



JERASOFT

USER GUIDE

FOR VERSION 3.24

www.jerasoft.net



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User Guide

Welcome to JeraSoft Billing User Guide

This is the Telecom Billing Software that we think is **a quantum leap** to develop the VoIP telephony services. This guide provides a general **overview** of the **JeraSoft Billing interface, key features** and useful information regarding its usage. We hope to make **the process of using** our application as painless as possible.

Please check the categories on the left navigation bar to get started or use search toolbar to find an answer to your questions.

- [Interface Basics](#)
- [Management](#)
- [Rates Section](#)
- [Retail](#)
- [Statistics](#)
- [Tools](#)
- [Routing](#)
- [Configuration](#)
- [Integration](#)
- [System](#)
- [Client Panel](#)
- [System Shell Tools](#)
- [APIs](#)

Interface Basics

In this article

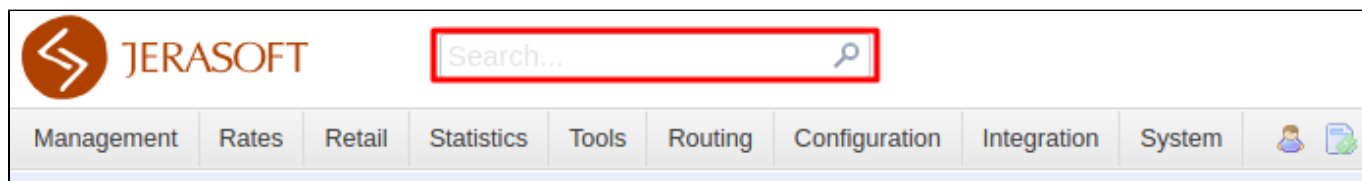
- [Global Search Bar](#)
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- [InfoBar](#)
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- [Page Load Time](#)
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- [Section Tabs](#)

Prior to jumping straight to system sections, it's advisable to take a look at basic interface elements that user comes across from section to section. By getting used to common JeraSoft Billing features, navigation throughout the system becomes easier and faster. Despite the fact that not every interface feature, mentioned in this article, is present in all JeraSoft Billing sections, all of them are pretty common for the majority of system sections. The full list of interface basics is as follows:

Global Search Bar

This tool is used to globally search for items within the entire system, as well as find elements within a current section. For example, you can search for **clients, accounts, packages, rate tables, DIDs, code decks, routing plans, etc.** This bar is located on the top of the system, and it's designed to predict a user's search and show results while you type. It is a time-saving feature. The items found as a result of your search are placed on the drop-down list as links and headings. You can click on the item to open respective settings.

Screenshot: Global search bar

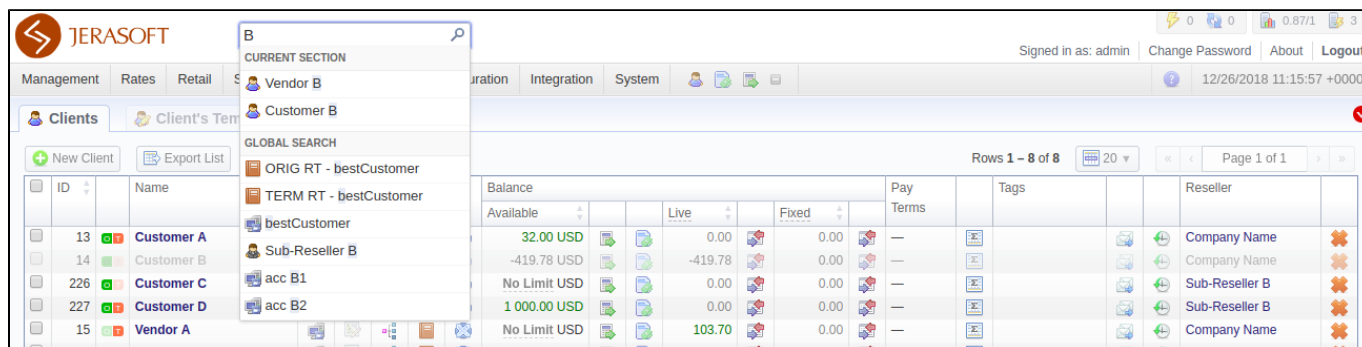




This search bar displays two parts of results: from the **current section** and **global search** in the system. Therefore, it shows a drop-down list with 10 first items matching your keyword from the current section and from a whole system at all (see screenshot below).

Tip

1. When you fill in the field and press **ENTER**, the search will be applied to the current section.
2. If you search in the section with no list of items to select from and press **ENTER**, the system will redirect to the **Clients** section and show results.
3. To open the edit form of the entity, click on it.
4. You can use the search bar for **filtering items in the section**, for example, clients or DIDs.



Screenshot: Global search bar



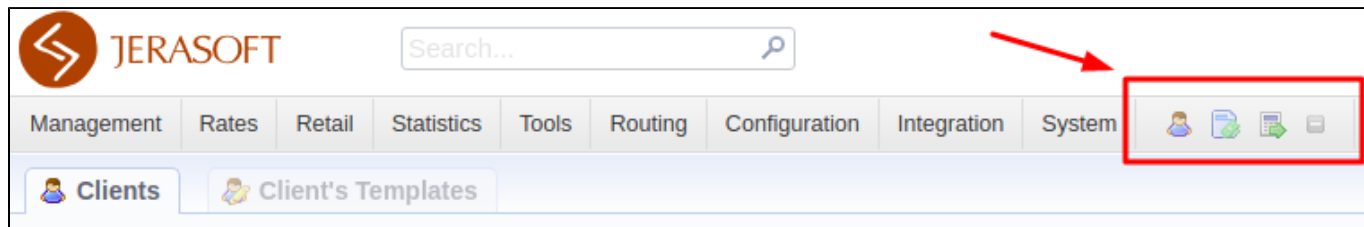
Several JeraSoft Billing sections have advanced search settings. To open these settings, click on downwards arrow  icon on the toolbar of a respective section. Red downwards arrow  icon on the toolbar means that the data is sorted by default (see screenshot above).

SmartBar

There is a **SmartBar** shortcut panel to provide quick access to frequently used sections. You can add any number of sections to the panel.

To add the shortcut, open a respective section and then click the plus sign  on the panel. As a result, a corresponding icon will be the rightmost on the panel. To remove the shortcut, click the minus sign  at the same location.

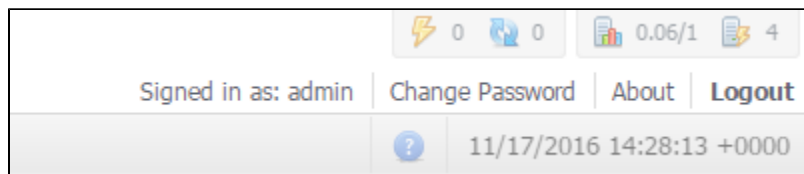
Screenshot: SmartBar panel










InfoBar

To have access to fast-changing system information, JeraSoft Billing features the information panel – **InfoBar**. You can find this panel in the top-right corner of the system and it is available from any section.

Screenshot: InfoBar settings

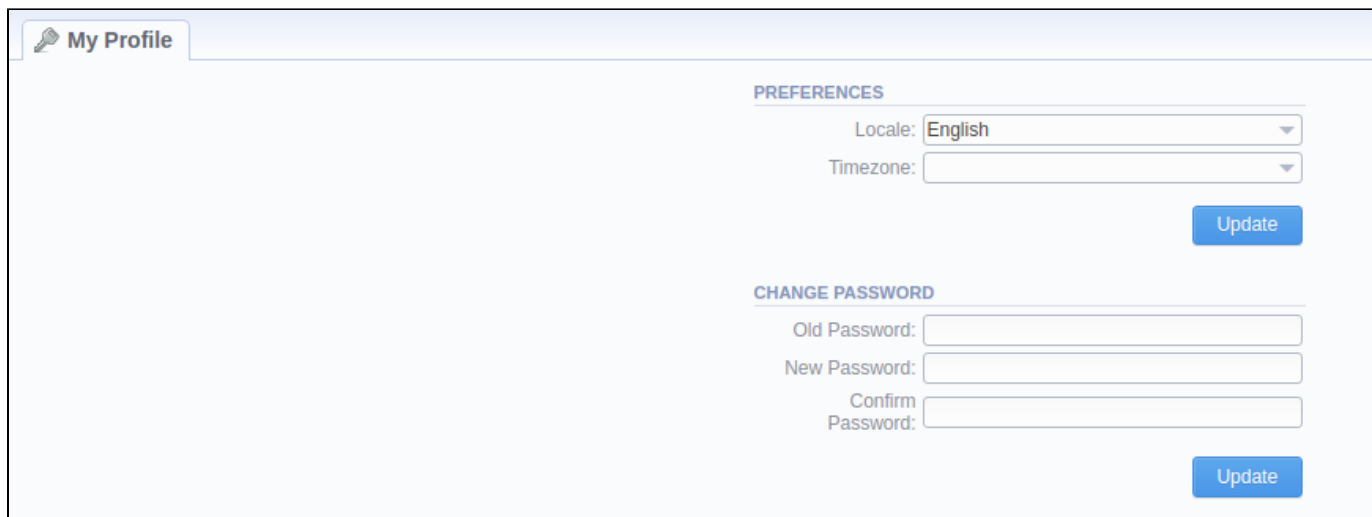


| Icon | Description |
|---|--|
|  | CDR queue |
|  | CDRs in queue for rerating |
|  | CDRs in queue for parsing |
|  | Information about system alerts |
|  | Load average on server / Number of CPU cores |
|  | Number of running billing services |
|  | Shortcut to a relevant article regarding certain section on Documentation Portal |

My Profile

You can set your timezone and locale in the **Preferences** menu, and change the current password by using **Change Password** menu. The changes will be implemented in the system immediately. When setting your timezone, the system will pull these settings to all the statistics reports query forms and transactions timestamps.

Screenshot: Change Password settings



To change a password, enter the current password in **Old Password** field, and a new one in **New Password** and **Confirm Password** fields. Then, click **OK**.

About

To get more details about the JeraSoft Billing system, current version, license number, limits, and other components, click **About** either on the **InfoBar** or in the bottom-left corner of the system.

Page Load Time

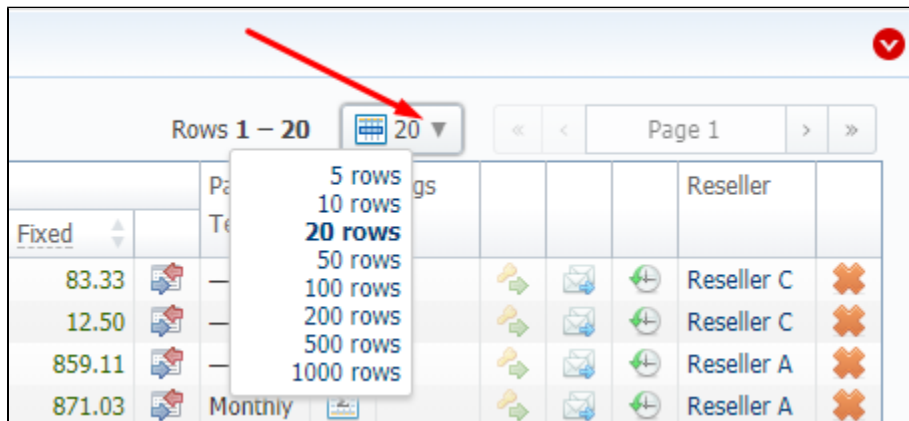
To provide the user with relevant information about the system, **Page Load Time** is displayed in the bottom-left corner of any page next to **About** button.



Rows per Page

In sections that are presented in the form of a table, JeraSoft Billing allows customizing the number of rows displayed on a page. To do so, click on **Rows Per Page** drop-down button and set the required quantity (see screenshot below).

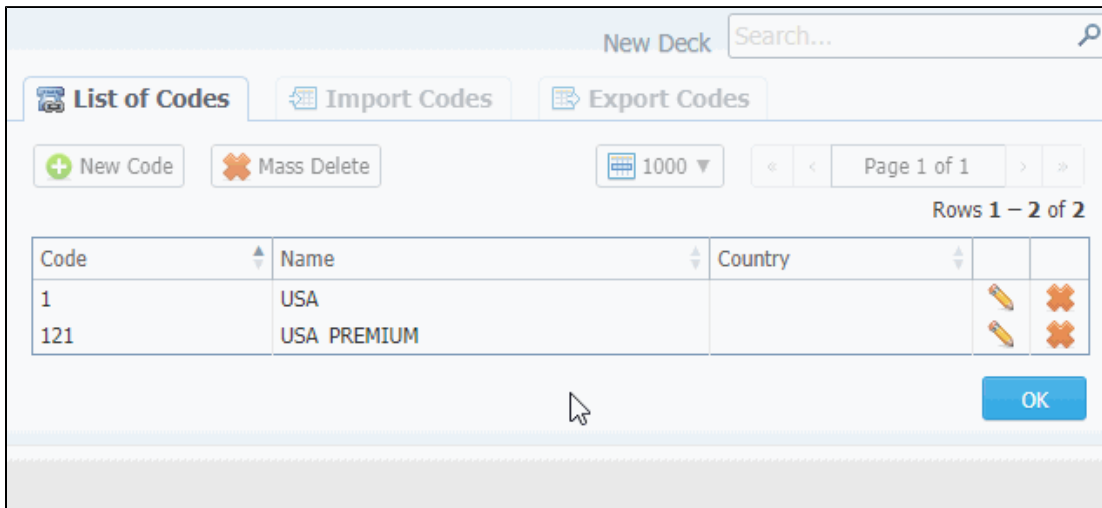
Screenshot: Rows Per Page dropdown button



Delete Confirmation

To prevent a situation when you delete an entity from the system by accident, in the majority of cases after hitting **Delete** icon / **Mass Delete** button, a **Delete Confirmation** dialog window will appear, requiring to confirm your action. To proceed with the deletion, press **OK**, and an entity will be removed from the system. The whole process is illustrated in the animation below.

Animation: Delete confirmation



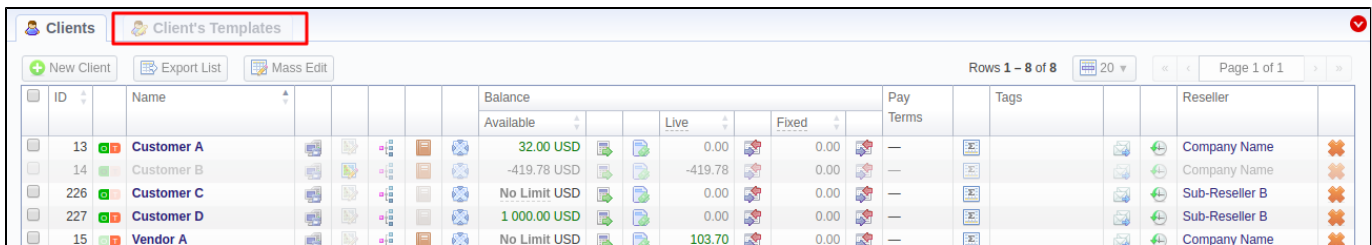
System Logout

You can log out from the system by clicking **Logout** on the **InfoBar**.

Section Tabs

Several sections in the system have respective tabs for making the work with billing much more easier and comfortable.

Screenshot: Clients section settings/tabs



Management

This chapter outlines how **the main components of JeraSoft Billing** could be used to provide various management capabilities through the system.

Take note that while navigating throughout the **system**, you will come across plenty of tool-tips to provide a better understanding of the system mechanisms. It's easy to determine, whether there is one or not. All tool-tips in the system are shown as the text with a dotted underline, for example,

ORIGINATOR SETTINGS

. All you need is to hover over it, and additional information becomes visible.

The list of management section includes:

- [Clients](#)
- [Accounts](#)
- [Invoices](#)
- [Transactions](#)
- [Balance Report](#)
- [Resellers](#)
- [Subscriptions](#)
- [Traffic Processing](#)

Clients

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Client](#)
- [Mass Edit](#)
- [Clients Templates](#)
- [Knowledge Base Articles](#)

Section overview

Beyond any doubts, clients are a cornerstone and the most valuable asset of any type of business. Hence, the **Clients** section is rightfully considered a core element of the whole **JeraSoft Billing**. In the section, user can manage the personal information of any client on the list, trace customer's balances, review resellers a particular client belongs to, etc. The section is presented in the form of a table with the following columns:

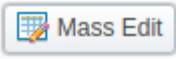















Screenshot: *Clients section*

| ID | Name | Balance | | | Pay Terms | Tags | Reseller |
|-----|------------|--------------|---------|-------|-----------|----------------|----------|
| | | Available | Live | Fixed | | | |
| 13 | Customer A | 32.00 USD | 0.00 | 0.00 | — | Company Name | |
| 14 | Customer B | -419.78 USD | -419.78 | 0.00 | — | Company Name | |
| 226 | Customer C | No Limit USD | 0.00 | 0.00 | — | Sub-Reseller B | |
| 227 | Customer D | 1 000.00 USD | 0.00 | 0.00 | — | Sub-Reseller B | |
| 15 | Vendor A | No Limit USD | 103.70 | 0.00 | — | Company Name | |
| 12 | Vendor B | No Limit USD | 0.00 | 0.00 | — | Company Name | |
| 19 | Vendor C | 78.27 USD | 78.27 | 0.00 | — | Company Name | |
| 11 | Voxbone | 7.03 USD | -2.97 | -1.60 | 7/7 | Company Name | |


| Column Name | Description |
|--|--|
| ID | Client's identification number |
| Name | Client's name |
| Balance | Client's balance values |
| | <ul style="list-style-type: none"> • Available 'Live' client's balance including allowed credit |
| | <ul style="list-style-type: none"> • Live Client's balance calculated on the basis of the performed payments and processed calls |
| <ul style="list-style-type: none"> • Fixed Client's balance calculated on the basis of the outstanding invoices and performed payments | |
| Pay Terms | Payment terms of each client |
| Tags | List of tags, applied to a client |
| Reseller | Name of reseller's company respective client belongs to |

Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows adding a new client to the system |
| | Allows exporting a list of user's clients in a .csv file |

| | | |
|---|---|-----------------------------------|
|  | Allows managing the last invoice date of a client | |
|  | Identifies the Orig client | |
|  | Identifies the Term client | |
|  | Identifies the Orig/Term client | |
|  | Allows accessing the list of client's accounts in the Accounts section (an icon will be colored if an account is assigned) | |
|  | Allows accessing the client's current routing plan (an icon will be colored if the plan is assigned) | |
|  | Allows accessing the Traffic Processing section for dynamic routing management | |
|  | Allows viewing client's rates (an icon will be colored if a rate table is assigned) | |
| | <ul style="list-style-type: none"> • ORIG | Rate tables for origination calls |
| | <ul style="list-style-type: none"> • TERM | Rate tables for termination calls |
|  | Allows accessing the Subscriptions section for new clients packages management | |
|  | Allows accessing the Transactions section for client's balance management | |
|  | Allows accessing the Invoices section for client's invoices management | |
|  | Allows accessing the Balance Report section for client's balance report (Live or Fixed) management (last 7 days of statistics) | |
|  | Allows accessing the Summary Report section for client's summary report management (last 7 days of statistics) | |
|  | Allows accessing the Mail Queue section to view sent emails history | |
|  | Allows accessing the Audit Log section to view change history | |
|  | Allows deleting a client from the system | |


Warning

When you **delete the client** by changing the status to **deleted** or clicking a respective icon , the Client Panel of this client will be disabled and origination/termination settings of its accounts will be turned off. However, its accounts will not be deleted from the system.

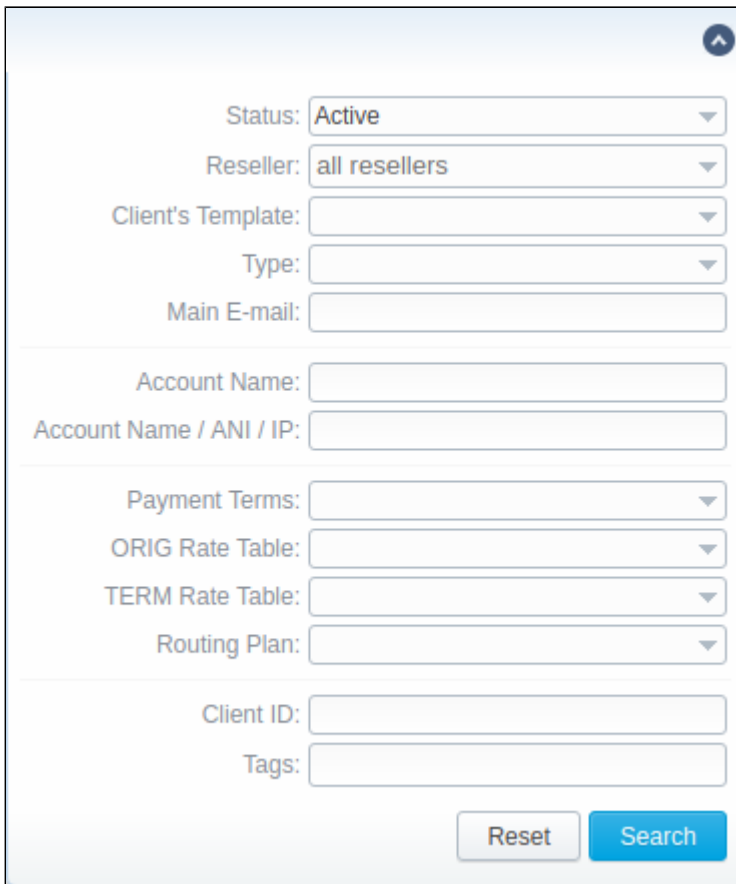
Helpful Tip

- If the prepaid mode is enabled, calls will be subject to balance check on a stage of call authorization (when RADIUS Authorization is used). If the postpaid mode is enabled, calls duration will be limited to **Max all length** setting in **Configuration > Settings**.
- You can search through clients by **Name** and by first letters only (**start with** rule). To find all clients with a specified main email, use * (asterisk) in the **Main Email** field.

Advanced Search

In the top right corner of the section above the table, the **Advanced Search** drop-down menu is located. By clicking on a red downwards arrow  icon (clients in the section are filtered by **Active** status by default), the following drop-down menu is displayed:

Screenshot: *Advanced Search drop-down menu*



A screenshot of a search form for client information. The form is contained within a light blue bordered box with a small upward-pointing arrow icon in the top right corner. The form fields are organized into several sections:

- Status:** A dropdown menu with "Active" selected.
- Reseller:** A dropdown menu with "all resellers" selected.
- Client's Template:** An empty dropdown menu.
- Type:** An empty dropdown menu.
- Main E-mail:** An empty text input field.
- Account Name:** An empty text input field.
- Account Name / ANI / IP:** An empty text input field.
- Payment Terms:** An empty dropdown menu.
- ORIG Rate Table:** An empty dropdown menu.
- TERM Rate Table:** An empty dropdown menu.
- Routing Plan:** An empty dropdown menu.
- Client ID:** An empty text input field.
- Tags:** An empty text input field.

At the bottom right of the form, there are two buttons: a light blue "Reset" button and a darker blue "Search" button.

To apply the specified search criteria, click the **Search** button; to cancel the applied parameters, click **Reset**.

Adding New Client

To add a new customer in the system, click the **New Client** button in the top-left corner of the section. A pop-up window with the following fields will show up:

Screenshot: Adding a new client

Client Info
Custom Fields
DIDs
Notes
Customer A

GENERAL SETTINGS

Name:

Reseller:

Currency:

Timezone:

Status:

Client's Template:

Tags:

Tax Profile:

Bill Events by:

Hidden Numbers

CLIENT'S PANEL

Login:

New Password:

TERMINATOR SETTINGS

Rate Table:

Credit limit: USD

Capacity: Channels

Low Balance Profile:

ORIGINATOR SETTINGS

Credit limit: USD Unlimited

Payment Terms:

Rate Table:

Routing Plan:

Capacity: Channels

Low Balance Profile:

LOW BALANCE CAPACITY CONTROL

Threshold: USD Capacity: Channels

AUTOINVOICING

Template:

Last Invoiced:

RATE NOTIFICATION

Format:

Notify Type:

COMPANY INFO

Name:

Main Email:

NOC Email:

Billing Email:

Rates Email:

Address:

ZIP Code: US State:

Tax ID:

Reg ID:


Account Details:

Locale:


| Information block | Fields & Description |
|--|--|
| General Settings | General information about the client |
| | <ul style="list-style-type: none"> Name Indicate a client's name |
| | <ul style="list-style-type: none"> Reseller Select a reseller new client belongs to (this name will be used in invoices) |
| | <ul style="list-style-type: none"> Currency Define preferred currency (will be used in invoices) |
| | <ul style="list-style-type: none"> Time zone Choose the timezone from the drop-down list of all available. This timezone will be used in invoices by default. UTC is a default parameter for a timezone <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <p>Attention</p> <p>If this parameter is not indicated, the timezone of the database will be automatically applied to the client's settings of the zone. It could lead to some problems while working with packages, rate tables, or time profiles.</p> </div> |
| | <ul style="list-style-type: none"> Status Select a respective status for the client: <ul style="list-style-type: none"> active stop deleted |
| | <ul style="list-style-type: none"> Client's Template Here you can apply the required template from the list to a new customer |
| <ul style="list-style-type: none"> Tags You can indicate tag(s) here that will be applied to a new customer. The tag doesn't need to be pre-existent in the system. You can provide an unlimited number of tags for each client. | |

| | |
|--|---|
| <ul style="list-style-type: none"> • Tax Profile | <p>You can specify a tax profile, which will be reflected in invoices. In order to select a tax profile in this field, the tax profile should be created first in the section Configuration>Taxes profiles. Check out the Taxes Profiles article for more information.</p> <p>There can be 3 types of the tax profiles used:</p> <ul style="list-style-type: none"> • Customer (you will need to manage the tax values manually) • SureTax (integration with a third-party tax calculation service) • Compliance (integration with a third-party tax calculation service) <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <p>For proper usage of SureTax and Compliance, the Invoice Number should contain only Latin and numeric characters. Max length is 40 symbols. Dst and Src Numbers should be in the NPANXXNNNN (10 digits) format. More info about these third-party tax calculation services can be found in the article US Taxation.</p> </div> |
| <ul style="list-style-type: none"> • Bill Events by | <p>Select how the system should bill events of a new client – by setup time, by connect time or by disconnect time (most switch models use disconnect time)</p> |
| <ul style="list-style-type: none"> • Hidden Numbers checkbox | <p>When checked, allows you to hide some part of the client's destination numbers in invoices, xDRs reports and during export.</p> <div style="background-color: #e0ffe0; padding: 5px;"> <p>✔ Tip</p> <p>If the client has the Hidden Numbers option enabled and the code appears in the code deck from the invoice template, the number, code, and code name become hidden. If the code doesn't appear in the code deck, the last *n characters of the number are hidden. The code deck from the rate table is only used to identify code names.</p> </div> |
| <p>Client Panel checkbox</p> | <p>Activates/deactivates the login procedure to the client's control panel for this client. Customer can get access to this control panel by using the following link: http://vcs_address/clients/, after filling in the following fields:</p> <ul style="list-style-type: none"> • Login Client's login • Password Client's password |
| <p>Originator Settings</p> | <p>Settings for your customers who send events to your switch. Clients' originator settings are as follows:</p> <ul style="list-style-type: none"> • Unlimited checkbox Here you can set the unlimited credit for a client if you enable the checkbox. It is disabled by default. • Credit limit The additional field next to the Unlimited checkbox. Here you can set the credit limit allowed for a client. You could fill this field with any of the positive or negative numbers, but no more than 9 digits. If the Unlimited checkbox is marked, this field becomes inactive. • Payment Terms Select the payment terms template from the general list of all available ones in the Payment Terms section • Rate Table From the list of all rate tables in the Rate Tables section, select an origination one for this client |


| | | |
|-------------------------------------|--|---|
| | <ul style="list-style-type: none"> • Routing Plan | Select an appropriate routing plan that will be used to route all calls of this customer (but it may be overridden for any of the customer's accounts in the <i>Accounts</i> tab). The full list of routing plans is presented in the Routing Plans section |
| | <ul style="list-style-type: none"> • Capacity | Indicate the origination capacity of channels for this client. For unlimited amount, leave empty |
| | <ul style="list-style-type: none"> • Low Balance Profile | From the list of all available, select a Low Balance Profile for this client |
| Terminator Settings | Settings for your vendors whom you send events from your switch. Clients' termination settings are as follows: | |
| | <ul style="list-style-type: none"> • Rate Table | From the list of all rate tables, select a termination one for this client |
| | <ul style="list-style-type: none"> • Credit limit | Define the credit limit you have on the vendor's side. It will be applied to vendors during the routing check to remove them from the routing result if the vendor's live balance + credit limit hits the entered threshold. |
| | <ul style="list-style-type: none"> • Capacity | Define the termination capacity of channels for this client. For unlimited amount, leave empty |
| | <ul style="list-style-type: none"> • Low Balance Profile | From the list of all available, select a Low Balance Profile for this client |
| Low Balance Capacity Control | Here you can set up whether the system should limit capacity or not when the client's Available balance is lower than a set threshold | |
| | <ul style="list-style-type: none"> • Threshold | Available balance threshold, below which the special capacity setting will be applied |
| | <ul style="list-style-type: none"> • Capacity | Origination capacity limit that will be applied when the available balance is below the threshold |
| Autoinvoicing checkbox | Activates/deactivates the automatic invoice generation feature for the current client. Information block parameters are: | |
| | <ul style="list-style-type: none"> • Template | Select an invoice template for this customer |
| | <ul style="list-style-type: none"> • Last Invoiced | Specify the last date when the client was invoiced |
| Rate Notification checkbox | Here you can enable or disable automatic rates notifications for the current client | |
| | <ul style="list-style-type: none"> • Format | Select the desirable format of rate notification (.xlsx or .csv) |

| | |
|--|--|
| <ul style="list-style-type: none"> • Notification Type | <p>Specify a type of notification:</p> <ul style="list-style-type: none"> • All rates - full rates list will be sent • Only changed rates - only changed rates will be sent • All rates (not repeated codes) - if there are two or more new rates with different effective dates for the same code, several files will be sent, each containing a full list of rates and only one unique rate for this code <div style="background-color: #e0ffe0; padding: 10px; border: 1px solid #c0ffc0;"> <p> Tip</p> <p>1. The system will push notification after adding new rates. Please note, if the user changes the Effective Date field of current rates manually, they will also be included in the notification.</p> <p>2. When you <i>force</i> Rate Notification, it does not send all the rates with the Effective Date in the future but only the rates that it will be late to send with the next scheduled notification (according to the Agreement assigned to the Rate Table). If there's no Agreement, the Rate Notification <u>will not be sent</u>.</p> <p>3. We recommend using forced notifications for testing purposes. It doesn't cancel a regular notification nor change the last export date.</p> </div> |
| <p>Company Info</p> | <p>Some additional information about a client can be entered here</p> |
| <ul style="list-style-type: none"> • Name | <p>Company name</p> |
| <ul style="list-style-type: none"> • Main Email | <p>Company email for general inquiries. Use only Latin characters.</p> |
| <ul style="list-style-type: none"> • NOC Email | <p>Company email for technical related questions. Use only Latin characters.</p> |
| <ul style="list-style-type: none"> • Billing Email | <p>Automatically generated invoices and notifications will be sent to this email address. Use only Latin characters.</p> |
| <ul style="list-style-type: none"> • Rates Email | <p>Company email for rates related questions. Use only Latin characters.</p> |
| <ul style="list-style-type: none"> • Address | <p>Physical company address</p> |
| <ul style="list-style-type: none"> • Zip Code | <p>Postal code for SureTax integration</p> |
| <ul style="list-style-type: none"> • Tax ID | <p>Customer's tax ID</p> |
| <ul style="list-style-type: none"> • Reg ID | <p>Customer's registration ID</p> |
| <ul style="list-style-type: none"> • Account Details | <p>Reference information about the client's bank account or payment details</p> |

| | |
|---|---|
| <ul style="list-style-type: none"> • Locale | <p>The preferred locale that will be sent as a reply to RADIUS Authorization. It is used for IVR platforms to define the language</p> |
|---|---|


 **Useful Tip**

You can use multiple emails per field if necessary. Just separate them with a comma or semicolon.

 **Attention**

Autoinvoicing tool sends rates in separate files for each time profile used in a certain Rate Table.

Please note, the **email address should contain only Latin characters** for proper work of email notifications and invoices.

 **Warning**

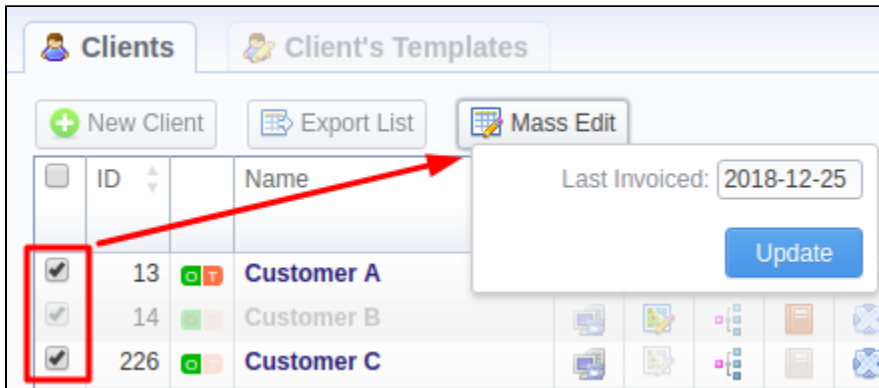
The **Full Delete** button can be used to remove a client from the system permanently, disregarding any statistics or rate tables data connections. Please use this feature with care – the deleted client cannot be restored by any means

Mass Edit

If there is a need to **change the last invoice date** (*i.e. the day that the client has already been invoiced for*) for more than one client, you can use **Mass Edit** functionality. Follow the next steps:

- Select target Clients;
- Click the **Mass Edit** button and specify the date in the **Last Invoiced** field;
- Click the **Update** button.

Screenshot: Mass edit functionality



Clients Templates

This section allows you to create a client template, where you can specify the main information about a client, originator settings, etc. Further, this template can be used to set the billing and tariff parameters for customers, managers, or resellers in several clicks. For more details, check out a related article: [Clients Templates](#).

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty



Clients Templates

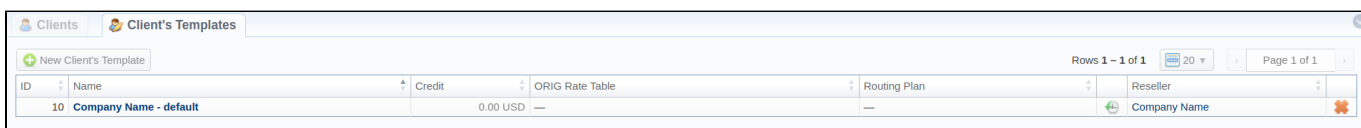
In this article

- [Tab overview](#)
- [Advanced Search](#)
- [Creating a New Client's Template](#)
- [Interface properties](#)
- [Functional properties](#)
- [Reports](#)

Tab overview


This tab allows you to create a client template where you can specify the main information about a client, originator settings, etc. Moreover, this template can be used to set the billing and tariffication parameters for Customers, Managers, or Resellers in several clicks.

Screenshot: *Client's Templates List*



| Column Name | Description |
|------------------------|--|
| ID | Client's template identification number |
| Name | Client's template name |
| Credit | Credit volume in a template |
| ORIG Rate Table | Origination rate table, assigned to this client's template |
| Routing Plan | Routing plan, assigned to this client's template |
| Reseller | Name of the reseller's company respective client's template belongs to |

Advanced Search

To navigate in the tab effectively, a user is advised to use **Advanced Search** drop-down menu by clicking a blue downward arrow  icon in the top right corner of the page.

Screenshot: *Advanced Search drop-down menu*

Creating a New Client's Template

To create a new template you need to click the **New Client Template** button. A new pop-up window with the following fields will appear:

Screenshot: New Client Template settings

Clients
Company Name - default

GENERAL SETTINGS

Name:

Reseller:

Currency:

ORIGINATOR SETTINGS

Credit: USD

Rate Table:

Routing Plan:

Capacity: Channels

LOW BALANCE CONTROL

Notify Client: USD

Threshold: USD

Notify Admin: USD

Capacity: Channels

| Information block | Fields Description |
|----------------------------------|--|
| System Information | General information regarding client's template settings |
| | <ul style="list-style-type: none"> Name - Indicate the title of the client's template |
| | <ul style="list-style-type: none"> Reseller - Select a reseller that will be assigned to this template (this name will be used in invoices) |
| | <ul style="list-style-type: none"> Currency - Indicate preferred currency (will be used in invoices) |
| Originator Settings | Billing settings and tariffication parameters for customers, who send the calls to your switch |
| | <ul style="list-style-type: none"> Credit - Credit limit allowed for a client |
| | <ul style="list-style-type: none"> Rate Table - Select the origination rate table |
| | <ul style="list-style-type: none"> Routing Plan - Select an appropriate routing plan that will be used to route all calls for this customer |
| Low Balance Notifications | Here you can set up whether the system should make low balance notifications or not when client's Available balance is lower than a set threshold |
| | <ul style="list-style-type: none"> Notify Client - When clients' balance+credit is below the entered value, the system will send a notification to email, specified in the clients' Billing email field |
| | <ul style="list-style-type: none"> Notify Admin - When clients' balance+credit is below the entered value, the system will send a notification to an administrator via Events Log |
| | <ul style="list-style-type: none"> Threshold - Available balance threshold, below which the special capacity setting will be applied |
| | <ul style="list-style-type: none"> Capacity - Origination capacity limit that will be applied when the available balance is below the threshold |

Tip

Clients Templates allow you to fill out customer's settings with **standard default values**. If you do not specify the values (*i.e.*, *Credit*, *Rate Table*, *Routing Plan*, *Capacity*, *Notify Client*, *Notify Admin*) in the *Client form*, the **Clients Templates** will take these values from templates (during authorization).

Please note: the system can fill only empty fields with standard default values overridden from the assigned template. For example, if the client has *0* (specified by default) in the **Credit** field near the **Postpaid** checkbox, you need to clear it manually. Otherwise, this value will not be taken from the template. But these values **will not be shown** in the **Client form**.

Sample: When there are no values in the Client form, the system will take them from the assigned template. When there are no values in the template assigned to the Client, they will be taken from **Manager's/Reseller's settings**.

Interface properties

The process of applying a template to the client is pretty simple. All you need to do is:

- Go to the **Clients** list, click on the **New Client** button or select the needed client;
- Fill in the **Client's Template** field by selecting a needed template from the drop-down list.

In the **Reseller** section, there is an option for Manager/Reseller to set a **Client's Template**, *i.e.*, this template will be used under this Reseller or Manager by default. All you need to do is:

- Go to the **Reseller** section and select the needed **Manager/Reseller** (configuration window will pop-up);
- Fill in the **Client's Template** field by selecting a template from the drop-down list.

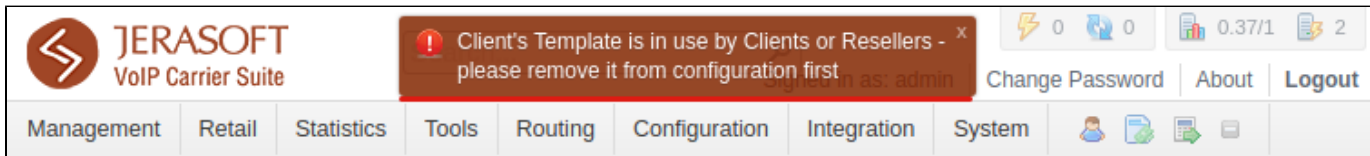
Tip

Please be advised that values overridden from templates, *i.e.*, **Routing Plan**, **Rate Table**, **Credit** are displayed only on the Clients list. They **will not be shown** on the Client's account.

Functional properties

1. If there are no indicated values (such as **Credit**, **Rate Table**, **Routing Plan**, **Capacity**, **Notify Client**, **Notify Admin**) in the **Client's Settings**, it will automatically override these values from the closest template.
2. The closest template is considered a first template found by the following chain: **Client its Manager its Reseller**
3. If there are no found values mentioned above in the closest template, further search stops and values are not defined.

When you remove the template, there is a validation of use this template by a Client, Manager or Reseller. The pop-up window with notification will appear.
Screenshot: *Removing the template*



Reports

1. If you want to **change the Reseller**, you will proceed without any application checks of this template by the **Client/Manager/Reseller**.
2. The **currency** indicated in the **Client Template** and the currency of the customer to which it applies should be the same to work properly.
3. All **Managers**, regardless of their nesting level, have a possibility to **see the full list of templates** that **belong to their Reseller only**.

Custom Fields

This tab represents the list of **Custom Fields** that have already been added and assigned to the respective client by its reseller. The data specified in these fields will be used in invoice templates as custom functions.

Screenshot: Custom Fields tab

You can add these fields in the **Management > Resellers** section by clicking the **Add Custom Field** button. Then, you need to specify the field key and title.

Screenshot: Custom Fields Reseller section

| Field | Description |
|------------------|---|
| Field Key | Specify a unique custom key for using the created field in invoice templates. Please note that only characters, number or underscores are allowed for this field. No blank spaces. |
| Title | Create the title of the client's Custom Fields form. Please note that it is obligatory to specify the title. |




DIDs

This tab allows assigning already existing DID numbers to a certain clients' account.

Screenshot: DIDs section

| Client Info | | | | | Custom Fields | | | | | DIDs | | | | | Notes | | | | | Rose term | | | | |
|-------------|--------|-------------|---------------|--|-----------------|--|--|--|--|------|--|--|--|--|-------------|--|--|--|--|-----------|--|--|--|--|
| + Add DID | | | | | Rows 1 - 1 of 1 | | | | | 20 | | | | | Page 1 of 1 | | | | | | | | | |
| DID | Status | Assigned to | Package | | | | | | | | | | | | | | | | | | | | | |
| 1111 | Active | rose_term | 2 Package DID | | | | | | | | | | | | | | | | | | | | | |

| Column | Description |
|---------------------|---|
| DID | List of DID numbers |
| Status | Status of a current DID |
| Assigned to | Shows clients' accounts, to whom the current DID number is assigned |
| Package Name | List of packages |

| Icon | Description |
|---|---------------------------|
|  | Allows activating the DID |
|  | Allows blocking the DID |
|  | Allows holding the DID |

Add DID Button

To assign a DID number, click the **Add DID** button. Then, specify an account, package, and DID number.

The **Add DID** button is **visible only if a client has at least one account and an activated package**. You can assign a defined number of DIDs, which you previously specified during package creation.

Tip

Detailed instructions on how to create a DID number you can find in the DID Management section, chapter **Creating DID Number**.

1. Go to **Retail > DID Management > Operators List** tab. Create one or more operators (DID providers).
2. Open the **DID Management** section, add one or more DID numbers with tags. Make sure that these DID's have the **in stock** status. You can also use the **Import DID's** button.
3. Go to the **Retail > Packages** section. Create a package, that will include tags specified in DID's settings and a number of allowed DID's to be picked from it.
4. Assign a respective Package to the customer in the **Client Packages** section.
5. Open the **DIDs** tab in the **Clients** section. Then, pick one or more DID numbers.

This will effectively assign a DID number to one of the customer's accounts. Please note that this functionality is switch dependent and additional development or testing may be required.

Please contact JeraSoft Support team for help, if you have any doubts or questions.

Screenshot: Add DID button

Client Info Custom Fields **DIDs** Notes Cli_2


+ Add DID Rows 1 - 1 of 1 20 Page 1 of 1


| Account: | Status | Assigned to | Package | | |
|----------|--------|-------------|--------------|--|---|
| Acc2 | Active | Acc2 | TESTPackages | | ■ |

Package: DID: Add DID

Notes

This tab represents a notebook for saving different additional information concerning a current client. For example, it may be used by managers to share relevant info regarding a particular customer.

To add a new note, open the **Note** tab of the respective client, click the **Add Note** button on the toolbar, enter the message or select a file, and click **OK**. Also, you can edit or remove notes associated with the respective client. **To change an existing note**, hover over the comment you'd like to edit and click on the edit  icon. Then, a new pop-up window with settings will appear.

To **remove a note** quickly, hover over the comment you'd like to cancel and click the delete  icon.

Screenshot: Notes tab



The screenshot shows a software interface with a top navigation bar containing tabs: Client Info, Custom Fields, DIDs, and Notes (highlighted with a red box). The Notes tab is active, displaying a table with one row of data. The table has columns for 'Updated by' and 'Comments'. The 'Updated by' column shows 'admin' and a timestamp '04/11/2018 14:42:01 +0000'. The 'Comments' column contains the text 'Notes on client accessibility' and a file path 'File: clients_list_6-03-2018.csv'. To the right of the table, there are icons for editing (pencil) and deleting (orange X). A toolbar at the top left of the notes area includes an 'Add Note' button. The text 'Rose orig' is visible in the top right corner of the interface.

| Updated by | Comments | | |
|------------------------------------|---|---|---|
| admin 04/11/2018 14:42:01 +0000 | Notes on client accessibility File: clients_list_6-03-2018.csv |  |  |

Accounts

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Account](#)
- [Knowledge Base Articles](#)

Section overview

This section is designed to create and manage all clients' accounts in the system. Any clients can have an unlimited number of unique accounts. Accounts are a key tool for clients' identification in JeraSoft Billing. The section is presented in the form of a table with the following columns:

Screenshot: Accounts section

| ID | Client | Account | Name / ANI / IP | Tech Prefix | Orig Details | Term Details |
|-----|-----------|-----------|-----------------|-------------|---|---|
| 176 | Rose orig | rose_orig | Name: rose_orig | | RT: RT ORIG - Rose RP: DR: Complex LCR | RT: TC: --- Protocol: --- / Proxy: 1 / Port: --- |
| 177 | Rose term | rose_term | Name: rose_term | | RT: OC: --- | RT: TC: --- Protocol: --- / Proxy: 1 / Port: --- |



| Column Name | Description |
|---------------------|--|
| ID | Account's identification number |
| Client | Client's name |
| Account | Account's name |
| Name/ANI/IP | The way of clients' identification |
| Tech Prefix | Technical prefix for users' identification |
| Orig Details | Originator settings |
| Term Details | Terminator settings |

⚠ Attention


- It's possible to add multiple accounts with the same IP address and different protocols/ports.
- When you **delete an account** from the system, all **associated statistics will be removed, amounts will be refunded and the client's balance will increase**. We recommend deactivating useless accounts instead of completely deleting them from the system. You can deactivate an account by disabling **Originator/Terminator Settings** checkboxes.

The section contains the respective list of functional buttons and icons.

| Button/Icon | Description |
|-------------|---|
| | Allows creating a new client's account |
| | Allows filtering accounts by a specified client |
| | Allows viewing specified client's profile in the Clients section |
| | Allows viewing client's change history in the Audit log section |

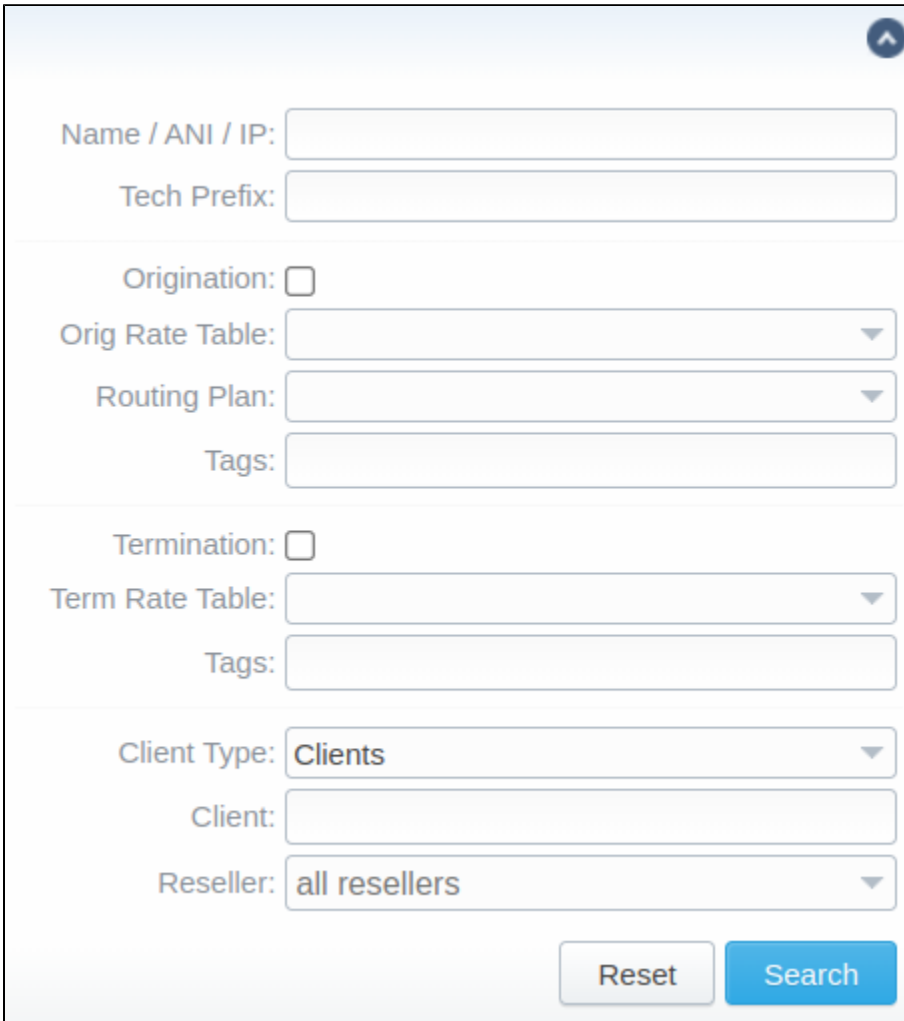
| | |
|---|---|
|  | Indicates that the Orig/Term rate table or routing plan is assigned to an account |
|  | Allows deleting an account from the system |

Advanced Search

Use the **Advanced Search** drop-down menu for fast navigation in the section (for instance, displaying accounts belonging to a certain client) by clicking on a red downward arrow  icon.

You can start a quick search by typing your keywords into a target field and clicking the **Search** button.

Screenshot: Advanced Search drop-down menu



The screenshot shows a search form with the following fields and controls:

- Name / ANI / IP:** Text input field
- Tech Prefix:** Text input field
- Origination:** Checkable field (checkbox)
- Orig Rate Table:** Dropdown menu
- Routing Plan:** Dropdown menu
- Tags:** Text input field
- Termination:** Checkable field (checkbox)
- Term Rate Table:** Dropdown menu
- Tags:** Text input field
- Client Type:** Dropdown menu (currently set to "Clients")
- Client:** Text input field
- Reseller:** Dropdown menu (currently set to "all resellers")
- Reset** button
- Search** button

Adding New Account

To add a new account, click the **New Account** button and fill in the respective fields. Then, click the **OK** button. The list of fields is as follows:

Screenshot: Adding new account

Accounts

| | | |
|--|--|---|
| <p>GENERAL</p> <p>Client: <input type="text" value="Rose orig"/></p> <p>Name: <input type="text" value="New account"/></p> <p>IP: <input type="text" value="11.11.20.33"/></p> <p>Tech Prefix: <input type="text"/></p> <p>Password: <input type="text"/></p> <p>Gateway: <input type="text" value="GW Calls"/></p> <p>Notes: <input style="width: 100%;" type="text"/></p> | <p><input checked="" type="checkbox"/> ORIGINATOR SETTINGS</p> <p>Rate Table: <input type="text" value="RT ORIG - Rose"/></p> <p>Routing Plan: <input type="text" value="DR: Complex LCR"/></p> <p>Tags: <input type="text"/></p> <p>Capacity: <input type="text"/></p> | <p><input type="checkbox"/> TERMINATOR SETTINGS</p> <p>Rate Table: <input type="text"/></p> <p>Tags: <input type="text"/></p> <p>Capacity: <input type="text"/> Protocol: <input type="text"/></p> <p>Proxy: <input type="text"/> Port: <input type="text"/></p> |
|--|--|---|

| Information block | Fields and Description |
|----------------------------|--|
| General | General information about a new client's account |
| | <ul style="list-style-type: none"> Client - Specify a client, to whom this account belongs |
| | <ul style="list-style-type: none"> Name - Define the name of an account for JeraSoft Billing |
| | <ul style="list-style-type: none"> Ident by - The <i>JeraSoft Billing system</i> allows client identification in 3 different ways, you need to select one of below-mentioned: <ul style="list-style-type: none"> IP – gateway IP-address. You can specify multiple addresses, by dividing them with “;”. Moreover, you can specify the subnet with mask here in CIDR-format, e.g., 10.0.0.0/24, 200.200.200.208/28 Name – gateway name or user login, used for identification ANI (Automatic Number Identification) – callee's or caller's phone number |
| | <ul style="list-style-type: none"> Tech Prefix - Define technical prefix that is used to identify users, when multiple clients use the same gateway |
| | <ul style="list-style-type: none"> Password - Set a user's password that is used with login/password identification on a switch. Also, it can be used through the default authentication mechanism. For more info, please consult your switch system manuals. Note that you can automatically generate a password or show it by clicking on the icon or the icon, respectively. |
| | <ul style="list-style-type: none"> Gateway - Specify a gateway for the account, which will be in use only when billing this host calls. It is possible to assign more than one gateway to one account. |
| | <ul style="list-style-type: none"> Notes - Additional information about a current account |
| Originator Settings | Settings for your customers, who send calls to your switch |
| | <ul style="list-style-type: none"> Rate Table - Select a rate table for a current origination account (it will have higher priority than a rate table set for the whole client) |
| | <ul style="list-style-type: none"> Routing Plan - Indicate a routing plan for a current origination account |
| | <ul style="list-style-type: none"> Tag - Specify a tag for a current origination account |

| | | |
|----------------------------|---|---|
| | <ul style="list-style-type: none"> • Capacity | Set limitation for the number of simultaneous calls within this account |
| Terminator Settings | Settings for your vendors, whom you send calls from your switch to | |
| | <ul style="list-style-type: none"> • Rate Table | Select a rate table for a current termination account (it will have higher priority than a rate table set for the whole client) |
| | <ul style="list-style-type: none"> • Tag | Specify a tag for a current termination account |
| | <ul style="list-style-type: none"> • Capacity | Indicate capacity for respective traffic direction |
| | <ul style="list-style-type: none"> • Protocol | Select respective protocol for a current termination gateway |
| | <ul style="list-style-type: none"> • Proxy | Define proxy for a current termination gateway |
| | <ul style="list-style-type: none"> • Port | Set port for a current termination gateway |

**Attention**

- You can add an **unlimited** number of accounts for **each client**
- It's possible to add multiple accounts with the **same IP** address and **different protocols/ports** or **different gateways**

Knowledge Base Articles

Error rendering macro 'contentbylabel'


parameters should not be empty

Invoices

In this article

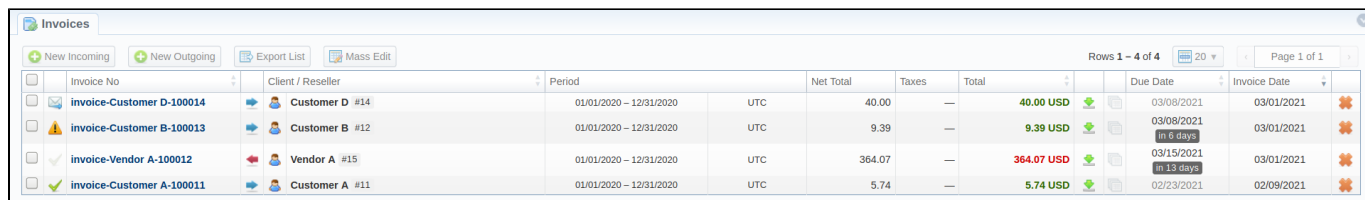
- [Invoices List](#)
- [Advanced Search](#)
- [Creating a New Invoice](#)
- [Mass Editing](#)
- [Differences in totals](#)

Invoices List



Since an invoice is an ultimate tool for controlling the volumes of provided services and their prices, the **Invoices** section of JeraSoft Billing is a staple instrument for the management of your business. It allows you to create and administer all outgoing and incoming invoices. By clicking on the **Download**  icon, you can export and view the respective invoice. By using the **Export List** option, you can download a currently stored list of invoices in a **.csv** format.

The section is presented in the form of a table of all invoices with the following columns:

Screenshot: Invoices section main window


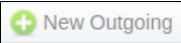
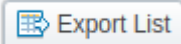
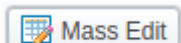










| Invoice No | Client / Reseller | Period | Net Total | Taxes | Total | Due Date | Invoice Date |
|---------------------------|-------------------|-------------------------|-----------|-------|------------|--------------------------|--------------|
| Invoice-Customer D-100014 | Customer D #14 | 01/01/2020 - 12/31/2020 | 40.00 | — | 40.00 USD | 03/08/2021 | 03/01/2021 |
| Invoice-Customer B-100013 | Customer B #12 | 01/01/2020 - 12/31/2020 | 9.39 | — | 9.39 USD | 03/08/2021 in 6 days | 03/01/2021 |
| Invoice-Vendor A-100012 | Vendor A #15 | 01/01/2020 - 12/31/2020 | 364.07 | — | 364.07 USD | 03/15/2021 in 13 days | 03/01/2021 |
| Invoice-Customer A-100011 | Customer A #11 | 01/01/2020 - 12/31/2020 | 5.74 | — | 5.74 USD | 02/23/2021 | 02/09/2021 |


| Column Name | Description |
|-------------------------|--|
| Invoice No | Number of an invoice |
| Client /Reseller | Name of a respective Client or Reseller along with the identification number. <div style="background-color: #e0ffe0; padding: 5px; border: 1px solid #c0ffc0;"> <p> Tip You can create an invoice for a root Reseller</p> </div> |
| Interval | Interval for invoicing |
| Net Total | The invoice sum, excluding the taxes |
| Taxes | The taxes amount if applicable |
| Total | The total sum of the invoice |
| Due Date | Determined due date of invoice |
| Invoice Date | Date of invoice creation <div style="background-color: #e0ffe0; padding: 5px; border: 1px solid #c0ffc0;"> <p> Tip When you leave the Invoice Date field empty, it will be identical to the time of invoice creation. In case you determine it, the system sets the midnight of a specified day</p> </div> |

Functional buttons and icons, presented in the section are as follows:

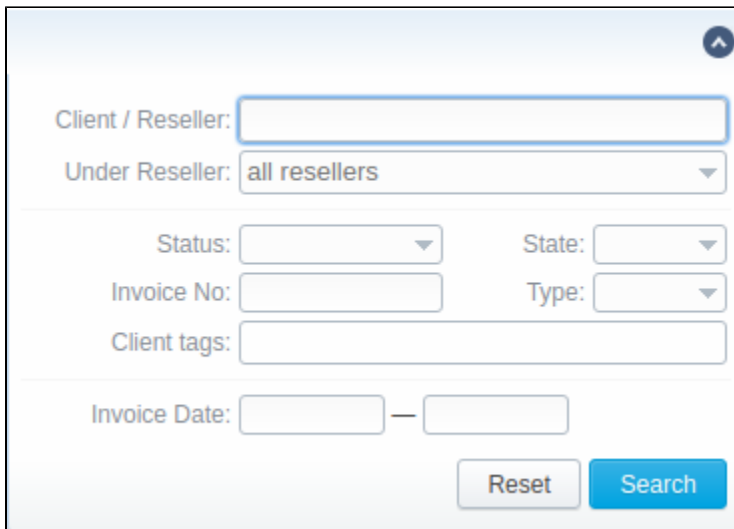
| Buttons/Icon | Description |
|--------------|-------------|
| | |

| | |
|--|---|
|  New Incoming | Allows creating a new incoming invoice in the system |
|  New Outgoing | Allows creating a new outgoing invoice in the system |
|  Export List | Allows exporting a list of invoices in a .csv file |
|  Mass Edit | Allows managing the state for the selected invoices in the list |
|  | Indicates normal state meaning that a respective invoice was paid in full. If the invoice is not fully paid, the icon will be grey |
|  | Defines to verify state meaning that this invoice is waiting to be checked before it is sent to a client |
|  | Defines to send state meaning that invoice is in sending queue |
|  | Indicates outgoing invoice |
|  | Indicates incoming invoice |
|  | Allows downloading a respective invoice file in a .csv format |
|  | Allows downloading an xDR file, if one is attached to invoice. If there are no attached xDR files, the icon will be grey |
|  | Allows deleting a respective invoice from the list |

Advanced Search

To filter data in the section, use the Advanced Search drop-down menu, which can be accessed by clicking a blue downward arrow  icon in the top right corner of the screen.

Screenshot: Advanced Search drop-down menu



The screenshot shows a search filter panel with the following fields:

- Client / Reseller:
- Under Reseller:
- Status:
- State:
- Invoice No:
- Type:
- Client tags:
- Invoice Date: —
- Buttons:

Creating a New Invoice

Invoices are created through the **New Invoice** button. When you click on it, a pop-up window shows up:

Screenshot: Create Invoice window

Invoices

Client / Reseller: Rose orig

Period: Last Week 2018-03-05 — 2018-03-11 UTC

Type: outgoing Currency: USD

Invoice No: (empty = auto) State: normal

Invoice Date: 2018-03-16 Due: 5 days

Included Charges: Uncovered x

Comments:

Action: Generate new invoice

Template: default | PDF


OK
Apply
Cancel

| Field | Description |
|-------------------------|---|
| Client /Reseller | Name of the <i>client</i> or <i>reseller</i> |
| Interval | Define a period of statistics that will be included in an invoice |
| Type | Specify the type of invoice: outgoing or incoming . By default, the Type is set for incoming for your convenience as that's usually the case for manual Invoices creation. Outgoing Invoices are usually automatically generated. |
| Currency | Select invoice currency from a drop-down menu |
| Invoice | A number of an invoice. The number length can't exceed 200 symbols |
| State | Select the state for a new invoice: <ul style="list-style-type: none"> normal - use this state to indicate that an invoice is paid to send - use this state to indicate that an invoice is paid, but not verified yet to verify - use this state to indicate that an invoice is created, but has not been sent to a client yet |
| Invoice Date | Specify the actual invoicing date |
| Due (days) | Define a number of days when an invoice is expected to be paid |
| Included Charges | Select the type of charges for invoices: <ul style="list-style-type: none"> uncovered - all charges that are not included in any previous invoice; covered - all charges already included in the previous invoice; pending - all pending charges. <p>Please note, these charges don't include calls. Therefore, <i>call</i> charges will be added to any invoice regardless of the Included Charges settings.</p> <div style="background-color: #e0ffe0; padding: 10px; margin-top: 10px;"> <p>✔ Tip</p> <p>It's not possible to include a charge twice with standard settings. To re-include an already used charge in the invoice, you need to combine uncovered + covered parameters in the Included Charges field.</p> </div> |
| Comments | Specify additional information if necessary |

| | | |
|--------------------------------|---|--|
| Action | Select one of two available actions: | |
| | Generate new invoice | A new invoice will be generated, based on predefined templates in the Invoices Templates section . To select a target template, select it from the drop-down menu in the Template field. |
| Attach existing invoice | If this option is selected, the following additional fields are displayed: <ul style="list-style-type: none"> • Attach Invoice - allows the user to attach additional invoice; • Attach xDR - allows attaching additional xDR file in a .csv format; • Events Amount - indicate a total amount, charged for services (calls, SMS, data, etc.) traffic; • Other Amount - indicate a total amount, charged for any other events (e.g., package fees). | |

 **Tip**

All automatically created invoices will have **to verify state**. To send an invoice to a client, you will need to change the state to **to send manually!**

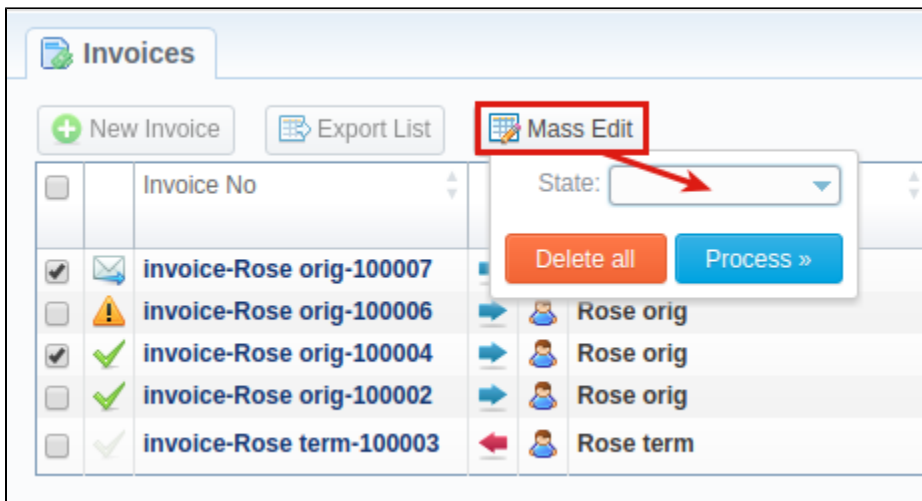
 **Warning**

When generating invoices under **one reseller** for **different clients**, it is recommended to wait till the invoice for one client will be generated and only after that start generating the other one (avoid generating them simultaneously). That is important to avoid the situation of having **invoices with an identical number** in the system.

Mass Editing

To change invoices **state** easily, use the **Mass Edit** button. First of all, you need to select invoices, for which a state should be changed, then specify it from a drop-down list of all states, and click the **Process** button for applying the change. Also, using the following window, you may delete all marked invoices by clicking **Delete all**.

Screenshot: Mass Edit button



 **Attention**

Please note:

1. While generating invoices, the system sorts packages in invoices by numbers. The names of packages could include numerical symbols. Please use numerical symbols like **001 name, 002 name, etc.** in the names of packages, and avoid names with special symbols like **%001 name, -001 name**.
2. The currency rate of extra charges will be taken on the **date of the charge, not on the date of the invoice**.

You can **include specific charges by ID** in the invoices (only for API). You can check the ID for extra charges and packages in the **Transactions** section. Then, you need to add the **charges_list** variable with respective values in the **Parameters** field of the **API Testbed** section:

Screenshot: API Testbed settings

API Testbed

API SERVER
JSON-RPC URL:

API METHOD
Module:
Action:

AUTHENTICATION
Login:
Password:

PARAMETERS

```

{
  "charges_list": {
    "0": "437",
    "1": "428",
    "2": "390",
    "3": "370",
  },
  "descr": "",
  "make_type": "generate",
  "id_invoices_templates": "12",
  "attach": "",
  "total_stats": "0",
  "attach_cdr": ""
}

```

About | Get Support | 0.6075s

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Differences in totals

You may have noticed that while creating different reports, such as a [Summary report](#), [xDRs list](#), etc., and then generating an invoice, you can get different totals. Here is a little background on what makes those differences.

Due to the **Included Calls (Attach xDRs list to the invoice settings)** option in the **Invoice Templates**, you can create an invoice based on different types of calls:

- **All payable** - includes calls with any duration that have non-zero costs and use packages;
- **Non-zero payable** - includes calls with a non-zero duration that have any cost and use packages.

Therefore, invoice totals depend on the selected parameters and settings. For example, whether to include calls with any cost/duration/package or not. However, when you generate a report, the statistics are usually based on all calls. As a result, a difference between invoice and report totals appears; even though an invoice may have completely another totals vs report data.

Attention

The invoice and report totals could differ if you made a rerating for a previous invoice period or the statistics were updated.

You may also need to know how **totals are rounded and calculated** in invoices. To get more information, follow this [link](#) or read about the general principals of rounding in JeraSoft Billing in [this article](#).

Besides, take note of **currency settings**: there you may specify the number of symbols that will be displayed in all reports with cost and rate values in the statistics. Also, it will be shown in the invoices, except total values (totals **always have 2 decimal places** in invoices).

- **Rates precision** - the number of decimal places for rates formatting.
- **Details precision** - the number of decimal places for detailed monetary values formatting. This precision is used for all reports, except for an xDR report.
- **Totals precision** - the number of decimal places for total monetary values formatting.

Error rendering macro 'contentbylabel'

parameters should not be empty

Transactions

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Payment/Charge](#)
- [Exporting and Importing Transactions](#)

Section overview

This section allows a user to perform and trace all the financial operations regarding the client's/reseller's balances. The section offers an overview of every single transaction performed in the system regardless of whether it's payment or charge and provides a wide variety of functionality for transactions management. Since the transactions section is a key tool for managing client's/reseller's balances, it's inseparable from the following sections of the system: [Clients](#), [Invoices](#), [Resellers](#), etc.

Transaction charges will be created according to the **configurations of Tax Profiles, Rate Tables** (including tax or not) and the **next parameters**:

- invoice time (transaction date);
- client ID;
- currency ID;
- positive or negative amount.

✓ Tips

- In case you change one of the parameters listed above and the rerating is done, you might have additional transactions (with zero or non-zero taxes).
- When a customer has calls with and without taxes for the same hour, two charges will be listed in the transactions section: one charge with taxes and the second one without taxes.
- If you see a transaction with a tax represented as a dash (), it means that all taxes were included in rate tables.

The section is presented in the form of a table of all conducted transactions with the following columns:

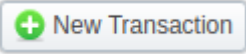
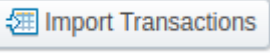
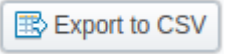






Screenshot: Transactions section main window

| ID | Payment Account | Client / Reseller | Client ID | Amount | Taxes | Description | Transaction Date | Author |
|----|-----------------------|-------------------|-----------|------------|-----------|---|---------------------------|--------|
| 74 | Payment: General | Rose orig | 11 | 20.00 USD | — | | 02/20/2018 16:37:06 +0000 | admin |
| 10 | Charge: Services | Rose orig | 11 | -7.55 USD | 0.00 USD | | 02/19/2018 14:00:00 +0000 | |
| 2 | Payment: General | Rose orig | 11 | 50.00 USD | — | PAYMENT FOR Rose Orig | 02/19/2018 00:00:00 +0000 | |
| 6 | Charge: Products Fees | Rose orig | 11 | -15.00 EUR | -1.50 EUR | Package activation payment: Package EUR Calls money | 12/31/2016 23:59:59 +0000 | |
| 7 | Charge: Products Fees | Rose orig | 11 | -10.00 USD | -1.00 USD | Package activation payment: Package USD Calls money | 12/31/2016 23:59:59 +0000 | |


| Column Name | Description |
|-------------------------|--|
| ID | Payment through an ID number |
| Payment Account | Shows a respective payment account, related to a performed payment or a respective charge type, such as <i>calls</i> , <i>products</i> , <i>extra charges</i> (each type has a visual representation in a form of a respective icon) |
| Client /Reseller | Displays the name of a client or reseller that was engaged in payment operation |
| Client ID | Customer's identity |
| Amount | The respective payment operation sum |
| Taxes | An amount of taxes |

| | |
|-------------------------|---|
| Description | Comments about a respective payment |
| Transaction Date | Displays a respective payment date, related to a performed payment |
| Author | Name of the user who performed the latest transaction (regardless whether it's a payment or a charge) |

The list of **functional buttons/icons** is as follows:

| Button/Icon | Description |
|---|--|
|  | Allows to create a new transaction |
|  | Allows to import user's transactions into the system |
|  | Allows to download a list of transactions in a .csv file |
|  | Indicates the type of transaction - payment |
|  | Indicates the type of transaction - extra charges |
|  | Indicates the type of transaction - services charges |
|  | Indicates the type of transaction - packages fees |
|  | Indicates that a transaction is approved |
|  | Allows deleting a transaction from the system. Requires confirmation |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow  icon, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu

Attention

Author column is going to be filled only if a transaction has been added **manually** by a user through the **Transactions** section in **JeraSoft Billing** or the **Refill Balance** page on **JeraSoft Client Portal**. In case a transaction is automatically generated by the system, the **Author** column will be empty.

Client:

Payment Account:

Type:

Payments Status:

Charges Coverage:

Date: —

Under Reseller:

| Field | Description |
|-------------------------|--|
| Client | Indicate a client you wish the section to be filtered by |
| Under Reseller | Filter the list of all payments for the selected Reseller's Clients. This field can take multiple values. |
| Payment Account | Select from the list of all payment accounts in the system |
| Type | Select a type of transaction: <ul style="list-style-type: none"> • Payment • Charge |
| Payments Status | Select from the list of transaction statuses: <ul style="list-style-type: none"> • Pending • Approved <p>Only fillable when Type is Payment.</p> |
| Charges Coverage | Select from the list: <ul style="list-style-type: none"> • Invoiced (already covered by Invoices) • Not Invoiced (not covered by Invoices) <p>Only fillable when Type is Charge.</p> |
| State | Indicate whether you wish payments covered by the invoices to be displayed by selecting from the list: <ul style="list-style-type: none"> • Covered • Uncovered |
| Date | Specify the date in the date picker |

After filling in the fields, click **Search** to filter section data or **Reset** to clear search results.

Adding New Payment/Charge

To add a payment, click the **New Transaction** button. A new pop-up window will appear after that. Specify the following parameters and click the **Apply** button.

Screenshot: *New transaction settings*

Transactions

Client:

Type: Payment ▼

Payment Account: General ▼


Amount: USD ▼

Transaction Date: Approved ▼

Description:

OK
Cancel
Apply

| Field name | Description |
|-------------------------|--|
| Client | Indicate a target client |
| Type | Specify a type of transaction. For incoming transactions, select Payment operation type, for outgoing – select Charge . |
| Payment Account | <p>Choose a respective account from the drop-down list of all available payment accounts. For charge type, you can select:</p> <ul style="list-style-type: none"> extra charges outgoing; extra charges incoming. <div style="background-color: #ffff00; padding: 10px; margin-top: 10px;"> <p>⚠ Attention</p> <p>Please note that you will have the same type of payment account in invoices. So, you can choose where the following charge will be shown in an outgoing/incoming invoice.</p> <p>For example, if you want to give a refund to the client, please select extra charges outgoing. It will guarantee that this charge will be visible in the invoice.</p> </div> |
| Amount | <p>Insert an amount of the transaction, which can be positive or negative:</p> <ul style="list-style-type: none"> positive amount is credited to a client; negative amount is debited from a client. <div style="background-color: #e0ffe0; padding: 10px; margin-top: 10px;"> <p>✔ Tip</p> <p>Transaction amounts could be specified with a comma as a decimal delimiter: for example, 2,45.</p> </div> <p>If your transaction type is Charge, you can choose whether a specified amount includes a tax or not by choosing a respective value in the drop-down list:</p> <ul style="list-style-type: none"> no taxes; including taxes; excluding taxes. <p>The tax rate is based on the tax profile of the client's reseller.</p> |
| Transaction Date | Indicate the actual date of the transaction in a date picker |
| Description | Notes for a new transaction |

| | |
|---------------|--|
| Status | Define the state of the transaction: <ul style="list-style-type: none"> • pending • approved <div style="background-color: #e0ffe0; padding: 10px; margin-top: 10px;"> <p> Tip</p> <p>If you change the transaction status in the respective field from Approved to Pending when adding a payment, this payment will have to pass additional approval check by a billing operator</p> </div> |
|---------------|--|

Attention

When a customer has 2 calls (with and without taxes) for the same hour, **two charges** will be listed in the transactions: *one charge with taxes* and a *second one - without taxes*. In case you change one of the parameters listed above and the rerating is done, you might have additional transactions.

If you see a transaction with a **tax represented as a dash ()**, it means that all taxes were included in rate tables.

When the **Reseller owns a payment account**, transactions for this account can be created for Clients and Sub-Resellers belonging to this Reseller. However, transactions of this Reseller (owner of the account) cannot be assigned to this payment account.

Exporting and Importing Transactions

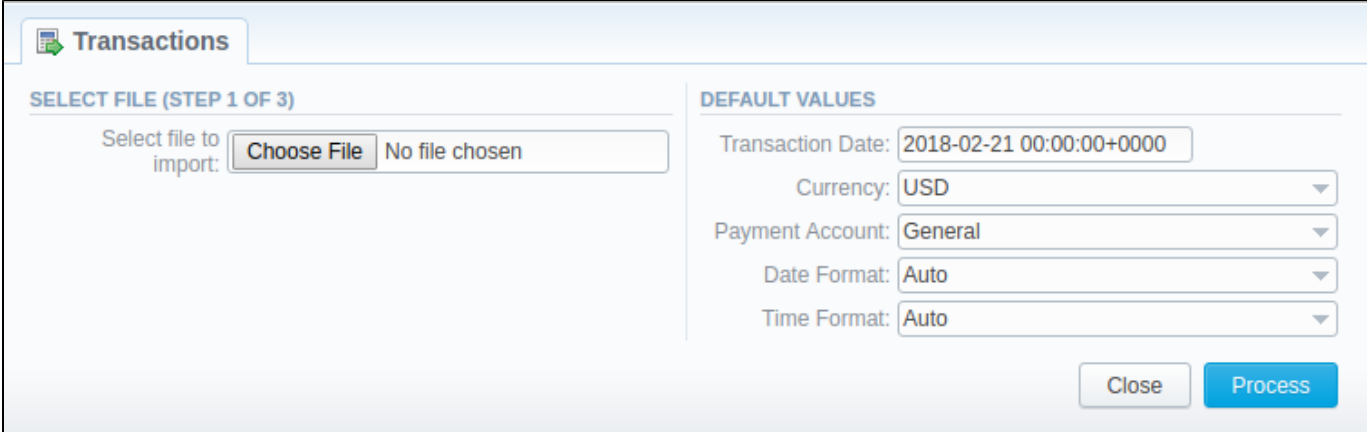
By clicking the **Export to CSV** button, you will be able to export all currently stored payments in a **.csv** file.

You can easily perform an import of payments by clicking the **Import Transactions** button and following on-screen instructions:

Step 1: Selecting a File and Specifying Additional Parameters

Upload a file from your computer, indicate such default parameters as **Transaction Date, Currency, Payment Account, Date and Time Format**, and click **Process**.

Screenshot: Transactions importing process. Step 1



Step 2: Recognizing The File

The system will recognize the file and you need to select 3 mandatory columns: **Client Info, Amount,** and **Transaction Date**. Following this, click **Process >>** again.

Screenshot: Transactions importing process. Step 2

SELECT COLUMNS (STEP 2 OF 3)

| ID | Transaction Date | Client / Reseller | Client ID | Client Info | Amount | Taxes | Currency | Description | Status | Author | Skip |
|-----|---------------------------|-------------------|-----------|--------------------------------|--------|-------|----------|---|----------|--------|--------------------------|
| 129 | 02/21/2018 16:00:11 +0000 | Rose term | 12 | Client Info Amount | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 128 | 02/21/2018 15:50:07 +0000 | Rose term | 12 | Description | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 124 | 02/21/2018 15:10:07 +0000 | Rose term | 12 | Transaction Date | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 123 | 02/21/2018 15:00:06 +0000 | Rose term | 12 | Charge: Products Fees | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 121 | 02/21/2018 14:56:19 +0000 | Rose orig | 11 | Charge: Extra Charges Outgoing | 20,00 | 2,00 | USD | | approved | admin | <input type="checkbox"/> |
| 119 | 02/21/2018 14:53:38 +0000 | Rose orig | 11 | Charge: Extra Charges Incoming | 12,00 | 1,20 | USD | | approved | admin | <input type="checkbox"/> |
| 122 | 02/21/2018 14:50:06 +0000 | Rose term | 12 | Charge: Products Fees | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 117 | 02/21/2018 14:41:09 +0000 | Rose orig | 11 | Charge: Extra Charges Outgoing | 18,18 | 1,82 | USD | | approved | admin | <input type="checkbox"/> |
| 118 | 02/21/2018 14:40:07 +0000 | Rose term | 12 | Charge: Products Fees | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 115 | 02/21/2018 14:38:50 +0000 | Rose orig | 11 | Payment: General | -10,00 | 0,00 | USD | | approved | admin | <input type="checkbox"/> |
| 116 | 02/21/2018 14:30:07 +0000 | Rose term | 12 | Charge: Products Fees | -6,00 | 0,00 | EUR | Package periodical payment: Package DID | approved | | <input type="checkbox"/> |
| 113 | 02/21/2018 14:26:03 +0000 | Rose orig | 11 | Charge: Extra Charges Outgoing | -13,00 | 0,00 | USD | | approved | admin | <input type="checkbox"/> |

Step 3: Checking The Rows

Having specified the required columns, you need to check the rows to make sure that no mistake has been made. On doing it, click **Process>>** to finish the importing process.

Screenshot: Transactions importing process. Step 3

Transactions

CHECK ROWS (STEP 3 OF 3)

| | Identified by | Transaction Date | | Client Info | | Amount | | | Skip |
|---|---------------|--------------------------|--------------------|-------------|-----------|----------|--------|----------|--------------------------|
| | | Original | Parsed | Original | Parsed | Original | Parsed | Currency | |
| ✓ | Client Name | 2018-02-21 16:00:11+0000 | 2018-02-21 16:00:1 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 15:50:07+0000 | 2018-02-21 15:50:0 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 15:10:07+0000 | 2018-02-21 15:10:0 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 15:00:06+0000 | 2018-02-21 15:00:0 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:56:19+0000 | 2018-02-21 14:56:1 | Rose orig | Rose orig | 20 | 20 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:53:38+0000 | 2018-02-21 14:53:3 | Rose orig | Rose orig | 12 | 12 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:50:06+0000 | 2018-02-21 14:50:0 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:41:09+0000 | 2018-02-21 14:41:0 | Rose orig | Rose orig | 18.18 | 18.18 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:40:07+0000 | 2018-02-21 14:40:0 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:38:50+0000 | 2018-02-21 14:38:5 | Rose orig | Rose orig | -10 | -10 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:30:07+0000 | 2018-02-21 14:30:0 | Rose term | Rose term | -6 | -6 | USD | <input type="checkbox"/> |
| ✓ | Client Name | 2018-02-21 14:26:03+0000 | 2018-02-21 14:26:0 | Rose orig | Rose orig | -13 | -13 | USD | <input type="checkbox"/> |

Balance Report

In this article

- [Section overview](#)
- [Creating a New Balance Report](#)
- [Simple scheme: how to generate a balance report](#)
- [Creating a Query Template](#)
- [Export Generated Report](#)


Section overview








Balance report section is a helpful balance analysis tool aimed at taking control over your funds as painlessly as it can possibly be. It shows a full client's charges and payments history for the selected period and provides a possibility to export the report data to **.csv**, **.xls** or **.xls** files depending on your preferences.

Screenshot: Balance Report query form

Creating a New Balance Report

To create a new summary report, you need to fill in the following parameters in the form and press **Query** button:

| Information block | Field Description |
|---|---|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the bar at the top of a drop-down menu with filters. |
| | Period Specify the time interval for the report and a timezone. Please note that the Period field is mandatory. |
| | Report Basis Select a balance mode to show a respective set of data <ul style="list-style-type: none"> • Accrual - this mode is compiled by invoices and payments, it shows fixed balance • Cash - this mode is compiled by payments and charges, it shows live balance |
| | Client Type Choose the system entity for the report from the following: <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop |
| | Group by Select from the list of the following accessible options to group data in reports: <ul style="list-style-type: none"> • Time: Month, Date. • Document: Client ID, Payment Account ID. |
| | Additional Filters |
| | Client Define an origination client for the report |
| Payment Account Enter a target payment account for the report | |

| | | |
|---------------|--|---|
| Output | This form contains settings of the output data of the report. | |
| | Click the plus  icon next to Columns and select the required columns to add them to the Output information block. Also, you can cancel any chosen item. | |
| | Accessible columns in the report | |
| | The following columns are to add in the report: | |
| | <i>Client, Client ID, Payment Account, Document Icon, Document Info, Opening Balance (report), Debit (report), Credit (report), Closing Balance (report), Type, NO, Notes, Date, Credit (client), Debit (client), Opening Balance (client), Closing Balance (client), Client Currency.</i> | |
| | Document | |
| | Client | Name of the client/reseller/calling card/call shop , to which that current operation is assigned |
| | Client ID | A client identification number that is also present in the full list of Transactions and Invoices . |
| | Payment Account | Respective payment account, used for the indicated transactions |
| | Document Icon | File icons that generally display a type of document in the report: <ul style="list-style-type: none"> • This icon  shows different payments in the system. • This icon  defines extra incoming/outgoing charges. • This icon  means different charges or payments of the calls. • This icon  represents payments of the packages. • This icon  displays service charges. • This icon  represents the invoices in the system. |
| | Document Info | The document that an operation corresponds to (charge, payment, invoice, etc.) |
| | Type | Indicated type of document |
| | NO | Number of transactions |
| | Notes | Notes indicated in the comments of transactions or in invoices |
| | Date | An operation date |
| | Amount | |
| | Opening Balance (report) | Start client's balance prior to a respective operation, displayed in the report currency |
| | Closing Balance (report) | Final client's balance after a respective operation, displayed in the report currency |
| | Debit (report) | Operation sum that has positive income (incoming payment/invoice), displayed in the report currency |
| | Credit (report) | Operation sum that has negative income (outgoing payment/invoice), displayed in the report currency |
| | Opening Balance (client) | Start client's balance prior to a respective operation, displayed in the client currency |
| | Closing Balance (client) | Final client's balance after a respective operation, displayed in the client currency |
| | Debit (client) | Operation sum that has positive income (incoming payment/invoice), displayed in the client currency |
| | Credit (client) | Operation sum that has negative income (outgoing payment/invoice), displayed in the client currency |
| | Client Currency | Currency indicated in a client's profile |
| | Other output settings | |

| | |
|------------------------|--|
| <p>Type</p> | <p>Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx.</p> <p>Also, a type of table view:</p> <ul style="list-style-type: none"> • Plain - a simple table view • Grouped - a table view with grouped data and a possibility to collapse it <div style="background-color: #ffffcc; padding: 5px;"> <p>Attention</p> <p>Please note that the Grouped type of table view is available only for Excel XLSx and Web formats, it doesn't work with CSV and Excel XLS.</p> </div> |
| <p>Send to</p> | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffffcc; padding: 5px;"> <p>Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report. It doesn't work with Web.</p> </div> |
| <p>Currency</p> | <p>Specify a currency for the report. And all values will be automatically converted in the report to the specified currency.</p> |

Screenshot: Balance Report section

Document

Client

Payment Account

FILTERS

Period: This Month | 2019-11-01 00:00:00 — 2019-11-30 23:59:59 UTC

Report Basis: Accrual

Client Type: Client

Group by: Month

Save Query

OUTPUT

Type: Web | Grouped

Currency: USD

Export to XLSX ?

| Month | Client | Payment Account | Client ID | Document Info | Opening Balance (report) | Debit (report) | Credit (report) | Closing Balance (report) | Client Currency | Opening Balance (client) | Debit (client) | Credit (client) | Closing Balance (client) |
|---------|------------|-----------------|-----------|---------------|--------------------------|----------------|-----------------|--------------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|
| 11/2019 | | | | | 0.00 USD | | 1 195.98 USD | -1 195.98 USD | | 0.0000 | | | 0.0000 |
| 11/2019 | Customer A | General | 12 | Payment 2 | 0.0000 USD | | 1 000.0000 USD | -1 000.0000 USD | USD | 0.0000 USD | | 1 000.0000 USD | -1 000.0000 USD |
| 11/2019 | Vendor B | General | 17 | Payment 3 | -1 000.0000 USD | | 100.0000 USD | -1 100.0000 USD | USD | -1 000.0000 USD | | 100.0000 USD | -1 100.0000 USD |
| 11/2019 | Customer C | General | 14 | Payment 5 | -1 100.0000 USD | | 95.9800 USD | -1 195.9800 USD | USD | -1 100.0000 USD | | 95.9800 USD | -1 195.9800 USD |

Warning

Please note, the system shows rounded values in the reports. However, while calculating, the system takes an exact value. Hence, the procedure of the rounding is as follows:

- the system rounds currency values according to the settings of a respective currency;
- other parameters are rounded to the nearest ten thousandths. For example, 3.879256 to 3.8793.

Simple scheme: how to generate a balance report

To create a simple report you need to:

- select target parameters for the report in the **Filters** menu;
- enter the interval and specify a timezone;
- select the **Mode** and **Client Type**;
- specify parameters in the **Group by** field; for example, **Client ID**;
- choose columns in the **Output** form; for example, **Client, Payment Account, Document Icon, Document Info, Opening Balance, Debit, Credit, Closing Balance, Date**;
- specify the **Type** field or leave its default settings (Web/Grouped);
- click the **Query** button.

Tip

- If the data is grouped in the report, it will be shown initially collapsed. To expand or collapse data in your report, click the plus or minus icons.
- Please note, the **Order by** option is active when the **Type** of the Output form is **Plain**. When it is **Grouped**, the data is only sorted by values specified in the **Group by** field.

Creating a Query Template

To create a template for reports and save specified parameters, click on the **Save Query** button. A pop-up window with settings will appear, and you will need to fill in the following form:

Screenshot: New Query Template form

To load the already existing templates while generating statistic reports, click the **Load Query** button.

Export Generated Report

You can export data to **XLSx** file, which contains currently presented data, by clicking **Export to XLSx**, respectively.

Screenshot: Balance Report section

| Month | Client | Payment Account | Client ID | Document Info | Opening Balance (report) | Debit (report) | Credit (report) | Closing Balance (report) | Client Currency | Opening Balance (client) | Debit (client) | Credit (client) | Closing Balance (client) |
|---------|------------|-----------------|-----------|---------------|--------------------------|----------------|-----------------|--------------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|
| 11/2019 | Customer A | General | 12 | Payment 2 | 0.00 USD | | 1 195.98 USD | -1 195.98 USD | USD | 0.0000 USD | | | 0.0000 |
| 11/2019 | Vendor B | General | 17 | Payment 3 | -1 000.0000 USD | | 100.0000 USD | -1 100.0000 USD | USD | -1 000.0000 USD | | 100.0000 USD | -1 100.0000 USD |
| 11/2019 | Customer C | General | 14 | Payment 5 | -1 100.0000 USD | | 95.9800 USD | -1 195.9800 USD | USD | -1 100.0000 USD | | 95.9800 USD | -1 195.9800 USD |

Attention

- You can check an **actual date interval** of the report by clicking the **Info** icon, and it could be different from **the Interval** specified above if there is no date for the period.
- When you export the file from the Balance Report in **Excel XLSx** format, values will be displayed in the report currency. The client and transaction currencies will not be shown in the exported file.

Error rendering macro 'contentbylabel'

parameters should not be empty

Resellers

In this article

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- [Advanced Search](#)
- [Adding a New Reseller](#)
- [Adding a New Manager](#)
- [Reseller Removal](#)
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- [Rates Notifications](#)
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Section overview

Reseller in JeraSoft Billing, in the majority of cases, is a company that has a certain number of [clients](#) and governs their activities in the system. Like any company, it can have a range of managers, each responsible for a certain group of company clients. The **Manager** has limited functionality: doesn't have his own balance, therefore, he cannot perform any transactions; neither origination nor termination rate table cannot be assigned to him, etc. The **Resellers** section is designed to provide a user with a possibility to **track and manage their company information and activity, build a hierarchy of company affiliates, or assign its managers**. The section is presented in the form of a table with the following columns:


Screenshot: Resellers section

| Column name | Description |
|--------------------------|---|
| ID | Reseller's/Manager's identification number |
| Name | Name of a reseller/manager |
| Available Balance | Reseller's available balance (live balance + credit) |
| Clients | The total amount of a respective reseller's/manager's clients |

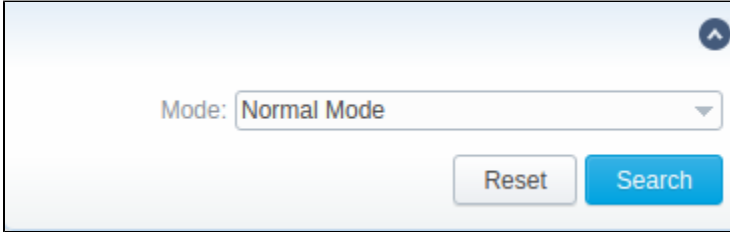
The following functional buttons and icons are present in the section:

| Button/Icon | Description |
|-------------|--|
| | Allows creating a new reseller |
| | Allows creating a new manager |
| | Allows assigning an origination rate table to a respective reseller |
| | Allows assigning a termination rate table to a respective reseller |
| | Allows viewing a list of a following reseller's/manager's users |
| | Allows viewing history of changes for a respective reseller/manager in the Audit log section |
| | Allows viewing reseller's balance operations in the Transactions section |
| | Allows viewing a list of reseller's/manager's clients in the Clients section |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow  icon, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu



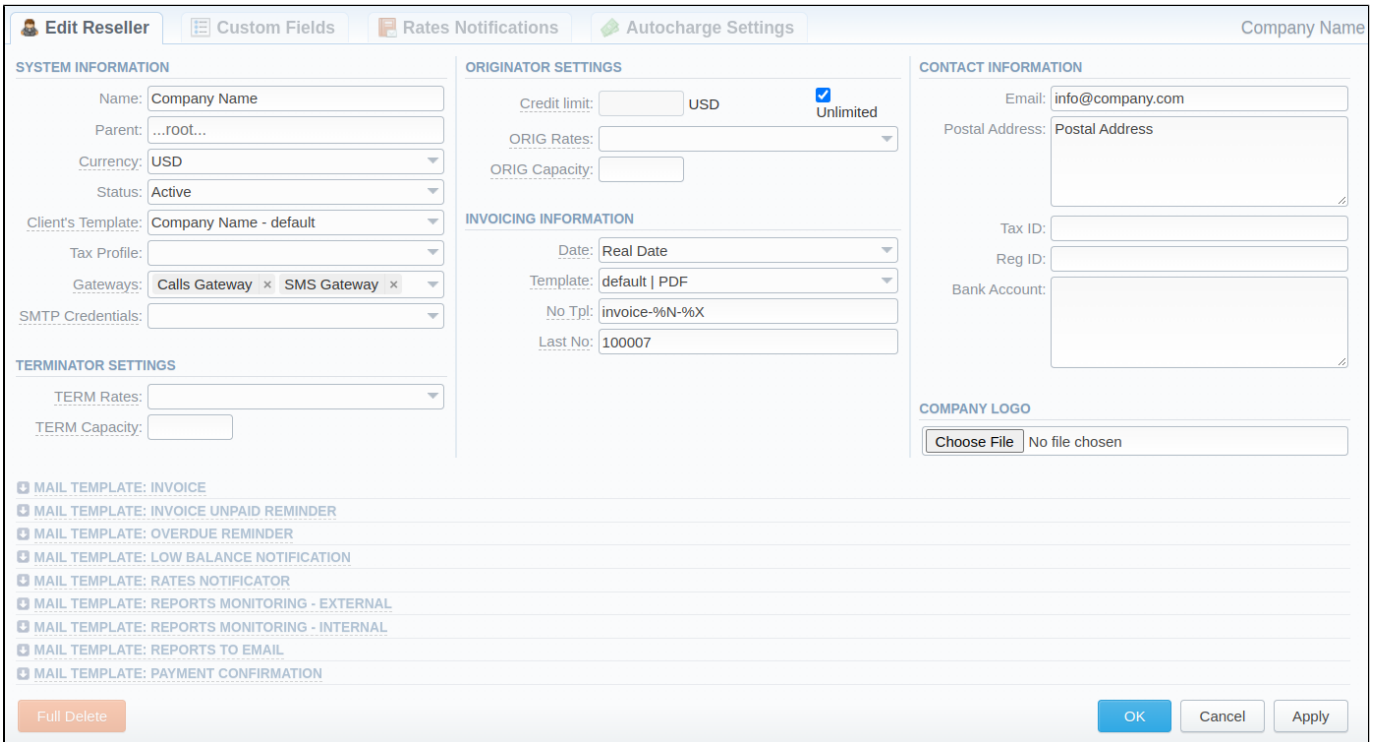
| Field | Description |
|-------------|--|
| Mode | Select a mode for the resellers' display: To apply the specified search criteria, click the Search button; to cancel the applied parameters, click Reset . <ul style="list-style-type: none"> Normal Mode - only resellers with Active status will be displayed Archive Mode - all resellers regardless of the status will be displayed |

Adding a New Reseller

To add a company, you need to:

- click the **New Company** button;
- fill in all the required fields in the appeared pop-up window (see below) and click **OK**.

Screenshot: Adding a new company





| Information block | Fields Description |
|---------------------------|---|
| System Information | General information about a company |
| | <ul style="list-style-type: none"> • Name Specify the name of one of your companies (or affiliates). This field is mandatory. |

| | |
|--|--|
| <ul style="list-style-type: none"> • Parent | <p>Indicate a parent for a reseller or make it a root one. By default, the field value is set to root</p> |
| <ul style="list-style-type: none"> • Currency | <p>Select a preferred currency for rates and invoices from the drop-down list of all available ones (see the Currencies section)</p> |
| <ul style="list-style-type: none"> • Status | <p>Define the status of a reseller:</p> <ul style="list-style-type: none"> • Active • Deleted |
| <ul style="list-style-type: none"> • Client's Template | <p>Select a template that will be used for all clients belonging to this reseller or manager by default (see the Clients Template section)</p> |
| <ul style="list-style-type: none"> • Tax Profile | <p>Indicate a tax profile that will be used for this reseller and reflected in invoices (refers to the Taxes Profiles section).</p> <ul style="list-style-type: none"> • SureTax and Compliance are tax calculation services, which allow managing your compliance with tax law. These profiles are used for further calculation in invoices. To get more details, check out the US Taxation article. <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <p>For proper usage of SureTax and Compliance, Invoice Number should contain only Latin and numeric characters. Max length is 40 symbols. Dst and Src Numbers should be in the NPANXXNNNN (10 digits) format.</p> </div> |
| <ul style="list-style-type: none"> • Gateways | <p>Select gateway(s) for this reseller</p> |
| <ul style="list-style-type: none"> • SMT P Credentials | <p>Select SMTP Credentials for this Reseller. Credentials are managed in the Data Sources section</p> |
| <p>Terminator Settings</p> | <p>Reseller's billing settings for outgoing calls</p> |
| <ul style="list-style-type: none"> • TER M Rates | <p>Rates for outgoing events from customers under a current reseller. Enables resellers billing mode</p> <div style="background-color: #e0ffe0; padding: 5px;"> <p>✔ Tip</p> <p>For more information about resellers billing mode, address this article</p> </div> |
| <ul style="list-style-type: none"> • TER M Capacity | <p>Termination capacity for all clients, belonging to this reseller. Leave this field empty for unlimited capacity</p> |
| <p>Origination Settings</p> | <p>Current Reseller's billing settings for incoming calls</p> |
| <ul style="list-style-type: none"> • Unlimited check box | <p>Here you can set a specific payment mode for a client. Unlimited mode means that a client will have unlimited credit. Otherwise, the client's Balance + Credit value will be checked on RADIUS or SIP authorization. When this field is checked, the Credit limit field becomes unavailable.</p> |

| | | |
|------------------------------|---|---|
| | <ul style="list-style-type: none"> • Cre dit limit | <p>The additional field next to the Unlimited checkbox. User can indicate an amount of reseller's credit</p> |
| | <ul style="list-style-type: none"> • ORI G Rates | <p>Specify rates for incoming events from customers under a current reseller. Enables resellers billing mode</p> |
| | <ul style="list-style-type: none"> • ORI G Cap acity | <p>Indicate origination capacity for all clients, belonging to this reseller. Leave this field empty for unlimited capacity</p> |
| Invoicing Information | <p>Current Reseller's invoicing settings</p> | |
| | <ul style="list-style-type: none"> • Date | <p>Allows you to select how the system sets an invoicing date:</p> <ul style="list-style-type: none"> • Real date – sets an invoicing date to actual invoicing date • Last day – sets an invoicing date to date of last day of invoicing period |
| | <ul style="list-style-type: none"> • Tem plate | <p>Select an invoice template that will be assigned to a reseller</p> |
| | <ul style="list-style-type: none"> • No Tpl | <p>Allows to define a default format of invoice's name</p> |
| | <ul style="list-style-type: none"> • Last No | <p>Define the last used invoice number</p> |
| Contact Information | <p>Some additional information</p> | |
| | <ul style="list-style-type: none"> • Ema il | <p>Company's email (it is required to specify an email to receive notifications). Use only Latin characters. This field is mandatory</p> |
| | <ul style="list-style-type: none"> • Pos tal Add ress | <p>Company's postal address</p> |
| | <ul style="list-style-type: none"> • Tax ID | <p>An ID of the tax-paying entity</p> |
| | <ul style="list-style-type: none"> • Reg ID | <p>Company's registration ID</p> |
| | <ul style="list-style-type: none"> • Ban k Acc ount | <p>Company's bank account info</p> |
| Company Logo | <p>Here you can add a file with a company's logo. To delete the company logo, open the edit form of a respective Reseller with a logo, then click the delete icon to remove the old logo.</p> | |

| | |
|-----------------------|---|
| Mail Templates | A detailed description of all Mail Templates and their configuration is presented at the end of the article |
|-----------------------|---|

 **Useful Tip**
 You can use multiple emails per field if necessary. Just separate them with a comma or semicolon.

 **Attention**

- Changes in Resellers' settings will not be applied instantly. They will be automatically reloaded at the next run of the **Cache Manager** service.
- **Parent Reseller has access to all information of its Sub-Resellers**, and also can assign **any routing plan and rate table** to its Sub-Resellers.

Adding a New Manager

To add a manager, click the **New Manager** button. After specifying the required fields, click **OK**.

Screenshot: Adding a new manager

| Information block | Fields Description |
|----------------------------|---|
| System Information | General information about a Manager |
| | <ul style="list-style-type: none"> • Name Here you can specify the name of a manager. This field is mandatory. |
| | <ul style="list-style-type: none"> • Parent Select a parent for a manager |
| | <ul style="list-style-type: none"> • Status Select the current status of a manager: <ul style="list-style-type: none"> • Active • Deleted |
| Contact Information | Some additional information |

| | |
|-------------------------|---|
| • Email | Manager's email. Use only Latin characters. |
| • Postal Address | Manager's postal address |

Reseller Removal

To delete a Reseller/Manager from the system, you need to **change the status** from **Active** to **Deleted** in the Reseller's/Manager's profile editing form.

Screenshot: Editing reseller's status

The screenshot shows the 'Manager 1' profile editing form. Under the 'SYSTEM INFORMATION' section, the 'Status' dropdown menu is open, displaying 'Active' and 'Deleted' options. A red arrow points to the 'Deleted' option. Below this, the 'CONTACT INFORMATION' section includes fields for 'E-mail' (manager@mail.com) and 'Postal Address'. At the bottom left, the 'Full Delete' button is highlighted with a red box. Other buttons at the bottom are 'OK', 'Cancel', and 'Apply'.

Please note that, in fact, a Reseller/Manager **will not be deleted fully**; it will be **archived**. To display them, use **Advance Search** (see above). To delete a profile completely, you need to click **Full Delete** in this editing window.

Custom Fields

- **Custom Fields** are used as custom variables that will be represented as readable text in invoice templates. A Custom Field allows adding information about a client.
- **Custom Package Fields** are also used as custom variables that allow adding information about a package.

To add a new field, follow these steps:

1. Click the **Add Custom Field** button.
2. Specify the **Field Key** and **Title** fields for a custom item. For example, **voip_phone_sell** as Key and **VoIP Phone** as common Title, which will be visible for all clients. Please note that the **Field Key must contain word characters only**.
3. Add respective notes to the **VoIP Phone** field in the **Client's settings/Package settings > Custom Fields** tab.
4. Create an invoice template and assign it to a target reseller. Then, the **Clients Custom Fields** and **Package Custom Fields** tables will appear in the **Invoice Template** settings. You simply need to add those tables to the invoice template.
5. Finally, you can generate an invoice.

Screenshot: Custom Fields

Rates Notifications

Rates Notification settings in the **Resellers** profile allow creating a **default rate notification** for the clients that belong to a target reseller.


Screenshot: Rates Notifications

To configure these settings, open the **Rate Notifications** tab in the reseller profile. The structure of a tab is as follows:

| Field | Description |
|--------------------------------------|---|
| Output format | |
| Fields Delimiter | Set a delimiter for the fields if you've chosen .csv . For .xls format, this field is unavailable |
| With headers row | Include a row with column names in a file |
| Export Columns | Select the columns to export |
| Code Deck | Select a code deck here to rewrite code names in an export file if needed |
| Codes from code deck checkbox | Include only codes, which are present in a specified Code Deck |
| Codes Output | Select a way codes must be displayed |
| | <ul style="list-style-type: none"> Separate Rows Each code is placed into a single row |
| | <ul style="list-style-type: none"> Delimited List Codes are grouped by a code name in a row. For example, 5510, 5511, 5512 |

| | | |
|--------------------------------|---|--|
| | <ul style="list-style-type: none"> • Ranges List | Codes are grouped by a code name into ranges plus delimiter. For example, 5510-5512, 5515 |
| Date Format | Specify the date format in your export file. Example of the field syntax: if you enter “ %d-%m-%Y ” here, your date will look like 25-02-2018 | |
| Header Text/Footer Text | Allows to specify additional text into an exported file as a header and footer, respectively | |

Description of all columns that could be selected for a rate notification is provided below:

 Note that the first selected column will be the one used for sorting the rates list.

| Column Name | Description | | | | | |
|--|--|---------------------------|---------------|-----------|------------------|---------------------------|
| Code / Code Name | Code or Code Name of a respective rate | | | | | |
| Effective Date | Date, on which a rate to be applied | | | | | |
| Rate | Price | | | | | |
| Min Volume | The minimum volume of chargeable events | | | | | |
| Interval | Chargeable interval | | | | | |
| Grace Volume | Free of charge interval | | | | | |
| Setup Fee | Interval of a setup fee | | | | | |
| Profile | Time profile (<i>all time, business time, non-business time, weekends</i>) | | | | | |
| End Date | Date, on which the rate ends | | | | | |
| Previous Rate | Rate used before the present time | | | | | |
| Prev Diff | Shows how current rate differs from a previous one after import | | | | | |
| Prev Diff Status | Shows how the current rate's status changed in comparison to a previous one (unchanged, increased, decreased) | | | | | |
| Prev Diff (export) | Shows how the current rate differs from a previous one after export | | | | | |
| Prev Diff Status (export) | Rate's changes after the last export. Shows the status of how the current rate differs from a previous one. The rate will have an unchanged status if the Effective date is lower than the Last Notification Date | | | | | |
| Step 1: Notification type: All rates unique mode - First Notification: 07/07/2017 | | | | | | |
| Code | Rate | Effective From | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 10 | 07/01/2017 00:00:00 +0000 | - | - | new | unchanged |
| 2 | 10 | 07/01/2017 00:00:00 +0000 | - | - | new | unchanged |
| 3 | 10 | 07/01/2017 00:00:00 +0000 | - | - | new | unchanged |
| Step 2: Added new rates with effective date 07/21/2017 - Second Notification: 07/14/2017 | | | | | | |
| Code | Rate | Effective From | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| 2 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| 3 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| Step 3: Rate with code 1 was edited and the increase was canceled - Third Notification: 07/21/2017 | | | | | | |
| Code | Rate | Effective From | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 10 | 07/21/2017 00:00:00 +0000 | 10 | 0 | unchanged | unchanged |
| 2 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| 3 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| Step 4: Rate with code 2 was edited and added a new rate for code 3 - Fourth Notification: 07/28/2017 | | | | | | |
| Code | Rate | Effective From | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 10 | 07/21/2017 00:00:00 +0000 | 10 | 0 | unchanged | unchanged |
| 2 | 20 | 07/21/2017 00:00:00 +0000 | 10 | 10 | increased | unchanged |
| 3 | 20 | 07/31/2017 00:00:00 +0000 | 15 | 5 | increased | increased (5.0000) |
| Notes | Additional information | | | | | |
| Tag | Tags that are assigned to a respective rate | | | | | |
| Policy | Indicated policy of the rate | | | | | |
| Status | Define a current rate status | | | | | |

Autocharge Settings

Autocharge Settings in the **Resellers** profile allow configuring the settings for Authorize.net or USAePay payment gateways. These settings will be true for all the clients under the respective Reseller.

Screenshot: Autocharge Settings

To configure these settings, open the **Autocharge Settings** tab in the reseller profile. The structure of a tab is as follows:


| Field | Description |
|-------------------------|--|
| Authorize.Net | |
| Login | API login |
| Transaction Key | API transaction key |
| Gateway Currency | A currency declared by the Payment Gateway |
| System Currency | Default JeraSoft Billing system currency |
| Payment Account | Payment Account name |
| USAePay | |
| API Key | API key |
| API PIN | API PIN to the API key |
| System Currency | Default JeraSoft Billing system currency |
| Payment Account | Payment Account name |

Configuring Mail Templates

Also, there are different mail templates you can configure in your company's profile:

Screenshot: Mail Templates

| |
|--|
| MAIL TEMPLATE: INVOICE |
| MAIL TEMPLATE: INVOICE UNPAID REMINDER |
| MAIL TEMPLATE: OVERDUE REMINDER |
| MAIL TEMPLATE: LOW BALANCE NOTIFICATION |
| MAIL TEMPLATE: RATES NOTIFICATOR |
| MAIL TEMPLATE: REPORTS MONITORING - EXTERNAL |
| MAIL TEMPLATE: REPORTS MONITORING - INTERNAL |
| MAIL TEMPLATE: REPORTS TO EMAIL |
| MAIL TEMPLATE: PAYMENT CONFIRMATION |

| Template Name | Description |
|---|---|
| Mail Template: Invoice | Used when sending an invoice to the customer |
| Mail Template: Invoice Unpaid Reminder | Used when sending a payment notification to a customer (sending notification on "Notify Days (before)") |
| Mail Template: Overdue Reminder | Used when sending a payment notification to a customer (sending notification on "Notify Days (after)") |
| Mail Template: Low Balance Notification | Used when sending a low balance notification to a customer <div style="background-color: #e0ffe0; padding: 5px; margin-top: 10px;"> <p> Tip</p> <p>You can add a rounding rule for a client's balance during low balance notification. For example, to round up to 2 decimal places, you need to add the variable <code>\$(client['balance'])</code> in the Mail template: Low Balance Notification in reseller's settings and specify the number of rounding decimals in the Totals Precision field of the Currencies section.</p> </div> |
| Mail Template: Rates Notificator | Used when sending a rate changes notification to a customer |
| Mail Template: Reports Monitoring - External | Used when the system matches client's destinations and sends notifications to them during Reports Monitoring |
| Mail Template: Reports Monitoring - Internal | Used when the system sends notifications about matched statistics during Reports Monitoring |
| Mail Template: Reports To Email | Used when sending reports by email |
| Mail Template: Payment Confirmation | Used when sending a payment confirmation email to the client |

All mail templates have the following structure:

Screenshot: Reseller/Mail Template: Invoice

MAIL TEMPLATE: INVOICE

From: "\${company['name']} <\${company['c_email']}>"
 BCC:
 Subject: Invoice from \${company['name']} for \${invoice['period_start']} - \${invoice['period_finish']}

Greetings,

This is invoice \${invoice['no']} for \${invoice['period_start']} - \${invoice['period_finish']}.

--
 Autogenerated by billing system

\${company['name']}
 \${company['c_email']}

| Field | Description |
|------------------|---|
| From | Specify a name and email of a company |
| BCC | Specify who will receive a blind copy of an email |
| Subject | Indicate an email subject that may contain the company name, invoice number, etc. |
| Mail Body | Content of the letter with the template-specific variables. |

To configure any of these templates, simply click on its name. Below, you will find a full list of templates configuration syntax used in almost all kinds of configured mails concerning Clients' and Resellers' data and configuration syntax, which is used in a foregoing list of mail templates.

Configuration Syntax

General Configuration Syntax Concerning Clients' Data

| Templates Configuration Syntax | Description |
|----------------------------------|--|
| \${client['status']} | Client's status: <ul style="list-style-type: none"> • Active • Deleted |
| \${client['name']} | Client's name |
| \${client['balance']} | Client's live balance |
| \${client['balance_accountant']} | Client's fixed balance |
| \${client['credit']} | Client's available credit |
| \${client['c_company']} | Client's official company name |
| \${client['c_address']} | Post address of a client's company |
| \${client['c_email']} | Client's email |
| \${client['locale']} | Client's location |
| \${client['currencies_id']} | Currency ID, used by a client |
| \${client['tz']} | Timezone of a client |
| \${client['taxes_profiles_id']} | Taxes profile's ID, used by a client |
| \${client['tax_id']} | Customers tax ID of a client's company |
| \${client['reg_id']} | Registration ID of a client's company |

General Configuration Syntax Concerning Company's/Reseller's Data

| Templates Configuration Syntax | Description |
|--------------------------------|-------------|
|--------------------------------|-------------|

| | |
|--|---|
| <code>\${company['status']}</code> | Company's status: <ul style="list-style-type: none"> • Active • Deleted |
| <code>\${company['balance']}</code> | Company's current balance |
| <code>\${company['balance_accountant']}</code> | Company's fixed balance |
| <code>\${company['credit']}</code> | Company's available credit |
| <code>\${company['c_address']}</code> | Company's postal address |
| <code>\${company['c_email']}</code> | Email of a company |
| <code>\${company['locale']}</code> | Company's location |
| <code>\${company['currencies_id']}</code> | Company's currency ID |
| <code>\${company['tz']}</code> | Company's timezone |
| <code>\${company['taxes_profiles_id']}</code> | Company's taxes profiles |
| <code>\${company['name']}</code> | Name of a company |
| <code>\${company['tax_id']}</code> | Company's customers tax ID |
| <code>\${company['reg_id']}</code> | Company's registration ID |

Configuration Syntax for Mail Template: Invoice and Payment Reminder Notification

| Templates Configuration Syntax | Description |
|---|------------------------|
| <code>\${invoice['c_dt']}</code> | Invoice date |
| <code>\${invoice['type']}</code> | Invoice type |
| <code>\${invoice['amount']}</code> | Invoice total sum |
| <code>\${invoice['period_start']}</code> | Invoice period start |
| <code>\${invoice['period_finish']}</code> | Invoice period end |
| <code>\${invoice['due_date']}</code> | Invoice due date |
| <code>\${invoice['no']}</code> | Invoice number |
| <code>\${invoice['descr']}</code> | Invoice comments |
| <code>\${invoice['tz']}</code> | Invoice timezone |
| <code>\${invoice['state']}</code> | Invoice state |
| <code>\${invoice['name']}</code> | Invoiced client's name |
| <code>\${client['currency']}</code> | Client's currency |

Configuration Syntax for Mail Template: Low Balance Notification

| Templates Configuration Syntax | Description |
|---|--|
| <code>\${client['balance_avail']}</code> | Client's available balance: live balance + credit |
| <code>\${client['currency']}</code> | Client's currency |
| <code>\${client['alert_threshold']}</code> | Notification for a client regarding reaching a balance limit |
| <code>\${client['alert_athreshold']}</code> | Notification for an administrator regarding reaching a balance limit |

Configuration Syntax for Mail Template: Rates Notificator

| Templates Configuration Syntax | Description |
|-------------------------------------|--|
| <code>\${msg['rt_name']}</code> | Rate table name |
| <code>\${msg['lastedit_dt']}</code> | Date when a rate table was edited last |

| | |
|-----------------------|-------------------------------------|
| <code>\$(date)</code> | Date when the notification was sent |
|-----------------------|-------------------------------------|

Configuration Syntax for Mail Template: Reports To Email

| Templates Configuration Syntax | Description |
|--------------------------------------|---|
| <code>\$(report["name"])</code> | Title of a report template |
| <code>\$(report["interval"])</code> | Actual report period |
| <code>\$(report["name-full"])</code> | Title of a report template with indication of an actual report period |
| <code>\$(report["id"])</code> | ID of a report template |

Tip

If you want the date of sending a letter to be present, you can add the `$(date)` variable in any mail template.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Subscriptions

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Assigning a New Package](#)
- [Editing a Subscription](#)

Section overview




This section is designed to provide a wide variety of functions to control and manage subscriptions. First and foremost, in this section, a user can assign a relevant package to a respective client or client's account, edit and cancel it, etc. Moreover, there is detailed information regarding all the limits that have been used over a set period. The section is presented in the form of a table with the following columns:

Screenshot: *Subscriptions list*


| ID | Client | Package | Qty | Limits | Current Period | Subscription Period |
|----|------------|---------------|-----|--|--|------------------------------------|
| 3 | Customer C | Minutes SMALL | 3 | | 04/30/2021 19:30:03 | 04/30/2021 19:04:15 Not Defined |
| 5 | Customer A | Minutes BIG | 1 | Calls * 10 000.00 min Left: 9 696.02 | 04/30/2021 19:30:03 04/01/2021 00:00:00 | 03/01/2021 00:00:00 Not Defined |

| Column | Description |
|----------------------------|--|
| ID | Subscription identification number |
| Client | Name of a client (and account, if specified), to whom a package is assigned |
| Package | Name of an assigned package |
| Qty | Quantity of the assigned packages |
| Limits | Shows if a respective package has some volume limits and time or money left <ul style="list-style-type: none"> • On the left side of the bar, it shows the service, destinations, code, or code names. • On the right side of the bar, it shows a specified limit and the amount left. |
| Current Period | Date of package activation for a respective client/account End date of a package period (a package period is set in Packages Period Settings) |
| Subscription Period | Effective start and stop date of the subscription |

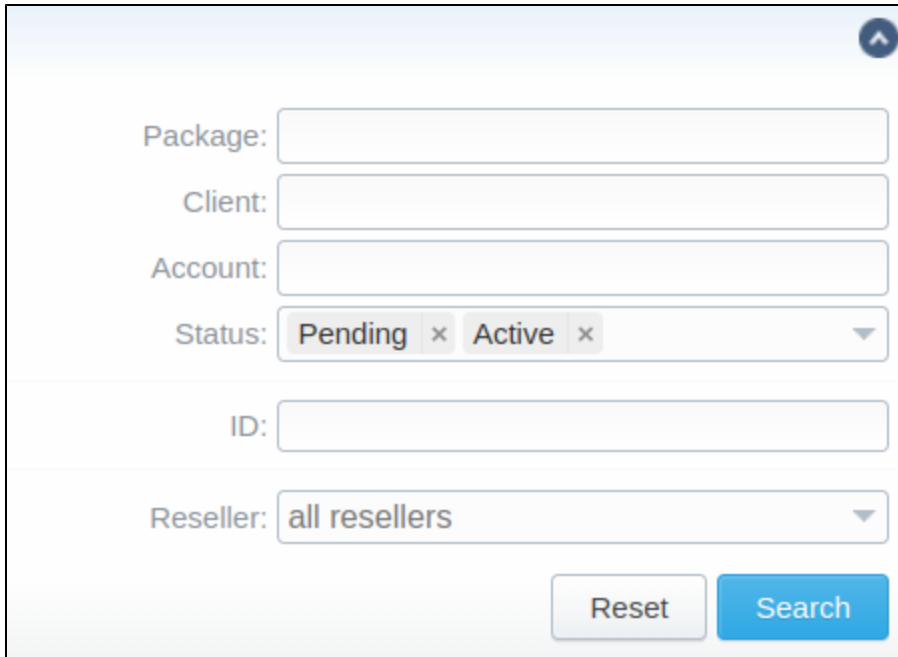
| Button/Icon | Description |
|-------------|--|
| | Allows assigning a package to a corresponding client/account |
| | Shows the full list of packages that were assigned to this client/account |
| | Marks a package that was successfully activated and will renew itself due to the package settings |
| | Marks a package that is new for a current user and was not activated yet |
| | Marks a package that is in the archive |
| | Allows editing a client's subscription |
| | Allows a user to stop the package at the beginning of the current period (<u>with balance rollback</u>). |

| | |
|---|---|
|  | Allows a user to stop the package at the end of the current period. |
|  | Cancels the active package |
|  | Removes a subscription completely |

Advanced Search

By default, the information in a section is filtered by **Pending** and **Active** statuses. To open the **Advanced Search** drop-down menu, click on a red downward arrow  icon and fill in the following fields with the required information:

Screenshot: Advanced Search drop-down menu



| Field | Description |
|-----------------|---|
| Package | Indicate the name of a target package |
| Client | Specify a target client |
| Account | Specify a client's target account |
| Status | Select the status of a package: <ul style="list-style-type: none"> • Pending • Active • Archive |
| ID | Specify a respective subscription ID |
| Reseller | Specify a reseller, under which to search |

To apply the specified search criteria, click the **Search** button; to cancel the applied parameters, click **Reset**.

Assigning a New Package

Click the **Assign Package** button for a new pop-up window with settings to appear. Then, fill in the form and click **Apply**. You can assign any number of packages. They will be activated when the **Package Manager** service runs, and if a customer has enough balance for activation+subscription fees.

Screenshot: Subscriptions add form

Subscriptions

GENERAL SETTINGS

Package:

Client:

Account:

Quantity: as a single subscription ▼

SUBSCRIPTION DURATION

Start Date:

Cancel Date:

SPECIAL PROCESSING

First Charge: ▼

Activate in the past:

OVERRIDDEN PACKAGE FEES +



i Default Package fees will be used

| Information block | Field | Description |
|------------------------------|--------------------------------------|--|
| General Settings | Package | Name of an assigned package |
| | Client | Name of a client, to whom a package is assigned |
| | Account | Name of an account, to whom a package is assigned |
| | Quantity | Number of packages to be assigned. You can assign multiple packages <ul style="list-style-type: none"> ▪ as a single subscription <i>(will create one line in a list of assigned Subscriptions with respective Qty value)</i> or <ul style="list-style-type: none"> ▪ as multiple subscriptions <i>(will create several lines respectively in a list of assigned Subscriptions for each individual one to manage separately)</i> |
| Subscription Duration | Start Date | Package limits and discounts are only effective after a specified date |
| | Cancel Date | Package limits and discounts are disabled after a specified date |
| Special Processing | First Charge | Determine when the first charge should be created: <ul style="list-style-type: none"> • Before period start • On period start |
| | Activate in the past checkbox | If checked, and the Start Date field value is in the past, a subscription will be activated on the specified date |
| Override Package Fees | Fee Type | Select the type of fee. There are two possible types: <ul style="list-style-type: none"> • Activation – a fee that will be charged upon subscription activation • Subscription – a fee that will be charged upon subscription renewal |
| | Fee Name | Specify the name of a fee. This field is obligatory |
| | Fee Note | Here you may enter additional information about a fee |
| | Rate, (currency) | Indicate the price for a fee. Price is indicated in the package currency. This price will overwrite the fee of a Package |


Warning

If you click the delete icon (**remove an archived package entirely**) in the **Subscriptions** section, you will delete a package with all transactions from the system.

To delete the package completely, you need to do the following:


- click the  icon opposite a respective package on the section list;
- filter the list of packages by the **Archive** status;
- find a respective package and click the  icon to delete it entirely from the system.

Editing a Subscription

When clicking on the edit  icon, detailed information on a subscription is displayed. In the **Billing Details & Overridden Package Fees** data blocks, a user can view and manage general info regarding the subscription charges. Also, a user can change the subscription **Cancel Date** in a respective field of the **Subscription Duration** block.

To make it easier for a user to keep records of package limits, the **Periods** information block provides a detailed view of package limits for each activation period.

Screenshot: Subscription edit form

 Subscriptions
ACTIVE

SUBSCRIPTION


Package: **Minutes BIG**

Client: **Customer A**

Account: All Accounts

Quantity: **1**


BILLING DETAILS


- Charged
- Charge on Event
- Align to Payment Terms
- Full Charge
- Overridden Package Fees 


SUBSCRIPTION DURATION

Start Date: **03/01/2021 00:00:00 +0000**

Cancel Date:

OVERRIDDEN PACKAGE FEES 

| Fee Type | Fee Name | Fee Note | Tags | Rate, USD | |
|------------|----------------|----------|------|-----------|---|
| Activation | Activation Fee | | | 1 |  |

 Discounts from the Package will not be used

PERIODS

Rows **1 – 2** of **2** 20 Page 1 of 1

| Status | Period | Limits |
|---------|--|---|
| Active | 04/01/2021 00:00:00 05/01/2021 00:00:00 | Calls * 10 000.00 min <input type="text"/> Left: 9 696.02 |
| Archive | 03/01/2021 00:00:00 04/01/2021 00:00:00 | Calls * 10 000.00 min <input type="text"/> Left: 9 413.00 |

OK
Cancel
Apply

Attention

When you change the **name of the package** in the **Retail > Packages**, it will be automatically changed in the **Management > Subscriptions** section as well, even if this package is already assigned. As a result, in the **Invoices** and **Transactions** sections, an **old** name of the package will be specified.

We do not recommend editing the name of an already assigned package in the *Retail > Packages*.

Traffic Processing

In this article

- [Advanced Search](#)
- [Creating a New Traffic Processing Rule](#)
 - [Tip](#)
- [Rules Import](#)
- [Rules Export](#)
- [Knowledge Base Articles](#)

Section overview

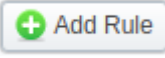

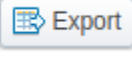




This section allows a user to configure and perform number translations. Here you can add and remove rules for traffic processing. The section includes 2 tabs: **Traffic Processing** and **Orig/Term Rules**:

Screenshot: *Traffic Processing* section


| ID | Filters | Action | Notes / Expiry Date / Modified by | Order |
|----|--------------------|----------------------|-----------------------------------|-------|
| 73 | Client: Customer C | | Modified by: admin - 03/31/2021 | 2 |
| 75 | Client: Customer C | | Modified by: admin - 03/31/2021 | 2 |
| 36 | Client: Customer C | Src Match: *380(*)\$ | Add Tags: origination group 1 | 2 |
| 72 | Client: Customer C | Dst Match: *0(*)\$ | Modified by: admin - 03/31/2021 | 2 |

| Column Name | Description |
|--|--|
| ID | Rule's identification number |
| Stage | Stage of a rule (the rules are grouped by following stages: Initial , After Client , After Rate , After Routing) |
| Filters | Depending on rule parameters, a table can display the following scope of details: <ul style="list-style-type: none"> • Name of service, the rule is created for • Gateway, specified in a rule • Tag(s), indicated in a rule • Client's name, specified in a rule • Client's account, defined in a rule • Indicated Code • POSIX regular expression for Src number (Src Match) • POSIX regular expression for Dst number (Dst Match) • Src Prefixes (Src P Any/Src P Not) • Src Prefixes Names (Src PN Any/Src PN Not) • Dst Prefixes (Dst P Any/Dst P Not) • Dst Prefixes Names (Dst PN Any/Dst PN Not) |
| Action | Depending on rule parameters, a table can display the following scope of details: <ul style="list-style-type: none"> • Replacement for a matched rule for Src number (Src) • Replacement for a matched rule for Dst number (Dst) • List of tags added during traffic processing rule execution • Deny plank for blocking rules • LNP/MNP db specification with LNP direction and Revert LNP indication (if enabled) • Any blocked termination Clients/Accounts from the Routing Blocks section |
| Notes / Expiry Date / Modified by | Depending on rule parameters, a table can display the following scope of details: <ul style="list-style-type: none"> • Notes specified in a rule • Rule's Expiry date • User name and time when a rule was created/edited |
| Order | Specified order for rule execution |

Functional **buttons/icons** presented in the section are as follows:

| Button/Icon | Description |
|--|---|
|  + Add Rule | Allows creating a new traffic processing rule |
|  Import | Allows importing a .csv file with a traffic processing rule(s) |
|  Export | Allows exporting a current list of rules in a .csv format |
|  | Indicates that a rule origin is origination |
|  | Indicates that a rule origin is termination |
|  | Allows editing existing rules in a section list |
|  | Allows deleting a traffic processing rule from the system |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow  icon, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu

Stage:

Origin:

Service ID:

Gateway:

Tag:

Src Prefix:

Dst Prefix:

Client:

Account:

Src Code:

Dst Code:

Mode:

LNP/MNP:

Company:

To apply the specified search criteria, click **Search**; to cancel the applied parameters, click **Reset**.

Creating a New Traffic Processing Rule

To perform a number translation, click the **Add Rule** button and fill in the following fields:

Screenshot: New Traffic Processing rule

Traffic Processing

GENERAL

Stage: Order:

Origin:

Company:

Notes:

Expiry Date:

Src Deck:

Dst Deck:

FILTERS

No Filters

PARTIES ID TRANSLATIONS

Type:

Order:

Match:

Replace:

Add Item

ACTIONS

Mode:

Add Tags: Set Service:

LNP / JURISDICTION

LNP/MNP: Revert LNP:

LNP Party: US NANP:

ROUTING BLOCKS

Block Clients:

Block Accounts:

| Information block | Field | Description |
|-------------------|---------------|---|
| General | Stage | <p>Specifies at what stage a current translation rule will be applied:</p> <ul style="list-style-type: none"> Initial - execute this rule before a Client is identified After Client - execute this rule after client identification but before rate identification After Rate - execute this rule after rate identification but before routing After Routing - execute this rule after routing <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> Tip</p> <p>TP rules' stages affecting RATING:</p> <p>Origination part:</p> <ol style="list-style-type: none"> Origination Initial rules: Origination After Client rules: Origination After Rate rules. <p>Termination part:</p> <ol style="list-style-type: none"> Termination Initial rules: Termination After Client rules: Termination After Rate rules. <p>TP rules' stages affecting ROUTING:</p> <ol style="list-style-type: none"> Origination Initial rules: Origination After Client rules: Origination After Rate rules: Termination After Routing rules. <p>Therefore, any termination rule with stage Initial, After Client, and After Rate won't affect routing but will be used in rating.</p> </div> |
| | Order | <p>Sets rules ordering that works within the same rule Stage.</p> <div style="background-color: #ffff00; padding: 10px; margin-top: 10px;"> <p> Attention</p> <p>Note that this field indicates the order of rules execution only within a specified stage. It means that a rule with the Initial stage and order 1 will be executed before any other rule of the same stage with order 2. However, such rule will be executed prior to a rule with the After Rate stage and order 0, even though the latter has a higher order, due to the fact that Initial is the 1st on the stages list.</p> </div> |
| | Origin | <p>Specify the event origin:</p> <ul style="list-style-type: none"> Origination Termination |

| | |
|--------------------|---|
| Company | Specify a Reseller for this rule to be executed under. Default - <i>all resellers</i> |
| Notes | Specify additional information about a rule |
| Expiry Date | Define a date when this rule will expire and will be removed from the system |
| Src Deck | Identify a code deck that will be used for Src codes or code names filtering |
| Dst Deck | Identify a code deck that will be used for Dst codes or code names filtering |

Filters

Select the required parameters for a traffic processing rule on the **Filters** menu. To cancel any filter, click on the delete  sign next to its name.

You can start a **quick search** by typing filters' names in the field at the top of the **Filters** menu.

 **Tip**

If, for instance, the **Client** filter is empty, it means that this rule will implicate all clients.

General



| | |
|-------------------|---|
| Service ID | Select a target from the drop-down list of all services, presented in the Services section of your JeraSoft Billing |
| Gateway | Select a respective VoIP gateway, for which rule is applied, from the drop-down list |
| Tags (Any) | A rule will work if an event has at least one of the tags, specified in this field |
| Tags (All) | A rule will work if an event has all tags, specified in this field |
| Tags (Not) | A rule will work if an event has no tags, specified in this field |

Src Party ID


| | |
|---------------------------------|---|
| Src (Match) | In this field you may indicate POSIX regular expressions syntax, by which a number will be analyzed. |
| Src Prefixes (Any) | A rule will work if an event has at least one of the Src prefixes (e.g., 010, 810), specified in this field |
| Src Prefixes (Not) | A rule will work if an event has no Src prefixes (e.g., 010, 810), specified in this field |
| Src Prefixes Names (Any) | A rule will work if an event has at least one of the Src prefixes names (e.g., vodafone), specified in this field |
| Src Prefixes Names (Not) | A rule will work if an event has no Src prefixes names (e.g., vodafone), specified in this field |

Dst Party ID

| | |
|--------------------|---|
| Dst (Match) | In this field, you may indicate POSIX regular expressions syntax, by which a number will be analyzed. |
|--------------------|---|

| | | |
|--------------------------------|---------------------------------|---|
| | Dst Prefixes (Any) | A rule will work if an event has at least one of the Dst prefixes (e.g., 010, 810), specified in this field |
| | Dst Prefixes (Not) | A rule will work if an event has no Dst prefixes (e.g., 010, 810), specified in this field |
| | Dst Prefixes Names (Any) | A rule will work if an event has at least one of the Dst prefixes names (e.g., vodafone), specified in this field |
| | Dst Prefixes Names (Not) | A rule will work if an event has no Dst prefixes names (e.g., vodafone), specified in this field |
| Client | | |
| | Client | Specify a respective client <div style="background-color: #ffff00; padding: 5px; border: 1px solid #ccc;"> <p> Attention</p> <p>Please be advised that any traffic processing rule can have either the Client or Account field.</p> </div> |
| | Account | Specify a respective account |
| | Dst Code | Specify a destination code |
| | Dst Code Name | Specify a destination code name |
| | Src Code | Specify a source code |
| | Src Code Name | Specify a source code name |
| Parties ID Translations | Type | Define a type of translation: <ul style="list-style-type: none"> • Src • Dst |
| | Order | Specify the order of translation <div style="border: 1px solid #8ebf8e; border-radius: 10px; padding: 10px; background-color: #e0f2e0;"> <p> Tip</p> <p>If you need to do multiple translations for the same call flow, it's better to create them all in one rule than to create multiple rules for the same type (time) of translations. That's where ordering would be useful.</p> </div> |
| | Match | In this field, you may indicate POSIX regular expressions syntax (see best practice example below), by which a number will be analyzed. If an expression matches the number, the translation will occur in respective settings in the Replace field. |
| | Replace | Replacement for a matched rule. |
| Actions | Mode | Defines an action that will be executed if a traffic rule matches: <ul style="list-style-type: none"> • Allow - allow a current event to proceed. Stop further traffic processing rules within this type of rule; • Allow and Continue - allow a current event to proceed. Search for the next traffic rule; • Deny - deny a current event. |

| | | |
|---------------------------|-----------------------|---|
| | Add Tags | Here you can add tags that will be added for events matching this rule |
| | Set Service | Allows to change a specified service to another one while processing them |
| LNP / Jurisdiction | LNP /MNP | <p>Define a provider for the LNP/MNP service, which will be dipped for translation</p> <div style="background-color: #ffffcc; padding: 10px;"> <p>⚠ Attention</p> <p>In the VCS 3.17.0, a new feature regarding TJA database has been added. Starting from this version, while creating a new rule, in the LNP/MNP field, a user can select either tja.ee (Routing Number) or tja.ee (Owner). The difference is as follows:</p> <ul style="list-style-type: none"> • tja.ee (Routing Number) - if a traffic processing rule executes, 372+Original Number will be substituted by 372+Routing Number, specified in the TJA database. • tja.ee (Owner) - if a traffic processing rule executes, 372+Original number will remain unchanged. Instead, a Dynamic Tag indicating an owner of the number will be added to the call. <p>Please find more about TJA database here.</p> </div> |
| | Revert LNP | <p>Allows returning original numbers to vendors after routing:</p> <ul style="list-style-type: none"> • Enabled • Disabled |
| | LNP Party | Define, which Party ID(s) (Src, Dst, or both) will be used for LNP dipping. To enable this feature, you need to specify the LNP/MNP field. |
| | US NANP | <p>Define if NANP processing will be used for LNP dipping:</p> <ul style="list-style-type: none"> • Enabled • Disabled |
| Routing Blocks | Block Clients | Specify, which termination Clients to block for the originator, specified in the Filters block |
| | Block Accounts | Specify, which termination Accounts to block for the originator, specified in the Filters block |

 **Best Practice Example**

To get a better understanding of how the **Src/Dst Match** and **Src/Dst Replace** fields work, let's consider the following example:

If our Src/Dst number is **123#456**, the **Src/Dst Match** field is **^123#(.*)\$** and the **Src/Dst Replace** field is **789\1**, the resulting number will be **789456**. That's because the **^123#(.*)\$** expression tells the system that from **123#456** number it must remember only the **(.*)** part, which stands for **456**. Now, in the **Src/Dst Replace** field we have **789\1**, which means that instead of **123#456**, it must insert **789** + add **\1** that equals **(.*)**. Therefore, our resulting number will be **789+456=789456**. These **translation rules use the PostgreSQL regular expressions syntax** (based on POSIX regex with some extensions). For more information, please refer to the PostgreSQL documentation portal.

In addition, in the **Src/Dst Replace** field you can insert random number with fixed digit length using the **\$rnd(xxx-yyy)\$** variable, where **xxx** - start number and **yyy** - end number of the range. For example, **\$rnd(050-950)\$** will be replaced by a **3-digit random number from 50 to 950**.

Rules Import

A user can import a **.csv** file containing a list of traffic processing rules. To import the file, click the **Import** button and a pop-up window with the following structure will appear:

Screenshot: *Traffic processing rule import*

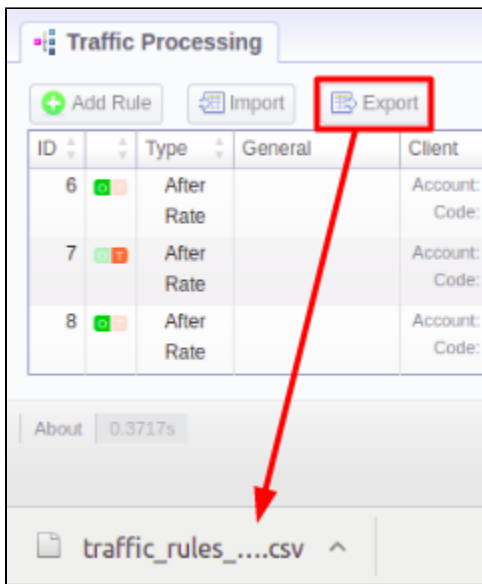
| Information block | Field | Description |
|-------------------|---------------------------------|--|
| File Process | Select a file for import | Select a .csv file to import a traffic processing rule from |
| | Fields Delimiter | Specify a delimiter symbol here. The possible options are: <ul style="list-style-type: none"> • Autodetect • , • ; • Tab By default, the Autodetect option is selected. |
| Import Config | Import Mode | Specify what to do with the current traffic processing rules: <ul style="list-style-type: none"> • Keep previous data - new rules will be added to the old ones • Purge all other rules - old rules will be deleted and substituted by the new ones. By default, the Keep previous data option is selected. |

When all fields are filled in, click **Process>>**. You will be transferred to the second step to indicate the default values in respective fields and specify rows and columns. To finish importing, click **Process>>** again.

Rules Export

By clicking on the **Export** button you can download a current list of rules in a **.csv** file.

Screenshot: Rules export



Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Rates Section

This chapter has everything to do with **rates management**, and provides information regarding the **rates analysis** and **rates generator** tools of the **JeraSoft Billing**, as well as **agreements** upon rates notifications.

For more details, please check the related sections of our Guide:

- [Rate Tables](#)
- [Rates](#)
- [Special Rates](#)
- [Rates Analysis 2.0](#)
- [Rates Analysis \[old\]](#)
- [Rates Generator](#)
- [Agreements](#)
- [Swap Deals](#)

Rate Tables

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Rate Table](#)
- [Configuring Rate Tables](#)
- [Knowledge Base Articles](#)

Section overview

A Rate Table is one of the three core elements of the entire JeraSoft Billing system. Its purpose is to contain determined rates (prices) for each code (destination) on the list. This section allows you to manage your rate tables. It is presented in the form of a table with the following fields:

Screenshot: Rate Tables section

| ID | Name | Currency | Src Code Deck | Dst Code Deck | Reseller | Notes |
|----|----------------------|----------|---------------|---------------|-----------|-------|
| 1 | ORIG RT - Customer A | USD | DEFAULT | DEFAULT | Company A | |
| 2 | ORIG RT - Customer B | USD | DEFAULT | DEFAULT | Company A | |
| 3 | ORIG RT - Customer C | USD | DEFAULT | DEFAULT | Company A | |
| 4 | ORIG RT - Customer D | USD | DEFAULT | DEFAULT | Company A | |
| 5 | TERM RT - Vendor A | USD | | DEFAULT | Company A | |
| 6 | TERM RT - Vendor B | USD | | DEFAULT | Company A | |
| 7 | TERM RT - Vendor C | USD | | DEFAULT | Company A | |

| Column Name | Description |
|----------------------|--|
| ID | Rate table's identification number |
| Name | Name of a rate table |
| Currency | The currency of a rate table |
| Src Code Deck | Name of a source code deck, where names for Src codes are taken from |
| Dst Code Deck | Name of a destination code deck that contains Dst code names |
| Reseller | Name of a reseller respective rate table belongs to |
| Notes | Additional information about a rate table |

Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows adding a new rate table to the system |
| | Allows managing rates within a specified rate table |
| | Allows managing special rates within a specified rate table |
| | If active (in color), allows running a rates generator tool on a specified rate table |
| | Forces rates notification to the clients |
| | Prompts to the import window for the respective Rate Table |
| | Prompts to the Import History tab for the selected Rate Table |
| | Allows deleting a rate table from the system |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow icon, the following drop-down menu is displayed:

Screenshot: *Advanced Search drop-down menu*

The screenshot shows a search interface with the following elements:


- Reseller:** A dropdown menu with "all resellers" selected.
- Src Code Deck:** An empty dropdown menu.
- Dst Code Deck:** An empty dropdown menu.
- Currency:** An empty dropdown menu.
- Buttons:** "Reset" and "Search" buttons at the bottom.

Adding New Rate Table

To add a new rate table, click the **New Rate Table** button and define the respective values in a pop-up window:


| Field | Description |
|----------------------------------|--|
| Name | The title of a respective rate table |
| Reseller | The Reseller, to whom this rate table belongs |
| Parent Rate Table | <p>The rate table to inherit rates from. Codes with the same length in the current rate table will have the priority. However, longer codes from the parent rate table will override the codes in this rate table</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <ol style="list-style-type: none"> Please note that the currencies of a parent and current rate tables should be the same. The working method with a Parent Rate Table could be applied only for origination. </div> <p>For example, you can create a <i>Child Rate Table</i> for some destinations and add special rates. Then, specify a respective <i>Parent Rate Table</i> (that includes all standard rates) in the <i>Child Rate Table</i> settings. And assign this <i>Child Rate Table</i> to the Client.</p> |
| Src Code Deck | Indicate a code deck that contains source codes and code names |
| Dst Code Deck | The deck that consists of a list of destination codes and code names |
| Currency | Preferred currency (will be used in invoices) |
| Rates with Taxes checkbox | <p>Tax settings (disabled by default).</p> <p>If you enable this checkbox, the system will consider Rates in this Rate Table to include taxes (both for the "Rate" and "Setup Fee" values). During billing, no additional taxes will be applied.</p> <p>When it is disabled, the tax value will be added as an additional invoice parameter.</p> |
| Description | Additional information |

Screenshot: *New rate table window*

 **Rate Tables**

GENERAL SETTINGS

Name:

Reseller:  Reseller 1 ▼

Parent Rate Table: RT ORIG - Rose ▼

Src Code Deck: Europe & USA ▼

Dst Code Deck: DEFAULT ▼

Currency: USD ▼

Rates Include Taxes

Description:

This section will also store all rate tables that you plan to analyze via the **Rates Analysis** section. You will be able to change these settings later by using the **Parameters** tab. After everything is entered, click **OK**. A new rate table will appear on the list.

Configuring Rate Tables

You can configure the rate table by clicking on the respective name in the full list. You will have a popup window with the following tabs:

| Tab | Description |
|-----------------------|--|
| Parameters | Here you can change some parameters that you've specified during the rate table creation |
| Simulate | Call simulation tool |
| Import History | Here you can view the history of importing from the .csv or .xls files |

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Automatic Email Import

In this article

- [Automatic Email Import](#)
- [Creating Import Template](#)

Automatic Email Import

This option allows a user to import rate tables from emails automatically. It means that the rate table data will be automatically updated by the data taken from a specified email box, using a defined template. To activate this tool, go to the **Rate Tables > Parameters** tab, enable the **Automatic Email Import** checkbox and fill in all the fields.

Screenshot: Automatic Email Import checkbox

The screenshot shows the 'Parameters' configuration window for 'RT 0 ORIG [USD]'. The 'GENERAL SETTINGS' section includes fields for Name, Reseller, Parent Rate Table, Src Code Deck, Dst Code Deck, Currency, and a checkbox for 'Rates Include Taxes'. The 'AUTOMATIC EMAIL IMPORT' section is highlighted with a red box and contains a checked checkbox, 'Data Source' (mail), 'Sender Match', 'Subject Match', and 'Import Template' (template). The 'RATES GENERATION' section includes 'Rates Generator', 'Agreement', and an unchecked 'Automatic generation' checkbox. The 'TABLE INFORMATION' section shows creation and last edited dates. Buttons for 'OK', 'Cancel', and 'Apply' are at the bottom right.

| Field | Description |
|------------------------|---|
| Data Source | Specify a data source (IMAP connection type only), where import files are located |
| Sender Match | Specify a sender name or email address for searching (works for multiple emails) |
| Subject Match | Define a regular expression for searching for specific mail titles |
| Import Template | Specify an import template |

Creating Import Template

⚠ Attention

Please note that **Automatic Email Import** will not work without a specified **Import Template**

The process of creating an **Import Template** is quite simple. First, you should import at least one rate table.

Second, during rate table import, on the second step of the importing process, you need to specify a template name and click the **Save Template** button in the bottom left corner. After the importing process will be finished, a new rate table template will be added to the templates list in a respective field.

Screenshot: Rates importing process. Step 2

Import

STEP 1: FILE SETTINGS

Rate Table: RT 0 ORIG

Import Template: ▼

Selected File: **rt.csv**
Choose a file or drag it here

STEP 2: IMPORT SETTINGS "Rates" sheet type ▼

rt.csv

| code | code name | effective from | rate | min length | max length | billing increment |
|-----------------------------|------------|----------------|---------|------------|------------|-------------------|
| 301 | Code 301 | 24-07-1996 | 1.23 | 2 | 9 | 1/1/1 |
| 302 | Code 302 | 24-07-1995 | 2.23 | 3 | 10 | 1/1/2 |
| 303 | Code 303 | 24-07-1994 | 3.23 | 4 | 11 | 1/1/3 |
| 304 | Code 304 | 24-07-1993 | 4.23 | 5 | 12 | 1/1/4 |
| +5 # 9771 rows skipped +5 # | | | | | | |
| 10073 | Code 10073 | 24-07-100 | 9773.23 | 9774 | 9781 | 1/1/9773 |
| 10074 | Code 10074 | 24-07-99 | 9774.23 | 9775 | 9782 | 1/1/9774 |
| 10075 | Code 10075 | 24-07-98 | 9775.23 | 9776 | 9783 | 1/1/9775 |
| 10076 | Code 10076 | 24-07-97 | 9776.23 | 9777 | 9784 | 1/1/9776 |
| 10077 | Code 10077 | 24-07-96 | 9777.23 | 9778 | 9785 | 1/1/9777 |

CODE RULES +

| Code | Status | Effective Date | Time Profile | Min | Int | Extra |
|------|----------|--|--------------|--------------------------------|--------------------------------|--|
| 1 | Active ▼ | In <input type="text"/> days from the midnight ▼ | all time ▼ | <input type="text" value="1"/> | <input type="text" value="1"/> | <input type="checkbox"/> regular ⚙️ |

Save Template
Import

Info

If your vendor sends you zipped files, the system can unzip them during import.

Simulate

Simulate tab gives you the possibility to see the exact rate, which will be used for a specified destination number, and also resulting cost if such an event takes place. To simulate an event, fill in the following fields and click **Process**:

Screenshot: Simulate tab

| Field | Description |
|----------------------|---|
| Dst Party ID | Specify Dst number of the event |
| Src Party ID | Specify Src number of the event |
| Date | Indicate the event date |
| Tags | Fill in this field if you wish to specify certain rate tags |
| Service | Specify a type of service |
| Volume, (sec) | Specify event volume (seconds, bytes, events, etc.) |



Attention

Note that from now on **only** rates with **Active** status can be used to simulate rates. Rates with **Stashed** status will not be displayed.

The results of a simulated event are presented in a table with the following structure:

Screenshot: Event simulating results

| Column | Description |
|-----------------------|--|
| Info icon | Hover over this icon to view additional parameters (setup fee, time profile) |
| Code | Destination code |
| Cost | Cost of an event <div style="border: 1px solid #ccc; padding: 5px;"> <p>Note</p> <p>If the queried destination is blocked, the Cost will not be displayed.</p> </div> |
| Effective Date | Rate start date |

| | |
|----------------------|---|
| Rate | <p>Event price for a specified unit. Units ratings are configured in the Services section. For instance, for call service, an indicated rate may be a price for 1 second, 1 minute, 1 hour, or 1 day.</p> <div style="border: 1px solid #ccc; padding: 5px;"><p> Note</p><p>If the queried destination is blocked, the Rate will be displayed as blocked.</p></div> |
| Tag | Tags of an event (@ by default). |
| Parameters | Information of minimal call time that will be tarified, tariffication interval, and time interval, below which the event is not tarified (grace volume), separated by "/". |
| Billed Volume | <p>Billed time (minimal time of billing increment)</p> <div style="border: 1px solid #ccc; padding: 5px;"><p> Note</p><p>If the queried destination is blocked, the Billed Volume will not be displayed.</p></div> |

Parameters

This tab allows you to modify settings that you entered while creating a current Rate Table. Moreover, you can enable the **Automatic Email Import** checkbox for automatic rate tables import from emails.

Screenshot: Parameters tab

| Information block | Fields description | |
|--|---|---|
| General Settings | General rate table information | |
| | • Name | Name of the rate table |
| | • Reseller | Reseller, to whom this rate table belongs |
| | • Src Code Deck | Indicate a code deck that contains source codes and code names |
| | • Dst Code Deck | The deck that consists of a list of destination codes and code names |
| | • Currency | Currency, specified for this rate table |
| | • Rates Include Taxes checkbox | If the field is checked, taxes are already included in the rate value. Otherwise, taxes will be added to a rate value as an additional invoice item |
| | • Description | Additional information concerning the current rate table |
| Automatic Email Import checkbox | Data used for automatic rates import into a current rate table (see the Automatic Email Import article) | |
| Rates Generation | • Rates Generator | Select a Rates Generator for generating rates to this particular rate table |
| | • Agreement | Specify an Agreement to be used during rates generation |
| | • Automatic Generation checkbox | If enabled, lets the current rate table to be updated automatically due to being bound to the previously selected Rates Generator |
| Table Information | Information concerning the date of the rate table creation and last editing | |

Rates

In this article

- [Section Overview](#)
- [Adding a New Rate](#)
- [Adding a New Blocked Dst](#)
- [Editing a Rate](#)
- [Mass Rate Edit](#)
- [Advanced Search](#)
- [Stashed rates](#)

Section Overview

This tab is a cornerstone of the whole section, containing the list of all codes with an indication of specific parameters. The tab allows adding and managing rates, as well as their mass editing, importing, and exporting.




Screenshot: Rates list

| Rate Table | Src Code | Code | Code Name | Rate | Effective Date | End Date | Tag | Service | Notes | SF | Min | Int | Time Profile |
|----------------------|----------|------|-----------|---------------------|---------------------------|----------|-----|---------|-------|----|-----|-----|--------------|
| ORIG RT - Customer A | | 1 | USA | R 0.0122 0.0121 USD | 2022-07-08 00:00:00 +0000 | | @ | Calls | | 0 | 1 | 1 | all time |
| TERM RT - Vendor A | | 1 | USA | R 0.0065 blocked | 2022-07-06 22:00:00 +0000 | | @ | Calls | | — | — | — | all time |
| ORIG RT - Customer B | | 1 | USA | R 0.0254 0.0262 USD | 2021-11-01 00:00:00 +0000 | | @ | Calls | | 0 | 1 | 1 | all time |
| TERM RT - Vendor B | | 1 | USA | R 0.0082 0.0081 USD | 2021-10-01 00:00:00 +0000 | | @ | Calls | | 0 | 1 | 1 | all time |

| Column Name | Description |
|-----------------------|--|
| Rate Table | Rate table of a rate |
| Src Code | Source code of a rate |
| Code | Destination code of a rate |
| Code Name | Destination code name of a rate |
| Policy | Policy of a rate (A for additive , R for regular) |
| Rate | Price per unit of service |
| Effective Date | Date when a rate becomes active |
| End Date | Date when a rate expires |
| Tag | Tag of a rate |
| Service | Service of a rate |
| Notes | Additional information about a rate |
| SF | Setup fee of a rate |
| Min | Minimal billed volume |
| Int | Billed interval |
| Time Profile | Time profile of a rate |




Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows adding a new rate to the system |
| | Allows adding a new blocked destination to the system |

| | |
|---|--|
|  | Allows editing a rate <div style="background-color: #ffff00; padding: 5px;">  Attention Please note that a rate cannot be edited if it was created along with a special rate. For editing such a rate, go to the Special Rates section and edit a respective special rate. </div> |
|  | Allows deleting a rate from the system |

Adding a New Rate

To create a new rate for a target code, you need to click **Add Rate**, and the following fields will appear:

| Field | Description |
|-----------------------|---|
| Rate Table | Indicate a rate table for a new rate |
| Code | Indicate a destination code for a new rate <div style="border: 1px solid #ccc; padding: 5px;">  The field accepts multiple values, delimited by a comma, or ranges. </div> |
| Code Name | Name of a destination code group <div style="border: 1px solid #ccc; padding: 5px;">  If the Code Name is missing for some Code, you'll have a functional button - Create Code Name - that will prompt you to add the missing Code Name to the Rate Table's Code Deck. </div> |
| Src Code | Specify a source code for a new rate <div style="background-color: #ffff00; padding: 5px;">  Attention Please note that rates with Src Codes are not used when termination tariffs are chosen for Dynamic Routing. This functionality is going to be reworked in the upcoming releases. </div> |
| Src Code Name | Indicate a source code name |
| Rate | Price per unit of a service |
| Interval | Tariffication interval. This parameter is used when Min Volume expires. For instance, if call time is 26 seconds, Min Volume is 25 , and Interval is 8 , the client will pay for 33 seconds |
| Min Volume | Minimal time of the call that will be tariffed. For example, if the total call time was 20 seconds and the Min Volume is 30 , the client will pay for 30 seconds of the call. |
| Grace Volume | Time interval that will not be tariffed (free time). For instance, if you specified 5 sec as Grace Volume , all calls with duration up to 5 seconds (including calls with a session time of 5 seconds) will be free of charge. |
| Setup Fee | Setup fee (charged when event duration is longer than 0 seconds) |
| Effective Date | Rate start date (newest available rate for a particular destination) |
| End Date | After a specified date, the target rate will not be used |
| Services | Select a service for a current rate (calls, SMSs, data) |

| | |
|---------------------------|--|
| Policy | <p>This option allows selecting a rate type for a code: regular rate or an additive (extra) rate:</p> <ul style="list-style-type: none"> ◦ regular rate - this policy signifies a usual rate definition for the event; ◦ additive (extra) rate - this policy signifies that this rate will be added to a regular rate for the event. <p>During billing, the system takes one regular rate and all additive (extra) rates that are appropriate for the call. Please note, a regular /additive rate table will be determined by accessible dynamic and static tags used for the call.</p> <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <p>Please note that the system uses only the 'Rate' parameter from the additive rates' settings when billing.</p> </div> |
| Time Profile | Time profile that will be used for a current rate. For example, business time, non-business time, weekends , etc. |
| Tag | Specify a tag for the respective rates. If it's not applicable, assign a (@) tag as a default |
| Notes | Additional information about the current rate |
| Stash Future Rates | <p>Select what the system should do to the future rates for the same destinations existing in the system:</p> <ul style="list-style-type: none"> • preserve; • stash. |
| Force Notification | <p>Select the system behavior regarding the notification process for the newly created rate:</p> <ul style="list-style-type: none"> • hold; • force. |
| Number Length | <p>Specify a minimum and maximum length of the destination number.</p> <p>For example, if you have a rate of 3 USD for 123 Dst Code with indicated number length from 6 to 9, and another rate of 5 USD for the same 123 Dst Code without a specified number length, all calls with a Dst Number between 6 and 9 digits will be billed by 3 USD, otherwise, by 5 USD.</p> |

Screenshot: Adding a New Rate

Rates

GENERAL SETTINGS

Rate Table:

Src Code:

Src Code Name:

Code:

Code Name:

RATING SETTINGS

Rate: USD

Interval: sec

Min Volume: sec

Grace Volume: sec

Setup Fee: USD

LIMITATIONS

Effective Date:

End Date:

Services:

Policy:

Time Profile:

EXTRA

Tag:

Notes:

Stash Future Rates:

Force Notification:

Number Length: —

After you finish filling in all the fields, click .

Adding a New Blocked Dst

To block a target destination, you need to click **Add Blocked Dst**, and the following popup window will appear:

Screenshot: Adding a New Blocked Dst

| Section | Field | Description |
|------------------|-----------------------|---|
| General Settings | Rate Table | Indicate a rate table for a new blocked destination |
| | Src Code | Specify a source code for a new blocked destination |
| | Src Code Name | Indicate a source code name |
| | Code | Indicate a destination code for a new blocked destination |
| | Code Name | Name of a destination code group |
| Limitations | Effective Date | Block start date (when a particular destination will start to be blocked) |
| | End Date | After a specified date, the target block will not be used |
| | Services | Select a service for a blocked destination (calls, SMSs, data) |
| | Time Profile | Time profile that will be used for a blocked destination. For example, business time, non-business time, weekends , etc. |
| Extra | Tag | Specify a tag for the respective blocked destination. If it's not applicable, assign a (@) tag as a default |
| | Notes | Additional information about the blocked destination |

After you finish filling in all the fields, click .

Editing a Rate

There is a possibility of inline rates editing. For this, click on a respective rate line once. You will be able to correct the **Src** and **Dst Code**, **Rate**, **Effective Date**, **Notes**, **SF**, **Min**, **Int**, and **Time Profile** columns:

Screenshot: *Inline editing a Rate*

| Rate Table | Src Code | Code | Code Name | Rate | Effective Date | End Date | Tag | Service | Notes | SF | Min | Int | Time Profile | |
|----------------------|----------|------|-----------|--------------|--------------------------|----------|-----|---------|-------|----|-----|-----|--------------|--|
| ORIG RT - Customer A | | 1 | | R 0.0065 USD | 2020-03-23 00:00:00+0000 | | @ | Calls | | 0 | 1 | 1 | all time | |

When you are done, click the icon to confirm the change without page reload.

Attention

After a rate was updated, it is still present in the list of filtered rates (if enabled) regardless of the set values. You need to **update the page** to see the filtered list without the changed rate (if the changes do not align with the filter).

Mass Rate Edit

It's possible to make a mass update of the rates filtered by the rate table by clicking on Mass Edit. The drop-down menu will appear, where you need to fill in the fields according to your needs. There are six general parameters that can be applied to a field:

- **preserve** - the default configuration that saves the rate not edited. Leave this parameter unchanged if required;
- **set to** - it allows to edit rates, for example, specify the same effective date for all rates at once, regardless of previous configurations;
- **inc for** - here you can indicate how the original value increased;
- **dec for** - here you can indicate how the original value decreased;
- **absolute** - take the entered value as an absolute one;
- **relative** - take the entered value as a relative one.

The list of mass edit fields is as follows:

Screenshot: *Mass Edit button*

Mass Edit

Status:

Rate:

SF:

Tag:

Min Volume:

Interval:

Grace Volume:

Effective Date:

End Date:

Time Profile:

Notes:

Number Length min:

Number Length max:

| Field | Description |
|--------------------------|---|
| Status | Change rates statuses. Available options: <i>preserve, set to</i> |
| Rate | <p>Change rates values. Available options: <i>preserve, set to, inc for, dec for, absolute, relative</i>. You can increase or decrease the value either by fixed number or percent. To increase or decrease by percent, enter % sign after the desired number.</p> <div style="background-color: #ffe6e6; padding: 5px;"> <p>Warning</p> <p>Do not enter non-numeric symbols.</p> </div> |
| SF | <p>Change setup fee values. Available options: <i>preserve, set to, inc for, dec for, absolute, relative</i>. You can increase or decrease the value either by fixed number or percent. To increase or decrease by percent, enter % sign after the desired number.</p> <div style="background-color: #ffe6e6; padding: 5px;"> <p>Warning</p> <p>Do not enter non-numeric symbols.</p> </div> |
| Tag | Change rates tags. Available options: <i>preserve, set to</i> |
| Min. Volume | Change minimal volume values. Available options: <i>preserve, set to</i> |
| Interval | Change tariffication interval values. Available options: <i>preserve, set to</i> |
| Grace Volume | Change grace volume values. Available options: <i>preserve, set to</i> |
| Effective Date | Change rates start date values. Available options: <i>preserve, set to</i> |
| End Date | Change rates end date values. Available options: <i>preserve, set to</i> |
| Time Profile | Change rates profiles. Available options: <i>preserve, set to</i> |
| Notes | Change rates notes. Available options: <i>preserve, set to</i> |
| Number Length Min | Change the minimum length of destination numbers. Available options: <i>preserve, set to</i> |
| Number Length Max | Change the maximum length of destination numbers. Available options: <i>preserve, set to</i> |

After indicating the necessary fields, click the **Preview** button. You will see a new rate table with edited details, where you can choose one of the following options:

- By clicking **Insert As New**, the edited rates will be added as new ones that will replace existent under specified conditions (for example, change of rate and effective date);
- By clicking **Update Current**, the edited rates will have their values updated with the new ones;

To delete all displayed rates, click **Delete All** in a Mass Edit menu.

Note

During **Mass Edit**, changing these fields - *Interval, Min volume, Grace Volume, Setup Fee, Policy, and Number Length* - will be ignored for blocked rates and will complete successfully for all other rates.

Advanced Search

Use the **Advanced Search** drop-down menu (see screenshot) by clicking on a blue downward arrow icon in the top right corner of the tab. To open additional settings, click the **Advanced** button.

Screenshot: Rates tab search settings

Rate Table:

Code:

Code Name:

current/future

Time Profile:

Tag:

sent/not sent

Prev Diff Status:

Next Diff Status:

| Field | Description |
|----------------------------|---|
| Rate Table | Filter rates by a selected rate table |
| State | <p>Search by the period of a rate during which the rate is active, expired, etc., as compared to the date specified in the next field. The following states are available to choose from a drop-down list:</p> <ul style="list-style-type: none"> • current/future - includes current and future rates • current on - the search includes rates that are active for a specified date • future for - the future rates compared with a specified date • past for - the search rates that are expired for a specified date • all - includes all rates |
| Time Profile | Search by the time profile of the rate |
| Tag | Search by an assigned tag |
| Notification status | <p>Search by the date of rate notifications to the clients:</p> <ul style="list-style-type: none"> • sent/not sent • sent • not sent <p>The field will be autocompleted with a date of the last notification of the filtered rates.</p> |
| Prev Diff Status | <p>Search by the cost changes of the current rate from previous. The following types are available to choose from a drop-down list:</p> <ul style="list-style-type: none"> • Decreased • Increased • Not changed • New |
| Next Diff Status | <p>Search by the cost changes of the next rate from the current. The following types are available to choose from a drop-down list:</p> <ul style="list-style-type: none"> • Decreased • Increased • Not changed • New |

When you have a filtered output and want to add a new rate, it will inherit filtered settings (a.k.a. will have them autocompleted in the adding form). These settings are **Rate Table, Policy, Time Profile, Service, Tag**.

Attention

When you filter rates by the state (for example, **current/future, future for, current on**), the **stashed** (not-confirmed) rates will not show up in the search results. To include these rates, choose **all** from the drop-down list.

Stashed rates

If you see the rate rows colored in yellow, it means these rates are in pending state and you need to confirm them all (click the **Confirm Filtered Rates** button). Unconfirmed rates appear during the import process.

Screenshot: Rates tab settings

| Src Code | Src Code Name | Dst Code | Dst Code Name | Rate | Effective Date | Min | Int | Extra | |
|----------|---------------|----------|---------------|-----------------|------------------------|-----|-----|--------------|---------|
| 902 | Canada | 1210 | United States | — 0.9900 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 782 | Canada | 1212 | United States | 3.0000 ▾ 2.0000 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 778 | Canada | 1205 | United States | — 0.8700 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 709 | Canada | 1209 | United States | 1.4000 ▲ 2.0000 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 604 | Canada | 1203 | United States | — 0.8700 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 506 | Canada | 1207 | United States | — 0.9900 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 431 | Canada | 1201 | United States | 1.0000 1.0000 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 250 | Canada | 1202 | United States | — 0.9900 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |
| 236 | Canada | 1206 | United States | — 0.8700 | 2018-12-12 00:00:00+00 | 1 | 1 | TP: all time | Stashed |

Confirm Filtered Rates OK Cancel Apply

Import

In this article

- [Import Tab](#)
 - [Step 1. Selecting a File and Specifying Additional Parameters](#)
 - [Step 2. Import Settings](#)
 - [Step 3. Import Errors](#)
 - [Confirming Rates](#)
- [Import History Tab](#)

Import Tab

The tab is designed to provide a user with the possibility to import rates to JeraSoft Billing by uploading a **.csv** or **.xls** file. The whole process can be divided into several steps discussed below. You can access the rates import by clicking the **Import** button in the Rates section:

Screenshot: *Import button*

| Rate Table | Src Code | Src Code Name | Code | Code Name | Rate | Effective Date | Notes | SF | Min | Int | Policy | Time Profile |
|----------------------|----------|---------------|------|--------------------------------|------------|--------------------------|-------|----|-----|-----|---------|--------------|
| ORIG RT - Customer A | | | 1 | USA | 0.1650 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - Customer A | | | 1143 | USA | 0.1650 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - Customer A | | | 1204 | CANADA MANITOBA PROPER | 0.0070 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - Customer A | | | 1226 | CANADA ONTARIO PROPER | 0.0070 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - Customer A | | | 1242 | BAHAMAS | 0.1841 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - Customer A | | | 1246 | BARBADOS | 0.2310 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - Customer A | | | 1250 | CANADA BRITISH COLUMBIA PROPER | 0.0070 USD | 2019-11-14 00:00:00+0000 | | 0 | 1 | 1 | Regular | all time |



Note

The button will only be active when you filter the rates by the rate table.

Step 1. Selecting a File and Specifying Additional Parameters

The first thing you need to do in the import configurations view is to select a rate table (the import template will autocomplete if existent). Then, drag-and-drop or upload an import file. Additionally, you can specify the following parameters:

Screenshot: *Step 1. File Settings*

| Field | Description |
|------------------------|--|
| Rate Table | This field will be autocompleted with the name of a rate table if the rates are filtered in the Rates section. If not applicable, select a target rate table |
| Import Template | Select a target template for rates importing if available |

Warning

1. It's not possible to import a file into the **Rate Table** with the **Min Time and Interval = 0**. These fields must have at least 1 second.
2. While specifying the **Effective Date** and **End Date**, keep in mind that **Timezone** is **UTC (+0000)** by default.
3. Please **DO NOT** import duplicates of the same **Code** in one import file.

Step 2. Import Settings

The system will recognize the file and display the first and last 5 rows of the first sheet. You will need to select the start and end lines of an import table (marked green). The middle lines are skipped, you can unfold them both ways by five lines by clicking the respective buttons. To switch from one sheet with rates to another, click on a respective tab: i.e., **Sheet 1**, **Sheet 2**, etc.

Screenshot: Step 2. Import Settings

The screenshot displays the 'Import' configuration interface. Under 'STEP 1: FILE SETTINGS', the 'Rate Table' is 'ORIG RT - Customer B' and 'Import Template' is a dropdown menu. A file named 'import.csv' is selected, with a 'Choose a file or drag it here' prompt. 'STEP 2: IMPORT SETTINGS' features a table with columns: Code, Code Name, Rate, and Effective Date. The table lists several entries, including USA, GEORGIA, KYRGYZSTAN, UZBEKISTAN, and UZBEKISTAN MOBILE. A note indicates '+5 741 rows skipped'. Below the table is the 'CODE RULES' section, which includes fields for Code, Status (Active), Effective Date (days from the midnight), Time Profile (all time), Min (1), Int (1), Extra (regular), and a 'Save Template' button.

Starting from **VCS 3.17.0**, the user has a possibility to specify a type for each sheet of an imported file. Each sheet type has its own list of columns. Currently, there are 3 sheet types:

- **Rates** type - an equivalent to an importing page from earlier versions. While importing, **at least 1 sheet must be of Rates type**. For this type, the following columns are mandatory:
 1. **Dst Code/Code Name** - indicate at least one of them
 2. **Rate**
 3. **Effective Date** - if you don't indicate this column, the Effective Date, specified in the Code Rules information block, will be applied to imported rates.
- **Src Codes** type - this type allows a user to perform the import to the code deck attached to the rate table. For this, indicate source codes/code names in the two columns: **Src Code** and **Src Code Name**. If selected, both columns must be specified.
- **Codes** type - this type allows a user to perform the import to the code deck attached to the rate table. For this, indicate destination codes/code names in the two columns: **Code** and **Code Name**. If selected, both columns must be specified.

Warning


- **Codes** and **Src Codes** sheet types require the **Import all codes (update existing)** mode of **Update Code Deck** from *Advanced Settings*.

Starting from **JeraSoft Billing v3.18.0**, the user has an option to select the **Skip this sheet** option for the system to ignore the respective sheet during import. More about sheet types configuration [here](#).

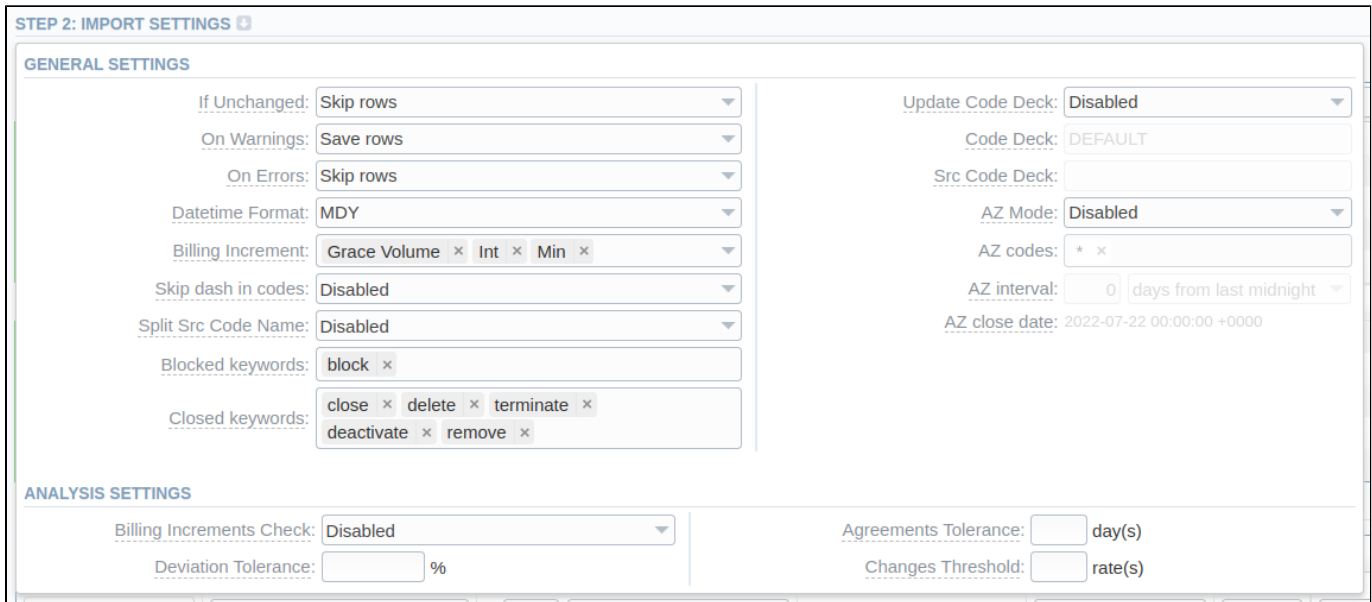
Screenshot: Sheet types



On the second step, you can also save the importing rate table as a template for further usage during import. To do so, specify a template title in the bottom left corner of the tab, and click the **Save Template** button (see screenshot above).


To open advanced configurations, click on a grey downwards arrow  icon next to **Step 2: Import Settings**. Advanced settings contain the following fields:

Screenshot: Advanced settings



| Field | Description |
|---------------------|---|
| If Unchanged | <p>Determines system behavior if it detects rates in the imported file with all the same settings as the ones already present in the Rate Table but Effective Date. Has two options:</p> <ul style="list-style-type: none"> • Save rows • Skip rows |
| On Warnings | <p>Manages alerts from the Analysis Settings section. If any, you'll have the option to:</p> <ul style="list-style-type: none"> • Save rows • Skip rows • Abort import |
| On Errors | <p>Determines billing behavior if inconsistency or error was found in the importing file (data inconsistency, incorrect symbols, etc.)</p> <ul style="list-style-type: none"> • Import correct rows and show all found errors - import error-free rows and display the list of errors, if any • If errors are found, abort import and show all errors - if any error is found, stop the import and display a list of errors |

| | |
|------------------------------|--|
| Datetime Format | <p>Specify the date format of an imported file. Please note, the auto-detection of date and time can be performed with files that contain one of the date and time formats, listed below:</p> <ul style="list-style-type: none"> • DD-MM-YYYY (%d-%m-%Y) = 28-12-2018 • YYYY-MM-DD (%Y-%m-%d) = 2018-12-28 • MM/DD/YYYY (%m/%d/%Y) = 12/28/2018 • DD.MM.YYYY (%d.%m.%Y) = 28.12.2018 • YYYY/MM/DD (%Y/%m/%d) = 2018/12/28 • YYYYMMDD (%Y%m%d) = 20181228 • YYYY-MM (%Y-%m) = 2018-12 |
| Billing Increment | <p>Billing Increment defines the way events are billed and combines two parameters: minimum volume and tariffication interval or three parameters: minimum volume, tariffication interval and grace volume. Indicate the order of parameters recognition in the Billing Increment column:</p> <ul style="list-style-type: none"> • Min Volume/Interval • Interval/Min Volume • Min Volume/Interval/Grace Volume • Interval/Min Volume/Grace Volume <p>For example, if the Billing Increment column in your import file is 1, 5, and you selected Min Volume/Interval value in this field, the system will recognize 1 as Minimum Volume and 5 as a Tariffication Interval for a target rate.</p> |
| Skip dash in codes | <p>Select whether a dash in codes must be skipped or not:</p> <ul style="list-style-type: none"> • Enabled - codes, written as 1201-1205, will be imported as a single 12011205 code • Disabled - 1201-1205 codes will be imported as separate 1201, 1202, 1203, 1204, 1205 codes |
| Split Src Code Name | <p>This option is used only in case source code names contain an underscore symbol. Choose one of the following:</p> <ul style="list-style-type: none"> • Disabled - if an Src Code Name is, for instance, USA_Columbia, it will be preserved as it is after import. • By underscore - if selected, a USA_Columbia Code Name will be changed to Columbia after import. |
| Blocked keywords | <p>List words here for the system to recognize blocked destinations. The prefilled value is block. These words are recognized in the Rate and Changes columns.</p> |
| Closed keywords | <p>List words here for the system to recognize closed destinations. The prefilled values are close, delete, terminate, deactivate, and remove. These words are recognized in the Rate and Changes columns.</p> |
| Notificator Code Deck | <p>Specify code decks that will be used for the next rates notification</p> |
| Update Code Deck | <p>Select the way you want both Src and Dst code decks to be updated with new/existing code names from current rates file:</p> <ul style="list-style-type: none"> • Disabled - leave selected code decks unchanged • Import only not existing codes - code decks will be updated with codes and their names if they are missing • Import all codes (update existing) - code decks and codes will be updated with code names taken from a file, overwriting of existing ones • Import all codes (purge code deck first) - code decks are fully cleared and then all codes and code names are imported from a file <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <p>If Src Code and/or Dst Code sheet type is selected, you need to enable this feature</p> </div> |
| Code Deck | <p>Dst Code Deck that will be used for an Update Code Deck option. Select a destination code deck that you want to update with the above-mentioned settings (note that code deck specified settings here will only be available if you are importing a file, which contains Code Names in addition to Codes).</p> |
| Src Code Deck | <p>Src Code Deck that will be used for an Update Code Deck option. Select a source code deck that you want to update with the above-mentioned settings (note that code deck specified settings here will only be available if you are importing a file, which contains Code Names in addition to Codes).</p> |
| AZ Mode | <p>A special mode that determines system behavior regarding active/future rates:</p> <ul style="list-style-type: none"> • Disabled - leave active/future rates unchanged. Selected by default. • Simple mode - active rates from a current Rate Table will be closed on the specified AZ close date if they aren't present in this import. • Extended mode - all existing future rates will be marked as stashed. Currently, active rates (not presented in this import) will be closed by the date specified below. |

| | |
|-------------------------------------|--|
| AZ codes | Available if AZ Mode is active . Specify the exact code(s) AZ Mode is going to be applied to. By default, the field value is "*" (all codes) |
| AZ interval | Available if AZ Mode is active . Specify the period for AZ mode to close rates. The selectable options are: <ul style="list-style-type: none"> • days from last midnight - the rates will be closed after the specified amount of days from the midnight of the import day • days from now - the rates will be closed after the specified amount of days from the import day • hours from XX:00 - the rates will be closed after the specified amount of hours from the start of an hour of the import timestamp • hours from now - the rates will be closed after the specified amount of hours from the import timestamp <div style="background-color: #e0ffe0; padding: 5px; margin-top: 10px;">  Tip For a detailed explanation, check out our Knowledge Base article </div> |
| AZ close date | Available if AZ Mode is active . The field displays the time and date (with timezone) of rates closure based on the AZ interval parameters. |
| Billing Increments Check | Select whether you need billing increments checking during import or not: <ul style="list-style-type: none"> • Enabled - the system will raise an error in case imported rates' billing increments differ from those already present in the Rate Table. • Disabled |
| Deviation Tolerance, (%) | Define the value of how much can an imported rate differ from an existing one in percent. If exceeded, the system will generate an alert for the manager. |
| Agreements Tolerance, (days) | Define a number of days that the system will take into account while analyzing the new import and the current agreement with the vendor. If the dates of an agreement and the import are closer then the specified amount, the system will generate an alert for the manager. |
| Changes Threshold, (rates) | Define a number of changed rates that will serve as a threshold for the selected rate table. If exceeded, the system will generate an alert for the manager. |

 **Attention**

If you have rates with missing **Rate** value in the importing file, the system will find the previous rate for the same destination and take this value from there (if the previous rate was not closed).

When you have rates with missing **Effective Date** value, the system will take it from the **End Date** value.



Code Rules Information Block

For adding a new code rule, click on the plus  icon next to the information block name.


When you add a rule and set the value in the fields, it will overwrite the parameters specified in the respective columns of the file. If you leave fields empty, it will take the parameters from the file.

There is one default rule with * **code** that affects all the imported codes. The not specified columns of the imported rates will be filled in with the respective field values of this code rule. The list of code rules fields is as follows:

Screenshot: Rates import - Code Rules settings

| CODE RULES  | | | | | | |
|--|--------|--|--------------|--------------------------------|--------------------------------|---|
| Code | Status | Effective Date | Time Profile | Min | Int | Extra |
| * | Active | in <input type="text"/> days from the midnight | all time | <input type="text" value="1"/> | <input type="text" value="1"/> | regular  |

| Field | Description |
|-----------------------|---|
| Code | Indicate a destination code. For all codes, use * (asterisk) |
| Status | Indicate a status for the rates. By default, it will be Active . Set the Stashed status if you want to double-check them later after import. |
| Effective Date | Specify a start date of a rate. There are various options to schedule this date: <ul style="list-style-type: none"> • days from last midnight - the rates will be active after the specified amount of days from the midnight of the import day • days from now - the rates will be active after the specified amount of days from the import day • hours from XX:00 - the rates will be active after the specified amount of hours from the start of an hour of the import timestamp • hours from now - the rates will be active after the specified amount of hours from the import timestamp |

| | |
|---------------------|--|
| Time Profile | Indicate time profile that will be used for a current rate, for example, business time, non-business time, weekends , etc. |
| Min | Minimal time of the call that will be tarified. For example, if the total call time was 20 seconds and Min is 30 , the client will pay for 30 seconds of the call. |
| Int | Tariffication interval. This parameter is used, when Min Time time expires. |
| Extra | Additional parameters are stored under the downwards arrow  icon. <ul style="list-style-type: none"> • Tag - specify a tag for respective rates. If it's not applicable, assign a (@) tag as default. • Service - specify a service of the rates. • Grace Volume - a volume that will not be tarified (i.e., it's free). • Policy - rate's type for a code: regular rate or additive (extra) rate. • Setup Fee - an initial fee that is charged. • Number Length - specify the min and max number length. • End Date - the final date after which the rate will expire. • Notes - additional information. |

After specifying all additional parameters, click the **Import** button.

Step 3. Import Errors


Provided a non-critical error(s) occurred, you will see a table, where the exact sheet, line and error description are specified (see screenshot). In this case, you need to start the whole import procedure from the beginning.

Screenshot: Step 3. Import Errors

| STEP 3: IMPORT ERRORS | | |
|-----------------------|------|------------------------------|
| RT ORIG - Rose | | |
| Sheet | Line | Errors |
| 1 | 4 | Can not parse effective date |

In case numerous errors occurred while **importing** rates, you will be displayed the respective notification:

Screenshot: Error notification

 **Too many errors. Please download file to see detailed data.**

Download file

By clicking on **Download file**, a **.csv** file with the following columns will be downloaded:

| Column | Description |
|---------------|--|
| Sheet | Index number of the sheet, where an error occurred |
| Line | Line of the sheet, where an error occurred |
| Errors | Description of the error that occurred |

Screenshot: .csv file with detailed error data

| | A | B | C | D |
|----|-------|------|---------------------------------|---|
| 1 | Sheet | Line | Errors | |
| 2 | 1 | 1 | <u>Incorrect rate specified</u> | |
| 3 | 1 | 2 | <u>Incorrect rate specified</u> | |
| 4 | 1 | 3 | <u>Incorrect rate specified</u> | |
| 5 | 1 | 4 | <u>Incorrect rate specified</u> | |
| 6 | 1 | 5 | <u>Incorrect rate specified</u> | |
| 7 | 1 | 6 | <u>Incorrect rate specified</u> | |
| 8 | 1 | 7 | <u>Incorrect rate specified</u> | |
| 9 | 1 | 8 | <u>Incorrect rate specified</u> | |
| 10 | 1 | 9 | <u>Incorrect rate specified</u> | |
| 11 | 1 | 10 | <u>Incorrect rate specified</u> | |

Confirming Rates

When the procedure has been executed, you will be forwarded to the **Rates** section where all imported rates will be displayed. If the **Auto-Confirm** option was disabled during the import process, you need to **Mass Edit** the rates' status from **stashed** to **active**.

Screenshot: Confirming Rates




Import History Tab

The tab contains information about all executed imports to this rate table. You can access it in the **Rate Tables {Specific Rate Table} Import History**. It is presented in the form of a table with the following columns:

Screenshot: Import History output

| Date | Details | Total Rows | Total Rates | New | Increased | Decreased | Unchanged | Closed | Blocked | A-Z Closed | A-Z Stashed | Status |
|---------------------------|--|------------|-------------|-----|-----------|-----------|-----------|--------|---------|------------|-------------|---------|
| 2021-09-16 15:38:23 +0000 | User Login: admin File: rates-ORIG_RT_-_Customer_B-2021-09-16_122150.csv | 6 | 8 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | Success |
| 2021-09-15 15:34:07 +0000 | Rates Generation: #2 | — | 19998 | 0 | 4 | 0 | 0 | 19994 | 0 | 0 | 0 | Success |

| Column | Description |
|--------|-----------------------------------|
| Date | Time and date of import execution |

| | |
|---|--|
| User Login | Login of a user who executed the import |
| File | Import file. By clicking on the  icon, the file will be downloaded |
| Total | Total amount of imported rows |
| New | Total amount of rates with New type |
| Increased | Total amount of rates with Increased type |
| Decreased | Total amount of rates with Decreased type |
| Unchanged | Total amount of rates with Unchanged type |
| Closed | Total amount of closed destinations |
| Blocked | Total amount of blocked destinations |
| A-Z Closed | Number of rates, closed by A-Z import |
| A-Z Stashed | Number of rates, stashed by A-Z import |
| Status | Status of import procedure (success/failed) |
|  icon | When clicked on, deletes respective import data from the system <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Note Only the latest Import can be undone.</p> </div> |

The imported rates are divided into the following types: **Unchanged**, **Increased**, **Decreased**, **New**. By clicking on the respective numbers of rates, you can see filtered rates by type (see screenshot above) in the **Rates** section.

Attention

Imported rates will be marked as **Unchanged**, **Increased**, or **Decreased** only if their **Effective Date** value (e.g., **04.25.2018**) is higher than **Effective Date** of a current rate (e.g., **04.10.2018**) and they don't have an **End Date** value. If the **End Date** value is present in a previous rate, the fresh one will be marked as **New**.

Export

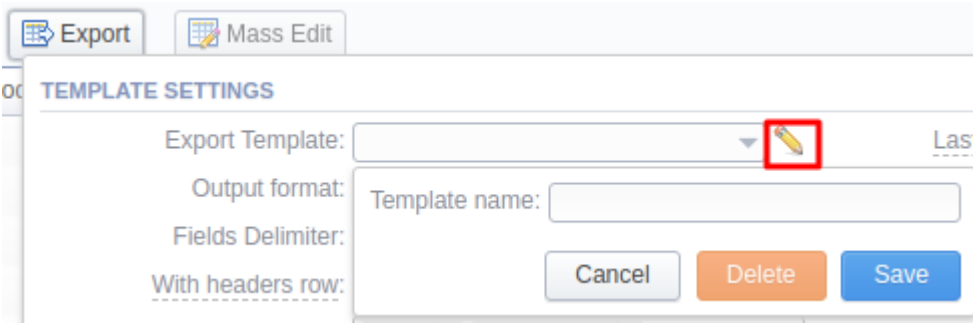
Rates export provides great flexibility in configuring the way rates will be exported in **.csv** or **.xlsx** files. To access the export settings, click the **Export** button in the Rates section.

Screenshot: Rates export button

| Rate Table | Src Code | Src Code Name | Code | Code Name | Rate | Effective Date | Notes | SF | Min | Int | Policy | Time Profile |
|------------------------|----------|---------------|------|-----------|------------|---------------------|-------|----|-----|-----|---------|-------------------|
| RT 0 ORIG | | | 1 | USA | 1.0000 USD | 2018-12-15 10:20:41 | | 2 | 1 | 1 | Regular | non-business time |
| RT 0 ORIG | | | 1 | USA | 0.1100 USD | 2018-12-12 10:30:38 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - bestCustomer | | | 1 | | 2.0000 USD | 2018-10-24 00:00:00 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - client2 | | | 1 | | 5.0000 USD | 2018-10-24 00:00:00 | | 0 | 1 | 1 | Regular | all time |
| TERM RT - bestCustomer | | | 1 | | 0.7000 USD | 2018-10-23 00:00:00 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - coolguy | | | 1 | | 0.5000 USD | 2018-10-23 00:00:00 | | 0 | 1 | 1 | Regular | all time |
| RT 0 ORIG | | | 123 | Code 123 | 4.0000 USD | 1970-01-01 00:00:00 | | 0 | 1 | 1 | Regular | all time |
| RT 0 TERM | | | 123 | Code 123 | 2.0000 USD | 1970-01-01 00:00:00 | | 0 | 1 | 1 | Regular | all time |
| RT 0 ORIG | | | 2 | | 1.0000 USD | 2018-12-15 10:21:49 | | 0 | 1 | 1 | Regular | all time |
| ORIG RT - | | | 234 | | 0.5000 USD | 2018-11-22 00:00:00 | | 0 | 1 | 1 | Regular | all time |

You can use the same advanced search tool, as provided on the Rates tab, to choose which rates you would like to export (including **all**, **past**, **current**, **future**, or **current/future**) prior to actually doing it. After clicking a respective button, the following settings will be visible:

Screenshot: Rates exporting window

| Field | Description |
|-------------------|--|
| Export Template | Select an export template or save an existing one using the Save button (will be visible after clicking the edit button):  |
| Output Format | Specify output file format, .xlsx or .csv |
| Fields Delimiter | Set delimiter for fields if you've chosen .csv |
| Compress into ZIP | Specify whether you want the output file to be compressed. By default this option is disabled . |
| With headers row | Include column names into the file |
| Export Columns | Here you can select from the drop-down list of maximum 25 columns to export: |

| | |
|------------------------------------|---|
| • Src Code/Src ode Name | Src Code/code name of rates |
| • Code/ode Name | Code/code name of rates |
| • Effective Date | Start date, before which the rate will not be used |
| • Rate | Price per unit, specified in respective service settings |
| • Billing Increment | Min Volume, Interval and Grace Volume combined, and their order |
| • Min Volume | Minimal time interval of tarified calls |
| • Interval | Tarification interval |
| • Grace Volume | Free of charge unit |
| • Setup Fee | An initial fee that is charged when event duration is longer than 0 seconds |
| • Time Profile | Time profile (<i>all time, business time, non-business time, weekends</i>) |
| • End Date | A final date, after which the rate will expire |
| • Number Length min | Minimum number length |
| • Number Length max | Maximum number length |
| • Previous Rate | Last rate in usage |
| • Prev Diff | Cost changes in the rates |
| • Prev Diff (export) | Cost changes in the rates after the last export |
| • Prev Diff Status | Difference between a current rate and a previous one |
| • Prev Diff Status (export) | Rate's changes after the last export. Shows the status of how a current rate differs from a previous one. The rate will have an unchanged status if the Effective Date is lower than the Last Notification Date |

| Step 1: Notification type: All rates unique mode - First Notification: 07/07/2017 | | | | | | |
|---|-----------|---------------------------|---------------|-----------|------------------|---------------------------|
| Code | Rate | Effective Date | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 10 | 07/01/2017 00:00:00 +0000 | - | - | new | unchanged |
| 2 | 10 | 07/01/2017 00:00:00 +0000 | - | - | new | unchanged |
| 3 | 10 | 07/01/2017 00:00:00 +0000 | - | - | new | unchanged |
| Step 2: Added new rates with effective date 07/21/2017 - Second Notification: 07/14/2017 | | | | | | |
| Code | Rate | Effective Date | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| 2 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| 3 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| Step 3: Rate with code 1 was edited and the increase was canceled - Third Notification: 07/21/2017 | | | | | | |
| Code | Rate | Effective Date | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 10 | 07/21/2017 00:00:00 +0000 | 10 | 0 | unchanged | unchanged |
| 2 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| 3 | 15 | 07/21/2017 00:00:00 +0000 | 10 | 5 | increased | increased (5.0000) |
| Step 4: Rate with code 2 was edited and added a new rate for code 3 - Fourth Notification: 07/28/2017 | | | | | | |
| Code | Rate | Effective Date | Previous Rate | Prev Diff | Prev Diff Status | Prev Diff Status (export) |
| 1 | 10 | 07/21/2017 00:00:00 +0000 | 10 | 0 | unchanged | unchanged |
| 2 | 20 | 07/21/2017 00:00:00 +0000 | 10 | 10 | increased | unchanged |
| 3 | 20 | 07/31/2017 00:00:00 +0000 | 15 | 5 | increased | increased (5.0000) |

| | |
|----------------------|---|
| • Notes | Additional information about a rate |
| • Tag | Tag, assigned to a respective rate |
| • Policy | Rate policy (<i>additive</i> or <i>regular</i>) |
| • Status | Rate status |
| • Service | Service of a rate |
| • Tech Prefix | Tech prefix of a rate |

| | |
|--------------------------------|---|
| Last Export Date | Parameter that affects the <i>Rate changes</i> field (depending on it, the exported rates will be marked as <i>new</i> , <i>changed</i> , <i>deleted</i> , etc.) |
| Code Deck | Select a code deck here to rewrite code names in an export file if needed |
| Codes from code deck | Allows you to filter the export by selecting only codes, which are present in a specified Code Deck |
| Codes Output | Specify how codes must be displayed. The options are: <ul style="list-style-type: none"> • Separate rows: Each code is placed into a single row • Delimited list: Codes are grouped by a code name in a row, for example, 5510, 5511, 5512 • Ranges list: Codes are grouped by code name into ranges plus delimiter, for example, 5510-5512, 5515 |
| Date Format | The date format in your export file. The syntax is as follows: if you indicate %d-%m-%Y here, your date will look like 25-03-2018 |
| Billing Increment | Select these parameters here and drag them to align anyhow: <ul style="list-style-type: none"> • Grace Volume • Int • Min |
| Header text/Footer text | Allows you to put some text into an exported file as header and footer, respectively |



Tip

You may save settings as a template of Rate Notification. But note that a reseller's rate notification template will be overridden by the existing rate export template.

Click the **Process** button and save an exporting file when you finish configuring the parameters.

 **Tip**

Rates sorting will be made by the very first column. For example, if you want rates to be sorted by A-Z destination name, make **Code Name** your first column.

Please note, that for reseller's rate notification, existing rate export template settings have higher priority than personal.

Rates Management

Recommended rates management practice includes a few tips that can make the routine job easier.

Tip 1: If you received an update for your rate table, do not delete or edit already existing information. Simply import an updated price list on the top of your current one, this will update your rates with the new effective dates, while no longer actual rates will be hidden. Read more about the importing process in the [Import](#) article.

Tip 2: If an existing rate was changed and the **Effective Date** field specifies a date that has passed, all calls will not be automatically rerated using this new rate. You must rerate them manually with [xDRs Rerating](#) section.

Tip 3: As an example of calculation, let's imagine that **Rate** = 1, **Min Time** = 30, **Interval** = 1, **Grace Time** = 2, and **Setup Fee** = 0,3, where:

- **Rate** is a price per unit of a service.
- **Min Time** is a minimal time of the call that will be tarified.
- **Interval** is a tariffication interval, which is used when **Min Time** time expires.
- **Grace Volume** is a time interval that will not be tarified (free time). For instance, if you specified 5 sec as **Grace time**, it means that all calls with duration up to 5 seconds (including calls with a session time of 5 seconds) will be free of charge.
- **Setup Fee** is a call fee, which is charged when call duration is longer than 0 seconds, and there is no specified grace time.

So, according to the given data, if the call duration was less than 2 seconds, the total call cost will be 0 currency units. If the call duration was between

$$Setup\ fee + \frac{Rate}{60\ seconds} \cdot Min\ Time$$

3 and 30 seconds, the total call cost will be

, which is 0,8 currency units regarding the presented

$$Setup\ fee + \frac{Rate}{60\ seconds} \cdot quantity\ of\ call\ seconds$$

data. If the call duration was more than 30 seconds, the total call cost will be currency units.

c

Tip 4: You can change the rate tables' currency in the **Parameters** tab.

Tip 5: All rate fields that define time have time format in seconds, while in the **Rate** field you specify the cost for 1 full minute of call.

Tip 6: If you require to perform bulk update or edit of your rates, you can use the **Mass Edit** feature. Please be aware that mass edit will be applied only to **current/future** rates. So, make sure you filtered target rates accordingly before editing.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Special Rates

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Special Rate](#)

Section overview

The **Special Rates** section has been created since version 3.18 of the JeraSoft Billing. Its purpose is to separate regular prices for the destinations and the exclusive prices based on agreements between vendors and clients. The section is presented as a table like the one below:

Screenshot: Special Rates section

| Rate Table | Code Name | Rate | Effective Date | End Date | Notes | SF | Min | Int | Time Profile |
|----------------------|-----------|------|----------------|---------------------------|-------|----|-----|-----|--------------|
| ORIG RT - Customer A | ARGENTINA | — | 0.0056 USD | 2021-10-01 00:00:00 +0000 | | | 0 | 1 | 1 all time |

| Column Name | Description |
|-----------------------|--|
| Rate Table | Rate table of a special rate |
| Code Name | Destination code name of a special rate |
| Rate | Price per unit of service |
| Effective Date | Date, when a special rate becomes active |
| End Date | Date, after which this special rate will not be used |
| Notes | Additional information about a special rate |
| SF | Setup fee of a special rate |
| Min | Minimal billed volume |
| Int | Billed interval |
| Time Profile | Time profile of a special rate |

Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows adding a new special rate to the system |
| | Allows managing rates within a specified special rate |
| | Allows editing a special rate |
| | Allows deleting a special rate from the system |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow icon, the following drop-down menu is displayed:

Screenshot: Advanced Search drop-down menu

| Field | Description |
|-------------------|---|
| Rate Table | You can filter the special rates belonging to a certain rate table |
| Code Name | You can filter the special rates by code names |
| State | Search by the period of a rate during which the rate is active, expired, etc. The following states are available to choose from a drop-down list: <ul style="list-style-type: none"> • current/future - the search includes current and future rates • current on - includes rates that are active for a specified date • future for - includes future rates compared with a specified date • past for - includes rates that are expired for a specified date • all - includes all rates |
| Status | You can search by the status of the special rate: <ul style="list-style-type: none"> ▪ active ▪ stashed |
| Services | You can filter the special rates by services |

Adding New Special Rate

To add a new special rate, click the **Add Rate** button and define the respective values in a pop-up window:

Screenshot: Adding new Special Rate

Special Rates

GENERAL SETTINGS

Rate Table:

Code Name:

RATING SETTINGS

Rate:

Interval: sec

Min Volume: sec

Grace Volume: sec

Setup Fee:

LIMITATIONS

Effective Date:

End Date:

Services:

Time Profile:

EXTRA

Tag:

Notes:

Stash Future Rates:

Force Notification:

Number Length: —

| Field | Description |
|-----------------------|--|
| Rate Table | Indicate a rate table, in which the rates will be created inheriting the settings of a current special rate |
| Code Name | Indicate a code name of the special rate <div style="border: 1px solid #ffc107; padding: 5px; margin-top: 5px;"> This field is inactive if the Code Deck is not specified. </div> |
| Rate | Price per unit of a service |
| Interval | Tariffication interval. This parameter is used when Min Volume expires. For instance, if call time is 26 seconds, Min Volume is 25 , and Interval is 8 , the client will pay for 33 seconds |
| Min Volume | Minimal time of the call that will be tariffed. For example, if total call time was 20 seconds and Min Volume is 30 , the client will pay for 30 seconds of the call |
| Grace Volume | Time interval that will not be tariffed (free time). For instance, if you specified 5 sec as Grace Volume , all calls with duration up to 5 seconds (including calls with a session time of 5 seconds) will be free of charge. |
| Setup Fee | Setup fee (charged when event duration is longer than 0 seconds). |
| Effective Date | Indicate a date, on which this special rate will become effective. Before this date, the rate will not be used |
| End Date | Indicate a date, after which this special rate will not be used |
| Services | Select a service for this rate (calls, SMSs, data) |
| Time Profile | Define a time profile to be used for a current special rate |
| Tag | Specify a tag for the respective rates. If it's not applicable, assign a (@) tag as default. |
| Notes | Additional information |

| | |
|---------------------------|---|
| Stash Future Rates | <p>Select what the system should do to the future rates for the same destinations existing in the system:</p> <ul style="list-style-type: none"> • <i>preserve</i>; • <i>stash</i>. |
| Force Notification | <p>Select the system behavior regarding the notification process for the newly created rate:</p> <ul style="list-style-type: none"> • <i>hold</i>; • <i>force</i>. |
| Number Length | <p>Specify a minimum and maximum length of the destination number.</p> <p>For example, if you have a rate of 3 USD for USA Code Name with indicated number length from 6 to 9, and another rate of 5 USD for the same USA Code Name without specified number length, all calls with a Dst Number between 6 and 9 digits will be billed by 3 USD , otherwise, by 5 USD.</p> |

 **Attention**

Please note that the creation of a special rate leads to the creation of regular rates in the **Rates** section. You will be able to edit them only by editing a special rate.

Rates Analysis 2.0

In this article

- [Rates Analysis Form](#)
- [Creating a New Analysis Report](#)
- [Creating a New Report Query](#)
- [Export generated report](#)
- [Sharing a Report](#)





Rates Analysis Form





Rates Analysis is an advanced feature of the **JeraSoft Billing Rates Management Module**. It allows you to analyze and compare rates within the JeraSoft Billing web interface without the usage of any third-party software.

Screenshot: Rates Analysis section

Creating a New Analysis Report

To analyze and compare different rates, you need to fill in the form with the next parameters:

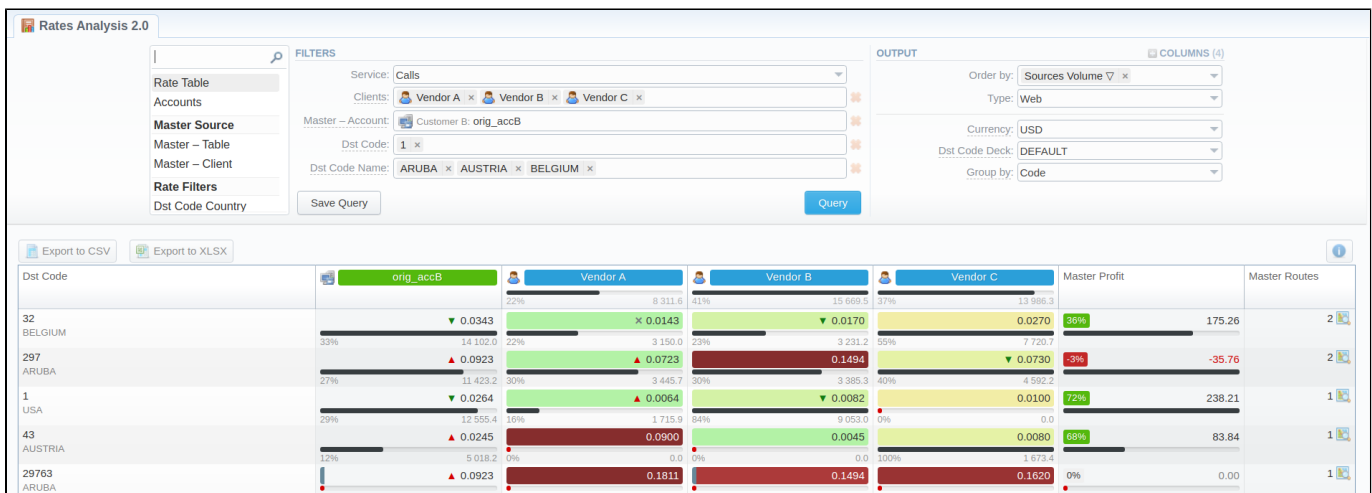
| Information Block | Field Description | | | | | | | | | | | | | | |
|---------------------------|---|--|--|-----------------|--|---|--|----------------------|---|----------------|---|-----------------|--|-------------------|---------------------------------|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <td>Service</td> <td>Select a service for rates analysis. Default is calls</td> </tr> <tr> <td>Dst Code</td> <td>Specify a code of the needed destination</td> </tr> <tr> <td colspan="2"> <div style="border: 1px solid #ccc; padding: 5px;"> <p> Info</p> <p>If a vendor does not have a Rate for the specified longer Dst Code, it would be simulated from an existing shorter one.</p> </div> </td> </tr> <tr> <td>Dst Code Name</td> <td>Define a code name of the desired destination</td> </tr> <tr> <td>Clients</td> <td>Indicate termination clients for analysis</td> </tr> <tr> <td>Accounts</td> <td>Indicate termination accounts for analysis</td> </tr> <tr> <td>Rate Table</td> <td>Define rate tables for analysis</td> </tr> </table> | Service | Select a service for rates analysis. Default is calls | Dst Code | Specify a code of the needed destination | <div style="border: 1px solid #ccc; padding: 5px;"> <p> Info</p> <p>If a vendor does not have a Rate for the specified longer Dst Code, it would be simulated from an existing shorter one.</p> </div> | | Dst Code Name | Define a code name of the desired destination | Clients | Indicate termination clients for analysis | Accounts | Indicate termination accounts for analysis | Rate Table | Define rate tables for analysis |
| | Service | Select a service for rates analysis. Default is calls | | | | | | | | | | | | | |
| | Dst Code | Specify a code of the needed destination | | | | | | | | | | | | | |
| | <div style="border: 1px solid #ccc; padding: 5px;"> <p> Info</p> <p>If a vendor does not have a Rate for the specified longer Dst Code, it would be simulated from an existing shorter one.</p> </div> | | | | | | | | | | | | | | |
| | Dst Code Name | Define a code name of the desired destination | | | | | | | | | | | | | |
| | Clients | Indicate termination clients for analysis | | | | | | | | | | | | | |
| Accounts | Indicate termination accounts for analysis | | | | | | | | | | | | | | |
| Rate Table | Define rate tables for analysis | | | | | | | | | | | | | | |
| Additional Filters | | | | | | | | | | | | | | | |

| | |
|-------------------------|---|
| Master Source | |
| Master - Table | Specify a rate table that all other rates will be compared to |
| Master - Client | Specify an origination client that all other rates will be compared to |
| Master - Account | Specify an origination account that all other rates will be compared to |
| Rate Filters | |
| Dst Code Country | Enter the name of the respective country |
| Rate Tags | Indicate a tag, which relates to specific rates |
| Extras | |
| Actual on | Define the date, when the rates should be effective on <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  Info Applies both to Effective Date and Time Profile. </div> |
| Volume Interval | Specify the number of days of statistics that would be taken for analysis |
| Output | <p>This information block contains settings of the report output data.</p> <p>Click the plus  icon next to Columns and select the required columns to add them to the Output information block. Also, you can cancel any chosen item.</p> <p>Accessible columns in the report</p> <p>The list of additional columns include:</p> <ul style="list-style-type: none"> • <i>Sources Volume</i> - calculated based on Summary Report. • <i>Sources Quality</i> - calculated based on Summary Report. Quality parameters for traffic - ASR and ACD - are available per row. • <i>Master Volume</i> - calculated based on Orig-Term report. • <i>Master Profit</i> - calculated based on Orig-Term report. The relative and absolute Profit is displayed per destination. • <i>Master Routes</i> - shows how many accepted routes there are according to the Routing Plan on the selected master entity. When clicked, prompts you to the Routing Analysis for the respective case. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px; background-color: #fff9c4;">  Note A master filter must be selected for any master-related output columns. </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  Info By default, the system takes statistics for the last 7 days. You can alter this value by specifying a Volume Interval filter. </div> |
| Order by | Select parameters to sort already grouped data in columns. Here you can sort data from highest to lowest values (or vice versa) and select different values |
| Type | Choose a format of the report from a drop-down list: <ul style="list-style-type: none"> • Web • CSV • Excel XLSx <p>If CSV or Excel XLSx type has been selected, an additional Send to field will be displayed. In this field, you can specify emails of the clients, to which the current report in the selected format will be sent.</p> |
| Currency | Specify the currency of the report. All values will be automatically converted to the specified currency in the report |

| | |
|-----------------------------|---|
| <p>Dst Code Deck</p> | <p>Select a code deck from a drop-down list. All codes in the following report will be presented according to the specified code deck</p> <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <p>Attention</p> <p>This field is not mandatory by default. However, it is required if you have any destination name-related filters and/or Group by Code Name.</p> </div> |
| <p>Group by</p> | <p>Select a grouping option from the following list:</p> <ul style="list-style-type: none"> • Dst Code - aggregation by default output • Dst Code Name - grouping by rate rows with the same names and rates for all codes in each rate table <p>This option is intended to simplify grouping, the system will automatically group data in specified columns. If certain termination entities will have different prices within the same Code Name, the rows will be displayed separately.</p> |

After clicking the **Query** button, the system will form a list of rates with prices for each destination. The appeal of rates is visualized as a heat map for convenience. The darker the red - the least profitable, the brighter the green - the more, respectively.

Screenshot: Rates Analysis section output



By hovering over the **Info** icon above the report on the right, the **user's name**, **time/date**, when a report was generated, and **Duration** will be displayed in a window.

Screenshot: Info icon

Generated by: Administrator on 09/17/2021 13:48:45 +0000

Duration: 0.1132 sec

Note for blocked destinations

- The margins cannot be calculated for a blocked destination, so, in the output, they are omitted;
- If the Master Source has a blocked Rate, margin calculation works between sources (as for missing Rates).

Creating a New Report Query

Also, you can create a template and save specified parameters by clicking the **Save Query** button. A pop-up window with settings will appear, where you need to fill out the following form:

Screenshot: New Report Query form

After a template has been created, a new **Load Query** button will be added to the section. By clicking it, you can select report settings to be filled in from a list of templates for rates analysis.

Export generated report


You can export report data either in .xlsx file or .csv that would contain currently presented data. Click the **Export to XLSx** or **Export to CSV** button above the report output to download a file of the respective format.

Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|--------------|--|
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |
| Duration | Time spent to generate a report |

Rates Analysis [old]

In this article

- [Rates Analysis Form](#)
- [Creating a New Analysis Report](#)
- [Creating a New Template](#)
- [Export generated report](#)
- [Sharing a Report](#)


Rates Analysis Form

Rates Analysis is an advanced feature of the **JeraSoft Billing Rates Management Module**. It allows you to analyze and compare rates within the JeraSoft Billing web interface without using any third-party software.

Screenshot: Rates Analysis section

Creating a New Analysis Report

To analyze and compare different rates, you need to fill in the form with the next parameters:

| Information Block | Field Description |
|---------------------------|--|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | <p>Outlook</p> <p>Choose the form of the rate analysis report for data display. Please note that this field is mandatory and should be filled in to make a report.</p> <ul style="list-style-type: none"> • Rates comparison - compares rates in general and particular rates assigned to certain Clients and Accounts. • Least costs list - shows the cheapest rate for each code in a particular rate table |
| | <p>Service</p> <p>Select a service for rates analysis</p> |
| | <p>Originators</p> <p>Specify origination clients for analysis</p> |
| | <p>Terminators</p> <p>Indicate termination clients for analysis</p> |
| | <p>Rate Tables</p> <p>Define rate tables for analysis</p> |
| | <p>Client Tags</p> <p>Select clients matching specified tags for analysis</p> |
| | <p>Group by</p> <p>Select a grouping option from the following list:</p> <ul style="list-style-type: none"> • Dst Code - aggregation by default output. • Dst Code Name - grouping by rate rows with the same names and rates for all codes in each rate table. <p>This option is intended to simplify grouping, the system will automatically group data in specified columns.</p> |
| Additional Filters | |

| | |
|---|---|
| <p>The accessible additional filters are:</p> <ul style="list-style-type: none"> • Events: <i>Dst Code, Dst Code Name, Country Name</i> • Extras: <i>Client Tags, Actual On, Master Table, Lowest Position, Get Margins For, Tag, Rate Age</i> | |
| <p>Events settings</p> | |
| Dst Code | Specify a code of the needed destination. |
| Dst Code Name | Define a code name of the desired destination. |
| Country Name | Enter the name of the respective country. |
| <p>Extra settings</p> | |
| Actual on | Define the Effective Date of rates. |
| Master Table | <p>Specify a rate table that all other rate tables will be compared to.</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note that this field is active only during rate tables analysis</p> </div> |
| Lowest Position | Enter the number of the position from the full list of rates. For example, if you are looking for the cheapest destination in several rates, type 1 in this field. Please note that this feature only works with the Master Table option. |
| Tag | Indicate a tag, which relates to a specified rate table |
| Get margins for | Define a rate table, from which the respective margins will be taken. It is used to analyze margins. |
| Rate age | Specify the number of days |
| Output | This information block contains settings of the report output data. |
| | <p>Type</p> <p>Choose a format of the report from a drop-down list:</p> <ul style="list-style-type: none"> • Web • CSV • Excel XLS • Excel XLSx <p>If CSV, Excel XLS or Excel XLSx type has been selected, an additional Send to field will be displayed. In this field, you can specify emails of the clients, to which the current report in the selected format will be sent.</p> |
| | <p>Currency</p> <p>Specify a currency of the report. All values will be automatically converted to the specified currency in the report.</p> |
| | <p>Code Deck</p> <p>Select a code deck from a drop-down list. All codes in the following report will be presented according to the specified code deck.</p> |
| | <p>Simulate long codes checkbox</p> <p>Check if a rate table does not have codes, which are presented in other tables for simulating them using shorter codes.</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>If you check the Simulate long codes checkbox, the system will try to simulate the longest available code with the shorter one. For example, we analyze two rate tables, one of which has code 380, and the other has 380 and 38044 codes.</p> <p>When the mentioned checkbox is active, the first rate table will have unavailable 38044 code simulated with the price of available 380. Rates like these have the Simulated label when you hover the mouse pointer over them and are colored in light-red, light-green and grey respectively.</p> </div> |

After clicking the **Query** button, the system will form a list of rates with prices for each destination. The highest rate available for the destination is colored in red, the lowest – in green, and middle rates are colored in black.

Screenshot: Rates Analysis section

The screenshot shows the 'Rates Analysis' interface. On the left is a sidebar with categories like 'Events', 'Extras', and 'Tag'. The main area is divided into 'FILTERS' and 'OUTPUT'. The 'FILTERS' section includes dropdowns for Outlook (rates comparison), Service (Calls), and Group By (Dst Code). It also features multi-select fields for Originators (coolguy, bestCustomer, Client 0 ORIG), Terminators (bestCustomer, client2, Client 0 TERM, ghosterm), and Rate Tables (ORIG RT - bestCustomer, ORIG RT - client2, ORIG RT - coolguy, RT 0 ORIG, RT 0 TERM, TERM RT - bestCustomer). The 'OUTPUT' section shows settings for Type (Web), Currency (USD), Dst Code Deck (DEFAULT), and Simulate Long (unchecked). Below the filters is a table with columns for various rate categories and their values.

| Dst Code | Dst Code Name | ORIG RT - bestCustomer | ORIG RT - client2 | ORIG RT - coolguy | RT 0 ORIG | RT 0 TERM | TERM RT - bestCustomer | coolguy Orig | bestCustomer Orig | Client 0 ORIG Orig | bestCustomer Term | Client 0 TERM Term | ghosterm ghosterm Term |
|----------|---------------|------------------------|-------------------|-------------------|-----------|-----------|------------------------|----------------|---------------------|----------------------|---------------------|----------------------|----------------------------|
| 1 | USA | 2.0000 | 5.0000 | 0.5000 | - | - | 0.7000 | - | - | - | - | - | - |
| 123 | Code 123 | - | - | - | 4.0000 | 2.0000 | - | - | - | - | - | - | - |
| 3 | - | - | 0.4000 | - | - | - | - | - | - | - | - | - | - |
| 417 | Code 417 | - | - | - | 5.0000 | 3.0000 | - | - | - | - | - | - | - |

Note for blocked destinations
 Margins for blocked rates are not calculated (all cells are filled with '-').

Also, there is a possibility to **select all** values in the **Rates Analysis form** for the following fields: *Rate tables, Originators, Terminators.*

Screenshot: Rates Analysis section

This screenshot shows the 'Rates Analysis' interface with the 'Originators', 'Terminators', and 'Rate Tables' fields highlighted with a red box and containing the text 'ALL'. A red arrow points to the 'ALL' text in the 'Terminators' field. The rest of the interface, including the 'FILTERS' and 'OUTPUT' sections, is identical to the previous screenshot.

By clicking the **Info** icon above the report on the right, the **user's name** and **time/date**, when a report was generated, will be displayed in a pop-up window.

Screenshot: Info icon

Generated by: Administrator on 01/24/2018 16:17:47 +0000

Creating a New Template

Also, you can create a template and save specified parameters by clicking the **Save Query** button. A pop-up window with settings will appear, where you need to fill out the following form:

Screenshot: New Template form

Reports Templates
 WATCH (NOT AVAILABLE FOR WEB OUTPUT TYPE)

RATES ANALYSIS

Title:

Reseller:

Visibility:

Recipients:

Run Time:

Run Time Timezone:

Days of Week:

REPORT QUERY

- Events
- Dst Code
- Dst Code Name
- Country Name
- Extras
- Actual On
- Master Table
- Lowest Position
- Get Margins For
- Tag

FILTERS

Outlook:

Service:

Originators:

Terminators:

Rate Tables:

Client Tags:

Group By:

OUTPUT

Type:

Currency:

Dst Code Deck:

Simulate Long:

| Section | Description |
|-----------------------|--|
| Rates Analysis | Here you can specify parameters for the template that will be used while running reports |
| | Title Specify a name of the template |
| | Reseller Indicate a Reseller for the report template |
| | Visibility It allows controlling the visibility of respective reports templates. You can set up whether you want to keep templates private or leave them visible for users under a specified Reseller. To enable this option, select one parameter from the drop-down list: <ul style="list-style-type: none"> • Public - available for users according to the settings of the Reseller field. • Private - accessible strictly for the creator. |
| Watch | This tool allows to generate the report automatically at the appropriate time and send the results to the list of emails. |
| | <p>Attention</p> <p>Please note that this tool is not available for Web output type, only for CSV/Excel XLS/Excel XLSx</p> |
| | Recipients Specify recipients. You can indicate your own email, or other users of the system, or even 3rd parties |
| | Run Time Indicate an appropriate time to generate a report automatically, it could be several times, for example, 10:00, 12:00, 18:00 |
| | Days of Week Indicate days of the week to generate a report automatically. For example, you can run a report only on Monday or each day of the week . |
| Report Query | Here you need to check filters and the output type. These values will be pre-selected by default according to the formed rate analysis query. |

After a template has been created, a new **Load Query** button will be added to the section. By clicking it, you can select report settings to be filled in from a list of templates for rates analysis.

Export generated report


You can export report data either in .xls file or .csv that would contain currently presented data. Click the **Export to XLSx** or **Export to CSV** button to download a file of the respective format.

Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

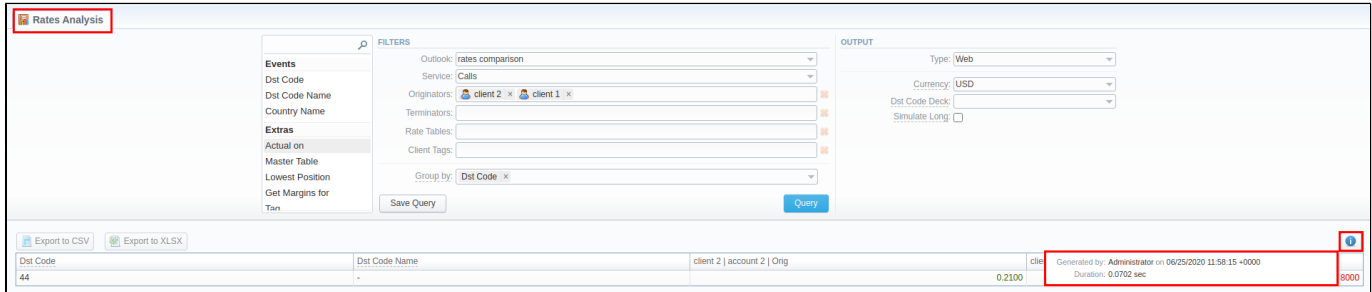
The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|--------------|--|
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |
| Duration | Time spent to generate a report |

Screenshot: Rates Analysis Info icon



The screenshot shows the 'Rates Analysis' report interface. It includes a sidebar with navigation options like 'Events', 'Extras', and 'Actual on'. The main area has 'FILTERS' and 'OUTPUT' sections. The 'FILTERS' section includes dropdowns for 'Outlook' (rates comparison), 'Service' (Calls), 'Originators' (client 2, client 1), 'Terminators', 'Rate Tables', and 'Client Tags'. The 'OUTPUT' section includes 'Type' (Web), 'Currency' (USD), 'Dst Code Deck', and a 'Simulate Long' checkbox. Below the filters is a 'Save Query' button and a 'Query' button. At the bottom, there are 'Export to CSV' and 'Export to XLSX' buttons. A table displays report data with columns for 'Dst Code', 'Dst Code Name', 'client 2 | account 2 | Orig', '0.2100', 'Generated by: Administrator on: 06/25/2020 11:58:15 +0000', 'Duration: 0.0702 sec', and '8000'. An 'Info' icon is located in the top right corner of the table area.

Rates Generator

In this article

- [Section overview](#)
- [Creating New Rates Generator](#)
 - [Optimization Options](#)
 - [Adjust Options](#)
 - [Advanced & Quality Options](#)
- [Rules List Tab](#)
- [Creating New Rules](#)

Section overview

Rates Generator is a tool aimed at making rates management more flexible and versatile by allowing setting up specific rules that will be applied to codes and rate tables in general. Additionally, it allows both generating a new rate table for vendors or updating new ones. The section is presented in the form of a table with the following columns:

Screenshot: Rates Generator form



| Column | Description |
|--------------------|---|
| ID | Identification number of a rates generator |
| Name | Name of a rates generator |
| Company | Name of a reseller, whom a rates generator belongs to |
| Description | Additional information about a rates generator |

Functional buttons/icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows creating a new rates generator |
| | Allows deleting a rates generator from the system |

Creating New Rates Generator

To create a new rates generator, you need to click the **New Rates Generator** button and a pop-up creation form will appear. It consists of **general** and **additional** settings. The list of general settings includes the following fields:

Screenshot: General settings

The screenshot shows the 'Rates Generator' form with three main sections: 'GENERAL SETTINGS', 'ADJUST RESULTS', and 'ADVANCED OPTIONS'. The 'GENERAL SETTINGS' section is highlighted with a red border and includes fields for Name, Reseller, Service (Calls), Dst Code Deck, Currency, and Description. The 'ADJUST RESULTS' section includes Tag (@), Policy (Regular), Rate, Setup Fee (0), Min Volume (1 sec), Interval (1 sec), Grace Volume (0 sec), and Time Profile (all time). The 'ADVANCED OPTIONS' section includes Detect Fake (5), Skip Distance (10%), Rate Position (1), and 'QUALITY OPTIONS' with Analyze Period (24 hours), Code Min Volume (60 min), and Unmatched price (100). At the bottom, there are 'OK', 'Cancel', and 'Apply' buttons.

| Field | Description |
|----------------------|---|
| Name | Specify the name of a new rates generator |
| Reseller | Select the reseller, to whom a newly created rates generator should belong |
| Service | Choose the service to be applied for the respective rates generator (calls, SMSs, data, etc.). |
| Dst Code Deck | Select the code deck that will be used to name destination codes in a new price list if the Adjust Results option is enabled |
| Currency | Specify the currency of rates in a new price list |
| Description | Additional information about a current rates generator |

To refine your results, you can use the following additional criteria:

Optimization Options

Screenshot: Rates Generator form/Optimization checkbox

This screenshot is similar to the first one but shows the 'OPTIMIZATION' section highlighted with a red border. It contains a 'Simplify Mode' dropdown menu set to 'min' and an unchecked 'Codes Optimization' checkbox. The rest of the form fields and layout are identical to the previous screenshot.

| Information Block | Description |
|----------------------|--|
| Simplify Mode | It allows applying the same price for all codes inside the same code name by using three options: |
| | <ul style="list-style-type: none"> min minimum available price. max maximum available price. |

| | average price of all available. | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--|------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------|---|---|---|---|---|------|---|---|---|---|------|---|---|---|---|
| • avg | | | | | | | | | | | | | | | | | | | | | | | |
| Example | For instance, if the USA code name consists of 3 codes with 1, 5, and 6 USD rates, respectively, depending on a chosen option, the results will be: | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Code</th> <th>Source Rate</th> <th></th> <th>Result Rate for <i>min</i></th> <th>Result Rate for <i>max</i></th> <th>Result Rate for <i>avg</i></th> </tr> </thead> <tbody> <tr> <td>1201</td> <td>1</td> <td rowspan="3">»</td> <td>1</td> <td>6</td> <td>4</td> </tr> <tr> <td>1202</td> <td>5</td> <td>1</td> <td>6</td> <td>4</td> </tr> <tr> <td>1203</td> <td>6</td> <td>1</td> <td>6</td> <td>4</td> </tr> </tbody> </table> | Code | Source Rate | | Result Rate for <i>min</i> | Result Rate for <i>max</i> | Result Rate for <i>avg</i> | 1201 | 1 | » | 1 | 6 | 4 | 1202 | 5 | 1 | 6 | 4 | 1203 | 6 | 1 | 6 | 4 |
| Code | Source Rate | | Result Rate for <i>min</i> | Result Rate for <i>max</i> | Result Rate for <i>avg</i> | | | | | | | | | | | | | | | | | | |
| 1201 | 1 | » | 1 | 6 | 4 | | | | | | | | | | | | | | | | | | |
| 1202 | 5 | | 1 | 6 | 4 | | | | | | | | | | | | | | | | | | |
| 1203 | 6 | | 1 | 6 | 4 | | | | | | | | | | | | | | | | | | |
| Codes Optimization checkbox | This option allows compressing an imported code range. For example, 4400-4409 will be shortened to 440 . At the same time, 4400-4491 will be shortened to 440, ..., 448, 4490, 4491 . | | | | | | | | | | | | | | | | | | | | | | |

Adjust Options

The **Adjust Results** section enables results adjusting by data from a currently selected **Code Deck**. It means that the number of codes in your **source rate table** (specified in rules after a new rates generator is created) **must be equal** to the number of codes in your Code Deck. If your Code Deck has only 5 codes, but a rate table has 10, those extra codes, that are not specified in a selected Code Deck, will be removed from a generated rate table. On the other hand, if your Code Deck has 15 codes, but a rate table has only 5, 10 extra codes will be added to a generated rate table with parameters, specified in this information block. A detailed example is provided in the table below.

Screenshot: *Adjust Results information block*

| Field | Description |
|---------------------|---|
| Tag | Specify a tag that will be applied to new rates, if such were created by a rates generator. Let's leave the default @ tag |
| Policy | Select the policy (regular or additive) that will be applied to code(s), presented in a code deck, but not in a source rate table. For example, Regular policy |
| Rate | Define a rate for codes, which are present in a code deck but missing in a rule's source rate table. For example, 7.5 USD |
| Setup Fee | Define a setup fee for a new rate(s). For example, 8 USD |
| Min Volume | Indicate minimum volume for a new rate(s). 6 sec , for instance |
| Interval | Specify the interval for a new rate(s). For example, 2 sec |
| Grace Volume | Determine grace volume for those rates. For example, 2 sec |
| Time Profile | Define a time profile for a new rate(s). For instance, leave the default all time profile |

Example

Let's say our DEFAULT code deck contains 5 codes: **1201, 1202, 1203, 1204, 1205**. But our source rate table has 4: **1201, 1202, 1203, and 1205**. If you enable **Adjust Results** and specify the above-mentioned fields with respective parameters, a new rate table, created by a rates generator, will consist of 5 codes: **1201, 1202, 1203, 1205** with their **original parameters** and a new **1204** code with the following ones (see screenshot above):

| Field | Value |
|---------------------|--------------------------------|
| Code | 1204 |
| Code Name | According to DEFAULT code deck |
| Rate | 7.5 |
| Setup Fee | 8 |
| Min Volume | 6 |
| Interval | 2 |
| Grace Volume | 2 |
| Time Profile | all time |
| Tag | @ |
| Policy | Regular |

If a source rate table misses **more than 1 code** from the selected code deck, all added codes will have **identical parameters**, specified in the respective fields above.

Attention

Please note, if you enable the **Adjust Results** option but don't specify the **Rate** field, new rates for missing codes **won't be added** to a new rate table

Advanced & Quality Options

Screenshot: *Advanced and Quality Options information block*

The screenshot shows the 'Rates Generator' interface with three main sections: 'GENERAL SETTINGS', 'ADJUST RESULTS', and 'ADVANCED OPTIONS'. The 'ADVANCED OPTIONS' section is highlighted with a red border and contains the following fields:

- Detect Fake: 5
- Skip Distance: 10 %
- Rate Position: 1
- QUALITY OPTIONS:
 - Analyze Period: 24 hours
 - Code Min Volume: 60 min
 - Unmatched price: 100

At the bottom right of the interface are buttons for 'OK', 'Cancel', and 'Apply'.

The Advanced Options information block is designed to resolve cases when rates generator rules are created for different source rate tables that share certain identical codes. By specifying the following fields, you can configure what will the rate system use for these codes:

| Field | Description |
|----------------------|--|
| Detect Fake | Enable detection of fake rates if at least a specified number of rates is present in all source rate table, specified in generator rules. |
| Skip Distance | A percentage value of the difference between the average rate value and a particular rate from all rates, used for the Detect Fake operation. |

| Rate Position | <p>Define what rate from a total amount of rates left after Detect Fake operation will be used for certain code.</p> <p>Rates are ordered from the cheapest to the most expensive. Thus, if you specify 1, The system will use the cheapest rate, if 2 - the second cheapest, and so on.</p> | | | | | | | | | | |
|----------------------|--|-----------------|------|------|------|------|-----|------|-----|------|-----|
| Example | <p>Let's say we have 4 rules in our rates generator, each with a different source rate table. Each rate table has a rate for the 1201 code, but with different prices in USD:</p> <table border="1"> <thead> <tr> <th>Rate Table Name</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>RT 1</td> <td>0.98</td> </tr> <tr> <td>RT 2</td> <td>0.2</td> </tr> <tr> <td>RT 3</td> <td>1.1</td> </tr> <tr> <td>RT 4</td> <td>1.7</td> </tr> </tbody> </table> <p>In Advanced Options of rates generator settings, we've specified values, seen in the screenshot above. It means that the system will pick all 4 rates for the 1201 code and execute the following actions:</p> <ol style="list-style-type: none"> Count an average rate for all 4 rates that equals 0.99 USD. Count the interval of 15% for an average rate of 0.99 USD that is between 0.85 USD and 1.13 USD. Then, the system will compare all rates and skip 1.7 USD rate from RT 4 and 0.2 USD rate from RT 2. Since the Rate position field value is 2, the system will pick the second cheapest rate for this code that is 1.1 from RT 3 and apply it as a basic rate for 1201 code in a new rate table, created by a rates generator. | Rate Table Name | Rate | RT 1 | 0.98 | RT 2 | 0.2 | RT 3 | 1.1 | RT 4 | 1.7 |
| Rate Table Name | Rate | | | | | | | | | | |
| RT 1 | 0.98 | | | | | | | | | | |
| RT 2 | 0.2 | | | | | | | | | | |
| RT 3 | 1.1 | | | | | | | | | | |
| RT 4 | 1.7 | | | | | | | | | | |

The Quality Options information block contains additional parameters for more precise rate generation, based on the [Summary Report](#). The system will analyze the report taking into account a specified time interval, specified in a report, minimum event value for codes, specified in generator rules, as well replace rate values for unmatched codes, and will generate a new rate table or update an existing one including these parameters. The information block consists of the following fields:

| Field | Description | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--|-------|----------|---------------|------------------------------------|-------------|------------------|---------------------|----|------|----------|--|----------|------|-----|---|-----|------|-----|-----|------|-----|-----|
| Analyze Period | Define a number of hours to analyze the Summary Report for. For example, 24 hours | | | | | | | | | | | | | | | | | | | | | | |
| Code Min Volume | Define a minimum event volume for certain code. For example, 60 min for the Calls service | | | | | | | | | | | | | | | | | | | | | | |
| Unmatched Price | Define a price for all codes that do not satisfy quality parameters (Code Min Volume value). For example, 100 USD | | | | | | | | | | | | | | | | | | | | | | |
| Example | <p>For example, you created a new rates generator and set up 3 rules for the following codes: 1201, 1202, 1205 with 1.5, 2.5, and 5.5 USD rates, respectively. In the Quality options, the respective parameters are the same as indicated in an example (see screenshot above). If you click Create Rate Table or Update Rate Table buttons on May 16th, at, i.e., 3:25 PM, the rates generator will run a Summary Report with the following parameters:</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Period</td> <td>May 15, 15.25 PM - May 16, 3:25 PM</td> </tr> <tr> <td>Code</td> <td>1201, 1202, 1205</td> </tr> <tr> <td>Total Volume</td> <td>60</td> </tr> </tbody> </table> <p>Subsequently, a report showed that the billed volume for 1201 code is 79 mins, 1202 - 49 mins, and 1205 - 61 mins. As a result, a newly generated rate table will contain the following data:</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Old Rate</th> <th></th> <th>New Rate</th> </tr> </thead> <tbody> <tr> <td>1201</td> <td>1.5</td> <td rowspan="3">»</td> <td>1.5</td> </tr> <tr> <td>1202</td> <td>2.5</td> <td>100</td> </tr> <tr> <td>1205</td> <td>5.5</td> <td>5.5</td> </tr> </tbody> </table> | Field | Value | Period | May 15, 15.25 PM - May 16, 3:25 PM | Code | 1201, 1202, 1205 | Total Volume | 60 | Code | Old Rate | | New Rate | 1201 | 1.5 | » | 1.5 | 1202 | 2.5 | 100 | 1205 | 5.5 | 5.5 |
| Field | Value | | | | | | | | | | | | | | | | | | | | | | |
| Period | May 15, 15.25 PM - May 16, 3:25 PM | | | | | | | | | | | | | | | | | | | | | | |
| Code | 1201, 1202, 1205 | | | | | | | | | | | | | | | | | | | | | | |
| Total Volume | 60 | | | | | | | | | | | | | | | | | | | | | | |
| Code | Old Rate | | New Rate | | | | | | | | | | | | | | | | | | | | |
| 1201 | 1.5 | » | 1.5 | | | | | | | | | | | | | | | | | | | | |
| 1202 | 2.5 | | 100 | | | | | | | | | | | | | | | | | | | | |
| 1205 | 5.5 | | 5.5 | | | | | | | | | | | | | | | | | | | | |

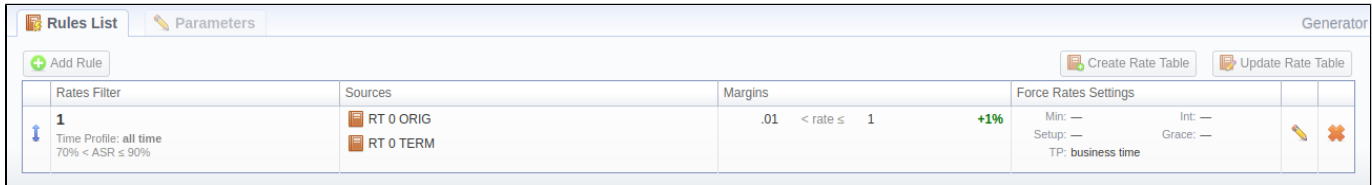
⚠ Attention

If you want to use **Quality Options** for Rates Generator, you have to define a **Terminator** as a Source for a Rates Generator's rule.

Rules List Tab

When your rates generator has been created, you need to specify its rules. The Rules List tab consists of all rules, created for a target rates generator and is presented in the form of a table with the following columns:

Screenshot: Rules List Tab



| Columns | Description |
|-----------------------------|--|
| Rates Filter | Code or Code Name, used in this rule |
| Sources | Rate Tables or Terminators Names that serve as sources for this rule |
| Margins | Amount of margin that will be applied to a rate if specified margin parameters are met <i>Margins are calculated like this: (Gross Profit / Revenue) * 100</i> |
| Force Rates Settings | Additional information on a rate: Setup Fee, Grace Volume , etc. |

List of functional buttons, presented in the tab, includes:

| Button/Icon | Description |
|-------------|---|
| | Allows creating new generator rules |
| | Allows creating a new rate table with data from respective rules that will be added to the Rate Tables section |
| | Allows updating a target rate table(s) with data from respective rules |

You can change an order of rules with the help of the icon. Simply click on it and drag-and-drop it to the desired place.

Creating New Rules

To create a new rule, you need to click the **Add Rule** button. In the opened creation form (see screenshot below), specify the respective fields and click **OK**. A new rule will be added at the top of the **Rules List** tab:

Screenshot: New rule creation form

Rates Generator
Generator

RATES FILTER

Code:

Code Name:

Time Profile:

Tag:

Policy:

QUALITY FILTER

ASR: — %

ACD: — min

FORCE RATES SETTINGS

Min Volume: sec

Interval: sec

Grace Volume: sec

Setup Fee: USD

Time Profile:

SOURCES

Rate Tables:



Terminators:

Terminators Tags:

MARGINS +

i No Margins

| Information Block | Fields and Description |
|-----------------------|--|
| Rates Filter | Basic parameters of a new rule |
| | <ul style="list-style-type: none"> • Code Indicate a code for a current rule. Use the * (asterisk) symbol for all codes. If a code is specified, the Code Name field is inactive and vice versa |
| | <ul style="list-style-type: none"> • Code Name Specify a respective Code Name for this rule |
| | <ul style="list-style-type: none"> • Time Profile Select a time profile for codes that will be picked from sources |
| | <ul style="list-style-type: none"> • Tag Specify a tag for a current code of a rule |
| Quality Filter | Set quality parameters of your rule here |
| | <p>⚠ Attention</p> <p>Please be advised that these parameters work in combination with Quality Options in generator settings. It means that if ASR, % is set to 85-95 when a rates generator creates a Summary Report, it will analyze codes not only by their volumes, indicated in the Code Min Volume field, but also if their ASR complies with the value, indicated in the ASR, % field. The same behavior is expected for the specified ACD, min field</p> |

| | | |
|-----------------------------|---|---|
| | <ul style="list-style-type: none"> • ASR, % | Specify ASR ranges for target code that are checked in a Summary Report by the rates generator |
| | <ul style="list-style-type: none"> • ACD, min | Specify ACD ranges for target code that are checked in a Summary Report by the rates generator |
| Force Rates Settings | Specify additional parameters that must be noted when picking destinations from sources: <ul style="list-style-type: none"> • Setup Fee • Min. Volume • Interval • Grace Volume • Time Profile | |
| Sources | Select one or multiple sources for picking data for a new price list | |
| | <ul style="list-style-type: none"> • Rate Tables | Specify source rate tables |
| | <ul style="list-style-type: none"> • Terminators | Specify vendors (termination clients) for this rule (both client's and its accounts' Rate Tables will be checked) |
| | <ul style="list-style-type: none"> • Terminators Tags | Specify vendors' tags for this rule (both client's and its accounts' Tags will be checked) |
| Margins | By clicking on the  icon, you can add a margin to a respective rate. <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>MARGINS </p> <p>Rate > <input type="text"/> USD</p> <p>Rate ≤ <input type="text"/> USD</p> <p>Add Margin: <input type="text"/> USD / %</p> <p style="text-align: right;"><input type="button" value="Add Margin"/></p> </div> If the rate for an indicated code is within the range of rates, defined in the Rate> and Rate fields, a margin (specified in respective currency or %) will be applied to this rate. Add the % symbol to the Add Margin field value to indicate that a margin is in percent. | |

 **Tip**

Section rules abide by the following priority: the top placed rule is picked first, and if some of the lower priority rules are able to provide the same codes, those codes will be ignored.

 **Attention**

Rate Generation does not work with rates with **Src Codes** indicated.

 **Info**

- If the currency of a source **Rate Table** differs from **Rate Generator** currency, it will convert prices to correspond to its assigned currency.
- If there are both *blocked* and *non-blocked Rates* in the **Sources** of a Rates Generator, only non-blocked will be taken into account while processing the destination;
- If all of the **Sources** have blocked rates for the destination in question, the Rates Generator will create a blocked Rate for a customer's side Rate Table.

Agreements

The **Agreements** section has been introduced in version 3.18 of the JeraSoft Billing. It provides a list of agreements between clients and vendors on the rates changes and notifications. The system considers agreements while generating rates and during clients' notifications.

Screenshot: Agreements section

| ID | Name | Notification Day | Increased Rate | Decreased Rate | Unchanged Rate | New Rate | Closed Rate | Blocked Rate | Reseller | Sort Order |
|----|-----------------|------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|------------|
| 1 | Basic Agreement | Friday | in 7 days from last midnight | in 0 days from last midnight | in 0 days from last midnight | in 7 days from last midnight | in 0 days from last midnight | in 0 days from last midnight | Company Name | 100 |

| Column Name | Description |
|-------------------------|---|
| ID | Agreement's identification number |
| Name | Name of an agreement |
| Notification Day | Day, on which a vendor agreed to send notifications to the customer |
| Increased Rate | Delay that indicates the minimal period between notification date and date of an increased rate |
| Decreased Rate | Delay that indicates the minimal period between notification date and date of a decreased rate |
| Unchanged Rate | Delay that indicates the minimal period between notification date and date of an unchanged rate |
| New Rate | Delay that indicates the minimal period between notification date and date of a new rate |
| Closed Rate | Delay that indicates the minimal period between notification date and date of a closed rate |
| Blocked Rate | Delay that indicates the minimal period between notification date and date of a blocked destination |
| Reseller | A reseller of an agreement |
| Sort Order | Order of the entity in the list |

Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|---|--|
|  | Allows adding a new agreement to the system |
|  | Allows deleting an agreement from the system |


Creating a New Agreement

To create a new agreement, you need to click the **New Agreement** button, and the following fields will appear:


| Field | Description |
|-------------------------|--|
| Name | Title of an agreement (must be text with no more than 128 symbols) |
| Reseller | Reseller of an agreement |
| Notification Day | Define the date of the notification to the customer |
| Agreement Terms | |

| | |
|--|---|
| <p>New/Increased/Decreased/Closed /Blocked/Unchanged Rate</p> | <p>Define a minimal period between the notification date and the date of a rate (must be an integer between 0 and 365). There are various options to schedule this date:</p> <ul style="list-style-type: none"> • days from last midnight - the rate will be changed after the specified amount of days from the midnight of the defined Notification Day • days from notification - the rate will be changed after the specified amount of days from the defined Notification Day • hours from XX:00 - the rate will be changed after the specified amount of hours from the start of an hour of the current agreement creation • hours from notification - the rate will be changed after the specified amount of hours from the defined Notification Day |
|--|---|

Screenshot: Adding a new Agreement

 **Agreements**
Basic Agreement

Name:

Reseller: 

Notification Day:

Sort Order:

AGREEMENT TERMS

New Rate: in

Increased Rate: in

Decreased Rate: in

Closed Rate: in

Blocked Rate: in

Unchanged Rate: in

After filling in all the required fields, click **OK**, and the new agreement will appear in the list.

Swap Deals

In this article


- [Section overview](#)
- [Adding a New Swap Deal](#)
 - [Items List tab](#)
 - [Edit Swap Deal tab](#)
- [Adding a New Item](#)
- [Swap Deals' in-system functioning](#)

Section overview

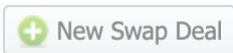


The **Swap Deals** section has been created since version 3.20 of the JeraSoft Billing. Its purpose is to comprise all the bilateral agreements for further monitoring and analysis. The section is presented as a table like the one below:

Screenshot: *Swap Deals* section

| ID | Name | Status | Period | Forecast Date | Live Profit | Progress | Client |
|----|-------------|------------|-------------------------|---------------|---------------|----------|----------------------------|
| 2 | Swap Deal | In-process | 11/01/2019 – 12/31/2019 | 10/29/2019 | 30 855.00 USD | 60% | Test Client Test Account |
| 3 | swap deal 2 | archive | 11/28/2019 – 12/13/2019 | — | 0.00 USD | | Test Client Test Account |

| Column Name | Description |
|----------------------|---|
| ID | ID of the Swap Deal |
| Alert | This column is showing whether the Swap Deal goes as planned. If the current traffic speed is insufficient to close the deal as planned, there will be a  icon to let you know. |
| Name | Name of the Swap Deal |
| Status | The deal's status. It can be either one of the following: <ul style="list-style-type: none"> ▪ pending - the Swap Deal's start day is in the future ▪ in process - meaning the Swap Deal is in process of completing ▪ archive - inactive Swap Deal ▪ success - the result status after the success deal's completion ▪ fail - the result status after the failed deal's completion |
| Period | Period of the Swap Deal |
| Forecast Date | The forecasted date of the Swap Deal completion with the current speed |
| Live Profit | The sum of inbound and outbound live revenue |
| Progress | The progress bar for the Swap Deal, shows the percentage of completion |
| Client | The Client's name and its Account, with whom the deal was agreed |

Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|---|---|
|  | Allows adding a new Swap Deal to the system |
|  | Allows editing a Swap Deal |
|  | Allows deleting a Swap Deal from the system |

Adding a New Swap Deal

To add a new swap deal, click the **Add Swap Deal** button and define the respective values in a pop-up window:

Screenshot: Adding a New Swap Deal

Swap Deals

GENERAL

Name:

Status: Active ▼

Currency: USD ▼

Client:

Account:

PERIOD SETTINGS

Period: day(s) ▼

Start Date:

OK
Cancel
Apply

| Field | Description | |
|---|-------------------|--|
| General | Name | Define the name for the Swap Deal |
| | Status | Specify the Swap Deal status. There are two options: <ul style="list-style-type: none"> • active • archive |
| | Currency | Specify the Swap Deal currency |
| | Client | Select the Client for the current Swap Deal |
| | Account | Select the Account for the current Swap Deal |
| Note that the Client and Account fields are mutually exclusive. | | |
| Period Settings | Period | Indicate a period in days or months for this Swap Deal |
| | Start Date | Indicate a start date for this Swap Deal |

Items List tab

Inside of the Swap Deal entity, there are **Items** - the agreements on traffic volumes and pricing per destination. The Items are in the **Items List** tab of the current Swap Deal. This tab looks like this:

Screenshot: Items List tab

Items List
 Edit Swap Deal
Swap Deal

GENERAL

Client: **Test Client** | Test Account

Period: 11/01/2019 – 12/01/2019

Update Time: 11/10/2019 00:00:00 +0000

Status: **In Process**

PROFIT

Planned: 44 800.00 USD

Live: **29 984.00 USD**

Sales: 29 984.00 USD

Margin: 6 060.00 USD

INBOUND

Planned: 50 000.00 USD

Live: 26 500.00 USD

Forecast: **12/01/2019**

Progress: **53%**

OUTBOUND

Planned: -5 200.00 USD

Live: **-3 484.00 USD**

Forecast: 11/30/2019







Progress: **67%**

ITEMS

New Item

| ID | Destination | Rate | Volume | Revenue | Sales Revenue | Run Rate | Progress | | |
|----|-------------|-------------------------|--------------------------------|---------------------------------------|---------------|------------------------------------|------------|--|--|
| 1 | CN: USA | 0.4000 USD 0.5000 USD | 8 710.00 min of 13 000.00 min | 4 355.00 USD of 5 200.00 USD | 4 355.00 USD | 230.00 min 214.50 min | 67% | | |
| 2 | CN: UK | 1.0000 USD 1.1000 USD | 26 500.00 min of 50 000.00 min | 26 500.00 USD of 50 000.00 USD | 29 150.00 USD | 1 085.00 min 1 175.00 min | 53% | | |

| Field | Description | |
|----------------|--------------------|---|
| General | Client | Displays the Client and its Account, with whom the deal was agreed upon |
| | Period | Shows the period for the current Swap Deal |
| | Update Time | Last time the system renewed information for this Swap Deal according to current statistics |
| | Status | Displays the current Swap Deal status |


| | | |
|-----------------|----------------------|---|
| Profit | Planned | The sum of inbound and outbound planned revenue |
| | Live | The sum of inbound and outbound live revenue |
| | Sales | Shows profit according to current statistics and sales rates <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> Counted like</p> <p>$sales\ profit = inbound\ sales\ revenue + outbound\ sales\ revenue$</p> <p>where inbound sales revenue is a sum of all inbound items' sales revenue and outbound sales revenue is a sum of outbound respectively</p> </div> |
| | Margin | Indicates the Swap Deal efficiency <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> Counted like</p> <p>$margin = live\ profit - sales\ profit$</p> </div> |
| Inbound | Planned | Planned inbound revenue based on Swap Deal volume and price |
| | Live | Current inbound revenue according to the statistics within the Swap Deal |
| | Forecast | Forecasted end date with current speed (concerning inbound traffic) |
| | Progress | Progress bar based on current inbound traffic |
| Outbound | Planned | Planned outbound revenue based on Swap Deal volume and price |
| | Live | Current outbound revenue according to the statistics within the Swap Deal |
| | Forecast | Forecasted end date with current speed (concerning outbound traffic) |
| | Progress | Progress bar based on current outbound traffic |
| Items | ID | ID of the Item |
| | Direction | Item's direction: <ul style="list-style-type: none"> ▪  for inbound traffic; ▪  for outbound traffic. |
| | Destination | Dst Code or Code Name |
| | Rate | Indicates the Swap Deal rate (first) and average sales rate (second) for the destination |
| | Volume, min | Shows how much traffic from the planned amount is currently within the Swap Deal (Live Volume Planned Volume) |
| | Revenue | Shows how much you earned on a specific destination within the Swap Deal from the planned amount (Live Revenue Planned Revenue) |
| | Sales Revenue | Shows how much you would have earned on a specific destination without a Swap Deal agreement <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> Counted like</p> <p>$sales\ revenue = live\ volume * sales\ rate$</p> </div> |
| | Alert | Shows whether the Item's progress goes as planned. If the current traffic speed is insufficient to close the deal as planned, there will be a  icon. |
| | Run Rate, min | Current speed of filling out the Swap Deal as per this Item (the first is the actual Run Rate, the second is the Required Run Rate) |
| | Progress, % | Item's progress |

Edit Swap Deal tab


To edit the Swap Deal details, there is an Edit Swap Deal tab available. It has the following outlook:

Screenshot: Edit Swap Deal tab

Adding a New Item

To add a new item to the swap deal, click the  button in the **Items List** tab and define the respective values in a pop-up window:


Screenshot: Adding a New Item

| Field | Description |
|----------------|---|
| General | Direction Specify the traffic direction: <ul style="list-style-type: none"> • Inbound • Outbound |
| | Volume Indicate an expected volume for the swap deal item. |
| | Code Indicate a code of the item. <div style="border: 1px solid orange; padding: 5px; margin-top: 10px;">  Note that the Code and Code Name fields are mutually exclusive. </div> |
| | Code Name Indicate a code name of the item. |
| Rating | Rate Indicate a rate that you agreed upon with your partner. |
| | Sales Rate Specify an average rate that would be applied if not for the swap deal. |
| | Service Select a service for this swap deal (calls, SMS, data). |

Swap Deals' in-system functioning

Swap Deals work within the billing system using the information on rates and current statistics. There is a separate service in **System Task Scheduler** section - **Swap Deals Manager**. This service updates each Swap Deal's statistics maximum once an hour. It monitors the current statistics and updates the Swap Deal information putting a timestamp of the latest changes to the **Update Time** field in the **General** section of an **Items List** tab.

If the Swap Deals Manager detects during its analysis that any item in a swap deal is performing not as expected, it will generate an alert to **System**

Events Log. Such alerts are sent at a frequency of maximum once in 4 hours. Apart from that, you will see an alert  icon in the Swap Deals section of the web interface.

From Events Log, you can configure it so that Swap Deals alerts will be sent to your mailbox upon occurrence. Learn more about how to set this up in the [Events Log](#) article.

Retail

This chapter digs into the **retail functions of JeraSoft Billing**. Please be advised that all these functions are available if your JeraSoft Billing installation includes **the Retail Module**.

In addition to vast wholesale functionality, JeraSoft Billing offers the retail module described in the below sections of this chapter. Each section describes an important aspect of retail-based VoIP business, such as Subscription Packages, DID Inventory, Top-Up Cards, and Call Shops. All of these options are grouped within the **Retail** section of your JeraSoft Billing solution.

The list of sections is as follows:

- [Packages](#)
- [DID Inventory](#)
- [Top-up Cards](#)
- [Call Shops](#)

Packages

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding a New Package](#)

Section overview

The Packages section helps to add and manage any one-time or regular supplementary services that your company may provide in addition to VoIP. For example, you can create a package with rent of some equipment or create a free minutes promotional package. The section is designed in the form of a table that displays all currently available packages and has the following structure:

Screenshot: Packages section main window

| ID | Status | Name | Activation Fee | Subscription Fee | Period | Reseller |
|----|--------------------------------------|-----------|----------------|------------------|------------|------------|
| 4 | ● | Package 1 | 0.00 USD | 0.00 USD | 1 month(s) | Reseller A |
| 5 | ● | Package 2 | 0.00 USD | 0.00 USD | 1 month(s) | Reseller A |
| 6 | ● | Package 3 | 0.00 USD | 0.00 USD | 1 month(s) | Reseller A |

| Column | Description |
|-------------------------|---|
| ID | ID of a package |
| Status | Status of a package |
| | ● Active Package is in use by a customer |
| | ● Disabled Package is not used |
| | ● Archived Package is not used and not available anymore |
| Name | Title of a package |
| Activation Fee | Fee that will be charged upon package activation |
| Subscription Fee | Fee that will be charged upon package renewal |
| Period | Package renewal period |
| Reseller | Name of a reseller, to which a target package belongs |


Attention

Please note that the **Package archiving** will perform closing of the current **Subscription** used for this package.

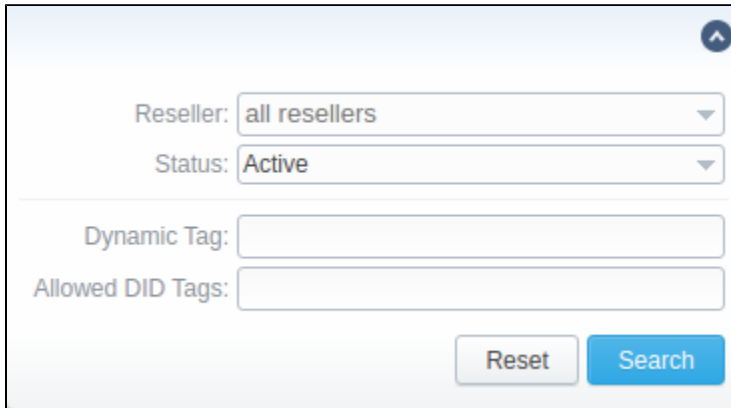
The list of functional **buttons/icons** in the section includes:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new package |
| | Allows deleting a package from the list. Requires confirmation |

Advanced Search

By default, the information in a section is filtered by **Active** statuses. To open an **Advanced Search** drop-down menu, click on a red downward arrow  icon and fill in the following fields with the required information:

Screenshot: Advanced Search drop-down menu



| Field | Description |
|-------------------------|--|
| Reseller | Indicate a name of a target reseller |
| Status | Select the status of a package: <ul style="list-style-type: none"> • Active • Disabled • Archive |
| Dynamic Tag | Indicate a target dynamic tag of a package |
| Allowed DID Tags | Indicate target DID tags of a package |

To apply the specified search criteria, click the **Search** button; to cancel the applied parameters, click **Reset**.

Adding a New Package

You can add a new package by clicking the **New Package** button. A pop-up window with settings contains the following information:

Screenshot: New package creation form

Edit Package
Custom Fields
Free Minutes BIG

GENERAL SETTINGS

Name:

Reseller:

Status:

Type:

FEES

| Fee Type | Fee Name | Fee Note | Rate, USD |
|--------------|------------------|----------|-----------|
| Activation | Activation Fee | | 10 |
| Subscription | Subscription Fee | | 50 |

PERIOD SETTINGS

Period:

Advance Renew:

Renew for:

DID LIMITS

DIDs Quantity: On Hold: day(s)

Allowed DID Tags:

BILLING SETTINGS

Currency:

Fees Include Taxes

Align to Payment Terms

Full Charge

Charge on Event

Setup Fee:

Client's Balance:

Renewal Charge:

LIMITS

Code Deck:

| Service | Code | Code Name | Limit |
|---------|------|-----------|-----------|
| Calls | * | | 10000 min |

PACKAGE APPLICATION

Priority:

Dynamic Tag:

Start Date:




End Date:

DISCOUNTS

No Discounts

| Information block | Field and Description |
|-------------------|--|
| General Settings | General information about a package |
| | Name Determine the name of your package |
| | Reseller Specify an owner of this package |
| | Status Select a current status for the package: <i>active/disabled/archive</i> |
| Period Settings | Type Specify the package type: <ul style="list-style-type: none"> Customer - this type will be applied to origination traffic regardless of the rate; Vendor - this type will be applied to termination traffic regardless of the rate. <div style="background-color: yellow; padding: 5px; margin-top: 10px;"> <p> Attention</p> <p>This option has been added in version 3.16.0.</p> </div> |
| | Settings regarding a package period |
| Period Settings | Period Specify a period for the current package if it's renewable. Allowed values: 1-24 hours, 1-99999 days, 1-12 months, 1-99999 years. |
| | Advance Renew Next renewal will be made within a specified period in advance (before the renewal date). Allowed values: 1-24 hours, 1-99999 days, 1-12 months, 1-99999 years. |

| | |
|-----------------------------------|---|
| | <p>Renew For Indicate a period, during which the system will try to renew a package. If no value is specified, attempts to renew a package will be endless. Allowed values: 1-24 hours, 1-99999 days, 1-12 months, 1-99999 years.</p> <p>⚠ Attention</p> <p>Please note that Period, Advance Renew and Renew For fields cannot be set to non-normalized time intervals (example: 75 hours).</p> |
| <p>Billing Settings</p> | <p>List of settings concerning the billing feature</p> <p>Currency Define a currency for this package</p> <p>Fees Include Taxes c checkbox If enabled, taxes are included in package prices, if disabled – taxes will be calculated regarding a customer's respective Tax Profile</p> <p>Align to Payment Terms c checkbox Allows the system to align a package period to customer's Payment Terms, equalizing Package billing with actual invoicing.</p> <p>⚠ Attention</p> <p>The length of the first Subscription period can be reduced in order to allow the following periods to match the invoicing periods in the Client's Payment Terms. All the charges and limits of the first period will be proportionally recalculated if the duration of the first period has been reduced.</p> <p>In order to process it correctly, the Package Period should match the Client's Payment Terms length. Alternatively, the periods of the Package and Payment Terms need to equal to a multiplex number. In this case, we will get equal Package charges in each invoice provided the periods are equal. If the Package period is longer than the Payment Terms length, we will get the Package charges with an equal interval.</p> <p>Full charge c checkbox Allows forcing full charge and limits for the first period regardless of the enabled Align to Payment Terms option.</p> <p>Charge on Event c checkbox If enabled, a package subscription fee will be applied when the first call within this package is made. Otherwise, a package would be free.</p> <p>Setup Fee</p> <p>Select from a list of available options of setup fee settings:</p> <ul style="list-style-type: none"> • Charge - setup fee will be charged when an event is billed by volume limit • Don't charge - setup fee won't be charged when limit by volume is used for event billing <p>Client's Balance</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Allow activating if insufficient- client's package will be activated regardless of the client's balance; however, package limits will be used only when the clients balance is sufficient; • Deny activating if insufficient- client's package will be activated only if there are sufficient funds on the balance <p>Renewal Charge</p> <p>Determine when the charge should be created:</p> <ul style="list-style-type: none"> • Before period start • On period start <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p>✔ Tip</p> <p>This parameter will affect when the Package charge will be included in an Invoice. For example:</p> <ul style="list-style-type: none"> ◦ the Before period start option is typically used for pre-paid as the system will create a charge just before the Package renewal. Thus, for a monthly Package, a charge for Feb will be created on Jan 31st and fall into Jan Invoice, etc. ◦ the On period start option is typically used for post-paid as the system will create a charge right on the renewal. So, for a monthly Package, a charge for Feb will be created on Feb 1st and fall into Feb invoice, etc. </div> |
| <p>Package Application</p> | <p>Information on package application</p> |

| | |
|---|---|
| <p>Priority</p> | <p>If there are multiple packages that satisfy a call, a package with the highest priority will be used (i.e. priority 2 < priority 1).</p> <div style="background-color: #ffff00; padding: 5px; border: 1px solid #ccc;"> <p>⚠ Attention</p> <p>Please note that packages with minutes will always be used before packages with money regardless of the priority.</p> </div> |
| <p>Dynami c Tag</p> | <p>Add a tag for the events, billed by this package</p> |
| <p>Start Date</p> | <p>Indicate an effective start date of a package. This feature is used for temporary packages.</p> |
| <p>End Date</p> | <p>Determine an effective end date of a package. This feature is used for temporary packages.</p> |
| <p>Fees</p> | <p>Information block is used for package fees indication and presented in the form of a table. To add a new fee type, you need to click on a  icon next to its name.</p> |
| <p>Fee Type</p> | <p>Select the type of fee. There are two possible types:</p> <ul style="list-style-type: none"> • Activation – a fee that will be charged upon package activation • Subscription – a fee that will be charged upon package renewal |
| <p>Fee Name</p> | <p>Specify a name of a fee</p> |
| <p>Fee Note</p> | <p>Here you may enter additional information about a fee</p> |
| <p>Rate</p> | <p>Indicate the price for a fee. Price is indicated in the package currency</p> |
| <p>DID Limits</p> | <p>Specify how many DIDs and from which group can be assigned to a customer with this package</p> |
| <p>DIDs Quantity</p> | <p>How many DIDs can be assigned to the client's accounts</p> |
| <p>Allowed Tags</p> | <p>Specify tags that are used while creating DIDs</p> |
| <p>On Hold</p> | <p>Indicate for how many days a DID is kept on hold after the package is deactivated</p> |
| <p>Limits</p> | <p>Here you can create promotional minute packets that will be included in the package. To add a new limit, click on a  icon next to Limits.</p> |
| <p>Code Deck</p> | <p>Specify a Code Deck if you plan to create limits by using Code Names</p> |
| <p>Service</p> | <p>Define a service this limit will be used for</p> |
| <p>Type</p> | <p>Select a limitation type from the drop-down list:</p> <ul style="list-style-type: none"> • Money • Volume <p>You can set both types within the same package</p> |
| <p>Code</p> | <p>Specify a code. Please note that package limits are working only for the exact code. I.e., if a short code like 121 was added, package limits will work only for this code and won't automatically work for longer codes like 12157. To make volume limits work for long codes, you must add * (for example, 121* code). If the Code Name field is specified, this one will be inactive.</p> |
| <p>Code Name</p> | <p>Specify a code name from a selected Code Deck. If the Code field is specified, this one will be inactive.</p> |
| <p>Limit</p> | <p>Enter the number of free minutes or bonus money (depends on a selected limitation type) that will be used for a specified code or code name</p> |
| <div style="background-color: #ffe6e6; padding: 10px; border: 1px solid #ccc;"> <p>⚠ Warning</p> <p>When you assign different packages (with specified volume limits and tags) to the same client, two or more packages could not be used simultaneously.</p> </div> | |
| <p>Discounts</p> | <p>A promotional discount of the package subscription fee. To add a new discount, click on the  icon next to Discounts.</p> |

| | |
|-------------------------|--|
| Activation Count | Specify the sequence number of the reactivation when the package will trigger the discount. For example: if the Activation Count is 2 , the discount will be applied for the second package reactivation and further. |
| Discount | Specify the amount of subscription fee cut. Discount is indicated in the package currency. |

 **Tip**

1. If the **client doesn't have enough money for a package activation**, a respective pending charge will appear. This charge includes all amounts needed for package activation. Also, you can add this charge to the invoice.
2. You can **assign the package in the past** and add package minutes backdated. For example, you assign the **Canada 200 minutes** package on April 12th, but you want the package to be used since April 1st. Then, apply package rerating to recalculate the tariffication during the period. Please, run rerating after the assignment of the package for a current month.
3. **Volume Limits** will be recalculated according to payment terms if the period is specified and both **Align to Payment terms** is enabled.
4. Package reactivation will be stopped after the **Renew Due** period. However, a DID for this package will be expired after the **On Hold** period. Therefore, we recommend setting the same values for DID **On Hold** and Package **Renew Due** parameters.

Please keep in mind that:

1. When **two similar packages** (for example, with the same destinations) are **assigned to a client**, the system takes the package with the highest priority or earlier expiration date. Thus, only one package is used for one established call. The second package will be applied right after the first one is fully used.
2. If the **client doesn't have enough funds** for the package (with a DID number) reactivation and DID hold date has already expired, attempts for package reactivation will be stopped.

 **Attention**

When you change the **name of the package** in **Retail > Packages**, it will be automatically changed in the **Management > Client Packages** section as well, even if this package is already assigned. As a result, in the **Invoices** and **Transactions** sections, an **old** name of the package will be specified. We **do not recommend** to edit the name of an already assigned package in **Retail > Packages**.

DID Inventory

In this article

- [Section overview](#)
- [DID Inventory Tab](#)
 - [Advanced Search](#)
 - [Creating a DID Number](#)
 - [Mass Edit of DIDs](#)
 - [DIDs Importing](#)
 - [DIDs Exporting](#)
- [Operators tab](#)
 - [Creating a New Operator](#)

Section overview

This section allows creating the DID numbers, which later may be assigned to one of the packages and finally provided to a customer under the Package terms. The section consists of two tabs:

- **DID Inventory;**
- **Operators.**

DID Inventory Tab

The tab contains a list of all existing DID(s) and is presented in the form of a table with the following columns:

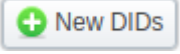
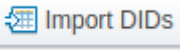
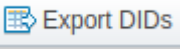



Screenshot: *DID Inventory section*

| ID | Status | Operator | DID | Tag | Notes | Client | Reseller |
|----|----------|----------|--------------|------------------|-------|--------|--------------|
| 1 | In Stock | Operator | 12314343242 | DID-1 | | --- | Company Name |
| 2 | In Stock | Operator | 12345555 | DID-1 | | --- | Company Name |
| 3 | In Stock | Operator | 12345678543 | DID-1 | | --- | Company Name |
| 4 | In Stock | Operator | 124342442424 | DID-2 | | --- | Company Name |
| 5 | Reserved | Operator | 2100 | Gr Res DID GROUP | | --- | Company Name |
| 6 | Reserved | Operator | 2101 | Gr Res DID GROUP | | --- | Company Name |
| 7 | Reserved | Operator | 2102 | Gr Res DID GROUP | | --- | Company Name |
| 8 | Reserved | Operator | 2103 | Gr Res DID GROUP | | --- | Company Name |
| 9 | Reserved | Operator | 2104 | Gr Res DID GROUP | | --- | Company Name |
| 10 | Reserved | Operator | 2105 | Gr Res DID GROUP | | --- | Company Name |

| Column | Description | |
|--|---|---|
| ID | ID of a current DID number | |
| Status | Status of a current DID number | |
| | <ul style="list-style-type: none"> • Active | DID is in use by a customer |
| | <ul style="list-style-type: none"> • In Stock | DID is in stock and available for usage |
| | <ul style="list-style-type: none"> • Blocked | DID is temporarily not available for usage |
| | <ul style="list-style-type: none"> • Reserved | DID is not used but at the same time not available for purchase yet |
| | <ul style="list-style-type: none"> • Hold | DID is on hold after usage |
| <ul style="list-style-type: none"> • Archive | DID is not used and not available anymore | |

| | |
|-----------------|---|
| Operator | Current DID's operator, an owner of a current DID number |
| DID | Current DID number |
| Tag | Specify the tag for a respective DID number you would like to be tagged in the future |
| Notes | Additional information about a certain DID |
| Client | Shows the client and account, which a current DID belongs to |
| Reseller | Name of a reseller, under which the respective DID's operator was created |

Functional buttons, presented in the tab are as follows:

| Button/Icon | Description |
|---|---|
|  | Allows creating a new DID(s) |
|  | Allows importing DIDs from .csv or .xls files |
|  | Allows exporting currently displayed DIDs in a .csv file |
|  | Allows editing the selected DIDs. |
|  | Allows viewing history of DID changes in the Audit Log section |
|  | Allows deleting a DID from the system |

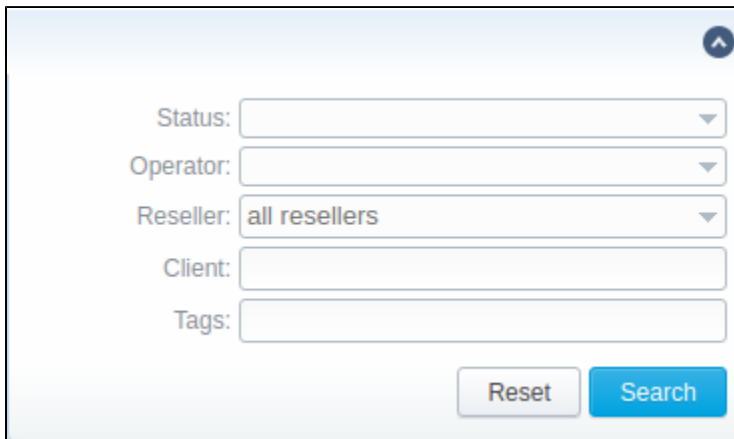
⚠ Attention

When a package with the **assigned DID number** is not active, this DID number will be in **Hold** and a routing destination will be unreachable.

Advanced Search

In the top right corner of the section above the table, the **Advanced Search** drop-down menu is located. To filter section data, fill in the following drop-down menu and press **Search**:

Screenshot: Advanced Search drop-down menu



The screenshot shows a search form with the following fields and buttons:


- Status:
- Operator:
- Reseller:
- Client:
- Tags:
- Buttons:

Creating a DID Number

The whole process of creating a DID number can be described in a few steps:

1. Go to the **Retail > DID Inventory > Operators** tab. Create one or more operators (DID providers).

- Open the **DID Inventory** tab, add one or more DID numbers.
Make sure that these DIDs have the **In Stock** status. You can also use the **Import DIDs** button.

| Field | Description |
|------------|--|
| DID(s) | Indicate one or multiple DID numbers <div style="background-color: #e0ffe0; padding: 5px;"> <p> Tip</p> <p>Also, you can set the range of DID numbers here. Specify the range using the upper and lower numbers and the dash (-) to separate them. For example, 111-222. Therefore, the system will create a range of DIDs from 111 to 222 (included).</p> </div> |
| Operator | Specify a target DID provider |
| Status | Choose one of the statuses a DID can acquire: <ul style="list-style-type: none"> • Reserved • In Stock • Archive |
| After Hold | Define what status a DID is going to acquire after being in Hold status. The Hold status is acquired after Package, this DID is assigned to, is deactivated |
| Tag | Specify an additional tag for better division of DIDs in certain groups. Useful when clients have multiple DIDs |
| Notes | Define additional info regarding DIDs |

- Go to the **Retail > Packages** section. Create a package, where a number of allowed DID's to be picked from will be specified.
- Assign a respective Package to a target customer in the **Subscriptions** section.
- Open the **DIDs** tab in the target client settings. Here, pick one or more DID numbers to assign.

For more details, look through the [How to configure DIDs scheme](#) article in our Knowledge Base.

This will effectively assign a DID number to one of the customer's accounts. Please note, this functionality is very switch-dependent, and additional development or testing may be required. Please contact JeraSoft Support team for help, if you have any doubts or questions.

 **Tip**

We recommend using **tags** to make navigation between a great deal of DIDs easier and more effective.

Mass Edit of DIDs

You easily can change the status of multiple selected DIDs, specify tags and a number of hold days using the **Mass Edit** button. To do so, you need to select DIDs (for which the status must be changed), then click the **Mass Edit** button and in a pop-up window specify the status from the drop-down list in a respective **Set Status to** field, then, click the **Update** button to confirm the change. Also, using the **Mass Edit** button, you can add a tag and notes. If you click the **Delete** button, only selected DIDs will be deleted.

Screenshot: *Mass Edit window*

The screenshot shows the 'DID Inventory' interface with a table of DIDs. The first four rows are selected. A 'Mass Edit' pop-up window is open, allowing for bulk updates to the selected DIDs.

| ID | Status | Operator |
|----|----------|----------|
| 1 | In Stock | Operator |
| 2 | In Stock | Operator |
| 3 | In Stock | Operator |
| 4 | In Stock | Operator |
| 5 | Reserved | Operator |
| 6 | Reserved | Operator |
| 7 | Reserved | Operator |
| 8 | Reserved | Operator |
| 9 | Reserved | Operator |
| 10 | Reserved | Operator |

Mass Edit pop-up fields:

- Set Status to: [Dropdown]
- After Hold: [Dropdown]
- Tag: [Text Input]
- Notes: [Text Area]
- Buttons: Delete, Update

DIDs Importing

The process of DIDs importing is pretty simple:

1. Click the **Import DIDs** button
2. In a pop-up window, you need to attach a **.csv** file you wish to be imported and fill in the respective fields
3. Click the **Process>>** button
4. Specify columns names from a drop-down list, and once again click **Process>>**
5. All imported DIDs will be displayed in a section table

Screenshot: Importing DIDs

The screenshot shows the 'Import DIDs' pop-up window. It includes a file selection area, a 'Fields delimiter' dropdown, and several configuration fields for the import process.

Fields:

- Select the file to import: Choose File (No file chosen)
- Fields delimiter: autodetect
- Operator: Operator
- Status: Reserved
- After Hold: Reserved
- Tag: [Text Input]
- Notes: [Text Area]
- Button: Process >>

DIDs Exporting

DIDs export allows a user to download a **.csv** file that contains information currently displayed in a section table. Apart from all the columns, the file contains an extra Package column, where a respective package name, if any of the DIDs is assigned to the package, will be displayed.

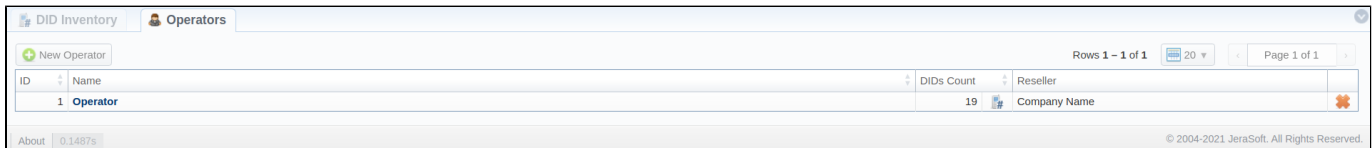
Screenshot: Package column in an exported file

| | A | B | C | D | E | F | G | H | I | J | K |
|----|----|----------|----------|-----|-----|-------|--------|---------|---------|------------|--------------|
| 1 | ID | Status | Operator | DID | Tag | Notes | Client | Account | Package | After Hold | Reseller |
| 2 | 4 | reserved | Oliver | 1 | | | | | | reserved | Company Name |
| 3 | 5 | archive | Oliver | 2 | | | | | | reserved | Company Name |
| 4 | 6 | instock | Oliver | 4 | | | | | | reserved | Company Name |
| 5 | 7 | instock | Oliver | 5 | | | | | | reserved | Company Name |
| 6 | 8 | instock | Oliver | 6 | | | | | | reserved | Company Name |
| 7 | 9 | instock | Oliver | 7 | | | | | | reserved | Company Name |
| 8 | 10 | instock | Oliver | 8 | | | | | | reserved | Company Name |
| 9 | 11 | instock | Oliver | 9 | | | | | | reserved | Company Name |
| 10 | | | | | | | | | | | |

Operators tab

This section shows the list of operators who are owners of DID numbers. The tab is presented in the form of a table with the following columns:

Screenshot: Operators tab



| Column | Description |
|--------------------|---|
| ID | ID of an operator |
| Name | Operator's name |
| DID's count | The amount of DID numbers owned by the current operator |
| Reseller | Current operators' reseller |

The functional buttons/icons in the tab are:


| Button/Icon | Description |
|-------------|---|
| | Allows creating a new operator |
| | Allows filtering DID numbers in the DID Inventory tab by a target operator |
| | Allows deleting a respective operator |

You can filter tab data by Resellers using Advanced Search in the top right corner of the page.



Creating a New Operator

To add a new operator, click on the **New Operator** button and specify an operator's name and target reseller in the pop-up window. Then, click **OK** for confirmation.

Screenshot: New Operator creation form

 **DID Inventory**

Name:

Reseller:  Company Name 

Top-up Cards

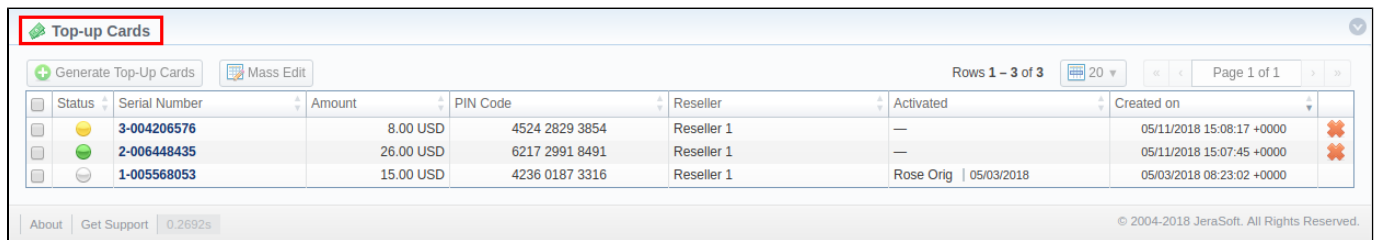
In this article




- [Section overview](#)
- [Advanced Search](#)
- [Creating New Top-Up Cards](#)
- [Mass Top-up Cards Edit](#)

Section overview

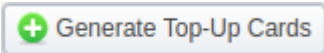
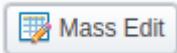
This section allows generating series of top-up cards for your customers. These cards can be used to recharge the balance. The section is presented in the form of a table with the following columns:

Screenshot: Top-Up Cards section



| Column | Description |
|----------------------|---|
| Status | Status of a respective top-up card |
| |  Indicates that the current card is new |
| |  Indicates that the current card is activated |
| |  Indicates that the current card is expired |
| Serial Number | Identifying a number of a card |
| Amount | Amount of money, stored on a card |
| PIN Code | Card PIN code |
| Reseller | Name of a reseller, a respective card belongs to |
| Activated | Identification of date and client who activated a card (if card status is activated) |
| Created on | Time and date when a card was created in the system |

The following functional buttons are presented in the section:

| Button | Description |
|---|--------------------------------------|
|  | Allows creating a new top-up card(s) |
|  | Allows mass editing of top-up cards |

Advanced Search

In the top right corner of the section above the table, the **Advanced Search** drop-down menu is located. To filter section data, fill in the following drop-down menu and click **Search**:

Screenshot: Advanced Search drop-down menu

Serial Number: -

PIN Code:

Status:

Company:

Amount: -

Expiration Date: -

Client:

Activation Date: -

Creating New Top-Up Cards

To create new top-up cards, you need to:

1. Click the **Generate Top-Up Cards** button;
2. In the opened pop-up window, fill in respective fields (see table below);
3. Confirm creation by clicking **OK**.

Screenshot: *New Top-up Cards window*

Top-up Cards

Amount: USD

Quantity:

Series:

PIN Length: digits

Reseller:

Expiration Date:

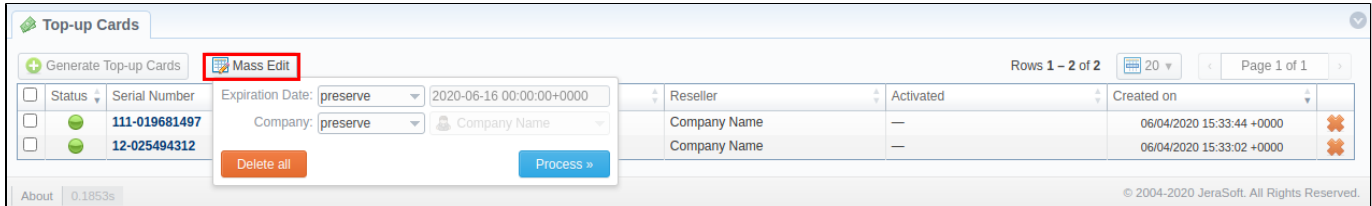
| Field | Description |
|------------------------|---|
| Amount | Indicate the cards balance value. This amount will be added to a customer's balance on activation. |
| Quantity | Specify the number of cards you wish to be created. |
| Series | Set a code identifier of a cards series. This code will prepend a serial number. For example, if the Series is 101 , the full card number will be 101-23423423 . |
| PIN Length | Specify the desired PIN-code length for a current calling cards series (it can be no less than 5 digits) |
| Reseller | Defines the reseller that owns a current calling card(s) |
| Expiration date | Specify the date when a current calling card(s) will be expired |

After a top-up card(s) is created, customers will be able to enter respective PINs in their client panel in the **Redeem Voucher** section to recharge their balance (respective rights for users are required).

Mass Top-up Cards Edit

Also, you may delete cards or change some settings for already existent top-up cards using the **Mass Edit** button. In the following window, you can specify the expiration date of cards by changing the **Expiration Date** field value to **set to** and select data and time, or define a reseller who will be the owner of these cards by changing the **Company** field value to **set to** and select a reseller from a drop-down list, then click the **Process** button and all changes will be applied. The **Delete all** button will wipe out all existing top-up cards.

Screenshot: *Top-up cards Mass Edit window*



| Field | Description |
|----------------------------|---|
| Optional Parameters | <ul style="list-style-type: none"> preserve - the default configuration that saves the rate not edited. Leave this parameter unchanged if required; set to - it allows to edit rates, for example, specify the same expiration date for all rates at once, regardless of previous configurations. |
| Expiration Date | Final date, after which the rate will expire |
| Company | Name of one of your companies (or affiliates) that you can add in the Reseller section |

Call Shops

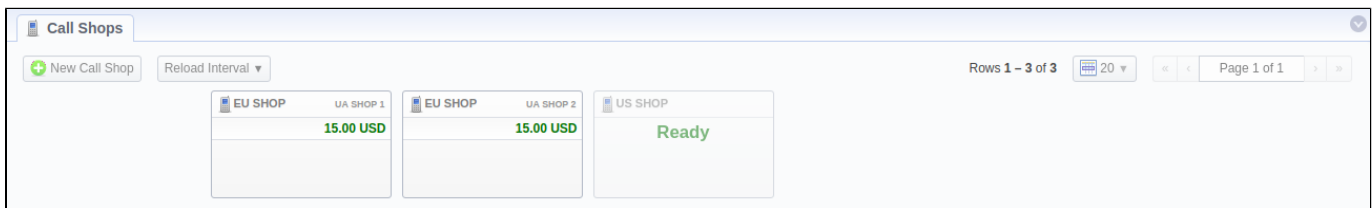
In this article

- [Section overview](#)
- [Advanced Search](#)
- [Creating a New Call Shop](#)
- [Steps to activate a call shop](#)
- [Interval Reload](#)
- [Finalize/Reactivate a Call Shop](#)

Section overview

The Call Shops section allows you to create and manage call shops networks. Each call shop is a **RADIUS-based** customer. That's why for correct work of the Call Shops section, RADIUS must be enabled. The section consists of all existing call shops, each containing such details as name, balance, rate table, etc. (see screenshot below).

Screenshot: Call Shops section main window



Advanced Search

In the top right corner of the section above the table, the **Advanced Search** drop-down menu is located. To filter section data, fill in the following drop-down menu and click **Search**:

Screenshot: Advanced Search drop-down menu

Creating a New Call Shop

To create a new call shop, click the **New Call Shop** button and fill in the following details in a pop-up window:

Screenshot: Creating new call shop / Clients form

| Field | Description |
|-----------------------|--|
| Name | Enter a name for a call shop |
| Reseller | Select a reseller that will be an owner of this call shop |
| Currency | Specify preferred currency |
| Timezone | Choose a preferred timezone |
| Status | Select a status for this call shop: <ul style="list-style-type: none"> • active • stop • deleted |
| Allowed Credit | Specify the credit value here |
| Rate Table | Choose a rate table this call shop will be using |
| Tax Profile | Specify a Tax Profile this call shop will be using |
| Routing Plan | Select a routing plan, if you wish to use dynamic routing for this call shop |
| Capacity | You can limit origination capacity for this call shop in this field |

When all information is entered, click **OK** and a call shop will appear on the list.

Steps to activate a call shop

When a call shop is created, you will be forwarded to the **Accounts** section. To activate a call shop, you need to follow these steps:

1. In the **Accounts** section, create an account for your call shop's account. Specify a rate table here, if you didn't indicate it in call shop's settings.
2. Return to the **Call Shops** section. Your call shop will be marked as Ready. To proceed, click on its name.
3. Fill in the respective form (see screenshot below) and click the **Activate** button. Now, your call shop is ready.

Screenshot: Call shop settings

Interval Reload

Also, you may **set an interval** for call shops list **reloading**. To do this, click the **Reload Interval** button and select the value from the drop-down list.

Attention

Please note that the **Calculator** tool must be in a **real-time mode** for correct Call Shops work.

Finalize/Reactivate a Call Shop

According to your demands, you can change the active period of the call shop.

Therefore, you may finish the call shop activities by clicking the **Finalize** button. Or you can reactivate the same call shop when it's over by clicking **Reactivate** on the toolbar.

To open the window with respective settings, click on the name of the call shop when it's already activated.

Screenshot: Call Shop settings

Call Shops Call Shop 1

| CURRENT SESSION | | CURRENT SESSION CALLS: 0 |
|-----------------|-----------|---|
| Duration: | 0:00:00 | <i>No calls were made in this session</i> |
| Cost: | 0.00 USD | |
| Balance: | 5.00 USD | |
| Credit Limit: | 15.00 USD | |

Finalize **Reactivate** **Print Bill** **Close**

Also, you can print the bill of the following call shop by using the **Print Bill** button. To close the window, click a respective button.

Statistics

This chapter of our Guide is dedicated to **figures and various statistical reports in JeraSoft Billing**. Here, a user can monitor their customer's activities or form different reports. For more details, please check the related sections:

- [Dashboard](#)
- [Customer Dynamics](#)
- [Summary Report](#)
- [Orig-Term Report](#)
- [Profit Report](#)
- [LCR Lists](#)
- [Invoicing Report](#)
- [xDRs List](#)
- [Mismatches Report](#)
- [xDRs Rerating](#)
- [Report Queries](#)
- [Archive Management](#)

Dashboard

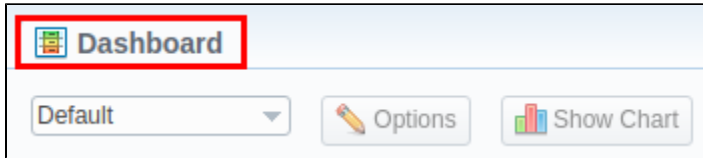
The **Dashboard** is the customizable section with charts that provide a vivid visual representation of the most relevant report data in one place.

It allows you to monitor your customer's activities in real-time by providing visual charts on some most crucial information. Here you can find all the charts that were created in the **Summary Report**, **Orig-Term Report** and **Active Calls** sections, and exported to the **Dashboard**.

To know more about charts, visit our ["How to create a statistic chart?"](#) article in Knowledge Base.

To start working with this section, please use the quick access toolbar (see the screenshot below):

Screenshot: Dashboard toolbar

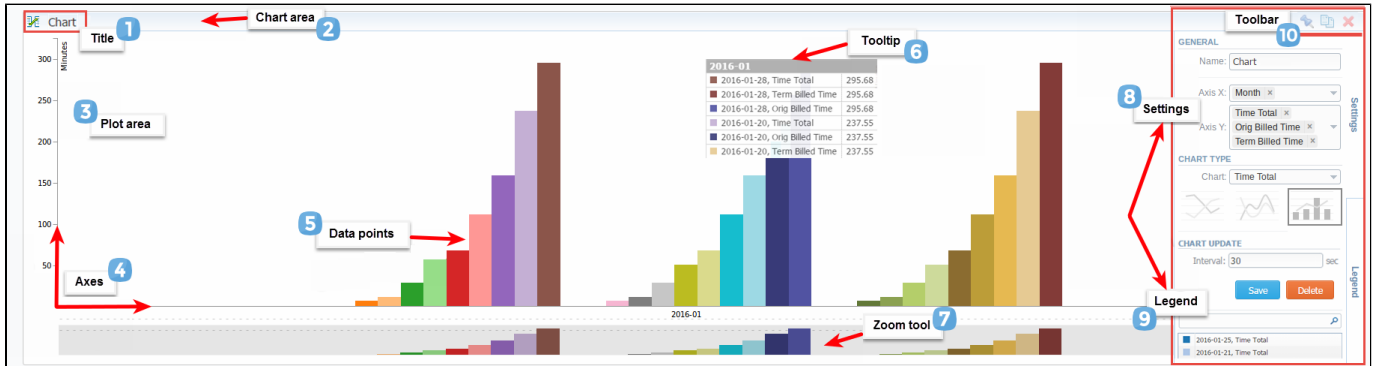


1. In the section, you can have **several dashboards**. To pick a target dashboard, click on the respective field and select a relevant dashboard (for example, **Default**) from the drop-down list.
2. To view the advanced settings, press the **Options** button on the toolbar.
 - You can **change the name** of the respective dashboard, specify a new name in the **Dashboard name** field, click **Save**, and reload the page.
 - To **copy the dashboard**, click **Copy** and reload the page. Then, you select it in the list of available dashboards.
 - Also, you can **remove any dashboard**. Simply select it, open settings, and click the **Delete** button.
3. To add a relevant chart to the dashboard, click the **Show Chart** button. Then choose the category of the chart (i.e., **Summary** report/**Orig-Term** report/**Active Calls**) and select the respective chart from the drop-down list. You could add several charts and use the vertical scrolling to browse the dashboard.

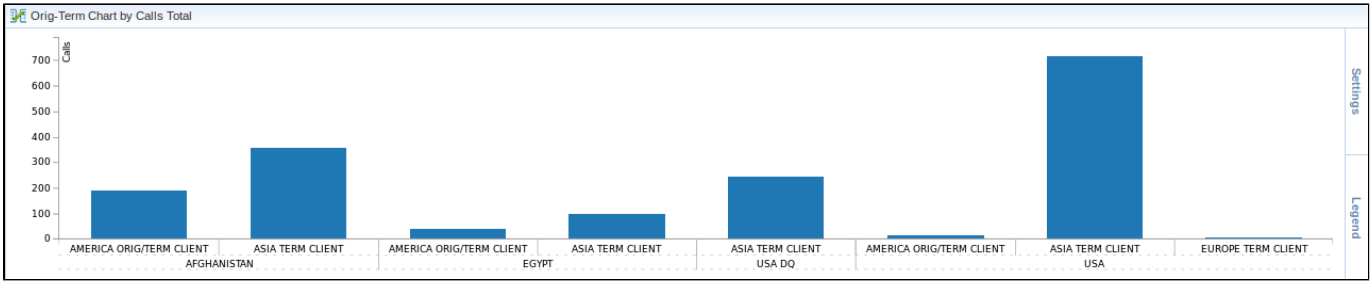
Attention

- **Resellers and administrators** have their own dashboards. The created dashboards while logged in the system as respective Reseller will be visible **only** for this Reseller.
- You can **plot in the chart only existing statistics** in the report. It doesn't show time periods where there is no data. You can check an actual date interval by clicking the **Info** icon and it could be different from the specified interval if there is no data for the period.
- When you choose the **Time parameters for the X-Axis** (i.e., Year, Month, Date, Time) and there is only one period, the **line chart** will not display the data. For example, if you choose the **Month** option on **X-Axis** and the statistics are only presented for January, the **line chart** will be empty in this case.

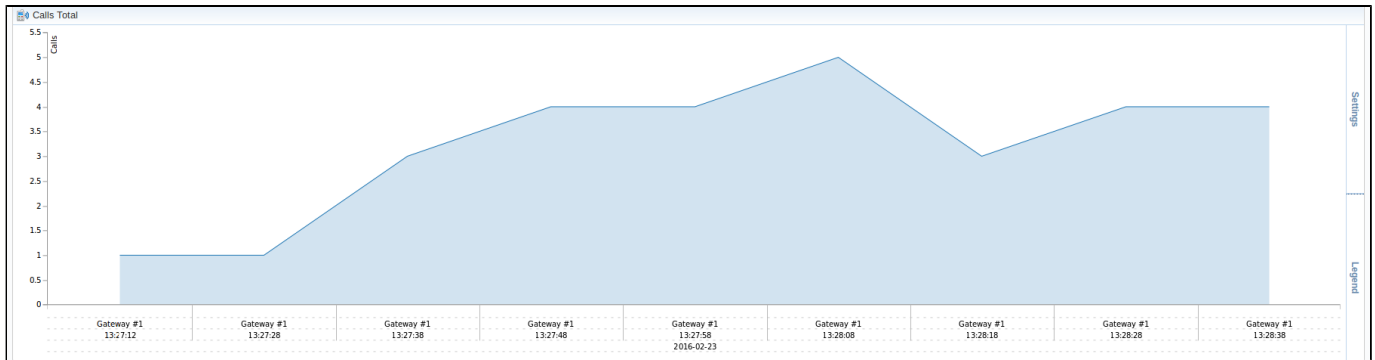
Screenshot: General example of a chart



Screenshot: Orig-Term chart



Screenshot: Active calls chart



Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Customer Dynamics

In this article

- [Section overview](#)
- [Creating a New Report](#)
- [Customer Dynamics buttons: export, chart.](#)
- [Sharing a Report](#)


Section overview

The **Customer Dynamics** section is designed to illustrate the data for analyzing and improving efficiency easily. Here, reports are presented in the form of a table. However, you can create a chart to interpret key information effectively and facilitate the decision-making process.

Screenshot: Customer Dynamics section/query form

Creating a New Report

To generate a report, you need to fill in the form and click the **Query** button. The query form consists of the following parameters:

| Information Block | Field Description |
|---|---|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | Interval Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory. |
| | Client Type Select a client type from a drop-down list of the following options: <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop |
| | Additional Filters |
| | There are the following accessible additional filters: <ul style="list-style-type: none"> • By clients: <i>Client Tags, Owner.</i> • Extras: <i>Package.</i> |
| | Client Tags Specify certain tags to filter clients and show more detailed results in the report |
| | Owner Define a reseller for the report |
| Package Enter a package for the report | |
| Group by | There are the following accessible options to group the data in reports: <ul style="list-style-type: none"> • Time: <i>Year, Month, Date.</i> • Extras: <i>Package Name.</i> |
| Output | This form contains settings for the output data of the report. |
| | Type Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx |

| | |
|------------------------|--|
| Send to | You can send generated reports via email. Also, it is possible to specify several emails. <div style="background-color: yellow; padding: 5px; border: 1px solid black;"> <p>! Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> |
| Currency | Specify a currency for the report. All values will be automatically converted to the specified currency in the report. |
| Active Duration | Determine the period (in months). If the customer has used any paid services within this period, (s)he will be considered an active client. |

A generated Customer Dynamics report is demonstrated on a screenshot below:

Screenshot: Customer Dynamics report

Customer Dynamics

CLIENTS

Client Tags

Owner

Extras

Package

FILTERS

Period: ▼ This Year | 2018-01-01 00:00:00 — 2018-12-31 23:59:59 | UTC ▼

Client Type: Client ▼

Group By: Month × ▼

Save Query Query

OUTPUT

Type: Web ▼

Currency: USD ▼

Active Duration: 3 month(s)

Export to CSV
Export to XLSx
Show Chart
?

| | 01/2018 | 02/2018 | 03/2018 | 04/2018 | 05/2018 | 06/2018 | 07/2018 | 08/2018 | 09/2018 | 10/2018 | 11/2018 | 12/2018 |
|---------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Clients - Active | | | | | | | | | | | | |
| Qty | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Balance Pos | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Balance Neg | N/A | N/A | -809.50 | -809.50 | -809.50 | -809.50 | N/A | N/A | N/A | N/A | N/A | N/A |
| Balance | N/A | N/A | -809.50 | -809.50 | -809.50 | -809.50 | N/A | N/A | N/A | N/A | N/A | N/A |
| Clients - Overall Active | | | | | | | | | | | | |
| Qty | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Balance Pos | N/A | N/A | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 |
| Balance Neg | -33.75 | -33.75 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 |
| Balance | -33.75 | -33.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 |
| Clients - All | | | | | | | | | | | | |
| Qty | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Balance Pos | N/A | N/A | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 | 30.75 |
| Balance Neg | -33.75 | -33.75 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 | -809.50 |
| Balance | -33.75 | -33.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 | -778.75 |
| Balance Refill | | | | | | | | | | | | |
| Qty | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | N/A | N/A | 125.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Avg | N/A | N/A | 125.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pay As You Go | | | | | | | | | | | | |
| Total | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Active Avg | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Packages | | | | | | | | | | | | |
| Activation Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Activation Total | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Renew Qty | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Renew Total | N/A | N/A | -870.00 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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| Title | Description |
|-------------------------|---|
| Clients - Active | <p>This subdivision shows statistical data of customers that actively use services according to the period specified in the Active Duration field</p> <ul style="list-style-type: none"> Qty - Overall number of clients that used any paid services within the last Active Duration period. Balance Pos - Total of all positive balances for the clients that used any paid services within the last Active Duration period. Balance Neg - Total of all negative balances for the clients that used any paid services within the last Active Duration period. Balance - Total of all balances for the clients that used any paid services within the last Active Duration period. |

| | |
|---------------------------------|--|
| Clients - Overall Active | <p>Here a statistic data of customers that actively used paid services at any time is displayed</p> <ul style="list-style-type: none"> • Qty - Total quantity of clients that used any paid services at any time. • Balance Pos - Total of all positive balances for the clients that used any paid services at any time. • Balance Neg - Total of all negative balances for the clients that used any paid services at any time. • Balance - Total of all balances for the clients that used any paid services at any time. |
| Clients - All | <p>It presents all customers according to the filter settings</p> <ul style="list-style-type: none"> • Qty - Total quantity of clients according to current filters. • Balance Pos - Total of all positive balances for the clients according to current filters. • Balance Neg - Total of all negative balances for the clients according to current filters. • Balance - Total of all balances for the clients according to current filters. |
| Balance Refill | <ul style="list-style-type: none"> • Qty - Number of balance refills during the specified period. • Total - Total amount of balance refills during the specified period. • Avg - Average amount of each refill during the specified period. |
| Pay As You Go | <ul style="list-style-type: none"> • Total - Total amount spent on any services out of package subscription plans. • Active Avg - Average amount of Pay as you Go services usage per currently active customers. |
| Packages | <ul style="list-style-type: none"> • Activation Qty - Number of packages activations during the specified period. • Activation Total - Total amount charged for all activations of the packages. • Renew Qty - Number of packages renewals during the specified period, including initial renew within the activation of the package. • Renew Total - Total amount charged for packages renewals, during the specified period, including initial renew within the activation of the package. |

Also, you can create a template for reports and save specified parameters by clicking the **Save Query** button. A pop-up window with settings will appear and you need to fill in the following form:




Screenshot: New Template form

Tip

To find more details about templates, please refer to the [Report Queries](#) article in our **User Guide**.


Customer Dynamics buttons: export, chart.

You can export data to a **CSV** and **XLSx** file, which contains only currently displayed data, with no automatic request to update data while exporting. Also, it is possible to create charts for illustrating crucial information easily:

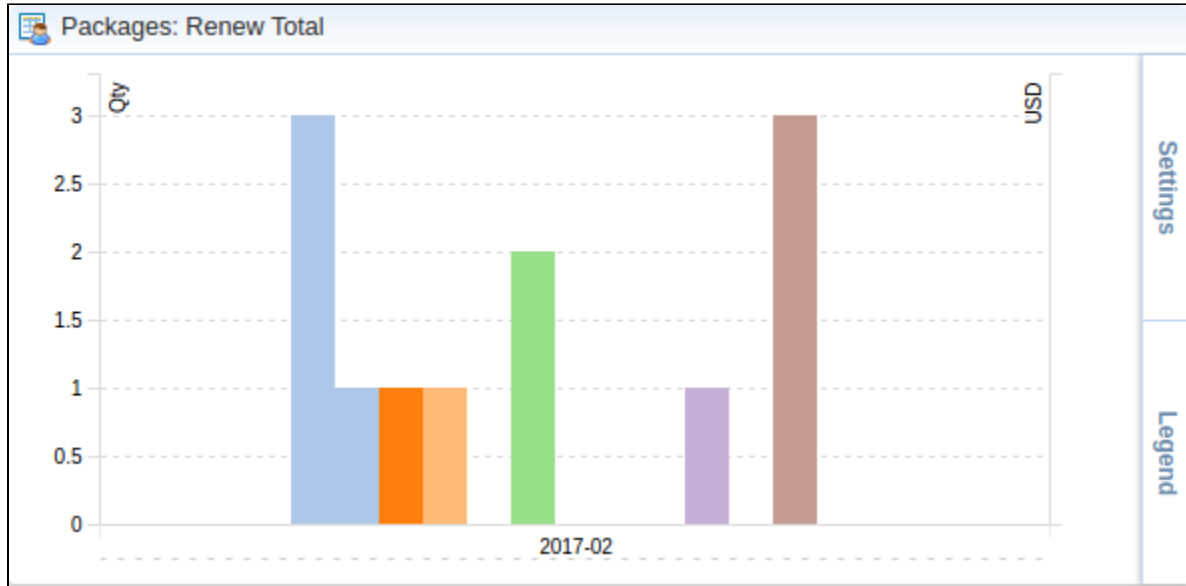
1. To download a report in **.csv**, click on the **Export to CSV**  button above the report.
2. To download a **.xlsx** file, click on the **Export to XLSx**  button above the report
3. To create a **visual chart**, click on the **Show Chart**  button above the report. There is more information available on this topic in the article [How to create a statistic chart?](#) in our Knowledge Base. From the drop-down list on this option, you can find the next pre-configured templates for the chart:

- **Clients - Active: Qty**
- **Balance Refill: Total**
- **Pay as you Go: Total**
- **Packages: Renew Total**
- **Blank Chart**

Therefore, you can create a new chart or select **Blank Chart** to have a new empty worksheet for configuring a custom chart

4. You can check an actual date interval by clicking on the **Info**  icon. The displayed data could be different from the Interval specified above if there is no data for the period.

Screenshot: Customer Dynamics chart




Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|---------------|--|
| Data Interval | States the period set for a report |
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |
| Duration | Time spent to generate a report |

Summary Report

In this article

- [Section overview](#)
- [Creating a New Summary Report](#)
- [Simple scheme: how to generate a summary report](#)
- [Creating a Query Template](#)
- [Summary Report buttons: reports, export, chart.](#)
- [Side-by-side report](#)
- [Sharing a Report](#)
- [Knowledge Base Articles](#)



Section overview


This section is designed to help users create a report that would contain summary information regarding all existing services from the perspective of both origination and termination sides. Not only can it provide a general overview of total services cost and billed volumes of service units, but it can be customized to outline even more detailed information regarding different client types, ASR / ACD Current, etc.

Screenshot: Summary Report query form

Creating a New Summary Report

To create a new summary report, you need to fill in the following parameters in the form and click the **Query** button:

| Information block | Field Description |
|-------------------|---|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | Interval Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory. |
| | Compare to Accessible when you click on the plus  icon next to the Interval . Specify the second interval for the report: <ul style="list-style-type: none"> • Previous Interval • Previous Day • Previous Week • Previous Month • Previous Year |

| | | | | | |
|---|--|-------------|---|---------------|---|
| <p>Group by</p> | <p>Select from the list of the following accessible options to group the data in reports:</p> <ul style="list-style-type: none"> • Time: Year, Month, Day, Hour • Clients: Client Type, Client, Account, C Series, Owner, Package • Events: Dst Code, Dst Code Name, Dst Country, Currency, Origin, Service, Result Code, Gateway, Gateway Tag • Extras: Time Profile, Setup Fee, Rate, Additive Rate. <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <ul style="list-style-type: none"> • The Group by field is mandatory, it couldn't be empty in order to generate the report. By default, there must be at least two options: <i>Origin</i> and <i>Service</i> • If you group by Client and his/her Timezone differs from the system Timezone, the latter will be used in the respective report. • When you are grouping by year, it is recommended to indicate the calendar year in the period. The same goes for other period types. </div> | | | | |
| <p>Additional Filters</p> | | | | | |
| <p>The accessible additional filters are:</p> <ul style="list-style-type: none"> • Clients: Client, Client Tags, Client Type, Account, Account Tags, Package, Owner, Cards Serial • Events: Origin, Dst Code, Dst Code Name, Dst Code Country, Src Code, Src Code Name, Src Code Country, Rate (avg), Result Code, Gateway, Gateway Tag, Time Profile, Service • Statistics: ASR Std, ASR Current, ACD Std, ACD Current, PDD (avg), SCD (avg) • Totals: Volume Total, Volume Billed, Package Volume, Cost, Package Credit, Setup Fee Cost, Additive Cost, Taxes Total, Total Records, Non Zero Records, Success Records, Busy Records, No Channel Records, Error Records • Extras: Match Client, Match Rate | | | | | |
| <p>Output</p> | <p>This form contains settings of the report output data.</p> <p>Click the plus  icon next to Columns and select the required columns to add them to the Output information block. Also, you can cancel any chosen item.</p> <p>Accessible columns in the report</p> <p>The list of additional columns include:</p> <p>Columns for the main interval:</p> <p><i>Cost Total, Setup Fee Cost, Average Rate, Package Credit, Total Volume, Billed Volume, Package Volume, Total Events, Not Zero, Success, Busy, No Channel, Error, ASR Std, ASR Cur, ACD Srd, ACD Cur, PDD Avg, SCD Avg, xDRs List, Taxes Total, Additive Cost.</i></p> <p>Columns for the comparative interval are the same as for the main period. Moreover, all parameters could be selected expressed in percentage.</p> <table border="1"> <tr> <td>Rate</td> <td>Avg. Rate - an average cost calculated</td> </tr> </table> <table border="1"> <tr> <td>Totals</td> <td> <ul style="list-style-type: none"> • Cost Total - the full price of all services including additional services • Total Volume - a whole volume of the events in units (specified in the Services settings "Reports" field) • Billed Volume - a whole billed volume of events. It could differ from the total volume due to the rates settings, for example, grace volume, min volume, and interval. • Package Volume - a volume within a respective package that is billed according to the package limits • Package Credit - a volume of credit that has been charged within the respective package • Total Events - the entire quantity of events • Not Zero Records - the number of records that have the volume equal to or more than 1 • Success Records - the number of records that have a duration equal to or more than 1 and a successful end code, records with Q.931 disconnect cause 16 or 31 • Busy Records - busy records quantity with Q.931 disconnect cause 17 • No Channel Records - no circuit/channel available, records quantity with Q.931 disconnect cause 34 </td> </tr> </table> | Rate | Avg. Rate - an average cost calculated | Totals | <ul style="list-style-type: none"> • Cost Total - the full price of all services including additional services • Total Volume - a whole volume of the events in units (specified in the Services settings "Reports" field) • Billed Volume - a whole billed volume of events. It could differ from the total volume due to the rates settings, for example, grace volume, min volume, and interval. • Package Volume - a volume within a respective package that is billed according to the package limits • Package Credit - a volume of credit that has been charged within the respective package • Total Events - the entire quantity of events • Not Zero Records - the number of records that have the volume equal to or more than 1 • Success Records - the number of records that have a duration equal to or more than 1 and a successful end code, records with Q.931 disconnect cause 16 or 31 • Busy Records - busy records quantity with Q.931 disconnect cause 17 • No Channel Records - no circuit/channel available, records quantity with Q.931 disconnect cause 34 |
| Rate | Avg. Rate - an average cost calculated | | | | |
| Totals | <ul style="list-style-type: none"> • Cost Total - the full price of all services including additional services • Total Volume - a whole volume of the events in units (specified in the Services settings "Reports" field) • Billed Volume - a whole billed volume of events. It could differ from the total volume due to the rates settings, for example, grace volume, min volume, and interval. • Package Volume - a volume within a respective package that is billed according to the package limits • Package Credit - a volume of credit that has been charged within the respective package • Total Events - the entire quantity of events • Not Zero Records - the number of records that have the volume equal to or more than 1 • Success Records - the number of records that have a duration equal to or more than 1 and a successful end code, records with Q.931 disconnect cause 16 or 31 • Busy Records - busy records quantity with Q.931 disconnect cause 17 • No Channel Records - no circuit/channel available, records quantity with Q.931 disconnect cause 34 | | | | |

| | |
|------------------------------|--|
| Statistics | <p>ASR - average success rate (successful records percentage)</p> <ul style="list-style-type: none"> Std - the value calculated based on the records with "success" status divided by the total number of records minus all records with "no channel available" status Cur - the value calculated based on the records with volume > 0 divided by the total number of records <p>ACD - average call duration in minutes</p> <ul style="list-style-type: none"> Std - the sum of all records duration divided by the number of records with "success" status Cur - the sum of all records duration divided by the number of records with duration > 0 <p>PDD Avg - average post-dial delay in seconds</p> <p>SCD Avg - average session connect delay in seconds</p> |
| | xDRs List - list of detailed records statistics |
| Other output settings | |
| Order by | Select parameters to sort already grouped data in columns. Here you can sort data from highest to lowest values (or vice versa) and select different values. |
| Type | <p>Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx</p> <p>Also, select a look of a table view next to the Type field:</p> <ul style="list-style-type: none"> Plain with total - a simple table view with an additional row with calculated totals Plain - a simple table view Grouped - a table view with grouped data and possibility to collapse it <div style="background-color: #ffffcc; padding: 5px;"> <p>! Attention</p> <p>Please note that the Grouped type of a table view is available only for Excel XLSx and Web formats, it doesn't work with CSV and Excel XLS.</p> </div> |
| Limit | Determine the number of rows that will be visible in the report. It is useful for displaying some top positions by the chosen parameter. It is available only for the Plain report type. |
| Send to | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffffcc; padding: 5px;"> <p>! Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report; it doesn't work with Web.</p> </div> |
| Currency | Specify a currency of the report. All values will be automatically converted to the specified currency in the report. |
| Code Deck | Select a code deck from a drop-down list. All codes in the following report will be presented according to the specified code deck. |

The example of a generated summary report is presented on a screenshot below:

Screenshot: Summary Report section

The screenshot shows the 'Summary Report' interface. On the left, there are 'FILTERS' for Clients, Client Tags, and Client Type. The main area shows 'OUTPUT' settings: Order by: Total Volume, Limit: No Limit, Type: Web, Grouped, Currency: USD, Dst Code Deck, and Src Code Deck. Below the settings is a data table with columns for various metrics.

| Origin | Service | Unit | Cost | Additive Cost | Setup Fee Cost | Rate (avg) | Package Credit | Taxes Total | Total Volume | Billed Volume | Package Volume | Total Events | Not Zero | Success | Busy | No Channel | Error | ASR Std | ASR Cur | ACD Std | ACD Cur | PDD (avg) | SCD (avg) | xDRs List | |
|-------------|---------|------|---------|---------------|----------------|------------|----------------|-------------|--------------|---------------|----------------|--------------|----------|---------|------|------------|-------|---------|---------|---------|---------|-----------|-----------|-----------|--|
| origination | | | 0.01 | 0.00 | 0.00 | | 0.0000 | 0.00 | | | | | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | | | | | |
| origination | Calls | min | 0.0128 | 0.0000 | 0.0000 | 0.0080 | 0.0000 | 0.0000 | 1.6000 | 1.6000 | 0.0000 | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | 0.53 | 0.53 | 6.00 | 5.67 | | |
| termination | | | -0.01 | 0.00 | 0.00 | | 0.0000 | 0.00 | | | | | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | | | | | |
| termination | Calls | min | -0.0072 | 0.0000 | 0.0000 | 0.0045 | 0.0000 | 0.0000 | 1.6000 | 1.6000 | 0.0000 | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | 0.53 | 0.53 | 6.00 | 5.67 | | |

If the data in the report is grouped, it will be shown initially collapsed. To expand or collapse data in your report, click the plus or minus icons. To expand all data in the report, please click Ctrl + the icon.

Warning

Please note, the system shows rounded values in the reports. But while calculating, the system takes an exact value. Hence, the procedure of the rounding is as follows:

- the system rounds currency values according to the settings of a respective currency
- all types of events (e.g., not zero, success, busy, as well as total quantity) are not rounded
- such parameters as **Setup Fee Cost, Package Credit, Average Rate, Cost Total** are rounded to the nearest ten-thousandth. For example, 3.879256 to 3.8793
- others are rounded to the nearest hundredth. For example, 4.8763 to 4.88

Simple scheme: how to generate a summary report

To create a simple summary report, you need to:

- Select desired parameters for the report on the **Filters** menu
- Enter the interval and specify a timezone
- Select parameters in the **Group by** field, for example, **Currency, Origin**, etc.
- Select **Columns** in the Output form, for example, **Average Rate, ASR Std, ASR Cur, ACD Std, ACD Cur, Total Records**, etc.
- Specify the **Type** field or leave its default settings (Web/Grouped)
- Specify the currency and select a code deck (if applicable).
- Click the **Query** button.

Tip

- If you want to sort already grouped data in columns, select respective parameters in the **Order by** field. Also, you can sort from highest to lowest values (or vice versa).
- Please note, the **Order by** option is active when the **Type** of the Output form is **Plain**. When it is **Grouped**, the data is only sorted by values specified in the **Group by** field.

Creating a Query Template

Also, you can create a template for reports and save specified parameters by clicking on the **Save Query** button. A pop-up window with settings will appear, and you will need to fill in the following form.

Screenshot: New Template form

The screenshot shows the 'Report Queries' configuration window. At the top, there's a 'Name' field and a 'Visibility' dropdown set to 'Private'. The 'Report' type is 'Summary Report'. Below this are two main sections: 'FILTERS' and 'OUTPUT'. The 'FILTERS' section includes an 'Interval' dropdown set to 'Today', a date range from '2021-09-17 00:00:00' to '2021-09-17 23:59:59', and a 'Timezone' dropdown set to 'UTC'. The 'Group by' field contains 'Origin' and 'Service'. The 'OUTPUT' section has an 'Order by' dropdown set to 'Total Volume', a 'Limit' dropdown set to 'No Limit', a 'Type' dropdown set to 'Grouped', a 'Currency' dropdown set to 'USD', and two empty dropdowns for 'Dst Code Deck' and 'Src Code Deck'. At the bottom right, there are 'OK', 'Cancel', and 'Apply' buttons.

To load already existed templates while generating statistic reports, click the **Load Query** button in the **Summary Report** section.

Tip

To find more details about templates, please refer to the [Report Queries](#) article in our **User Guide**.

Summary Report buttons: reports, export, chart.

You can export data to a **CSV** or **XLSx** file, which contains only currently displayed data, with no automatic request to update data while exporting. Also, it is possible to create charts for illustrating crucial information easily. You can generate a report using the same criteria in the **Orig-Term report** and the **xDR s list** sections.

1. To expand/collapse all the data for the **Grouped** output, click on the icon above the report.
2. To download a report in **.csv**, click on the **Export to CSV** button above the report.

Attention

Please note, this button will be visible only when the **Type** of the output is **Plain**. For the **Grouped** output type it is not available.

3. To download a **.xlsx** report file, click the **Export to XLSx** button above the report.
4. To create a **visual chart**, click the **Show Chart** button above the report. There is more information available on this topic in the article **How to create a statistic chart?** in our Knowledge Base.
5. You can generate a detailed report using the same criteria in the **xDRs list** section by clicking the **xDRs list** icon above the report.

Tip

When you make a report based on two intervals, **two xDRs list** icons appear:

- the first xDRs list icon allows generating an xDRs report based **on the first interval**;
- the second xDRs list icon allows generating data based **on the second interval** in the xDRs list.

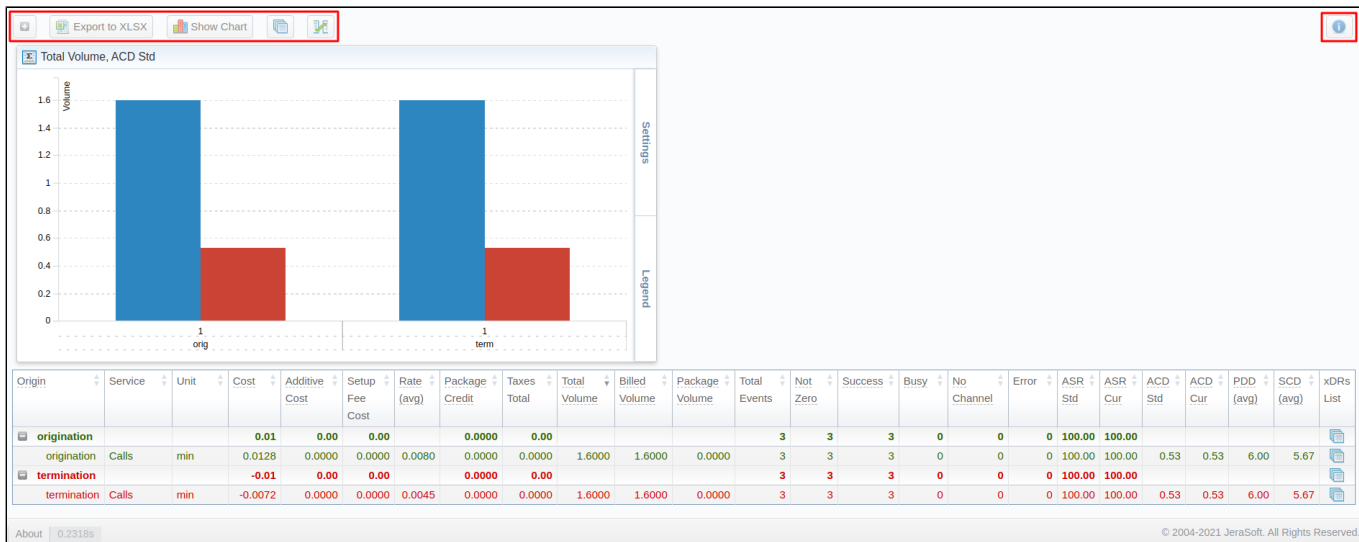
When you make a report and filter data by **Client/Client Tags/Account/Code/Code Name/Owner** parameters, two Orig-Term icons appear. They allow generating reports with **origination** and **termination** data separately.

- this Orig-Term icon allows generating a report **based on origination data**;
- this Orig-Term icon allows generating a report **based on termination data**.

6. It is possible to generate a report using the same criteria in the **Orig-Term** section by clicking the **Orig-Term** icon on the toolbar.

7. You can check an actual date interval by clicking on the **Info** icon. The displayed data could be different from the Interval specified above if there is no data for the period.

Screenshot: Summary Report section

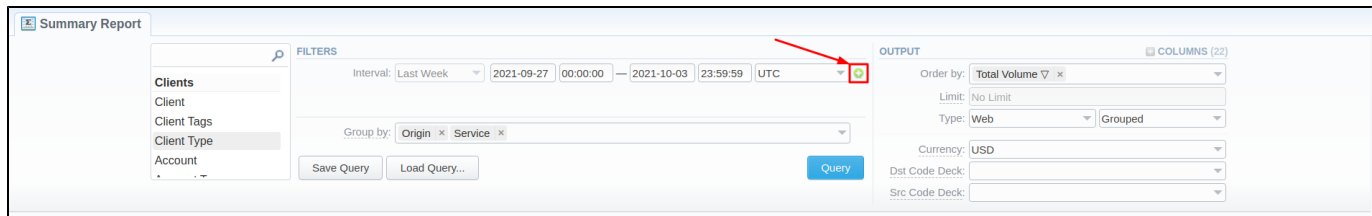


Side-by-side report


This tool allows building a report with side-by-side sub-reports. Use it to run a comparative analysis on the same page. It's helpful for reviewing multiple parameters, totals, and compare results at different time intervals. The **Compare to** option is designed to create a report that shows two sub-reports side-by-side. You can view more info about it in the article [How to compare report parameters over the periods?](#)

To enable this option, click on the plus icon next to the **Interval** field and specify both intervals for the report.

Screenshot: Summary Report section

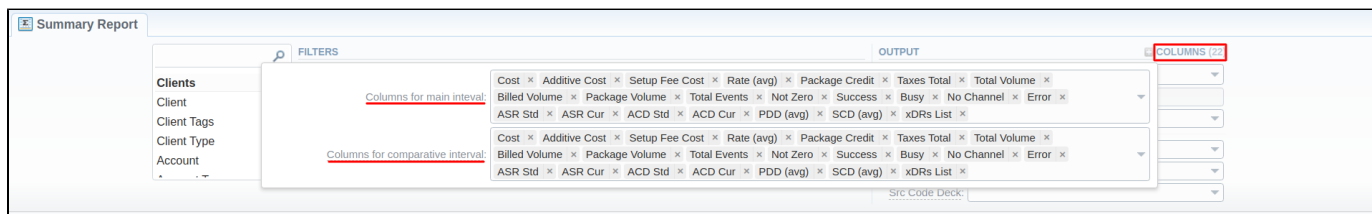



Then choose columns for a main and comparative period in the report Output form. When all required parameters are specified, click the **Query** button.

To remove this filter, please click the delete  icon.

You can modify a comparative mode by changing periods and columns. For example, to compare how different the cost total of the two periods is in percentage terms. To do this, choose the **Cost Total (%)** value from the Columns. Therefore, the final report splits **Cost Total (%)** into separate columns (see screenshot below).

Screenshot: Summary Report section




 **How does the Compare Period work?**

Example 1:

If you select the **Interval** to be **Today** 00:00:00 til 23:59:59, the **Previous Interval** and **Previous Day** values would be the same and show yesterday. The **Previous Week** option would display the same day last week (i.e., Monday for Monday), the **Previous Month** option would show the same date last month, and the **Previous Year** will display the same date last year.

Example 2:

If you select the **Interval** to be **This Week**, the system will take the period starting Monday 00:00:00 and up to 23:59:59 on the *current day*. That is if your current day is Thursday, **This Week** would be Monday to Thursday. The comparative periods will work accordingly, selecting the same periods from the past week, month, year. Only the **Previous Day** option will result in offsetting a period one day behind (if a period is Monday to Thursday, comparative would be Sunday to Wednesday).

 **Attention**


When you use the **Compare to** option in the **Summary Report** and **Orig-Term Report** sections, default chart templates will not be accessible.

Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|-----------------|--|
| Data Interval | States the period set for a report |
| Data Interval 2 | States the period set for a Compare Mode |
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |
| Duration | Time spent to generate a report |

Screenshot: Summary report Info icon

The screenshot shows the 'Summary Report' interface. At the top, there are filters for 'Interval' (Last Week), dates (2021-09-27 to 2021-10-03), and time zone (UTC). The 'OUTPUT' section shows 'Order by: Total Volume', 'Limit: No Limit', 'Type: Web', and 'Currency: USD'. Below the filters is a table with columns: Origin, Service, Unit, Cost, Additive Cost, Setup Fee Cost, Rate (avg), Package Credit, Taxes Total, Total Volume, Billed Volume, Package Volume, Total Events, Not Zero, Success, Busy, No Channel, and Error. A red box highlights the 'Info' icon in the top right of the table and a tooltip that appears, containing the following text:

Data Interval: 09/30/2021 15:59:59 +0000 — 09/30/2021 15:59:59 +0000
 Generated by: Administrator on 10/08/2021 17:25:51 +0000
 Duration: 0.0674 sec

| Origin | Service | Unit | Cost | Additive Cost | Setup Fee Cost | Rate (avg) | Package Credit | Taxes Total | Total Volume | Billed Volume | Package Volume | Total Events | Not Zero | Success | Busy | No Channel | Error |
|-------------|---------|------|---------|---------------|----------------|------------|----------------|-------------|--------------|---------------|----------------|--------------|----------|---------|------|------------|-------|
| origination | Calls | min | 0.0128 | 0.0000 | 0.0000 | 0.0080 | 0.0000 | 0.0000 | 1.6000 | 1.6000 | 0.0000 | 3 | 3 | 3 | 3 | 0 | 0 |
| termination | Calls | min | -0.0072 | 0.0000 | 0.0000 | 0.0045 | 0.0000 | 0.0000 | 1.6000 | 1.6000 | 0.0000 | 3 | 3 | 3 | 3 | 0 | 0 |

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Orig-Term Report

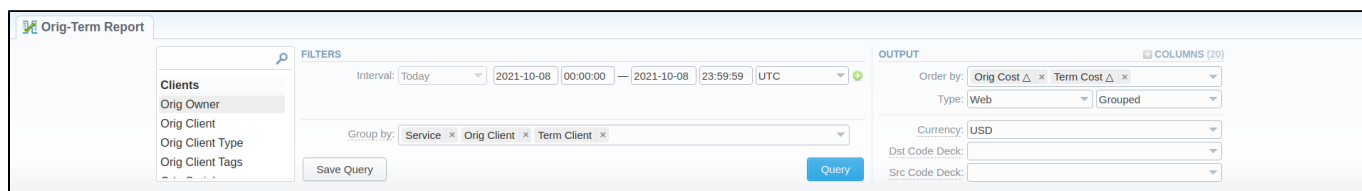
In this article

- [Section overview](#)
- [Creating a New Orig-Term Report](#)
- [Simple scheme: how to generate an orig-term report](#)
- [Creating Reports Templates](#)
- [Orig-Term Report buttons: reports, export, chart.](#)
- [Side-by-side report](#)
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Section overview





This section is designed to provide a user with a possibility to generate a report and trace all call routes from a **Client** to any **Provider** with orig-term cost and profit. Here you can create a report based on an existing template or generate a new one. Also, you can get the information sorted by clients, events, profit, etc.

Screenshot: *Orig-Term Report query form*



Creating a New Orig-Term Report

To create a new summary report, you need to fill in the following parameters in the form and click the **Query** button:

| Information Block | Field Description |
|--|--|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | <p>Interval Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory.</p> |
| | <p>Compare to Accessible when you enable the Compare to option by clicking on the plus  icon next to the Interval. Specify the second interval for the report.</p> <div style="background-color: #e0ffe0; padding: 10px; border: 1px solid #c0ffc0;"> <p> Tip</p> <p>When you select one of the Time parameters for Group by, the end date of Interval 2 will be set automatically to make equal intervals.</p> </div> |
| Group by | <p>There are the following accessible options to group the data in reports:</p> <ul style="list-style-type: none"> • Time: Year, Month, Date, Hour. • Clients: Orig Client, Orig Account, Orig Code, Orig Code Name, Orig Code Country, Orig Rate, Term Client, Term Account, Term Code, Term Code Name, Term Code Country, Term Rate • Extras: Service, Orig Serial, Orig Client Type, Orig Owner, Orig Time profile, Term Client Type, Term Owner, Term Time profile <div style="background-color: #ffffe0; padding: 10px; border: 1px solid #ffc000;"> <p> Attention</p> <p>Please note that the Group by field is mandatory, it couldn't be empty in order to generate the report.</p> </div> |
| Additional Filters | |
| There are the following accessible additional filters: | |

| Clients | |
|------------------------------|--|
| Orig Owner | Define an origination Reseller for the report. <i>Accepts multiple values.</i> |
| Orig Client | Define an origination client for the report |
| Orig Client Type | Determine the type of origination client: <i>Client, Reseller, Calling Card, Call Shop</i> |
| Orig Client Tags | Determine tags that belong to an origination client |
| Orig Serial | Define an origination serial |
| Orig Account | Enter an origination account for the report |
| Orig Account Tags | Specify tags determined for an origination account |
| Term Owner | Define a Reseller for the report. <i>Accepts multiple values.</i> |
| Term Client | Define a termination client for the report |
| Term Client Type | Determine the type of termination client: <i>Client, Reseller, Calling Card, Call Shop</i> |
| Term Client Tags | Determine tags that belong to a termination client |
| Term Account | Enter a termination account for the report |
| Term Account Tags | Specify tags determined for a termination account |
| Events | |
| Service | Determine the name of service for the report |
| Match Orig Client | Search for matched/mismatched origination clients |
| Match Orig Rate | Search for matched/mismatched origination rates |
| Orig Dst Code | Specify an origination code for the report |
| Orig Dst Code Name | Indicate an origination code name |
| Orig Dst Code Country | Indicate an origination country name |
| Orig Src Code | Specify an origination source code for the report |
| Orig Src Code Name | Indicate an origination source code name |
| Orig Src Code Country | Indicate an origination source country name |
| Orig Rate (avg) | Enter the range of average call rate for origination |
| Orig Time Profile | Select an orig time profile that will be used as filter criteria |
| Match Term Client | Search for matched/mismatched termination clients |
| Match Term Rate | Search for matched/mismatched termination rates |
| Term Dst Code | Specify a termination code for the report |
| Term Dst Code Name | Indicate a termination code name |

| | |
|------------------------------|--|
| Term Dst Code Country | Indicate a termination country name |
| Term Src Code | Specify a termination source code for the report |
| Term Src Code Name | Indicate a termination source code name |
| Term Src Code Country | Indicate a termination source country name |
| Term Rate (avg) | Enter the range of average call rate for termination |
| Term Time Profile | Specify a term time profile that will be used as filter criteria |
| Statistics | |
| ASR Std | Specify the range of ASR Std for events you would like to display |
| ASR Current | Specify the range of ASR Cur for events you would like to display |
| ACD Std | Specify the range of ACD Std for events you would like to display |
| ACD Current | Specify the range of ACD Cur for events you would like to display |
| Totals | |
| Volume Total | Enter the range of total volume of services |
| Orig Volume Billed | Enter the range of orig volume of billed services |
| Term Volume Billed | Enter the range of term volume of billed services |
| Profit (abs) | Enter the absolute profit range |
| Profit (rel) | Enter the relative profit range |
| Margin | Enter the margin range |
| Total Records | Enter the range of total events |
| Not Zero Records | Define the range of events, that have a duration greater than 0 |
| Success Records | Define the range of successful events |
| Busy Records | Define the range of busy events |
| No Channel Records | Define the range of no channel events |
| Error Records | Define the range of error events |

Output

This form contains settings of the output data of the report.

Click the plus  icon near the **Columns** to select respective columns to output a report data. Also, you can cancel any chosen item.

Accessible columns in the report

Columns for the main interval are:

ASR Std, ASR Cur, ACD Std, ACD Cur, Total Volume, Profit (abs), Profit (rel), Orig Billed Volume, Orig Cost, Orig Rate (avg), Term Billed Volume, Term Cost, Term Rate (avg), Total Events, Not Zero, Busy, No Channel, Success, Error, Margin.

Columns for the comparative interval are the same as for the main period. Moreover, all parameters could be selected expressed in percentage.

| | |
|------------------------------|--|
| Orig | <p>Origination information:</p> <ul style="list-style-type: none"> • Billed Volume - Billed event volume • Cost - Price of the event • Avg. Rate - Average event rate |
| Term | <p>Termination information:</p> <ul style="list-style-type: none"> • Billed Volume - Billed event volume • Cost - Event cost • Avg. Rate - Average event rate |
| Profit | <ul style="list-style-type: none"> • Profit (abs) - Revenue in respective currency, for example, USD (in fact, any system currency can be specified here) • Profit (rel) - Revenue in percent value |
| Total Volume | The total volume of services |
| Margin | The absolute value of profit divided by volume billed (orig and term). |
| ASR | <p>Average successful rate (successful events percentage):</p> <ul style="list-style-type: none"> • Std - Number of events with success status divided by the total number of events minus all events with no channel available status • Cur - Number of events with duration > 0 divided by the total number of events |
| ACD | <p>Average call duration:</p> <ul style="list-style-type: none"> • Std - Sum of all event duration divided by the number of events with success status • Cur - Sum of all event duration divided by the number of events with a duration > 0 |
| Events | <p>Quantity of events in a database</p> <ul style="list-style-type: none"> • Total Events - Total events quantity • Not Zero - Quantity of events that have a duration equal to or more than 1 second • Success - Quantity of events that have a duration equal to or more than 1 second and a successful end code, events with Q.931, disconnect cause 16 or 31 • Error - Quantity of declined events • Busy - Busy events quantity • No Channel - No circuit/channel available. Events with Q.931, disconnect cause 34 |
| Other output settings | |
| Order by | Select parameters to sort already grouped data in columns. Here you can sort data from highest to lowest values (or vice versa) and select different values. |
| Type | <p>Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx</p> <p>Also, select a look of a table view next to the Type field:</p> <ul style="list-style-type: none"> • Grouped - a table view with grouped data and possibility to collapse it • Plain - a simple table view • Plain with total - a simple table view with an additional Total row at the beginning of the report <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note, that the Grouped type of table view is available only for Excel XLSx and Web formats; it doesn't work with CSV.</p> </div> |
| Limit | Determine the number of rows that will be visible in the report. It is useful for displaying some top positions by the chosen parameter. It is available only for plain and plain with total types of the report. |
| Send to | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report; it doesn't work with Web.</p> </div> |

| | |
|------------------|---|
| Currency | Specify a currency for the report. All values will be automatically converted to the specified currency in the report. |
| Code Deck | Select a code deck from a drop-down list. All codes in the following report will be presented according to the specified code deck. |

A generated orig-term report is demonstrated on a screenshot below:

Screenshot: Orig-Term Report section

The screenshot shows the 'Orig-Term Report' interface. It includes a 'FILTERS' section with an interval set to 'Last Week' (2021-09-27 00:00:00 to 2021-10-03 23:59:59 UTC) and a 'Group by' field containing 'Service', 'Orig Client', and 'Term Client'. The 'OUTPUT' section shows 'Order by' set to 'Total Volume', 'Type' as 'Web', and 'Currency' as 'USD'. Below these are 'Dst Code Deck' and 'Src Code Deck' dropdowns. A 'Query' button is visible. At the bottom, there is a table with columns for Service, Unit, Orig Client, Term Client, Total Volume, Total Events, Not Zero, Success, Busy, No Channel, Error, ASR Std, ASR Cur, ACD Std, and ACD Cur. The data is grouped by Service and Unit.

| Service | Unit | Orig Client | Term Client | Total Volume | Total Events | Not Zero | Success | Busy | No Channel | Error | ASR Std | ASR Cur | ACD Std | ACD Cur | |
|---------|------|-------------|-------------|--------------|--------------|----------|---------|------|------------|-------|---------|---------|---------|---------|------|
| Calls | min | | | 1.6000 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | 0.53 | 0.53 |
| Calls | min | Customer A | | 1.6000 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | 0.53 | 0.53 |
| Calls | min | Customer A | Vendor C | 1.6000 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 100.00 | 100.00 | 0.53 | 0.53 |

If the data is grouped in the report, it will be shown initially collapsed. To expand or collapse data in your report, click the plus or minus icons. To expand all data in the report, please click **Ctrl** and .

Warning

Please note, the system shows rounded values in the reports. However, while calculating, the system takes an exact value. Hence, the procedure of the rounding is as follows:

- the system rounds currency values according to the settings of a respective currency
- all types of events (e.g., not zero, success, busy, as well as total quantity) are not rounded
- such parameters as **Orig Avg Rate**, **Term Avg Rate**, **Profit**, **Term Cost** are rounded to the nearest ten-thousandth. For example, 3.879256 to 3.8793
- others are rounded to the nearest hundredth. For example, 4.8763 to 4.88

Simple scheme: how to generate an orig-term report

An easy way to generate a simple orig-term report is:

- Select the desired parameters for the report on the **Filters** menu.
- Enter the period.
- Select some parameters in the **Group by** field, for example, *Orig Client*, *Service*
- Select **Columns** in the Output form, for example, *ASR Std*, *ASR Cur*, *ACD Std*, *ACD Cur*, *Success*, *Error*, *Profit (%)*.
- Specify the **Type** field or leave its default settings (Web/Grouped)
- Specify the currency and choose the code deck (if applicable).
- Click the **Query** button.

Tip

- If you want to sort already grouped data in columns, select the respective parameters in the **Order by** field. Also, you can sort from highest to lowest values (or vice versa).
- Please note, the **Order by** option is active when the **Type** of the Output form is **Plain** or **Plain with Total**. When it is **Grouped**, the data is only sorting by values specified in the **Group by** field.

You can also sort data in a report manually using special arrows next to the name of the respective columns.

Screenshot: Orig-Term Report

| Orig Code | ASR Std | ASR Cur |
|-----------|---------------|---------------|
| | 100.00 | 100.00 |
| 38067 | 100.00 | 100.00 |
| | 100.00 | 100.00 |
| 1111 | 100.00 | 100.00 |
| | 42.42 | 100.00 |
| 3333 | 42.42 | 100.00 |

Creating Reports Templates

You can also create a template for reports and save specified parameters by clicking the **Save Query** button. A pop-up window with settings will appear and you will need to fill out the following form:

Screenshot: *New Template creation form*

The screenshot shows the 'Report Queries' dialog box. The 'Name' field is empty, and 'Visibility' is set to 'Private'. The 'Report' is 'Orig-Term Report'. The 'FILTERS' section includes an 'Interval' of 'Today' from '2021-09-17 00:00:00' to '2021-09-17 23:59:59' in 'UTC'. The 'Group by' field is set to 'Service x Orig Client x Term Client'. The 'OUTPUT' section shows 'Order by' as 'Orig Cost x Term Cost', 'Type' as 'Grouped', 'Currency' as 'USD', and 'Dst Code Deck' and 'Src Code Deck' are empty. There are 'OK', 'Cancel', and 'Apply' buttons at the bottom right.

Tip

To find more details about templates, please refer to the [Report Queries](#) article in our **User Guide**.

Orig-Term Report buttons: reports, export, chart.

You can export data to a **CSV** or **XLSx** file, which contains only currently displayed data, no automatic request to update data while exporting. Also, it is possible to create charts for illustrating crucial information easily. And you can generate a report using the same criteria in the **Summary report** and the **xDRs list** sections.

1. To expand/collapse all the data for the **Grouped** output, click on the icon above the report.
2. To download a report in .csv, click the **Export to CSV** button on the toolbar.

Attention

Please note, this button will be visible only when the **Type** of the output is **Plain**. For the **Grouped** output type it is not available.

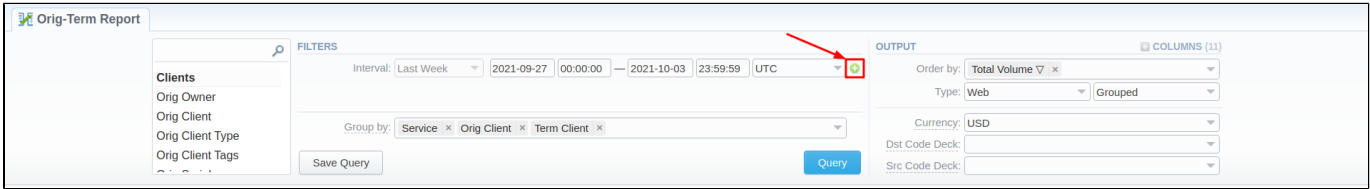
3. To download a .xlsx file, click the **Export to XLSx** button on the toolbar.
4. To create a **visual chart**, click the **Show Chart** button on the toolbar. There is more information available on this topic in the article "**How to create a statistic chart?**" in our Knowledge Base.
5. You can generate a detailed report using the same criteria in the **xDRs list** section by clicking the **xDRs list** icon on the toolbar.
6. And it is possible to generate a report using the same criteria in the **Summary report** section by clicking the **Summary** icon on the toolbar.
7. You can check an **actual date interval** of the report by clicking the **Info** icon and it could be different from *the Interval* specified above if there is no data for the period.

Side-by-side report


This tool allows building a report with side-by-side sub-reports. Use it to run a comparative analysis on the same page. It's helpful for reviewing multiple parameters, totals, and compare results at different time intervals. The **Compare to** option is designed to create a report that shows two sub-reports side-by-side.

To enable this option, click the plus icon next to the **Interval** field and specify both intervals for the report.

Screenshot: *Orig-Term Report query form*

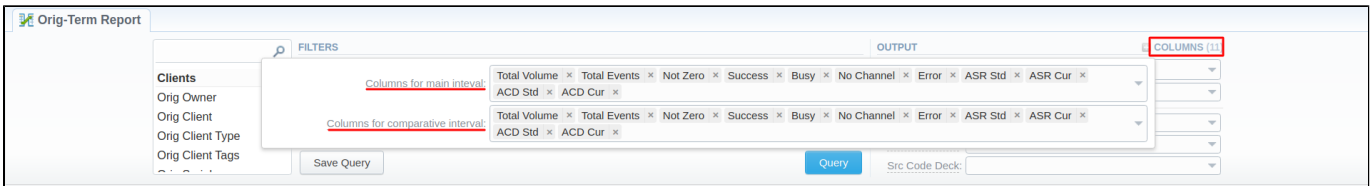


Afterwards, choose columns for the main and comparative period in the report output form. When all required parameters are specified, click the **Query** button.

To remove this filter, please click the delete  icon.

You can modify a comparative mode by changing periods and columns. For example, to compare how different the cost total of the two periods is in percentage terms. To do this, choose the **Cost Total (%)** value from the Columns. Therefore, the final report splits **Cost Total (%)** into separate columns (see screenshot below).

Screenshot: *Orig-Term Report example*




Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|---------------|--|
| Data Interval | States the period set for a report |
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |
| Duration | Time spent to generate a report |

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Profit Report

In this article

- [Section overview](#)
- [Creating a Profit Report](#)
- [Creating a Query Template](#)
- [Export a Generated Report](#)
- [Side-by-side report](#)
- [Sharing a Report](#)

Section overview

This section allows generating the profit report, which analyzes profitability data and defines profits between **Reseller** parties (companies and managers) and **Clients** belonging to the respective Reseller/Manager.




For example, when **Manager_1** executes a profitability report, it allows seeing their origination customers sending traffic to **Manager_2**, who owns the actual terminator vendors. In this case, Reseller's permissions apply to every query, which guarantees that **Manager_1** will **not** be able to see any actual name of a client belonging to another manager, or another party that restricts such access.



Screenshot: Profit Report query form

Creating a Profit Report

To generate a profit report, you need to fill in the required parameters in the form and click the **Query** button. To get information sorted, use the **Group by** option and choose respective values from the drop-down list.

The list of query fields is as follows:

| Information block | Field Description |
|-------------------|--|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of the drop-down menu with filters. |
| | <p>Interval</p> <p>Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory.</p> |
| | <p>Compare to</p> <p>Accessible when you enable the Compare to option by clicking on the plus  icon next to the Interval. Specify the second interval for the report.</p> <div style="background-color: #e0ffe0; padding: 10px; border: 1px solid #c0ffc0;"> <p> Tip</p> <p>When you select one of the Time parameters for Group by, the end date of the Compare to will be set automatically to make equal intervals.</p> </div> |
| | <p>Reseller</p> <p>Specify the name of a target Reseller.</p> |
| | <p>Mode</p> <p>Choose the mode of the report:</p> <ul style="list-style-type: none"> • All visible - all represented visually. • Hide External Originators - all external originators of the selected manager will not be displayed. • Hide External Clients - only events made solely between clients of the chosen manager will be shown. <p>By default, the field value is set to All visible</p> |

| | |
|---|--|
| <p>Group by</p> | <p>Select a grouping option. Here you can choose and swap columns, as well as change their order. There are the following accessible options to group data in reports:</p> <ul style="list-style-type: none"> • Time: <i>Year, Month, Day, Hour.</i> • Clients: <i>Income Client, Income Account, Income Code, Income Code Name, Orig Rate, Outcome Client, Outcome Account, Outcome Code, Outcome Code Name, Term Rate, Package name.</i> • Extras: <i>Service Name, Income Series.</i> <div style="background-color: #ffffcc; padding: 5px;"> <p> Attention</p> <p>Please note that the Group by field is mandatory, it couldn't be left empty to generate the report.</p> </div> |
| <p>Additional Filters</p> | |
| <p>There are the following accessible filters:</p> <ul style="list-style-type: none"> • Clients: <i>Income Client, Income Client's Tag, Income Account, Income Account's Tag, Income Code, Income Code Name, Income Serial, Income Reseller, Outcome Client, Outcome Client's Tag, Outcome Account, Outcome Account's Tag, Outcome Code, Outcome Code Name.</i> • Extras: <i>Package, Service</i> | |
| <p>Income Client</p> | <p>Specify an origination client(s) for the report</p> |
| <p>Income Client's Tag</p> | <p>Specify a tag(s) assigned to origination clients</p> |
| <p>Income Account</p> | <p>Determine an origination client's account(s)</p> |
| <p>Income Account's Tag</p> | <p>Indicate origination account's tags</p> |
| <p>Income Code</p> | <p>Define an incoming code</p> |
| <p>Income Code Name</p> | <p>Specify an incoming code name</p> |
| <p>Income Serial</p> | <p>Indicate a serial number of the originator's calling card</p> |
| <p>Income Reseller</p> | <p>Specify a target reseller(s) for the report</p> |
| <p>Outcome Client</p> | <p>Define a termination client(s)</p> |
| <p>Outcome Client's Tag</p> | <p>Define a termination client's tag(s)</p> |
| <p>Outcome Account</p> | <p>Indicate an account(s) of the termination client(s) for the report</p> |
| <p>Outcome Account's Tag</p> | <p>Specify termination account's tags if any</p> |
| <p>Outcome Code</p> | <p>Specify a termination code of the client</p> |
| <p>Outcome Code Name</p> | <p>Indicate a termination code name</p> |
| <p>Package</p> | <p>Determine the name of the used package</p> |
| <p>Service</p> | <p>Specify the service</p> |
| <p>Output</p> | <p>This form contains settings of the report output data.</p> <p>Click a plus  sign next to Columns and select required columns to add them to the Output information block. Also, you can cancel any chosen item.</p> |

| Accessible columns in the report | |
|--|---|
| <p>Additional columns of the report are:</p> <p>Columns for the main interval:</p> <p><i>Volume Total, Income Cost, Income Avg Rate, Income Billed Volume, Outcome Cost, Outcome Avg Rate, Outcome Billed Volume, Profit, Profit rel.</i></p> <p>Columns for the comparative interval:</p> <p><i>Volume Total, Income Cost, Income Avg Rate, Income Billed Volume, Outcome Cost, Outcome Avg Rate, Outcome Billed Volume, Profit, Profit rel, Profit (%), Profit rel (%), Income Cost (%), Outcome Cost (%), Income Avg Rate (%), Outcome Avg Rate (%), Income Billed Volume (%), Outcome Billed Volume (%), Volume Total (%).</i></p> <p>And it's possible to choose each parameter expressed in percentage.</p> | |
| Volume Total | Total time of calls in minutes |
| Rate | <p>The call rate</p> <ul style="list-style-type: none"> • Income Avg Rate - an average call rate that is used for origination • Outcome Avg Rate - an average call rate that is used for termination |
| Profit | <p>The revenue</p> <ul style="list-style-type: none"> • Profit - a revenue in a respective currency (in fact, any system currency can be specified here) • Profit rel - a revenue in percent value |
| Time | <p>The billed time</p> <ul style="list-style-type: none"> • Income Billed Volume - the whole billed time for origination • Outcome Billed Volume - the whole billed time for termination |
| Cost | <p>The call cost</p> <ul style="list-style-type: none"> • Income Cost - a call cost that is used for origination • Outcome Cost - a call cost that is used for termination |
| Other output settings | |
| Order by | <p>Select parameters to sort already grouped data in columns. There are the following accessible options to order the data: by Time, Clients, Extras.</p> <p>Here you can sort data from highest to lowest values (or vice versa) and select different values.</p> |
| Type | <p>Choose a report format from a drop-down list: Web/CSV/Excel XLS/Excel XLSx</p> <p>Also, select a table view next to the Type field:</p> <ul style="list-style-type: none"> • Plain - a simple table view • Grouped - a table view with grouped data and possibility to collapse/expand it <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note that the Grouped type of a table view is available only for Excel XLSx and Web formats, it doesn't work with CSV.</p> </div> |
| Limit | <p>Determine the number of rows that will be visible in the report. It is useful for displaying some top positions by a chosen parameter. It is available only for the plain type of report.</p> |
| Send to | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>This feature is available only for CSV, Excel XLS, Excel XLSx formats of the report, it doesn't work with Web.</p> </div> |

| | |
|------------------|---|
| Currency | Specify a currency for the report. All values will be automatically converted to the specified currency in the report. |
| Code Deck | Using a drop-down list, select a respective code deck. All code names will be rewritten and presented according to the specified code deck. If there is no value specified, the code deck assigned to the Client or Rate Table will be in usage. |

A generated profit report is demonstrated on a screenshot below:

Screenshot: Profit report section

The screenshot shows the 'Profit Report' interface. It includes a left sidebar with categories like 'Outcome Account's Tags', 'Outcome Code', and 'Extras'. The main area has 'FILTERS' and 'OUTPUT' sections. The 'FILTERS' section includes 'Interval' (Last Week), 'Reseller' (Company Name), 'Mode' (All Visible), and 'Group by' (Service, Income Client, Outcome Client, Package Name). The 'OUTPUT' section includes 'Order by' (Income Cost, Outcome Cost), 'Limit' (No Limit), 'Type' (Web), 'Currency' (USD), and 'Dst Code Deck'. Below these is a table with columns for Service, Unit, Income, Income Client, Outcome, Outcome Client, Package, Volume, Income Cost, Income Avg, Income Billed, Outcome, Outcome Avg, Outcome Billed, Profit, and Profit Rel.

| Service | Unit | Income Client's ID | Income Client | Outcome Client's ID | Outcome Client | Package Name | Volume Total | Income Cost | Income Avg Rate | Income Billed Volume | Outcome Cost | Outcome Avg Rate | Outcome Billed Volume | Profit | Profit Rel |
|---------|------|--------------------|---------------|---------------------|----------------|--------------|--------------|-------------|-----------------|----------------------|--------------|------------------|-----------------------|--------|------------|
| Calls | min | | Customer A | | | | 1.6000 | 0.01 | 0.0080 | 1.6000 | -0.01 | 0.0045 | 1.6000 | 0.01 | 77.78 |
| Calls | min | 11 | Customer A | | | | 1.6000 | 0.0128 | 0.0080 | 1.6000 | -0.0072 | 0.0045 | 1.6000 | 0.0056 | 77.78 |
| Calls | min | 11 | Customer A | 17 | Vendor C | | 1.6000 | 0.0128 | 0.0080 | 1.6000 | -0.0072 | 0.0045 | 1.6000 | 0.0056 | 77.78 |
| Calls | min | 11 | Customer A | 17 | Vendor C | N/A | 1.6000 | 0.0128 | 0.0080 | 1.6000 | -0.0072 | 0.0045 | 1.6000 | 0.0056 | 77.78 |

If the data is grouped in the report, it will be shown initially collapsed. To expand or collapse data in your report, click the plus or minus icons.

Warning

Please note that the system shows rounded values in the reports. However, while calculating the system takes an exact value. Hence, the procedure of the rounding is as follows:

- the system rounds currency values according to the settings of a respective currency;
- other parameters are rounded to the nearest ten thousandths. For example 3.879256 to 3.8793.

Creating a Query Template

A user can create a template for profit reports and save specified parameters by clicking the **Save Query** button. A pop-up window with settings will appear and you will need to fill out the following form:

Screenshot: New Template form


The screenshot shows the 'Report Queries' form. It includes fields for 'Name' and 'Visibility' (set to Private). The 'Report' is set to 'Profit Report'. The 'FILTERS' section is identical to the screenshot above. The 'OUTPUT' section includes 'Order by' (Income Cost, Outcome Cost), 'Limit' (No Limit), 'Type' (Grouped), 'Currency' (USD), and 'Dst Code Deck'. There are 'OK', 'Cancel', and 'Apply' buttons at the bottom right.

To preview or load already existing templates while generating statistic reports, click the **Load Query** button and click on a template name or a play icon, respectively.


Export a Generated Report

You can export data to **XLSx** or **CSV** file, which contains currently presented data by clicking the **Export to XLSx** or **Export to CSV** button respectively. Please note that **Export to CSV** is available only when the **Type** of the output is **Plain**.

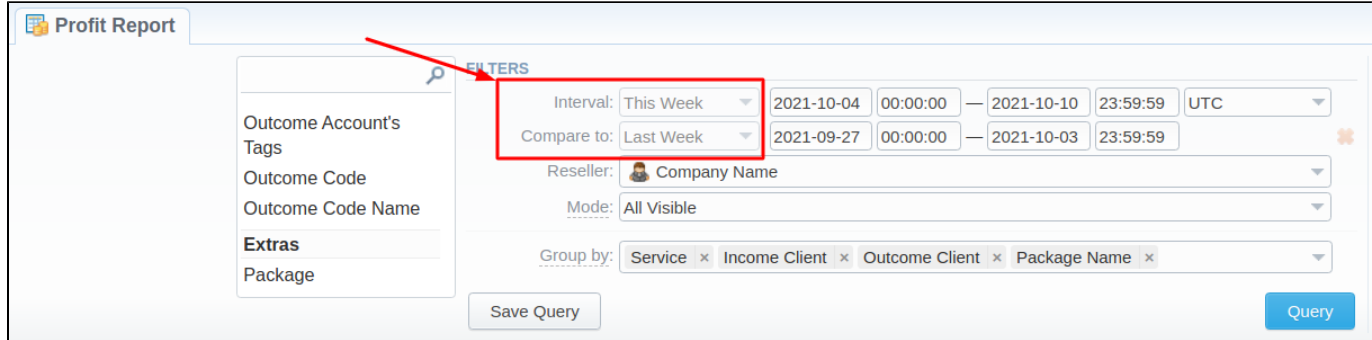
Attention

You can check an **actual date interval** of the report by clicking the **Info**  icon, and it could be different from **the Interval** specified above if there is no data for the period.


Side-by-side report

This tool allows building a report with side-by-side sub-reports. Use it to run a comparative analysis on the same page. It's helpful for reviewing multiple parameters, totals and compare results at different time intervals. The **Compare to** option is designed to create a report that shows two sub-reports side-by-side. To enable this option, click on the plus  icon next to the **Interval** field and specify both intervals for the report.

Screenshot: Profit Report query form

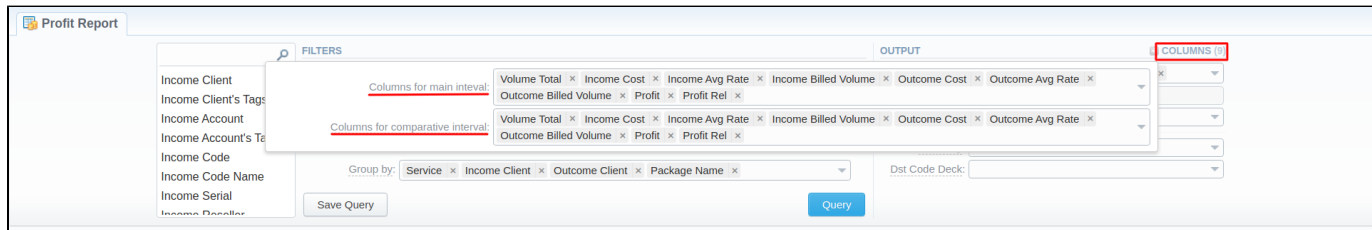


Then choose columns for the main and comparative period in the report Output form. When all required parameters are specified, click the **Query** button.

To remove this filter, please click the delete  icon.

You can modify a comparative mode by changing periods and columns. For example, to compare how different the profit of the two periods is, choose the **Profit** value from the Columns. Therefore, the final report splits **Profit** into separate columns (see screenshot below).

Screenshot: Profit Report query form




Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|---------------|--|
| Data Interval | States the period set for a report |
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |
| Duration | Time spent to generate a report |

Invoicing Report

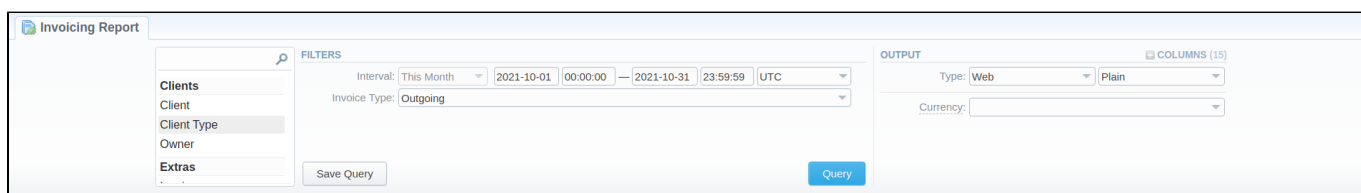
In this article

- [Section overview](#)
- [Creating a New Invoicing Report](#)
- [Invoicing Report buttons: export, chart.](#)
- [Sharing a Report](#)

Section overview


This section allows a user to build a report, based on information from the issued invoices with a possibility to export data (.xls, .xlsx, and .csv). Since the **Invoicing Report** generates statistics according to invoices, if you delete an invoice, the data will be no longer present in the report. The report shows data according to the variables determined in the [Invoices Template](#) section.


Screenshot: Invoicing Report section



Creating a New Invoicing Report

To create a new invoicing report, fill in the following query form:

| Information Block | Field and Description | | | | | | |
|-------------------|--|--|---|--------------|----------------------------------|---------------------|--|
| Filters | <p>On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter.</p> <p>You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters.</p> | | | | | | |
| | <table border="1"> <tr> <td>Interval</td> <td>Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory.</td> </tr> <tr> <td>Owner</td> <td>Define a reseller for the report</td> </tr> <tr> <td>Invoice Type</td> <td>Select the type of invoice from the drop-down list: <ul style="list-style-type: none"> • outgoing • incoming </td> </tr> </table> | Interval | Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory. | Owner | Define a reseller for the report | Invoice Type | Select the type of invoice from the drop-down list: <ul style="list-style-type: none"> • outgoing • incoming |
| | Interval | Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory. | | | | | |
| | Owner | Define a reseller for the report | | | | | |
| | Invoice Type | Select the type of invoice from the drop-down list: <ul style="list-style-type: none"> • outgoing • incoming | | | | | |
| | Additional Filters | | | | | | |
| | The accessible additional filters are: <ul style="list-style-type: none"> • Clients: Client, Client Type. • Extras: Invoice, Payment Account | | | | | | |
| | Client Type | Choose a respective parameter for statistics data: <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop | | | | | |
| Client | Define a client for the report | | | | | | |
| Invoice | Specify the name/number of a target invoice | | | | | | |

| | <p>Payment Account</p> <p>Select from the drop-down list of predefined system payment accounts:</p> <ul style="list-style-type: none"> • Services • Products Fees • Extra Charges Outgoing • Extra Charges Incoming • SureTax • Calling Cards Fees • Accounts Receivable • Accounts Payable • General <p>and all manually created accounts from the Payment Accounts section</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--|----------------------------------|--|---------------|------------------|-------------|--|------------------------|---|-----------------------|--|----------------|------------------|--------------------|--|---------------|---|-------------|--|-------------|---------------------------------------|-------------|---------------------------------------|------------|---|-----------------|---------------------------|---------------------|----------------------------|----------------------|--------------------------|-----------|----------------------|-----------------------|--|-------------|--|----------------|--|-----------------|---|
| <p>Output</p> | <p>This form contains settings of the report output data</p> <p>Click a plus  icon next to Columns and select the required columns to add them to the Output information block. Also, you can cancel any chosen item.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #f2f2f2;">Accessible columns in the report</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;">Client</td> <td>Name of a client</td> </tr> <tr> <td>Date</td> <td>The date when an invoice was generated</td> </tr> <tr> <td>Payment Account</td> <td>Type of a payment account: <ul style="list-style-type: none"> • services • packages </td> </tr> <tr> <td>Invoice Number</td> <td>Number of an invoice, used in the report</td> </tr> <tr> <td>Service</td> <td>Type of services</td> </tr> <tr> <td>Description</td> <td>Details specified in invoice templates, for example, the number of services, country code, code name, package name, etc.</td> </tr> <tr> <td>Volume</td> <td>Volume of the service, for example, the duration of the event</td> </tr> <tr> <td>Unit</td> <td>Unit that was used for rates and packages limits</td> </tr> <tr> <td>Rate</td> <td>Price per 1 rating unit that was used</td> </tr> <tr> <td>Cost</td> <td>Total price of used services/products</td> </tr> <tr> <td>Tax</td> <td>Financial charge for services/products used in an invoice</td> </tr> <tr> <td>Currency</td> <td>Currency used in invoices</td> </tr> <tr> <td>Period Start</td> <td>Start period of an invoice</td> </tr> <tr> <td>Period Finish</td> <td>End period of an invoice</td> </tr> <tr> <td>TZ</td> <td>Timezone of invoices</td> </tr> <tr> <th colspan="2" style="background-color: #f2f2f2;">Other output settings</th> </tr> <tr> <td>Type</td> <td>Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx</td> </tr> <tr> <td>Send to</td> <td> <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffff00; padding: 5px; border: 1px solid #ccc;"> <p>⚠ Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> </td> </tr> <tr> <td>Currency</td> <td>Specify an output currency for the report. All values will be automatically converted to the specified currency in the report</td> </tr> </tbody> </table> | Accessible columns in the report | | Client | Name of a client | Date | The date when an invoice was generated | Payment Account | Type of a payment account: <ul style="list-style-type: none"> • services • packages | Invoice Number | Number of an invoice, used in the report | Service | Type of services | Description | Details specified in invoice templates, for example, the number of services, country code, code name, package name, etc. | Volume | Volume of the service, for example, the duration of the event | Unit | Unit that was used for rates and packages limits | Rate | Price per 1 rating unit that was used | Cost | Total price of used services/products | Tax | Financial charge for services/products used in an invoice | Currency | Currency used in invoices | Period Start | Start period of an invoice | Period Finish | End period of an invoice | TZ | Timezone of invoices | Other output settings | | Type | Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx | Send to | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffff00; padding: 5px; border: 1px solid #ccc;"> <p>⚠ Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> | Currency | Specify an output currency for the report. All values will be automatically converted to the specified currency in the report |
| Accessible columns in the report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client | Name of a client | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | The date when an invoice was generated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Payment Account | Type of a payment account: <ul style="list-style-type: none"> • services • packages | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Invoice Number | Number of an invoice, used in the report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Service | Type of services | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Description | Details specified in invoice templates, for example, the number of services, country code, code name, package name, etc. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Volume | Volume of the service, for example, the duration of the event | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit | Unit that was used for rates and packages limits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rate | Price per 1 rating unit that was used | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost | Total price of used services/products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tax | Financial charge for services/products used in an invoice | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Currency | Currency used in invoices | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Period Start | Start period of an invoice | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Period Finish | End period of an invoice | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TZ | Timezone of invoices | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other output settings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Send to | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffff00; padding: 5px; border: 1px solid #ccc;"> <p>⚠ Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Currency | Specify an output currency for the report. All values will be automatically converted to the specified currency in the report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

After selecting all needed parameters, click the **Query** button and the system will generate a report:

Screenshot: Invoicing Report

Invoicing Report

CLIENTS

- Client
- Client Type
- Owner
- Extras

FILTERS

Interval: Custom | 2021-09-29 00:00:00 — 2021-09-30 23:59:59 | UTC

Invoice Type: Outgoing

Save Query

OUTPUT

Type: Web | Plain

Currency:

Export to CSV
Export to XLSX

| Client | Date | Invoice Number | Payment Account | Service | Description | Volume | Unit | Rate | Cost | Tax | Currency | Period Start | Period Finish | TZ |
|------------|------------|---------------------------|-----------------|---------|---|--------|------|--------|------------|--------|----------|--------------|---------------|-----|
| Customer B | 09/29/2021 | invoice-Customer B-100005 | Services | Calls | Quantity: 11429, Code Name: ARUBA, Country Code: , Time Profile: all time | N/A | min | 0.0923 | 1 054.3583 | 0.0000 | USD | 09/15/2021 | 09/29/2021 | UTC |
| Customer B | 09/29/2021 | invoice-Customer B-100005 | Services | Calls | Quantity: 4972, Code Name: AUSTRIA, Country Code: , Time Profile: all time | N/A | min | 0.0245 | 122.9467 | 0.0000 | USD | 09/15/2021 | 09/29/2021 | UTC |
| Customer B | 09/29/2021 | invoice-Customer B-100005 | Services | Calls | Quantity: 14004, Code Name: BELGIUM, Country Code: , Time Profile: all time | N/A | min | 0.0343 | 483.6969 | 0.0000 | USD | 09/15/2021 | 09/29/2021 | UTC |
| Customer B | 09/29/2021 | invoice-Customer B-100005 | Services | Calls | Quantity: 12389, Code Name: USA, Country Code: , Time Profile: all time | N/A | min | 0.0264 | 331.4626 | 0.0000 | USD | 09/15/2021 | 09/29/2021 | UTC |
| Customer C | 09/29/2021 | invoice-Customer C-100006 | Services | Calls | Quantity: 299, Code Name: CHILE, Country Code: , Time Profile: all time | N/A | min | 0.0294 | 8.7534 | 0.0000 | USD | 01/01/2021 | 12/31/2021 | UTC |
| Customer C | 09/29/2021 | invoice-Customer C-100006 | Services | Calls | Quantity: 297, Code Name: DENMARK, Country Code: , Time Profile: all time | N/A | min | 0.0500 | 14.6158 | 0.0000 | USD | 01/01/2021 | 12/31/2021 | UTC |
| Customer C | 09/29/2021 | invoice-Customer C-100006 | Services | Calls | Quantity: 298, Code Name: , Country Code: , Time Profile: all time | N/A | min | 0.4500 | 142.9650 | 0.0000 | USD | 01/01/2021 | 12/31/2021 | UTC |

About | 0.1667%
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Moreover, you can create a template for reports and save specified parameters by clicking the **Save Query** button. Then, fill in the required fields in a pop-up window with settings, and confirm template creation.

Tip

To find more details about templates, please refer to the [Reports Templates](#) article in our **User Guide**.

Invoicing Report buttons: export, chart.

You can export data to a **CSV** or **XLSx** file, which contains only currently displayed data, with no automatic request to update data while exporting.

1. To download a report in **.csv**, click the **Export to CSV** button above the report.
2. To download a **.xlsx** file, click the **Export to XLSx** button above the report.
3. You can check an actual date interval by clicking the **Info** icon. The displayed data could be different from the Interval specified above if there is no data for the period.

Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info** icon, which is located under the **Output** section:

| Title | Description |
|---------------|--|
| Data Interval | States the period set for a report |
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |

LCR Lists

In this article

- [Section overview](#)
- [Creating an LCR Report](#)
- [Export generated report](#)
- [Sharing a Report](#)


Section overview




This section provides a user with a possibility to generate a report with a focus on actual traffic over the specified period. The report allows customizing a display of routes limits, vendors, total records, etc.

Screenshot: *LCR Lists query form*

Creating an LCR Report

To create a new *LCR report*, go to the **Statistics** section and open the **LCR Lists**. Then, you will need to fill out the search form with the next parameters:

| Information Block | Field Description |
|-------------------|--|
| Filters | <p>On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter.</p> <p>You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters.</p> |
| | <p>Interval Specify an interval for the report and a timezone. Please note that the Interval field is mandatory.</p> |
| | <p>Group by Select from the list of the following accessible options to group the data in reports:</p> <ul style="list-style-type: none"> • Code • Code Name <p>This option is intended to simplify the grouping option, the system will automatically group data in specified columns.</p> <div style="background-color: #ffffcc; padding: 10px;"> <p>⚠ Attention</p> <ul style="list-style-type: none"> • Please note, the Group by field is mandatory, it couldn't be empty to generate the report. Grouping by code is a default output. • When you select the grouping by a code name, please be aware that simulation marks will not be shown and an effective date, also the next rate, may not be accurate. This data is taken from one of the codes of the group. </div> |
| | <p>Service Specify a target service (<i>calls, data, SMSs</i>)</p> |
| | <p>Additional Filters</p> <p>There are the following accessible additional filters:</p> <ul style="list-style-type: none"> • Clients: <i>Owner, Client Tags</i> • Events: <i>Code/ Code Name</i> • Extras: <i>Routes Limit</i> |
| Owner | Specify a target reseller |

| | |
|---------------------|---|
| Client Tags | Indicate client tags that will be used for the report |
| Code | Enter the code of a target destination |
| Code Name | Define the code name you would like to be displayed in a report |
| Routes Limit | Indicate the limit of routes that will be shown. To display all possible routes, leave this field empty . |
| Output | <p>This form contains settings of the report output data.</p> <p>Click the plus  icon next to Columns and select the required columns to add them to the Output information block. Also, you can cancel any chosen item.</p> <p>Accessible columns in the report</p> <p>There are the following columns to add to the report:</p> <ul style="list-style-type: none"> • Code • Code Name • Total Volume <p>Other output settings</p> <p>Type Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx. The table view of the report is Plain by default.</p> <p>Send to You can send generated reports via email. For example, it is useful when it takes a lot of time to run the report. Also, it is possible to specify several emails.</p> <div style="background-color: #ffff00; padding: 5px; border: 1px solid #ccc;"> <p> Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> <p>Currency Specify a currency of the report. All values will be automatically converted to the specified currency in the report.</p> <p>Code Deck Select a code deck from a drop-down list. All code decks in the following report will be presented according to the specified code deck. All data will be unified by code names.</p> <div style="background-color: #ffe6e6; padding: 5px; border: 1px solid #ccc;"> <p> Warning</p> <ol style="list-style-type: none"> 1. Please be aware that if you do not specify the code deck, the system will use the code decks assigned to each pulled client or rate table. 2. Code deck must contain code names and codes used for calls. Otherwise, the LCR report would not show results for missing codes and code names in the code deck. </div> <p>Show Vendors checkbox Specify whether you need vendor (terminator) names to be displayed in the report or not.</p> <p>Show Total Calls checkbox Check if you want total calls amount to be shown.</p> |

The LCR report has the following look:

Screenshot: LCR report

The screenshot shows the 'LCR Lists' interface. On the left, there are filter categories: Client Tags, Owner, Events, Dst Code, Dst Code Name, Extras, and Routes Limit. The 'FILTERS' section includes: Interval (Last Week), Date range (2021-09-27 to 2021-10-03), Time (00:00:00 to 23:59:59), and UTC. A warning message states: 'This module is deprecated – please use Rates Analysis 2.0 instead'. The 'OUTPUT' section includes: Order by (Code), Type (Web | Plain), Currency (USD), Dst Code Deck, Show Vendors (checked), and Show Total Records (checked). Below the filters are 'Export to CSV' and 'Export to XLSX' buttons. The main table displays data for Dst Code 1234 (USA) with a Total Volume of 1.6000. The table also shows details for Route #1, including Name, Total Events (3), Vendor C, Volume, min (1.6000), Rate, USD (0.0045), ASR, % (100.00%), and ACD, min (0.53). At the bottom, there is an 'About' button and a timestamp '0.1836s'.

Each route, presented in a report, besides a total number of events and vendors (displayed when respective checkboxes are marked) has the following data specified (see screenshot above):

- **Event volume;**
- **Event rate;**
- **ASR;**
- **ACD.**

Also, you can create a template for reports and save specified parameters by clicking the **Save Query** button. Visit our [Reports Templates](#) article for detailed information.

To query by template, click the Load Query button and the icon .

Export generated report

You can export data to a **CSV** or **XLSx** file, which contains only currently displayed data, with no automatic request to update data while exporting.

1. To download a report in **.csv**, click on the **Export to CSV** button above the report.
2. To download a **.xlsx** report file, click on the **Export to XLSx** button above the report.

Attention

You can check an actual date interval by clicking the **Info** icon. The displayed data could be different from the Interval specified above if there is no data for the period.

Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info** icon, which is located under the **Output** section:

| Title | Description |
|---------------|--|
| Data Interval | States the period set for a report |
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |

xDRs List

In this article

- [Section overview](#)
- [Creating an xDR Report](#)
- [xDR Report export buttons](#)
- [Search by partial Session ID](#)
- [Knowledge Base Articles](#)


Section overview

This section allows you forming detailed statistics on each client with a description of each event. Here you can create a report, based on an existing template or generate a new one. The section consists of a query form similar to those of other reports:

Screenshot: xDRs List query form

Creating an xDR Report


To create a new report, you need to fill in the following parameters in the form and click the **Query** button:

| Information Block | Field Description |
|--|--|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | Interval Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory. |
| | Additional Filters |
| | There are the following accessible additional filters: |
| | <ul style="list-style-type: none"> • Clients: <i>Client Type, Client, Client Tags, Account Tags, Cards Serial, Account, Package.</i> • Events: <i>Dst Code, Dst Code Name, Origin, Result Code, Tags, Gateway.</i> • Extras: <i>Service, Owner, Src Code, Src Code Name, Result Status, Rate, Setup Fee, DST Party ID, SRC Party ID, Session ID, XDR ID, Volume, Cost, Status, Match Clients, Match Codes, Currency.</i> |
| | Client Type Select a client's type for the report (<i>Client, Reseller, Calling Card or Call Shop</i>) |
| | Client Define a client for the report |
| | Client Tags Specify customer's tags |
| | Account Enter a client's account for the report |
| | Account Tags Determine account's tags |
| | Cards Serial Indicate cards serial for the report |
| | Package Enter a package name for the report (can be active or archived Package) |
| | Code Specify a code of a target destination |
| Code Name Specify a code name of a target destination | |

| | |
|----------------------|--|
| Origin | Indicate event origin |
| Result Code | Determine a disconnect code as a filtering parameter |
| Tags | Indicate tags for the report |
| Gateway | Specify a host as a filtering criterion |
| Service Name | Select a type of service (data, call, SMS) for the report |
| Owner | Indicate a reseller |
| Src Code | Specify a code of a source number |
| Src Code Name | Specify a code name of a source number |
| Result Status | Choose a disconnect processing state: <ul style="list-style-type: none"> • Success (code = 16 or 31) • Busy (code = 17) • No channel (code = 34) • Error |
| Rate | Indicate the destination rate |
| Setup Fee | Specify a setup fee of an event |
| DST Party ID | Determine the DST Party ID (destination number or any other identification of destination) that is used for detection of destination and billing (after all translations) |
| SRC Party ID | Determine the SRC Party ID (source number or any other source identification) |
| Session ID | ID of the session received from the gateway |
| xDR ID | xDR ID value |
| Volume | Volume of the service (e.g., call duration) |
| Cost | Enter the range of event cost |
| Status | Processing state (all/processed/in rerating) |
| Match Clients | Choose a respective state: <ul style="list-style-type: none"> • matched clients (identified), • mismatched clients (not identified). |
| Match Codes | Choose a respective state: <ul style="list-style-type: none"> • matched codes, • mismatched codes. |
| Currency | Indicate a respective currency |

Output

This form contains settings of the report output data.

Click the plus  icon next to **Columns** and select the required columns to add them to the Output information block. Also, you can cancel any chosen item.

Accessible columns in the report

There are the following columns to add to the report:

- **Clients:** *Client Type, Clients Tags, Client ID, Client, Account, Account ID, Accounts Tags, CC Series, Owner, Owner ID, Package ID, Package Name.*
- **Events:** *Code, Code Name, Country Name, Currency, Rate, Setup fee, Origin, Result Status, Result Code, Gateway ID, Gateway.*
- **Extras:** *Event time, Client Tags, Accounts Tags, Tags, Volume, Billed Volume, Package Volume, Package Credit, Cost, Taxes, Subscriber IP, Subscriber Name, Switch Code, Start Time, Connect Time, Finish Time, PDD, SCD, Session ID, x ID, Src Party ID, Dst Party ID, SCR Party ID EXT, DST Party ID EXT, SCR Party ID BILL, DST Party ID BILL, xDR Source, xDR ID, Uniq Sign, Custom, Extra Data, Status, Service Name, Unit.*

| Other output settings | |
|-----------------------|--|
| Order by | Select parameters to sort already grouped data in columns. Here you can sort data from highest to lowest values (or vice versa) and select different values. |
| Type | Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx . The Plain type of view is set by default. |
| Send to | You can send generated reports via email. Also, it is possible to specify several emails. <div style="background-color: yellow; padding: 5px; border: 1px solid black;"> <p>⚠ Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> |
| Currency | Specify a currency for the report. All values will be automatically converted to the specified currency in the report. |
| Dst Code Deck | Select a destination code deck from a drop-down list. All codes in the following report will be presented according to the specified code deck. |
| Src Code Deck | Select a source code deck from a drop-down list. All codes in the following report will be presented according to the specified code deck. |

Below you will find an example of a generated xDRs report:

Screenshot: xDRs report

The screenshot shows the 'xDRs List' interface. On the left, there are filter options for Clients, Account, Client Tags, and Account Tags. The main area has a search bar and a 'Save Query' button. On the right, there are 'OUTPUT' settings for Order by (Event Time), Type (Web), Currency (USD), Dst Code Deck, and Src Code Deck. Below these are 'Export to CSV' and 'Export to XLSX' buttons. The main part of the interface is a table with 21 columns: Origin, Event Time, Client Type, Client, Account, Dst Code Name, Dst Code, Volume, Billed Volume, Currency, Cost, Subscriber IP, Subscriber Name, Result Code, Result Status, Status, Service, Unit, Src Party ID, Dst Party ID, and Session ID. The table contains several rows of data representing call events.

Also, you can create a template for reports and save specified parameters by clicking the **Save Query** button. Visit our [Report Queries](#) article for detailed information.

xDR Report export buttons

You can export data to a **CSV** or **XLSx** file, which contains only currently displayed data, with no automatic request to update data while exporting

1. To download a report in **.csv**, click on the **Export to CSV** button above the report.
2. To download a **.xlsx** report file, click on the **Export to XLSx** button above the report.

Search by partial Session ID

✔ How to perform a search by partial Session ID:

For example, the Session ID of a respective call is `1647398901830024226688`. To filter calls by:

- **first digits of the Session ID**, enter digits + asterisk (*): `16*`.
- **middle digits of the Session ID**, enter a search term by this formula: asterisk (*) + digits + asterisk (*): `*7398*`. It will match any Session ID containing the 7398 string, even if it occurs in the middle of a large number.
- **last digits of Session ID**, enter asterisk (*) + digits: `*88`.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Mismatches Report

In this article

- [Section overview](#)
- [Creating a New Mismatches Report](#)
- [Knowledge Base Articles](#)

Section overview

This section allows you finding **unrecognized calls/clients** by the system due to the unavailability of the respective information. Here you can see the general info about unknown clients, unknown destinations, calls stats, the total number of mismatched calls. The section consists of a query form and 3 tables, each representing a specific type of mismatched data:

- **Unknown Clients** - calls with unrecognized clients.
- **Unknown Destinations (Known Clients)** - calls with unrecognized destinations.
- **Unknown Destinations in Resellers (Known Reseller)** - calls with unrecognized destinations or unknown destinations in Resellers.

Screenshot: Mismatches Report section

The screenshot shows the 'Mismatches Report' interface. At the top, there is a query form with the following fields: Interval (Custom), Service (Calls), and a date range from 2021-10-07 00:00:00 to 2021-10-08 23:59:59 in UTC. A 'Query' button is located to the right of the date range.

Below the query form, there are three sections, each with a table and query controls:

- UNKNOWN CLIENTS:** A table with columns 'origination', 'termination', and 'all'. The rows are 'Total', 'Non Zero', and 'Total Volume', all showing values of 0. To the right are dropdowns for Type (all), Duration (non zero), and Output (Web), with a 'Query xDR' button.
- UNKNOWN DESTINATIONS (KNOWN CLIENTS):** A table with columns 'origination', 'termination', and 'all'. The rows are 'Total', 'Non Zero', and 'Total Volume', all showing values of 0. To the right are dropdowns for Type (all), Duration (non zero), and Output (Web), with a 'Query xDR' button.
- UNKNOWN DESTINATIONS IN RESELLERS (KNOWN RESELLERS):** A table with columns 'origination', 'termination', and 'all'. The rows are 'Total', 'Non Zero', and 'Total Volume', all showing values of 0. To the right are dropdowns for Type (all), Duration (non zero), and Output (Web), with a 'Query xDR' button.

Creating a New Mismatches Report

To create a report, you need to follow the next steps:

- Filter the data for all tables. To do so, fill in the following fields of the query form and click the **Query** button.

| Fields | Description |
|-----------------|--|
| Interval | Define the period for the mismatches report. You can customize it by selecting a specific time and date or choose predefined options from the list like This Year, Last Month, Yesterday , etc. |
| Service | Choose the desired service from the list (e.g. Calls, SMS , etc.). |

- Once the data has been filtered, you need to fill in the fields to the right of the desired table and click a respective **Query xDR** button to create a report.

| Fields | Description |
|-----------------|--|
| Type | Choose the type of calls for generating the report: all/origination/termination . |
| Duration | Select the continuance of calls: all/non-zero/zero . |
| Output | Indicate the output type: Web/CSV/Excel XLSx/Excel XLS . |

Screenshot: Creating a report

| | | |
|-----------|----------|---|
| Type: | all | ▼ |
| Duration: | non-zero | ▼ |
| Output: | Web | ▼ |

[Query xDR](#)

If you select **Web** in the **Output** field, you'll be forwarded to the **xDRs List** section with detailed information on a selected mismatched data. However, if in the **Output** field you select any file format from the list, a mismatched report of the chosen format will be downloaded to your computer.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

xDRs Rerating

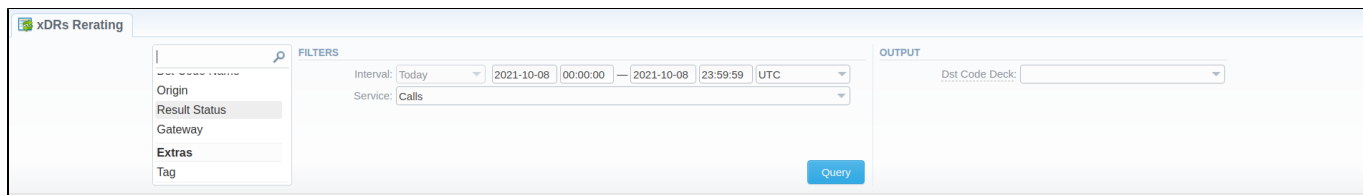
In this article

- [Section overview](#)
- [Performing xDRs Rerating](#)
- [Knowledge Base Articles](#)

Section overview

This section allows rerating calls, SMS, data. It's useful when some changes were applied to the rates, currencies, client accounts, or you need to correct errors with a **Mismatches Report**.


Screenshot: xDRs Rerating section



Performing xDRs Rerating

The whole procedure consists of the following **3 steps**:

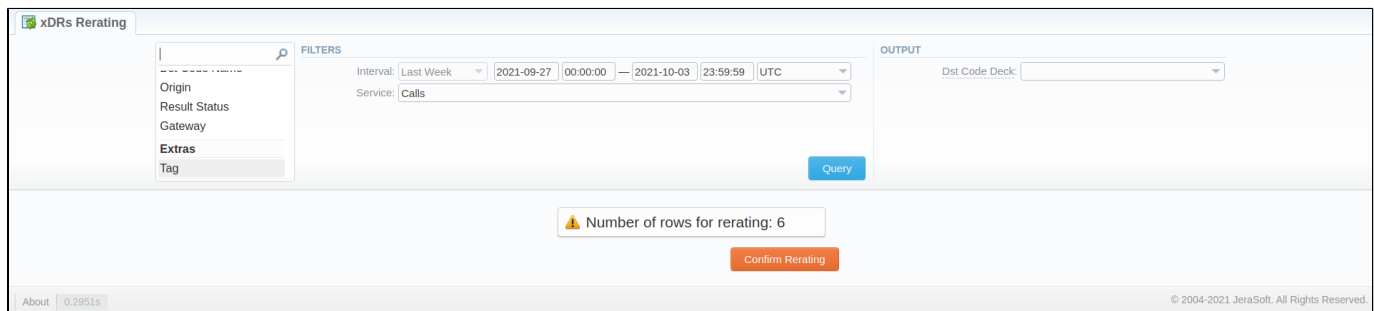
1. Choose filters, specify an interval and respective values in the query form, and click the **Query** button.

| Information Block | Field Description |
|---|---|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete  icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | Interval Specify the time interval for the report and a timezone. Please note that the Interval field is mandatory. |
| | Service Indicate a target type of services from the Services section |
| | Additional Filters |
| | There are the following accessible additional filters: |
| | <ul style="list-style-type: none"> • Clients: <i>Client</i>. • Events: <i>Code, Code Name, Call Origin, Result Status, Gateways</i>. • Extras: <i>Tag, Match Clients, Match Codes, Duration</i>. |
| | Client Define a client for the report. |
| | Code Define a code of a needed destination. |
| | Code Name Enter a code name of a desired destination. |
| | Call Origin Specify a call origin for the report: <ul style="list-style-type: none"> • origination • termination |
| Result Status Indicate the status of the call for the report: <ul style="list-style-type: none"> • success • busy • no channel • error | |

| | |
|----------------------|--|
| Gateway | Define a target gateway. |
| Tag | Specify target tags |
| Match Clients | Indicate a respective type: <ul style="list-style-type: none"> • matched (identified) • mismatched (not identified) |
| Match Codes | Choose an appropriate type: <ul style="list-style-type: none"> • matched • mismatched |
| Duration | Select the continuance of the call: <ul style="list-style-type: none"> • zero • non-zero (i.e., calls that have a duration equal to or more than 1 second). |
| Output | This form contains settings of the output data of the report. |
| Dst Code Deck | Select a respective code deck for the report from the drop-down menu. If you do not select it , code decks assigned to each specified client or rate table will be in use. If you select it , all code names will be rewritten according to the names from the selected code deck. Also, all data will be unified by code names. |

2. Then, you will see a respective notification, and you will need to approve the process by clicking the **Confirm Rerating** button.

Screenshot: xDRs Rerating approval notification



3. Finally, the calls will undergo rerating, and you will need to wait for the system procedure to be completed. You can see the respective number of calls for the rerating on the toolbar at the top of the page.

Screenshot: xDRs in the queue for rerating



You will also receive the following notification: **xDRs have been added to queue now. Please wait while the system processes them.** Then, you need to run the **Calculator** in the **System Services** section.

Warning

The xDRs rerating is a time-requiring procedure. It's not recommended to create a rerating query with large chunks of information (for example, rerating 3 million calls at once).

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty



Report Queries

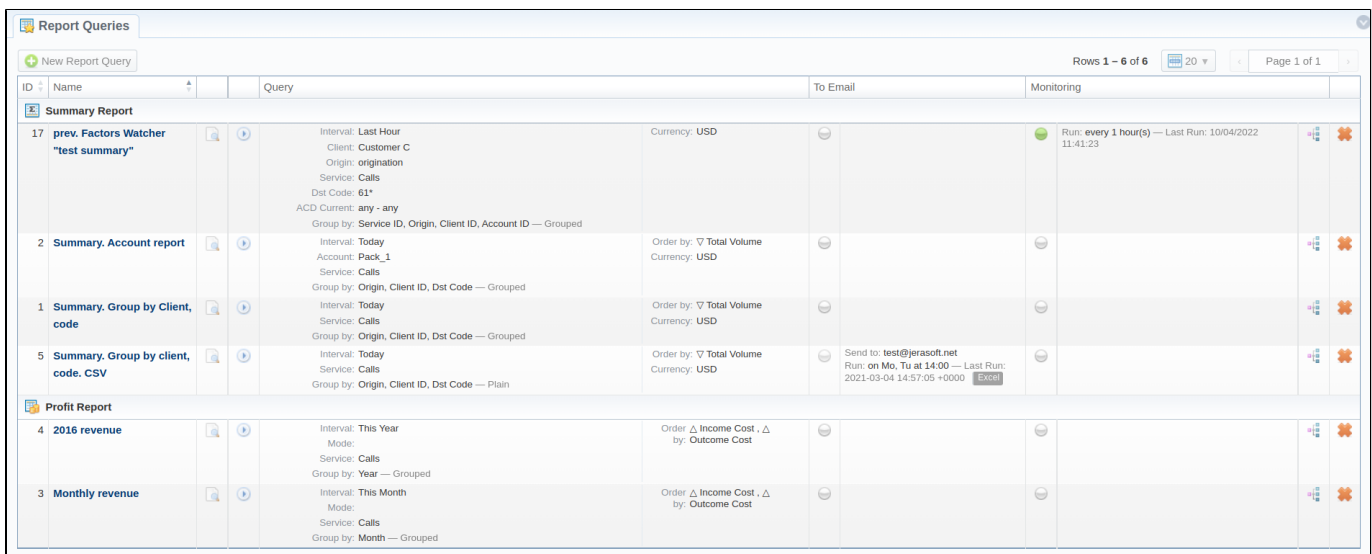
In this article

- [Report Queries List](#)
- [Creating a Report Query](#)
 - [To Email Tab](#)
 - [Monitoring Tab](#)

Report Queries List

This section allows you to view, execute and manage the Report Queries of **Active Sessions**, **Balance Report**, **Customer Dynamics**, **Invoicing Report**, **LCR Lists**, **Orig-Term Report**, **Profit Report**, **Rates Analysis**, **Routing Analysis**, **Summary Report**, and **xDRs List**. Moreover, you can send reports by email to keep yourself informed about the traffic status without the need to log in to the system and query reports. The section structure is as follows:






Screenshot: Report Queries section main window



| Column | Description |
|-------------------|---|
| ID | Query ID |
| Name | Name of the query |
| Query | Query details |
| To Email | Tool to run a report automatically at the exact time and send the results to the list of emails |
| Monitoring | Tool to be used for Traffic Processing and/or notifications per the given schedule |

The section contains the following functional icons:

| Icon | Description |
|------|--|
| | Allows creating a new report query |
| | Allows previewing a query |
| | Allows running a respective report by this query |

| | |
|---|--|
|  | Indicates that sending a report via email/monitoring option is enabled. <div style="border: 1px solid #ccc; padding: 5px; border-radius: 5px;"> You can enable/disable the rule after it's been created in the system by clicking the indication icon.</div> |
|  | Indicates that sending a report via email/monitoring option is disabled. |
|  | Prompts to the Traffic Processing rules created by matching factors in a query |
|  | Allows deleting a query |

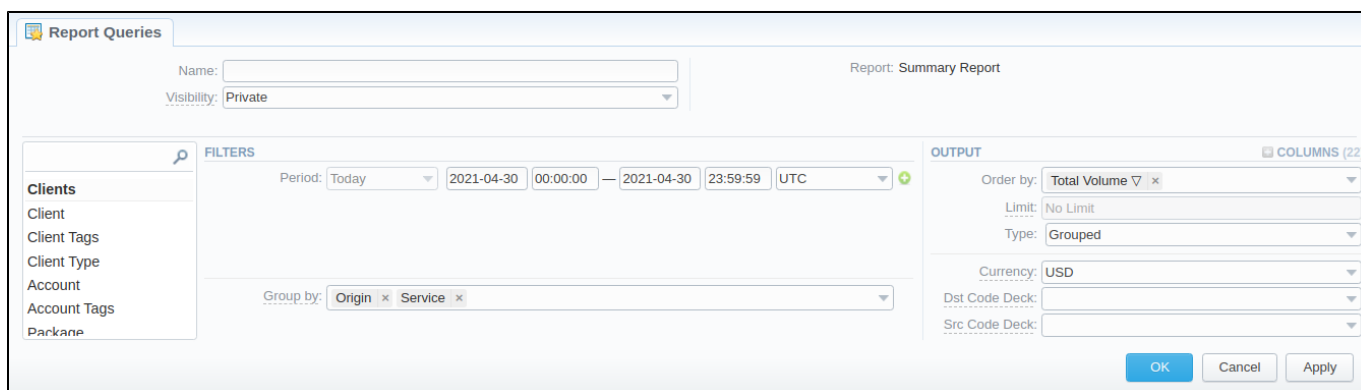
To start managing, choose the respective query from the section and click on the name to open the settings.

Creating a Report Query

You can create a report query either using a **New Report Query** button in the main section or from the respective sections while generating reports. If you are adding a new query from the report section, you need to:

1. open the target report section;
2. fill in a query form with respective parameters;
3. click the **Save Query** button;
4. in a pop-up window with template settings, fill in all required fields (screenshot and field description is provided down below);
5. click **Apply** to save a template.

Screenshot: New Query form



| Information Block | Description |
|-------------------------|--|
| Name | Specify the name of the template |
| Visibility | It allows controlling the visibility of respective reports templates whether you want to keep templates private or leave them visible for other users: <ul style="list-style-type: none"> • Public - available for all users of the same Reseller; • Private - accessible strictly for the creator. |
| Report | Here, a report type will be prefilled. |
| Filters / Output | Here you need to specify filters that will be used for generating a correct report and choose the output type to view the report |

To Email Tab

After creating the Query, you can manage whether to allow generating reports at the specific times and send results to specified emails. For this, open the needed **Report Query**, and click the **To Email** tab:

Screenshot: To Email tab

Query
To Email

GENERAL

Status: Enabled

Output Type: CSV

RECIPIENTS

Users: admin

Extra Emails:

SCHEDULING

Type: Fixed

Timezone: UTC

+ Add Time

| Time | Days of the Week | |
|-------|------------------|--|
| 06:00 | Daily | |

Last Run: Not run yet

OK
Cancel
Apply

| Information Block | Description | |
|-------------------|--|---|
| General | Status | Specify if this function is on: <ul style="list-style-type: none"> Enabled Disabled |
| | Output Type | Specify a file type to be sent: <ul style="list-style-type: none"> CSV Excel |
| Recipients | Users | Define system Users to send a Query to (can be empty if the <i>Extra Emails</i> field is filled in) |
| | Extra Emails | Specify the needed extra email addresses (can be empty if the <i>Users</i> field is filled in) |
| Scheduling | Type | Report generation scheduling approach: <ul style="list-style-type: none"> fixed (run at specific times/days); periodic (run at certain intervals). |
| | Fixed | |
| | Timezone | Indicate a timezone for a selected report run time |
| | Add Time button | <ul style="list-style-type: none"> Time - specify the time; Days of the Week - specify the needed frequency (Daily, Weekdays, Weekends, Custom); Specific days - becomes active if Custom is selected as a Days of the Week parameter. Specify exact days here. <div style="border: 1px solid #c6e0b4; padding: 10px; margin-top: 10px;"> <p>✔ Tip</p> <p>If you want to receive reports for a previous month every 1st day of the next month, you will need to:</p> <ul style="list-style-type: none"> set Last Month as an Interval in the Query set First Run in the To Email as the first day of the month <p>The report will be queried for the previous interval and be sent to the respective email/-s on the first day of each month.</p> </div> |
| | Last Run | Indicates when the report was last run by the system |
| Periodic | | |
| Every | Determine an appropriate interval to generate a report automatically, it could be in minutes , hours , days , weeks , months , or years . <div style="border: 1px solid #c6e0b4; padding: 10px; margin-top: 10px;"> <p>i Please note that an xDRs List Report Query period for monitoring is <u>limited to 1 week</u>.</p> </div> | |

| | |
|------------------|---|
| First Run | Offset a specific date & time up to a second (incl. a timezone) for the first run of a report |
| Last Run | Indicates when the report was last run by the system |

Warning




If you create the report query and the **To Email** option is enabled, the client will receive the file with a report even when there are no statistics for a specified period.

Monitoring Tab

After creating the Query, you can manage whether to monitor statistics and generate alerts, as well as block numbers, codes/code names, destinations, clients, or accounts if set conditions are met. For this, open the needed **Report Query**, and click the **Monitoring** tab:

Screenshot: Monitoring tab

| Information Block | Description | |
|-------------------|-----------------|--|
| General | Status | Specify if this function is on: <ul style="list-style-type: none"> • Enabled • Disabled |
| | Schedule | Query execution scheduling approach: <ul style="list-style-type: none"> • fixed (run at specific times/days); • periodic (run at certain intervals). |
| | | Fixed |
| | Timezone | Indicate a timezone for a selected query run time |

| | |
|---------------------------|---|
| | <p>Add Time but ton</p> <ul style="list-style-type: none"> • Time - specify the time; • Days of the Week - specify the needed frequency (Daily, Weekdays, Weekends, Custom); • Specific days - becomes active if Custom is selected as a Days of the Week parameter. Specify exact days here. <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> Tip</p> <p>If you want to receive reports for a previous month every 1st day of the next month, you will need to:</p> <ul style="list-style-type: none"> • set Last Month as an Interval in the Query • set First Run in the To Email as the first day of the month <p>The report will be queried for the previous interval and be sent to the respective email/-s on the first day of each month.</p> </div> |
| | <p>Last Run Indicates when the report was last run by the system</p> |
| | <p>Periodic</p> |
| | <p>Every Determine an appropriate interval to generate a report automatically, it could be in minutes, hours, days, weeks, or years.</p> |
| | <p>Next Run Offset a specific date & time up to a second (incl. a timezone) for the first run of a report</p> |
| | <p>Last Run Indicates when the report was last run by the system</p> |
| Traffic Processing | <p>Match Here you can specify Report fields to build Traffic Processing Rules.</p> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> Tip</p> <p>For example, if you want to block only an Account, you should select "Account ID". Meanwhile, having only "Client ID" will block the whole Client.'</p> </div> |
| | <p>Action What the produced Traffic Processing Rules should do:</p> <ul style="list-style-type: none"> ▪ Block - the Rules should block events matching them; ▪ Add Tags - the Rules should add specific Tags to events matching them. |
| | <p>Expire When the produced Traffic Processing Rules should expire:</p> <ul style="list-style-type: none"> ▪ No Expiry - the Rules shouldn't have an Expiry Date; ▪ After - the Rules should expire after a fixed interval after their creation; ▪ By Payment Terms - the Rules should expire at the end of the current period of Client Payment Terms. <div style="border: 1px solid yellow; padding: 10px; margin-top: 10px;"> <p> Note</p> <p>Expiry by Payment Terms is possible only with matched Client or Account.</p> </div> |
| Notifications | <p>Users Define system Users to send a notification to (can be empty if the <i>Extra Emails</i> field is filled in)</p> |
| | <p>Extra Emails Specify the needed extra email addresses (can be empty if the <i>Users</i> field is filled in)</p> |
| | <p>Client check box In case of blocking a Client or its Account, we can email the client (using Reports Monitoring - External Mail Template) or their owner (using Reports Monitoring - Internal Mail Template). You can also specify the Client's email from their settings in this field:</p> <ul style="list-style-type: none"> ▪ Main Email ▪ NOC Email ▪ Billing Email ▪ Rates Email |

Archive Management

In this article

- [Section overview](#)
- [Active Statistics Packages](#)
- [Archived Statistics Packages](#)
- [Knowledge Base Articles](#)

Section overview

This section represents an archive of the system statistics packages manager. The statistics package is a pack of billing entities, created during a respective day. The section is divided into 2 Information blocks: **Active Statistics Packages** and **Archived Statistics Packages**, presented in a form of tables:

Screenshot: Archive Management section

Archive Management

| ACTIVE STATISTICS PACKAGES | | | | | | | | | | |
|----------------------------|--------|------------|----------------------|-----------|----------|------------|----------------|----------------------------------|---------|--|
| Date | Type | Total xDRs | Volume | Paid xDRs | New xDRs | New Volume | Re-Rating xDRs | Progress | | |
| 2018, May (2) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2018, April (2) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2018, March (2) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2018, February (2) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2017, October (1) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2017, September (1) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2017, July (3) | Data | 22 | 606 614 MB | 22 | 0 | 0 MB | 0 | <div style="width: 100%;"></div> | 100.00% | |
| | Events | 18 | 178 Event | 18 | 0 | 0 Event | 0 | | | |
| | Time | 470 | 474 Min | 462 | 0 | 0 Min | 0 | | | |
| 2017, May (4) | Data | 26 | 362 664 MB | 14 | 0 | 0 MB | 0 | <div style="width: 100%;"></div> | 100.00% | |
| | Events | 82 | 66 783 506 420 Event | 82 | 0 | 0 Event | 0 | | | |
| | Time | 298 | 300 Min | 157 | 0 | 0 Min | 0 | | | |

[Process](#)

| ARCHIVED STATISTICS PACKAGES | | |
|------------------------------|----------|---------|
| Date | Filename | Size |
| 2018, April (14) | | 0.00 Mb |
| 2018, March (48) | | 0.14 Mb |
| 2018, February (33) | | 0.00 Mb |
| 2017, October (129) | | 0.00 Mb |
| 2017, September (204) | | 0.00 Mb |
| 2017, July (12) | | 0.40 Mb |
| 2017, May (537) | | 4.18 Mb |
| 2017, March (412) | | 4.20 Mb |
| 2016, November (42) | | 0.00 Mb |
| 2016, October (132) | | 0.00 Mb |
| 2016, September (108) | | 0.00 Mb |
| 2016, July (8) | | 0.00 Mb |
| 2016, June (28) | | 0.00 Mb |
| 2016, May (2) | | 0.00 Mb |
| 2011, December (4) | | 0.00 Mb |

[Process](#)

You can download these files from the billing server: ep@jerasoft.com-dataarchive

About | © 2018 | © 2004-2018 JeraSoft. All Rights Reserved.

Active Statistics Packages

The **Active Statistics Packages** information block contains information regarding statistics packages that are currently present in the database. All statistics packages are grouped by month. Click on the plus icon to expand all available active packages. Information about packages is presented in the form of a table with the following columns:

Screenshot: Active Statistics Packages

ACTIVE STATISTICS PACKAGES

| Date | Type | Total xDRs | Volume | Paid xDRs | New xDRs | New Volume | Re-Rating xDRs | Progress | | |
|---------------------|--------|------------|----------------------|-----------|----------|------------|----------------|------------------------------------|---------|--|
| 2018, May (3) | Time | 30 870 | 19 371 Min | 0 | 17 640 | 11 070 Min | 0 | <div style="width: 42.86%;"></div> | 42.86% | |
| 5 May, 2018 | | | | | | | | <div style="width: 0%;"></div> | | |
| 4 May, 2018 | Time | 30 870 | 19 371 min | 0 | 17 640 | 11 070 min | 0 | <div style="width: 42.86%;"></div> | 42.86% | |
| 3 May, 2018 | | | | | | | | <div style="width: 0%;"></div> | | |
| 2018, April (2) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2018, March (2) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2018, February (3) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2017, October (1) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2017, September (1) | | | | | | | | <div style="width: 0%;"></div> | | |
| 2017, July (3) | Data | 22 | 606 614 MB | 22 | 0 | 0 MB | 0 | <div style="width: 100%;"></div> | 100.00% | |
| | Events | 18 | 178 Event | 18 | 0 | 0 Event | 0 | | | |
| | Time | 470 | 474 Min | 462 | 0 | 0 Min | 0 | | | |
| 2017, May (4) | Data | 26 | 362 664 MB | 14 | 0 | 0 MB | 0 | <div style="width: 100%;"></div> | 100.00% | |
| | Events | 82 | 66 783 506 420 Event | 82 | 0 | 0 Event | 0 | | | |
| | Time | 298 | 300 Min | 157 | 0 | 0 Min | 0 | | | |

[Process](#)

| Column | Description |
|----------------------|--|
| Date | System package creation date |
| Type | Type of package entity: time/events/data |
| Total xDRs | Total number of processed xDRs (origination/termination) |
| Volume | Total amount of processed events (origination/termination) |
| Paid xDRs | Total number of paid xDRs |
| New xDRs | Total number of xDRs that have not been processed yet |
| New Volume | Volume of events that have not been processed yet |
| Rerating xDRs | Quantity of events queued for rerating |
| Progress | Overall data processing progress |

Functional icons, presented in the information block, are as follows:

| Icon | Description |
|------|--|
| | Updates a selected package to the latest database format (useful after a system update to a new version). All updated packages are marked with the icon. |
| | Shows the status of the package: <ul style="list-style-type: none"> icon indicates that the package is not archived for the respective day (month). icon indicates that the package is archived. |
| | Moves a package to archive and removes from database |
| | Deletes a package from the database without performing balance rollback |
| | Deletes a package from the database with balance rollback |

To update, move or delete a package, you need to mark a respective checkbox and click the **Process** button. The operation itself will be executed after the next run of the **Statistics Manager** tool.

Archived Statistics Packages

The **Archive Statistics Packages** table displays statistics packages that are kept in the archive (the `/opt/jerasoft/vcs-data/archive` folder of your billing server). Click on the plus icon to view detailed information on archived packages.

Screenshot: *Archived Statistics Packages*



| ARCHIVED STATISTICS PACKAGES | | | |
|--|----------|---------|---|
| Date | Filename | Size | |
| <input type="checkbox"/> 2018, April (14) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2018, March (48) | | 0.14 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2018, February (33) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2017, October (129) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2017, September (204) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2017, July (12) | | 0.40 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2017, May (537) | | 4.18 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2017, March (412) | | 4.20 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2016, November (42) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2016, October (132) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2016, September (108) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2016, July (8) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2016, June (28) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2016, May (2) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |
| <input type="checkbox"/> 2011, December (4) | | 0.00 Mb | <input type="checkbox"/> <input type="checkbox"/> |

You can download these files from the billing server:
/opt/jerasoft/vcs-data/archive

[Process](#)

| Column | Description |
|-----------------|--|
| Date | Package archive creation date |
| Filename | Name of the archived file, which contains a system package |
| Size | Size of an archived file |

Information block function buttons include:

| Icon | Description |
|---|---|
|  | Restores a package from the archive to the database |
|  | Removes an archived package from the archive |

To perform a target action, check the respective package and click the **Process** button.

Attention

Moving or rotating the current day statistics package may result in errors! It is strongly recommended not to do any operations to the current day's package.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Tools

This chapter describes how to manage **active calls** and **xDR disputes** of the JeraSoft Billing. For more details, please check the related sections of our Guide:

- [Active Sessions](#)
- [xDR Disputes](#)

Active Sessions

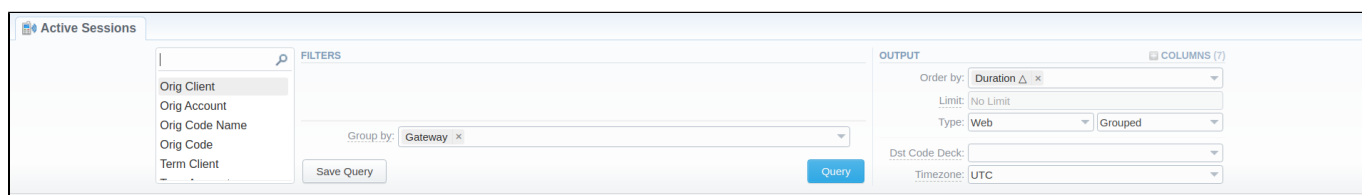
In this article

- [Active Sessions Search Form](#)
- [Creating an active sessions report](#)
- [Query templates](#)
- [Active Sessions buttons: reports, export, chart.](#)
- [Knowledge Base Articles](#)

Active Sessions Search Form

This section provides an easy and convenient active sessions monitoring tool. Upon access, you can see the full list of active sessions that are currently being processed by your switch.

Screenshot: Active Sessions section



If the data is grouped in the report, it will be shown initially collapsed. To expand or collapse data in your report, click the plus or minus icons.

Attention



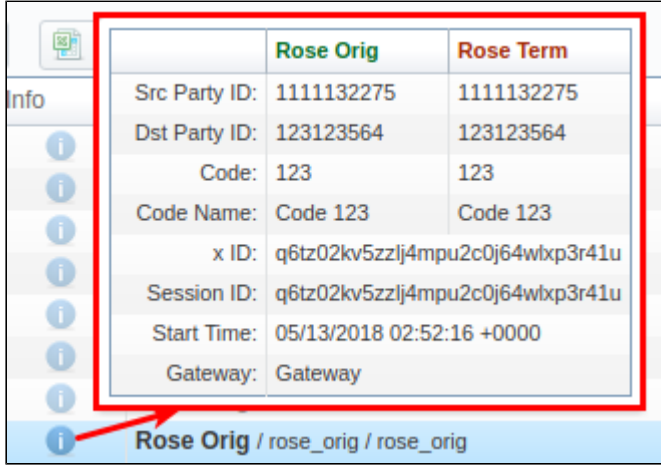
Please note, this function requires **RADIUS Accounting Start packets** to be sent from your Gateway and the **Track Active Events** option enabled in the [Gateways](#) section.

Be advised that the **Track Active Events** option **diminishes system performance**. Please, activate it only if you use capacity control by billing and/or require active sessions status monitoring.

Creating an active sessions report

To create a report, fill in the query form with the parameters specified below, and click the Query button. A screenshot of a generated report is presented above.


| Information Block | Field Description |
|-------------------|--|
| Filters | On the Filters menu, select the required parameters for the report. To cancel any filter, click on the delete icon next to the filter. You can start a quick search by typing filters' names in the field at the top of a drop-down menu with filters. |
| | <p>Group by</p> <p>Select a grouping option. Here you can choose and swap columns, or change their order. There are the following accessible options to group data in the report:</p> <ul style="list-style-type: none"> • Orig Client, Orig Account, Orig Code, Orig Code Name. • Term Client, Term Account, Term Code, Term Code Name. • Gateway. |
| | <p>Additional Filters</p> <p>There are the following accessible additional filters:</p> <ul style="list-style-type: none"> ◦ <i>Orig Client, Orig Account, Orig Code, Orig Code Name.</i> ◦ <i>Term Client, Term Account, Term Code, Term Code Name.</i> |
| | <p>Orig Client</p> <p>Define an origination client for the report</p> |

| | |
|-----------------------|--|
| Orig Account | Enter an origination account for the report |
| Orig Code | Specify an origination code for the report |
| Orig Code Name | Indicate an origination code name |
| Term Client | Define a termination client for the report |
| Term Account | Enter a termination account for the report |
| Term Code | Specify a termination code for the report |
| Term Code Name | Indicate a termination code name |
| Output | <p>This form contains settings of the report output data.</p> <p>Click the plus  icon next to Columns and select the required columns to add them to the Output information block. Also, you can cancel any chosen item.</p> <p>Accessible columns in the report</p> <p>There are the following columns to add in the report:</p> <ul style="list-style-type: none"> • <i>Total, Info, Originator, Terminator, Src Number, Dst Number, Duration.</i> <p>Total Total quantity of sessions in the database.</p> <p>Info By hovering over the Info  icon, additional data about sessions will be displayed (see screenshot below):</p> <ul style="list-style-type: none"> • Src and Dst Party ID • Code and Code Name • x ID • Session ID • Start Time and Gateway <p>Screenshot: <i>Info</i></p>  <p>Originator The name of the originator, orig gateway, account IP, Name or ANI.</p> <p>Terminator The name of the terminator, term gateway, account IP, Name or ANI.</p> <p>Src Party ID The source number.</p> <p>Dst Party ID The destination number.</p> <p>Duration Session duration, specified in seconds.</p> |

| Other output settings | |
|-----------------------|--|
| Order by | Select parameters to sort already grouped data in columns. Here you can sort data from highest to lowest values (or vice versa) and select different values. |
| Type | <p>Choose a format of the report from a drop-down list: Web / CSV / Excel XLS / Excel XLSx</p> <p>Also, select next to the Type field a look of table view:</p> <ul style="list-style-type: none"> • Plain - a simple table view • Grouped - a table view with grouped data and possibility to collapse it <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <p>Please note that the Grouped type of a table view is available only for Excel XLSx and Web formats, it doesn't work with CSV and Excel XLS.</p> </div> |
| Limit | Determine the number of rows that will be visible in the report. It is useful for displaying some top positions by a chosen parameter. It is available only for the Plain type of the report. |
| Send to | <p>You can send generated reports via email. Also, it is possible to specify several emails.</p> <div style="background-color: #ffffcc; padding: 5px;"> <p>⚠ Attention</p> <p>This feature is available only for CSV/Excel XLS/Excel XLSx formats of the report, it doesn't work with Web.</p> </div> |
| Dst Code Deck | Specify a Code Deck to force Code Names for the displayed data. If not specified, Code Decks of the respective Clients /Rate Tables will be used. |
| Timezone | Specify a Timezone for data output. If not selected, the user's Timezone will be used. |

Query templates

Also, you can create a template for reports and save specified parameters by clicking the **Save Query** button in the form. A pop-up window with settings will appear, and you will need to fill in the form. A detailed description of creating a template can be found in the [Report Templates](#) article in our **User Guide**.

To load already existing templates while generating statistic reports, click the **Load Query** button and the  icon opposite a target template on the list.

Active Sessions buttons: reports, export, chart.

You can export data to a **CSV** or **XLSx** file, which contains only currently displayed data, with no automatic request to update data while exporting. Also, it is possible to create charts for illustrating crucial information easily. And you can generate a report using the same criteria in the **Orig-Term Report** and the **xDRs List** sections.

1. To set a reload interval of the report, click the respective **Reload options** button and select needed values in the **Interval** and **Show Last** fields.



Tip

The **Show Last** field defines the period, for which data is generated in a report. For example, if you want to display the data for 1 day, specify it in the **Show last** field.

2. To download a report in **.csv**, click on the **Export to CSV**  button above the report.

Attention

Please note, this button will be visible only when the **Type** of the output is **Plain**. For the **Grouped** output type it is not available.

3. To download an **.xlsx** report file, click the **Export to XLSx**  button above the report.
4. To create a **visual chart**, click the **Show Chart**  button above the report. There is more information available on this topic in the article **How to create a statistic chart?** in our Knowledge Base.

✔ **Tip**

If you want to create a proper **Line chart** for **different clients**, please follow these steps:

- choose the **Orig Client** parameter in the **Group by** field.
- click the **Show Chart** button and open the chart settings.
- select the **Date** and **Time** parameters on the **X Axis**, and the **Calls Total** parameter on the **Y Axis**.
- specify a **line type** of the chart and click on the **Save** button.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

xDR Disputes

In this article

- [Section overview](#)
- [Creating a New Dispute](#)
 - [Step 1. Selecting a File and Specifying All Required Parameters](#)
 - [Step 2. Rows and Columns Select](#)
 - [Step 3. Receiving Results of comparison](#)
- [Mass Edit](#)

Section overview

xDR Disputes Manager is a full-featured add-on of the system that could be used to compare xDRs given by your client/vendor with xDRs stored in the system.

Screenshot: *xDR Disputes List*

| ID | Client / Account | Period | Total Qty | No L | No E | Updated | |
|----|--------------------------|-----------------------------|-----------|------|------|---------------------------|--|
| 4 | Rose orig / all accounts | 05/17/2018 – 05/17/2018 UTC | 3 | 0 | 1 | 05/17/2018 13:30:00 +0000 | |
| 3 | Rose orig / all accounts | 05/17/2018 – 05/17/2018 UTC | 3 | 0 | 1 | 05/17/2018 13:26:43 +0000 | |
| 2 | Rose orig / all accounts | 05/17/2018 – 05/17/2018 UTC | 2 | 0 | 1 | 05/17/2018 13:21:05 +0000 | |
| 1 | Rose orig / all accounts | 05/17/2018 – 05/17/2018 UTC | 3 | 1 | 1 | 05/17/2018 13:17:42 +0000 | |

| Column | Description |
|-----------------------|---|
| ID | ID of a dispute |
| Client/Account | Client and Accounts of a current dispute |
| Interval | Period of compared xDR files and timezone |
| Total Qty | Total amount of compared xDRs |
| No L | Number of xDRs that were not found in the system |
| No E | Number of xDRs that were not found in the external xDR file |
| Updated | Date of the last dispute update |

Functional buttons/icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows adding a new dispute to the system |
| | Allows editing selected disputes |
| | Allows viewing dispute details |
| | Allows deleting a dispute from the system |

Attention

If the **xDRs Disputes** section is not displayed in your JeraSoft Billing, you need to enable it in the **System > Roles** section.

Creating a New Dispute

The whole process can be divided into three steps.

Step 1. Selecting a File and Specifying All Required Parameters

To create a new dispute, click the **Add New Dispute** button. Then, you need to upload a target xDR file and specify the next information in the opened pop-up window:

Screenshot: Adding New Dispute. Step 1

| Field | Description |
|-----------------------------------|--|
| Client | Specify a client for the dispute. If indicated, the Account field is disabled (and vice versa) |
| Account | Specify an account for the dispute |
| Type | Choose the type of compared xDRs: <ul style="list-style-type: none"> • origination • termination |
| Code Name | Specify a code name of the desired destination. If indicated, the Code field is disabled (and vice versa) |
| Code | Specify a code of the desired destination |
| Code Deck | Select a code deck that will be used for a current dispute |
| Select File | Upload the xDR file for comparison |
| Date Format | Specify date format of xDRs <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <p>⚠ Attention</p> <p>Please note that by default date format is set to auto and has the following format: YYYY-MM-DD HH:MM:SS.</p> </div> |
| Interval | Specify a time interval of a dispute |
| Override Timezone checkbox | If enabled, the timezone in the imported file will be replaced with the specified timezone in the Period field |

When you fill in all required fields, click the **Process>>** button.

Warning

xDR Disputes have developed optimization algorithms of the file uploading process. Hence, we strongly recommend uploading files with a limited number of columns. **The dispute file must contain only 6 columns** for correct auto-detection while importing.

Step 2. Rows and Columns Select

The system will recognize the file and display a few first rows of it. Following this, you need to select these mandatory columns: **Src Party ID, Dst Party ID, Volume, Connect Time, Finish Time**. Then, click **Process>>** again (see screenshot below).

Screenshot: Rows and Columns Select window. Step 2

Import

ROWS AND COLUMNS SELECT

| | Connect Time | SRC Party Id | DST Party Id | Volume | Finish Time | Skip |
|---------------------------|---------------------------|--------------|--------------|---------|---------------------------|-------------------------------------|
| Event time | Connect Time | Src Party ID | Dst Party ID | Volume | Finish Time | <input checked="" type="checkbox"/> |
| 05/17/2018 13:07:37 +0000 | 05/17/2018 13:05:59 +0000 | 1111131458 | 1201140538 | 98,0000 | 05/17/2018 13:07:37 +0000 | <input type="checkbox"/> |
| 05/17/2018 13:07:37 +0000 | 05/17/2018 13:05:59 +0000 | 1111131458 | 1201140538 | 98,0000 | 05/17/2018 13:07:37 +0000 | <input type="checkbox"/> |

« Return
Process »

Step 3. Receiving Results of comparison

After you click **Process>>**, the system will execute the comparison of a local xDR and the imported one, and the **Dispute Details** window will be opened. Then, you need to click the **Update** button and specify **Compare Options** in a respective pop-up window. Following this, click the **Refresh** button for the disputes results to be displayed (see screenshots below).

Screenshot: Disputes Details window. Step 3

Dispute Details

Update

COMPARISON OPTIONS

SRC party id:

DST party id:

Connect Time:

Finish Time:

Volume:

Refresh

(A red arrow points from the 'Refresh' button to the 'Update' button in the screenshot)

(The main window displays "No items were found")

| Field | Description |
|---------------------|--|
| Src Party ID | Enter a number of last digits for source number comparison |
| Dst Party ID | Indicate a number of last digits for destination number comparison |
| Connect Time | Specify the possible time offset (in seconds) between the system and external xDRs |
| Finish Time | Define the possible time offset (in seconds) between the system and external xDRs |
| Volume | Specify the possible time offset (in seconds) between the system and external xDRs |

Screenshot: Disputes Details window. Step 3

Dispute Details

Update

Rows 1 - 3 of 3 20 Page 1 of 1


| | SRC Party Id | DST Party Id | Connect Time | Finish Time | Volume | |
|----------|-----------------|--------------|------------------------|------------------------|--------|--|
| L | 1111131458 | 1201140538 | 2018-05-17 13:05:59+00 | 2018-05-17 13:07:37+00 | 98 | |
| E | No matched xDRs | | | | | |
| L | 1111131458 | 1201140538 | 2018-05-17 13:05:59+00 | 2018-05-17 13:07:37+00 | 98 | |
| E | 1111131458 | 1201140538 | 2018-05-17 13:05:59+00 | 2018-05-17 13:07:37+00 | 98 | |
| L | 1111131458 | 1201140538 | 2018-05-17 13:05:59+00 | 2018-05-17 13:07:37+00 | 98 | |
| E | 1111131458 | 1201140538 | 2018-05-17 13:05:59+00 | 2018-05-17 13:07:37+00 | 96 | |

| Icon | Description |
|----------|--|
| E | Red color indicates the mismatched xDRs (external or local, it depends on the marked letter L or E) |

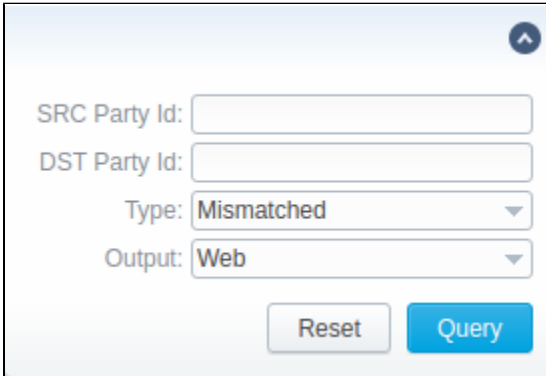
| | |
|----------|--|
| L | Yellow color indicates the matched xDRs with offset (external or local, it depends on the marked letter L or E). For example, the Volume value on a screenshot above for a local xDR is 98 and for external - 96 |
| L | Green color indicates the exactly matched xDRs (external or local, it depends on the marked letter L or E) |

Attention

Please note, if at least one of the xDR's comparison parameters (**Session Time/Connect Time** or **Session Time/Finish Time**) matches the range of values specified in the **Update** option, it will be indicated as exactly matched xDRs (green color).

Click on a blue downward arrow  in the top right corner of the page to use Advanced Search. Note that by default, dispute details are filtered by the **Mismatched** type.

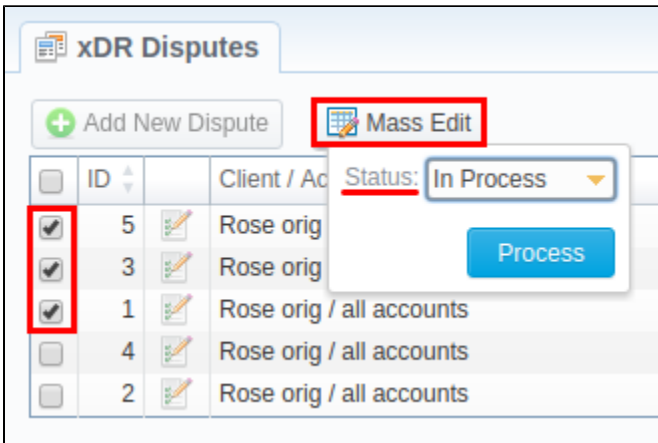
Screenshot: Advanced Search drop-down menu



Mass Edit

You may change the status of selected disputes by using the **Mass Edit** button. Simply select target disputes, click the **Mass Edit** button, choose a status in a respective field and press **Process**. All changes will be applied immediately.

Screenshot: Mass Edit button



| | ID | Client / Ac | Status |
|-------------------------------------|----|--------------------------|------------|
| <input checked="" type="checkbox"/> | 5 | Rose orig | In Process |
| <input checked="" type="checkbox"/> | 3 | Rose orig | |
| <input checked="" type="checkbox"/> | 1 | Rose orig / all accounts | |
| <input type="checkbox"/> | 4 | Rose orig / all accounts | |
| <input type="checkbox"/> | 2 | Rose orig / all accounts | |

Routing

This chapter describes the **routing capabilities of JeraSoft Billing**. Please note that your JeraSoft Billing must include the **Routing Module** to have functional capabilities described below.

Introduction to JeraSoft Billing Routing Module

JeraSoft Billing is able to provide so-called Dynamic Routing features, also often called *External Routing*. Depending on your switch manufacturer, it provides these functions via RADIUS Protocol or SIP Redirect Server. To find out more about possible options of your switch manufacturers, please look through [JeraSoft Billing Integration Manual](#) or contact *JeraSoft Support*.

In JeraSoft Billing, the Dynamic Routing work is based on three principles: *Routing Plans, Routing Policies, and Routing Table generation*. So, there are a few easy steps to set it working:

Step 1: You need to create a so-called [Routing Plan](#) with rules that describe your routing preferences and other criteria;

Step 2: You need to choose the desired [policy](#) for your rules – a special formula to decide, which routes should get top priority (for example, this way you decide whether you want to do LCR or Quality Routing);

Step 3: Assign a created Routing Plan to your origination customer(s). Then, you need to wait until the Routing Table is created.

Please check the sections below to get more information:

- [Routing Plans](#)
- [Routing Analysis](#)
- [Dynamic Routing Policies](#)
- [Dynamic Routing Table](#)

Routing Plans

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding a New Routing Plan](#)
- [Routing Rules tab](#)
- [Import/Export tab](#)
- [Routing Plan](#)
- [Knowledge Base Articles](#)

Section overview

The **Routing Plans** section is available if your JeraSoft Billing includes the **Routing Module**. To access the *Routing Plans* section, please log in to your system and go to **Routing > Routing Plans**.

This section allows managing your routing rules for customers, providers, and destinations. Each routing plan should be assigned to a respective customer (originator) for the proper work of the routing process.

You can combine both routing rules (**dynamic** and **static**) while creating a routing plan, also assign separate rules to each destination. Here you can find a list of created routing plans.

Screenshot: Routing Plans section

| ID | Name | Reseller | Code Deck | Rules Hunting | DR Order | Rules |
|----|----------------------|-----------|-----------|---------------|------------------|-------|
| 7 | AZ General | Company A | DEFAULT | longest only | by code / appeal | 1 |
| 8 | AZ Premium | Company A | DEFAULT | longest only | by code / appeal | 1 |
| 6 | DR: DID + Simple LCR | Company A | — | longest only | by code / appeal | 2 |
| 3 | DR: Proportional | Company A | — | longest only | by code / appeal | 1 |
| 2 | DR: Simple LCR | Company A | — | longest only | by code / appeal | 1 |
| 1 | DR: Simple Quality | Company A | — | longest only | by code / appeal | 1 |

| Column | Description |
|----------------------|--|
| ID | ID number of a routing plan |
| Name | Name of a routing plan |
| Reseller | Name of a reseller a corresponding routing plan has been assigned to as an owner |
| Code Deck | Name of code deck that has been applied to a corresponding routing plan |
| Rules Hunting | A respective hunting rule that has been applied to a routing plan |
| DR Order | A name of dynamic routing order that has been selected to organize routing rules |
| Rules | A number of rules specified in a respective routing plan |

Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new routing plan |
| | Allows to copy an existing routing plan to the section |
| | Allows deleting a routing plan from the system |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow icon, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu

The screenshot shows a search filter window with the following fields and values:

- Reseller: all resellers
- Allowed for: all resellers
- Code Deck: (empty)
- Tags: (empty)
- Additional DR plan: (empty)
- TERM Client: (empty)

Buttons: Reset, Search

| Field | Description |
|---------------------------|--|
| Reseller | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |
| Allowed for | Select from the list of all Resellers, Sub-resellers, and Managers that are assigned to a routing plan in the Origination Limit field |
| Code Deck | Select from the list of all Code Decks in the system |
| Tags | Specify a certain Tag that was added to a routing plan |
| Additional DR Plan | Select a routing plan that was assigned as an additional in the Additional Routing Plan field |
| TERM Client | Specify a termination client that was assigned to any routing plan rule |

To apply the specified search criteria, click the **Search** button; to cancel the applied parameters, click the **Reset** button.

Adding a New Routing Plan

To create a new routing plan, click the **New Routing Plan** button, and fill in the following fields in the pop-up window.

Screenshot: Routing Plans window

The screenshot shows the 'Routing Plans' window with two main sections:

- GENERAL INFORMATION**
 - Name: (empty)
 - Reseller: (empty)
 - Additional Routing Plan: (empty)
 - Code Deck: (empty)
 - Origination Limit: (empty)
 - Termination Limit: (empty)
 - Routing loop protection
- RULES PROCESSING**
 - Rules Hunting: longest only
 - DR Order: by code / appeal
 - Match Increments: disabled
 - PM: 0 [USD / %]
 - Vendor Limit: (empty)

Buttons: OK, Cancel, Apply

| Information Block | Fields Description |
|---------------------|----------------------------------|
| General Information | General routing plan information |

| | <table border="1"> <tr> <td>Name</td> <td>Title of a routing plan</td> </tr> <tr> <td>Reseller</td> <td>Define the reseller/owner of a current routing plan</td> </tr> <tr> <td>Additional Routing Plan</td> <td>Specify a DR plan, which will be additional for a current plan</td> </tr> <tr> <td>Code Deck</td> <td>Select a Code Deck if you wish to have names of your code to be specified in the Code Name field</td> </tr> <tr> <td>Origination Limits</td> <td>Define the company or companies, which will have access to this routing plan (also this restriction will be extended to their sub-companies). If there is no specified company, the following routing plan is available for all companies.</td> </tr> <tr> <td>Termination Limits</td> <td>Select the company or companies, which will have a limit in termination for vendors who use it (sub-companies are not included)</td> </tr> <tr> <td>Rooting Loop Protection checkbox</td> <td>Excludes originating client from the list of terminators. If it is unchecked, it will be possible to route calls between different accounts of the same client. It is enabled by default.</td> </tr> </table> | Name | Title of a routing plan | Reseller | Define the reseller/owner of a current routing plan | Additional Routing Plan | Specify a DR plan, which will be additional for a current plan | Code Deck | Select a Code Deck if you wish to have names of your code to be specified in the Code Name field | Origination Limits | Define the company or companies, which will have access to this routing plan (also this restriction will be extended to their sub-companies). If there is no specified company, the following routing plan is available for all companies. | Termination Limits | Select the company or companies, which will have a limit in termination for vendors who use it (sub-companies are not included) | Rooting Loop Protection checkbox | Excludes originating client from the list of terminators. If it is unchecked, it will be possible to route calls between different accounts of the same client. It is enabled by default. | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---------------|-------------------------|-----------------|--|--------------------------------|--|------------------|---|---------------------------|---|---------------------------|---|---|---|----|-------------|----|---|----|---|----|--------------|----|---|---|---|----|--------------|---|---|----|---|------|------------------------------|---|---|---|---|------|--|
| Name | Title of a routing plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reseller | Define the reseller/owner of a current routing plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Additional Routing Plan | Specify a DR plan, which will be additional for a current plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code Deck | Select a Code Deck if you wish to have names of your code to be specified in the Code Name field | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Origination Limits | Define the company or companies, which will have access to this routing plan (also this restriction will be extended to their sub-companies). If there is no specified company, the following routing plan is available for all companies. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Termination Limits | Select the company or companies, which will have a limit in termination for vendors who use it (sub-companies are not included) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rooting Loop Protection checkbox | Excludes originating client from the list of terminators. If it is unchecked, it will be possible to route calls between different accounts of the same client. It is enabled by default. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rules Processing | Options of rules processing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rules Hunting Select a hunting mode (the way how rules will be executed). They are as follows: <ul style="list-style-type: none"> • longest only – routing will find only the longest matching code • all matching – all possible matches will be found, including even the shortest codes By default, the longest only option is set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DR Order Specify a method of routes sorting in a routing table. The options are: <ul style="list-style-type: none"> • by appeal/code – routes will be sorted according to their resulting appeal value and then grouped by codes • by code/appeal – routes will be grouped by codes and then sorted by appeal value By default, the by code/appeal option is set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Match Increments Define if the system should check whether Customers' increments proportionally overlap Vendors' increments: <ul style="list-style-type: none"> • disabled - selected by default • dynamic only - will exclude vendors with increments that do not match customers' rates from the routing list for dynamic rules. • dynamic and static - will exclude vendors with increments that do not match customers' rates from the routing list for dynamic and static rules. <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> Sample Scenarios</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Customer Rate</th> <th colspan="2">Vendor Rate</th> <th rowspan="2">Result</th> <th rowspan="2">Notes</th> </tr> <tr> <th>Min Time</th> <th>Pay Internal</th> <th>Min Time</th> <th>Pay Interval</th> </tr> </thead> <tbody> <tr> <td>60</td> <td>60</td> <td>60</td> <td>60</td> <td>OK</td> <td>Exact match</td> </tr> <tr> <td>30</td> <td>6</td> <td>30</td> <td>1</td> <td>OK</td> <td>Full overlap</td> </tr> <tr> <td>30</td> <td>6</td> <td>6</td> <td>6</td> <td>OK</td> <td>Full overlap</td> </tr> <tr> <td>1</td> <td>1</td> <td>30</td> <td>6</td> <td>FAIL</td> <td>Vendor Increments are higher</td> </tr> <tr> <td>7</td> <td>7</td> <td>6</td> <td>6</td> <td>FAIL</td> <td>Even though Customers increments are higher, with call duration of 7 seconds this case will lead to 7 seconds billed on customer and 12 seconds billed on vendor</td> </tr> </tbody> </table> </div> | Customer Rate | | Vendor Rate | | Result | Notes | Min Time | Pay Internal | Min Time | Pay Interval | 60 | 60 | 60 | 60 | OK | Exact match | 30 | 6 | 30 | 1 | OK | Full overlap | 30 | 6 | 6 | 6 | OK | Full overlap | 1 | 1 | 30 | 6 | FAIL | Vendor Increments are higher | 7 | 7 | 6 | 6 | FAIL | Even though Customers increments are higher, with call duration of 7 seconds this case will lead to 7 seconds billed on customer and 12 seconds billed on vendor |
| | Customer Rate | | Vendor Rate | | Result | | | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Min Time | Pay Internal | Min Time | Pay Interval | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 60 | 60 | 60 | OK | Exact match | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 6 | 30 | 1 | OK | Full overlap | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 6 | 6 | 6 | OK | Full overlap | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 | 30 | 6 | FAIL | Vendor Increments are higher | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 7 | 6 | 6 | FAIL | Even though Customers increments are higher, with call duration of 7 seconds this case will lead to 7 seconds billed on customer and 12 seconds billed on vendor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PM Define a Profit Margin value for a current rule here. It can be specified either as a percent value (e.g., 16%), or in a system currency (e.g., 5 for 5 USD). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vendor Limit Determine the number of allowed routes for the same vendor to use (if a vendor has multiple accounts). You can set the limit only for accepted account routes , not including the accounts blocked by the term groups. If the field is left empty, the number is unlimited. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Attention

Please note that the **Origination Limit** and **Termination Limit** fields are visible only during:

- new routing plan creation;
- editing of already created routing plan if a specified **Reseller** of this routing plan has **at least one sub-reseller or manager**.





Routing Rules tab

Once a routing plan has been created, routing rules are to be determined (see screenshot below). To do that, click on a routing plan's name and you will enter **Routing Rules** tab, then, click the **Add rule** button and fill in the following fields:

Screenshot: *Routing Rules tab*

| Priority | Code | Code Name | Type | Terminator / Policy | PM | Params | Capacity | Stop Hunt |
|----------|------|-----------|---------|---------------------|-------|--------------|----------|-----------|
| 1 | * | | Dynamic | Proportional | 0.01% | TP: all time | | |

| Field | Description |
|---------------------------|--|
| Priority | Define a priority of rule execution if two or more rules have similar code or code name specified |
| Code | Enter a code, which will be used in a current routing rule, use * as a wildcard. |
| Code Name | If you have a code deck assigned to this routing plan, a corresponding code name, specified in the Code field, will be displayed automatically. If |
| Type | <p>Select a type of routing for a current rule:</p> <ul style="list-style-type: none"> • Static Client - if selected, in the Terminator/Policy field you can specify a certain termination client • Static Account - if selected, in the Terminator/Policy field you can specify a certain termination account of a client • Dynamic - if selected, in the Terminator/Policy field you can specify a certain dynamic policy for the rule • DID - if selected, the Terminator/Policy and Code fields become inactive |
| Terminator /Policy | If you selected static type, you may specify a termination client/account here; if you selected dynamic type, specify routing policy for the current r |
| PM | <p>Define a <i>Profit Margin</i> value for a current rule here.</p> <div style="background-color: yellow; padding: 5px;"> <p>Attention</p> <p>If the PM field has been specified both for the entire routing plan and for a certain rule, the latter has a higher priority.</p> </div> |
| Params | <p>A number of additional parameters available by clicking the icon (see screenshot below)</p> <p>You can specify respective originator tags here. If nothing is specified, it works for all.</p> <ul style="list-style-type: none"> • O • r • i • g • i • n • a • t • o • r • T • a • gs <ul style="list-style-type: none"> • all - applies for originators if all specified tags are present. • any - applies for originators if at least one of the specified tags is presented. |

| <ul style="list-style-type: none"> • T e r m i n a t o r T a g s | <p>Here you can add terminator tags that will be used for terminators. If nothing is indicated, it works only for terminators without tags. Ple</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|-----------|---------------|-----------|------|---|------|--------|---------------|---|------|--------|---------------|---|------|--------|---------------|---|-----|---------|---------------|---|-----|---------|---------------|---|-----|---------|---------------|
| <ul style="list-style-type: none"> • T i m e P r o f i l e | <p>Specify a time profile from the list</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> • E x p i r a t i o n D a t e | <p>Here you can determine if a Rule will expire or not. If a date/time is specified here, the respective Rule will stop working after said times If empty, the said Rule will work indefinitely.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> If the Expiration Date will be set for the past, it will be highlighted in red to draw attention that it's not in use. With the next run o</p> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> • B a l a n c i n g | <p>Define the percentage or proportion amount of traffic, which will be sent to a respective vendor who participates in balancing</p> <div style="border: 1px solid #ffc107; padding: 5px; margin-top: 10px;"> <p> Attention Please note that after changing <i>balancing value</i>, you will need to restart the Traffic Rules manager or wait till its next run.</p> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Among the rules of the same priority, balancing will not be performed if the value is 100 or more in the Balancing field.</p> </div> <div style="border: 1px solid #28a745; padding: 5px; margin-top: 10px;"> <p> Useful tip To balance routes equally among, say, three vendors, you can set Balancing to 33/33/33 for them OR 1/1/1 OR 99/99/99, etc.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 10%;">Priority</th> <th style="width: 15%;">Code</th> <th style="width: 55%;">Code Name</th> <th style="width: 20%;">Type</th> </tr> </thead> <tbody> <tr> <td style="border: 2px solid red;">1</td> <td style="border: 2px solid red;">1907</td> <td>ALASKA</td> <td>Static Client</td> </tr> <tr> <td style="border: 2px solid red;">1</td> <td style="border: 2px solid red;">1907</td> <td>ALASKA</td> <td>Static Client</td> </tr> <tr> <td style="border: 2px solid red;">1</td> <td style="border: 2px solid red;">1907</td> <td>ALASKA</td> <td>Static Client</td> </tr> <tr> <td style="border: 2px solid red;">1</td> <td style="border: 2px solid red;">212</td> <td>MOROCCO</td> <td>Static Client</td> </tr> <tr> <td style="border: 2px solid red;">1</td> <td style="border: 2px solid red;">212</td> <td>MOROCCO</td> <td>Static Client</td> </tr> <tr> <td style="border: 2px solid red;">1</td> <td style="border: 2px solid red;">212</td> <td>MOROCCO</td> <td>Static Client</td> </tr> </tbody> </table> </div> | Priority | Code | Code Name | Type | 1 | 1907 | ALASKA | Static Client | 1 | 1907 | ALASKA | Static Client | 1 | 1907 | ALASKA | Static Client | 1 | 212 | MOROCCO | Static Client | 1 | 212 | MOROCCO | Static Client | 1 | 212 | MOROCCO | Static Client |
| Priority | Code | Code Name | Type | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1907 | ALASKA | Static Client | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1907 | ALASKA | Static Client | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1907 | ALASKA | Static Client | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 212 | MOROCCO | Static Client | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 212 | MOROCCO | Static Client | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 212 | MOROCCO | Static Client | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|--|--|
| <ul style="list-style-type: none"> • N u m b e r L e n g t h | Set minimum and maximum length of destination number that will be matched by this routing rule |
| <ul style="list-style-type: none"> • M i n A S R | Specify minimum ASR (successful records percentage) value to reject the routes that don't correspond to it |
| <ul style="list-style-type: none"> • M i n A C D | Specify minimum ACD (in Service units) value to reject the routes that don't correspond to it |
| Capaci ty | Limit capacity for the current rule (leave blank for unlimited) |
| Stop Hunt checkb ox | If this field is checked, this means that rule search will be stopped when matched with the current one and all the consecutive rules will not be ex |

Screenshot: Routing rules settings

The screenshot displays the 'Routing Rules' configuration page. At the top, there are tabs for 'Routing Rules', 'Import / Export', and 'Routing Plan'. The current view is 'DR: Simple LCR'. Below the tabs is a table with the following columns: Priority, Code, Code Name, Type, Terminator / Policy, PM, Params, Capacity, and Stop Hunt. A single row is shown with the following values: Priority: 1, Code: *, Type: Dynamic, Terminator / Policy: Simple LCR, PM: (empty), Params: TP: all time, Capacity: (empty), Stop Hunt: (empty). A context menu is open over the row, showing the following fields: Originator Tags: Any, Terminator Tags: Any, Time Profile: all time, Expiration Date: (empty), Balancing: 100%, Min ASR: (empty), Number Length: (empty) - (empty), and Min ACD: (empty).

Import/Export tab

The Import/Export tab allows a user to either upload desired routing rules (choose a file on a computer through a form and click **Process**), or download current routing plan rules in a .csv file by clicking the **Process** button (see screenshot).

Screenshot: Import/Export tab

Routing Rules **Import / Export** Routing Plan DR: Complex LCR

IMPORT ROUTING RULES
 Select CSV file to import rules (please refer to VCS Users Guide for correct import column order). All current rules will be removed.

Select file: No file chosen

EXPORT ROUTING RULES
 Export rules to CSV file. After export you can use external editor to edit the file.

Please pay attention that the column order in importing file must correspond to the one presented in the screenshot below.

Screenshot: Importing file format

| Code | Code name | Priority | Type | Client | Account | Policy | PM | Time Profile | Number length min | Number length max | Balancing | Originator Tags | Terminator Tags | Capacity | Stop Hunt |
|-------|-----------|----------|---------|-------------------|---------|----------------|----|--------------|-------------------|-------------------|-----------|---------------------|-------------------|----------|-----------|
| 1268* | | 1 | Static | Vendor Figaro | | | | all time | | | 100 | | | | |
| 7 | | 1 | Dynamic | | | Simple LCR | | all time | | | 100 | | | | |
| 1758* | | 1 | Static | Vendor Lotos | | | | all time | | | 100 | | | | |
| 1 | | 1 | Static | Vendor Figaro | | | 5% | all time | | 15 | 70 | | | | |
| 1 | | 1 | Static | Vendor Lotos | | | | all time | | | 30 | | | | |
| 1 | | 2 | Dynamic | | | Simple Quality | | all time | | | 100 | origination group 1 | Termination group | | |
| * | | 2 | Dynamic | | | Simple LCR | | all time | | | 100 | | | | |
| 2 | | 1 | Static | Vendor Figaro | | | | all time | | | 50 | origination group 2 | | | |
| 3 | | 1 | Static | Vendor Profit | | | | all time | | | 100 | | | | |
| 4 | | 1 | Static | Vega_DID_provider | | | | all time | | | 100 | | | | |

Attention

After all information has been entered and rules created, you need to go to **Management > Clients/Accounts** sections and assign this routing plan to one or more of your origination clients or client's accounts.

Routing Plan

If you wish to change your routing plan settings, you can always do so by going to the Routing Plan tab. The list of fields in a tab is identical to that on a routing plan creation page (see screenshot below).

Screenshot: Routing Plan tab

Routing Rules Import / Export **Routing Plan** AZ General

GENERAL INFORMATION

Name: AZ General
 Reseller: Company A
 Additional Routing Plan:
 Code Deck: DEFAULT
 Origination Limit:
 Termination Limit:
 Routing loop protection

RULES PROCESSING

Rules Hunting: longest only
 DR Order: by code / appeal
 Match Increments: disabled
 PM: 0 [USD / %]
 Vendor Limit:

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Routing Analysis

In this article

- [Section overview](#)
- [Creating a Routing Analysis Report:](#)
- [Export a generated report](#)
- [Sharing a Report](#)

Section overview

This section represents a **route analyzer tool** that allows to manage dynamical routes and simulate different routing models without hurting live voice traffic. It should be noted that this tool can be used only in case you are using the **Dynamic Routing feature**.

The **Routing Analysis** section represents a query form with the following parameters:


Screenshot: *Routing Analysis form*




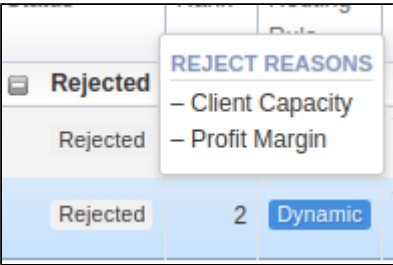


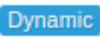
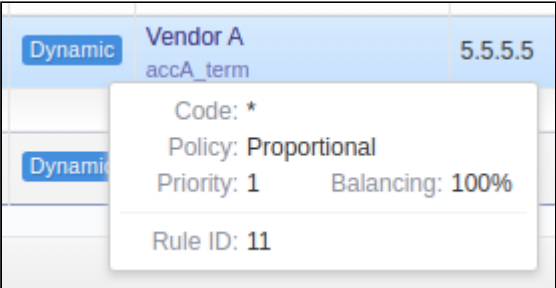


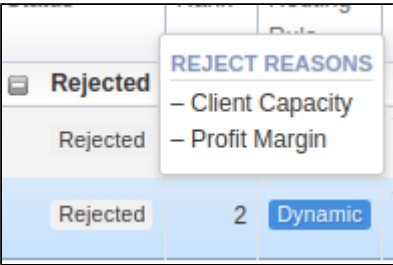


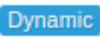
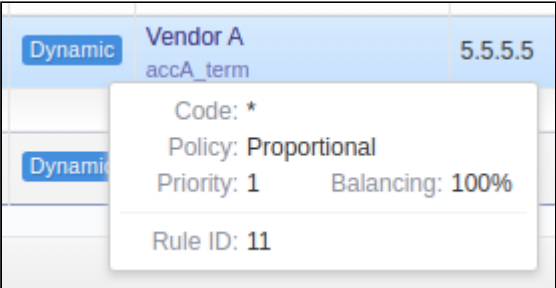


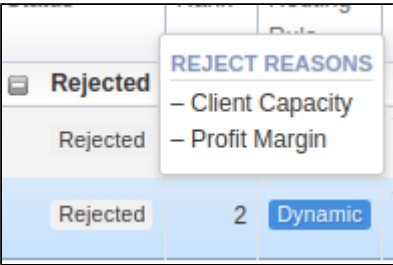


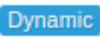
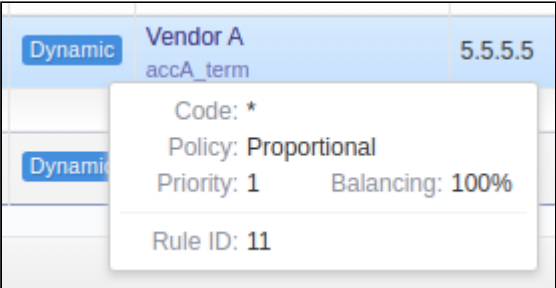
⚠ Attention



Please note that if there are changes in **the Term Rate Table**, you need to launch **Dynamic Routing Manager** in the **Task Scheduler** section (**System > Task Scheduler**). Routing Analysis shows routes based on the **routing table** built on the last run of the **Dynamic Routing Manager**. So you won't be able to see the latest changes regarding Routing Rules until Dynamic Routing Manager is **restarted**.

Creating a Routing Analysis Report:

To generate routing analysis, enter the next parameters in the query form:

| Section | Field Description |
|---|--|
| Filters | Select desired parameters for the report in the Filters menu. To cancel any filter, click the delete icon  next to the filter. You can use a quick search by typing filters' names in the respective field at the top of the filters list. |
| | Service Select the service for the report. By default, the field value is set to Calls . This field is mandatory. |
| | Dst Party ID Enter the destination party ID to define a destination. This field is mandatory. |
| | Client Select a client for the report. Also, you can specify respective call shops . This field is mandatory. |
| | Account Select an account for the report. |
| | Additional Filters |
| There are the following accessible additional filters: | |
| <ul style="list-style-type: none"> • Events: Gateway. • Extras: Src Party ID; Dynamic Tags; Routing Plan. | |
| Events Settings | |
| Gateway | Define a gateway specified in the term account |

| Extra Settings | | | | | | | |
|---------------------|---|---------------|---|-------------|--|---------------------|---|
| Src Party ID | Specify a source number or any other source identification to check the translations | | | | | | |
| Dynamic Tags | Enter additional dynamic tags for this routing | | | | | | |
| Routing Plan | Enter the plan with a respective routing rule | | | | | | |
| Output | <p>This form contains settings of the output data of the report.</p> <p>Click the plus icon  near Columns to select respective columns to output report data. Also, you can cancel any chosen item.</p> <p>Accessible columns in the report</p> <p>Following columns can be added to the report: <i>Status, Rank, Routing Rule, Vendor, Account, Code, Rate, Dst Party ID, Src Party ID, Appeal, Reject Reasons.</i></p> <tr> <td>Status</td> <td> <p>The following information is displayed in the column: the state of the route, reject reasons (if any)</p> <p> for accepted route</p> <p> for rejected route due to some reasons <i>(to see them, hover over the icon)</i></p> <p>To view detailed information on a rejected route status, hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on a route status</i></p>  </td> </tr> <tr> <td>Rank</td> <td>Vendor position during routing. It's applicable and the system puts values in order when route status is accepted.</td> </tr> <tr> <td>Routing Rule</td> <td> <p>Type of the route that includes: destination, policy and rule properties (balancing, priority), time profile, orig groups, term groups, debug information</p> <p>A grey  icon in the column shows a static route</p> <p>A violet  icon indicates a DID route</p> <p>A blue  icon in the column shows a dynamic route</p> <p>To view detailed information on a route type hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on a routing rule</i></p>  </td> </tr> | Status | <p>The following information is displayed in the column: the state of the route, reject reasons (if any)</p> <p> for accepted route</p> <p> for rejected route due to some reasons <i>(to see them, hover over the icon)</i></p> <p>To view detailed information on a rejected route status, hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on a route status</i></p>  | Rank | Vendor position during routing. It's applicable and the system puts values in order when route status is accepted. | Routing Rule | <p>Type of the route that includes: destination, policy and rule properties (balancing, priority), time profile, orig groups, term groups, debug information</p> <p>A grey  icon in the column shows a static route</p> <p>A violet  icon indicates a DID route</p> <p>A blue  icon in the column shows a dynamic route</p> <p>To view detailed information on a route type hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on a routing rule</i></p>  |
| Status | <p>The following information is displayed in the column: the state of the route, reject reasons (if any)</p> <p> for accepted route</p> <p> for rejected route due to some reasons <i>(to see them, hover over the icon)</i></p> <p>To view detailed information on a rejected route status, hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on a route status</i></p>  | | | | | | |
| Rank | Vendor position during routing. It's applicable and the system puts values in order when route status is accepted. | | | | | | |
| Routing Rule | <p>Type of the route that includes: destination, policy and rule properties (balancing, priority), time profile, orig groups, term groups, debug information</p> <p>A grey  icon in the column shows a static route</p> <p>A violet  icon indicates a DID route</p> <p>A blue  icon in the column shows a dynamic route</p> <p>To view detailed information on a route type hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on a routing rule</i></p>  | | | | | | |

| | |
|------------------------------|---|
| Vendor | The name of the respective terminator specified in the Client's settings and its account name |
| Account | The name or IP of the account |
| Code | Here you can see matched code in the terminator's rate table |
| Rate | Rate that is used to terminate the call |
| Dst Party ID | Shows destination party ID that is sent to the provider when all matching number translations are performed |
| Src Party ID | Shows source party ID after all number translations |
| Appeal | Shows the appeal automatically calculated by the system according to the chosen DR Policies (Routing section > DR Policies) <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  The Appeal is displayed as a value if a route is dynamic. If a route is static, it's displayed as N/A. Regardless of the route type, you can hover over the appeal value to get additional insights on ASR, ACD, SCD, PDD, Vendor Debt, Payment Due, Stats Qty. </div> |
| Reject Reasons | Displays respective rejection reasons for a particular route |
| Other output settings | |
| Type | Choose a report format from a drop-down list: Web/CSV/Excel XLS/Excel XLSx . Also, select a look of table view next to the Type field: <ul style="list-style-type: none"> • Plain - a simple table view • Grouped - a table view with grouped data and possibility to collapse it <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;">  Attention Please note that the Grouped type of a table view is available only for Excel XLSx and Web formats, it doesn't work with CSV or Excel XLS. </div> <p>If CSV, Excel XLS or Excel XLSx type has been selected, an additional Send to field will be displayed. In this field you can specify emails of the clients, where the current report in the selected format will be sent.</p> |
| Verbosity | Select which routes should be displayed (accepted and rejected , or accepted only). |
| Skip Reasons | Specify the reasons under which routes should be excluded from the output list. The available skip reasons are: <ul style="list-style-type: none"> • <i>Reseller Mismatch</i> • <i>Blocked Reseller</i> • <i>Blocked Client</i> • <i>Blocked Account</i> • <i>Vendor Qty</i> • <i>Stop Hunting</i> • <i>Party ID Length</i> • <i>Profit Margin</i> • <i>Rate Increments</i> • <i>Orig Tags</i> • <i>Term Tags</i> • <i>Traffic Processing</i> • <i>Reseller Capacity</i> • <i>Client Capacity</i> • <i>Account Capacity</i> • <i>Rule Capacity</i> • <i>Quality</i> • <i>Vendor Credit Limit</i> |

After selecting all needed parameters, click the **Query** button, and the system will generate a report.

Screenshot: Routing Analysis

The screenshot shows the 'Routing Analysis' interface. On the left, there is a sidebar with 'Events' (Gateway, Extras, Src Party ID, Dynamic Tags, Routing Plan) and a search bar. The 'FILTERS' section includes: Service: Calls, Dst Party ID: 1, Client: Customer A, and Account: (empty). There are 'Save Query' and 'Query' buttons. The 'OUTPUT' section shows Type: Web, Grouped, Verbose: Accepted and Rejected, and Skip Reasons: Reseller Mismatch, Blocked Reseller. Below the filters, summary information is displayed: Dst Party ID: 1, Destination: USA, Client: Customer A, Rate Table: ORIG RT - Customer A, Routing Plan: AZ General, and DR Order: by code / appeal, Rules Hunting: longest only. An 'Export to XLSX' button is present. The main table has columns: Status, Rank, Routing Rule, Vendor, Account, Code, Rate, Dst Party ID, Src Party ID, and Appeal. Two rows are shown, both with 'Accepted' status and 'Dynamic' routing rules.

| Status | Rank | Routing Rule | Vendor | Account | Code | Rate | Dst Party ID | Src Party ID | Appeal |
|----------|------|--------------|-----------------------|---------|------|------------|--------------|--------------|--------|
| Accepted | 1 | Dynamic | Vendor A accA_term | 5.5.5.5 | 1 | 0.1500 USD | 1 | | 2.37 |
| Accepted | 2 | Dynamic | Vendor C accC_term | 7.7.7.7 | 1 | 0.1538 USD | 1 | | 2.43 |

Moreover, you can create (save) and display previously saved report templates by clicking **Save Query** and **Load Query**, respectively. Remember that the load button will be present only if there is at least one routing analysis report in the **Report Queries** section.

Tip

To find more details about templates, please refer to the [Report Queries](#) article in our **User Guide**.



Attention

Please mind the naming of your codes. For example, if your client has:

- a **447911** code in a Rate Table,
- an assigned Code Deck that has only **44-UK**, but **not 447911**,
- an assigned Routing Plan with a static rule for **UK** to a vendor,

in the Routing Analysis you **will not** see this vendor as available for a call to, say, 4479110000, even though the Orig parameters state a Code Name as UK. This happens, because it's a *simulated Code Name* (from 44 Code, present in a Code Deck).

If you'd like to see the said vendor, the code should be either 447911, or 44*.

To expand or collapse data in your report, click the **plus** or **minus** icons. If the data is **Grouped** in the report, it will be shown as **initially expanded**.

Screenshot: *Expand/collapse report data*

Routing Analysis

- Events
- Gateway
- Extras
- Src Party ID
- Dynamic Tags
- Routing Plan

FILTERS

Service: Calls

Dst Party ID: 1

Client: Customer A

Account:

Save Query Query

OUTPUT COLUMNS (10)

Type: Web Grouped

Verbosity: Accepted and Rejected

Skip Reasons: Reseller Mismatch x Blocked Reseller x

Dst Party ID: 1
Src Party ID: —
Static Tags: —
Dynamic Tags: —

Destination: 1 USA
Orig Rate: 0.1650 USD

Client: Customer A
Rate Table: ORIG RT - Customer A
Routing Plan: AZ General

DR Order: by code / appeal
Rules Hunting: longest only

Export to XLSX Info

| Status | Rank | Routing Rule | Vendor | Account | Code | Rate | Dst Party ID | Src Party ID | Appeal |
|----------|------|--------------|-----------------------|---------|------|------------|--------------|--------------|--------|
| Accepted | | | | | | | | | |
| Accepted | 1 | Dynamic | Vendor A accA_term | 5.5.5.5 | 1 | 0.1500 USD | 1 | | 2.37 |
| Accepted | 2 | Dynamic | Vendor C accC_term | 7.7.7.7 | 1 | 0.1538 USD | 1 | | 2.43 |

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Note for blocked destinations

1. If the rate is blocked for the originator, the routes will not be displayed.
2. If a terminator has a direction blocked, the route will be rejected with the corresponding status ("Blocked Rate").
3. If the Routing Policy contains the Rate factor, the appeal value for blocked rates is set to a high value of 1000, regardless of the values of any other factors.

If applicable, you can check the **future terminator's rate**, **effective date**, and **profit** in the report by hovering over the current rate in the **Term Rate** column.

Screenshot: Future Terminator's Rate



Tip

Please note that it analyses the profitability by comparing orig and term rates. Therefore, an orig rate should be equal or greater than a term rate and profit margin.



Attention

Please note that if a **Reseller** has an orig rate assigned, the profit margin will be counted taking into account both client-originator's rate and Reseller's rate.

By hovering over the **Info** icon above the report on the right, **user's name** and **time/date** when a report was generated will be displayed in a pop-up window.

Screenshot: Info icon

Generated by: Administrator on 01/24/2018 16:17:47 +0000

Export a generated report

You can export report data either in a .xlsx or .csv file that would contain currently presented data. Click the **Export to XLSx** or **Export to CSV** button to download a file of the respective format. Be advised that the **Export to CSV** button is only available if **Output** is set to **Web/Plain**.

Please note


1. Inactive additive rates with non-zero value (for respective tags) won't be shown. Active additive rates with zero value will be shown.
2. If you change the currency in the **Settings**, you need to restart **Dynamic Routing Manager** in the **Task Scheduler** section for immediate Routing Analysis functioning.

Sharing a Report

Each time you get a report output, the system generates a unique link in the format of "/view?id=<uniq-string>". It allows sharing data between the users, even if they belong to different resellers (the feature works similarly to Share by Link in Google Drive).

The link refers to the report data valid for a specific moment.

Example: When you send a link to a report, you ensure the recipient would see the same data as you do. If you change data in the system (for example, perform rerating), the previously copied link to the report will display data valid for the moment of generation (even though the actual data is now different).

You can also view the additional information about the generated report by hovering over the **Info**  icon, which is located under the **Output** section:

| Title | Description |
|--------------|--|
| Generated by | Indicates the Role of the user who generated a report and specifies a generation time |

Screenshot: Routing Analysis Info icon

The screenshot shows the 'Routing Analysis' interface. It includes a 'FILTERS' section with dropdowns for Service (Calls), Dist Party ID (44), Client (client 2), and Account (client 2, account 2). The 'OUTPUT' section has settings for Type (Web), Grouped, Verbose (Accepted and Rejected), and Skip Reasons (Reseller Mismatch, Blocked Reseller). Below these are summary statistics for Destination 44, including Orig Rate (0.2100 USD), Client (client 2), Account (account 2), Rate Table (Rate_2), and Routing Plan (r p 1). At the bottom, a table displays routing results with columns for Status, Rank, Routing Rule, Vendor, Account, Code, Rate, and Dist Party ID. A red box highlights the 'Generated by: Administrator on 06/25/2020 11:30:34 +0000' text in the table's right side.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Dynamic Routing Policies

Section overview

This section describes the list of **currently available routing policies for JeraSoft Billing**. **Routing policy** is a set of regulations and principles (**appeal**) that determine the **way** all available **terminators are prioritized** during dynamic routing. Each policy has its **unique principles** of terminators prioritizing and allows a user a wide variety of possibilities to configure the system in the best suitable way. Below you will find a description of **6 standard DR Policies**:

Screenshot: DR Policies section

| ID | Name | Factors | Sort Order |
|----|----------------|--|------------|
| 4 | Cash Flow | Rate ASR ACD PDD SCD Vendor Debt Payment Due | 100 |
| 3 | Proportional | Rate ASR ACD PDD SCD Vendor Debt Payment Due | 100 |
| 2 | Simple LCR | Rate ASR ACD PDD SCD Vendor Debt Payment Due | 100 |
| 1 | Simple Quality | Rate ASR ACD PDD SCD Vendor Debt Payment Due | 100 |

| Policy | Description |
|-----------------------|---|
| Cash Flow | When vendors owe you the most and have long periods to invoice due date, they get higher priority in routing. |
| Proportional | When the price is lower and a route quality is higher, it has a higher priority. |
| Simple LCR | Generic price-based routing. |
| Simple Quality | Generic quality-based routing. |

Adding a New DR Policy

To add your custom DR policy, click the **Add Routing Policy** button. The following window will open showing the available settings:

Screenshot: Adding a New DR Policy

| Field | Description |
|----------------|--|
| Name | Set the name of the respective policy. |
| Factors | Specify the factors for the system to consider during building the DR table: <ul style="list-style-type: none"> • Rate - vendor's rate for the destination, vendors with a lower rate will get higher position in routing; • ASR - vendor's ASR, analyzed by Summary Report data for the duration given in the System Confirmation; • ACD - vendor's ACD, analyzed by Summary Report data for the duration given in the System Confirmation; • PDD - vendor's PDD, analyzed by Summary Report data for the duration given in the System Confirmation; • SCD - vendor's SCD, analyzed by Summary Report data for the duration given in the System Confirmation; • Vendor Debt - considers the amount a vendor owes you; vendors, that owe you the most, are moved to a higher position in routing; • Payment Due - considers the next payment date to a vendor (date of next invoice + due days); vendors with longer periods till due date get higher positions. <p>You can select multiple factors.</p> |




Note that it is possible to create a **Routing Policy** without any factors. As a result, all Appeal values will be the same for this Policy. During the routing process all routes with all other similar parameters will be randomly reordered.

Dynamic Routing Table

The **JeraSoft Billing solution** operates with its own **Routing Table** that is automatically generated over specified regular periods to provide the "**dynamic**" part of the routing.

The **Routing Table** deals with the latest changes of the whole routing process, including all updates made to system configuration, such as clients or rates updates, changes to routing plans, accounts reconfiguration, etc. It is always a good idea to recreate your routing table to be able to see how your routing will work with current settings. Of course, if you don't have time to wait till it is created automatically, you can do that in a manual mode.

To generate a routing table manually, please **go to System > Task Scheduler**, and **click the  icon** opposite **Dynamic Routing Manager**.

Configuration

This chapter of our Guide contains information that relates to section designed for **setting up and configuration of JeraSoft Billing**. Here users can arrange invoices templates, time and taxes profiles, currencies and many other elements used throughout the entire system. For more details, please go to the related sections:

- [Code Decks](#)
- [Currencies](#)
- [Payment Accounts](#)
- [Payment Terms](#)
- [Time Profiles](#)
- [Taxes Profiles](#)
- [Tags](#)
- [Invoices Templates](#)
- [Services](#)
- [Settings](#)

Code Decks

In this article

- [Section overview](#)
- [Creating a New Code Deck](#)
- [Managing Code Decks](#)
 - [Adding Codes](#)
 - [Deleting Codes](#)
 - [Importing Codes](#)
 - [Exporting Codes](#)

Section overview

Code deck is a list of **destination codes**, each with its corresponding **name** and **country** it represents (optional). Code deck is by far one of the key elements of any **Rate Table** and is used pretty much throughout the whole system (sections like **Invoices**, **Packages**, **LCR Lists**, and so on). By having multiple code decks, you can freely operate with different names for the same codes and change them in real-time.

The section is presented in the form of a list of all existing code decks in the system. The table of code decks consists of the following columns:

Screenshot: Code Decks section

| ID | Name | Reseller |
|----|---------|---------------|
| 1 | DEFAULT | All Resellers |

| Column | Description |
|------------------|--|
| ID | Code deck's identification number |
| Deck Name | Name of a code deck |
| Reseller | List of resellers corresponding deck was assigned to |

Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new code deck |
| | Allows to manage an existing code deck on a list |
| | Allows deleting a code deck from the system. Requires confirmation |

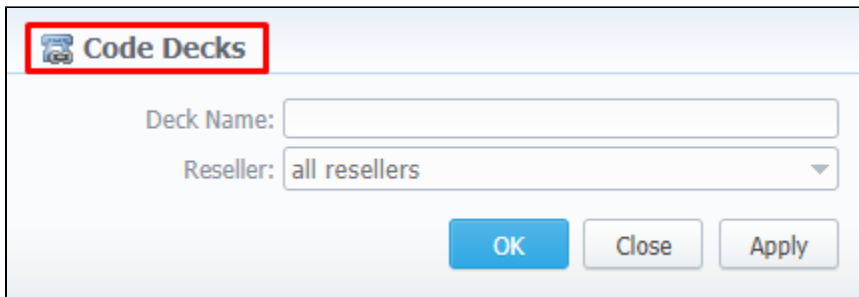
Creating a New Code Deck

To create a new code deck:

- Click the **New Code Deck** button
- Fill in all required fields of a pop-up window (see screenshot below)
- Click **OK**


Subsequently, a new code deck will be added to the general list in the section.

Screenshot: Code Deck pop-up window

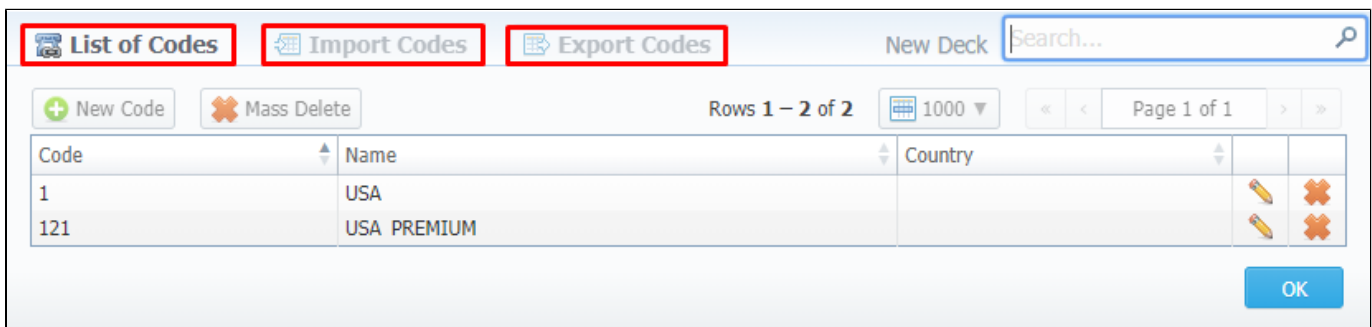


The screenshot shows a dialog box titled "Code Decks". It has a "Deck Name:" text input field and a "Reseller:" dropdown menu currently set to "all resellers". At the bottom, there are three buttons: "OK", "Close", and "Apply".

Managing Code Decks

To manage your code deck, left-click on the deck's name or  edit icon opposite the deck on the right. The opened pop-up window consists of 3 tabs: **List of Codes**, **Import Codes** and **Export Codes** (see screenshot), where you can perform operations pointed out below.

Screenshot: Code deck's tabs

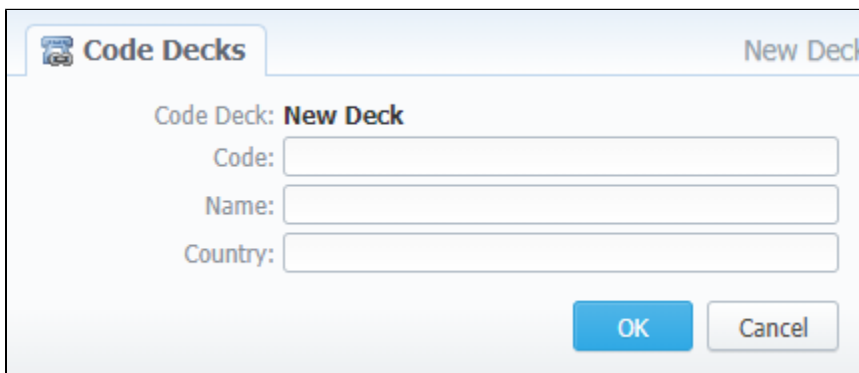


The screenshot shows the main interface for managing code decks. At the top, there are three tabs: "List of Codes", "Import Codes", and "Export Codes", all highlighted with red boxes. To the right of the tabs is a "New Deck" button and a search box. Below the tabs, there are buttons for "New Code" and "Mass Delete". The main area contains a table with columns for "Code", "Name", and "Country". The table shows two rows: one with code "1" and name "USA", and another with code "121" and name "USA PREMIUM". Each row has edit and delete icons. At the bottom right, there is an "OK" button.

Adding Codes

In the **List of Codes** tab, click the **New Code** button to add a code group to your deck. The pop-up window contains the following parameters (see screenshot below):

Screenshot: Adding new codes

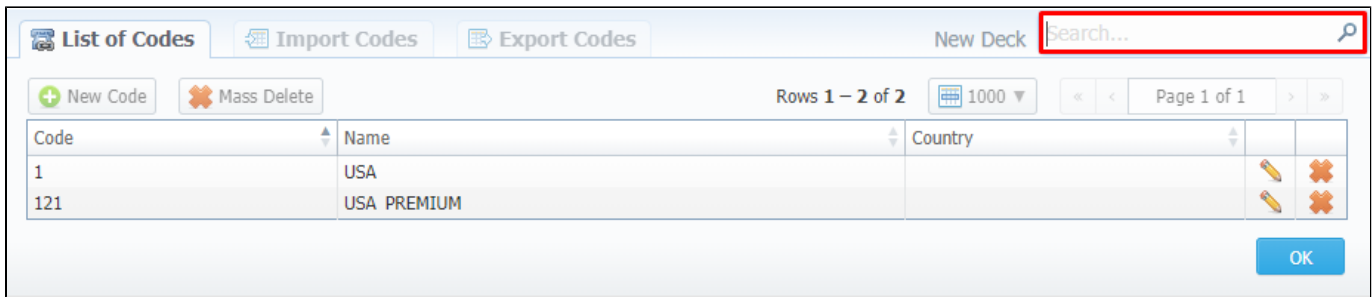


The screenshot shows a dialog box titled "Code Decks" with a "New Deck" button in the top right. The main text reads "Code Deck: New Deck". Below this, there are three input fields: "Code:", "Name:", and "Country:". At the bottom, there are "OK" and "Cancel" buttons.


| Field | Description |
|------------------|---|
| Code Deck | Name of the code deck. Auto-filled by the system |
| Code | New destination code |
| Code Name | Displayed name of a code group |
| Country | Country the codes in the current group will belong to |

To manage navigation between thousands of codes on the list, you can always look for the necessary code using a **Search** box (see screenshot).

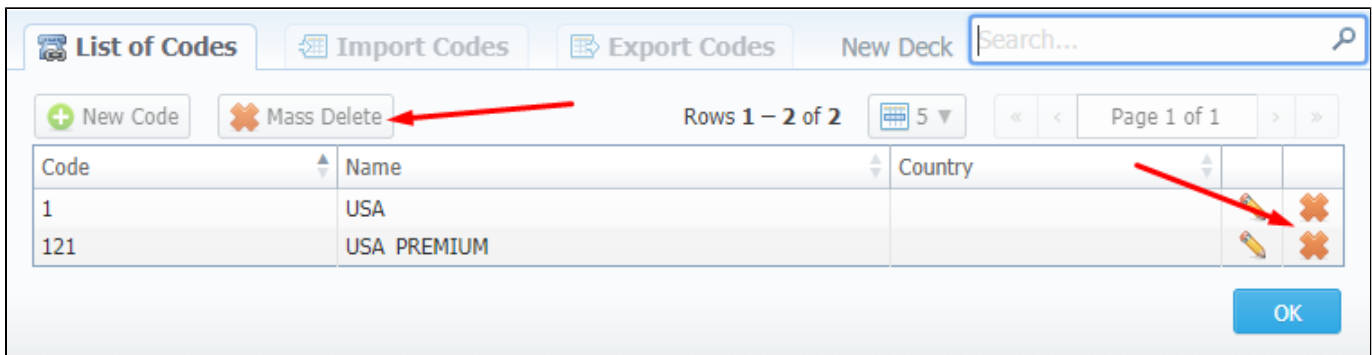
Screenshot: Section search box



Deleting Codes

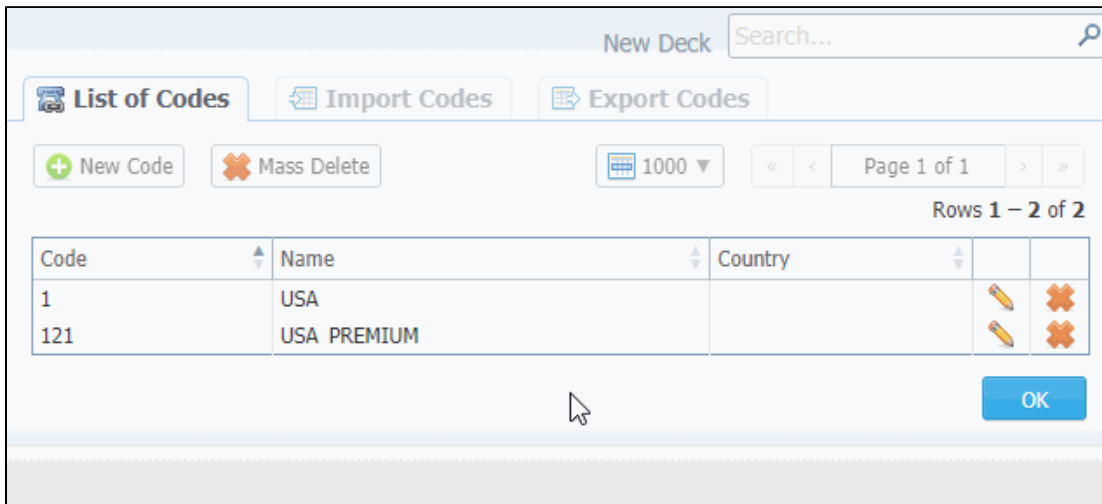
You can either delete **each** code separately by clicking the  delete icon opposite corresponding code on the list or delete **all** codes at once by pressing **Mass Delete** button (see screenshot below).

Screenshot: Codes deletion



To verify mass deletion, click **OK** in a pop-up window (see animation below).

Animation: Codes deletion



Importing Codes

Not only can you add codes to the lists manually, but also **import** them from a file. The whole import process can be logically divided into two steps:

The **first step** is to go to the **Import Codes** tab (screenshot below) and fill in the required fields. After selecting a file and specifying all additional fields, click the **Process>>** button.

Screenshot: Import Codes - Step 1

List of Codes
Import Codes
Export Codes
New Deck

FILE PROCESS

Select file for import: No file chosen

Fields Delimiter:

IMPORT PROCESS

Deck update mode: On errors:

| Section | Field | Description |
|----------------|------------------------------|--|
| File Process | Select File to Import | Select an import file by clicking the Choose File button |
| | Fields Delimiter | Specify a delimiter symbol. Possible options are: <ul style="list-style-type: none"> • Autodetect • , • ; • Tab By default, the Autodetect option is chosen. |
| Import Process | Deck Update Mode | Specify the code deck update mode. There are three possible modes: <ul style="list-style-type: none"> • Import only not existing codes • Import all codes (update existing) • Import all codes (purge code deck first) By default, Import all codes (update existing) mode is chosen. |
| | On Errors | Define what to do if inconsistency or error was found in the importing file: <ul style="list-style-type: none"> • Import correct rows and show all found errors • If errors are found, abort import and show all errors By default, the Import correct rows and show all found errors option is chosen. |

During the **second step**, the system will recognize the file and display the first 17 rows. Then, you need to select the header for each column. In case you don't need some rows, you can easily skip them by checking boxes opposite unnecessary rows in the **Skip** column (see screenshot). To abort the importing process, click the **Return** button, and you will be redirected to the **Import Codes** tab. To finish importing, click **Import** (see screenshot).

Screenshot: Import Codes - Step 2

List of Codes | **Import Codes** | Export Codes New Deck

ROWS AND COLUMNS SELECT

| | | | Skip |
|-------------|------------------|--|-------------------------------------|
| 1 | USA | | <input type="checkbox"/> |
| 1901555 | USA DQ | | <input type="checkbox"/> |
| 213 | ALGERIA | | <input type="checkbox"/> |
| 223 | MALI | | <input checked="" type="checkbox"/> |
| 376 | ANDORRA | | <input type="checkbox"/> |
| 5195210 | PERU MOBILE | | <input type="checkbox"/> |
| 56 | CHILE | | <input type="checkbox"/> |
| 5632196 | CHILE RURAL | | <input type="checkbox"/> |
| 591 | BOLIVIA | | <input type="checkbox"/> |
| 598 | URUGUAY | | <input checked="" type="checkbox"/> |
| 771 | KAZAKHSTAN | | <input type="checkbox"/> |
| 93 | AFGHANISTAN | | <input type="checkbox"/> |
| 95 | MYANMAR | | <input type="checkbox"/> |
| 967 | YEMEN | | <input type="checkbox"/> |
| Destination | Description | | <input type="checkbox"/> |
| 2131 | Algeria-cellular | | <input type="checkbox"/> |
| 21390 | Mobile | | <input type="checkbox"/> |

Return Import

After you click **Import**, the system will start the importing process. When the progress bar reaches 100%, your import is done. Congrats!

Knowledge Base Tip

See what happens if your file contains the [Country Code](#) column.

Exporting Codes

This feature allows you to export the content of a code deck to a file. To initiate export, do the following:

- Go to the **Export Codes** tab (screenshot down below)
- Specify a delimiter symbol in the **Fields delimiter** field and a first CSV file row as a title row by marking **With headers row** checkbox (optional).
- Click **OK**, and a CSV file will be downloaded to your computer.

Screenshot: *Export Codes tab*

List of Codes | Import Codes | **Export Codes** New Deck

Delimiter of Fields:

With headers row

OK Cancel

Currencies

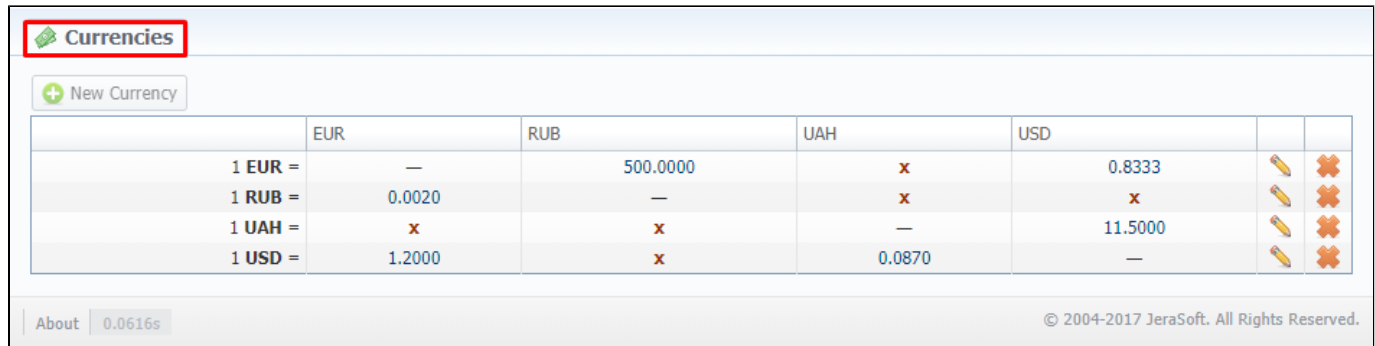
In this article

- [Section overview](#)
- [Adding a New Currency](#)
- [Specifying a Currency Rate](#)

Section overview

This section displays the list of all **currencies**, registered in the system, in the form of a **table of exchange rate relationships**. Each currency has a direct **exchange rate** to any other currency on the list. Since currencies are the cornerstone of the billing process, they are specified in various section of the system, such as [Invoices](#), [Rate Tables](#), [Clients](#), [Resellers](#), etc. Check out the section structure on the screenshot down below.

Screenshot: Currencies section main window



| | EUR | RUB | UAH | USD | | |
|---------|--------|----------|--------|---------|--|--|
| 1 EUR = | — | 500.0000 | x | 0.8333 | | |
| 1 RUB = | 0.0020 | — | x | x | | |
| 1 UAH = | x | x | — | 11.5000 | | |
| 1 USD = | 1.2000 | x | 0.0870 | — | | |

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Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows to create a new currency |
| | Allows managing an existing currency on a list |
| | Allows deleting a currency from the system. Requires confirmation |
| | Allows managing an exchange rate of a currency |

Adding a New Currency

You can add a new currency by clicking the **New Currency** button above the list. In a pop-up window (see screenshot below), you need to fill in the **required fields** and click **OK**.



Screenshot: New Currency pop-up window

| Field | Description |
|--------------------------|--|
| Name | Name of a new currency |
| Rates Precision | Number of decimal places for rates formatting. By default, the field value is set to 4 . |
| Details Precision | Number of decimal places for detailed monetary values formatting. By default, the field value is set to 4 . |
| Totals Precision | Number of decimal places for total monetary values formatting. By default, the field value is set to 2 . |

The respective numbers will be displayed in all reports (**details precision** is used for all reports except xDR report) with cost and rate values in the statistics. They will also be shown in the invoices, except total values (totals **always** have 2 decimal places in invoices).

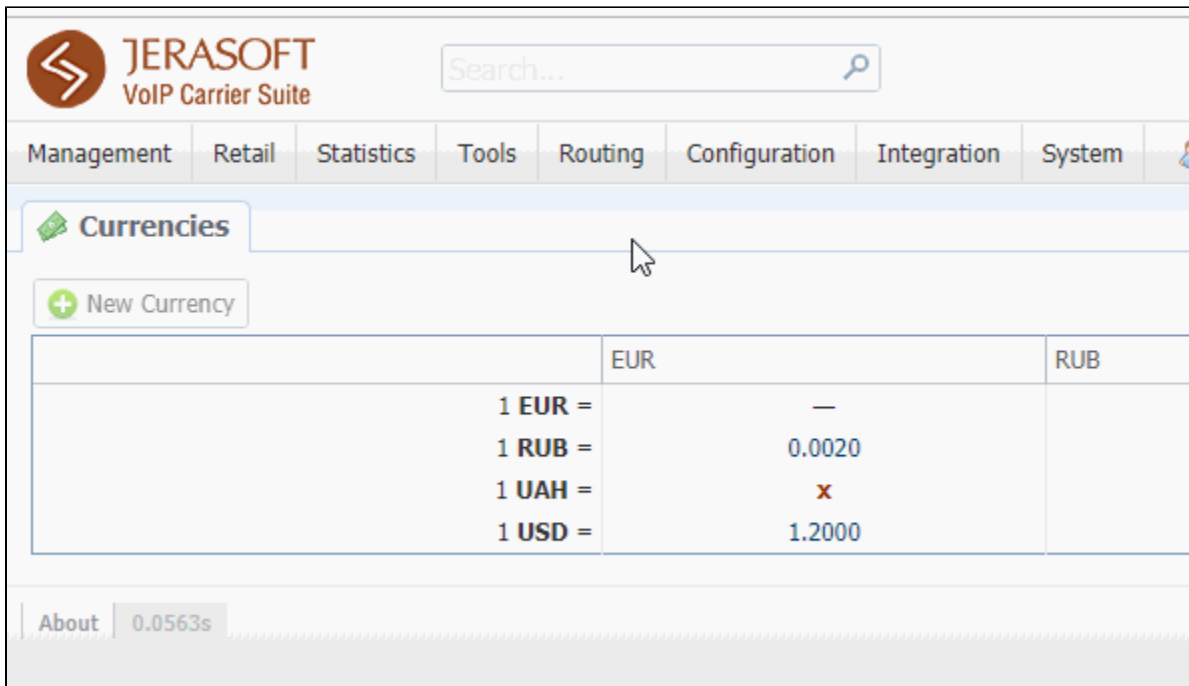
Specifying a Currency Rate

After you add a currency, you need to specify the rate. To do this, you need to (see animation down below):

- Click the  icon in the currency column, for which you wish to specify the exchange rate
- Click the  **Add** button in a pop-up window and set **Currency Rate** and **Date**
- Click **Add**

As a result, a new rate for the currency pair will be added. If more than one currency rate had been added, you can view a history of changes in the **Date** column.

Animation: Specifying a currency rate



The screenshot shows the JeraSoft VoIP Carrier Suite interface. At the top left is the JeraSoft logo and the text "VoIP Carrier Suite". To the right is a search bar labeled "Search...". Below the logo is a navigation menu with tabs: Management, Retail, Statistics, Tools, Routing, Configuration, Integration, and System. The "Currencies" tab is selected, indicated by a green icon and a blue underline. Below the navigation menu is a "New Currency" button with a green plus sign. The main content area is a table with two columns: "EUR" and "RUB". The table contains the following data:

| | EUR | RUB |
|---------|--------|-----|
| 1 EUR = | — | |
| 1 RUB = | 0.0020 | |
| 1 UAH = | x | |
| 1 USD = | 1.2000 | |

At the bottom left of the interface, there is an "About" button and a timer showing "0.0563s".

 **Tip**

Statistical data of a new currency will be available after it'd been added to the system. However, if the currency has an old start date, and you want old data to be billed in this currency, you need to run calls rerating.

 **Attention**

Please note that *changing of the system currency* requires running of *Dynamic Routing Manager* to generate a *routing table* with rates in the new system currency.

Low Balance Profiles

In this article

- [Section overview](#)
- [Adding a New Low Balance Profile](#)

Section overview

This section displays the list of all **Low Balance Profiles** registered in the system. Low Balance Profiles are used for notifications management for prepaid customers' balance control. The low balance notifications are sent over e-mail.

The structure of the section is presented in a screenshot below.

Screenshot: Low Balance Profiles section

| ID | Name | User Notification | | Client Notification | | Reseller | Sort Order |
|----|---------|-------------------|----------------------|---------------------|------------------------|--------------|------------|
| | | Threshold | Notify | Threshold | Notify | | |
| 1 | default | 100 USD | Client Owner's Email | 50 USD | Client's Billing Email | Company Name | 100 |

Functional **buttons/icons** presented in the section are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows creating a new low balance profile |
| | Allows deleting a low balance profile from the system. Requires confirmation |

Adding a New Low Balance Profile

To add a new low balance profile, you need to:

- Click the **New Profile** button
- In the appearing pop-up window, fill in the required fields (screenshot below)
- Click **OK**

Screenshot: Adding a new low balance profile

Low Balance Profiles

Name:

Reseller:

Currency: Max Qty: notifications

Sort Order: Period: hour(s)

USER NOTIFICATION

Threshold: USD Notify: Client Owner's Email

Users:

Emails:

CLIENT NOTIFICATION

Threshold: USD Notify: Client's Billing Email

Emails:

| Section | Field | Description |
|-------------------|-------------------------|--|
| General | Name | The name of a Low Balance Profile <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> i You can click on the Low Balance Profile name to open its settings/edit a Low Balance Profile. </div> |
| | Reseller | Select the owner for this profile |
| | Currency | Set the Currency for the profile |
| | Sort Order | Order of the entity in the list |
| | Max Qty | The maximum quantity of notifications to send under each particular rule. The counter resets when the balance is refilled. |
| | Period | The frequency of checks and sending notifications. For example, if you would like to send notifications each day, set this value to 24 hours. |
| User Notification | Threshold | If the available balance of a Client becomes lower than the specified threshold, the notifications will be fired. |
| | Notify check box | The notifications will be sent to the email configured for the current Reseller/Manager of the Client. |
| | Users | Specify needed users here. |

| | | |
|----------------------------|-------------------------|---|
| | Emails | Specify additional emails here. |
| Client Notification | Threshold | If the available balance of a Client becomes lower than the specified threshold, the notifications will be fired. |
| | Notify check box | The notifications will be sent to the Billing Email of the Client. |
| | Emails | Specify additional emails here. |

Screenshot: Adding an advanced rule

Threshold: USD Notify: Client's Billing Email

Inactivity: day(s)

Emails:

| Field | Description |
|------------------------|---|
| Threshold | If the available balance of a Client becomes lower than the specified threshold, the notifications will be fired. |
| Notify checkbox | The notifications will be sent to the Billing Email of the Client. |
| Inactivity | Send notification only if the Client has been <i>inactive</i> for the given duration. This setting defines a typically lower threshold if the customer stops using the services. Inactivity is treated as the absence of the charges to the Client's balance. |
| Emails | Specify additional emails here. |

Payment Accounts

In this article

- [Section overview](#)
- [Adding a New Payment Account](#)

Section overview

Payment accounts serve as the exact definitions used in the [Transactions](#) section. For example, you can have a **Bank Transfer** and **Credit Card** payment accounts, and, while applying respective payments, you will be able to define payment origin by selecting a corresponding payment account.

This section allows you to **create different payment accounts** for correct and precise **transactions (payments) management**. The section is presented in the form of a list of payments with the following structure (see screenshot):

Screenshot: *Payment Accounts section*

| ID | Name | Reseller | Sort Order |
|----|---------|---------------|------------|
| 1 | General | all resellers | 100 |

| Column Name | Description |
|-------------------|--|
| ID | Payment account's identification number |
| Name | Account's name |
| Reseller | Name of the reseller a new payment account will be attached to |
| Sort Order | Order of the entity in the list |

Functional **buttons/icons** presented in the section are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new payment account |
| | Allows deleting a payment account from the system. Requires confirmation |

Attention

Please note that the user **cannot** edit or delete the **General** payment account with ID = 1 (see screenshot above)

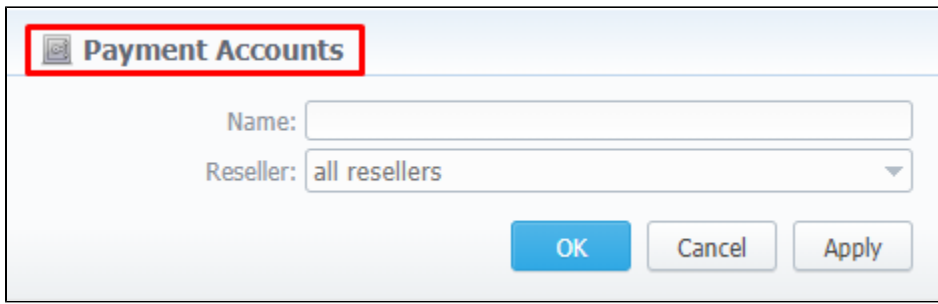
Adding a New Payment Account

The following steps are to be taken to create a new payment account:

- Click the **New Payment Account** button
- Specify an account name in the **Name** field and a **Reseller** from a drop-down list of all registered resellers (see screenshot below).
- Click **OK**.

A new account will be added to the list and will become available in the **Transactions** section.

Screenshot: *Payment Account creation form*



The image shows a dialog box titled "Payment Accounts" with a red border around the title bar. The dialog contains two input fields: "Name:" which is an empty text box, and "Reseller:" which is a dropdown menu currently showing "all resellers". At the bottom right, there are three buttons: "OK" (highlighted in blue), "Cancel", and "Apply".

Payment Terms

In this article

- [Section overview](#)
- [Adding New Payment Terms](#)

Section overview

In JeraSoft Billing, **payment terms** are implemented as sets of rules and regulations that define the **clients' payment dates** and **noticing periods** (before and/or after the payment day). Primarily, they help to make the clients' **invoicing** easier and faster by allowing to use **auto-invoicing profiles**. Payment terms are indicated in clients' profiles.

The section constitutes a list of profiles that determine **payment terms**. The structure of the section is presented on a screenshot below.

Screenshot: Payment Terms section

| ID | Name | Payment | Grace Period | Notify Days (before) | Notify Days (after) | Sort Order |
|----|-------|---------------|--------------|---|---------------------|------------|
| 2 | 14/14 | every 14 days | 14 days | on 10, 5, 3, 1 day(s) before the due date | none | 100 |
| 1 | 7/7 | every 7 days | 7 days | on 5, 3, 1 day(s) before the due date | none | 100 |

Functional **buttons/icons** presented in the section are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new payment terms profile |
| | Allows to manage an existing payment terms profile on a list |
| | Allows deleting a payment terms profile from the system. Requires confirmation |

Adding New Payment Terms

To create a new payment terms profile, you need to do the following:

- Click the **New Payment Terms** button
- Specify the **required fields** in the appeared pop-up window (see table below);
- Confirm new payment terms profile creation by clicking **OK**

Screenshot: Adding new payment terms profile

Payment Terms


Name:

Payment: every days

Grace Period: days
empty = do not check

Notify Days(Before): day(s) before due date

Notify Days(After): day(s) after due date
empty = do not check

| Field | Description |
|-----------------------------|--|
| Name | Name of a new payment terms profile |
| Payment | <p>The exact day when a payment must be performed or its frequency (for example, on the 7th day of the month or every 10 days)</p> <div style="border: 1px solid #f0e68c; padding: 10px; margin: 10px 0;"> <p> Attention</p> <p>Please note that when you choose the on mode, the allowed days are limited to 1-28 values (to avoid ambiguity with the cases of 29-31 days that are not present in all months). Thus, the best practice to issue a monthly invoice is issuing it on the 1st of the next month. In case you put the 29-31 value, the system will convert it to 28.</p> </div> |
| Grace Period | Period that specifies how many days the client has to pay the bill after he was invoiced. It's the Due Date field in invoices (so-called "Deferral period") |
| Notify Days (before) | Set how many days before the payment date (invoicing date + grace period) have to pass before automatic reminders will be sent to a client. For example, if you enter <i>10</i> , the reminder will be sent <i>10</i> days before the payment date. You can specify more than one value in this field separating them with commas - <i>10, 5, 3</i> |
| Notify Days (after) | Specify how many days after the payment date have to pass before reminders will be sent to a client. The field can have more than one value, each separated with a comma. |

Time Profiles

In this article

- [Section overview](#)
- [Adding a New Time Profile](#)

Section overview

Time profile is a great way to make your billing more flexible and convenient. Time profiles can be attached to your clients' rate tables and are used to adjust rates by dividing them based on the time of usage. For instance, such a profile can be used to sell traffic for an **increased** price during business hours and for the **reduced** one during non-business hours.

This section is used to create and manage time profiles. The structure of the section is presented on a screenshot below.

Screenshot: Time Profiles section main window



Functional **buttons/icons** presented in the section are as follows:

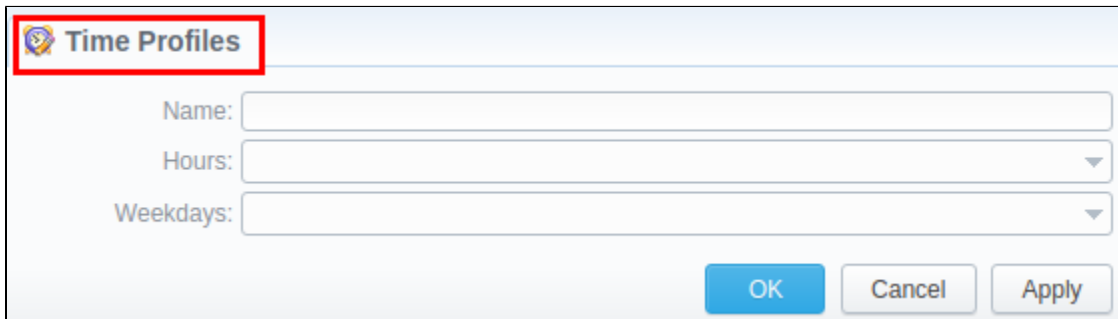
| Button/Icon | Description |
|-------------|---|
| | Allows to create a new time profile |
| | Allows to manage an existing time profile on a list |
| | Allows deleting a time profile from the system. Requires confirmation |

Adding a New Time Profile

To add a new time profile, you need to:

- Click the **New Time Profile** button
- In the appeared dialog-window, fill in the required fields
- Click **OK**

Screenshot: Adding a new time profile



| Field | Description |
|--------------|---|
| Name | Name of a new time profile |
| Hours | Select hours that will be used for a particular time profile. More than one hour range can be added (e.g. <i>03.00 - 03.59, 08.00 - 08.59</i>) |

| | |
|-----------------|---|
| Weekdays | Specify days that will be used for the particular time profile. You can add more than one day to the profile (e.g. Monday, Tuesday, Thursday, Sunday) |
|-----------------|---|

Taxes Profiles

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Creating a New Taxes Profile](#)
 - [Type: Customer](#)
 - [Type: SureTax](#)
 - [Type: Compliance Solutions](#)
 - [Type: Avalara](#)
- [Tax Values Management](#)

Section overview

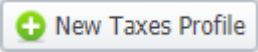



Taxes profiles, equally as [Time profiles](#), is a JeraSoft Billing tool that makes the process of clients' [rate tables](#) management exceptionally agile. Taxes profile is a **set of tax rules** that can be applied to client's rate tables in different taxation schemes. This section allows you to add, edit, and delete profiles and is presented in the form of a table with the following columns (see screenshot):

Screenshot: Taxes Profiles section


| ID | Name | Profile Owner | Notes | Sort Order |
|----|---------|---------------|-------|------------|
| 1 | SureTax | all resellers | | 100 |
| 2 | VAT | all resellers | | 100 |

| Column Name | Description |
|----------------------|---|
| ID | Taxes profile's identification number |
| Name | Name of a taxes profile (clickable, to access taxation values for Customer type profile) |
| Profile Owner | List of resellers corresponding taxes profile was assigned to |
| Notes | Additional information regarding a taxes profile |
| Sort Order | Order of the entity in the list |

Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|---|--|
|  | Allows to create a new taxes profile |
|  | Allows to manage an existing taxes profile on a list |
|  | Allows deleting a taxes profile from the system. Requires confirmation |
|  | Opens the Advanced Search drop-down menu |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on a blue downward arrow  icon, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu

| Field | Description |
|----------------------|---|
| Profile Owner | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |
| Status | Select the status of a taxes profile: To apply the specified search criteria, click the Search button; to cancel the applied parameters, click the Reset button. <ul style="list-style-type: none"> • Active • Archive |

Creating a New Taxes Profile

To create a new profile, you need to:

- Click the **New Taxes Profile** button
- Fill in mandatory fields (specified in tables below)
- Click the **OK** button

Starting from **JeraSoft Billing v3.21.0**, we have introduced the integration with a third-party tax calculation service called **Compliance Solutions**. In addition to the **SureTax** service, we had integration with before, now you have one more advanced option to calculate taxes. Please also note that there are no pre-generated taxes profiles in the system anymore.

You can select the type of a taxes profile while creating a profile:

Type: Customer


Screenshot: New Taxes Profile window (Customer)




| Field | Description |
|----------------------|--|
| Name | Name of a taxes profile |
| Profile Owner | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |

| | |
|----------------------|---|
| Type | Select the tax profile type from a drop-down list: <ul style="list-style-type: none"> • Customer • SureTax • Compliance Solutions |
| Invoice Notes | If specified, this information will be displayed in issued Invoices |
| Notes | Additional information regarding a taxes profile |
| Sort Order | Order of the entity in the list |

Type: SureTax

Screenshot: New Taxes Profile window (SureTax)

| Section | Field | Description |
|---|--|---|
| General Settings | Name | Name of a taxes profile |
| | Profile Owner | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |
| | Type | Select the tax profile type from a drop-down list: <ul style="list-style-type: none"> • Customer • SureTax • Compliance Solutions |
| | Invoice Notes | If specified, this information will be displayed in issued invoices |
| | Notes | Additional information regarding a taxes profile |
| | Sort Order | Order of the entity in the list |
| SureTax Settings | Client Number | Used when issuing invoices for clients with selected SureTax profile |
| | Validation Key | Used for clients with selected SureTax profile |
| | Test profile checkbox | Check to specify that a created SureTax profile is a test one |
| | Exemption Codes | List Tax Exemption Codes to not calculate them within this profile |
| Extra Chagres Settings | Default settings for Extra Charges taxation. | |
| <div style="border: 1px solid green; padding: 10px;"> <p> Tip</p> <p>You can set <u>separate</u> Rules/Codes per Extra Charge if needed. For this, when creating an Extra Charge in Transactions, add a Tag, specifying both Situs Rule and Trans Type Code, like suretax:04-010101.</p> </div> | | |

| | | |
|------------------------------|---|---|
| | Situs Rule | Select a Situs Rule from the list of available ones: <ul style="list-style-type: none"> • 04 - Zip code • 05 - Zip code + 4 |
| | Trans Type Code | Specify a Trans Type Code for this Rule (e.g., 010101) |
| Package Fees Settings | Default settings for Package Fees taxation. <div style="border: 1px solid green; padding: 10px; margin-top: 10px;">  Tip You can set <u>separate</u> Rules/Codes per Package Fee if needed. For this, when adding a Fee to a Package, set a Tag, specifying both Situs Rule and Trans Type Code, like suretax:04-010101. </div> | |
| | Situs Rule | Select a Situs Rule from the list of available ones: <ul style="list-style-type: none"> • 04 - Zip code • 05 - Zip code + 4 |
| | Trans Type Code | Specify a Trans Type Code for this Rule (e.g., 010101) |
| Services Settings | Safe Harbor | Specify a numeric value to set static traffic distribution between interstate/intrastate <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;">  Note The Safe Harbor logic applies to transactions for services only (i.e. calls). </div> |
| Defaults | Default settings for Services taxation. <div style="border: 1px solid green; padding: 10px; margin-top: 10px;">  Tip You can set <u>separate</u> Rules/Codes per Account if needed. For this, when creating an Account, add a Tag, specifying both Situs Rule and Trans Type Code, like suretax:04-010101. You can also do this via the Traffic Processing section by creating a rule that will be adding needed Tags to traffic. </div> | |
| | Service | Set a Service for the rule: <ul style="list-style-type: none"> • Calls • SMS • Data |
| | Direction | Select a Direction from the list of available ones: <ul style="list-style-type: none"> • NANP to NANP • NANP to non-NANP • non-NANP to NANP • non-NANP to non-NANP |
| | Trans Type Code | Specify a Trans Type Code for this Rule (e.g., 010101) |
| | Situs Rule | Select a Situs Rule from the list of available ones: <ul style="list-style-type: none"> • 01 - Two-out-of-Three test using NPA-NXX • 02 - Billed to number • 03 - Origination number • 04 - Zip code • 05 - Zip code + 4 |

Type: Compliance Solutions

Screenshot: New Taxes Profile window (Compliance)

Taxes Profiles

GENERAL SETTINGS

Name:

Profile Owner: all resellers

Type: Compliance Solutions

Invoice Notes:

Notes:

Sort Order: 100

COMPLIANCE SOLUTIONS SETTINGS

Client Access Code:

Exemption Codes:

EXTRA CHARGES SETTINGS

Product Code: V001

Service Code: 1

PACKAGE FEES SETTINGS

Product Code: V001

Service Code: 2

SERVICES SETTINGS

Safe Harbor:

DEFAULTS

| Service | Product Code | Service Code | |
|---------|--------------|--------------|---|
| Calls | V001 | 1 | ✖ |

| Section | Field | Description |
|-------------------------------|---|--|
| General Settings | Name | Name of a taxes profile |
| | Profile Owner | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |
| | Type | Select the tax profile type from a drop-down list: <ul style="list-style-type: none"> • Customer • SureTax • Compliance Solutions |
| | Invoice Notes | If specified, this information will be displayed in issued invoices |
| | Notes | Additional information regarding a taxes profile |
| | Sort Order | Order of the entity in the list |
| Compliance Solutions Settings | Client Access Code | Used when issuing invoices for clients with selected Compliance Solutions profile |
| | Exemption Codes | List Tax Exemption Codes to not calculate them within this profile |
| Extra Chagres Settings | Default settings for Extra Charges taxation | |
| | <div style="display: flex; align-items: center;"> ✔ <div> <p>Tip</p> <p>You can set <u>separate</u> Codes per Extra Charge if needed. For this, when creating an Extra Charge in Transactions, add a Tag, specifying both Product Code and Service Code, like compliance:V001-1.</p> </div> </div> | |
| | Product Code | Specify the Product Code for the Extra Charges |
| | Service Code | Specify the Service Code for the Extra Charges |
| Package Fees Settings | Default settings for Package Fees taxation | |
| | <div style="display: flex; align-items: center;"> ✔ <div> <p>Tip</p> <p>You can set <u>separate</u> Codes per Package Fee if needed. For this, when adding a Fee to a Package, set a Tag, specifying both Product Code and Service Code, like compliance:V001-1.</p> </div> </div> | |
| | Product Code | Specify the Product Code for the Package Fees |
| | Service Code | Specify the Service Code for the Package Fees |

| | | | | | | | | | | | | | | |
|--------------------------|---|--|----------------|-----------------------------|--|--------------|--|------------|--|-------------|---------------------|--|---------------------|--|
| Services Settings | Safe Harbor Override | Specify a numeric value to set static traffic distribution between interstate/intrastate <div style="border: 1px solid #ccc; padding: 10px;"> <p>Note</p> <p>The Safe Harbor logic applies to transactions for services only (i.e. calls).</p> <p>Fill in this field to request Compliance Solutions to override static distribution. If the field is empty, defined static distribution will be used - 64,9.</p> </div> | | | | | | | | | | | | |
| Defaults | Default settings for Services taxation <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Service</td> <td>Set a Service for the rule:</td> </tr> <tr> <td></td> <td>Calls</td> </tr> <tr> <td></td> <td>SMS</td> </tr> <tr> <td></td> <td>Data</td> </tr> <tr> <td>Product Code</td> <td>Specify the Product Code for the Service</td> </tr> <tr> <td>Service Code</td> <td>Specify the Service Code for the Service</td> </tr> </table> | | Service | Set a Service for the rule: | | Calls | | SMS | | Data | Product Code | Specify the Product Code for the Service | Service Code | Specify the Service Code for the Service |
| Service | Set a Service for the rule: | | | | | | | | | | | | | |
| | Calls | | | | | | | | | | | | | |
| | SMS | | | | | | | | | | | | | |
| | Data | | | | | | | | | | | | | |
| Product Code | Specify the Product Code for the Service | | | | | | | | | | | | | |
| Service Code | Specify the Service Code for the Service | | | | | | | | | | | | | |

Note While using **SureTax** or **Compliance Solutions** profile type, the tax values cannot be managed manually in the system as the taxes will be automatically dipped from third-party tax calculation services. Only the **Customer** profile allows managing the tax values.




Type: Avalara

Screenshot: New Taxes Profile window (Avalara)


Taxes Profiles

| <p>GENERAL SETTINGS</p> <p>Name: <input type="text"/></p> <p>Profile Owner: all resellers</p> <p>Type: Avalara</p> <p>Invoice Notes: <input style="width: 100%; height: 40px;" type="text"/></p> <p>Notes: <input style="width: 100%; height: 40px;" type="text"/></p> <p>Sort Order: <input type="text" value="100"/></p> | <p>AVALARA SETTINGS</p> <p>Username: <input type="text"/></p> <p>Password: <input type="password"/></p> <p>Client ID: <input type="text"/></p> <p>Client Profile ID: <input type="text"/></p> <p><input type="checkbox"/> Test profile</p> <p>COMPANY ADDRESS</p> <p>State: <input type="text"/></p> <p>City: <input type="text"/></p> <p>Street Address: <input type="text"/></p> <p>Zip Code: <input type="text"/></p> <p>EXTRA CHARGES SETTINGS</p> <p>Transaction Type: <input type="text" value="19"/></p> <p>Service Type: <input type="text" value="30"/></p> <p>PACKAGE FEES SETTINGS</p> <p>Transaction Type: <input type="text" value="19"/></p> <p>Service Type: <input type="text" value="30"/></p> <p>SERVICES SETTINGS</p> <p>Safe Harbor Override: <input type="text"/></p> <p>DEFAULTS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Service</th> <th>Transaction Type</th> <th>Service Type</th> <th></th> </tr> </thead> <tbody> <tr> <td>Calls</td> <td style="text-align: center;">19</td> <td style="text-align: center;">6</td> <td style="text-align: center;">✖</td> </tr> </tbody> </table> | Service | Transaction Type | Service Type | | Calls | 19 | 6 | ✖ |
|--|--|--------------|------------------|--------------|--|-------|----|---|---|
| Service | Transaction Type | Service Type | | | | | | | |
| Calls | 19 | 6 | ✖ | | | | | | |

| Section | Field | Description |
|------------------|----------------------|--|
| General Settings | Name | Name of a taxes profile |
| | Profile Owner | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |

| | | | | | | |
|--------------------------------------|---|---|--------------------------------|---|----------------------------|---|
| | <p>Type</p> | <p>Select the tax profile type from a drop-down list:</p> <ul style="list-style-type: none"> • Customer • SureTax • Compliance Solutions • Avalara | | | | |
| | <p>Invoice Notes</p> | <p>If specified, this information will be displayed in issued invoices</p> | | | | |
| | <p>Notes</p> | <p>Additional information regarding a taxes profile</p> | | | | |
| | <p>Sort Order</p> | <p>Order of the entity in the list</p> | | | | |
| <p>Avalara Settings</p> | <p>Username</p> | <p>Company's username in Avalara</p> | | | | |
| | <p>Password</p> | <p>Company's password in Avalara</p> | | | | |
| | <p>Client ID</p> | <p>Unique identifier of your company provided by Avalara</p> | | | | |
| | <p>Client Profile ID</p> | <p>Avalara Profile ID you want to use. Leave empty for default configuration</p> | | | | |
| | <p>Test profile checkbox</p> | <p>Check to specify that a created Avalara profile is a test one</p> | | | | |
| <p>Company Address</p> | <p>Company address that will be used as billing address. Please fill in the respective:</p> <ul style="list-style-type: none"> • State • City • Street Address • Zip Code | | | | | |
| <p>Extra Chagres Settings</p> | <p>Default settings for Extra Charges taxation</p> <div style="border: 1px solid #c6e0b4; padding: 10px; margin: 10px 0;"> <p> Tip</p> <p>You can set <u>separate</u> Codes per Extra Charge if needed. For this, when creating an Extra Charge in Transactions, add a T ag, specifying both Transaction Type and Service Type, like avalara:19-30.</p> </div> <table border="1"> <tr> <td> <p>Transaction Type</p> </td> <td> <p>Specify the Transaction Type for the Extra Charges</p> </td> </tr> <tr> <td> <p>Service Type</p> </td> <td> <p>Specify the Service Type for the Extra Charges</p> </td> </tr> </table> | | <p>Transaction Type</p> | <p>Specify the Transaction Type for the Extra Charges</p> | <p>Service Type</p> | <p>Specify the Service Type for the Extra Charges</p> |
| <p>Transaction Type</p> | <p>Specify the Transaction Type for the Extra Charges</p> | | | | | |
| <p>Service Type</p> | <p>Specify the Service Type for the Extra Charges</p> | | | | | |
| <p>Package Fees Settings</p> | <p>Default settings for Package Fees taxation</p> <div style="border: 1px solid #c6e0b4; padding: 10px; margin: 10px 0;"> <p> Tip</p> <p>You can set <u>separate</u> Codes per Package Fee if needed. For this, when adding a Fee to a Package, set a Tag, specifying both Transaction Type and Service Type, like avalara:19-30.</p> </div> <table border="1"> <tr> <td> <p>Transaction Type</p> </td> <td> <p>Specify the Transaction Type for the Package Fees</p> </td> </tr> <tr> <td> <p>Service Type</p> </td> <td> <p>Specify the Service Type for the Package Fees</p> </td> </tr> </table> | | <p>Transaction Type</p> | <p>Specify the Transaction Type for the Package Fees</p> | <p>Service Type</p> | <p>Specify the Service Type for the Package Fees</p> |
| <p>Transaction Type</p> | <p>Specify the Transaction Type for the Package Fees</p> | | | | | |
| <p>Service Type</p> | <p>Specify the Service Type for the Package Fees</p> | | | | | |
| <p>Services Settings</p> | <p>Safe Harbor Override</p> | <p>Specify a numeric value to set static traffic distribution between interstate/intrastate</p> <div style="border: 1px solid #c6e0b4; padding: 10px; margin: 10px 0;"> <p> Note</p> <p>The Safe Harbor logic applies to transactions for services only (i.e. calls).</p> <p>Fill in this field to request Avalara to override standard static distribution. If the field is empty, defined static distribution will be used.</p> </div> | | | | |
| <p>Defaults</p> | <p>Default settings for Services taxation</p> | | | | | |

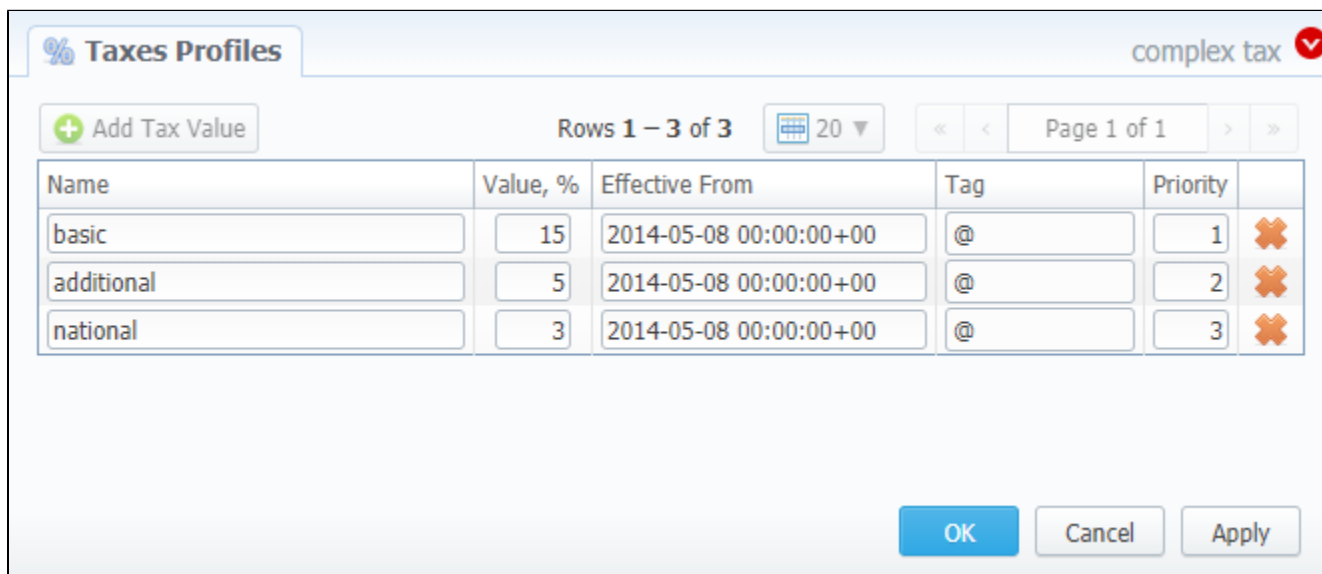
| | |
|-------------------------|---|
| Service | Set a Service for the rule: <ul style="list-style-type: none"> • Calls • SMS • Data |
| Transaction Type | Specify the Transaction Type for the Service |
| Service Type | Specify the Service Type for the Service |




 Please note that you cannot change the taxes profile **type** after the creation is completed.

Tax Values Management


To manage a tax value within the **Customer** type of the taxes profile, you need to click the respective profile name. In the pop-up window, you can add a new rule by clicking **Add Tax Value** or edit already existing values. The structure of a pop-up window is as follows:

Screenshot: Tax Values Management



| Name | Value, % | Effective From | Tag | Priority | |
|------------|----------|------------------------|-----|----------|---|
| basic | 15 | 2014-05-08 00:00:00+00 | @ | 1 |  |
| additional | 5 | 2014-05-08 00:00:00+00 | @ | 2 |  |
| national | 3 | 2014-05-08 00:00:00+00 | @ | 3 |  |

| Field | Description |
|-----------------------|---|
| Name | Name of the tax value added to this profile |
| Value | Specify a tax value in % |
| Effective from | Start date of a corresponding tax value |
| Tag | Specify tag(s) you would like to be applied to corresponding tax value. If no tags are added, you can leave the field blank |
| Priority | Specify the priority of tax value usage |

While operating with tax values, you can apply **Advance Search** to find the value you might be interested in. To do so, click on a red downward arrow  icon in the top right corner of the pop-up window and set the **Status** and **Status Date** fields:

Status:

current on - if chosen, all tax values with the latest **Effective from** field value will be displayed

old for - if chosen, all tax values, whose **Effective from** field value is **older** in comparison to its current one, will be displayed

future for - if chosen, all tax values, whose **Effective from** field value **> Date**, will be displayed

all - if chosen, **all** tax values will be displayed

Date - set the time and date that will be applied for the search.

By default, tax values displayed in a pop-up window are filtered by the **current on** status.


 **Tip**

In cases when you determine a **Priority** status, you basically set the order of the taxation. So, *the tax with **Priority 1*** will add % tax to operation sum, the *tax with **Priority 2*** will add tax % to the **resulted sum** (operation sum + 1st tax %). Each following priority will add % tax to operation sum plus all the previous priorities values.

For example:

If operation sum is **100 USD**, and there is a single tax with **Priority 1** and a **value of 10%**, the taxation result will be **10 USD**, so full operation plus tax is **110 USD**.

If there are **two taxes** with priorities of 1 and 2, and values of 10% and 20%, respectively, then the **first tax yield** will be **10 USD**, and **second tax yield** will be **22 USD** (because 20% is calculated from sum of operation + previous tax), and total will be **100 + 10 + 22 = 132 USD**.

 **Warning**

You **cannot** delete or archive a tax profile that is **currently assigned** to the *Client, Call Shop, Reseller, or Calling Card*

Tags

In this article

- [Section overview](#)
- [Adding a New Tag](#)
- [xDRs report tags](#)

Section overview

Tags enable you to organize resources for your billing environment in a more flexible way. With tags, you are able, for instance, to expand the functional capabilities of [rate tables](#) by creating exclusive rates with specific tags. These tags can be applied to [clients](#), [accounts](#), [VoIP gateways](#), [rate tables](#), [routing plans](#), [traffic processing](#), [packages](#), [DIDs](#), and [taxes profiles](#). This section represents a list of tags that you created within the system and those belonging to your Reseller (see screenshot below).

Screenshot: Tags section

| Tag | Reseller | |
|------------------|------------|--|
| Customers | Reseller B | |
| Customers | Reseller E | |
| DID-1 | Reseller A | |
| DID-2 | Reseller A | |
| Gr Res DID GROUP | Reseller C | |

Adding a New Tag

To start things off, you **can't create** a new tag, **nor** can you **edit** an existing one. The section is designed to display the list of all tags in the system with a possibility to delete any of them.

What is more important, you can add a tag to an entity straight in the corresponding section (listed above) of the system. For example, to assign a new tag to a client, fill in the **Tag** field in a respective *client's profile*. Then, the system will create this tag and show up a corresponding notification on the top of the page:

New tag "Tag D" was added successfully.

To remove a tag from the system, click the delete icon opposite a corresponding tag on the list.

Tip

1. You can create an **unlimited** number of tags for each entity.
2. Use the "at" (@) symbol as a **default tag for rates**.
3. Please **avoid using commas** in the tag names.
4. When you **determine a tag for the call**, and there is no rate for this tag, the system will take a rate with a **default tag**.

You can bill **on-net calls** where both the calling and called parties are on the same provider's network **by using tags**. To do so, you need to go to the [Traffic Processing](#) section and create a rule for **Src/Dst match** and add a *tag* (for example, **on-net tag** for calls matching this rule). Then, add this tag to [rate tables](#). As a result, calls within a respective operator will be billed by an **added tag**.

Warning

1. If you applied a tag for the [Taxes Profile](#), please make sure it **matches** the tag specified in the respective **Rate Table**.
2. We strongly recommend that you **properly configure rates and assign tags**. If you configure in the way that some rate tables will have **several** accessible tags, it will work **randomly**.

xDRs report tags

Also, in [xDRs List](#), you can view **tags that were used while the calls were processed**. While building an xDRs report, the following columns related to tags may be added:

- **Client Tags** — respective tags that were assigned directly to the *Client*.
- **Accounts Tags** — tags that were added to account profiles.
- **Tags** - all **dynamic** tags of the processed call. Dynamic are those tags that were assigned to *Accounts, Clients, or Gateways* through **Traffic Processing** or **Number Portability**.

Screenshot: *xDRs List* section

The screenshot displays the 'xDRs List' interface. At the top left, there is a 'Clients' sidebar with options: Client Type, Client, Account, and Client Tags. The 'FILTERS' section includes a 'Period' dropdown set to 'This Year', with date and time pickers for '2017-01-01 00:00:00' and '2017-12-31 23:59:59 UTC'. A 'Save Query' button is present. The 'OUTPUT' section on the right shows 'Order By: Event time', 'Type: Web', 'Currency: USD', and 'Code Deck'. Below the filters, there are 'Export to CSV' and 'Export to XLSx' buttons, and a 'Rows 1 - 5' indicator. The main data table has the following columns: Account, Code, Origin, Client Tags, Accounts Tags, Tags, Code Name, Cost, Dst Party ID, Event time, Rate, Service Name, Unit, and Volume. The 'Client Tags', 'Accounts Tags', and 'Tags' columns are highlighted with a red border. The table contains five rows of data, all for 'MEXICO GUADALAJARA' on '07/18/2017 10:49:07 +0000'. The bottom of the interface shows 'About 0.5873s' and a copyright notice '© 2004-2017 JeraSoft. All Rights Reserved.'

| Account | Code | Origin | Client Tags | Accounts Tags | Tags | Code Name | Cost | Dst Party ID | Event time | Rate | Service Name | Unit | Volume |
|-----------|------|-------------|-------------|---------------|------|--------------------|---------|--------------|---------------------------|--------|--------------|------|----------|
| account_1 | 5233 | termination | | | | MEXICO GUADALAJARA | -0.1878 | 523320298765 | 07/18/2017 10:49:07 +0000 | 0,0189 | Calls | sec | 83.0000 |
| Pack_3 | 5233 | origination | | | | MEXICO GUADALAJARA | 1.9740 | 523320298765 | 07/18/2017 10:49:07 +0000 | 0,9870 | Calls | sec | 119.0000 |
| Pack_3 | 5233 | origination | | | | MEXICO GUADALAJARA | 1.9740 | 523320298765 | 07/18/2017 10:49:07 +0000 | 0,9870 | Calls | sec | 81.0000 |
| account_1 | 5233 | termination | | | | MEXICO GUADALAJARA | -0.1878 | 523320298765 | 07/18/2017 10:49:07 +0000 | 0,0189 | Calls | sec | 119.0000 |
| account_1 | 5233 | termination | | | | MEXICO GUADALAJARA | -0.1878 | 523320298765 | 07/18/2017 10:49:07 +0000 | 0,0189 | Calls | sec | 81.0000 |

Invoices Templates

In this article

- [Section overview](#)
- [Creating a New Invoice Template](#)
 - [New XLS Template creation](#)
 - [New PDF Template creation](#)
- [Method of Calculating and Rounding Values](#)

Section overview

Invoices Templates is a convenient tool that makes the whole process of invoicing less time consuming and much more convenient and effective. It allows you to create custom invoice templates that would address your particular needs. The section is presented in the form of a table of invoices templates with the following columns (see screenshot below):

Screenshot: *Invoices Templates section main window*



| Column Name | Description |
|-----------------|--|
| ID | Invoice template's identification number |
| Name | Name of an invoice template |
| Type | Type of an invoice template format (.pdf/.xls) |
| Reseller | List of resellers corresponding invoice template was assigned to |
| Notes | Additional information on a template |

Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows to create a new invoice template in .pdf format |
| | Allows to create a new invoice template in .xls format |
| | Allows to delete an invoice template from the system |

Creating a New Invoice Template

When creating a new template, you need to choose its type. Currently, there are **two types** – **.xls** and **.pdf**. For creating a new template, click the respective button: **New XLS Template** or **New PDF Template**.

New XLS Template creation

Screenshot: *New XLS invoice template creation form*

Invoices Templates

| | |
|--|--|
| <p>Name: <input type="text"/></p> <p>Reseller: <input type="text"/></p> <p>Anonymized Codes: <input type="text"/></p> <p>Locale: <input type="text" value="English"/></p> <p>Totals Calculation: <input type="text" value="Round then sum"/></p> <p>Taxes Calculation: <input type="text" value="Percent from total amount"/></p> <p><input type="checkbox"/> Attach xDRs list to the invoice </p> | <p>Notes: <div style="border: 1px solid #ccc; height: 60px; width: 100%;"></div></p> |
|--|--|

EXCEL TEMPLATE PARAMETERS

| | |
|---|---|
| <p>Statistics Columns: <input type="text"/></p> <p><input type="checkbox"/> Include packages charges to invoice</p> | <p>Template: <input type="text" value="default"/></p> |
|---|---|

| Section | Fields Description | | |
|---|---|---|--|
| General Information | General information about the invoice template | | |
| | <ul style="list-style-type: none"> Name | Unique name to differentiate invoice templates | |
| | <ul style="list-style-type: none"> Reseller | Reseller who owns this invoice template | |
| | <ul style="list-style-type: none"> Anonymized Codes | Code Deck, whose codes and their respective names will be hidden in the invoice | |
| | <ul style="list-style-type: none"> Locale | Language for the text representation of totals in the invoice | |
| | <ul style="list-style-type: none"> Totals Calculation | The order of rounding while calculating the totals: <ul style="list-style-type: none"> round then sum - raw values are rounded first according to the currency settings, then summed; sum then round - raw values are summed first, then rounded. | |
| | <ul style="list-style-type: none"> Taxes Calculation | The way taxes will be calculated: <ul style="list-style-type: none"> percent from total amount - taxes are calculated as a percentage from the total amount; sum of individual taxes - taxes are calculated as a sum of respective taxes. | |
| | <ul style="list-style-type: none"> Attach xDRs list to the invoice <i>checkbox</i> | If enabled, creates an xDR file for the invoicing period and attaches it to the invoice. To view advanced settings, click the icon next to its name. | |
| | <table style="width: 100%;"> <tr> <td style="width: 15%; vertical-align: top;"> <ul style="list-style-type: none"> xDRs List Format </td> <td>List of xDR file format (.csv, .xlsx)</td> </tr> </table> | <ul style="list-style-type: none"> xDRs List Format | List of xDR file format (.csv , .xlsx) |
| <ul style="list-style-type: none"> xDRs List Format | List of xDR file format (.csv , .xlsx) | | |

| | | |
|----------------------------------|---|--|
| | <ul style="list-style-type: none"> • Included Calls | Types of calls that will be included in invoices: <ul style="list-style-type: none"> • All payable - includes calls with any duration that have non-zero costs and use packages • Non-zero payable - permits including calls with a non-zero duration that either have any cost or use packages. |
| | <ul style="list-style-type: none"> • Select Columns | List of columns which can be presented in the attached xDR file |
| | <ul style="list-style-type: none"> • Notes | Additional information concerning the invoice template |
| Excel Template Parameters | Settings of an invoice template | |
| | <ul style="list-style-type: none"> • Statistics Columns | List of statistics columns. If selected, the invoice will include summary statistics with selected columns |
| | <ul style="list-style-type: none"> • Include packages charges to invoice checkbox | If enabled, the invoice will include the data on ordered packages into a current invoice for the selected period |
| | <ul style="list-style-type: none"> • Template | Defined displaying format of xDRs list in a template |

 **Tip**

When you select a **Non-zero payable** parameter in the **Attached xDRs list to the invoice** advanced settings, then:

1) created **outgoing** Invoice for Client **will have attached xDRs file with:**

- incoming/outgoing non-free calls that should be paid by the Client
- outgoing free calls with non-zero duration
- outgoing free calls by package volume limits with non-zero duration

2) created **incoming** Invoice for Client **will have attached xDRs file with:**

- incoming/outgoing non-free calls that should be paid to the Client
- incoming free calls with non-zero duration
- incoming free calls by package volume limits with non-zero duration (it's applicable in case of usage of termination limits)

 **Attention**

- xDRs table of the created invoice displays calls according to the settings of **Attach xDRs list to the invoices** settings.
- Stats table of the created Invoice shows calls included in the xDRs table.

New PDF Template creation

Screenshot: New PDF invoice template creation form

Invoices Templates
default

Name:

Reseller:

Anonymized Codes:

Locale:

Totals Calculation:

Taxes Calculation:

Attach an xDRs list to the invoice

Notes:

EDIT PDF TEMPLATE

File Edit View Insert Format Tools Table

👁️ 🔗 ↶ ↷ **B** *I* U 🔗 ⌵ ⌵ ⌵ ⌵ **A** 🖌️ ⋮

INVOICE No. {number} {sender_logo}

Date of invoice: {date}.
 To be paid within {due_days} days of invoice date.
 To be paid before {due_date}

FROM: {sender_name}
{sender_address}
Tax ID: {sender_tax_id}
Reg ID: {sender_reg_id}

TO: {receiver_name}
{receiver_address}
Tax ID: {receiver_tax_id}
Reg ID: {receiver_reg_id}

INVOICE FOR: VoIP services from {period_start} to {period_finish}, timezone GMT{tz}.

| Package Info | Cost |
|---------------------------------|---|
| {name} <small>{details}</small> | <small>{cost}</small> |
| TOTAL: | {packages_cost_total} <small>{currency}</small> |

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Invoice Settings

{number} Invoice Number
 {due_days} To be paid within (days)
 {due_date} To be paid before (date)
 {period_start} Start Period: invoicing period start
 {period_finish} Finish Period: invoicing period finish
 {date} Date of Invoice: actual invoice date
 {tz} Timezone

▶ Personal Data

▶ Stats Table

▶ Packages Table

▶ xDRs Table

▶ Custom Items Table

▶ Taxes Table

▶ Custom Taxes Table

▶ Financial Summary

▶ Global Totals

The process of creating a new *PDF* invoice template is divided into the following steps:

1. Add a table to your workspace, right-click on it, choose **Table Properties**, and define the **Class** field (*stats*, *xDRs*, *packages*, *custom_taxes*, *custom*) in the **General** tab. The table can have no Class if needed;
2. Fill a table with relevant information, which should be present in invoices by using **functional variables**, which you can pick from a list provided in the same window on the right drop-down panels;
3. After an invoice template is created, fill in its **Name** and other **fields** in the **General Information** section, then click **OK**;
4. Go to **Management > Resellers** and select your invoice template in the reseller's properties. It will ensure that **all customers** of this reseller will be using this template;
5. When creating an invoice in **Management > Invoices**, you can use an invoice template prior to generating an invoice. JeraSoft Billing includes **default .pdf templates**, called **default** and **default extended**.



For creating an invoice template for **SureTax** or **Compliance**, view the info in the [US Taxation](#) article.

⚠ Attention

Please note:

- You can select the **Time Format** (*H:M:S*) or (*M:S*) while creating a **new invoice template**. The default format is in **minutes (M)**.
- There is a package arrangement by numbers in **Invoices** and **Invoices Templates**. While generating invoices, the system sorts packages in invoices. The names of packages could include numerical symbols. Please use numerical symbols as **001 name**, **002 name**, etc. in the names of packages. Moreover, it's advisable to **avoid** names with special symbols like **%001 name**, **-001 name**.

⚠ Attention

In VCS 3.16.0.:

1. **Taxes Table** group of functional variables to display collected taxes in an invoice has been added. Taxes Table consists of the following variables:
 - **{name}** - Tax name
 - **{value}** - Tax value in percent
 - **{effective_from}** - Tax effective from date
 - **{amount}** - Tax amount
2. New **default with taxes detailstemplate** with included **Taxes Table** functional variables has been added to the section.

Method of Calculating and Rounding Values

 **Tip**

To help you avoid rounding issues with **float numbers** and **missing cents**, check out our [Best practice example](#) or read about round half to even algorithm, applied in the system, [here](#).

Services

In this article

- [Section overview](#)
- [Adding a New Service](#)

Section overview

Services, presented in this section, reflect the major utilities for billing all types of data, including **calls**, **SMSs**, **IoT events**, etc. This section represents a list of all existing services in the system.

Screenshot: Services section

| ID | Quantity | Name | Ident Code | Rating | Rating Params | Reports | Detailed Reports | Sort Order |
|----|----------|-------|------------|--------|---------------|---------|------------------|------------|
| 1 | time | Calls | calls | min | sec | min | sec | 100 |
| 3 | data | Data | data | gB | B | gB | B | 100 |
| 2 | event | SMS | sms | event | event | event | event | 100 |

Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new service |
| | Allows deleting a service from the system. Requires confirmation |

Adding a New Service

To proceed to the service creation process:

- Click the **New Service** button
- Fill in all required fields in a pop-up window (screenshot below)
- Click **OK**

Screenshot: New service creation form

| Information Block | Fields Description |
|-------------------|--|
| General | General information about a service |
| | <ul style="list-style-type: none"> • Name Title of the new service |

| | | |
|--------------|---|---|
| | <ul style="list-style-type: none"> • Quantity | Type of a unit group (<i>time, event, data</i>) that will measure the service |
| | <ul style="list-style-type: none"> • Rounding Precision | Number of decimal places for volume formatting. Used in reports. |
| | <ul style="list-style-type: none"> • Ident Code | ID that will be used to identify the unit in the xDRs |
| Units | <p>Depending on a unit group chosen in the Quantity field, the following unit values will be applied to the fields of the Units section</p> <ul style="list-style-type: none"> • for time: sec, min, hour, day • for event: event • for data: B, kB (1000 B), KB (1024 B), mB (1000² B), MB (1024² B), gB (1000³ B), GB (1024³ B) | |
| | <ul style="list-style-type: none"> • Rating | Choose the unit that will be used for rates and for packages limits |
| | <ul style="list-style-type: none"> • Rating Params | Indicate the unit for extra rate parameters like Min Volume |
| | <ul style="list-style-type: none"> • Reports | Select the unit for all aggregated reports |
| | <ul style="list-style-type: none"> • Detailed Reports | Determine the unit for detailed xDR reports |

Settings

This section is designed for management of system notification messages distribution, as well as specifying the system time and date format. The section is divided into 13 information blocks listed below:

- [System Settings](#)
- [Regional Settings](#)
- [Mail Server Settings](#)
- [Reports and Processing Settings](#)
- [Output and Import/Export](#)
- [Invoicing Settings](#)
- [Filename Templates](#)
- [RADIUS Server](#)
- [SIP Server](#)
- [Dynamic Routing](#)
- [Rates Generator Settings](#)
- [Notification and Monitoring](#)
- [Autorotation and Cleaning](#)
- [Backup Settings](#)

To apply any changes, made in the section, click the  button. The whole **Settings** section is presented in the screenshot below:

Screenshot: Settings section

Signed in as: admin | [My Profile](#) | [About](#) | [Logout](#)

Management
Rates
Retail
Statistics
Tools
Routing
Configuration
Integration
System

2022-07-20 21:51:37 +0000

Settings

SYSTEM SETTINGS

| | | |
|---|--|---|
| Domain Name: | <input type="text" value="https://172.17.172.17:443"/> | The "Domain name" field must always start with "https://" and cannot be empty! |
| Public IP: | <input type="text"/> | The system public IP address used for LNP DIP requests. This field is mandatory if LNP is enabled in the system. |
| <input checked="" type="checkbox"/> Collect anonymized data | | Allow collection of the anonymized system usage statistics. It will allow us to make whole system usage experience better for you. Please note that we collect only usage data, no personal or monetary information will be collected. |

REGIONAL SETTINGS

| | | |
|----------------------------|---|---|
| Default Currency: | <input type="text" value="USD"/> | Default currency is used for routing, profitability margin check and new entities creation. |
| Default Language: | <input type="text" value="English"/> | Set default locale for the interface if not set in user preferences. |
| Timezone: | <input type="text" value="UTC"/> | Default system timezone. You can change timezone in statistic reports queries. |
| Year/Month Format: | <input type="text" value="%Y-%m"/> | Output format for year/month, you can check syntax for this field in the User Guide. |
| Date Format: | <input type="text" value="%m/%d/%Y"/> | Output format for dates, you can check syntax for this field in the User Guide. |
| Date and Time Format: | <input type="text" value="%m/%d/%Y %H:%M:%S"/> | Output format for dates and times, you can check syntax for this field in the User Guide. |
| Date and Time w/TZ Format: | <input type="text" value="%Y-%m-%d %H:%M:%S %z"/> | Output format for dates and times with a timezone, you can check syntax for this field in the User Guide. |

MAIL SERVER SETTINGS

| | | |
|-------------------|--|--|
| SMTP Credentials: | <input type="text" value="Default SMTP"/> | Credentials of SMTP server to be used for system notifications (e.g. Events Watcher, Reports To Email, etc). |
| From: | <input type="text" value="bilbery@localhost"/> | Specify email address to send mail from, it is a system address for the SMTP server, not the one that appears in the "From" field in emails. |

REPORTS AND PROCESSING SETTINGS

| | | |
|---|--|---|
| Files Collector Workers: | <input type="text" value="1"/> | Number of parallel workers running files collector tasks. |
| Statistics processing order: | <input type="text" value="old calls first"/> | Order of statistics processing when the queue is large. |
| Calculator Workers: | <input type="text" value="4"/> | Number of parallel workers running calculator tasks (number of CPU cores / 2). |
| <input type="checkbox"/> Round Monetary Value | | Round monetary value in xDRs report and xDRs files. Default without rounding. |
| <input type="checkbox"/> Cross-Gateway Connection | | Used for Orig-Term and Profit Reports : allows Reports Generator tool to concatenate orig and term legs from different gateways. |

OUTPUT AND IMPORT/EXPORT

| | | |
|--------------------|------------------------------------|---|
| Items per Page: | <input type="text" value="20"/> | Default number of items per page in the system interfaces. |
| CSV Delimiter: | <input type="text" value=","/> | Default delimiter used for CSV files when importing/exporting. |
| CSV Decimal Point: | <input type="text" value="."/> | What will be used as a decimal separation point for numbers ("," for most cases). |
| Hidden Numbers: | <input type="text" value="0"/> | The number of digits, which must be hidden in a destination number. |
| Import Encoding: | <input type="text" value="UTF-8"/> | Encoding that will be used during importing data from a file. |
| Export Encoding: | <input type="text" value="UTF-8"/> | Encoding that will be used during importing data from a file. |

INVOICING SETTINGS

| | | |
|---|--|---|
| Invoice No Template: | <input type="text" value="%Y%m%Yx"/> | Format for Invoices No, you can use next replacements: %Y - current year, %m - current month, %d - current day, %C - client ID, %N - client name, %x - system incremental integer, %X - reseller incremental integer. |
| Invoice Last No: | <input type="text" value="100332"/> | Last Invoice No used in the system for invoices generation. |
| Autoinvoicing Default State: | <input type="text" value="to verify"/> | Default state for all automatically created invoices. |
| Autoinvoicing Delay: | <input type="text" value="5 hour(s)"/> | Time in hours that system is going to wait from the end of a previous day before invoicing. Required to be a positive integer. Otherwise, the system will invoice a customer before the moment of full statistics process. Recommended value is around 5-6 hours. |
| <input type="checkbox"/> Check for empty code names in invoices | | In case invoice template shows code names, but the "Code Name" field is not presented in a rate table of a client, invoice will not be generated. |
| <input type="checkbox"/> Allow Zero Invoices | | Enables creation of zero invoices. |

FILENAME TEMPLATES

| | | |
|-------------------------------|---|--|
| Invoice File: | <input type="text" value="{{no}}"/> | Template for Invoice filename |
| Attached xDR File: | <input type="text" value="{{no}}-XDR"/> | Template for Invoice attached xDR filename |
| Rates Export File: | <input type="text" value="rates-{{rate_tables_name}}-{{date}}_{{time}}"/> | Template for Rates export filename |
| Rates Notification (all): | <input type="text" value="rates-all-{{companies_name}}-for-{{clients_name}}-{{tech_prefix}}-{{time_profiles_name}}-{{date_utc}}_{{time_utc}}"/> | Template for Rates notification filename in <i>(all)</i> mode |
| Rates Notification (changed): | <input type="text" value="rates-changed-{{companies_name}}-for-{{clients_name}}-{{tech_prefix}}-{{time_profiles_name}}-{{date_utc}}_{{time_utc}}"/> | Template for Rates notification filename in <i>(changed)</i> mode |
| Rates Notification (unique): | <input type="text" value="rates-all-{{companies_name}}-for-{{clients_name}}-{{tech_prefix}}-{{time_profiles_name}}-{{date_utc}}_{{time_utc}}"/> | Template for Rates notification filename in <i>(only changed)</i> mode |
| Reports To Email File: | <input type="text" value="{{reports_module}}-{{reports_queries_name}}-{{date_utc}}"/> | Template for Reports To Email filename |

RADIUS SERVER

| | | |
|---|-----------------------------------|---|
| Bind to Address: | <input type="text"/> | Specify your server IP address to bind to, empty field means bind to all addresses. |
| Accounting Port: | <input type="text" value="1813"/> | Listen for accounting packets on a specified port. |
| Authorization Port: | <input type="text" value="1812"/> | Listen for authorization packets on a specified port, same for dynamic routing if available. |
| Number of Workers: | <input type="text" value="2"/> | Number of threads that process packets. The value of this parameter also affects the number of SIP workers. |
| Max Call Length: | <input type="text" value="7200"/> | Maximum call duration in seconds, for customers with unlimited credit . |
| Max Routes Quantity: | <input type="text" value="10"/> | Maximum routes quantity to be returned. |
| Changes will be applied only after you restart RADIUS server from the Task Scheduler section. | | |

SIP SERVER

| | | |
|----------------------|-----------------------------------|--|
| SIP Port: | <input type="text" value="5060"/> | Listen for auth packets on a specified port. |
| Max Routes Quantity: | <input type="text" value="10"/> | Maximum routes quantity to be returned. |

DYNAMIC ROUTING

| | | |
|------------------------------|---|---|
| Analyze Period: | <input type="text" value="300"/> minute(s) | How many last minutes of statistics will be analyzed to build a routing table. |
| Minimal Statistics Quantity: | <input type="text" value="100"/> | Minimal quantity of statistics records required for considering quality factors. Otherwise defined default values will be used. |
| Default ASR: | <input type="text" value="30"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default ACD: | <input type="text" value="2"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default PDD: | <input type="text" value="1"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default SCD: | <input type="text" value="5"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |

| RATES GENERATOR SETTINGS | |
|--------------------------|---|
| Number of workers: | <input type="text" value="4"/> Number of threads that process rates generation. |
| Rates Generation Delay: | <input type="text" value="1"/> hour(s) System will start Automatic Rates Generation in given amount of hours after the sources rates changes. |

| NOTIFICATION AND MONITORING | |
|--|--|
| <input checked="" type="checkbox"/> Event on Missing Account | Send an event to events log, when client/account was not identified during processing of XDRs or RADIUS Authorization. |
| <input checked="" type="checkbox"/> Event on Missing Rate | Send an event to events log, when destination/rate was not identified during processing of XDRs or RADIUS Authorization. |
| <input type="checkbox"/> Event on zero time calls | Send events even if a call has zero length. |
| Rate changes notification period: | <input type="text" value="300"/> minute(s) Customer will be informed regarding rates changes in given amount of minutes after the actual change. |

| AUTOROTATION AND CLEANING | |
|--------------------------------------|---|
| Delete events from log after: | <input type="text" value="1"/> day(s) (from 1 to 90) Delete events from Events Log after a specified period of days. |
| Statistics Archiving Delay: | <input type="text" value="35"/> day(s) (0 - do not archive) Archive statistics in advance. Advance archiving minimizes the time needed for backup. |
| Statistics Rotate Delay: | <input type="text" value="100"/> day(s) (0 - do not rotate) Rotate statistics to archive after specified number of days. |
| Delete not actual rates after: | <input type="text" value="360"/> day(s) (0 - do not delete) Delete rates from the system when they are not relevant for a specified number of days from the end date. |
| Delete parsed xDR files after: | <input type="text" value="180"/> day(s) (0 - do not delete) Number of days, after which already parsed and processed xDR files must be deleted from the local server. |
| Delete archived log files after: | <input type="text" value="90"/> day(s) (0 - do not delete) Number of days, after which archived log files must be deleted from the local server. |
| Delete emails from Mail Queue after: | <input type="text" value="365"/> day(s) (0 - do not delete) Number of days, after which emails from Mail Queue must be deleted from the local server. |

| BACKUP SETTINGS | |
|-----------------------------------|--|
| System Backup Period: | <input type="text" value="167"/> hour(s) (0 - do not backup) How often to backup the system. Please note that actual backup will be done at the time when the Backup Manager process runs. |
| Destination for Backup Packages: | <input type="text" value="/opt/jerasoft/backups"/> Absolute path where to put backup packages. It cannot be inside the root of the system. |
| Include into backup: | <input type="text" value="Database"/> Which components of system should be included into backup. |
| Disk usage threshold: | <input type="text" value="40"/> % Threshold for backup size relative to free disk space. Contact Support Team if you need to change the value. |
| Leave last X Packages: | <input type="text" value="3"/> How many last backup packages to leave. |
| Number of Backup Manager workers: | <input type="text" value="1"/> Number of threads that run database backup. |

[Update](#)

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Warning

We strongly recommend that you **do not add any symbols** (for example, a slash) after a domain name.

System Settings

The **System Settings** information block contains default system parameters specified below:

Screenshot: *System Settings window*

| SYSTEM SETTINGS | |
|--|---|
| Domain Name: <input type="text"/> | The "Domain name" field must always start with "https://" and cannot be empty! |
| Public IP: <input type="text"/> | The system public IP address used for LNP DIP requests. This field is mandatory if LNP is enabled in the system. |
| <input type="checkbox"/> Collect anonymized data | Allow collection of the anonymized system usage statistics. It will allow us to make whole system usage experience better for you. Please note that we collect only usage data, no personal or monetary information will be collected. |

| Field | Description |
|---|---|
| Domain Name | Enter relevant domain address of your JeraSoft Billing server. In most cases, JeraSoft Billing IP address should be entered here. Please note, if this name is specified incorrectly , you may experience issues with reseller logos display |
| Public IP | Specify an Internet Protocol address that LNP DIP requests |
| Collect Anonymized Data checkbox | Allows collecting anonymized system usage statistics |

Regional Settings

The **Regional Settings** information block contains the following fields:

Screenshot: *Regional Settings block*

| REGIONAL SETTINGS | | |
|----------------------------|----------------------|---|
| Default Currency: | USD | Default currency is used for routing, profitability margin check and new entities creation. |
| Default Language: | English | Set default locale for the interface if not set in user preferences. |
| Timezone: | UTC | Default system timezone. You can change timezone in statistic reports queries. |
| Year/Month Format: | %Y-%m | Output format for year/month, you can check syntax for this field in the User Guide. |
| Date Format: | %m/%d/%Y | Output format for dates, you can check syntax for this field in the User Guide. |
| Date and Time Format: | %m/%d/%Y %H:%M:%S | Output format for dates and times, you can check syntax for this field in the User Guide. |
| Date and Time w/TZ Format: | %Y-%m-%d %H:%M:%S %z | Output format for dates and times with a timezone, you can check syntax for this field in the User Guide. |

| Field | Description | | | | | | | | | | |
|-----------------------------|---|------|---|------|--|------|---|------|---|------|---|
| Default Currency | Specify currency that will be used as the default for the generation of routing and new entities creation (accounts, invoices, transactions, clients, resellers, etc.). However, this currency won't be used for reports. | | | | | | | | | | |
| Default Language | Select your default language for the system. You can change it to your preferred language at any time . | | | | | | | | | | |
| Timezone | Select your default timezone | | | | | | | | | | |
| Year/Month Format | Specify how year/month will be displayed here <table border="1"> <tbody> <tr> <td>• %Y</td> <td>Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010</td> </tr> <tr> <td>• %m</td> <td>Month number. Allowed values: from 01 to 12</td> </tr> </tbody> </table> | • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 | • %m | Month number. Allowed values: from 01 to 12 | | | | | | |
| • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 | | | | | | | | | | |
| • %m | Month number. Allowed values: from 01 to 12 | | | | | | | | | | |
| Date Format | Specify date parameters here <table border="1"> <tbody> <tr> <td>• %d</td> <td>Day of the month in numeric form. Allowed values: from 01 to 31</td> </tr> <tr> <td>• %m</td> <td>Month number. Allowed values: from 01 to 12</td> </tr> <tr> <td>• %Y</td> <td>Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010</td> </tr> </tbody> </table> | • %d | Day of the month in numeric form. Allowed values: from 01 to 31 | • %m | Month number. Allowed values: from 01 to 12 | • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 | | | | |
| • %d | Day of the month in numeric form. Allowed values: from 01 to 31 | | | | | | | | | | |
| • %m | Month number. Allowed values: from 01 to 12 | | | | | | | | | | |
| • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 | | | | | | | | | | |
| Date and Time Format | Specify the date and time parameters here <table border="1"> <tbody> <tr> <td>• %d</td> <td>Day of the month in numeric form. Allowed values: from 01 to 31</td> </tr> <tr> <td>• %m</td> <td>Month number. Allowed values: from 01 to 12</td> </tr> <tr> <td>• %Y</td> <td>Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010</td> </tr> <tr> <td>• %H</td> <td>Hours in 24-hour format with leading zeroes. Allowed values: from 00 to 23</td> </tr> <tr> <td>• %M</td> <td>Minutes with leading zeroes. Allowed values: from 00 to 59</td> </tr> </tbody> </table> | • %d | Day of the month in numeric form. Allowed values: from 01 to 31 | • %m | Month number. Allowed values: from 01 to 12 | • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 | • %H | Hours in 24-hour format with leading zeroes. Allowed values: from 00 to 23 | • %M | Minutes with leading zeroes. Allowed values: from 00 to 59 |
| • %d | Day of the month in numeric form. Allowed values: from 01 to 31 | | | | | | | | | | |
| • %m | Month number. Allowed values: from 01 to 12 | | | | | | | | | | |
| • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 | | | | | | | | | | |
| • %H | Hours in 24-hour format with leading zeroes. Allowed values: from 00 to 23 | | | | | | | | | | |
| • %M | Minutes with leading zeroes. Allowed values: from 00 to 59 | | | | | | | | | | |

| | | |
|---------------------------------------|---|---|
| | <ul style="list-style-type: none"> • %S | Seconds with leading zeroes. Allowed values: from 00 to 59 |
| Date and Time w /TZ Format | Specify the date and time with timezone parameters here | |
| | <ul style="list-style-type: none"> • %d | Day of the month in numeric form. Allowed values: from 01 to 31 |
| | <ul style="list-style-type: none"> • %m | Month number. Allowed values: from 01 to 12 |
| | <ul style="list-style-type: none"> • %Y | Number of the year that consists of 4 numbers. Value example: 1999, 2005, 2010 |
| | <ul style="list-style-type: none"> • %H | Hours in 24-hour format with leading zeroes. Allowed values: from 00 to 23 |
| | <ul style="list-style-type: none"> • %M | Minutes with leading zeroes. Allowed values: from 00 to 59 |
| | <ul style="list-style-type: none"> • %S | Seconds with leading zeroes. Allowed values: from 00 to 59 |
| | <ul style="list-style-type: none"> • %z | Timezone settings |

 **Attention**

If you change the **Default Currency**, you need to restart the **Dynamic Routing Manager** in the **Task Scheduler** section for an immediate **Routing Analysis** functioning.

Mail Server Settings

This information block allows you to specify mail server settings:

Screenshot: Mail Server Settings window

| MAIL SERVER SETTINGS | | |
|----------------------|--------------------|---|
| SMTP Credentials: | Default SMTP | Credentials of SMTP server to be used for system notifications (e.g. Events Watcher, Reports Watcher, etc) |
| From: | billbery@localhost | Specify email address to send mail from, it is a system address for the SMTP server, not the one that appears in the "From" field in emails |

| Field | Description |
|-------------------------|--|
| SMTP Credentials | Select SMTP Credentials that you want to be used by the system (Credentials are managed in the Data Sources section) |
| From | Email address that will be specified as a sender |

Reports and Processing Settings

This information block contains the following reports settings information:

Screenshot: *Reports and Processing Settings window*

| REPORTS AND PROCESSING SETTINGS | |
|---|--|
| Files Collector Workers: <input type="text" value="1"/> | Number of parallel workers running files collector tasks. |
| Statistics processing order: <input type="text" value="old calls first"/> | Order of statistics processing when the queue is large. |
| Calculator Workers: <input type="text" value="4"/> | Number of parallel workers running calculator tasks (number of CPU cores / 2). |
| Calculator Mode: <input type="text" value="periodically run"/> | Select calculator processing mode: periodically run – runs every X minutes by Task Scheduler; faster processing of xDR bulks, but causes some delay. realtime process – processes calls in realtime; slower processing in case of xDR bulks; use only if you really need realtime. |
| <input type="checkbox"/> Round Monetary Value | Round monetary value in xDRs report and xDRs files. Default without rounding. |
| <input type="checkbox"/> Cross-Gateway Connection | Used for Orig-Term and Profit Reports : allows Reports Generator tool to concatenate orig and term legs from different gateways. |

| Field | Description |
|--|---|
| Files Collector Workers | Specify the number of threads processing files collection tasks |
| Statistics Processing Order | Specify what statistics to process first (newer or older)Specify the number of threads processing calculator tasks (number of CPU cores/2) |
| Calculator Workers | Specify the number of threads processing calculator tasks (number of CPU cores/2) |
| Calculator Mode | Defines the calculator workout , whether it will start periodically through Task Scheduler, or will be constantly running |
| Round monetary value checkbox | Forces the values in the xDRs report and xDRs files to be rounded according to currency settings |
| Cross-gateway connection checkbox | Applies to Orig-Term and Profit Reports . When marked, it allows concatenating of orig and term records from different gateways by the Reports Generator tool |

Output and Import/Export

In this information block, you can specify output and import/export parameters, including time and date parameters configuration:

Screenshot: *Output and Import/Export settings window*

| OUTPUT AND IMPORT/EXPORT | | |
|--------------------------|-------|---|
| Items per Page: | 20 | Default number of items per page in the system interfaces. |
| CSV Delimiter: | , | Default delimiter used for CSV files when importing/exporting. |
| CSV Decimal Point: | , | What will be used as a decimal separation point for numbers ("," for most cases). |
| Hidden Numbers: | 0 | The number of digits, which must be hidden in a destination number. |
| Import Encoding: | UTF-8 | Encoding that will be used during importing data from a file. |
| Export Encoding: | UTF-8 | Encoding that will be used during importing data from a file. |

| Field | Description |
|--------------------------|---|
| Items per Page | Set default quantity of items displayed on a single page |
| CSV Delimiter | Set default delimiter for CSV files |
| CSV Decimal Point | Set default decimal point for CSV files |
| Hidden Numbers | Specify how many digits of a number should be hidden when this function is activated for a customer |
| Output Encoding | Select which encoding to use when exporting a file |
| Import Encoding | Select which encoding to use while importing data from a file |

Invoicing Settings

Below, you will find a list of fields of the **Invoicing Settings** information block:

Screenshot: *Invoicing Settings window*

| INVOICING SETTINGS | | |
|------------------------------|--|---|
| Invoice No Template: | <input type="text" value="%Y%m/%x"/> | Format for Invoices No, you can use next replacements: %Y - current year, %m - current month, %d - current day, %C - client ID, %N - client name, %x - system incremental integer, %X - reseller incremental integer |
| Invoice Last No: | <input type="text" value="100332"/> | Last Invoice No used in the system for invoices generation |
| Autoinvoicing Default State: | <input type="text" value="to verify"/> | Default state for all automatically created invoices. |
| Autoinvoicing Delay: | <input type="text" value="0"/> hour(s) | Time in hours that system is going to wait from the end of a previous day before invoicing. Required to be a positive integer. Otherwise, the system will invoice a customer before the moment of full statistics process. Recommended value is around 5-6 hours. |
| <input type="checkbox"/> | Check for empty code names in invoices | In case invoice template shows code names, but the "Code Name" field is not presented in a rate table of a client, invoice will not be generated. |
| <input type="checkbox"/> | Allow Zero Invoices | Enables creation of zero invoices. |

| Field | Description |
|--|---|
| Invoice No Template | Default template for invoice number |
| Invoice Last No | Number of the last issued invoice |
| Autoinvoicing Default State | Set the state for all automatically created invoices by choosing one of the following field values: <ul style="list-style-type: none"> • normal • to sent • to verify |
| Autoinvoicing Delay | Time in hours the system will wait until performing invoicing |
| Check empty code names in invoices checkbox | Enables checking of the correspondence of a Code with a Code name , and, in case of any mismatches , the system will give an alert and an invoice will not be generated |
| Allow Zero Invoices checkbox | Allows to create invoices with zero amount |

Filename Templates

Below, you will find a list of fields of the **Filename Templates** information block:

Screenshot: *Filename Templates* window

| FILENAME TEMPLATES | |
|-------------------------------|---|
| Invoice File: | <input type="text" value="{{no}}"/> Template for Invoice filename |
| Attached xDR File: | <input type="text" value="{{no}}-XDR"/> Template for Invoice attached xDR filename |
| Rates Export File: | <input type="text" value="rates-{{rate_tables_name}}-{{date}}_{{time}}"/> Template for Rates export filename |
| Rates Notification (all): | <input type="text" value="rates-all-{{companies_name}}-for-{{clients_name}}-{{tech_prefix}}-{{time_profiles_name}}-{{date_utc}}_{{time_utc}}"/> Template for Rates notification filename in <i>(all)</i> mode |
| Rates Notification (changed): | <input type="text" value="rates-changed-{{companies_name}}-for-{{clients_name}}-{{tech_prefix}}-{{time_profiles_name}}-{{date_utc}}_{{time_utc}}"/> Template for Rates notification filename in <i>(changed)</i> mode |
| Rates Notification (unique): | <input type="text" value="rates-all-{{companies_name}}-for-{{clients_name}}-{{tech_prefix}}-{{time_profiles_name}}-{{date_utc}}_{{time_utc}}"/> Template for Rates notification filename in <i>(only changed)</i> mode |
| Reports To Email File: | <input type="text" value="{{reports_module}}-{{reports_queries_name}}-{{date_utc}}"/> Template for Reports To Email filename |

| Field | Description |
|-------------------------------------|---|
| Invoice File | Default template for invoice filename |
| Attached xDR File | Default template for attached xdr filename |
| Rates Export File | Default template for Rates export filename |
| Rates Notification (all) | Default template for Rates notification filename in <i>(all)</i> mode |
| Rates Notification (changed) | Default template for Rates notification filename in <i>(changed)</i> mode |
| Rates Notification (unique) | Default template for Rates notification filename in <i>(only changed)</i> mode |
| Reports to Email File | Default template for Reports to Email filename |

RADIUS Server

JeraSoft Billing **RADIUS server** settings can be managed in this information block:

Screenshot: *RADIUS Server settings window*

| RADIUS SERVER | | |
|--|-----------------------------------|---|
| Bind to Address: | <input type="text"/> | Specify your server IP address to bind to, empty field means bind to all addresses. |
| Accounting Port: | <input type="text" value="1813"/> | Listen for accounting packets on a specified port. |
| Authorization Port: | <input type="text" value="1812"/> | Listen for authorization packets on a specified port, same for dynamic routing if available. |
| Number of Workers: | <input type="text" value="2"/> | Number of threads that process packets. The value of this parameter also affects the number of SIP workers. |
| Max Call Length: | <input type="text" value="7200"/> | Maximum call duration in seconds, for customers with unlimited credit . |
| Max Routes Quantity: | <input type="text" value="10"/> | Maximum routes quantity to be returned. |
| Changes will be applied only after you restart RADIUS server from the System Services section. | | |

| Field | Description |
|----------------------------|---|
| Bind to Address | Specify your JeraSoft Billing server IP addresses , separated by a comma, to bind RADIUS to |
| Accounting Port | Specify the accounting port here. By default, the field value is 1813 |
| Authorization Port | Specify the authorization port here. By default, the field value is 1812 |
| Number of Workers | Number of RADIUS workers . The value of this parameter also affects SIP workers' number . |
| Max Routes Quantity | Limit maximum routes quantity to be returned. Default - 10 |

SIP Server

JeraSoft Billing **SIP Server** settings can be managed in this information block:

Screenshot: *SIP Server settings window*

| SIP SERVER | |
|----------------------|--|
| SIP Port: | <input type="text" value="5060"/> Listen for auth packets on a specified port. |
| Max Routes Quantity: | <input type="text" value="10"/> Maximum routes quantity to be returned. |

| Field | Description |
|----------------------------|--|
| SIP Port | Specify the SIP port here. By default, the field value is 5060 |
| Max Routes Quantity | Limit maximum routes quantity to be returned. Default - 10 |

Dynamic Routing

Settings for JeraSoft Billing Dynamic Routing is presented in the information block with the following fields:

Screenshot: *Dynamic Routing settings window*

| DYNAMIC ROUTING | | |
|------------------------------|--|---|
| Analyze Period: | <input type="text" value="300"/> minute(s) | How many last minutes of statistics will be analyzed to build a routing table. |
| Minimal Statistics Quantity: | <input type="text" value="100"/> | Minimal quantity of statistics records required for considering quality factors. Otherwise defined default values will be used. |
| Default ASR: | <input type="text" value="30"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default ACD: | <input type="text" value="2"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default PDD: | <input type="text" value="1"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default SCD: | <input type="text" value="5"/> | Default value to use, if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |

| Field | Description |
|------------------------------------|--|
| Analyze Period | A number of minutes of last available statistics that will be used to build a routing table |
| Minimal Statistics Quantity | Minimal quantity of statistics records required for considering quality factors. Otherwise, defined default values will be used. |
| Default ASR | Default value to use if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default ACD | Default value to use if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default PDD | Default value to use if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |
| Default SCD | Default value to use if statistics quantity volume is not reached by particular vendor. Minimal allowed value is 0.1. |

Rates Generator Settings

The **Rates Generator Settings** information block contains the fields specified below:

Screenshot: *Rates Generator Settings window*

| RATES GENERATOR SETTINGS | |
|--|--|
| Number of workers: <input type="text" value="4"/> | Number of threads that process rates generation. |
| Rates Generation Delay: <input type="text" value="1"/> hour(s) | System will start Automatic Rates Generation in given amount of hours after the sources rates changes. |

| Field | Description |
|--|---|
| Number of workers | Specify the number of system workers that run rates generation . |
| Rates Generation Delay, hour(s) | Specify rates generation delay (for example, if you enter 3 as a value, the system will generate rates in three hours after the sources rates changes). |

Notification and Monitoring

Notification messages distribution and other monitoring settings contain the underwritten fields:

Screenshot: Notification and Monitoring settings window

| NOTIFICATION AND MONITORING | | |
|-------------------------------------|---|---|
| <input checked="" type="checkbox"/> | Event on Missing Account | Send an event to events log, when client/account was not identified during processing of XDRs or RADIUS Authorization |
| <input checked="" type="checkbox"/> | Event on Missing Rate | Send an event to events log, when destination/rate was not identified during processing of XDRs or RADIUS Authorization |
| <input type="checkbox"/> | Event on zero time calls | Send events even if a call has zero length |
| Resend low-balance events every: | <input type="text" value="24"/> hour(s) | How often to resend email regarding low customer's balance |
| Rate changes notification period: | <input type="text" value="5"/> hour(s) | Customer will be informed regarding rates changes in given amount of hours after the actual change. |
| Watch for free space at: | <input type="text" value="/opt/jerasoft:20;/var/lib/pgsql:30"/> | Monitor free disk space. You can specify full path where to monitor and percent of space delimited by ":". When free space is less than specified percent of the whole disk size - the system will send an alert. |

| Field | Description |
|--|---|
| Event on Missing Account checkbox | If checked, activates notification sending when no account was found |
| Event on Missing Rate checkbox | If checked, activates notification sending when no rate was found |
| Event on zero time calls checkbox | If checked, activates all previous checkboxes effects when calls with zero duration were found |
| Resend low balance events every, hour(s) | Set the frequency of low balance notification resending service |
| Rate changes notification period, hour(s) | Specify the frequency of rate changes notification period |
| Watch for free space at | <p>Here you can specify folders that will be monitored for available disk space. To add a folder, specify its path, and by using the ":" <i>symbol</i>, choose the percentage of disk space, below which the system will send warning notifications.</p> <p>For example, /opt/jerasoft:20 means that if free disk space is below 20 percent in the /opt/jerasoft/ folder, the notification will be sent. You can add multiple folders in this field by delimiting them with the ":" <i>symbol</i>.</p> |

Autorotation and Cleaning

Automatic statistics and backup management parameters are configured here:

Screenshot: *Autorotation and Cleaning settings window*

| AUTOROTATION AND CLEANING | | |
|--------------------------------------|---|---|
| Delete events from log after: | <input type="text" value="1"/> day(s) (from 1 to 90) | Delete events from Events Log after a specified period of days. |
| Statistics Archiving Delay: | <input type="text" value="0"/> day(s) (0 - do not archive) | Archive statistics in advance. Advance archiving minimizes the time needed for backup. |
| Statistics Rotate Delay: | <input type="text" value="100"/> day(s) (0 - do not rotate) | Rotate statistics to archive after specified number of days. |
| Delete not actual rates after: | <input type="text" value="360"/> day(s) (0 - do not delete) | Delete rates from the system when they are not relevant for a specified number of days from the end date. |
| Delete parsed xDR files after: | <input type="text" value="180"/> day(s) (0 - do not delete) | Number of days, after which already parsed and processed xDR files must be deleted from the local server. |
| Delete archived log files after: | <input type="text" value="90"/> day(s) (0 - do not delete) | Number of days, after which archived log files must be deleted from the local server. |
| Delete emails from Mail Queue after: | <input type="text" value="365"/> day(s) (0 - do not delete) | Number of days, after which emails from Mail Queue must be deleted from the local server. |

| Field | Description |
|--|--|
| Delete events from log after | Specify the number of days , in which events will be removed from the log-files (when 0 is the value – events won't be deleted) |
| Statistics Archiving Delay | Here, it's possible to archive the statistics in advance to reduce the backup time (by default, 35 days is set here. When 0 is the value – events won't be archived) |
| Statistics Rotate Delay | Specify statistics packages rotation delay (for example, if you enter 3 as a value, all statistics packages that are older than 3 days will be automatically archived) |
| Delete not actual rates after | Cleans non-actual rates from the database when effective date is older than a specified number of days |
| Delete parsed xDR files after | Define when the system should delete old parsed xDR-files |
| Delete archived log files after | Define when the system should delete archived log-files |
| Delete emails from Mail Queue after | Define when the system should delete emails from Mail Queue |

Backup Settings

Backup settings are presented with the following fields:

Screenshot: Backup Settings window

| BACKUP SETTINGS | | |
|-----------------------------------|--|---|
| System Backup Period: | <input type="text" value="167"/> hour(s) (0 - do not backup) | How often to backup the system. Please note that actual backup will be done at the time when the Backup Manager process runs. |
| Destination for Backup Packages: | <input type="text" value="/opt/jerasoft/backups"/> | Absolute path where to put backup packages. It cannot be inside the root of the system. |
| Include into backup: | <input type="text" value="Database"/> | Which components of the system should be included into backup. |
| Disk usage threshold: | <input type="text" value="40 %"/> | Threshold for backup size relative to free disk space. Contact Support Team if you need to change the value. |
| Leave last X Packages: | <input type="text" value="3"/> | How many last backup packages to leave. |
| Number of Backup Manager workers: | <input type="text" value="1"/> | Number of threads that run database backup. |

| Field | Description |
|---|--|
| System Backup Period | The field value specifies when the system should backup itself (for example, if you enter 24 as a value, it will mean that the system will backup itself every 24 hours). |
| Destination for Backup Packages | Absolute path to the folder where the system backup copies will be stored . <div style="background-color: #ffe6e6; padding: 5px;"> <p>Warning</p> <p>This folder shouldn't be within any system folder!</p> </div> |
| Include into backup | Specify components of the system which should be included into backup. |
| Disk usage threshold | The percentage value of the disk space that backup needs free for correct work. |
| Leave last X Packages | This Parameter specifies how many backup copies will be stored at one given time (for example, if you enter 3 as a value, only three copies will be stored. When the fourth copy is added, the oldest one will be deleted). |
| Number of Backup Manager workers | Specify the number of system managers that run a database backup . |



Attention

The backup will not be created if the disk size is not enough.

Integration

This chapter of our Guide focuses upon sections that are called to govern the **integration process** of 3rd party software **with JeraSoft Billing**. Please look for more information on the following sections:

- [Gateways](#)
- [Number Portability](#)
- [Data Sources](#)
- [Provisioning API](#)
- [CoreAPI Docs](#)

Gateways

In this article

- [Section overview](#)
- [Adding a New Gateway](#)
- [Files Downloading History](#)
- [Knowledge Base Articles](#)

Section overview

This section allows you to configure and integrate all switches into billing via RADIUS, SIP or xDR-files upload.

The section is presented in the form of a table of all created gateways in the system with the following columns (see screenshot):

Screenshot: Gateways section

| ID | Name | RADIUS Server | Files Collector | SIP Server |
|----|----------------------------|-------------------------|---|------------|
| 22 | SMS Gateway 127.0.0.3 | JeraSoft Billing Common | — | — |
| 17 | DIAMETER_TEST 127.0.0.2 | — | — | — |
| 14 | Data Gateway 127.0.0.4 | JeraSoft Billing Common | — | — |
| 16 | Calls Gateway 127.0.0.1 | Aloe MVTS I | — | — |
| 23 | Voip 192.168.1.1 | Nexge | JeraSoft Billing Common 127.0.0.1(admin). From path: /ect/openvpn/ view history | — |

| Column | Description |
|------------------------|--|
| ID | ID number of a gateway |
| Name | Name of a gateway |
| RADIUS Server | Description of current status and collector type of RADIUS Server (if such is applied) |
| Files Collector | Description of current status and collector type of applied Files Collector (if such is applied) |
| SIP Server | Description of current status and collector type of applied SIP Server (if such is applied) |

The following **functional buttons/icons** are present in the section:

| Button/Icon | Description |
|-------------|--|
| | Allows to create a new gateway |
| | Allows to set up traffic processing rules |
| | Displays a current status - enabled or disabled - of RADIUS/SIP Server, Files Collector. |
| | Allows deleting a gateway from the system. Requires confirmation |

Adding a New Gateway

To add a gateway to the list, click the **New Gateway** button and specify parameters in a pop-up window with settings. You can access the advanced settings by clicking on a downward arrow icon next to the name of a respective information block.

Screenshot: Adding new Gateway

Gateways
Calls Gateway

GENERAL INFORMATION

Name:

IP Address:

Allowed for:

Service:

Tag:

FILES COLLECTOR

Collector Type: sec

Data Source:

From path:

RADIUS SERVER

Collector Type: sec

Secret:


SIP SERVER


Collector Type:

Following System Services will be restarted:

Calculator RADIUS Server SIP Redirect Server

| Information Block | Fields and Descriptions |
|----------------------------|--|
| General Information | General gateway and events processing information |
| | Name Gateway name |
| | IP Address Gateway IP address |
| | Allowed For Specify here, which resellers can use current gateway |
| | Service Select a service (calls, SMSs, data, etc.) for a current gateway |
| | Tag Indicate a particular tag to filter events by gateways while creating invoices and using reports. |
| | <p>Click the downward arrow icon next to the General Information information block to access the following advanced settings:</p> <ul style="list-style-type: none"> Ident Priority - a hierarchy of account identification. By default, the field value priority is IP, name, ANI. ORIG ANI Ident - select ANI identification of originating events (available options: Src number ext, Src number bill, Dst ext, Dst number bill) TERM ANI Ident - select ANI identification of terminating events (available options: Src number ext, Src number bill, Dst ext, Dst number bill) Rate ORIG events by Dst In code checkbox - activation/deactivation of originating events billed by DST PARTY ID IN (if <u>disabled</u>, the Dst Party ID BILL will be used) Rate TERM events by Dst Out code checkbox - activation/deactivation of terminating events billed by DST PARTY ID OUT (if <u>disabled</u>, the Dst Party ID BILL will be used) |
| Files Collector | Information block regarding the File Collector settings. Files Collector gathers event data from xDR-files (activate this option if you plan to use integration via xDR-files) |
| | <p>Select a collector type you plan to use from the list</p> <ul style="list-style-type: none"> C o l e c t o r y p |

| | |
|--|--|
| <ul style="list-style-type: none"> • D a t a S o u r c e | <p>Specify a data source, where xDR files are stored</p> |
| <ul style="list-style-type: none"> • F r o m P a t h | <p>Specify the xDR-files path (mask paths are allowed). Available only for SSH and FTP</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>If there are <code>/var/cdrs</code> folder with the latest CDR files and <code>/var/archive_cdrs/</code> folder with outdated ones, and a user needs to download CDR files from both of them, he can use <code>;</code> (semicolon) to separate paths or <code>/**/</code> for recursive download. New paths may have the following look: <code>/var/cdrs/**/bill*</code>; <code>/var/archive_cdrs/bill*</code>.</p> </div> |
| <ul style="list-style-type: none"> • S e n d e r M a t c h | <p>Indicate the sender name or email. Solely for IMAP</p> |
| <ul style="list-style-type: none"> • S u b j e c t M a t c h | <p>Use a regular expression to search by message titles. Solely for IMAP</p> |
| <p>Click the downward arrow  icon next to the Files Collector information block to access advanced settings:</p> <ul style="list-style-type: none"> • Overwrite TZ - timezone selection (if you select a different timezone, the system will ignore a timezone stored in an xDRs-file and use current value) • Skip Zero Events checkbox - activation/deactivation of zero duration events ignoring • Skip Released Events checkbox - activation/deactivation of released events ignoring | |
| <p>RADIUS Server</p> | <p>Information block regarding RADIUS Server settings. RADIUS Collectors gather packets from RADIUS-server via RADIUS-protocol (activate this option if you plan to use integration via RADIUS-protocol)</p> <ul style="list-style-type: none"> • C o l l e c t o r T y p e <p>Select a collector type you plan to use from the list</p> |

| | |
|-----------------------------------|--|
| | <ul style="list-style-type: none"> • S e c r e t <p>RADIUS-server password</p> |
| | <p>Click the downward arrow  icon next to the RADIUS Server information block to access advanced settings:</p> <ul style="list-style-type: none"> • Override TZ - timezone selection (if you select a different timezone, the system will ignore timezone information stored in an xDR file and use current value) • Track Active Events checkbox - activation/deactivation of monitoring active events and event packets. This option is required for "Active Sessions" section to work and for RADIUS capacity control. Please note, it could slow down RADIUS for about 10-30% • Skip Zero Events checkbox - activation/deactivation of zero duration events ignoring • Skip Released Events checkbox - activation/deactivation of released events ignoring • Collect Accounting Data checkbox - if disabled, information from STOP packets will not be collected by database and <i>Radius Accounting</i> will be used only for <i>Active Sessions monitoring</i>. If enabled, information from STOP packets will be collected by the database. By default, this checkbox is marked. |
| <p>SIP Server</p> | <p>Allows acceptance of SIP packets from the current gateway. Required for SIP Redirect routing feature</p> <ul style="list-style-type: none"> • C o l e c t o r T y p e <p>Select a collector type you plan to use from the list</p> |
| <p>LNP Files Collector</p> | <p>This collector processes downloaded LNP/MNP files and stores them in the database. It's accessible only when you select the LNP /MNP type of gateway.</p> <ul style="list-style-type: none"> • C o l e c t o r T y p e <p>Select a collector type you plan to use from the list</p> |

Files Downloading History

To view files downloading history, where gateway name, filename, download date, and file size will be specified, open the **Downloads History** tab. Also, you can remove files from the list by selecting them and clicking the **Delete** button above the table.

| Gateways | | Downloads History | | | | |
|-------------------------------------|------------|-------------------|---------------------------|-----------|--|--|
| ID | Name | Filename | Download Date | File size | | |
| <input type="checkbox"/> | 11 Gateway | tmpysYWfv | 01/25/2018 08:49:09 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 10 Gateway | tmpPctDgm | 01/25/2018 08:44:13 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 9 Gateway | tmp8ukyJl | 01/24/2018 15:59:04 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 8 Gateway | tmpwEYa0B | 01/24/2018 15:58:45 +0000 | 360.98 Kb | | |
| <input checked="" type="checkbox"/> | 7 Gateway | tmpHhIQoq | 01/24/2018 15:50:10 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 6 Gateway | tmp17fwZq | 01/24/2018 15:49:47 +0000 | 360.98 Kb | | |
| <input checked="" type="checkbox"/> | 5 Gateway | tmpGtD8Zk | 01/24/2018 15:49:35 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 4 Gateway | tmpJKKpHb | 01/24/2018 15:49:05 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 3 Gateway | tmp1khURr | 01/24/2018 15:42:45 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 2 Gateway | tmpFcBHwW | 01/24/2018 15:28:39 +0000 | 360.98 Kb | | |
| <input type="checkbox"/> | 1 Gateway | tmp6B_mqf | 01/24/2018 14:33:50 +0000 | 360.98 Kb | | |

Rows 1 – 11 of 11 20 Page 1 of 1

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Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Number Portability

In this article

- [Section overview](#)
- [Number Portability tab](#)
 - [Advanced Search](#)
- [Gateways tab](#)
- [Downloads History tab](#)
- [LNP/MNP Configuration](#)
- [Knowledge Base Articles](#)

Section overview

This section represents local databases (further on, we'll describe everything on the example of the two providers: **Numuri** and **TJA**). Here, you can find the list of ranges and numbers downloaded by **Files Collector**. It's intended to facilitate the administration of number portability. **Number Portability** refers to the ability to transfer either an existing fixed-line or mobile telephone number assigned by a local exchange carrier and reassign it to another carrier.

How it works

TJA (RN): During the translation of the call, the system verifies the code of a TJA number, identifies the number, and changes the Dst Number to **372+ RN Number**.

Numuri/TJA (Owner): During the translation of the call, the number is verified and the system **applies a dynamic tag** (owner's name) to the call for further billing.

The section consists of 3 tabs:

- **Number Portability**
- **Gateways**
- **Downloads History**

Number Portability tab

The tab is presented in the form of a table of ranges of numbers with the following columns:

Screenshot: Number Portability

| ID | Provider | Range Start | Range End | Owner | RN Number | Prefix | Effective Date | End Date |
|----|------------|------------------|------------------|-----------|-----------|--------|---------------------------|----------|
| 1 | Numuri | 5657000 | 5657999 | Operator1 | | | 10/20/2016 10:00:00 +0000 | |
| 2 | Numuri | 1002350 | 1002999 | Operator2 | | | 10/20/2016 10:00:00 +0000 | |
| 3 | Numuri | 5105000 | 5105999 | Operator3 | | | 10/20/2016 10:00:00 +0000 | |
| 4 | Lithuanian | 3157660200000000 | 3157660299999999 | ICSC | 95983 | | 05/03/2019 00:00:00 +0000 | |
| 5 | Lithuanian | 5982844400000000 | 5982844499999999 | INTT | 95883 | | 07/01/2019 00:00:00 +0000 | |
| 6 | Lithuanian | 3740719800000000 | 3740719899999999 | FLT1 | 95013 | | 06/01/2019 00:00:00 +0000 | |

| Column Name | Description |
|-----------------------|---|
| ID | Identification number of a number range |
| Provider | Name of a number range provider |
| Range Start | Starting number in a respective range |
| Range End | Final number in a respective range |
| Owner | Name of a number range owner |
| RN Number | Registration number for the range |
| Prefix | Number prefix |
| Effective Date | Indication of the latest date of numbers range modification |
| End Date | Indication of the date after which the range won't be valid |

Functional **buttons/icons** that are present in a section are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows creating a new range of numbers for a provider |
| | Allows managing an existing range of numbers on a list |
| | Allows deleting a range of numbers from the system. Requires confirmation |

Advanced Search

Use the **Advanced Search** drop-down menu for fast investigation in this section. This tool provides a filter to limit the search results for higher working efficiency. To display **JeraSoft LNP Common** provider data, select **JeraSoft LNP Common** in a drop-down menu of the **Provider** field. Click on the blue downward arrow icon.

Screenshot: Number Portability section

The screenshot shows the 'Number Portability' section with a table of ranges and a search filter. The table has columns for ID, Provider, Range Start, Range End, Owner, RN Number, Prefix, and Effective Date. The search filter is set to 'JeraSoft LNP Common'.

| ID | Provider | Range Start | Range End | Owner | RN Number | Prefix | Effective Date |
|----|------------|------------------|------------------|-----------|-----------|--------|--------------------------|
| 1 | Numuri | 5657000 | 5657999 | Operator1 | | | 10/20/2016 10:00:00+0000 |
| 2 | Numuri | 1002350 | 1002999 | Operator2 | | | 10/20/2016 10:00:00+0000 |
| 3 | Numuri | 5105000 | 5105999 | Operator3 | | | 10/20/2016 10:00:00+0000 |
| 4 | Lithuanian | 3157660200000000 | 3157660299999999 | ICSC | 95983 | | 05/03/2019 00:00:00+0000 |
| 5 | Lithuanian | 5982844400000000 | 5982844499999999 | INTT | 95883 | | 07/01/2019 00:00:00+0000 |
| 6 | Lithuanian | 3740719800000000 | 3740719899999999 | ILT1 | 95013 | | 06/01/2019 00:00:00+0000 |
| 7 | Lithuanian | 3465925100000000 | 3465925199999999 | INTT | 95883 | | 07/01/2019 00:00:00+0000 |


Creating a New Range/Number

To create a **range** of numbers, click the **New Range** button and specify the fields listed below. After that, click **OK**.

Screenshot: Number Portability range creation form

The screenshot shows the 'Number Portability' range creation form. The 'Provider' field is set to 'Numuri'. The 'Modification Date' is '2020-07-15 14:00:00+0000'. The 'Owner' field is empty. The 'Range End', 'RN Number', and 'End Date' fields are also empty. The 'OK', 'Cancel', and 'Apply' buttons are visible at the bottom.

| Field | Description |
|--------------------|--|
| Provider | Select the needed provider from the available dropdown: <ul style="list-style-type: none"> • JeraSoft LNP Common • JeraSoft LNP - tags only • Numuri • TJA (RN) • TJA (Owner) • Lithuanian |
| Range Start | Set the range's start position |
| Range End | Set the end position |
| RN Number | Indicate a registration number |
| Prefix | Number prefix |

| | |
|-----------------------|--|
| Owner | Determine an operator that owns a respective range of numbers/number <div style="background-color: #ffff00; padding: 5px;">  Attention Further, the owner's name will be applied to the call as a tag (for example, EU Carrier 1) for billing the call. </div> |
| Effective Date | Indicate the last modification date |
| End Date | Indicate the end date for the range |

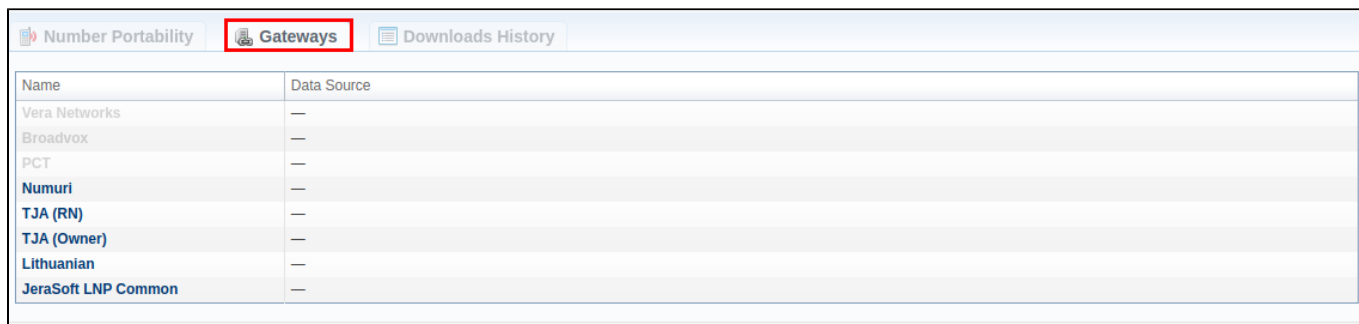
Gateways tab

 **Attention**

In **VCS 3.17.0**, for the purpose of making the **Traffic Processing** section more versatile, the TJA gateway has been divided into **TJA (Routing Number)** and **TJA (Owner)** (more information can be found in [this article](#)). Please note that each gateway in the tab has its own unique and predefined format of the LNP update file, thus, we recommend addressing our support center to avoid any possible issues while configuring the gateways.

Apart from **Numuri, TJA, Lithuanian, JeraSoft LNP Common, JeraSoft LNP - tags only**, JeraSoft Billing is integrated with the following providers:

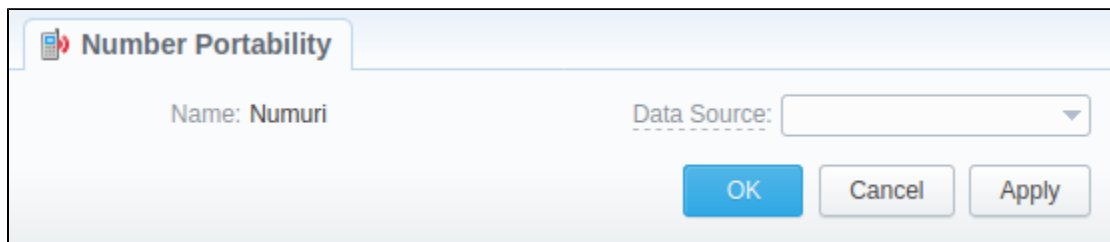
1. **Broadvox**
2. **Vera Networks**
3. **PCT**



| Name | Data Source |
|---------------------|-------------|
| Vera Networks | — |
| Broadvox | — |
| PCT | — |
| Numuri | — |
| TJA (RN) | — |
| TJA (Owner) | — |
| Lithuanian | — |
| JeraSoft LNP Common | — |

The **Gateways** tab is presented in the form of a table of gateways of all the above-mentioned providers with indication of their names and assigned data sources. You can manage **Numuri, TJA, Lithuanian, and JeraSoft LNP Common**. To assign a new data source to a gateway, click on a respective gateway name and specify a target data source in a corresponding field (see screenshot below). Depending on a selected data source, additional fields may differ (see **Data Source** section):

Screenshot: Numuri gateway management



Number Portability

Name: Numuri

Data Source:

OK Cancel Apply

 **Note**

When the database is local and has both ranges and single numbers present in it, we always select the most recent record by date (regardless of whether it is a single number or a range).

Downloads History tab

Downloads History tab displays files downloading history through one of the number portability gateways. It is presented in the form of a table where ID, gateway name, filename, download date and file size are specified. Also, you can remove files from the list by selecting them and clicking on the **Delete** button above the tab.

Screenshot: Downloads History tab

| Number Portability | | Gateways | | Downloads History | |
|--------------------|------|-----------------|---------------------------|-------------------|--|
| Delete | | Rows 1 – 1 of 1 | | Page 1 of 1 | |
| ID | Name | Filename | Download Date | File size | |
| 1 | tja | tmp9nKgkt | 04/11/2018 08:25:04 +0000 | 6.74 Kb | |

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LNP/MNP Configuration

LNP/MNP configuration can be divided into 2 steps:

1. Set up the download of external data to local LNP/MNP databases
2. Configure communication between JeraSoft Billing and these databases

Step 1

To configure a download of external data, namely LNP/MNP file updates, you need to:

1. Open **Data Source** section and create a new data source with **IMAP** or **Web (Numuri)** connection type.
2. Go to the **Gateways** tab of the **Number Portability** section and open **TJA** or **Numuri** gateway settings.
3. Assign **IMAP** or **Web (Numuri)** data source to a respective gateway.



Tip

- **IMAP** - mail mode to download files. For this type, the format of the file must be ***csv.zip**.
- **Web (Numuri)** - web mode to download files. For this type, the format of the file must be ***csv**.

4. At first, downloaded files will be displayed in the **Downloads History** tab. After being parsed by the **Files Collector** tool, numbers will be displayed in the **Number Portability** tab.

Step 2

The next stage is to configure JeraSoft Billing addressing to our local LNP/MNP databases during routing. To do so:

1. Go to the **Traffic Processing** section and create a new rule or open settings of an existing one.
2. Select a target provider from the drop-down list of **LNP/MNP** field and apply settings.

Congrats! Your LNP/MNP is configured and ready for work.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Data Sources

In this article

- [Section overview](#)
- [Creating a New Data Source](#)
- [Knowledge Base Articles](#)

Section overview

Data Source section is a first step to providing easier and more convenient work with data sources: files import, in particular. Previously, data source settings were split between [Rate Tables](#), [Resellers](#), [Gateways](#), and [Number Portability](#) and caused certain inconvenience in its configuration. Now, all these settings have been united in a single section making it possible to configure a data source in one place and use it throughout the entire system. The section is presented in the form of a table with the following columns:

Screenshot: Data Source section

| ID | Name | Reseller | Connection Type | Host | Port |
|----|--------|------------|-----------------|---------|------|
| 1 | New DS | Reseller A | FTP | 1.0.0.1 | 21 |

| Column Name | Description |
|------------------------|---|
| ID | Data source identification number |
| Name | Data source name |
| Reseller | The name of the reseller the data source is assigned to |
| Connection type | Type of connection to the data source |
| Host | IP address or domain name |
| Port | Data source port |

Functional buttons and icons, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows creating a new data source |
| | Allows deleting a data source from the system |

Creating a New Data Source

To create a new data source, you need to follow these steps:

1. Click the **Add Source** button
2. In the pop-up window, fill in the required fields (see screenshot below) and click **OK**

Screenshot: New Data Source creation form

Data Sources

| | |
|--|---|
| Name: <input style="width: 90%;" type="text"/> Reseller: all resellers Connection Type: IMAP | Host: <input style="width: 90%;" type="text"/> Port: 993 Login: <input style="width: 90%;" type="text"/> Password: <input style="width: 90%;" type="password"/> |
|--|---|

OK
Cancel
Apply

| Field | Description |
|------------------------|--|
| Name | Indicate a data source name |
| Reseller | The name of the reseller the data source is assigned to |
| Connection Type | Specify connection type: <ul style="list-style-type: none"> SSH SFTP FTP IMAP - mail mode to download files IMAP Microsoft [OAuth2] - mail mode for Microsoft OAuth 2.0 (available starting from JeraSoft Billing v3.24.5) Web (Numuri) - web mode to download files SMTP - for configuring a mail server <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <p>⚠ Attention</p> <p>Depending on a type you've chosen, the list of fields in the information block may differ</p> </div> |
| Security Layer | <p><i>FOR SMTP ONLY</i></p> <p>Specify security layer for SMTP server:</p> <ul style="list-style-type: none"> TLS SSL Plain |
| Host | Specify an IP address or domain name of the server. Unavailable for Web (Numuri) connection type |
| Port | Specify the port for SSH, IMAP or FTP type. Unavailable for Web (Numuri) |
| Login | Specify gateway server login |
| Password | <p>Password for FTP connection, IMAP mailbox, and Numuri web service.</p> <p>For SSH you have to create SSH-keys. Thus, this field is unavailable for this type.</p> <p>For SMTP type, you can leave login&password fields empty if your server does not require such authentication.</p> |

Knowledge Base Articles

Content by label

There is no content with the specified labels

Provisioning API

In this article

- [Section overview](#)
- [Execution Logs tab](#)

More Information

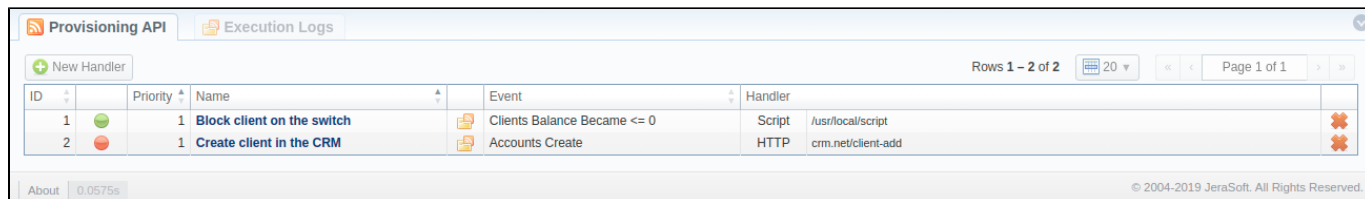
This page contains information about **Provisioning API** as a *section of the user interface*. For the documentation about **Provisioning API** as a *concept and its usage*, please refer to [ProvisioningAPI](#) article.

Section overview

The following section allows **configuring and monitoring of hooks for Provisioning API**.

Provisioning API provides a mechanism for real-time integration with 3rd party systems, including softswitches, gateways, and CRM systems. It calls pre-defined handlers on the occurrence of specific events in the system. For detailed information about Provisioning API functionality, go to the [APIs](#) section of our User Guide.

To configure [handlers](#) and check their call log, go to the **Integration > Provisioning API**.




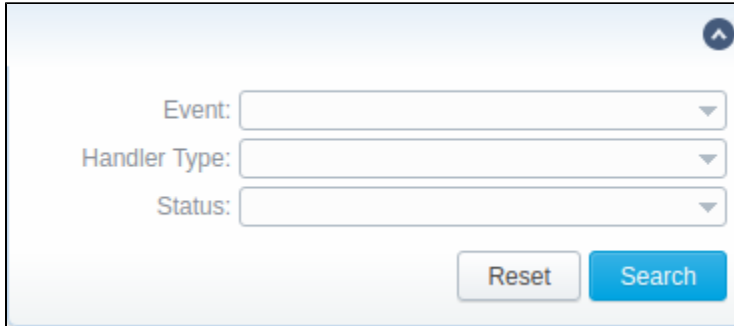
| Column | Description |
|-----------------|--|
| ID | Handler's identification number |
| Priority | Priority of handlers execution |
| Name | Handler's title |
| Event | Description of the handler event |
| Handler | Category of the handler that is used and location. There are two types of handlers that can be used: <ul style="list-style-type: none"> • HTTP scripts, called via POST requests (used in most cases) • Local server scripts, called locally on the server (used in very specific cases) |

The list of section functional **buttons/icons** is as follows:

| Button/Icon | Description |
|-------------|---|
| | Allows creating a new handler |
| | Identifies a disabled status of a handler |
| | Identifies an enabled status of a handler |
| | Identifies an archived status of a handler |
| | Allows viewing details of a target handlers' performance Execution Logs tab for a respective handler |
| | Allows deleting a handler from the system |

Advanced Search

Advanced Search drop-down menu, located in the top right corner of the section, is called to facilitate easy access to required information. By clicking on a red downward arrow  icon, the following drop-down menu is displayed:

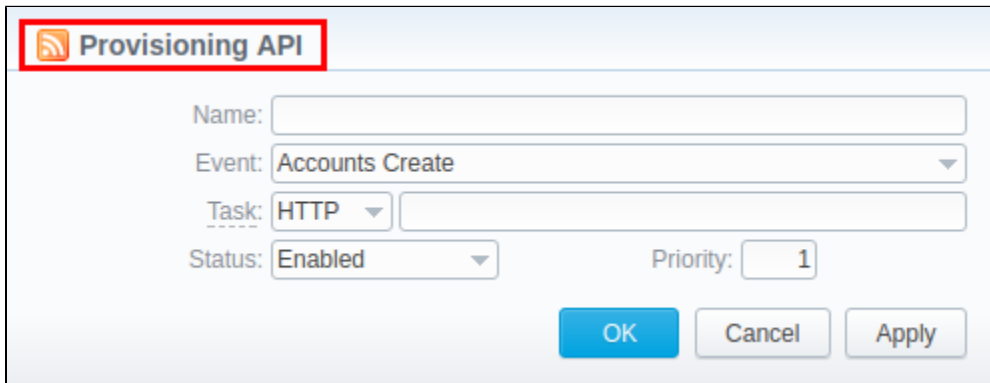


| Field | Description |
|---------------------|-----------------------------------|
| Event | Filter by the event type |
| Handler Type | Filter by the type of the handler |
| Status | Filter by status of the handler |

Creating a New Handler

To start with provisioning, you need to create a [handler](#) manually. Click the **New Handler** button and specify respective parameters in the appeared pop-up window:

Screenshot: *Provisioning section/Handler adding form*



| Field | Description |
|-----------------|--|
| Name | Specify a particular title for a handler |
| Event | Specify an event to be handled |
| Status | Choose the state of the handler: <ul style="list-style-type: none"> • enabled - select it to make a handler active; • disabled - select it to unable a handler; • archived - select it to archive a handler. |
| Priority | Establish an order of handler performing. Note: Lower values have higher priority. |

 **Attention**

To put a handler into action, you need to wait for about 5 minutes till the next execution of the **Cache Manager** service.

Execution Logs tab

You can access the details about handler execution in this tab. For more details, check out a related article: [Execution Logs](#).


Execution Logs


Execution Logs tab provides information about handlers execution such as date and time of execution, status, duration, etc. The tab is presented in the form of a table with the following columns:

Screenshot: *Execution Logs tab*

| ID | Date | Event | Status | Name | Error | Duration |
|-----|---------------------------|-----------------------|---------|-------|--|----------|
| 153 | 12/20/2016 13:45:15 +0000 | After Accounts Create | Success | acc 6 | | 1 ms |
| 156 | 12/20/2016 13:45:18 +0000 | After Accounts Create | Success | acc 6 | | 1 ms |
| 179 | 01/10/2017 15:40:07 +0000 | After Accounts Create | Fail | acc 6 | Script execution error No such file or directory | 27 ms |

| Column Name | Description |
|-----------------|--|
| ID | Handler's identification number |
| Date | Time and date of handler execution |
| Event | Details on handler type and event |
| Status | Status of a handler: Success/Fail |
| Name | Title of the handler |
| Error | Description of the event in case of an error |
| Duration | Amount of time, spent on handler execution |

When you click on **Details**  icon, a new window with a description of respective handler execution appears (see screenshot below). This window contains information that JeraSoft Billing sends via the handler.

Click on this icon  to expand logs. For example, logs for handlers with **before** type will only show modified data.

Screenshot: *Provisioning details*

Provisioning API

acc 6

Event Type: After

Event: Accounts Create

Status: **Success**

Date: 12/20/2016 13:45:18 +0000

DATA

```

{
  auth_type: "name",
  protocol: null,
  ani: null,
  id_dr_plans: null,
  orig_capacity: null,
  ips: [ ],
  term_tags: [ ],
  term_capacity: null,
  port: null,
  orig_enabled: false,
  id: 178,
  tech_prefix: null,
  term_rate_table: null,
  proxy_mode: null,
  orig_tags: [ ],
  rates_notify_force: false,
  password: null,
  name: "ipre-pre-",
  term_enabled: false,
  notes: "",
  accname: "1",
  voip_hosts: [ ],
  id_clients: 15,
  orig_rate_table: null
}
                
```

Advanced Search

By clicking on red downwards arrow, the following **Advanced Search** drop-down menu is displayed:

Screenshot: Advanced Search drop-down menu

Status:

Event Type:

Event:

Data:

Error:

Date From:

Date To:

| Field | Description |
|-------|-------------|
|-------|-------------|

| | |
|----------------------------|--|
| Status | Indicate handler execution status: <ul style="list-style-type: none">• Success• Fail |
| Event Type | Select a type of event: <ul style="list-style-type: none">• After• Before After event type is set by default |
| Event | Select from a list of all possible handler events |
| Data | Indicate handler execution data, specified in Details pop-up window |
| Error | Indicate handler execution data, specified in Error pop-up window |
| Date From / Date To | Specify first and/or the last date of handler execution |

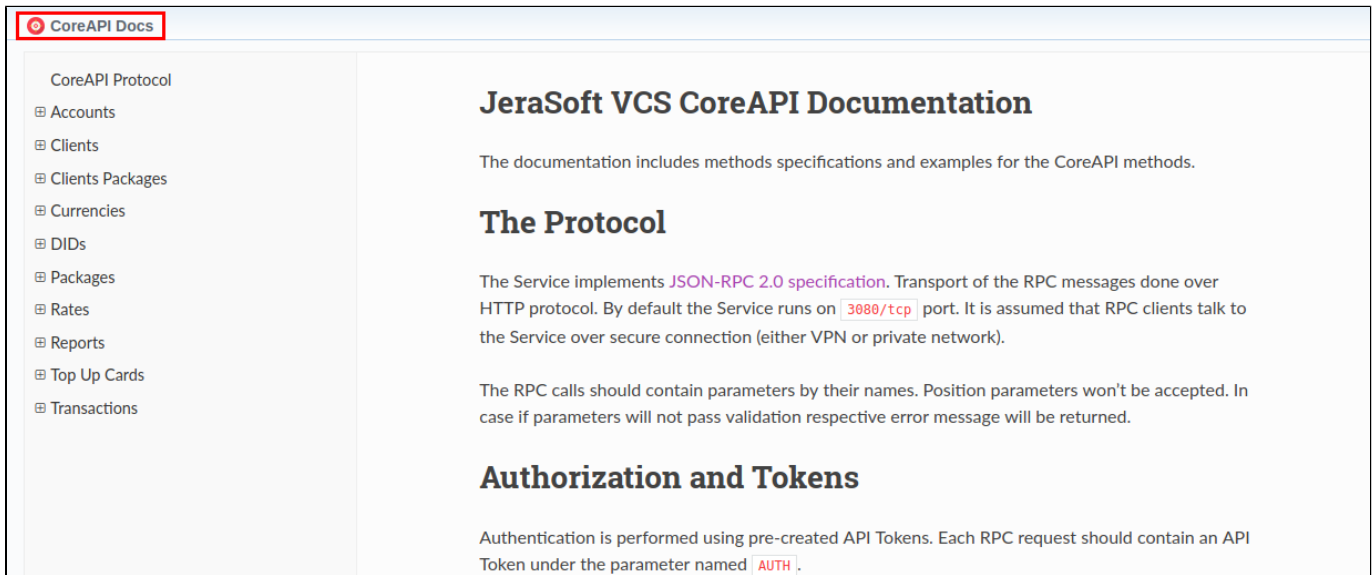
CoreAPI Docs

This section contains overall information describing CoreAPI as a whole; documentation on methods available through JSON-RPC service.

Use the sidebar to access different methods, grouped by respective parameters:

- **Account**
- **Clients**
- **Client's Packages**
- **Currencies**
- **DIDs**
- **Packages**
- **Rates**
- **Reports**
- **Top-Up Cards**
- **Transactions**

Screenshot: CoreAPI Docs section



The screenshot shows a web interface for the CoreAPI documentation. On the left is a sidebar with a search icon and a list of categories: CoreAPI Protocol, Accounts, Clients, Clients Packages, Currencies, DIDs, Packages, Rates, Reports, Top Up Cards, and Transactions. The main content area is titled "JeraSoft VCS CoreAPI Documentation" and contains the following text:

The documentation includes methods specifications and examples for the CoreAPI methods.

The Protocol

The Service implements [JSON-RPC 2.0 specification](#). Transport of the RPC messages done over HTTP protocol. By default the Service runs on [3080/tcp](#) port. It is assumed that RPC clients talk to the Service over secure connection (either VPN or private network).

The RPC calls should contain parameters by their names. Position parameters won't be accepted. In case if parameters will not pass validation respective error message will be returned.

Authorization and Tokens

Authentication is performed using pre-created API Tokens. Each RPC request should contain an API Token under the parameter named [AUTH](#).

For more information about CoreApi, open the [CoreAPI](#) article in the APIs section of our User Guide.

System

Information in this chapter of the Guide provides an overview of major **JeraSoft Billing services and utilities, list of users and their roles with permits, system statuses**, etc. For more details, check out the following sections:

- [Events Log](#)
- [Audit Log](#)
- [Mail Queue](#)
- [System Status](#)
- [System Services](#)
- [Users](#)
- [Roles](#)

Events Log

In this article

- [Section overview](#)
- [Events Log tab](#)
 - [Advanced Search](#)
 - [Detailed Description of the Event](#)
- [Configuration Tab](#)
 - [Adding a new rule](#)

Section overview

Since keeping track of all **events** that occur in the system is crucial, JeraSoft Billing offers you the **Events Log** section where you can view information regarding all **errors**, **alerts**, and **messages**, as well as configure the rules for email notifications sending. The section is divided into two tabs: **Events Log** and **Configuration**.

Events Log tab

Information in the tab is presented in the form of a list of all events recorded by the system. For example, the system records the following events:

- incoming or outgoing events of the client that are not registered within the system;
- number prefixes that are not registered within the system;
- incoming call prices that are higher than outgoing ones;
- incoming or outgoing calls that were rejected and others.




Tab structure is presented in the screenshot below:


Screenshot: *Events Log tab*

| ID | Type | Sender | Date | Message | Node |
|------|---------|---------------|---------------------------|---|---------|
| 3921 | Message | Calculator | 03/10/2021 21:59:55 +0000 | Started (pid 3515) | node-01 |
| 3920 | Message | Calculator | 03/10/2021 21:59:55 +0000 | Started (pid 3514) | node-01 |
| 3919 | Message | Calculator | 03/10/2021 21:59:55 +0000 | Started (pid 3513) | node-01 |
| 3918 | Message | Calculator | 03/10/2021 21:59:55 +0000 | Started (pid 3512) | node-01 |
| 3917 | Message | Calculator | 03/10/2021 21:59:55 +0000 | Started (pid 3510) | node-01 |
| 3916 | Message | Calculator | 03/10/2021 21:59:55 +0000 | Started (pid 3511) | node-01 |
| 3915 | Message | Cache Manager | 03/10/2021 21:59:46 +0000 | Cache was generated in 0.0308 sec | node-01 |
| 3914 | Error | Cache Manager | 03/10/2021 21:59:23 +0000 | Cache is too old - can not run calculator, check cache manager | node-01 |
| 3913 | Error | RADIUS Server | 03/10/2021 13:24:58 +0000 | Can not start - can not set UDP buffer to 1572864 (got 212992, check net.core.rmem_max) | node-01 |
| 3912 | Message | Cache Manager | 03/10/2021 13:24:54 +0000 | Cache was generated in 0.0169 sec | node-01 |

| Column Name | Description |
|----------------|---|
| ID | Identification number of the event |
| Type | Category of the event in the system (error , alert , or message) |
| Sender | Name of the system service that sent the event |
| Date | Date and time when the event occurred |
| Message | Description of the event |
| Node | Node ID that sent a notification |

Functional **buttons/icons**, presented in the tab, are as follows:

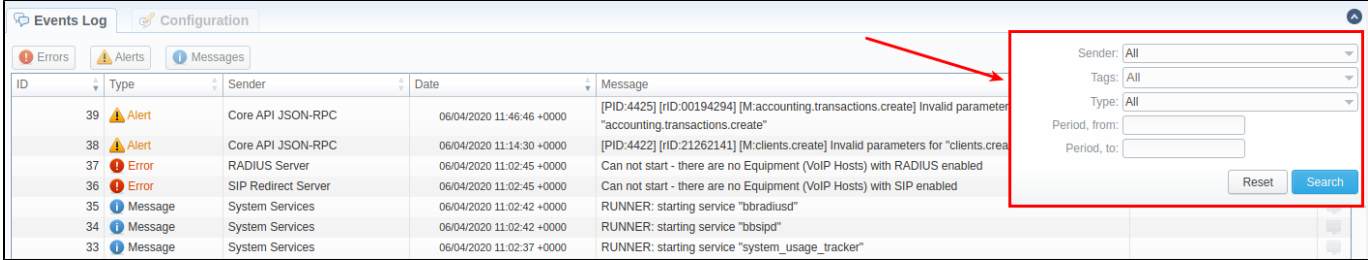
| Button/Icon | Description |
|---|--|
|  Errors | Allows to filter the list of events by errors |
|  Alerts | Allows to filter the list of events by alerts |
|  Messages | Allows to filter the list of events by messages |

 Allows to view a **detailed description** of the event (if possible)

Advanced Search

You can find the built-in **Advanced Search** drop-down menu that provides an easy way of navigation between multiple columns of the table. Click a blue downward arrow icon to open a menu with the following fields:

Screenshot: Advanced Search drop-down menu



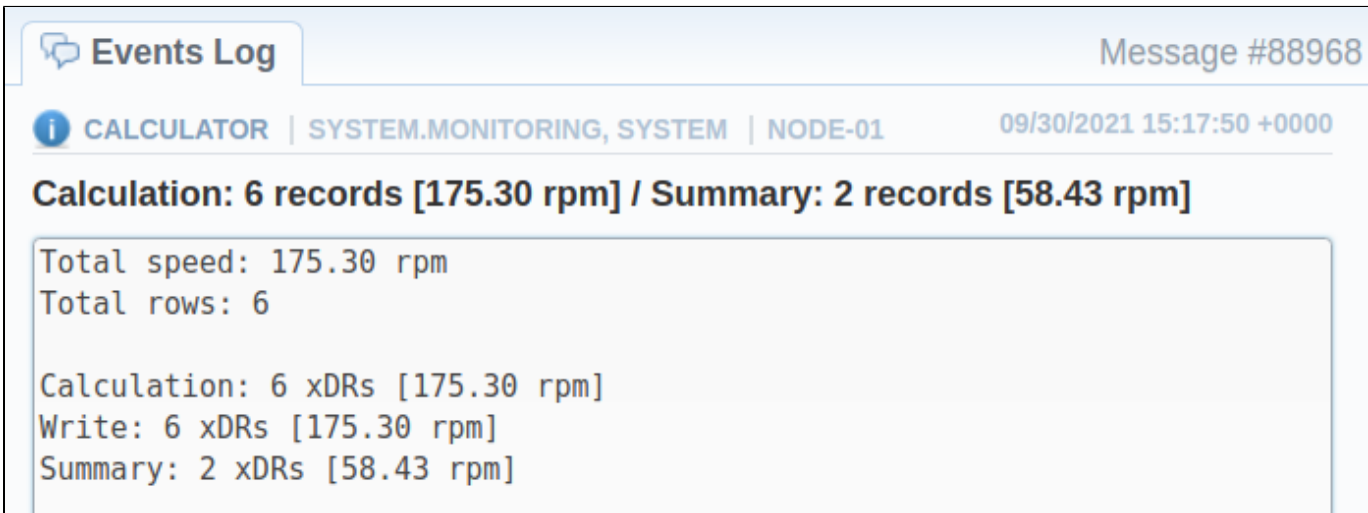
| Field | Description |
|----------------------|--|
| Sender | Select a respective sender from the given list. By default, the field value is All . |
| Tags | Select one or multiple tags from the provided list. By default, the field value is All . |
| Type | Specify a type of event: error , alert , or message . By default, the field value is All . |
| Period, from: | When search settings are applied, only events whose Date value Period, from value will be displayed |
| Period, to: | When search settings are applied, only events whose Date value Period, to value will be displayed |

When all search criteria have been set, click the **Search** button to apply them. Click **Reset** to cancel the applied search.

Detailed Description of the Event

You can view detailed descriptions of some events by clicking the icon opposite a respective event on the right. A pop-up window consists of **Title** and **Event Description** (see screenshot below):

Screenshot: Detailed description of the event



Configuration Tab

In the **Configuration** tab, you can create rules for email notifications about respective events within the system. The main window represents a set of rules, presented in the form of a table (screenshot below):

Screenshot: Configuration tab

| Column Name | Description |
|--------------------|---|
| ID | Identification number of the rule |
| Title | Name of the rule |
| Emails | List of recipients' email addresses |
| Filters | List of services and types of events added to the respective rule |
| Group Limit | Number of messages allowed to be sent separately |

Functional **buttons/icons**, presented in the tab, are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows to add a new rule for email notifications |
| | Allows to delete an email notification rule |

Adding a new rule

You need to click the **Add Rule** button to add a new rule to the system. Following this, the **Event Log** pop-up window will show up with the respective settings (shown below):

Screenshot: *Event Log pop-up window*

| Information Block | Field | Description |
|-------------------|-------|---|
| General | | General information block consists of the following fields: |

| | | |
|----------------|--|---|
| | Title | Name of the rule that will be put into the subject of the message |
| | Emails | Email addresses of the recipient |
| | Group Limit | The boundary to control the number of messages to be sent. If there are more messages available for delivery within one monitoring cycle than the specified value , they will be sent as a single email (set 0 to get all messages separately , or an ultimate high value to receive grouped messages). |
| | Details Limit | Data will be limited and cut to specified characters in the grouped messages. By default, the field value is set to 300 . |
| Filters | Fill in this information block to make your rule more detailed and precise . | |
| | Services | <p>Specify billing services that will be included in these event rules.</p> <p>List of available services:</p> <ul style="list-style-type: none"> • AAA Manager; • Backup Manager; • Balances Manager; • Cache Manager; • Calculator; • Cleaner; • Cluster Health Checker; • Core API / Files Download Service; • Core API / Files Upload Service; • Core API / JSON-RPC; • Dynamic Routing Manager; • Email Rates Manager; • Events Manager; • Files Collector; • Files Downloader; • Import Manager; • Invoicing Manager; • Jurisdiction Manager; • Log Rotator; • Low Balance Monitoring; • Mail Manager; • Orig-Term Report Generator; • Packages Manager; • Provisioning Manager; • Quotas Updater; • RADIUS Server; • Rates Generator; • Rates Notificator; • Reports Monitoring; • Reports to Email; • Rerating; • SIP Redirect Server; • Statistics Manager; • Statistic Manager / Meta Info; • Summary; • Swap Deals Manager; • System Services; • System Tracker / State; • System Tracker / Usage; • Traffic Rules Manager; • Web. |
| | Types | Specify the category of events for the rule: errors, messages, alerts |

| | |
|-------------------------------------|---|
| <p>Tags</p> | <p>Set labels that will be applied to filter the rule.</p> <p>List of the available tags:</p> <ul style="list-style-type: none"> • aaa - includes all accounting tags: aaa.ident; aaa.ident.client; aaa.ident.rate; aaa.ident.service; aaa.routing; aaa.traffic_processing; • api - includes all API tags: api.core; api.management; api.provisioning; • coreapi; • dids; • packages - includes all package tags: packages.nofunds; • system - includes all system tags: system.cluster; system.config; system.database; system.license; system.mail; system.monitoring; system.security; system.storage; • transactions - includes all transactions tags: transactions.charge; |
| <p>RegEx p Match</p> | <p>Regular Expression Match option to filter rules. Use POSIX standart while specifying regular expressions</p> |

After clicking **OK**, a new rule will be added to the general list of the **Configuration** tab.

Audit Log

In this article

- [Section overview](#)
- [Advanced Search](#)

Section overview

When it comes to keeping an ear to the ground about what is going on in the system, the **Audit Log** section comes to your rescue. This section displays de-tailed information concerning all **actions** performed by users in JeraSoft Billing with **Clients, Resellers, Accounts, and DIDs** (see screenshot below):

Screenshot: *Audit Log section main window*

| Date | Object | Action | Data |
|-------------------|-----------------|---|--|
| 04/02/2021 | | | |
| 13:18:20 | Customer A #11 | Client - Modification by Invoicing Manager | Last Invoiced: 2021-03-31 -- 2021-03-01 |
| 13:18:19 | Company Name #3 | Reseller - Create by _system #1 | Last Invoice Number: 100001 -- 100000 |
| 03/31/2021 | | | |
| 18:42:10 | Vendor B #16 | Client - Modification by Calculator | Activation Date: 2021-03-31T18:00:00+00:00 -- |
| 18:41:47 | term_accB2 #183 | Account - Create by Administrator #1 | Addresses: 127.0.0.12 ANI: Client ID: 16 |
| 18:38:52 | Customer C #13 | Client - Modification by Calculator | Activation Date: 2021-03-31T16:00:00+00:00 -- |

| Column Name | Description |
|------------------------------|--|
| Date | Data and time of applied actions |
| Object | System item (Client, Account, Reseller, DID Inventory) that a certain action was applied to |
| Action | Action Name (<i>Account Creation, Client Removal, etc.</i>) and Service that is responsible for a specific action |
| Data | The list of changes with detailed information on what exactly was changed |
| Detailed Changes icon | If clicked, opens a more detailed log entry on Action |

Attention

If you change the **Mail Templates** in the **Reseller** settings, these updates **will not** be displayed in the **Audit log**

Advanced Search

The displayed list of audit actions is grouped by date, and you can filter them using Advanced Search indicated by a blue downward arrow in the top right corner of the section. The search menu is presented with the following fields:

Screenshot: *Advanced Search drop-down menu*

The screenshot shows a web application interface. At the top, it indicates the user is signed in as 'admin' and provides navigation links for 'My Profile', 'About', and 'Logout'. The current date and time are shown as '05/24/2021 08:39:16 +0000'. A search filter panel is overlaid on the right side of the page, containing the following fields:

- Object Type: [Dropdown menu]
- Object Name: [Text input]
- Object ID: [Text input]
- Action: [Dropdown menu]
- Period: [Date range picker]
- By User: [Dropdown menu]
- By Service: [Dropdown menu]

At the bottom of the search panel are 'Reset' and 'Search' buttons. The background shows a table with a 'Data' header and several rows of data, including dates like '2021-03-01' and values like '100000'.

| Field | Description |
|--------------------|---|
| Object Type | Select a respective object type from the given list: <ul style="list-style-type: none"> • Client • Client Template • Account • Reseller • DID Management • Payment |
| Object Name | Insert a name of the respective item (e.g., Customer A) |
| Object ID | Insert an ID of the needed object |
| Action | Choose a type of action available for object types separately |
| Period | Set an exact date and time period with Datepicker |
| By User | Select a User from the list. Users are grouped by status: Active and Archived . |
| By Service | Select a System Service from the provided list. |

⚠ Attention

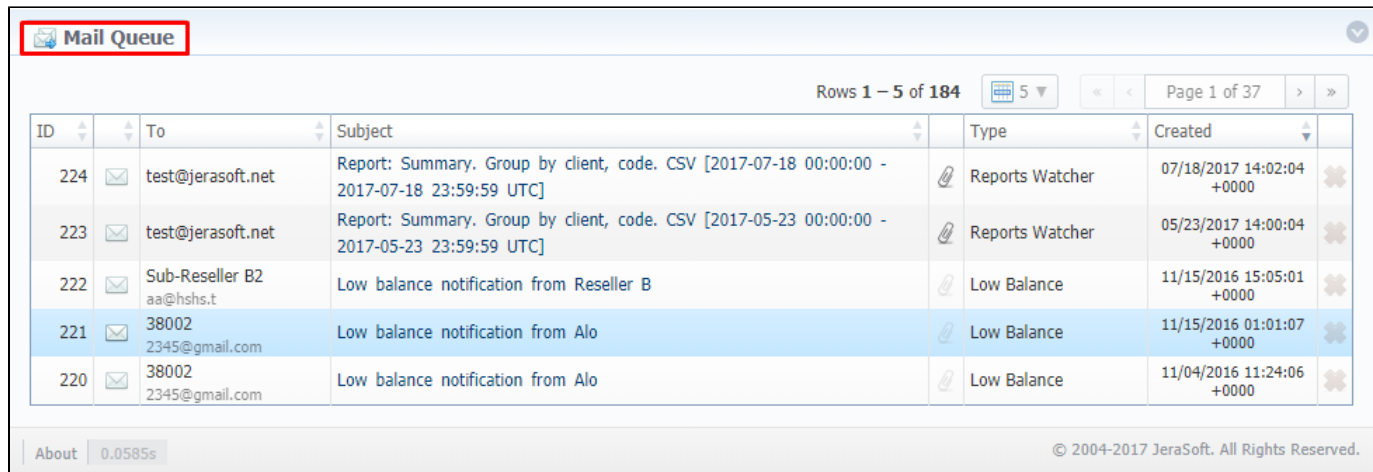
In case a **client**, **account**, or **reseller** was **deleted** (but not **fully**), there is a possibility to see a state of this item at the time of its removal, by clicking on its **name** in the **Object** column.

Mail Queue

Section overview

Mail Queue is a section designed to provide a visual representation of all system emails that have already been sent or are in a queue to be delivered. These emails can contain **invoices**, **low balance notifications** or **other types of messages**. The section is presented in the form of a table with the following columns:





Screenshot: Mail Queue section



| ID | To | Subject | Type | Created |
|-----|------------------------------|---|-----------------|---------------------------|
| 224 | test@jerasoft.net | Report: Summary. Group by client, code. CSV [2017-07-18 00:00:00 - 2017-07-18 23:59:59 UTC] | Reports Watcher | 07/18/2017 14:02:04 +0000 |
| 223 | test@jerasoft.net | Report: Summary. Group by client, code. CSV [2017-05-23 00:00:00 - 2017-05-23 23:59:59 UTC] | Reports Watcher | 05/23/2017 14:00:04 +0000 |
| 222 | Sub-Reseller B2 aa@hshs.t | Low balance notification from Reseller B | Low Balance | 11/15/2016 15:05:01 +0000 |
| 221 | 38002 2345@gmail.com | Low balance notification from Alo | Low Balance | 11/15/2016 01:01:07 +0000 |
| 220 | 38002 2345@gmail.com | Low balance notification from Alo | Low Balance | 11/04/2016 11:24:06 +0000 |

| Column Name | Description |
|----------------|--|
| ID | Email's identification number |
| To | A recipient of the email |
| Subject | Subject of the letter on the list |
| Type | Certain type of email |
| Created | Date and time when the email was created |

Functional **icons**, presented in the section, are as follows:

| Button/Icon | Description |
|---|---|
|  | Icon indicates that respective email is currently in a queue and hasn't been sent yet |
|  | Icon indicates that respective email has already been sent |
|  | Icon indicates that respective email contains an attached file |
|  | Allows deleting an email from the queue. Requires confirmation |

⚠ Attention

Emails that have been sent **cannot** be deleted from the list; you can delete only those that are currently **in a queue**

Advanced Search

You can filter data, presented in the section, using an **Advanced Search** drop-down menu. It makes a search filter to limit the search results for higher working efficiency. To open this form, click on a blue downward arrow  icon.

Screenshot: Mail Queue search toolbar

The screenshot shows a 'Mail Queue' window with a table of emails. A search filter overlay is visible on the right, containing three dropdown menus: 'Client', 'Type', and 'Status'. Below these are 'Reset' and 'Search' buttons. A red box highlights this filter area, and a red arrow points from the 'Subject' column of the email list to the search filter.


| ID | To | Subject | | | |
|-----|------------------------------|---|-------------|------------------------------|--|
| 224 | test@jerasoft.net | Report: Summary. Group by client, code. CSV [2017-07-18 00:00:00-2017-07-18 23:59:59 UTC] | | | |
| 223 | test@jerasoft.net | Report: Summary. Group by client, code. CSV [2017-05-23 00:00:00-2017-05-23 23:59:59 UTC] | | | |
| 222 | Sub-Reseller B2 aa@hshs.t | Low balance notification from Reseller B | Low Balance | 11/15/2016 15:05:01 +0000 | |
| 221 | 38002 2345@gmail.com | Low balance notification from Alo | Low Balance | 11/15/2016 01:01:07 +0000 | |
| 220 | 38002 2345@gmail.com | Low balance notification from Alo | Low Balance | 11/04/2016 11:24:06 +0000 | |

| Field | Description |
|---------------|--|
| Client | Type the name of a client that you want to filter by |
| Type | Select the type of mail: <ul style="list-style-type: none"> • Invoice • Notify (Before) • Notify (After) • Low Balance • Reports Watcher • Rates Notificator |
| Status | Choose a state of email: <ul style="list-style-type: none"> • In Queue • Sent |

Email view

To view any email on the list, click on a respective email's subject in the **Subject** column. A pop-up window with the following structure will appear:

Screenshot: Detailed view of email letter


 Mail Queue
Rates Notificator


To: Customer J <234@gmail.com>

From: "Reseller_A" <accounts@123.ua>

Created: 11/20/2015 13:59:13 +0000

Subject: Rates notification from Reseller_A

 rates-Rates-all_time-20151120-135801-PARTIAL.csv

 Sent
 11/20/2015 14:04:01 +0000

Dear customer we would like to inform you that Rates has been updated. Data when Rate table was last time edited: 2015-11-20 13:38:36.465269+00:00

--

Autogenerated by JeraSoft VCS

| Field | Description |
|-------------------------------|---|
| To | Full name and email address of the recipient |
| From | Full name and email address of the sender |
| Created | Date and time of email creation |
| Subject | Subject of the email letter |
| Attached file (if any) | If an email has the attached file , its name will be specified in the field. By clicking on it, the file will be downloaded to your computer |
| Status | Email status: Sent or In Queue . If the status is Sent , time and date when it was delivered will be specified |
| Message | Body of the letter |

System Status

System Status displays all **currently launched system services**, **system load** info and current system **database sessions** of the main server, divided into two information blocks: **Localhost** and **Master Database Sessions**. In addition, this section displays the status of **Redundancy** and **Reporting servers** (see screenshot below). Section structure is as follows:

Screenshot: System Status section

The screenshot shows the 'System Status' interface for node NODE-01 - 127.0.0.1. It includes system metrics (CPU Load: 4%, 10%, 13%; Memory: 1.8 GB total), CPU information (Common KVM processor, 1 socket(s), 1 cores), and a table of services (RADIUS Server, SIP Redirect Server, Import Manager, Rates Generator) with columns for Uptime, PID, and control icons. Below this is a table of 'MASTER DATABASE SESSIONS' with columns for PID, Application, Client IP, Session Duration, Query Duration, and Query.

| Information Block | Column | Description |
|--------------------------|------------------|---|
| Node: [node_ident]-[ip] | CPU Load | CPU utilization within 1 min, 5 min, and 15 min periods. |
| | Memory | Amount of Total Memory with breakout for <i>cache</i> , <i>shared</i> , and <i>available</i> |
| | Uptime | Current uptime of the system |
| | Last Ping | A timestamp of how long ago we received a ping from the server |
| | CPU | Number of Central Processing Unit cores |
| | UDP Buffers | List of UDP ports with queue size in incoming/outgoing queues |
| | Assigned IPs | Current server IP(s) |
| | Service | Name of the system service. If the service is a daemon, it will be marked accordingly. |
| | Uptime | Current uptime of the service |
| | PID | Process ID of the system service |
| Master Database Sessions | PID | Database session process ID |
| | Application | Name of the application |
| | Client IP | IP of the server, accessing the Master database |
| | Session Duration | Session duration |
| | Query Duration | Query duration |
| | Query | Description of the query |

The **section** allows a user to stop, and restart services **manually** with the help of certain icons.

| Icon | Description |
|------|--|
| | Allows to restart a service that is currently running |
| | Allows to stop a service |

Attention

Note that you **cannot** stop some processes via the **web interface**. To do so, you need to login on a server via **SSH** to stop them.

System Services

In this article

- [Utility Description](#)
- [Utility Management](#)

The **System Services** section represents a list of all **system utilities** (see screenshot below) and is aimed at providing a possibility to manage and **configure** them as a **user** desires. List of system utilities has the following structure:

Screenshot: *System Services* section


| Status | Name | Schedule | Allowed Nodes | Run Groups | Last Run | In Queue | |
|----------------------------|--------------------------------|----------|---|-------------------|------------------|----------|---|
| Daemon Services | | | | | | | |
| ● | Calculator | — | Master Calculation Calculation via Hub | stats_processing | 11:25:54 ago | — | |
| ● | Import Manager | — | Master | — | 11:25:50 ago | — | |
| ● | Quotas Updater | — | Master | — | 11:25:46 ago | — | |
| ● | RADIUS Server | — | Master Redundancy Reporting Routing Routing via Hub | — | 11:26:05 ago | — | |
| ● | Rates Generator | — | Master | — | 11:25:44 ago | — | |
| ● | SIP Redirect Server | — | Master Redundancy Reporting Routing Routing via Hub | — | 11:25:59 ago | — | |
| Fixed Time Services | | | | | | | |
| ● | Backup Manager | Ⓢ 05:30 | Master | stats_processing | 21d 03:51:43 ago | 00:00:00 | ■ |
| ● | Balances Manager | Ⓢ 03:20 | Master | — | 11:22:54 ago | — | ▶ |
| ● | Cleaner | Ⓢ 01:20 | Master Redundancy Reporting Routing Calculation Hub Routing via Hub Calculation via Hub | — | 13:22:53 ago | — | ▶ |
| ● | Jurisdiction Manager | Ⓢ 00:20 | Master | — | 14:22:49 ago | — | ▶ |
| ● | Log Rotator | Ⓢ 01:10 | Master Redundancy Reporting Routing Calculation Hub Routing via Hub Calculation via Hub | — | 13:32:52 ago | — | ▶ |
| Periodical Services | | | | | | | |
| ● | AAA manager | ⌚ 1 min | Master | — | 00:00:56 ago | — | ▶ |
| ● | Cache Manager | ⌚ 6 min | Master Redundancy Reporting Routing Calculation Hub Routing via Hub Calculation via Hub | — | 00:05:54 ago | — | ▶ |
| ● | Dynamic Routing Manager | ⌚ 60 min | Master Routing Hub | — | 00:39:53 ago | — | ▶ |
| ● | Email Rates Manager | ⌚ 5 min | Master | — | 00:01:51 ago | — | ▶ |
| ● | Events Manager | ⌚ 5 min | Master | — | 00:04:53 ago | — | ▶ |
| ● | Files Collector | ⌚ 10 min | Master | stats_processing | 11:25:43 ago | 00:00:01 | ■ |
| ● | Files Downloader | ⌚ 5 min | Master | — | 00:01:52 ago | — | ▶ |
| ● | Invoicing Manager | ⌚ 60 min | Master | — | 00:22:48 ago | — | ▶ |
| ● | Low Balance Monitoring | ⌚ 60 min | Master | — | 00:37:50 ago | — | ▶ |
| ● | Mail Manager | ⌚ 5 min | Master | — | 00:03:53 ago | — | ▶ |
| ● | Orig-Term Report Generator | ⌚ 16 min | Master | — | 00:09:52 ago | — | ▶ |
| ● | Packages Manager | ⌚ 10 min | Master | — | 00:08:50 ago | — | ▶ |
| ● | Provisioning Manager | ⌚ 5 min | Master | — | 00:02:53 ago | — | ▶ |
| ● | Rates Notificator | ⌚ 5 min | Master | — | 00:00:51 ago | — | ▶ |
| ● | Reports Monitoring | ⌚ 5 min | Master | — | 00:02:48 ago | — | ▶ |
| ● | Reports To Email | ⌚ 6 min | Master | — | 00:03:51 ago | — | ▶ |
| ● | Rerating | ⌚ 1 min | Master | — | 00:00:50 ago | — | ▶ |
| ● | Statistics Manager | ⌚ 60 min | Master | stats_processing | 11:25:40 ago | 00:00:02 | ■ |
| ● | Statistics Manager / Meta Info | ⌚ 5 min | Master | meta_info_manager | 00:02:51 ago | — | ▶ |
| ● | Summary | ⌚ 1 min | Master | — | 00:00:50 ago | — | ▶ |
| ● | Swap Deals Manager | ⌚ 60 min | Master | — | 00:30:48 ago | — | ▶ |
| ● | Traffic Rules Manager | ⌚ 6 min | Master Routing Calculation Hub | — | 00:01:48 ago | — | ▶ |

| Column Name | Description |
|-----------------|--|
| Status | Status of the utility. Depending on the icon, the status can be either enabled or disabled . To change a utility status, click on the utility name in the table. |
| Name | Name of the utility. The full list of system utilities with their descriptions is provided in a table below |
| Schedule | Periodicity at which each utility is run. Daemon services don't have a schedule, Periodic are run in a defined period, Fixed Time - at predefined timeslots. By clicking the Run utility icon, you manually start this utility regardless of its Schedule column value (doesn't work for Daemon Services). |

| | |
|----------------------|---|
| Allowed Nodes | Nodes , at which the service is allowed to run. This parameter is configured only during deployment and is not allowed to be changed by the user |
| Run Groups | Run Groups define, which services may not run in parallel with others. If two services have intersecting groups, the system will not run them simultaneously and will put one of the services in queue |
| Last Run | Time and date when the last run was initiated |
| In Queue | If the utility is run manually, time and date when its launch was initiated will be specified in the column |

Utility Description

| Group Name | Utility Name | Description |
|----------------------------|-----------------------------------|---|
| Daemon Services | | These utilities do not have a schedule and are automatically run by the system when active |
| | AC Manager | Fetches Active Calls for Gateways |
| | Calculator | Utility that processes all data collected from xDR-files |
| | Import Manager | Manages rates import process |
| | Quotas Updater | Utility that performs balances synchronization |
| | RADIUS Server | RADIUS server process |
| | Rates Generator | Utility that generates rates, both manually and automatically |
| | SIP Redirect Server | SIP Redirect server process |
| Periodical Services | | These utilities are run every defined period of minutes. The period can be up to 60 minutes. |
| | AAA Manager | Utility that deletes old AAA sessions and routing results |
| | Cache Manager | Cache Manager process whose main function is to monitor and include client-related changes for RADIUS and SIP Redirect continuously |
| | Dynamic Routing Manager | Utility that creates routing tables used in the Dynamic Routing feature |
| | Email Rates Manager | Utility that imports rate tables updates from emails |
| | Events Manager | A process that sends events to emails according to <i>Events Config</i> |
| | Files Collector | Utility that controls file collectors |
| | Files Downloader | Utility that automatically downloads xDR-files from the switch host |
| | Invoicing Manager | Utility that manages the autoinvoicing feature |
| | Low Balance Monitoring | Utility that controls the <i>Low Balance Monitoring</i> rules and notifies specified Users |
| | Mail Manager | Sends emails from the mail queue (invoices, notifications, etc.) |
| | Orig-Term Report Generator | Utility that manages data generation for Orig-Term Report |

| | | |
|---------------------------------------|--|---|
| Packages Manager | Utility that manages your packages | |
| Provisioning Manager | Utility that processes events asynchronously | |
| Rates Notificator | Utility that notifies clients about rate changes | |
| Reports Monitoring | Utility that monitors Reports for pre-configured parameters and triggers alerts/actions | |
| Reports to Email | Utility that sends generated statistic reports by the scheduled time <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  Reports that will be sent by Reports to Email, will be sent using SMTP credentials specified in the Reseller, to which the owner of a Reports Query belongs. For Users without Reseller restrictions (super-admins), default system SMTP credentials will be used. </div> | |
| Rerating Manager | Utility that processes rerating | |
| Statistics Manager | Utility that manages statistics packages | |
| Statistics Manager / Meta Info | Gathers meta-information about collected statistics | |
| Summary | Utility that aggregates <i>Summary Report</i> | |
| Swap Deals Manager | Caches statistics for Swap Deals module, analysis and notifications | |
| Traffic Rules Manager | Utility that manages all traffic rules in the system | |
| Fixed Time Services | These utilities are run at predefined timeslots | |
| | Backup Manager | Utility that manages system backup processes |
| | Balances Manager | Creates automatic charges |
| | Cleaner | Utility that automatically cleans old messages from the <i>Events Log</i> section |
| | Jurisdiction Manager | Generates jurisdiction table from LERG/TMP data sources for US routing |
| | Log Rotator | Utility that controls log-files |

Attention

Please note that if a customer had no assigned **packages, accounts, presets** or **translations**, and you decided to add one, then RADIUS or SIP Redirect servers will notice those changes only after *Cache Manager* runs and does its job. Please note, that this is only applicable if a customer previously had absolutely no items listed above, in other words, if you add a second account to a customer, then that change will be effective instantly.

Utility Management

You can always configure the run time of any periodical or fixed time utility by clicking a respective name. A pop-up window for utility management has the following structure (see screenshots below):

Screenshot: *Periodical service editing*

System Services Cache Manager

Name: Cache Manager

Status: Enabled

Schedule: Periodical

Period: 6 min align to: 3 min

OK Cancel Apply

| Field | Description |
|-----------------|---|
| Name | Name of the utility |
| Status | Status of the utility: <ul style="list-style-type: none"> • Enabled • Disabled |
| Schedule | Set Periodical to define periodicity further |
| Period | Define run period for the utility. It can not be more than 60 minutes. If you want to use a longer period - use fixed time instead |
| align to | Align time is used to distribute services running in the same periods. For example, if a period is set to 5 min and align to is 2, service will be run at XX:02, XX:07, XX:12 and so on |

Screenshot: Fixed time service editing

System Services Backup Manager

Name: Backup Manager

Status: Enabled

Schedule: Fixed Time

Run at: 05:30 ×

OK Cancel Apply

| Field | Description |
|-----------------|--|
| Name | Name of the utility |
| Status | Status of the utility: <ul style="list-style-type: none"> • Enabled • Disabled |
| Schedule | Set Fixed Time to define a specific run timeslot further |
| Run at | Set the time to run a utility. You can define multiple times here. The time should be given in system timezone |

Users

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding a New User](#)
- [Archiving a User](#)

Section overview

Users is a core section that provides an overview of all registered users in the system. The section allows to **create**, **edit**, and **disable** existing users. The list of users is presented in the form of a table with the following columns:

Screenshot: Users section

| Status | Login | Reseller | Full Name | Role |
|--------|-------------------|---------------|-------------------|---------------------|
| 1 | admin | all resellers | Administrator | Administrator |
| | api-client-portal | Company Name | API Client Portal | API - Client Portal |
| | jerasupport | all resellers | JeraSoft Support | Administrator |

| Column | Description |
|------------------|--|
| Status | User's status . Depending on the icon, the status can be either active , deleted or archived . |
| Login | User's account name |
| Reseller | Name of a company whom this user belongs to |
| Full Name | Mailto links of users (if specified in the user's account) |
| Role | User's role that determines the access level or permissions |

Functional **buttons/icons**, presented in the section, are as follows:

| Button/Icon | Description |
|-------------|--|
| | Allows creating a new user |
| | Allows archiving a user |
| | Opens an Advanced Search drop-down menu |

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By default, the list of clients is filtered by **Active** status. By clicking on a red downwards arrow icon, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu

| Field | Description |
|-----------------|---|
| Login | Specify a desired user's login |
| Reseller | Select from the list of all Resellers, Sub-resellers and Managers registered in the system |
| Role | Select from the list of existing system roles |
| Active | Specify whether the user's status is active or not, by selecting from a drop-down list: |

Adding a New User

- Yes
- No
- Empty (to display users with both statuses)

What you need to do to create new users:

- Click the **New User** button
- In the opened pop-up window, fill in all the **required fields** (list of them is presented in a column below)
- Confirm new user creation by clicking **OK**

Screenshot: New user creation window

| Field | Description |
|-----------------|---------------------------------|
| Login | Specify a user's login . |
| Password | Define a password |


| | |
|----------------------|---|
| Role | Select a role for a user from a drop-down list |
| Status | Check if you need to prevent a user temporary from having access to the system. The statuses are: <ul style="list-style-type: none"> ▪ Active ▪ Blocked ▪ Archive |
| Full Name | Enter a user's name . Note that if a user's email is specified, full name in the section serves as a mailto link . |
| Email | Specify a user's email |
| Locale | Define a language for a user, and it will be used instead of the system one for displaying all dates, reports, etc. If not specified, the system settings are taken. |
| Timezone | Define a timezone for a user, and it will be used instead of the system one for displaying all dates, reports, etc. If not specified, the system settings are taken. |
| Reseller | Specify a reseller, sub-reseller or manager a user belongs to |
| CoreAPI Token | This field cannot be specified in the creation form. CoreAPI Token is automatically generated by the system after a user is created |
| Allowed IPs | Enter IPs or subnets , one record per line, i.e. the user will have access to the system only if he/she logs in via specified IPs |

Attention

While creating a new user, bear in mind the following things:

- Each user can have only **one** assigned role.
- We strongly recommend **avoiding non-Latin characters** in users' logins/passwords

Archiving a User


If you want to archive a **User**, click the  button. The following window will open, where you will be able to transfer **Report Queries** ownership to another **User**:

Screenshot: Archiving a User

👤 **Users** 1

Before archiving the User, you may want to transfer their data (Report Queries) to another owner. If the new owner is not selected, all data related to the User will be removed.

Transfer the ownership to:

 All data related to the User will be deleted

OK
Cancel

Roles

In this article

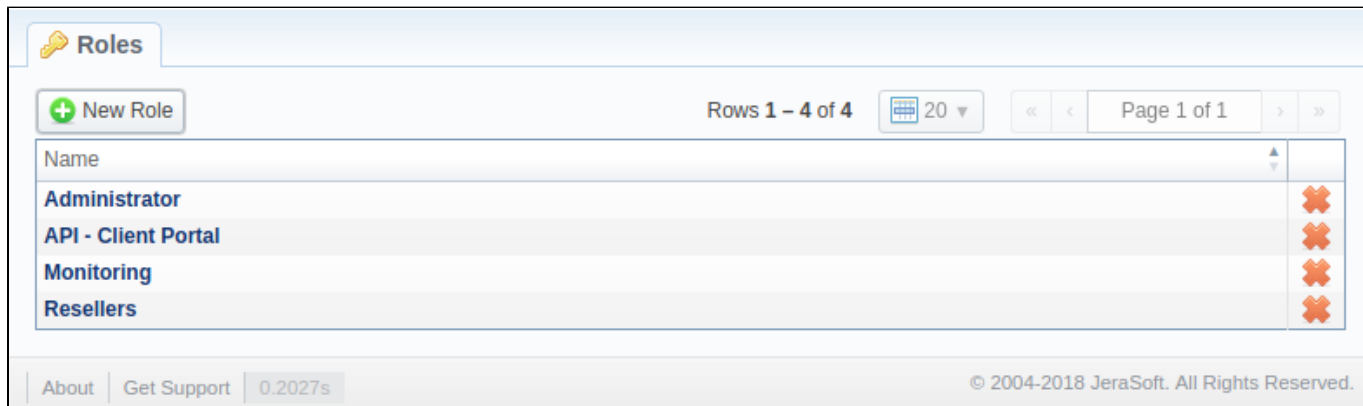
- [Roles List](#)
- [Adding a New Role](#)
- [Knowledge Base Articles](#)

Roles List

This section allows to manage and specify access rights for all sections of the system. In the section, you can create new roles, as well as edit permissions of already existing ones. By default, there are 4 pre-installed roles:

- **Administrator** – this role has unlimited rights and access permissions in the system;
- **Monitoring** – this role has basic access permissions to work in the system, including viewing client lists and summary reports, etc. However, the role doesn't stipulate for access to technical settings and some statistical info that is only available to the Administrator;
- **Resellers** – this role has advanced access permissions for complete client management. User with this role also doesn't have access to technical settings and some statistical info that is only available to the Administrator (use this role when adding a Reseller or Agent user).
- **API - Client Portal** - this role has been created to simplify users' access to Client Portal and has next to no permissions for work inside JeraSoft Billing.

Screenshot: Roles section



| Name | |
|---------------------|--|
| Administrator | |
| API - Client Portal | |
| Monitoring | |
| Resellers | |

Adding a New Role

Click the **New Role** button on the toolbar to add a new role. A pop-up window with role settings will appear, where you need to enter the name, choose the default module, and select respective access rights in the **Entries** table. The **Default Module** field specifies a default section that will be displayed when you log in to the system.

Note that a created user can **assign the role with respective permissions**. Therefore, if the user has access to create roles, he can assign the role with permission similar to his own or less.

Screenshot: Adding a new role window

 **Roles**

Name:

Default Module:

ENTRIES

| Name | Access Permissions | | | | |
|------------------------------------|-------------------------------|--------------------------------|----------------------------------|---------------------------------------|--------------------------------------|
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Management / Clients | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | <input type="checkbox"/> Full Delete |
| Management / Accounts | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Management / Rate Tables | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Management / Invoices | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Management / Transactions | <input type="checkbox"/> Read | <input type="checkbox"/> Write | <input type="checkbox"/> Execute | | |
| Management / Balance Report | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | | |
| Management / Resellers | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | <input type="checkbox"/> Full Delete |
| Management / Client Packages | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Management / Presets | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Management / Traffic Processing | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Retail / Packages | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Retail / DID Management | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Retail / Calling Cards | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Retail / Top-up Cards | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Retail / Call Shops | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Statistics / Dashboard | | <input type="checkbox"/> Write | <input type="checkbox"/> Execute | | |
| Statistics / Summary Report | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | <input type="checkbox"/> Billing data | |
| Statistics / Orig-Term Report | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | <input type="checkbox"/> Billing data | |
| Statistics / Profit Report | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | | |
| Statistics / LCR Lists | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | | |
| Statistics / CDRs List | <input type="checkbox"/> Read | <input type="checkbox"/> Write | <input type="checkbox"/> Execute | | |
| Statistics / Mismatches Report | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | | |
| Statistics / Calls Rerating | | | <input type="checkbox"/> Execute | | |
| Statistics / Reports Templates | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Statistics / Archive Management | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Tools / Rates Analysis | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | | |
| Tools / Rates Generator | | | <input type="checkbox"/> Execute | | |
| Tools / Active Calls | | | <input type="checkbox"/> Execute | | |
| Tools / Factors Watcher | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Tools / CDR Disputes | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Routing / Routing Plans | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Routing / Routing Analysis | <input type="checkbox"/> Read | | <input type="checkbox"/> Execute | | |
| Routing / DR Policies | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Code Decks | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Currencies | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Payment Accounts | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Payment Terms | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Payment Gateways | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Time Profiles | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Taxes Profiles | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Groups | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Invoices Templates | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / VoIP Gateways | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| Configuration / Settings | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / Events Log | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / Audit Log | <input type="checkbox"/> Read | | | | |

| | | | | | |
|---------------------------|-------------------------------|--------------------------------|----------------------------------|--|--|
| System / Mail Queue | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / System Status | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / Task Scheduler | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / API Testbed | | | <input type="checkbox"/> Execute | | |
| System / Users | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / Roles | <input type="checkbox"/> Read | <input type="checkbox"/> Write | | | |
| System / Charts Templates | | <input type="checkbox"/> Write | | | |
| System / Change Password | | | <input type="checkbox"/> Execute | | |
| System / About System | <input type="checkbox"/> Read | | | | |
| System / Get Support | | | <input type="checkbox"/> Execute | | |

| Checkbox | Description |
|---------------------|--|
| Read | Allows/forbids a user to view information presented in a section |
| Write | Allows/forbids a user to create, edit, and delete information presented in a section |
| Execute | Allows/forbids a user to execute system services in a section |
| Full Delete | Allows/forbids a user to perform full deletion of entities in a section |
| Billing Data | Allows/forbids a user to work billing data (rates, profit, taxes, etc.) in a section |

⚠ Attention

- **Parent Reseller has access to all information of his *Sub-Resellers***, and, therefore, can assign **any routing plan and rate table** to them
- A user with a disabled **Management/Clients** module in the **Roles section** will not see the Clients List from the *Clients Panel*.

Knowledge Base Articles

Error rendering macro 'contentbylabel'

parameters should not be empty

Client Panel

The **Client Panel** is a separate application integrated with JeraSoft Billing via API. It has a user-friendly interface and is tailored for your clients to manage the services they purchased. For example, they can check their rates, refill balance, update contact and billing details, check a detailed call history with all related statistics and cost.

It has been designed to be as simple and easy to understand as possible and should cut a lot of basic customers' questions. The panel is provided as an open-source, so it can be used as a starting point for your own development or as a reference and example.

Tip

Starting from the **JeraSoft VCS 3.13**, the Client Panel will be hosted by default on 9080 port. To access it, open <http://VCS-IP-ADDRESS:9080/>. Moreover, you could assign your own domain name to the panel.

Functional advantages

1. Fully API based

The system is fully based on API integration. Therefore, it does not require any direct access to the JeraSoft Billing database and provides a more secure approach.

2. Can be hosted separately

You can move the Client Panel to other server and just configure JeraSoft Billing IP address in the API settings. As a result, you can fully isolate JeraSoft Billing from the public Internet.

3. Full Open Sourced

The panel comes with all source code. It allows you to either customize the system or extend it, or just use as a reference guide for the development of your own panel.

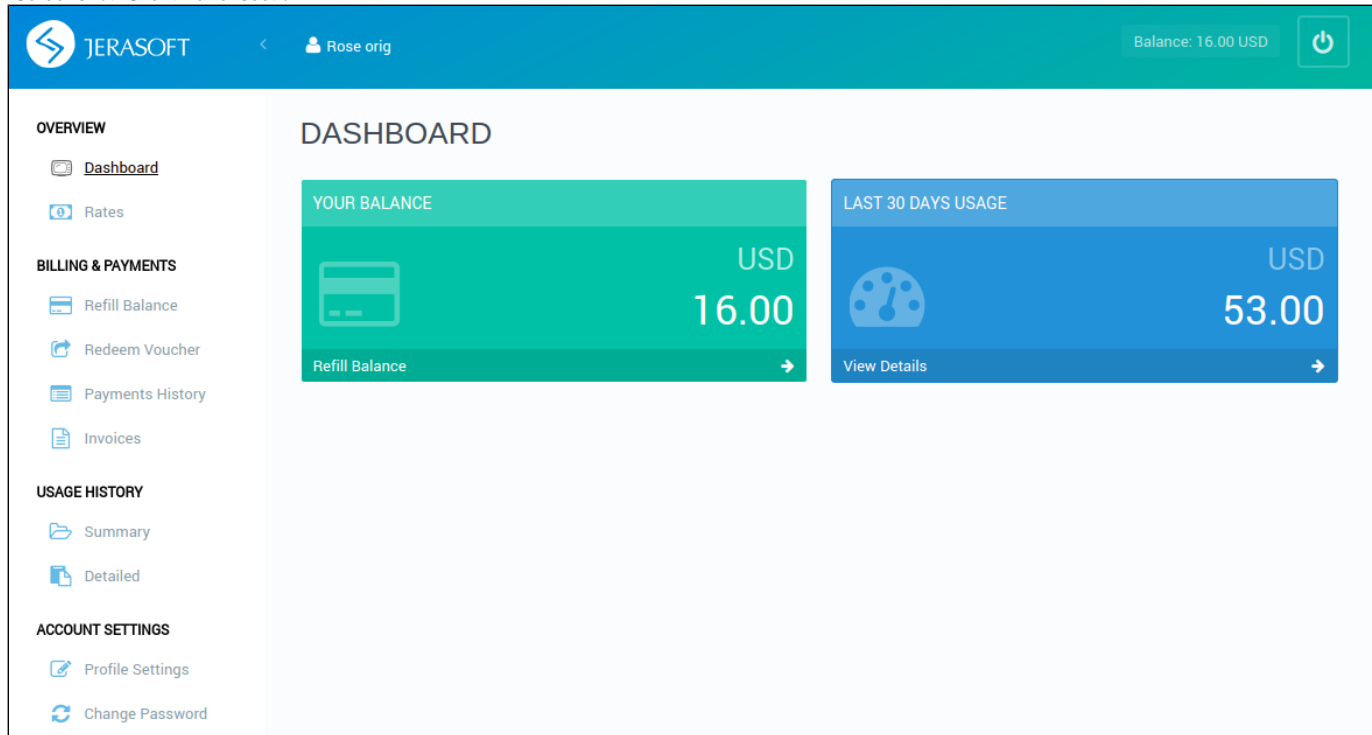
More details about Client Panel can be found in the following articles:

- [Panel Features](#)
- [Panel Deployment](#)
- [Panel Configuration](#)
- [Panel Access](#)
- [Panel Customization](#)

Panel Features

There are 4 main sections in the Client Panel – Overview, Billing & Payments, Usage History, and Account Settings. Let's take a closer look at each of them.

Screenshot: Client Panel section



Overview

- **Dashboard** – displays an overview of a real-time user's balance and last 30 days of executed charges. By clicking on **Refill Balance**, you will be moved to the corresponding **Refill Balance** page. By clicking on **View Details**, you will be forwarded to **Detailed** page.
- **Rates** – shows all rates and allows to easily sort and search them by services.

Billing and Payments

- **Refill Balance** - allows replenishing client's balance by means of configured payment gateways. Currently, the **Client Panel** supports **PayPal**, **Aut horize.net**, and **USAePay** service providers.
- **Redeem Voucher** - allows the user to refill his account by means of top-up cards, specified in **Top-up Cards** section.
- **Payment History** - displays a full history of conducted payments.
- **Charges History** - display a full history of conducted charges.
- **Invoices** - shows all invoices that belong to the user with a possibility to download them.

Usage History

- **Summary** - grants the user a possibility to view the summary report on the executed events, allowing to easily filter data by period, service, account or package.
- **Detailed** - shows detailed statistics about all client's calls, performed within a specified period of time.

Account Settings

- **Profile Settings** - allows the user to update the profile settings, including company name, billing email, address, registration, and tax IDs.
- **Change Password** - allows the user to change his password to the Client Panel.

Panel Deployment

In this article

- [Nginx Installation](#)
- [Nginx Configuration](#)
- [Obtaining SSL certificates](#)
- [Billing Firewall Configuration](#)

First and foremost, while deploying Client Panel is to set up an additional server for proxying access to the client panel within the billing platform. There are no specific requirements for the server - you can use either **virtual server** or **simple dedicated server**. Basic knowledge of server administration and shell usage is required.



Tip

All provided examples are given assuming usage of CentOS/RHEL based OS.

Nginx Installation

When you have your server up and running, you need to install [Nginx](#). To do so, you need to execute the following command:

nginx install

```
yum -y update
yum -y install nginx
```

Once Nginx has been successfully installed, the next crucial step is to configure it, and in particular, **set panel domain name** and **obtain an SSL certificate**.

Nginx Configuration

You will need to setup **3 virtual hosts** within Nginx that will implement following configuration:

- **<panel_domain>:80** redirect to **<panel_domain>:443** (*https-redirect.conf*)
- **<panel_domain>:443** proxy to **<vcs-ip-address>:9080** (*panel-frontend.conf*)
- **<panel_domain>:9090** proxy to **<vcs-ip-address>:9090** (*panel-backend.conf*)

Config examples of the above-mentioned hosts are given below. You can simply put them in */etc/nginx/conf.d/* and replace "**<panel-domain>**" and "**<vcs-ip-address>**" with real data.

https-redirect.conf

```
server {
    listen 80;
    server_name <panel-domain>;
    return 301 https://$host$request_uri;
}
```

panel-frontend.conf

```

server {
    listen      443 default_server ssl http2;
    server_name <panel-domain>;
    access_log  /var/log/nginx/frontend-access.log;
    error_log   /var/log/nginx/frontend-error.log;

    # SSL Settings
    ssl_session_cache shared:SSL:1m;
    ssl_session_timeout 10m;
    ssl_protocols TLSv1.2 TLSv1.1 TLSv1;
    ssl_prefer_server_ciphers on;
    ssl_ciphers EECDH+ECDSA+AESGCM:EECDH+aRSA+AESGCM:EECDH+ECDSA+SHA512:EECDH+ECDSA+SHA384:EECDH+ECDSA+SHA256:
ECDH+AESGCM:ECDH+AES256:DH+AESGCM:DH+AES256:RSA+AESGCM:!aNULL:!eNULL:!LOW:!RC4:!3DES:!MD5:!EXP:!PSK:!SRP:!DSS;
    ssl_certificate "/etc/pki/tls/certs/localhost.crt";
    ssl_certificate_key "/etc/pki/tls/certs/localhost.crt";

    # HSTS Header
    add_header Strict-Transport-Security "max-age=31536000; includeSubDomains";

    # Proxy
    location / {
        proxy_pass http://<vcs-ip-address>:9080;
    }
}

```

panel-backend.conf

```

server {
    listen      9090 default_server ssl http2;
    server_name <panel-domain>;
    access_log  /var/log/nginx/backend-access.log;
    error_log   /var/log/nginx/backend-error.log;

    # SSL Settings
    ssl_session_cache shared:SSL:1m;
    ssl_session_timeout 10m;
    ssl_protocols TLSv1.2 TLSv1.1 TLSv1;
    ssl_prefer_server_ciphers on;
    ssl_ciphers EECDH+ECDSA+AESGCM:EECDH+aRSA+AESGCM:EECDH+ECDSA+SHA512:EECDH+ECDSA+SHA384:EECDH+ECDSA+SHA256:
ECDH+AESGCM:ECDH+AES256:DH+AESGCM:DH+AES256:RSA+AESGCM:!aNULL:!eNULL:!LOW:!RC4:!3DES:!MD5:!EXP:!PSK:!SRP:!DSS;
    ssl_certificate "/etc/pki/tls/certs/localhost.crt";
    ssl_certificate_key "/etc/pki/tls/certs/localhost.crt";

    # HSTS Header
    add_header Strict-Transport-Security "max-age=31536000; includeSubDomains";

    # Proxy
    location / {
        proxy_pass http://<vcs-ip-address>:9090;
    }
}

```

Obtaining SSL certificates

When Nginx is configured and the panel domain name is set, you need to obtain a valid SSL certificate. You can use [Letsencrypt](#) or any other SSL certificates provider. If you are going to use Letsencrypt, follow guideline at <https://certbot.eff.org/lets-encrypt/centosrhel7-nginx>. Otherwise, refer to the respective provider manual to deploy certificates.

Billing Firewall Configuration

The last stage of the deployment is to configure the **firewall on the billing servers**. In order to permit requests from panel proxy server to your JeraSoft Billing server, in firewall settings of the latter, you need to allow following ports from proxying server's IP: **443, 3080, 9080, 9090**.

Panel Configuration

In this article

- [Configuration File](#)
- [Per Reseller Configuration](#)
- [Configuration Options](#)
 - [General Settings](#)
 - [Output Formatting](#)
 - [Date and Time Formatting](#)
 - [Payment Gateways: PayPal](#)
 - [Payment Gateways: Authorize.Net](#)
 - [Payment Gateways: USAePay](#)
 - [Section: Charges History & Payments History](#)
 - [Section: Usage History / Detailed](#)
 - [Section: Usage History / Summary](#)
 - [Additional Settings](#)

Configuration File

The next step is to tune Client Panel settings. If you are using default deployment, the configuration is located at `/opt/jerasoft/vcs-data/conf/cp-customer-params.json`. If you are moving the panel to the other host, the file should be located in `<YOUR-PATH>/portal-backend/config/customer-params.json`.

During the installation process, the file is pre-created with all general settings like billing credentials, tokens, etc. At the same time there is a set of parameters that can be configured like:

- Payment gateway credentials
- Default locale and output settings
- Date and time formatting options
- Rates and costs rounding

To simplify the process, your deployment provides the `/opt/jerasoft/vcs/portal-backend/config/customer-params.default.json` file. This file has all the available settings with their default values. You do not need to change this file, it is provided as a reference.

Warning

Do not edit default configuration at `/opt/jerasoft/vcs/portal-backend/config/customer-params.default.json`. If you need to change configuration parameters just add them to `/opt/jerasoft/vcs-data/conf/cp-customer-params.json`.

Per Reseller Configuration

The structure of your configuration file allows you to have different settings for different **Resellers** in the system. By default, the file contains a single section called **"default"** with all custom settings. If you want to have multiple Client Panels (for example, separated by domain names), you need to add another section with a simple distinguishable name and put all related settings in this section. The name may consist of Latin characters, numbers, minus and underscore characters.

After that, you need to pass this name from your web-server to the panel using FastCGI parameter called **"CONFIG_ID"**. It will tell panel which part of config to read to display a related Client Panel. If you are using **nginx** as your web server, use the following statement to pass the parameters:

Ngix Config

```
fastcgi_param CONFIG_ID "special";
```

Additionally, in the admin panel of the billing system, you'll need to add a **User** for each Reseller in the SystemUsers section. For each such user, set the **PI - Client Portal Role**. From settings set up there, you will also get a login, password, and CoreAPI token values for the `customer-params.json` file.

Attention

Please note that for correct work each Reseller has to have its own separate redis databases (**redisMain** and **redisCache** are at db 1 and 2 respectively by default). **Redis** instance supports 16 databases (0-15 in numeric values) by default. You can increase the number of available databases in Redis config if needed.

Configuration Options

As mentioned above, you can use `/opt/jerasoft/vcs/portal-backend/config/customer-params.default.json` file as a reference for all available parameters. The table below describes each of them. Please put all settings into your config file and do not change `customer-params.default.json` as it will be overwritten on the system update.

General Settings

| Setting Name | Description | Example |
|-------------------------------|--|-------------------------------------|
| amountOptions | Array of available amounts for a top-up in the list to select. | [5, 20, 50, 100] |
| billingUrl | URL of the billing system. As it is accessible from the Client Panel host | "https://127.0.0.1" |
| companiesId | ID of the Reseller for the Client Panel | 3 |
| currenciesId | Currency ID (as per your system configuration) for the payments received from the specific Payment Gateway. Required. | 2 |
| currencyCode | Currency code of the Payment Gateway to charge payments in (declared by the gateway itself). | USD |
| logFile | Path to the Client Panel log file | "/opt/jerasoft/vcs-data/log/cp.log" |
| openedEndpoint | URL of the Client Panel (without "/" at the end). This URL will be used to return clients to after processing of the payment by the Payment Gateways | "http://127.0.0.1" |
| coreApi.url | URL of the Core API service | "http://127.0.0.1:3080" |
| coreApi.authToken | Authorization token for the Core API service. You can get this token in the System/Users section | "PW2Ln6PSS3vpmmZrCQBV5of2N07jJbcU" |
| managementApi.url | URL of the Management API | "https://127.0.0.1/jsonrpc" |
| managementApi.login | Login of the user used for the integration. You need to have a dedicated user for the integration, use the same user for the Core API service and Management API | "api-client-portal" |
| managementApi.password | Password of the user used for the integration | "aqGW31oxHag8" |
| paymentAccountsId | Payment Account's ID as per your system configuration. | 1 |

Output Formatting

The following settings are located under **"defaults"** key of the configuration file.

| Setting Name | Description | Example |
|---------------------|--|---------|
| locale | Default locale to start with. Available settings: en, ru | "en" |
| perPage | Quantity of rows to display per page. Allowed values: an integer from 1 to 1000 | 10 |
| roundRates | Quantity of digits after the decimal point for display of rates. Allowed values: an integer from 0 to 16 | 4 |
| roundAmounts | Quantity of digits after the decimal point for display of amounts. Allowed values: an integer from 0 to 16 | 2 |

Date and Time Formatting

The following settings are located under **"dateTimeConfig"** key of the configuration file. Please refer to [the following guide](#) for a list of possible values.

| Date and Time Formatting [section: dateTimeConfig] | | |
|---|-------------|---------|
| Setting Name | Description | Example |

| | | |
|-----------------------|---|----------------|
| monthFormat | Format string to display "Month Year" strings | "F Y" |
| dateFormat | Format string to display dates | "m/d/Y" |
| dateTimeFormat | Format string to display dates with time | "m/d/Y, h:i A" |

Payment Gateways: PayPal

The following settings are located under "**paymentGateways.paypal**" key of the configuration file. Check your PayPal panel for the required parameters. [Get more details.](#)

| Setting Name | Description | Example |
|-------------------------|---|----------------------------|
| enabled | Defines if the payment gateway is enabled. Allowed values: true, false. Do not forget to enable gateway in the respective section of the billing system | true |
| sandbox | Defines if the Sandbox mode is enabled. Allowed values: true, false | false |
| allowCustom | Defines if the custom amount payments are allowed. Allowed values: true, false | true |
| clientId | PayPal Client ID | test@example.org |
| feesPayer | Describes who pays fees for the transaction. Allowed values: provider, client | provider |
| clientSecret | PayPal Client Secret Key | |
| itemName | Item name displayed in the PayPal order | "Credit Your Balance Item" |
| orderDescription | Order description displayed in the PayPal | "Credit Your Balance" |
| currenciesId | Currency ID | 26 |
| currencyCode | Name of currency | "USD" |

Payment Gateways: Authorize.Net

The following settings are located under "**paymentGateways.authorizenet**" key of the configuration file. Check your Authorize.Net panel for the required parameters. [Get more details.](#)

| Setting Name | Description | Example |
|--------------------------|---|---------|
| enabled | Defines if the payment gateway is enabled. Allowed values: true, false. Do not forget to enable gateway in the respective section of the billing system | true |
| sandbox | Defines if the Sandbox mode is enabled. Allowed values: true, false | false |
| allowCustom | Defines if the custom amount payments are allowed. Allowed values: true, false | true |
| apiLoginId | Authorize.Net API Login ID | |
| apiTransactionKey | Authorize.Net API Transaction Key | |

Payment Gateways: USAePay

The following settings are located under "**paymentGateways.usaepay**" key of the configuration file. Check your USAePay panel for the required parameters. [Get more details.](#)

| Setting Name | Description | Example |
|--------------------|---|---------|
| enabled | Defines if the payment gateway is enabled. Allowed values: true, false. Do not forget to enable gateway in the respective section of the billing system | true |
| sandbox | Defines if the Sandbox mode is enabled. Allowed values: true, false | false |
| allowCustom | Defines if the custom amount payments are allowed. Allowed values: true, false | true |
| apiKey | USAePay API Key | |
| apiPin | USAePay API Pin | |

Attention

Payment Gateways integration requires a proper domain name and real SSL certificate. Please check the [Panel Deployment](#) guideline to get more information.

Section: Charges History & Payments History

The following settings are located under "**modules.transactionList**" key of the configuration file.

| Setting Name | Description | Example |
|-------------------------|---|---------|
| dateRangeDefault | Default dates range in the filter, in days. Allowed values: an integer from 1 to 90 | 30 |

Section: Usage History / Detailed

The following settings are located under "**modules.reportXdrs**" key of the configuration file.

| Setting Name | Description | Example |
|-------------------------|--|------------------------------|
| queryOn Open | Defines if the report should be run right after section open. If set to false , the user will have to hit Query to get the report. Use this option if you have plenty of data to load. Allowed values: true, false | true |
| dateRangeDefault | Default dates range in the filter, in days. Allowed values: integer 1 to 90 | 3 |
| columns | List of columns to display. Allowed values: origin, dt, accounts_name, cc_serial, clients_tags, accounts_tags, tags, code_country, code_name, code, src_code_country, src_code_name, src_code, volume, volume_billed, package_volume, package_credit, packages_id, packages_name, currencies_id, pay_setup, cost, rate, taxes, subscriber_host, subscriber_id, result_code, result_status, switch_code, start_time, connect_time, finish_time, pdd, scd, src_party_id, dst_party_id, src_party_id_ext, dst_party_id_ext, src_party_id_bill, dst_party_id_bill, voip_hosts_id, voip_hosts_name, voip_hosts_collectors_id, services_name, units_id, session_id, x_id, xdrs_id, uniq_id, custom, xdrs_extra, status | ["origin", "src_party_id"] |

Section: Usage History / Summary

The following settings are located under "**modules.reportSummary**" key of the configuration file.

| Setting Name | Description | Example |
|-------------------------|--|--------------------------------|
| queryOn Open | Defines if the report should be run right after section open. If set to false , the user will have to hit Query to get the report. Use this option if you have plenty of data to load. Allowed values: true, false | true |
| dateRangeDefault | Default dates range in the filter, in days. Allowed values: integer 1 to 180 | 90 |
| columns | List of columns to display. Allowed values: origin, services_name, units_id, currencies_id, cost_total, pay_setup_cost, rate_avg, package_credit, volume_total, volume_billed, package_volume, records_total, records_notzero, records_success, records_busy, records_nochannel, records_error, asr_std, asr_cur, acd_std, acd_cur, pdd_avg, scd_avg | ["origin", "service_s_name"] |

Additional Settings

The following settings are located at the top level of the configuration section.

| Setting Name | Description | Example |
|--------------------------------|--|-------------|
| redisMain.hostname | The hostname or IP address to use for connecting to the Redis server. | "localhost" |
| redisMain.port | The port to use for connecting to the Redis server. | 6379 |
| redisMain.database | The Redis database to use. | 1 |
| redisCache.hostname | The hostname or IP address to use for connecting to the Redis server. | "localhost" |
| redisCache.port | The port to use for connecting to the Redis server. | 6379 |
| redisCache.database | The Redis database to use. | 2 |
| environment.httpTimeout | The timeout for all requests that Portal Frontend sends to Portal Backend. | 30000 |

Panel Access

Access to the panel for your customers is configured in a respective customer's properties of JeraSoft Billing web-interface: **Mangement > Clients > Client's Panel** information block in a target client's profile. Make sure, you have enabled the access and specified login/password.

Screenshot: Client profile

Clients

SYSTEM INFORMATION

Name:

Reseller:

Currency:

Timezone:

Status:

Client's Template:

Tags:

Tax Profile:

Bill Events by:

Hidden Numbers

CLIENT'S PANEL

Login:

Password:

TERMINATOR SETTINGS

Rate Table:

Capacity: Channels

ORIGINATOR SETTINGS

Postpaid: USD

Payment Terms:

Rate Table:

Routing Plan:

Capacity: Channels

LOW BALANCE CONTROL

Notify Client: USD Notify Admin: USD

Threshold: USD Capacity: Channels

AUTOINVOICING

Template:

Last Invoiced:

RATE NOTIFICATION

Format:

Notify type:

Panel Customization

Personal logo and styles customization

You may personalize your panel to make it fit better to your company style. You can start with logo and, if you are familiar with CSS, you may add CSS styles. Below, you can find locations for the respective files. Please note that given paths relate to **/opt/jerasoft/vcs/portal-frontend/dist/assets**.

- **Logo for Login Page** – image-resources/logo-login.png
- **Logo for Client Portal** – image-resources/logo-panel.png
- **CSS Files** – client_portal_custom.css

Warning

You need to re-apply your settings **after each JeraSoft Billing upgrade**.

Functional customization

If you wish to tune panel in more details (for example add or remove features) you can just copy source code to another server and modify it. Do not modify code at default deployment location, otherwise, all the changes made will be removed during the system upgrade.

The panel consists of two parts:

- **Frontend** - responsible for the user interface (style, formatting, and logic)
 - Development Stack: JS/Angular, CSS/Bootstrap
 - Located at /opt/jerasoft/vcs/portal-frontend/
- **Backend** - responsible for serving data between system API and Frontend
 - Development Stack: PHP/Yii2, Swagger
 - Located at /opt/jerasoft/vcs/portal-backend/

These both parts have to be copied to a dedicated server if you would like to make any modifications in how Client Panel looks and works. Both parts come with all source code, which you can use as a starting point for your development or as a reference guide to developing your own portal from scratch.

Feel free to modify the code, improve it or extend, build it into some other platforms. For example, you can update the menu, a panel view, edit a set of filters, modify grouping options or create your own panel by taking it as an example of functional implementation.

System Shell Tools

In this article

- [Requirements Checker](#)
- [Safety Checker](#)
- [Services Manager](#)
 - [Usage Examples](#)
- [Cluster Manager](#)
 - [Cluster Status](#)
 - [Init Master](#)
 - [Init Slave](#)
 - [Promote to Master](#)
 - [Sync Files](#)
 - [Remove Node](#)

This section describes **shell tools** required for the deployment management of the system. All these tools are part of the JeraSoft Billing distributive. In order to use the tools you will need either SSH or direct access to the server console. Some of the tools require *root permissions* to run.

Important!

Please use these tools **only if you have a clear understanding** of what you are doing. Misuse of the tools may cause improper functioning of the system.

Attention

Please note, for simplification we introduced `<APP_PATH>` variable that refers to the JeraSoft Billing application files location. This location may differ, but typically it is `/opt/jerasoft/vcs`. So whenever you see an example with path like `"<APP_PATH>/bin/system/cluster"` it means `"/opt/jerasoft/vcs/bin/system/cluster"`.

Requirements Checker

The tool is aimed to check **minimal requirements** of your server before installation.

Usage

```
<APP_PATH>/bin/system/setup-checker
```

The tool requires **root** permissions and takes no arguments. It should be executed before installation of the system in order to check minimal hardware and software requirements.

Attention

The tool checks only minimal requirements. **Real hardware requirements** highly depend on your traffic and deployment model.

Safety Checker

The tool is aimed to check configuration of the main server settings after installation.

Usage

```
<APP_PATH>/bin/system/security-checks
```

The tool takes no arguments. When executed it performs numerous checks for the correctness of the network and server configuration.

Services Manager

The tool is used for **management of System Services**. It allows to correctly start, stop and perform other actions over various JeraSoft Billing Services such as RADIUS Server, SIP Server, Calculator, etc.

Usage

```
<APP_PATH>/bin/system/service <COMMAND> [<service-name>] [<options>]
```

The tool should be run under **root** or **vcs** user. The tool typically takes 2 arguments – action to perform and related system service. Actions prefixed with "all-" do not require service name and operate over all services.

| Command | Description |
|------------|---|
| start | Start System Service Takes "--wait" option in order to wait and exit only when service finishes its execution. |
| stop | Stop System Service |
| restart | Stop and then start System Service |
| reload | Send reload (HUP) signal to the System Service (forces reload of settings, connections, etc) |
| status | Show current status of the System Service |
| all-start | Start all required System Services (list of services varies depending on the role of the current node in the cluster) |
| all-stop | Stop all running System Services |
| all-status | Show status of all System Services on the current node |

Usage Examples

Restart RADIUS Server

```
<APP_PATH>/bin/system/service restart bbradiusd
```

Start Files Downloader

```
<APP_PATH>/bin/system/service start files_downloader
```

Start all required System Services

```
<APP_PATH>/bin/system/service all-start
```

Cluster Manager

The tool is used to **manage nodes in the cluster deployment**. It allows to initialize the cluster, add a new node, promote redundancy to master, etc.

Usage

```
<APP_PATH>/bin/system/cluster <COMMAND> [<options>]
```

The tool requires **root** permissions. The list of arguments and other requirements depend on the command used. Please refer to the below table for a summary and respective sections for details.

| Command | Description | Nodes | Root Required |
|-------------|--------------------------------|-----------------------------------|---------------|
| status | Show status of the cluster | Any node | No |
| init-master | Init Master Node configuration | Master | Yes |
| init-slave | Init Slave Node configuration | Master | Yes |
| promote | Promote current node to Master | Redundancy | Yes |
| sync-files | Sync files from Master | Redundancy, Reporting, Processing | No |
| remove-node | Remove Node from the Cluster | Master | Yes |

Cluster Status

The command shows Cluster Status, including all nodes with their roles, IP addresses, current lag to Master, and overall status.

Bash

```
<APP_PATH>/bin/system/cluster status
```

The command can be executed **on the Master** to get the most detailed information about the cluster:

| Role | Node ID | IP Address | Status | Receive Lag | Replay Lag | Replication |
|------------|---------|----------------|-------------|-------------|------------|-------------|
| > Master | node-01 | 172.17.172.17 | [Current] | N/A | N/A | Master |
| Redundancy | node-02 | 172.17.172.101 | Connected | 0.00 MB | 0.00 MB | Streaming |
| Processing | node-03 | 172.17.172.102 | Connected | 0.00 MB | 0.00 MB | Logical |

Alternatively, the command can be executed at any other node - in this case, only the status of the connection between this particular node and the Master will be shown.

If any node failed and has been disconnected from the cluster, it will be shown like this:

| Role | Node ID | IP Address | Status | Receive Lag | Replay Lag | Replication |
|------------|---------|----------------|--------------|-------------|------------|-------------|
| > Master | node-01 | 172.17.172.17 | [Current] | N/A | N/A | Master |
| Redundancy | node-02 | 172.17.172.101 | Disconnected | Unknown | Unknown | Streaming |
| Processing | node-03 | 172.17.172.102 | Connected | 0.00 MB | 0.00 MB | Logical |

In this case, you have to re-check failed node, fix it and then return to the cluster using the *"init-slave"* command.

Init Master

The command is used for the initial configuration of the Master Node.

Bash

```
<APP_PATH>/bin/system/cluster init-master <IP-ADDRESS> [<options>]
```

Command has to be executed **on the Master** node and requires **root** permissions. The following options are supported:

| Option | Description | Default |
|-------------------|---|------------|
| <IP-ADDRESS> | IP Address of the Master server (required) | |
| --ssh-port=<port> | SSH Port as the master node | 22 |
| --pg-data=<path> | Path to PostgreSQL data directory | autodetect |

Init Slave

The command is used to add a node to the cluster. There are different contexts when it is required:

- First-time deployment of the cluster
- Addition of a new slave node to the cluster
- Addition of the old master to work as a slave after failover

| Bash |
|---|
| <APP_PATH>/bin/system/cluster init-slave <IP-ADDRESS> [<options>] |

Command has to be executed **on the Master** node and requires **root** permissions. The following options are supported:

| Option | Description | Default |
|-------------------|--|-------------|
| <IP-ADDRESS> | IP Address of the Slave server (required) | |
| --role=<role> | Role of the new node: <ul style="list-style-type: none"> • redundancy - fully-featured redundancy, that acts as a hot standby and can be promoted to the Master at any time (may be used for redundancy and load balancing at the same time) • reporting - a node that receives most of the requests for the reports, holds a full snapshot of the database, however, it might be delayed from Master depending on the current load and requests (might be used for failover, as a last resort) • processing - lightweight node for processing of real-time requests (authentication, authorization, and routing), can not be used for failover as it does not hold any statistical data • calculation - a node to help calculate huge amounts if the Master struggles to process solely | redundancy |
| --ssh-port=<port> | SSH Port at the remote node | 22 |
| --ssh-user=<user> | SSH User at the remote node | jerasupport |
| --pg-data=<path> | Path to PostgreSQL data directory at the remove node | autodetect |

Promote to Master

The command is used to **promote the Redundancy node to Master**.

| Bash |
|---------------------------------------|
| <APP_PATH>/bin/system/cluster promote |

Command has to be executed **on the Redundancy node** and requires **root** permissions. Reporting node can be used as a last resort if there are no Redundancy node alive. There are no options required.

After the promotion is performed, all required System Services will be started on the current node (new master). After you fix the old *Master*, you may add it as a new *Slave* using the "*init-slave*" command.

⚠ Attention

In case when you have more than 2 nodes in the cluster, you need to **re-init all other** nodes from this new *Master*.

Sync Files

The command is used to sync data and application files from the Master.

Bash

```
<APP_PATH>/bin/system/cluster sync-files
```

Command has to be executed **on the Redundancy node** and by default, it is added to the crontab for automatic synchronization.

Remove Node

The command is used to remove a node from the cluster.

Bash

```
<APP_PATH>/bin/system/cluster remove-node <IP-ADDRESS>
```

Command has to be executed **on the Master** node. The node in question shouldn't have any active database replication. The following options are supported:

| Option | Description | Default |
|--------------|---|---------|
| <IP-ADDRESS> | IP Address of the remote node (required) | |

APIs

This section of our Guide contains detailed information about **JeraSoft Billing API** that lets you integrate 3rd party applications with the JeraSoft Billing platform or develop your own tools on top of it. The API makes it easy to get data in and out of the JeraSoft Billing. Depending on your needs, you may need to choose, which type of API is best for you:

- **CoreAPI** - provides tools for main components' integrations, high loads and contains a limited number of most used API methods.
- **Provisioning API** - allows handling events on 3rd party systems.
- **Management API** - gives possibilities to retrieve, add or modify data. It has the same logic as the web interface. Thus, every object that you could use via the web interface can be accessed within API.

For more details, please go to the related subsections:

- [CoreAPI](#)
- [Provisioning API](#)

CoreAPI

Tip

For more specific JeraSoft Billing module description, click [here](#).

The **CoreAPI** is the high-performance mechanism for real-time integration with 3rd party systems, including softswitches, gateways, etc. It's designed for a limited number of most used methods for integrations. Typically, the CoreAPI methods can be used for the following:

- for developing customers' portals;
- for mobile applications;
- for data synchronization with 3rd party systems.

Attention

1. The JeraSoft team may modify the attributes and methods related to the CoreAPI usage from time to time without advance notice.
2. To provide our users with the most up-to-date features, **we recommend using CoreAPI** instead of **Management API methods** for integrations.

Protocol

The Service implements JSON-RPC 2.0 specification. Transport of the RPC messages is performed over the HTTP protocol. By default, the Service runs on 3080/tcp port. It is assumed that RPC clients talk to the Service over a secure connection (either VPN or private network).

Authorization and Tokens

Authentication is performed using pre-created API Tokens. Each RPC request should contain an API Token under the parameter named `AUTH`. The API Tokens are linked to System Users and Resellers setting of the user is respected. At the same time, there is no module/method limitation within CoreAPI, all methods are available to all users.

Example

```
[
  {
    "jsonrpc": "2.0",
    "id": 1,
    "method": "rating.getTaxes",
    "params": {
      "amountGross": 100,
      "taxes": [
        {"priority": 1, "value": 10}
      ]
    }
  },
  {
    "jsonrpc": "2.0",
    "id": 2,
    "method": "transactions.create",
    "params": {
      "clients_id": 10562,
      "currencies_id": 16,
      "amount": "${0.amountNet}",
      "descr": "Special Transaction"
    }
  }
]
```

Tip

You can access the user's CoreAPI token in his edit form, go to the **System > Users**

ProvisioningAPI

In this article

- [Handlers](#)
- [Event Payload](#)
 - [Structure](#)
- [Supported Events](#)
 - [Clients Management](#)
 - [Accounts Management](#)
 - [Subscriptions Management](#)
 - [Email Rates Manager](#)
 - [Import Manager](#)
 - [Charges](#)
 - [Payments](#)

The **Provisioning API** provides a mechanism for real-time integration with 3rd party systems, including softswitches, gateways, and CRM systems. The mechanism calls pre-defined handlers on the occurrence of specific events in the system.

While **Core API** and **Management API** sub-systems answer requests, **Provisioning API** pushes data as soon as an event occurs. For example, you can monitor the client's balance status via this functionality. Thus, when the client's balance is below zero, you can configure the system to send a notification to an external system to avoid any disruptions to your organization's current processes.

Handlers

A typical handler should be configured as is **HTTPS** or **HTTP** with an URL of the script, which will get HTTP POST requests about each event occurrence.

*Please avoid using the **Script** type of handlers, they are designed for internal usage within the system.*

Best practice example

There is an example based on <https://hostname/handler-endpoint> usage.

Open the **Provisioning section** and start creating a handler.

1. Specify the name, type, and status.
2. In the **Event** field, select **Clients Create** event from the drop-down list.
3. In the **Task** field, indicate **HTTPS** type and define the URL for the handler, for example, **my-domain.org/api**.
4. Click **Apply**.

Find an example of the <http://handler> below:

```
from flask import Flask, request
import json
app = Flask(__name__)
@app.route("/api", methods=['GET', 'POST'])
def api():
    data = json.loads(request.data)
    return json.dumps(data)
if __name__ == "__main__":
    app.run()
```

Event Payload

Structure

Within notification, the handler will be called with a JSON-formatted data payload. The payload has the following structure:

- **event**
 - **dt** - the date-time of the event in the ISO8601 format;
 - **events_id** - ID of the event occurred (helpful, when multiple events are handled by the same handler);
 - **object_id** - the entity, to which the event happened;
- **data** - data related to the specific event (check Payload Samples below)

Supported Events

Please note that some Payload Samples below contain reduced payload as they fully replicate the data structures within CoreAPI. Please refer to the respective documentation within the system interface in the **Integration/CoreAPI Docs** section for full format of the structure.

| Event ID | Payload Sample |
|---|----------------|
| Clients Management | |
| <p>clients.create</p> <p>The client has been created</p> | |
| <p>clients.update</p> <p>The client's details have been updated</p> | |
| <p>clients.archive</p> <p>The client has been archived</p> | |
| <p>clients.delete</p> <p>The client has been completely deleted</p> <p><i>Not to be confused with archived</i></p> | |
| <p>clients.balance_zero</p> <p>The client's balance became ≤ 0</p> | |
| <p>clients.balance_notzero</p> <p>The client's balance became > 0</p> | |

| | |
|---|--|
| <code>clients.custom_fields.update</code> The client's Custom Field has been updated | |
| Accounts Management | |
| <code>clients.accounts.create</code> The account has been created | |
| <code>clients.accounts.update</code> The account's details have been updated | |
| <code>clients.accounts.delete</code> The account has been completely deleted | |
| Subscriptions Management | |
| <code>clients.subscriptions.assign</code> The subscription has been assigned | |

clients.subscriptions.activate

The subscription has been activated

clients.subscriptions.deactivate

The subscription has been deactivated

clients.subscriptions.renew

The subscription has been renewed

clients.subscriptions.close

The subscription has been closed

Email Rates Manager

email_rates_manager.import

The import file has been prepared for further processing by the task specified in the Provisioning API handler settings, and the import process was stopped

email_rates_manager.rate_tables_no_match

No Rate Tables match received email

email_rates_manager.no_attachments

No attachments have been identified

email_rates_manager.file_processing_error

The file processing error

Import Manager

`importd.process_success`

The import attempt was successful

importd.process_failed

The import attempt has failed

Charges

| | |
|--|--|
| <p>accounting.charges.create</p> <p>The Transaction of Type Charge has been created</p> | |
| <p>accounting.charges.delete</p> <p>The Transaction of Type Charge has been removed</p> | |
| <p>accounting.charges.update</p> <p>The Transaction of Type Charge has been edited</p> | |
| Payments | |
| <p>accounting.payments.create</p> <p>The Transaction of Type Payment has been created</p> | |

| | |
|--|--|
| <p>accounting.payments.delete</p> <p>The Transaction of Type Payment has been removed</p> | |
| <p>accounting.payments.update</p> <p>The Transaction of Type Payment has been edited</p> | |

 **Tip**

- For more information about **configuring and monitoring the hooks for Provisioning API**, visit our respective article **User Guide > System > [Provisioning API](#)**.
- If you need to process some of the actions that are not listed here, contact our support for a feature request.