

JeraSoft Billing

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User Guide

Welcome to JeraSoft VCS 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 **VCS 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](#)
- [Retail](#)
- [Statistics](#)
- [Tools](#)
- [Routing](#)
- [Configuration](#)
- [System](#)
- [Client Portal](#)
- [System Shell Tools](#)
- [APIs](#)

Interface Basics

In this article

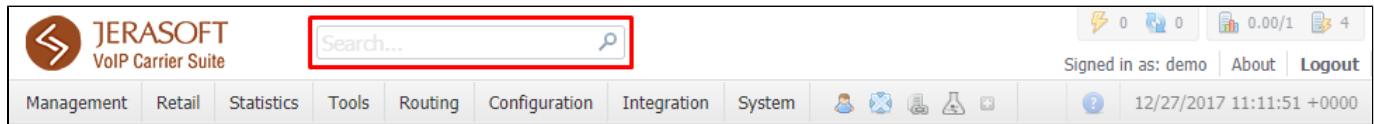
- [Global Search Bar](#)
- [SmartBar](#)
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- [Change Password](#)
- [About](#)
- [Page Load Time](#)
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- [System Logout](#)
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Prior to jumping straight 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 VCS 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 VCS 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

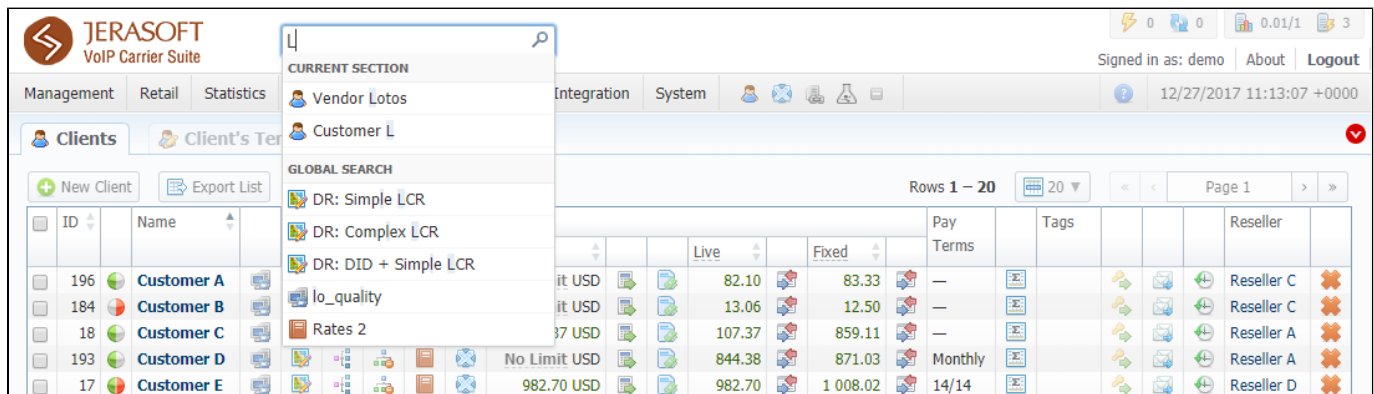




This search bar displays two parts of results: from the **current section** and **global search** in the system. Therefore, it shows a drop-down list with 10 first items matched your keyword from the current section and from a whole system at all (see screenshot below).

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



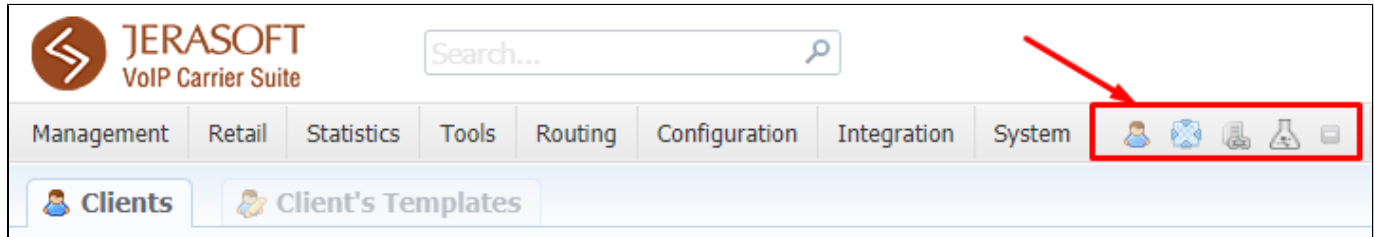
Several VCS sections have advanced search settings. To open these settings, click on blue downwards arrow  icon on the toolbar of a respective section. Red downwards arrow  icon on the toolbar means that the data is sorted by default (see screenshot above).

SmartBar

There is **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 the result, a corresponding icon will be the rightmost on the panel. To remove the shortcut, click the minus sign  at the same location.

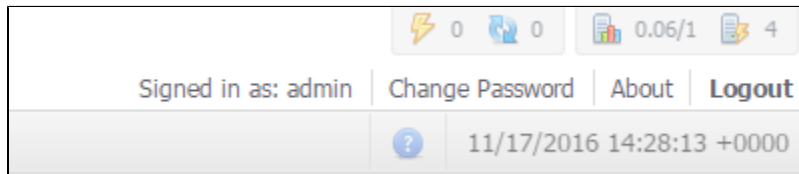
Screenshot: SmartBar panel










InfoBar

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

Screenshot: InfoBar settings

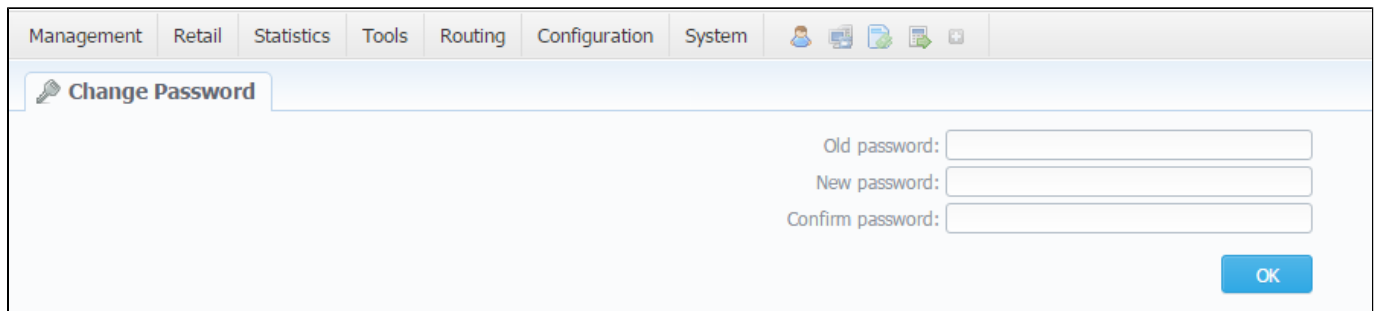


Icon	Description
	CDR queue
	CDRs in queue for rerating
	CDRs in queue for parsing
	Information about system alerts
	Load average on server / Number of CPU cores
	Number of running billing services
	Shortcut to a relevant article regarding certain section on Documentation Portal

Change Password

You can change current password by using **Change Password** menu (see screenshot below):

Screenshot: Change Password settings



To change a password, enter 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 VCS 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

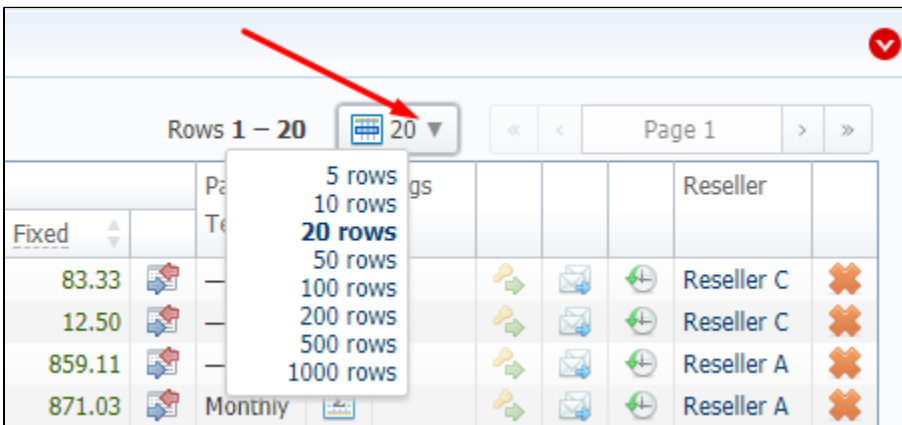
To provide user with relevant information about the system, in the bottom-left corner of any page next to **About** button **Page Load Time** is displayed.



Rows per Page

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

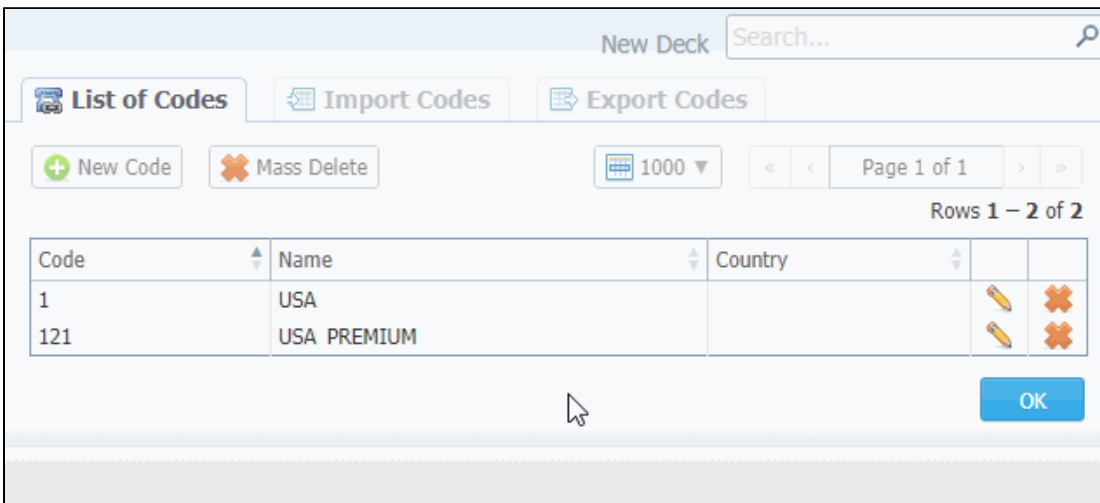
Screenshot: Rows Per Page dropdown button



Delete Confirmation

To prevent a situation when you delete any 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 deleting, press **OK**, and an entity will be removed from the system. The whole process is illustrated on the animation below.

Animation: Delete confirmation



System Logout

You can logout from 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

ID	Name	Balance			Pay Terms	Tags	Reseller
		Available	Live	Fixed			
196	Customer A	No Limit USD	82.10	83.33	—		Reseller C
184	Customer B	No Limit USD	13.06	12.50	—		Reseller C
18	Customer C	107.37 USD	107.37	859.11	—		Reseller A
193	Customer D	No Limit USD	844.38	871.03	Monthly		Reseller A
17	Customer E	982.70 USD	982.70	1 008.02	14/14		Reseller D

About 0.0828s

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Management

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

Take a note that while navigating throughout the **system**, you will come across find plenty of tooltips to provide a better understanding of the system mechanisms. It's easy to determine, whether there is one or not. All tooltips 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 an additional information becomes visible.

The list of management section includes:

- [Clients](#)
- [Accounts](#)
- [Rate Tables](#)
- [Invoices](#)
- [Transactions](#)
- [Balance Report](#)
- [Resellers](#)
- [Client Packages](#)
- [Presets](#)
- [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, **Clients** section is rightfully considered as a core element of the whole **JeraSoft VoIP Carrier Suit**. In the section, user can manage personal information of any client on the list, trace customer's balances, review resellers a particular client belongs to, etc. Section is presented in a form of a table with the following columns:

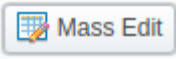
















Screenshot: *Clients section*

ID	Name	Balance Available	Balance Live	Balance Fixed	Pay Terms	Tags	Reseller
14	Rose	257.00 USD	0.00	0.00	—		Reseller 1
11	Rose orig	105.40 USD	105.40	-5.10	—		Reseller 1
12	Rose term	No Limit EUR	-2 471.95	942.00	—		Reseller 1


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 basis of performed payments and processed calls
<ul style="list-style-type: none"> • Fixed Client's balance calculated on 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 management of 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 Accounts section (icon will be colored if any account is assigned)	
	Allows accessing client's current routing plan (icon will be colored if plan is assigned)	
	Allows accessing Traffic Processing section for dynamic routing management	
	Allows accessing Presets section for management of certain routes in client's routing scheme	
	Allows viewing client's rates (icon will be colored if 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 Client Packages section for new clients packages management	
	Allows accessing Transactions section for management of client's balance	
	Allows accessing Invoices section for client's invoices management.	
	Allows accessing Balance Report section to manage client's balance report (Live or Fixed)	
	Allows accessing Summary Report section to manage client's summary report	
	Allows accessing Mail Queue section to view history of sent emails	
	Allows accessing 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 click a respective delete  icon, the Client Panel of this client will be disabled and origination/termination settings of his accounts will be turned off. However, his 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 only by first letters (**start with** rule). To find all clients with specified main email, use * (asterisk) in the **Main Email** field.

Advanced Search

In the top right corner of the section above the table, an **Advanced Search** drop-down menu is located. By clicking on 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 interface with the following fields and controls:

- Status: Active (dropdown)
- Reseller: all resellers (dropdown)
- Client's Template: (dropdown)
- Type: (dropdown)
- Main E-mail: (text input)
- Account Name: (text input)
- Account Name / ANI / IP: (text input)
- Payment Terms: (dropdown)
- ORIG Rate Table: (dropdown)
- TERM Rate Table: (dropdown)
- Routing Plan: (dropdown)
- Client ID: (text input)
- Tags: (text input)
- Reset button
- Search button

Attention

In VCS 3.15.0, **Account IP** field has been renamed to **Account Name / ANI / IP**

Adding New Client

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

Screenshot: Adding new client


A screenshot of the 'Adding new client' form, organized into several sections:

- SYSTEM INFORMATION:** Name (Customer A), Reseller (Reseller 1), Currency (USD), Timezone (Default (UTC)), Status (Active), Client's Template, Tags, Tax Profile, Bill Events by (Setup time), Hidden Numbers checkbox.
- CLIENT'S PANEL:** Login, Password.
- TERMINATOR SETTINGS:** Rate Table, Capacity (Channels).
- ORIGINATOR SETTINGS:** Postpaid (checked), USD, Payment Terms, Rate Table, Routing Plan (DR: Complex LCR), Capacity (Channels).
- LOW BALANCE CONTROL:** Notify Client (USD), Notify Admin (USD), Threshold (USD), Capacity (Channels).
- AUTOINVOICING:** (checked), Template, Last Invoiced.
- RATE NOTIFICATION:** (checked), Format (CSV), Notify type (All rates).
- COMPANY INFO:** Name, Main E-mail, NOC E-mail, Billing E-mail, Rates E-mail, Address, ZIP Code, Tax ID, Reg ID, Account Details, Locale.

Buttons: OK, Cancel, Apply.

Information block	Fields & Description	
System Information	General information about client	
	<ul style="list-style-type: none"> Name 	Indicate 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"> Timezone 	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 timezone <div style="background-color: #ffff00; padding: 5px;"> <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, time profiles.</p> </div>
	<ul style="list-style-type: none"> Status 	Select 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-existed in the system. You can provide unlimited number of tags for each client.
	<ul style="list-style-type: none"> Tax Profile 	You can specify a tax profile which will be reflected in invoices (refers to Taxes Profiles section). <ul style="list-style-type: none"> SureTax is a tax, levied on top of another tax. It allows to manage your compliance with tax law. This profile is used for further calculation in invoices. To get more details, check out the article "How to set SureTax profile?". <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>For proper usage of SureTax, the Invoice Number should contain only Latin and numeric characters. Max length is 40 symbols. Dst and Src Numbers should be in format NPANXXNNNN (10 digits).</p> </div>
<ul style="list-style-type: none"> Bill Events By 	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)	
<ul style="list-style-type: none"> Hidden Numbers checkbox 	When checked, allows you to hide some part of client's destination numbers in invoices, xDR's reports and during export. <div style="background-color: #c8e6c9; padding: 5px;"> <p>✔ Tip</p> <p>If the client has enabled Hidden Numbers option 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, then 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>	
Client Panel checkbox	Activates/deactivates the log in 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:	

	<ul style="list-style-type: none"> • Login 	Client's login
	<ul style="list-style-type: none"> • Password 	Client's password
Originator Settings	Settings for your customers, who send events to your switch. Clients' origination settings are as follows:	
	<ul style="list-style-type: none"> • Postpaid checkbox 	Here you can set needed paid mode for a client. If you enable the postpaid mode, the client will have unlimited credit. It is disabled by default.
	<ul style="list-style-type: none"> • Credit 	Additional field next to the Postpaid check box. Here you can set the credit limit allowed for a client. You could fill this field with any of positive and negative numbers, but no more than 9 digits. If Postpaid checkbox is marked, this field becomes inactive .
	<ul style="list-style-type: none"> • Payment Terms 	Select the payment terms template from the general list of all available ones in Payment Terms section
	<ul style="list-style-type: none"> • Rate table 	From the list of all rate tables in Rate Tables section, select an origination one for this client
	<ul style="list-style-type: none"> • Routing Plan 	Select appropriate routing plan that will be used to route all calls of this customer (but it may be overridden for any of customer's accounts in <i>Accounts</i> tab). The full list of routing plans is presented in Routing Plans section
	<ul style="list-style-type: none"> • Capacity 	Indicate origination capacity of channels for this client. For unlimited amount, leave empty
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 an termination one for this client
	<ul style="list-style-type: none"> • Capacity 	Define termination capacity of channels for this client. For unlimited amount, leave empty
Low Balance Notifications	Here you can setup whether 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 entered value, system will send a notification to email, specified in clients' Bill ing e-mail field
	<ul style="list-style-type: none"> • Notify Admin 	When clients' balance+credit is below entered value, system will send a notification to 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 available balance is below 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	Here you can enable or disable automatic rates notification for the current client	

Notification checkbox	<ul style="list-style-type: none"> • Format 	Select desirable format of rate notification (xls or csv)
	<ul style="list-style-type: none"> • Notify 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 have unique mode - if there are two or more new rates with different effective dates for the same code, several files will be sent, each containing all unchanged rates and only one unique rate for this code <div style="background-color: #e0ffe0; padding: 5px; margin-top: 10px;"> <p> Tip</p> <p>1. The system will push a notification after new rates were added. Please note, if the user changes manually the Effective Date field of current rates, it won't activate notifications.</p> <p>2. We recommend to use this type of notification for testing purposes. It doesn't cancel a regular notification and doesn't change the last export date.</p> </div>
Company Info	Some additional information about client can be entered here	
<ul style="list-style-type: none"> • Name 	Company name	
<ul style="list-style-type: none"> • Main E-mail 	Company email for general inquiries. Use only Latin characters.	
<ul style="list-style-type: none"> • NOC E-mail 	Company email for technical related questions. Use only Latin characters.	
<ul style="list-style-type: none"> • Notify about Factor Watcher blocks checkbox 	This tool watches over different parameters and generates alerts if some conditions are met. This function is optional, i.e. you can enable or disable them in Clients form	
<ul style="list-style-type: none"> • Billing E-mail 	Automatically generated invoices and notifications will be sent to this e-mail address. Use only Latin characters.	
<ul style="list-style-type: none"> • Rates E-mail 	Company email for rates related questions. Use only Latin characters.	
<ul style="list-style-type: none"> • Address 	Physical company address	
<ul style="list-style-type: none"> • Zip Code 	Postal code for SureTax integration	
<ul style="list-style-type: none"> • Tax ID 	Customer's tax ID	
<ul style="list-style-type: none"> • Reg ID 	Customer's registration ID	
<ul style="list-style-type: none"> • Account Details 	Reference information about client's bank account or payment details	

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

⚠ Attention

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

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

⚠ Warning

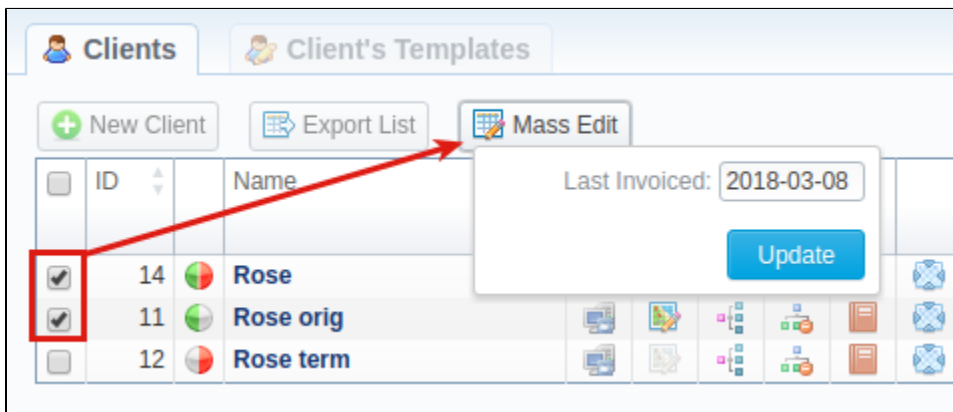
Full Delete button can be used to permanently remove a client from the system, disregarding any statistics or rate tables data connections. Please, use this feature with care – deleted client can not be restored by any means

Mass Edit

If there is a need to **change 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;
- Press **Mass Edit** button and specify the date in **Last Invoiced** field;
- Press **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 tariffication parameters for customers, managers, or resellers in several clicks. For more details, check out a related article: [Clients Templates](#).

Knowledge Base Articles

- [US Taxation](#)
- [How to set Prepaid or Postpaid mode?](#)
- [How to set up a functional capacity?](#)
- [Priority of Capacity field use in Clients section](#)

Clients Templates

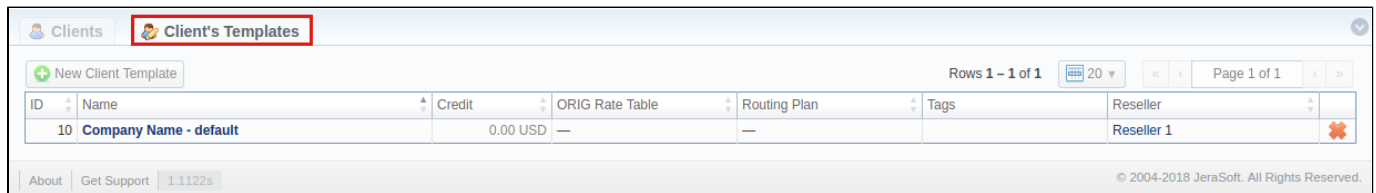
In this article

- [Tab overview](#)
- [Advanced Search](#)
- [Creating 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*



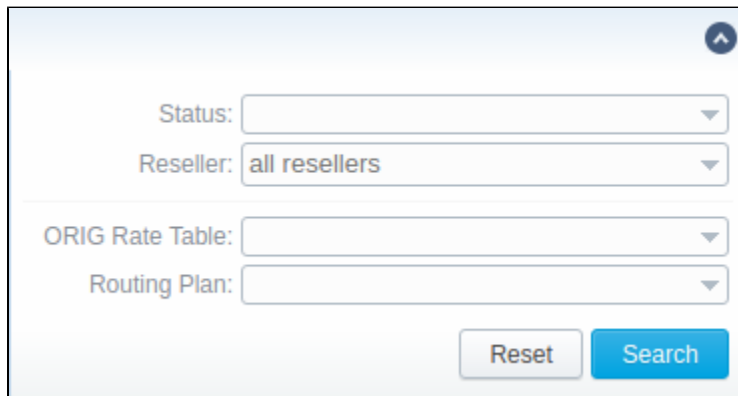
ID	Name	Credit	ORIG Rate Table	Routing Plan	Tags	Reseller
10	Company Name - default	0.00 USD	—	—		Reseller 1

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
Tags	List of client's templates tags
Reseller	Name of reseller's company respective client's template belongs to

Advanced Search

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

Screenshot: *Advanced Search drop-down menu*



Status:

Reseller:

ORIG Rate Table:

Routing Plan:

Creating New Client's Template

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

Screenshot: New Client Template settings

Information block	Fields Description
System Information	General information regarding client's template settings
	<ul style="list-style-type: none"> Name - Indicate the title of client's template
	<ul style="list-style-type: none"> Reseller - Select 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 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 setup whether 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 entered value, system will send a notification to email, specified in clients' Billing email field
	<ul style="list-style-type: none"> Notify Admin - When clients' balance+credit is below entered value, system will send a notification to 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 available balance is below threshold
--	---	---

Tip

Client's Templates allows 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 **Client's Templates** allows to take the following values from templates (during authorization).

Please note: the system can fill only empty fields with standard default values overridden from 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 assigned template. When there are no values in the template assigned to the Client, they will be taken from **Manager/Reseller's settings**.

Interface properties

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

- Go to **Clients** list, click on **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 **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:

- Go to **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

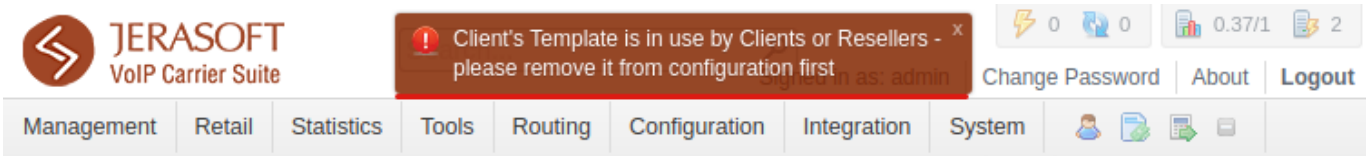
Tip

Please be advised that values overridden from templates, i.e. **Routing Plan, Rate Table, Credit** are displayed only on the Client 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 his Manager his Reseller**
3. If there are no found values mentioned above in the closest template, a further search stops and values are not defined.

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

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 **Management > Resellers** section by clicking **Add Custom Field** button, then you need to specify field key and title.

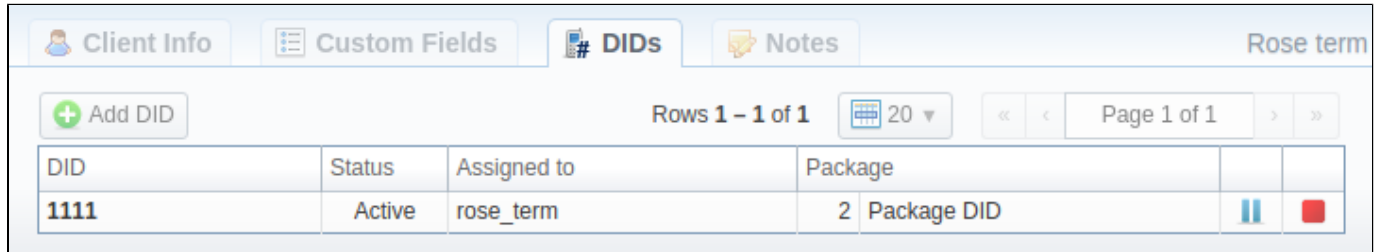
Screenshot: Custom Fields Reseller section

Field	Description
Field Key	Specify unique custom key for using the created field in invoice templates. Please note that only characters, number or underscore are allowed for this field. No blank spaces.
Title	Create the title of the clients 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



DID	Status	Assigned to	Package		
1111	Active	rose_term	2 Package DID		■

Column	Description
DID	List of DID numbers
Status	Status of current DID
Assigned to	Shows clients' accounts whom the current DID number is assigned to
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 a DID number.

The **Add DID** button is **visible only if a client has at least one account and activated package**. You can assign only 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 **in stock** status. You can also use the **Import DID's** button.
3. Go to **Retail > Packages** section. Create a package, that will include tags specified in DID's settings and number of allowed DID's to be picked from it.
4. Assign respective Package to the customer in the **Client Packages** section.
5. Open the **DIDs** tab in the **Clients** section. Here, 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 current client. For example, this may be used by managers to share relevant info regarding particular customer.

To add a new note, open the **Note** tab of 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 respective client. **To change an existing note**, hover over the comment you'd like to edit and click on edit  icon . Then, a new pop-up window with settings appears.

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

Screenshot: Notes tab



The screenshot shows a software interface with a top navigation bar containing tabs for 'Client Info', 'Custom Fields', 'DIDs', and 'Notes'. The 'Notes' tab is selected and highlighted with a red box. Below the navigation bar is a toolbar with an 'Add Note' button. The main area contains a table with the following data:

Updated by	Comment		
admin 06/27/2016 05:50:25 -0400	Notes on client accessibility File: detailed_client_info.pdf		

Rows 1 - 1 of 1

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 unlimited amount of unique accounts. Accounts are a key tool for clients' identification in JeraSoft VCS. Section is presented in a 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	Settings of the Originator
Term Details	Settings of the Terminator

⚠ 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 client balance will increase**. We recommend deactivating useless accounts instead of completely deleting from the system. You can deactivate an account simply 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 Clients section
	Allows viewing client's change history in Audit log section

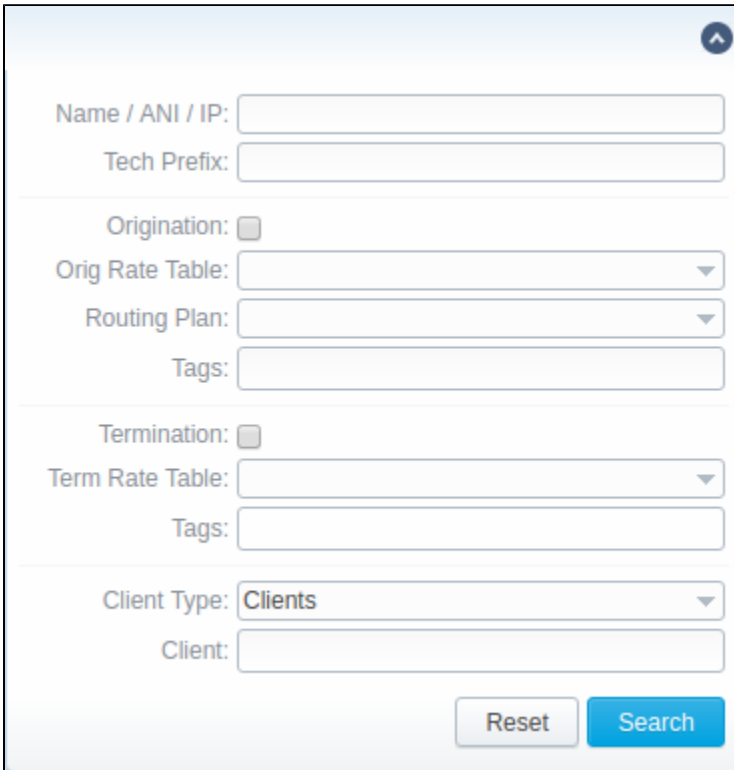
	Indicates that Orig/Term rate table or routing plan is assigned to an account
	Allows deleting an account from the system

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  red downward arrow.

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

Screenshot: *Advanced Search drop-down menu*



The screenshot shows a search form with the following elements:

- Name / ANI / IP:** Text input field
- Tech Prefix:** Text input field
- Origination:** Checkbox
- Orig Rate Table:** Dropdown menu
- Routing Plan:** Dropdown menu
- Tags:** Text input field
- Termination:** Checkbox
- Term Rate Table:** Dropdown menu
- Tags:** Text input field
- Client Type:** Dropdown menu (currently set to 'Clients')
- Client:** Text input field
- Reset** and **Search** buttons at the bottom right.

Attention

In v. 3.15.0, **Name**, **ANI**, and **IP** fields have been united into a single **Name / ANI / IP** field

Adding New Account

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

Screenshot: *Adding new account*

Accounts

GENERAL

Client:

Name:

IP:

Tech Prefix:

Password:

Gateway:

Notes:

ORIGINATOR SETTINGS

Rate Table:

Routing Plan:

Tags:

Capacity:



TERMINATOR SETTINGS

Rate Table:

Tags:

Capacity: Protocol:

Proxy: Port:

Information block	Fields and Description
General	General information about new client's account
	<ul style="list-style-type: none"> Client Specify a client whom this account belongs to
	<ul style="list-style-type: none"> Name Define a name of an account for JeraSoft VCS
	<ul style="list-style-type: none"> Ident by The VCS system 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) – called or caller 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 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  icon or  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 current account
Originator Settings	Settings for your customers, who send calls to your switch
	<ul style="list-style-type: none"> Rate Table Select rate table for current origination account (it will have higher priority than 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 rate table for a current termination account (it will have higher priority than rate table set for 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 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

- [How to specify CLI and non-CLI traffic?](#)
- [How to set up a functional capacity?](#)
- [Why the Account cannot be added, same IP / Name exists within other client message during adding an IP to an account appeared?](#)

Rate Tables

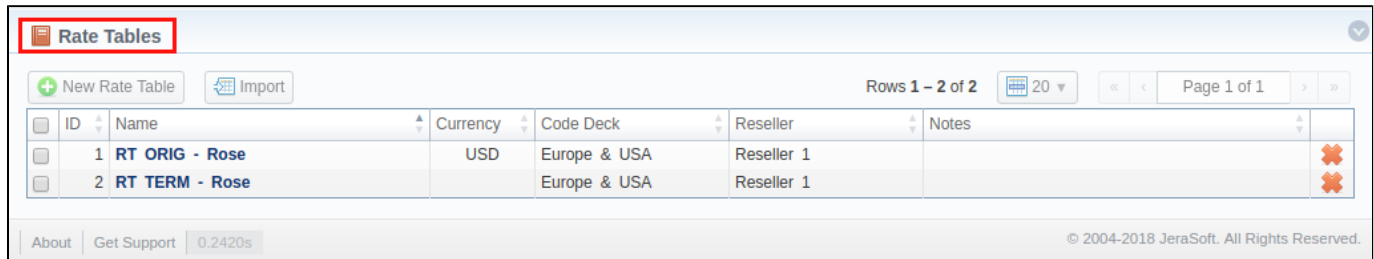
In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Rate Table](#)
 - [To configure rates](#)
 - [Import](#)
- [Knowledge Base Articles](#)

Section overview

Rate Table is one of three core elements of the entire JeraSoft VCS system. Its purpose is to contain determined rates (prices) for each code (destination) on the list. This section provides you with a full scope of tools for management of your rate tables. Section is presented in a form of a table with the following fields:

Screenshot: Rate Tables section



Column Name	Description
ID	Rate table's identification number
Name	Name of a rate table
Currency	Currency of a rate table
Code Deck	Name of a code deck, specified in a rate table
Reseller	Name of 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 import a list of user's clients in a .csv file
	Allows deleting a client 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 red downwards arrow (clients in the section are filtered by **Active** status by default), the following drop-down menu is displayed:

Screenshot: Advanced Search drop-down menu

Reseller:

Code Deck:

Currency:

Adding New Rate Table

In order to add a new rate table, press **New Rate Table** button and in a pop-up window define respective values:

Field	Description
Name	The title of a respective rate table
Reseller	The Reseller to whom this rate table belongs to
Parent Rate Table	<p>The 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 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>
Code Deck	The deck that consists of a destination code and a destination name
Currency	Preferred currency (will be used in invoices)
Rates with taxes checkbox	Tax settings. It's disabled by default. If you enable it, all rates will include above tax in their values. When it is disabled, the tax value will be added as an additional invoice parameter.
Description	Additional information

Screenshot: *New rate table window*

Rate Tables

GENERAL RATE TABLE SETTINGS

Name:

Reseller: AutoTest_Company

Parent Rate Table:

Code Deck:

Currency:

Rates with taxes

Description:

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

To configure rates

You can configure the rates by clicking on the respective name of the rate in the full list. The rate management has a panel with following tabs:

Tab	Description
Rates	Rates configuration
Simulate	Call simulation tool
Import	Rates importing from <i>csv</i> or <i>xls</i> files
Export	Rates exporting to <i>csv</i> or <i>xls</i> files
Parameters	Here you can change some parameters that you've specified during rate table creation

Attention

In VCS 3.15.0, **Rate Formulas** tab, where user was able to specify the number of seconds system would consider as a minute, has been **removed**

Import

In general, you can **import all existing rate tables** from this section of the VCS. To **import multiple rates**: first, select rates and then click the **“Import”** button on the toolbar at the top left of the rate tables to launch the import wizard.

Screenshot: *Rate Tables* section main window

Rate Tables

Rows 1 – 6 of 6

ID	Name	Currency	Code deck	Reseller	Notes	
<input checked="" type="checkbox"/>	77 Rate_Africa	USD	DEFAULT	Company Name		
<input checked="" type="checkbox"/>	89 Rate_Antarctica	USD	DEFAULT	Company Name		
<input checked="" type="checkbox"/>	15 Rate_Australia	USD	DEFAULT	Company Name		
<input type="checkbox"/>	88 Rate_Europe	USD	DEFAULT	Company Name		
<input type="checkbox"/>	76 Rate_North America	USD	DEFAULT	Company Name		
<input type="checkbox"/>	78 Rate_South America	USD	DEFAULT	Company Name		

For information about import process, see **“Rates Import tab”**.

Knowledge Base Articles

- [How to bill by Access Numbers \(A-number billing\)?](#)

Rates Tab

On this page

- [Tab Description](#)
- [Adding New Rate](#)
- [Mass Rate Edit](#)
- [Quick Rate Search](#)
- [Not confirmed rates](#)

Tab Description

This tab allows the user to add new rates with different tariffication parameters for each code, also export rates and mass update them. You know you are on the **"Rates"** tab when the tab is highlighted.

Screenshot: Rates tab settings


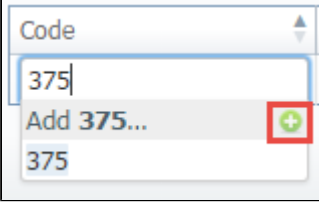
The screenshot shows the 'Rates' tab interface. At the top, there is a navigation bar with tabs: 'Rates' (highlighted), 'Simulate', 'Rate Formulas', 'Import', 'Export', and 'Parameters'. Below the navigation bar are three buttons: 'Add Rate' (highlighted with a red box), 'Export Filtered', and 'Mass Edit'. The main area contains a table with the following data:

Code	Code Name	Rate	Effective From	Min	Int	Extra Fields
1		1.1000	2016-04-22 03:00:00+03	1	1	TP: all time
12		1.5000	2016-04-22 03:00:00+03	1	1	TP: all time
13		1.9000	2016-04-22 03:00:00+03	1	1	TP: all time

At the bottom right of the table, there are three buttons: 'OK', 'Cancel', and 'Apply'.

Adding New Rate

All you need to do is to click the **"Add Rate"** button to create a new rate line and then fill next fields:

Field	Description
Code	<p>Destination code. Please note, you can add a code at already chosen code deck while creating a new rate. To do it, click the plus icon  next to the respective code (see screenshot below). The plus icon will be visible if there is code deck specified previously.</p> <p>Screenshot: Rates settings/ column Code</p> 
Code Name	Name of code group (available if code deck is attached)
Rate	Price per 1 minute of call. Here you can see changes (how current rate differs from previously effective on) by clicking up/down arrows
Effective Date	Rate start date (newest available rate for a particular destination)
Min	Minimal time of call that will be tarifficated. For example, if total call time was 20 seconds and <i>Min Time</i> is 30, then client will pay for 30 seconds of call
Int	Tariffication interval. This parameter is used, when <i>Min Time</i> time expires

Extra Fields	Additional parameters are stored under down arrow.
	<ul style="list-style-type: none"> • Tag Specify a tag for respective rates. If it's not applicable, assign a <i>tag (@)</i> as default.
	<ul style="list-style-type: none"> • Policy This option allows selecting a rate's type for a code: regular rate or an additive (extra) rate: <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. During the 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.
	<ul style="list-style-type: none"> • Profile Which time profile will be used for current rate, for example, <i>business time, non-business time, weekends, etc.</i>
	<ul style="list-style-type: none"> • End Date After specified date the rate would not be used
	<ul style="list-style-type: none"> • Setup Fee Setup fee (charged when call duration is longer than 0 seconds)
	<ul style="list-style-type: none"> • Grace Time Time interval that will not be tarifficated (free time). For instance, if you specified 5 sec as a <i>Grace time</i> , that means, all calls with duration up to 5 seconds (including calls with session time of 5 seconds) will be free of charge
	<ul style="list-style-type: none"> • Notes Additional information about current rate

After you finish filling all fields, click the "" button.

Also, you can quick export the rates by clicking the "**Export Filtered**" button on the rates toolbar or open the tab "**Export**".

Tip

To manage future changes of rates manually, enable the simple mode of Full A-Z import and import rates. Then, click the **Future changes** button on the toolbar of Rates tab. It will show a list of conflicting rates. On the screenshot below you can find two pairs of conflicting rates because of different effective dates.

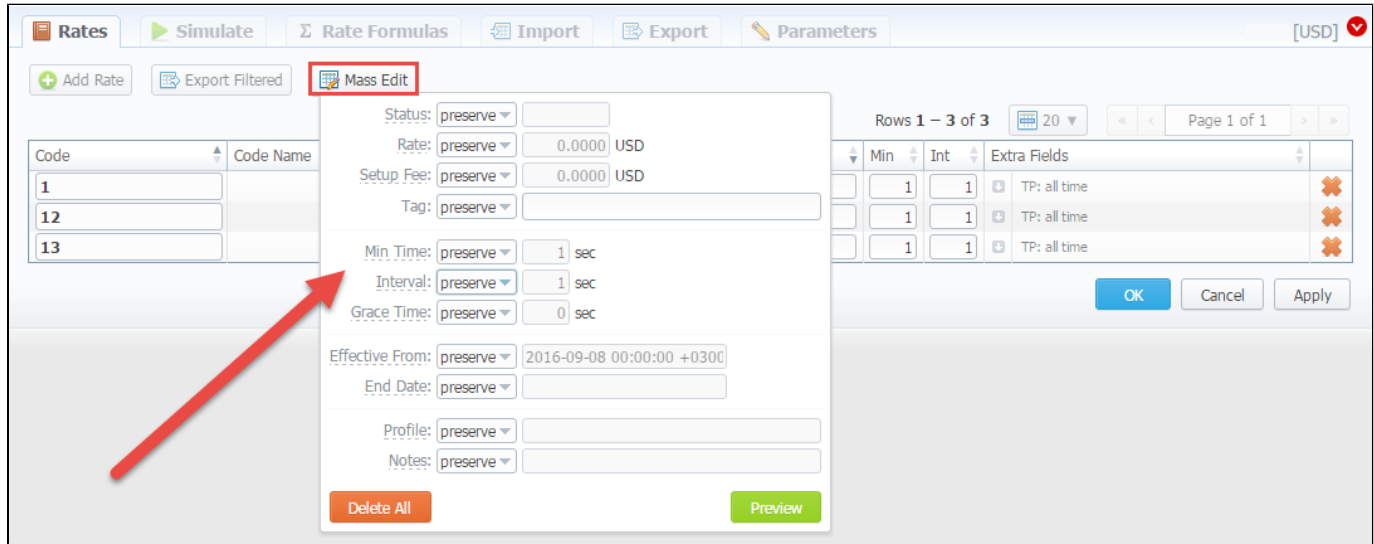
Screenshot: Rates tab

Code	Code Name	Rate	Changes	Effective Date	Min	Int	Extra Fields
33	1	0.1900	0.0000	2016-07-16 20:00:00-04	1	1	TP: all time
33		0.1900	-0.0100	2016-07-13 00:00:00-04	1	1	TP: all time
88881111	2	0.3900	0.0000	2016-07-16 20:00:00-04	1	1	TP: all time
88881111		0.3900	0.0000	2016-07-13 00:00:00-04	1	1	TP: all time

Mass Rate Edit


Moreover, it's possible to make a mass update of the rates by clicking the **"Mass Edit"** button on the rates toolbar and the drop-down settings menu appears. Then you need to fill the fields according to your needs.


Screenshot: Rates tab search settings



Mass edit options	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 effective date for all rates at once, regardless of previous configurations; • inc for - here you can indicate how the original value should be increased; • dec for - here you can indicate how the original value should be decreased.
Rate	Price per one minute of call
Setup Fee	An initial fee that is charged when call duration is longer than 0 seconds
Tag	A tag for the traffic matching this rule
Min Time	Minimal time of the call
Interval	Interval for the tariffication in seconds. It's used when the Min time parameter expires
Grace Time	Not paid time interval in seconds
Effective Date	Start date before which the rate will not be used
End Date	Final date after which the rate will expire
Profile	Time Profile that will be applied to a current rate
Notes	Additional information about rate

Quick Rate Search

Use the **Quick Search** toolbar and click a down pointing arrow  on the top of the page for fast investigation. When you click the red down arrow a new drop-down search menu appears (see screenshot below). To open additional settings, click the **"Advanced"** button.

To hide the drop-down search menu, click an upward pointing arrow  next to the title of the rate.

Screenshot: Rates tab search settings

Field	Description
Rate Time Frame	Search by the period of a rate during which the rate is active, expired, etc., as compared with data specified in the next field. The following time frames are available to choose from drop-down list: <ul style="list-style-type: none"> • current on - search includes rates that are active for specified data • old for - search rates that are expired for specified data • future for - the future rates compared with specified data • current/new - includes current and future rates • all - includes all rates
Code/Name	Search by the title or code
Tag	Investigate by an assigned tag
Imported File	Research by the title of an imported file , choose a file from the drop-down list of all available. If the list is empty, there is no imported files.
Difference Status	Search by the cost changes of the rate . The following types are available to choose from drop-down list: <ul style="list-style-type: none"> • Decreased • Increased • Not changed • New
Status	Investigate by the state of the rate: <ul style="list-style-type: none"> • active • stashed (not confirmed). This state means that the rate is not used for the billing or routing process.
Rate	Research by the rate , the price interval could be specified
Setup Fee	Quick search by the setup fee of the rate , the interval could be specified
End Date	Search by the expiration date of the rate
Min Time	Research by the minimal time of call that will be tarifficate
Interval	Investigate by the tariffication interval
Profile	Fast search by the time profile of the rate
Grace time	Investigation by the interval of the free time

Attention

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

Not confirmed rates

If you see the rate rows colored in yellow, this means that these rates in **pending state** and you need to confirm them all (click the "**Confirm Filtered Rates**" button). Not confirmed rated appears while import process.

Screenshot: Rates tab settings

Rates Simulate Σ Rate Formulas Import Export Parameters Optimize [USD]

Add Rate Export Filtered Mass Edit

New: 9 Not changed: 0 Decreased: 0 Increased: 0

Rows 1 – 9 of 9 20 Page 1 of 1

Code	Code Name	Rate	Effective From	Min	Int	Extra Fields
6009		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6005		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6001		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6006		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6007		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6003		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6004		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6008		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time
6002		0.6600	2016-09-09 00:00:00+00	1	1	TP: all time

Confirm Filtered Rates OK Cancel Apply

Rates Management

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

Tip 1: If you have received an update to your rate table, do not delete or edit already present information. Simply import updated price list on top of your current one, this will update your rates with new effective dates, while no longer actual rates will be hidden. Read more about importing process in *Import* subsection.

Tip 2: If an existing rate was changed and *Effective From* field specifies a date that have passed, then all calls will not be automatically rerated using this new rate. You should rerate them manually with *Calls Rerating* section.

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

- *Rate* is a price of call per 1 minute.
- *Min Time* – minimal time of call that will be tarificated.
- *Interval* – tarification interval which is used, when *Min Time* time expires.
- *Grace Time* – time interval that will not be tarificated (free time). For instance, if you specified 5 sec as a *Grace time*, that means, all calls with duration up to 5 seconds (including calls with session time of 5 seconds) will be free of charge.
- *Setup Fee* – 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 call duration was less than 2 seconds, then total call cost will be 0 currency units. If call duration was between 2 and 30

$$\text{Setup fee} + \frac{\text{Rate}}{\text{Rate Formulas}} \cdot \text{Min Time}$$

seconds, then total call cost will be where *Rate Formulas* is the amount of seconds in a minute
that will be used while billing the calls, which is 0,8 currency units regarding the presented data. If call duration was more than 30 seconds, then total call

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

cost will be

currency units.

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

Tip 5: All rate fields, that define time, have time format in seconds, while in *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 Mass Edit feature. First, you'll have to form a query in search form. To do this, enter date that searched rates must correspond to as *current on*, *old for*, *future for*, *current+future for* or *all*, and code for your search (use * as wildcard). Then press "Search" button. System will find all rates that correspond to specified criteria and display them. Then click on "Mass Edit" link at the bottom of the window and proceed with respective action.

Operation type is selected under *Action* drop-menu:

- *insert as new rates* – edited rates will be added as new ones, that will replace existant under specified conditions (for example, change of rate and effective date);
- *update current rates* – edited rates will have their values updated with new ones;
- *delete found rates* – all found rates will be deleted.

After you selected desired action, you can change next available rate parameters (unavailable for *delete found rates* action):

Parameter	Description
Rate	Change the rate value. Available options: preserve, set to, inc for, dec for. You can increase or decrease the value either by fixed number or percent. To increase or decrease by percent enter % sign before desired number
Setup Fee	Change setup fee value. Available options: preserve, set to, inc for, dec for. You can increase or decrease the value either by fixed number or percent. To increase or decrease by percent enter % sign before desired number
Grace Time	Change <i>grace time</i> value. Available options: preserve, set to
Min. Time	Change <i>minimal time</i> value. Available options: preserve, set to
Interval	Change <i>tarification interval</i> value. Available options: preserve, set to
Effective Date	Change <i>rate start date</i> value. Available options: preserve, set to
End Date	Change <i>rate end date</i> value. Available options: preserve, set to
Profile	Change rate profile. Available options: preserve, set to

After all desired changes press "Preview" button to preview the results, and "Process" button to accept them.

Knowledge Base Articles

- [Jurisdictional Billing](#)
- [US Billing & Taxation](#)

Simulate

Rates analysis section gives you possibility to see exactly which rate will be used for specified DNIS, and also resulting cost, if such call would take place:

Screenshot: Simulating calls

The screenshot shows the 'Simulate' tab in a software interface. On the left, there are input fields for 'Number:', 'Date: 2014-07-09 10:50:52', and 'Duration: 60 sec'. Below these is a blue 'Process' button. On the right, a white box with a blue information icon contains the text 'Please select parameters for report'. The top navigation bar includes 'Rates', 'Extra', 'Simulate', 'Rate Formulas', 'Import', 'Export', and 'Parameters', with 'Custom-ExaServe [USD]' on the far right.

Description of analyze parameters is the following:

Field	Description
Number	Specify number for simulation
Date	Specify the call date
Duration	Specify call duration in seconds

⚠ 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.

Screenshot: Call simulating results

The screenshot shows the 'Simulate' tab with the 'Process' button clicked. The input fields now show 'Number: 1204', 'Date: 2014-07-09 11:01:39', and 'Duration: 60 sec'. The main area displays a table with the following data:

Code	Call Cost	Effective Date	Rate	Parameters	Billed Time
1204 CANADA MANITOBA PROPER	0.0010 USD	09/04/2014 21:00:00 +0000	0.0010 USD	1 / 1 / 0	60 sec

Column	Description
Code	A destination code
Call Cost	Cost of a call
Effective Date	Rate start date
Rate	Price per 1 minute of call
Parameters	Information of minimal time of call that will be tarificated, tarification interval and time interval below which call is not tarificated
Billed Time	Billed time (minimal time of billing increment)

Import

On this page

- [Import Section Tab](#)
- [Rates Importing Process](#)
 - [Step 1. Selecting File and Specifying Additional Parameters](#)
 - [Step 2. Recognizing The File](#)
 - [Add a new Code Rule](#)
 - [Step 3. Import Errors](#)

Import Section Tab

Allows rates importing from Microsoft Excel *.csv or *.xls files.

Screenshot: Rate tables Import section tab

The screenshot shows the 'Import' section of a software interface. At the top, there are tabs for 'Rates', 'Simulate', 'Rate Formulas', 'Import' (highlighted with a red box), 'Export', and 'Parameters'. The 'Orig rate [USD]' is displayed on the right. The interface is divided into two main steps:

STEP 1: FILE SETTINGS

A central area shows a checkmark icon and the text: 'Selected file: cc-2.csv. Choose a file or drag it here'. To the right, there are dropdown menus for 'Import Template:' and 'Delimiter: autodetect'.

STEP 2: IMPORT SETTINGS

Below this, there are tabs for 'Sheet 1', 'Sheet 2', and 'Sheet 3'. A table displays the imported data:

Code	Effective From	Rate	Skip
444	2017-01-10 00:00:00	0.333	<input type="checkbox"/>
445	2017-01-10 00:00:00	0.333	<input type="checkbox"/>
446	2017-01-10 00:00:00	0.333	<input type="checkbox"/>
447	2017-01-10 00:00:00	0.333	<input type="checkbox"/>
447	2017-01-10 00:00:00	0.333	<input type="checkbox"/>

Below the table is a 'More rows' link. Underneath is the 'CODE RULES' section with a table:

Code	Time profile	Min	Int	AZ Mode / Close in(days)	Extra	
*	all time	1	1	Disabled		regular
23423	non-business time	34	70	Extended (close active and futur	6	Best quality ED: 2018-02-04 12:00:00+0800 SF: 3.25 additive Tags: VIP GV: 22

At the bottom, there is a 'Save Template' button and an 'Import' button.

Rates Importing Process

Whole import process can be logically divided into two steps.


Step 1. Selecting File and Specifying Additional Parameters

Open Import tab and select a file to import on your HDD. This step also allows you to edit all information that was not present in import file (system will automatically paste most commonly used values), and set some configurations in regards to import process.

Screenshot: Rates importing process. Step 1

Rates Simulate **Import** Import History Export Parameters Parent Rate Notification [USD]

STEP 1: FILE SETTINGS



Selected file: **File not selected**
Choose a file or drag it here

Import Template:
 Delimiter:
 Auto Confirm:

STEP 2: IMPORT SETTINGS


File Settings sub-panel	
Select file to import	Select a file to load into workspace for import
Import template	Select the template for rates importing
Delimiter	Select a delimiter symbol from the drop-down list
Auto Confirm	Select whether the system should confirm imported rates automatically or not

Warning

1. It's not possible to import a file into the **Rate Table** with the **Min Time and Interval = 0**. These fields should have at least 1 second.
2. While specifying the **Effective Date** and **End Date** that by default the **Time zone** is **UTC (+0000)**.

Step 2. Recognizing The File

The system will recognize the file and display few first rows of it. You can make changes to the recognition of data and apply configurations for multiple sheets.

To open the advanced configurations, click the down arrow  next to the *Step 2: Import Settings*. To switch from one sheet with rates to the next one, use tabs "Sheet 1", "Sheet 2", etc.


As well as, on this step you can save the importing rate table as a template for further usage in importing or exporting process. On the bottom of the window, find "Save Template" button and specify the title.

Screenshot: Rates importing process. Step 2

STEP 2: IMPORT SETTINGS

Sheet 1



				Skip
Code	Code Name	Rate	Effective Date	<input type="checkbox"/>
1201	United States	0,99	01/10/2018 00:00:00 +0000	<input type="checkbox"/>
1202	United States	0,99	01/10/2018 00:00:00 +0000	<input type="checkbox"/>
1203	United States	0,99	01/10/2018 00:00:00 +0000	<input type="checkbox"/>
1205	United States	0,99	01/10/2018 00:00:00 +0000	<input type="checkbox"/>



 More rows

CODE RULES


Code	Service	Effective Date	Profile	Min	Int	Extra
*	Calls	2018-01-12 00:00:00+0000	all time	1	1	regular

Import Settings information block

On Duplicates	<p>What should billing do if it finds duplicate rate row, duplicates are checked by pair of columns "Code" + "Effective Date".</p> <ul style="list-style-type: none"> • Update with the latest value - if multiple duplicates were found, the last value is stored • Skip duplicate rows - if there are multiple duplicates, only first value will be stored • Alert me about duplicates - if duplicate is found, VCS will alert you about their presence <div style="background-color: #ffffcc; padding: 5px;"> <p> Attention</p> <p>Alert limitation about rate duplicates during import process. It means that the import process cannot proceed if you get more than 1 000 duplicate alerts. This limitation applies while the Alert me about duplicates option is enabled in the On duplicate rates field in the Import tab</p> </div>
On Errors	<p>Decide, what system should do if an inconsistency or error was found in 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 import and display a list of errors
Date Format	<p>Specify date format of imported file. Please note, the auto-detection of date and time can be performed with files that contains one of the date and time formats listed below:</p> <ul style="list-style-type: none"> • DD-MM-YYYY (%d-%m-%Y) = 28-12-2002 • YYYY-MM-DD (%Y-%m-%d) = 2002-12-28 • MM/DD/YYYY (%m/%d/%Y) = 12/28/2002 • DD.MM.YYYY (%d.%m.%Y) = 28.12.2002 • YYYY/MM/DD (%Y/%m/%d) = 2002/12/28 • YYYYMMDD (%Y%m%d) = 20021228 • YYYY-MM (%Y-%m) = 2002-12
Custom format	<p>If defined, this format will be used for date parsing instead of "Date Format" field</p>
Optimize Codes	<p>This option allows to make shorter codes of importing code range. For example, code range 4400-4409 will be shortened to 440. Please note, a single code 44001 will not be shortened to 440, it only works for code ranges specified with dash "-".</p> <div style="background-color: #e0ffe0; padding: 5px;"> <p> Tip</p> <p>Therefore, when you make an import with enabled "Optimize codes" option and your importing file consists of code 440 and code range 4400-4409 at the same time, the import result will depend on the "On duplicate rates" settings.</p> </div>
Update Code Deck	<p>Select the way you want a code deck to be updated with new/existing code names from current rates file</p> <ul style="list-style-type: none"> • Disabled - leave selected code deck unchanged • Import only not existing codes - code deck will be updated with codes and their names, if it doesn't currently have this information • Import all codes (update existing) - code deck and codes will be updated with code names taken from file with overwriting of existent code names • Import all codes (purge code deck first) - code deck is fully cleared and then all codes and code names are imported from file
Code Deck	<p>Code Deck that will be used for <i>Deck Update Mode</i>. Select a code deck that you want to update with above settings (note that code deck specified settings here will only be available if you are importing file which contains <i>code names</i> in addition to <i>codes</i>)</p>
Notifier Code Deck	<p>Specify code decks, that will be used for the next rates notification</p>
AZ Mode	<p>Mode to close active/future rates:</p> <ul style="list-style-type: none"> • Disabled - leave active/future rates unchanged. Selected by default • Simple mode - active rates from current Rate Table will be closed on the specified AZ close date if they aren't present in this import. • Extended mode - all already 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	<p>Available if AZ Mode is active. Specify the exact code(s), AZ Mode is going to be applied to. By default, field value is * (all codes)</p>

AZ interval (days)	Available if AZ Mode is active . It consists of two fields where time and date of rates closure are specified: <ol style="list-style-type: none"> Time - select from a drop-down list: <ul style="list-style-type: none"> Beginning of the day - active/future rates will be closed at 00:00 of the specified day Import time - active/future rates will be closed at the exact time of import on the specified day Day - specify the interval of days after which rates will be closed <div style="background-color: #e0ffe0; padding: 5px; margin-top: 10px;"> <p> Tip</p> <p>For more detailed explanation, check out our Knowledge Base article</p> </div>
AZ close date	Available if AZ Mode is active . Field displays the time and date of rates closure based on the AZ interval (day) parameters
Code Rules information block	
Code	Destination code
Service	Select a service for rate
Effective Date	Rate start date
Profile	The time profile that will be used for current rate, for example business time, non-business time, weekends, etc.
Min	Minimal time of call that will be tarifficated. For example, if total call time was 20 seconds and Min Time is 30, then client will pay for 30 seconds of call
Int	Tariffication interval. This parameter is used, when Min Time time expires
Extras	Additional parameters are stored under downwards arrow  icon. <ul style="list-style-type: none"> Tag - label for respective rates. If it's not applicable, assign a tag (@) as default. Grace Volume - volume that will not be tarifficated (i.e. it's free). Policy - rate's type for a code: regular rate or an additive (extra) rate. Setup Fee - an initial fee that is charged. End Date - final date after which the rate will expire. Notes - additional information.




Add a new Code Rule

For adding a new code rule with settings for import process, click the plus  icon next to information block name.

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

The column with * **code** presents the rule with **default settings** for fields that are **NOT selected** in the imported file. However, the **default values** (of this rule) for fields that are **selected** in the file won't be applicable (see screenshot below).

Screenshot: Rates import - Code Rules settings

CODE RULES 							
Code	Service	Effective Date	Profile	Min	Int	Extra	
*	Calls	2018-01-12 00:00:00+0000	all time	1	1	regular	
1201	Calls	2018-01-12 00:00:00+0000	all time	60	45	regular	


Save Template Import

After selecting a file and specifying all additional parameters click the **Import** button.

Step 3. Import Errors

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 is downloaded:

Column	Description
Sheet	Index number of the sheet, where error occurred
Line	Line of the sheet, where 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 Incorrect rate specified	
3		1	2 Incorrect rate specified	
4		1	3 Incorrect rate specified	
5		1	4 Incorrect rate specified	
6		1	5 Incorrect rate specified	
7		1	6 Incorrect rate specified	
8		1	7 Incorrect rate specified	
9		1	8 Incorrect rate specified	
10		1	9 Incorrect rate specified	
11		1	10 Incorrect rate specified	

Export

On this page

- [Export Section Tab](#)
- [Rates Exporting Process](#)
 - [Step 1. Specifying Filter Parameters](#)
 - [Step 2. Specifying Date And Format Options](#)
 - [Step 3. Selecting Columns To Export](#)

Export Section Tab

Rates exporting to Microsoft Excel *.CSV or *.XLS files (see screenshot below).

You can use same search engine as provided on Rates tab, to decide which rates you would like to export (including confirmed/unconfirmed, old, current, future or current+future).

Screenshot: Rates exporting window

The screenshot shows the 'Export' tab in a software interface. The top navigation bar includes 'Rates', 'Simulate', 'Rate Formulas', 'Import', 'Export' (highlighted with a red box), and 'Parameters'. The main area is divided into three sections:

- TEMPLATE SETTINGS:** Includes an 'Export Template' dropdown and a 'Save' button.
- STEP 1: SPECIFY FILTER PARAMETERS:** Contains fields for 'current / future' (dropdown), a timestamp '2016-11-22 10:43:11', 'Code', 'Code Name', 'Status', 'Policy', 'Tag', 'Import File', 'Prev Diff Status', 'Next Diff Status', 'Join Parent' checkbox, 'Rate' (USD), 'Min Time', 'Profile', 'Setup Fee' (USD), 'Interval', 'Grace Time', and 'End Date'.
- STEP 2: SPECIFY DATE AND FORMAT OPTIONS:** Includes 'Last export date', 'Code Deck', 'Data format' (CSV), 'Date Format' (%m/%d/%Y %H:%M:%S %z), 'Codes Output' (separate rows), and 'Fields Delimiter' (comma). It also has checkboxes for 'with headers row' and 'codes from code deck'.
- STEP 3: SELECT COLUMNS TO EXPORT:** A list of 16 columns with dropdown menus. Column #1 is 'Code', Column #2 is 'Code Name', and Column #3 is 'Rate'. The rest are empty.

At the bottom right, there are 'Process' and 'Cancel' buttons.

Rates Exporting Process

Whole export process can be logically divided in three steps.

Step 1. Specifying Filter Parameters

Here you need to fill next fields:

Field	Description
Code / ode Name	Specify code / code name of exporting file
Status	State of the rate: <ul style="list-style-type: none"> • <i>stashed</i> (unconfirmed) means that the rate will not be used for billing or routing process; • <i>active</i> means that the rate is confirmed and used for billing.

Policy	Select the policy of the rate: <ul style="list-style-type: none"> • <i>additive</i> - this policy signifies a usual rate definition for the event; • <i>regular</i> - this policy signifies that this rate will be added to a regular rate for the event.
Tag	Indicate a respective label
Imported File	Select imported file
"Join Parent" checkbox	Enable this checkbox if you need to include rates from the parent rate table
Prev Diff Status	Indicate how should differ a current rate table from the previous
Next Diff Status	Indicate how should differ a next rate table from a current one
Rate	Specify price interval
Setup Fee	Specify setup fee interval
Min Time, sec	Specify minimal time interval of tarificated calls
Interval, sec	Specify tarification interval
Profile	Select time profile (<i>all time, business time, non-business time, weekends</i>)
Grace Time, sec	Specify grace time interval
End Date	Indicate a final date

Step 2. Specifying Date And Format Options

Fill here next fields:

Field	Description						
Last export date	Parameter that affects "Rate changes" field (depending on it exported rates will be marked as <i>new, changed, deleted</i> etc)						
Date Format	Date format in your export file. Syntax is following: for example, if you put "%d-%m-%Y" here, your date will look like 25-05-2011						
Code Deck	Select a code deck here to rewrite code names in export file if needed						
Codes Output	Specify how codes should be displayed. There are few options <table border="1"> <tr> <td>• Separate rows</td> <td>Each code is placed into single row</td> </tr> <tr> <td>• Delimited list</td> <td>Codes are grouped by code name in a row, for example: 5510,5511,5512</td> </tr> <tr> <td>• Ranges list</td> <td>Codes are grouped by code name into ranges plus delimiter, for example: 5510-5512, 5515</td> </tr> </table>	• Separate rows	Each code is placed into single row	• Delimited list	Codes are grouped by 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
• Separate rows	Each code is placed into single row						
• Delimited list	Codes are grouped by 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						
Data Format	Specify output file format, XLS or CSV						
Fields Delimiter	Set delimiter for fields if you've chosen CSV						
"With headers row" Checkbox	Include column names into the file						
"Codes from code deck" Checkbox	Allows to additionally filter the export, by selecting only codes which are present in specified <i>Code Deck</i>						
Header text / Footer text	Allows you to additionally put some text into exported file as header and footer respectively						

Tip

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

Step 3. Selecting Columns To Export

Here you can select from the drop-down list max 16 columns to export:

Field	Description																																																																																																																																																																
Code / ode Name	Code / code name of rates																																																																																																																																																																
Effective Date	Start date before which the rate will not be used																																																																																																																																																																
Rate	Price per one minute of call																																																																																																																																																																
Min Time	Minimal time interval of tarifficated calls																																																																																																																																																																
Interval	Tarification interval																																																																																																																																																																
Grace Time	Not paid time interval in seconds																																																																																																																																																																
Setup Fee	An initial fee that is charged when call duration is longer than 0 seconds																																																																																																																																																																
Profile	Time profile (<i>all time, business time, non-business time, weekends</i>)																																																																																																																																																																
End Date	Final date after which the rate will expire																																																																																																																																																																
Previous Rate	Last rate in usage																																																																																																																																																																
Prev Diff	Cost changes of the rates																																																																																																																																																																
Prev Diff Status	Difference between current rate from the previous																																																																																																																																																																
Prev Diff Status (export)	Rate's changes after the last export. Shows the status how differs current rate from previous. The rate will have an "unchanged" status if the <i>Effective Date</i> of rate is lower than the <i>Last Notification Date</i>																																																																																																																																																																
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Notes	Additional information about rate																																																																																																																																																																
Tag	Label that belongs to a respective rate																																																																																																																																																																
Policy	Rate policy (<i>additive or regular</i>)																																																																																																																																																																
Status	State of the rate																																																																																																																																																																

Click "Process" button and save exporting file when you finish setting 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 than make Code Name as first column.

Please note that reseller's rate notification template will be overridden by existing rate export template.

Parameters

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

Screenshot: Parameters tab

Section	Fields description	
General Rate Tables Settings	General rate table information	
	<ul style="list-style-type: none"> Name 	A name of the rate table
	<ul style="list-style-type: none"> Reseller 	A reseller whom this rate table belongs to
	<ul style="list-style-type: none"> Code Deck 	A code deck for current rate table
	<ul style="list-style-type: none"> Currency 	A currency specified for this rate table
	<ul style="list-style-type: none"> "Rate with taxes" check box 	Enabled check box means that taxes are already included in rate value. Disabled check box means that taxes are not included in rate value and will be added as an additional invoice item
<ul style="list-style-type: none"> Description 	Additional information concerning the current rate table	
"Automatic Email Import" check box	Data used for automatic rates import	
Table Information	Information concerning the date of the rate table creation and last editing	

Automatic Email Import

On this page

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

Automatic Email Import

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

Screenshot: "Automatic Email Import" check box

The screenshot shows the 'Parameters' tab of a software interface. The 'AUTOMATIC EMAIL IMPORT' checkbox is checked and highlighted with a red box. Below it are fields for Login, Password, Sender Match, Subject Match, and Import Template. An 'EXTRA' section shows creation and last edit timestamps. Buttons for OK, Cancel, and Apply are at the bottom right.

Field	Description
Login	Specify the login of an email box
Password	Enter a password of the specified email <div style="background-color: yellow; padding: 5px; margin-top: 10px;"> <p>⚠ Attention</p> <p>Please note that the password should contain at least 10 symbols</p> </div>
Sender Match	Specify a sender name or email address for searching
Subject Match	Define a regular expression for searching of specific mail titles
Import Template	Specify a rate table template

Also you need to configure mail server in *Reseller - Email Rates Import Settings*.

Screenshot: *Edit Reseller form*

Edit Reseller
Custom Fields
Rates Notifications
Company Name

SYSTEM INFORMATION

Name:

Parent:

Currency:

Status:

Client Template:

Tax Profile:

VoIP Gateways:

ORIGINATOR SETTINGS

Postpaid:

ORIG Rates:

ORIG Capacity:

CONTACT INFORMATION

E-mail:

Postal Address:

Tax ID:

Reg ID:

Bank Account:

TERMINATOR SETTINGS

TERM Rates:

TERM Capacity:

FRAUD PROTECTION

Notification frequency:

Skip digits:

INVOICING INFORMATION

Date:

Template:

No_Tpl:

Last No:

COMPANY LOGO

No file chosen

EMAIL RATES IMPORT SETTINGS

Host:

Port:

SURETAX SETTINGS

Client Number:

Validation Key:

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: FACTORS WATCHER
- MAIL TEMPLATE: REPORTS WATCHER

Field	Description
Host	Specify an email server. Note that it should support IMAP and SSL
Port	Define a port, by default the 993 port is set

⚠ Attention

If you are using imap.gmail.com as Host, you should **turn on** an access for all *external applications* in your email settings.

Creating Import Template

⚠ Attention

Please note that *Automatic Email Import* will not work without specified *Import template*.

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

Secondly, during importing a rate table on the second step of importing process, you should click on "Save *template*" button (Screenshot below). In the pop-up window specify a template name and save it, then click "Process>>" button. After the importing process will be finished, a new rate table template will be added and seen in templates list in respective field.

Screenshot: Rates importing process. Step 2

Rates Simulate Rate Formulas **Import** Export Parameters 0 [USD]

DEFAULT VALUES

Effective From: 2016-12-09 00:00:00 +0200 Setup Fee: 0 Rate: 0 Profile: all time Notes:
 End Date: Min Time: 1 Interval: 1 Grace Time: 0 Tag: @ Policy: Regular

ROWS AND COLUMNS SELECT

Code	Code Name	Rate	Skip
380		0,0870	<input type="checkbox"/>

Save Template Delete Template Cancel « Return Process »


Template Name: Save

Invoices

On this page

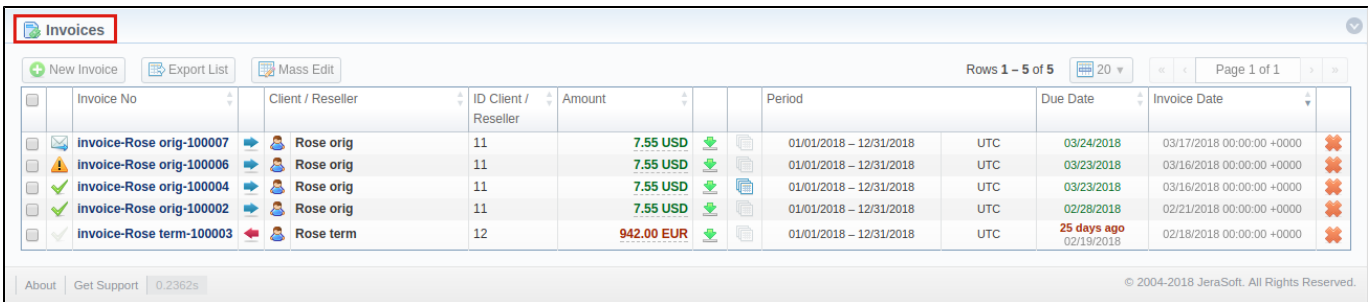
- [Invoices List](#)
- [Creating New Invoice](#)
- [Mass Editing](#)
- [Differences in totals](#)

Invoices List



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

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

Screenshot: Invoices section main window














Invoice No	Client / Reseller	ID Client / Reseller	Amount	Period	Due Date	Invoice Date
invoice-Rose orig-100007	Rose orig	11	7.55 USD	01/01/2018 – 12/31/2018	03/24/2018	03/17/2018 00:00:00 +0000
invoice-Rose orig-100006	Rose orig	11	7.55 USD	01/01/2018 – 12/31/2018	03/23/2018	03/16/2018 00:00:00 +0000
invoice-Rose orig-100004	Rose orig	11	7.55 USD	01/01/2018 – 12/31/2018	03/23/2018	03/16/2018 00:00:00 +0000
invoice-Rose orig-100002	Rose orig	11	7.55 USD	01/01/2018 – 12/31/2018	02/28/2018	02/21/2018 00:00:00 +0000
invoice-Rose term-100003	Rose term	12	942.00 EUR	01/01/2018 – 12/31/2018	25 days ago 02/19/2018	02/18/2018 00:00:00 +0000

Column Name	Description
Invoice No	Number of invoice
Client / Reseller	Name of a respective Client or Reseller. <div style="background-color: #e0ffe0; padding: 5px;"> <p> Tip You can create an invoice for a root Reseller</p> </div>
ID Client / Reseller	Client or Reseller identification number
Amount	Total sum of invoice
Period	Invoice period
Due Date	Determined due date of invoice
Invoice Date	Date of creation the invoice <div style="background-color: #e0ffe0; padding: 5px;"> <p> Tip When you leave the Invoice Date field empty, it will be identical to the time of an 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 Invoice	Allows creating a new invoice in the system
 Export List	Allows exporting a list of invoices in a .csv file
 Mass Edit	Allows management of state for the selected invoices on the list
	Indicates normal state meaning that respective invoice was paid in full. If the invoice is not fully paid, this 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 respective invoice file in .csv format
	Allows downloading xDR file, if one is attached to invoice. If there is no attached xDR file, this icon will be grey
	Allows deleting a respective invoice from the list

Creating New Invoice

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

Screenshot: Create Invoice window

Invoices

Client / Reseller:

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

Comments:

Action: Generate new invoice


Template: default | PDF

Field	Description
Client /Reseller	Name of the <i>lient</i> or <i>reseller</i>
Period	Define period of statistics that will be included into invoice
Type	Specify the type of invoice: outgoing or incoming

Currency	Select an invoice currency from a drop-down menu				
Invoice	Number of 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 invoice is paid • to send - use this state to indicate that invoice is paid, but not verified yet • to verify - use this state to indicate that 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 the Included Charges settings.</p> <div style="background-color: #e0ffe0; padding: 10px; border: 1px solid #c0ffc0;"> <p> Tip</p> <p>It's not possible to include a charge twice with standard settings. To re-include already used charge in the invoice, you need to combine parameters uncovered + covered in the Included Charges field.</p> </div>				
Comments	Specify additional information if necessary				
Action	Select one of two available actions: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Generate new invoice</td> <td>a new invoice will be generated, based on predefined templates in Invoices Templates section. To select a target template, select it from the drop-down menu in Template field</td> </tr> <tr> <td>Attach existing invoice</td> <td>if this option is selected, the following additional fields are displayed: <ul style="list-style-type: none"> • Attach Invoice - allows user to attach additional invoice • Attach xDR - allows attaching additional xDR file in .csv format <ul style="list-style-type: none"> • 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) </td> </tr> </table>	Generate new invoice	a new invoice will be generated, based on predefined templates in Invoices Templates section. To select a target template, select it from the drop-down menu in 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 user to attach additional invoice • Attach xDR - allows attaching additional xDR file in .csv format <ul style="list-style-type: none"> • 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)
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 **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 **send manually!**

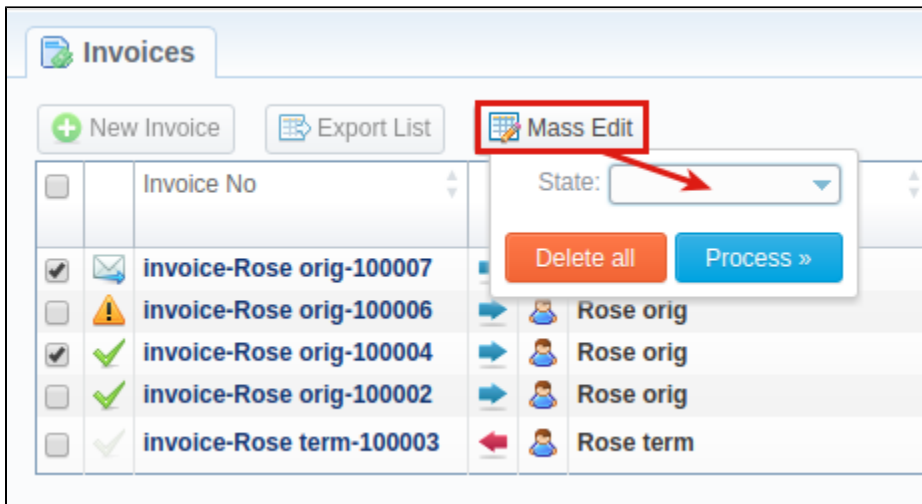
 **Warning**

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 for avoiding the situation of having **invoices with an identical number** in the system.

Mass Editing

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

Screenshot: *Mass Edit button*



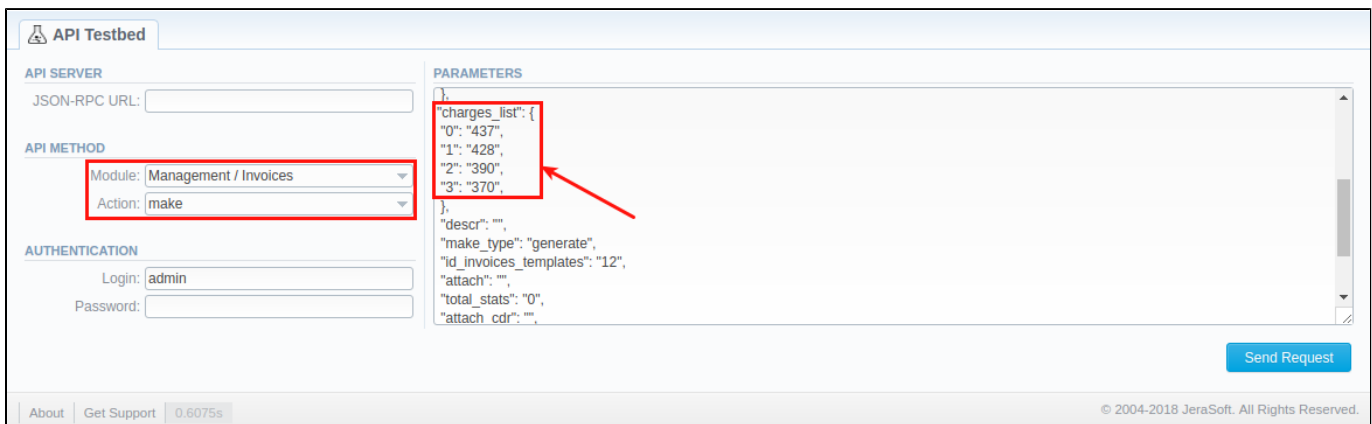
⚠ Attention

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 names of packages, and avoid names with special symbols like **%001 name, -001 name.**
2. Currency rate of extra charges will be taken on the **date of charge, not on the date of invoicing.**

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

Screenshot: API Testbed settings



Differences in totals

You may have noticed while creating different reports like **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 option **Included Calls (Attach xDRs list to the invoice)** settings 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 non-zero duration that have any cost and use packages.

Therefore, invoice totals depend on 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 is usually based on all calls. As the result, a difference between invoice and report totals appears even an invoice may have completely another totals vs report data.

⚠ Attention

The invoice and report totals could differ if you made a re-rating 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 follow this [link](#) or read about the general principals of rounding in VCS in [this article](#).

Besides, take a note of **currency settings**: there you may specify 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 xDR report.
 - **Totals precision** - the number of decimal places for total monetary values formatting.
-
- [Incoming VS Outgoing Invoices](#)
 - [Method of calculating and rounding values for Invoices](#)
 - [Why generated invoice is not sent?](#)
 - [Why there is no logo in generated invoice?](#)

Transactions

In this article

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

Section overview

This section allows a user to perform and trace all the financial operations regarding client's / reseller's balances. 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 transactions section is a key tool for managing client's / reseller's balance, 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 nonzero 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 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 a form of a table of all conducted transaction with the following columns:

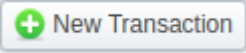
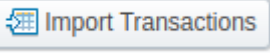
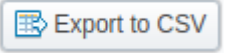






Screenshot: *Transactions section main window*

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	A payment through ID number
Payment Account	Shows respective payment account, related to a performed payment or respective charge type, such as <i>calls</i> , <i>products</i> , <i>extra charges</i> (each type has visual representation in a form of respective icon)
Client / Reseller	Displays the name of 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 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 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 transaction is approved
	Allows to delete 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  downwards arrow, 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 transaction has been added **manually** by a user through **Transactions** section in **JeraSoft VCS** or **Refill Balance** page on **JeraSoft Client Portal**. In case transaction is automatically generated by the system, **Author** column will be empty.



Client:

Payment Account:

Type:

Status:

State:

Date: -

Field	Description
Client	Indicate a client you wish the section to be filtered by

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
Status	Select from the list of transaction statuses: <ul style="list-style-type: none"> • Pending • Approved
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 datepicker. Alter filling in the fields, press Search to filter section data or Reset to clear search results.

Adding New Payment/Charge

To add a payment, press **New Transaction** button. In the appeared pop-up window, specify following parameters and click on **Apply** button.

Screenshot: New transaction settings

Field name	Description
Client	Indicate a target client
Type	Specify a type of the transaction. For incoming transaction select Payment operation type, for outgoing one – select Charge .

Payment Account	<p>Choose a respective account from the drop-down list of available payment accounts. For charge type, you can select:</p> <ul style="list-style-type: none"> • extra charges outgoing; • extra charges incoming. <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 an extra charges outgoing, it will guarantee that this charge will be visible in the invoice.</p>
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 client; • negative amount is debited from client. <p>✔ Tip</p> <p>Transaction amounts could be specified with comma as a decimal delimiter, for example, 2,45.</p> <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 text rate is based on the tax profile of the client's reseller.</p>
Transaction Date	Indicate actual date of the transaction in a datepicker
Description	Notes for a new transaction
System Info	Here you can add system information for transactions. Also, it's possible to add a variable in the invoices templates. Then, the variable will show this info for extra charges.
Status	<p>Define the state of the transaction:</p> <ul style="list-style-type: none"> • pending • approved <p>✔ Tip</p> <p>If you change transaction status in the respective field from Approved to Pending when adding a payment, this payment will have to pass additional approval check by billing operator</p>

⚠ 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 re-rating 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) can not be assigned to this payment account.

Exporting and Importing of Transactions

By clicking **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 pressing **Import Transactions** button and following on-screen instructions:

Step 1: Selecting 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 press **Process** button

Screenshot: Transactions importing process. Step 1

Transactions

SELECT FILE (STEP 1 OF 3)

Select file to import: Choose File No file chosen

DEFAULT VALUES

Transaction Date:

Currency:

Payment Account:

Date Format:

Time Format:

Close
Process

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, press **Process s>>** 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 Description Transaction Date	-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	Charge: Products Fees	-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	Charge: Products Fees	-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"/>

« Return
Process »

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, press **Process>>** to finish 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	<input type="text" value="-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	<input type="text" value="-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	<input type="text" value="-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	<input type="text" value="-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	<input type="text" value="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	<input type="text" value="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	<input type="text" value="-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	<input type="text" value="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	<input type="text" value="-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	<input type="text" value="-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	<input type="text" value="-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	<input type="text" value="-13"/>	USD	<input type="checkbox"/>

« Return

Process »

Balance Report

In this article

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


Section overview

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

Screenshot: Balance Report query form


reating 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	<p>On the Filters menu, select required parameters for the report. To cancel any filter, click on the delete  sign next to the filter.</p> <p>You can start a quick search by typing filters' names in the bar at the top of drop-down menu with filters.</p>
Period	Specify the time interval for the report and a timezone. Please note that the Period field is mandatory.
Mode	<p>Select a balance mode to show a respective set of data</p> <ul style="list-style-type: none"> • Accountant - this mode is compiled by invoices and payments, it shows fixed balance • Live balance - this report mode is compiled by payments and charges, it shows live balance
Client Type	<p>Choose the system entity for the report from the following</p> <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop
Group By	<p>Select from the list of following accessible options to group the data in reports:</p> <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 plus  sign next to **Columns** and select required columns in order to add them to Output information block. Also, you can cancel any chosen item.

Accessible columns in the report

There are following columns to add in the report:







Client, Client ID, Payment Account, Document Icon, Document Info, Start Balance, Debit, Credit, End Balance, Type, NO, Notes, Date.

Client Name of the **client / reseller / calling card / call shop** for that current operation is assigned to

Client ID 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 the document in the report:

- 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

Start Balance Start client's balance prior to respective operation

End Balance Final client's balance after respective operation

Debit Operation sum that has positive income (**incoming payment / invoice**)

Credit Operation sum that has negative income (**outgoing payment / invoice**)

Other output settings

Type Choose a format of the report from a drop-down list: **Web / CSV / Excel XLS / Excel XLSx**.

Also, a kind of table view:

- **Plain** - a simple table view
- **Grouped** - a table view with grouped data and possibility to collapse it

Attention

Please note that **Grouped** type of table view is available only for **Excel XLSx** and **Web** formats, it doesn't work with **CSV** and **Excel XLS**.

Send to You can send generated reports via email. Also, it is possible to specify several emails.

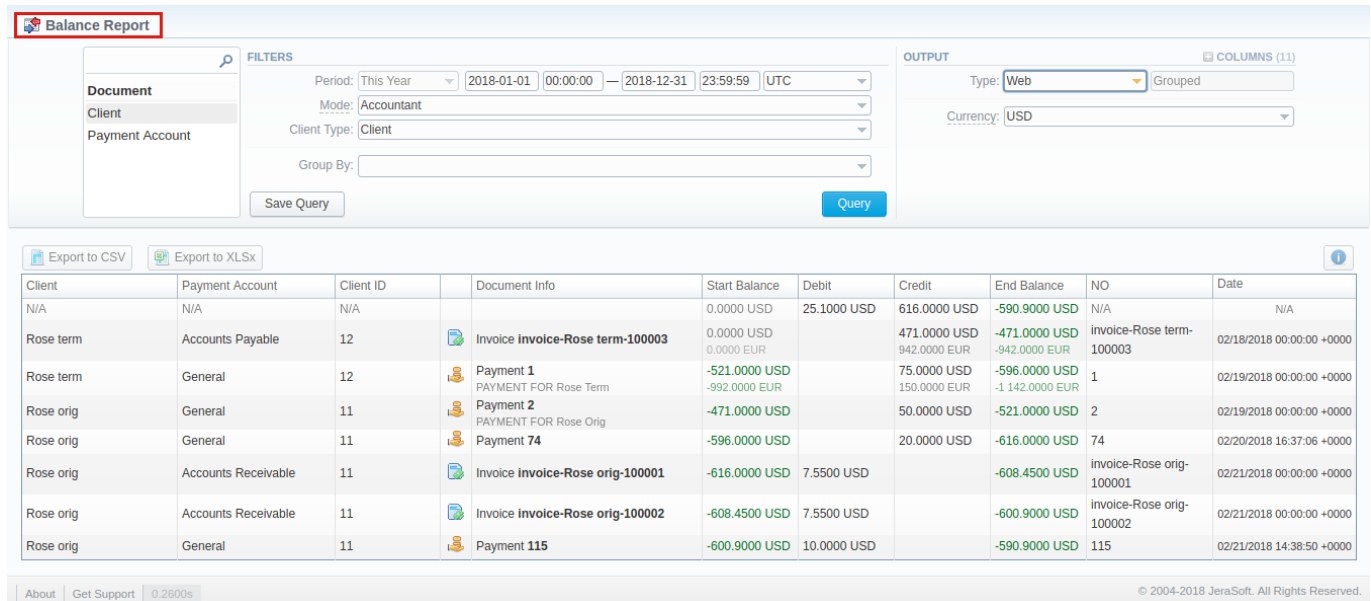
Attention

This feature is available only for **CSV / Excel XLS / Excel XLSx** formats of the report, although it doesn't work with **Web**.

Currency

Specify a currency for the report. And all values will be automatically converted in the report to the specified currency.

Screenshot: Balance Report section



Client	Payment Account	Client ID	Document Info	Start Balance	Debit	Credit	End Balance	NO	Date
N/A	N/A	N/A		0.0000 USD	25.1000 USD	616.0000 USD	-590.9000 USD	N/A	N/A
Rose term	Accounts Payable	12	Invoice invoice-Rose term-100003	0.0000 USD 0.0000 EUR		471.0000 USD 942.0000 EUR	-471.0000 USD -942.0000 EUR	invoice-Rose term-100003	02/18/2018 00:00:00 +0000
Rose term	General	12	Payment 1 PAYMENT FOR Rose Term	-521.0000 USD -992.0000 EUR		75.0000 USD 150.0000 EUR	-596.0000 USD -1 142.0000 EUR	1	02/19/2018 00:00:00 +0000
Rose orig	General	11	Payment 2 PAYMENT FOR Rose Orig	-471.0000 USD		50.0000 USD	-521.0000 USD	2	02/19/2018 00:00:00 +0000
Rose orig	General	11	Payment 74	-596.0000 USD		20.0000 USD	-616.0000 USD	74	02/20/2018 16:37:06 +0000
Rose orig	Accounts Receivable	11	Invoice invoice-Rose orig-100001	-616.0000 USD	7.5500 USD		-608.4500 USD	invoice-Rose orig-100001	02/21/2018 00:00:00 +0000
Rose orig	Accounts Receivable	11	Invoice invoice-Rose orig-100002	-608.4500 USD	7.5500 USD		-600.9000 USD	invoice-Rose orig-100002	02/21/2018 00:00:00 +0000
Rose orig	General	11	Payment 115	-600.9000 USD	10.0000 USD		-590.9000 USD	115	02/21/2018 14:38:50 +0000

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 following:



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

Simple scheme: how to generate a balance report

In order to create a simple report you need to:

- On the **Filters** menu, select target parameters for the report.
- Enter the interval and specify a timezone
- Select the **Mode** and **Client Type**.
- Specify parameters in the **Group By** field, for example, **Client ID**.
- Then, choose columns in the **Output** form, for example, **Client, Payment Account, Document Icon, Document Info, Start Balance, Debit, Credit, End Balance, Date**.
- Specify **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 signs.
- 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 sorting by values specified in the **Group By** field.

Creating Query Template

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

Screenshot: New Query Template form

Reports Templates

BALANCE REPORT

Title:

Reseller:

Visibility:

WATCH (NOT AVAILABLE FOR WEB OUTPUT TYPE)

Recipients:

Run Time:

Run Time Timezone:

Days of Week:

REPORT QUERY

Document

Client

Payment Account

FILTERS

Period: —

Mode:

Client Type:

Group By:

OUTPUT




Type:

Currency:

Information block	Description
Balance Report	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 Define who can review this template: <ul style="list-style-type: none"> • Public - anyone can view this template • Private - only template owner can view it
Watch	This tool allows to automatically generate reports 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: it can be your own email, other users of the system or even 3rd parties
	Run Time Define an appropriate time to automatically generate a report. It could be several times, for example: 10:00, 12:00, 18:00
	Days of Week Indicate days of the week to automatically generate a report. For example, you can run a report only on Monday or each day of week
Report Query	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 load already existing templates while generating statistic reports, click **Load Query** button.

Export Generated Report

You can export data to **XLSx** or **CSV** file, which contains currently presented data by pressing **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**.

Screenshot: Balance Report section

Balance Report

Document

Client

Payment Account

FILTERS

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

Mode: Accountant

Client Type: Client

Group By:

Save Query | Query

OUTPUT COLUMNS (11)

Type: Web | Grouped

Currency: USD

Export to CSV | Export to XLSx



Client	Payment Account	Client ID	Document Info	Start Balance	Debit	Credit	End Balance	NO	Date
N/A	N/A	N/A		0.0000 USD	25.1000 USD	616.0000 USD	-590.9000 USD	N/A	N/A
Rose term	Accounts Payable	12	Invoice invoice-Rose term-100003	0.0000 USD 0.0000 EUR		471.0000 USD 942.0000 EUR	-471.0000 USD -942.0000 EUR	invoice-Rose term-100003	02/18/2018 00:00:00 +0000
Rose term	General	12	Payment 1 PAYMENT FOR Rose Term	-521.0000 USD -992.0000 EUR		75.0000 USD 150.0000 EUR	-596.0000 USD -1 142.0000 EUR	1	02/19/2018 00:00:00 +0000
Rose orig	General	11	Payment 2 PAYMENT FOR Rose Orig	-471.0000 USD		50.0000 USD	-521.0000 USD	2	02/19/2018 00:00:00 +0000
Rose orig	General	11	Payment 74	-596.0000 USD		20.0000 USD	-616.0000 USD	74	02/20/2018 16:37:06 +0000
Rose orig	Accounts Receivable	11	Invoice invoice-Rose orig-100001	-616.0000 USD	7.5500 USD		-608.4500 USD	invoice-Rose orig-100001	02/21/2018 00:00:00 +0000
Rose orig	Accounts Receivable	11	Invoice invoice-Rose orig-100002	-608.4500 USD	7.5500 USD		-600.9000 USD	invoice-Rose orig-100002	02/21/2018 00:00:00 +0000
Rose orig	General	11	Payment 115	-600.9000 USD	10.0000 USD		-590.9000 USD	115	02/21/2018 14:38:50 +0000

Attention

- You can check an **actual date interval** of the report by clicking on **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 XLS/CSV** formats, values will be displayed in the report currency. The client and transaction currencies will not be shown in the exported file.

- Why are there differences between reports?

Resellers

In this article

- [Section overview](#)
- [Advanced Search](#)
- [Adding New Reseller](#)
- [Adding New Manager](#)
- [Reseller Removal](#)
- [Custom Fields](#)
- [Rates Notifications](#)
- [Configuration Syntax](#)
- [Knowledge Base Articles](#)

Section overview






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

Screenshot: Resellers section


ID	Name	Available Balance	Clients	Cards	Call Shops
3	Reseller 1	No Limit USD	3	114	0
20	Manager 1		0	0	0
21	Sub-manager 1		0	0	1
15	Reseller 2	0.00 USD	1	0	0

Column name	Description
ID	Reseller's/manager's identification number
Name	Name of reseller/manager
Available Balance	Reseller's available balance (live balance + credit)
Clients	Total amount of a respective reseller's/manager's clients
Cards	Total amount of a respective reseller's/manager's calling cards
Call Shops	Total number of a respective reseller's/manager's call shops

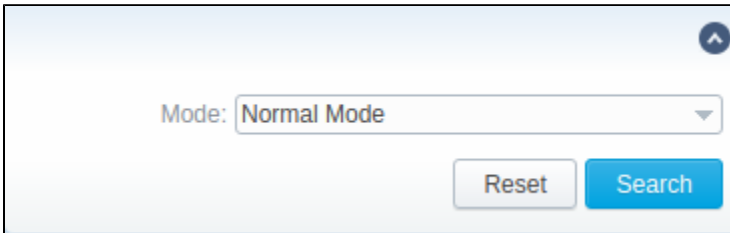
Button/Icon	Description
	Allows creating a new reseller
	Allows creating a new manager
	Allows assigning an origination rate table to a respective reseller
	Allows assigning a termination rate table to a respective reseller
	Allows viewing a list of a following reseller's/manager's users

	Allows viewing a history of changes for a respective reseller/manager in Audit log section
	Allows viewing reseller's balance operations in Transactions section
	Allows viewing a list of reseller's/manager's clients in Clients section
	Allows viewing a list of reseller's/manager's calling cards in Calling Cards section
	Allows viewing a list of reseller's/manager's call shops for a current reseller/manager in Call Shops 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  downwards arrow, a drop-down menu with the following structure is displayed:

Screenshot: Advanced Search drop-down menu



Field	Description
Mode	Select a mode for resellers display: To apply the specified search criteria, press Search button; to cancel the applied parameters, press Reset button. <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 New Reseller

To add a company, you need to:



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

Screenshot: Adding new company

Resellers

<p>SYSTEM INFORMATION</p> <p>Name: <input type="text" value="Reseller A"/></p> <p>Parent: <input type="text" value="...root..."/></p> <p>Currency: <input type="text" value="USD"/></p> <p>Status: <input type="text" value="Active"/></p> <p>Client's Template: <input type="text"/></p> <p>Tax Profile: <input type="text"/></p> <p>Gateways: <input type="text" value="GW Calls x GW Sms x GW Data x"/></p> <p>TERMINATOR SETTINGS</p> <p>TERM Rates: <input type="text"/></p> <p>TERM Capacity: <input type="text"/></p> <p><input type="checkbox"/> FRAUD PROTECTION</p> <p>Notification frequency: <input type="text" value="0"/></p> <p>Skip digits: <input type="text" value="0"/></p> <p>MAIL TEMPLATE: INVOICE</p> <p>MAIL TEMPLATE: INVOICE UNPAID REMINDER</p> <p>MAIL TEMPLATE: OVERDUE REMINDER</p> <p>MAIL TEMPLATE: LOW BALANCE NOTIFICATION</p> <p>MAIL TEMPLATE: RATES NOTIFICATOR</p> <p>MAIL TEMPLATE: FACTORS WATCHER</p> <p>MAIL TEMPLATE: REPORTS WATCHER</p>	<p>ORIGINATOR SETTINGS</p> <p>Postpaid: <input type="checkbox"/> <input type="text" value="0"/> USD</p> <p>ORIG Rates: <input type="text"/></p> <p>ORIG Capacity: <input type="text"/></p> <p>INVOICING INFORMATION</p> <p>Date: <input type="text" value="Real date"/></p> <p>Template: <input type="text" value="default PDF"/></p> <p>No Tpl: <input type="text"/></p> <p>Last No: <input type="text" value="10000"/></p> <p>EMAIL RATES IMPORT SETTINGS</p> <p>Host: <input type="text"/></p> <p>Port: <input type="text" value="993"/></p> <p>SURETAX SETTINGS</p> <p>Client Number: <input type="text"/></p> <p>Validation Key: <input type="text"/></p>	<p>CONTACT INFORMATION</p> <p>E-mail: <input type="text"/></p> <p>Postal Address: <input type="text"/></p> <p>Tax ID: <input type="text"/></p> <p>Reg ID: <input type="text"/></p> <p>Bank Account: <input type="text"/></p> <p>COMPANY LOGO</p> <p><input type="button" value="Choose File"/> No file chosen</p>
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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 Indicate a parent for a reseller or make it a root one. By default, field value is set to root
	<ul style="list-style-type: none"> Currency Select a preferred currency for rates and invoices from the drop-down list of available ones (see Currencies section)
	<ul style="list-style-type: none"> Status Define a status of reseller: <ul style="list-style-type: none"> Active Deleted
	<ul style="list-style-type: none"> Client Template Select a template that will be used for all clients belonging to this reseller or manager by default (see Clients Template section)
	<ul style="list-style-type: none"> Tax Profile Indicate a tax profile that will be used for this reseller and reflected in invoices (refers to Taxes Profiles section). <ul style="list-style-type: none"> SureTax is a tax, levied on top of another tax. It allows to manage your compliance with tax law. This profile is used for further calculation in invoices. To get more details, check out the article "US Taxation". <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <p>⚠ Attention</p> <p>For proper usage of SureTax, Invoice Number should contain only Latin and numeric characters. Max length is 40 symbols. Dst and Src Numbers should be in NPANXXNNNN (10 digits) format.</p> </div>

	<ul style="list-style-type: none"> • Gateways 	Select gateway(s) for this reseller
Terminator Settings	Reseller's billing settings for outgoing calls	
	<ul style="list-style-type: none"> • TERM Rates 	Rates for outgoing events from customers under current reseller. Enables resellers billing mode <div style="background-color: #e0ffe0; padding: 5px;">  Tip For more information about resellers billing mode, address this article </div>
	<ul style="list-style-type: none"> • TERM Capacity 	Termination capacity for all clients, belonging to this reseller. Leave this field empty for unlimited capacity
Fraud Protection checkbox	Enables/disables administrator notification in case of multiple simultaneous calls made to the same number from the current Reseller. <div style="background-color: #ffff00; padding: 5px;">  Attention Please note that all notifications can be found in System > Events Log. If you want to receive them on exact email, go to Configuration tab of Events Log section, and add a new rule with the indication of target email and aaa.fraud value in Tag field. </div>	
	Here you need to specify the following:	
	<ul style="list-style-type: none"> • Notification frequency 	Set minimum time in seconds between sent notifications (minimum interval must be 0 sec)
<ul style="list-style-type: none"> • Skip digits 	Define amount of the last number digits which will be ignored when determining a destination number. For instance, with one digit for ignoring, the numbers 123456 and 123457 will be considered as the same number	
Origination Settings	Current Reseller's billing settings for incoming calls	
	<ul style="list-style-type: none"> • Postpaid checkbox 	Here you can set specific paid mode for a client. Postpaid mode means that client will have unlimited credit. Otherwise, client's Balance + Credit value will be checked on RADIUS or SIP authorization. When this field is checked, Credit field become unavailable.
	<ul style="list-style-type: none"> • Credit 	Additional field next to Postpaid checkbox. User can indicate an amount of reseller's credit
	<ul style="list-style-type: none"> • ORIG Rates 	Specify rates for incoming events from customers under current reseller. Enables resellers billing mode
	<ul style="list-style-type: none"> • ORIG Capacity 	Indicate origination capacity for all clients, belonging to this reseller. Leave this field empty for unlimited capacity
Invoicing Information	Current Reseller's invoicing settings	
	<ul style="list-style-type: none"> • Date 	Allows you to select how system sets invoicing date: <ul style="list-style-type: none"> • Real date – sets invoicing date to actual invoicing date • Last day – sets invoicing date to date of last day of invoicing period

	<ul style="list-style-type: none"> • Templ ate 	Select an invoice template that will be assigned to reseller
	<ul style="list-style-type: none"> • No Tpl 	Allows to define default format of invoice's name
	<ul style="list-style-type: none"> • Last No 	Define last used invoice number
Email Rates Import Settings		Settings used for automatic import of updated rates from emails
	<ul style="list-style-type: none"> • Host 	Specify an email server. Note that it should support IMAP and SSL
	<ul style="list-style-type: none"> • Port 	Define a port. By default, field value is 993
SureTax Settings		SureTax profile settings. SureTax is a third-party tax calculation engine. This tax calculation is based on the location of the customer's taxing jurisdiction. This profile is used for further calculation in invoices. To get more details, check out the article " US Taxation ".
	<ul style="list-style-type: none"> • Client Number 	Specify a unique number that identify an individual in the SureTax service
	<ul style="list-style-type: none"> • Validation Key 	Defien a unique validation key of the SureTax service.
Contact Information		Some additional information
	E-mail	Company's email (it is required to specify email in order to receive notifications). Use only Latin characters. This field is mandatory
	<ul style="list-style-type: none"> • Postal Address 	Company's postal address
	<ul style="list-style-type: none"> • Tax ID 	An ID of tax paying entity
	<ul style="list-style-type: none"> • Reg ID 	Company's registration ID
	<ul style="list-style-type: none"> • Bank Account 	Company's bank account info
Company Logo		Here you can add a file with company's logo. To delete the company logo, open the edit form of a respective Reseller with logo, then click the delete icon to remove the old logo.
Mail Templates		A detailed description of all Mail Templates and their configuration is presented at the end of the article

Attention

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

Adding New Manager

To add a manager, press **New Manager** button and after specifying required fields press **OK**.

Screenshot: Adding new manager.

Resellers

SYSTEM INFORMATION

Name:

Parent:

Status:

Client's Template:

CONTACT INFORMATION

E-mail:

Postal Address:

Information block	Fields Description
System Information	General information about 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
Contact Information	Select current status of a manager:
	<ul style="list-style-type: none">• Active• Deleted
	Some additional information
	<ul style="list-style-type: none">• E-mail Manager's email. Use only Latin characters.
	<ul style="list-style-type: none">• 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 Reseller's/Manager's profile editing form.

Screenshot: Editing reseller's status

The screenshot shows a web interface for editing a Reseller/Manager profile. The title bar includes a user icon and the text 'Resellers' on the left, and 'Manager 1' on the right. Below the title bar, there are two main sections: 'SYSTEM INFORMATION' and 'CONTACT INFORMATION'.
In the 'SYSTEM INFORMATION' section, there are four fields:
1. Name: A text input field containing 'Manager 1'.
2. Parent: A dropdown menu showing 'Reseller 1' with a user icon.
3. Status: A dropdown menu showing 'Active'.
4. Client's Template: A dropdown menu showing 'Active' and 'Deleted'. A red arrow points to the 'Deleted' option.
In the 'CONTACT INFORMATION' section, there are two fields:
1. E-mail: A text input field containing 'manager@mail.com'.
2. Postal Address: A large text area.
At the bottom of the form, there are four buttons: 'Full Delete' (highlighted with a red border), 'OK', 'Cancel', and 'Apply'.

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

Custom Fields

- **Custom Field** is used as custom variables that will be represented as readable text in invoice templates. Custom Field allows to add an information about client.
- **Custom Package Field** is also used as as custom variables that allows adding information about package.

To add new field follow next steps:

1. Click the **Add Custom Field** button.
2. Specify **Field Key** and **Title** fields for 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 **VoIP Phone** field in **Client's settings/Package settings > Custom Fields** tab.
4. Create an invoice template and assign it to a target reseller. Then, **Clients Custom Fields** and **Package Custom Fields** tables will appear in the **Invoice Template** settings. You simply need to add those tables in the invoice template.
5. Finally, you can generate an invoice.

Screenshot: Custom Fields

[Edit Reseller](#)
[Custom Fields](#)
[Rates Notifications](#)
Reseller 1

CUSTOM FIELDS

+ Add Custom Field

Field Key	Title
voip_phone_sell	VoIP Phone

CUSTOM PACKAGE FIELDS

+ Add Custom Field

Field Key	Title

Rates Notifications

Rates Notification settings in **Resellers** profile allows to create **default rate notification** for clients that belong to a target reseller.

⚠ Attention

Starting from VCS 3.15.0:

- If any rate table (**child**) in the system has the assigned **parent** rate table, clients will be notified through **Rate Notification** service about changes in **both tables**.
- If child and parent rate tables both have the rule for the same code, priority is given to a **child one**. However, if the rule in a child rate table has expired due to **End date** field value, and a parent rule is still active, notifications will regard the latter one.

Screenshot: Rates Notifications

[Edit Reseller](#)
[Custom Fields](#)
[Rates Notifications](#)
Reseller 1

STEP 2: SPECIFY DATE AND FORMAT OPTIONS

Date Format:
 Code Deck:
 Codes Output:
 Data format:
 Fields Delimiter:

with headers row
 codes from code deck

[HEADER TEXT](#)
[FOOTER TEXT](#)

Column #1:	Code
Column #2:	Code Name
Column #3:	Rate
Column #4:	
Column #5:	
Column #6:	
Column #7:	
Column #8:	
Column #9:	
Column #10:	
Column #11:	
Column #12:	
Column #13:	

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

Field	Description
Date Format	Specify date format in your export file. Example of field syntax: if you enter “%d-%m-%Y” here, your date will look like 25-02-2018

Code Deck	Select a code deck here to rewrite code names in export file if needed
Codes Output	Select a way, codes must be displayed
	<ul style="list-style-type: none"> • Separate rows Each code is placed into single row
	<ul style="list-style-type: none"> • Delimited list Codes are grouped by code name in a row, for example, 5510, 5511, 5512
	<ul style="list-style-type: none"> • Ranges list Codes are grouped by code name into ranges plus delimiter, for example, 5510-5512, 5515
Data Format	Specify an output file format, .xls or .csv
Fields Delimiter	Set delimiter for fields if you've chosen .csv . For .xls format this field is unavailable
With headers row checkbox	Include into the file a row with column names
Codes from code deck check box	Include only codes which are present in a specified Code Deck
Header text / Footer text	Allows you to specify additional text into exported file as header and footer, respectively

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

Column Name	Description
Code / Code Name	Code or Code Name of respective rate
Effective Date	Date on which a rate to be applied
Rate	Price
Min Volume	Minimum volume of chargeable events
Interval	Chargeable interval
Grace Volume	Free of charge interval
Setup Fee	Interval of 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 current rate's status changed in comparison to a previous one (unchanged, increased, decreased)
Prev Diff (export)	Shows how current rate differs from a previous one after export
Prev Diff Status (export)	Rate's changes after the last export. Shows the status how differs current rate from previous. The rate will have an unchanged status if the Effective date of rate 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 respective rate
Policy	Indicated policy of the rate
Status	Define a current rate status


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: FACTORS WATCHER
MAIL TEMPLATE: REPORTS WATCHER

Template Name	Description
Mail Template: Invoice	Used when sending invoice to the customer
Mail Template: Invoice Unpaid Reminder	Used when sending payment notification to a customer (sending notification on "Notify Days(Before)")
Mail Template: Overdue Reminder	Used when sending payment notification to a customer (sending notification on "Notify Days(After)")

Mail Template: Low Balance Notification	Used when sending low balance notification to a customer <div style="background-color: #e0ffe0; padding: 5px; border: 1px solid #c0ffc0;"> <p> Tip</p> <p>You can add a rounding rule for client's balance while 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 Totals precision field in Currencies section.</p> </div>
Mail Template: Rates Notificator	Used when sending rate changes notification to a customer
Mail Template: Factors Watcher	Used when sending notification to a customer once Preset by Factors Watcher has been added
Mail Template: Reports Watcher	Used when sending reports by email

The structure of all mail templates is identical and has the following structure:

Screenshot: Reseller/ Mail Template:Factors Watcher form

MAIL TEMPLATE: FACTORS WATCHER

From: "`#{company['name']}`" <`#{company['c_email']}`>

BCC:

Subject: Factors watcher notification `#{company['name']}`

Direction `#{direction}` blocked by: `#{reason}`

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Autogenerated by JeraSoft VCS

Field	Description
From	Specify name and email of company
BCC	Specify who will receive a blind copy of an email
Subject	Indicate email subject that may contain company name, invoice number, etc.
Mail body	Content of the letter. On the screenshot above the following information is specified: <ul style="list-style-type: none"> Direction {direction} Code or Code name that will be automatically filled in by the system Reason {reason} Values specified in Factors Watcher settings (for example: <code>calls_total >0</code>).

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

Configuration Syntax

General Configuration Syntax Concerning Client Data

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

<code>#{client['status']}</code>	A client status: <ul style="list-style-type: none"> • Active • Deleted
<code>#{client['name']}</code>	lient's name
<code>#{client['balance']}</code>	lient's live balance
<code>#{client['balance_accountant']}</code>	lient's fixed balance
<code>#{client['credit']}</code>	lient's available credit
<code>#{client['c_company']}</code>	lient's official company name
<code>#{client['c_address']}</code>	Post address of a client's company
<code>#{client['c_email']}</code>	lient's email
<code>#{client['locale']}</code>	Client's location
<code>#{client['currencies_id']}</code>	urrency ID, used by a client
<code>#{client['tz']}</code>	Time zone of a client
<code>#{client['taxes_profiles_id']}</code>	Taxes profile's ID, used by a client
<code>#{client['tax_id']}</code>	Customers tax ID of a client's company
<code>#{client['reg_id']}</code>	Registration ID of a client's company

General Configuration Syntax Concerning Company/Reseller 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 post 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 time zone
<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 time zone
<code>\${invoice['state']}</code>	Invoice state
<code>\${invoice['name']}</code>	Invoiced client name
<code>\${client['currency']}</code>	lient'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>	lient's currency
<code>\${client['alert_threshold']}</code>	Notification for a client regardig reaching a balance limit
<code>\${client['alert_athreshold']}</code>	Notification for an administrator regardig 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 rate table was last time edited
<code>\${date}</code>	Date when the notification was sent

Configuration Syntax for Mail Template: Reports Watcher

Templates Configuration Syntax	Description
<code>\${report["title"]}</code>	Title of report template
<code>\${report["interval"]}</code>	Actual report period of time
<code>\${report["title-full"]}</code>	Title of report template with indication of actual report period of time
<code>\${report["webUrl"]}</code>	URL to view report on the web portal
<code>\${report["id"]}</code>	ID of report template

Tip

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

Knowledge Base Articles

- [US Taxation](#)
- [What is resellers billing mode?](#)

- How to set up a functional capacity?
- What is real time fraud protection functionality and how to set it up?

Client Packages

In this article

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

Section overview




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

Screenshot: *Client Packages list*


Client	Account	Package	Limits	Current period start/stop	Package start/stop
Orig Client		Extra Package	380 100.0000 EUR 38044 100.00 min	01/01/2018 00:00:00 02/01/2018 00:00:00	10/01/2017 00:00:00 Not defined
-Orig-Client		Package 1	380 100.0000 EUR	01/09/2018 11:06:32 02/09/2018 11:06:32	01/01/2018 00:00:00 01/30/2018 16:12:32
Orig Client		Package 1	380 100.0000 EUR	01/09/2018 11:02:46 02/09/2018 11:02:46	01/01/2018 00:00:00 02/09/2018 11:02:46
Orig Client	orig	Package 2	38044 100.00 min	01/09/2018 11:03:01 02/09/2018 11:03:01	01/02/2018 00:00:00 Not defined
Orig Client		Package 2		Not defined Not defined	01/31/2018 00:00:00 Not defined

Column	Description
Client	Name of client whom package is assigned to
Account	Name of account whom package is assigned to
Package	Name of assigned package
Limits	Shows, if respective package has some volume limits and time or money left <ol style="list-style-type: none"> 1. On the left side of the bar it shows the <i>destinations, code or code names</i>. 2. On the right side of the bar it shows a <i>specified limit</i>.
Current period start/stop	A date of package's activation for respective client/account A date of package's deactivation for respective client/account
Package start/stop	Effective start and stop date of the package

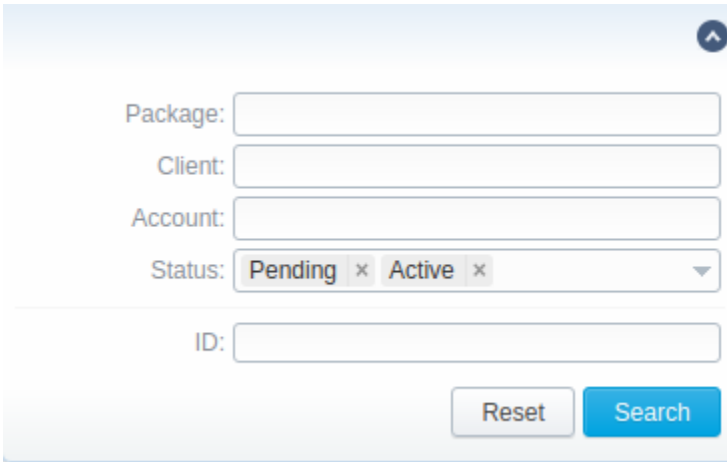
Button/Icon	Description
	Allows assing a package to corresponding client/account
	Shows the full list of packages that were assigned to this client/account
	Marks package, that was successfully activated and will renew itself due to the package settings
	Marks package, that is new for current user and not activated yet
	Marks package, that is in the archive
	Allows editing client's package

	Allows user to renew the package. However, we strongly recommend not to renew the package on the expiration date.
	Cancels the active package
	Removes assigned package completely

Advanced Search

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

Screenshot: Advanced Search drop-down menu




Field	Description
Package	Indicate a name of a target package
Client	Specify a target client
Account	Specify a client's target account
Status	Select a status of a client's package: <ul style="list-style-type: none"> • Pending • Active • Archive
ID	Specify respective client's package ID

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

Assigning New Package

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

Screenshot: Client Packages form

 **Client Packages**

Client:

Account:

Package:

Start date:

End date:


Quantity:

Activate in the past:

Field	Description
Client	Name of client whom package is assigned to
Account	Name of account whom package is assigned to
Package	Name of assigned package
Start Date	Package's limits and discounts are only effective after specified date
End Date	Package's limits and discounts are disabled after specified date
Quantity	Number of packages to be assigned.
Activate in the past checkbox	If checked and Start Date field value is in the past, package will be activated on the specified date



 **Attention**

In VCS 3.15.0, a possibility to activate assigned package **disregarding** client's current balance has been added


 **Warning**

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

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

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

Editing Clients Package


When clicking on  icon, a detailed information on client's package is displayed. In **System information** data block, user can view general info regarding the package including client himself, start date, status and so on. What is more important, user can change package's **End date** in a respective field.

To make it easier for a user to keep records of package limits, a new **Limits History** information block on an **Edit Client's Package** (see screenshot below) page has been introduced in **VCS 3.15.0**. It provides a detailed view of package limits for each specified period.

Screenshot: Limits History information block

Client Packages

SYSTEM INFORMATION

Client:  **Orig Client**
 Account: All Accounts
 Package: **Test Package with volume and credit limits**
 Start date: 10/01/2017 00:00:00 +0000
 End date:

Status: **Active**
 Charge on Event: No
 Charged: Yes
 Reactivations: 4
 Align to Payment Terms: No
 Recalculate to Period: No

LIMITS HISTORY



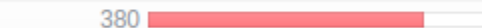
Rows 1 – 4 of 4

 20 ▼

« <

Page 1 of 1

> »

	Limits	Current period start	Current period stop
	380  100.0000 USD 38044  100.00 min	01/01/2018 00:00:00	02/01/2018 00:00:00
	380  100.0000 USD 38044  100.00 min	12/01/2017 00:00:00	01/01/2018 00:00:00
	380  100.0000 USD 38044  100.00 min	11/01/2017 00:00:00	12/01/2017 00:00:00
	380  100.0000 USD 38044  100.00 min	10/01/2017 00:00:00	11/01/2017 00:00:00

OK

Cancel

Apply

Attention

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

Presets

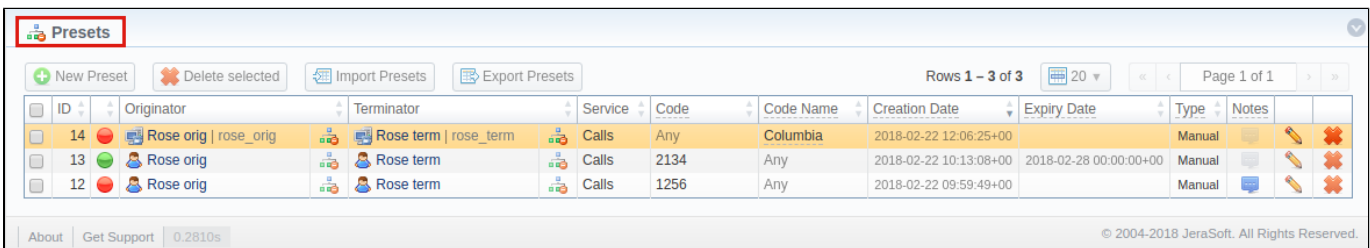
In

- [Section overview](#)
- [Advanced Search](#)
- [Creating New Routing Preset](#)
- [Importing and Exporting of Presets](#)

Section overview

This section makes your billing more versatile by providing user with a possibility to deny (block) or allow routes in a client's routing scheme. Here, you can add and remove routing presets either for origination or termination routes. These presets can be created for a defined period of time or permanently. Section provides an advanced functionality for the management routing and is presented in a form of a table with the following columns:


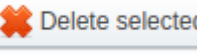
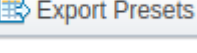
Screenshot: Presets section










ID	Originator	Terminator	Service	Code	Code Name	Creation Date	Expiry Date	Type	Notes
14	Rose orig rose_orig	Rose term rose_term	Calls	Any	Columbia	2018-02-22 12:06:25+00		Manual	
13	Rose orig	Rose term	Calls	2134	Any	2018-02-22 10:13:08+00	2018-02-28 00:00:00+00	Manual	
12	Rose orig	Rose term	Calls	1256	Any	2018-02-22 09:59:49+00		Manual	


Column Name	Description
ID	Preset's identification number
Originator	Name of origination client
Terminator	Name of termination client
Service	Type of a service this preset was created for
Code	The code used for matching this rule
Code Name	Name of the specified code
Creation Date	Date when the preset was added
Expiry Date	Date when the preset will be invalid
Type	Type of the preset creation: manual or automatic. <i>Manual</i> rules added using this section, <i>auto</i> rules added by the Factors Watcher
Notes	Additional info on a preset

The list of **functional buttons/icon** comprises of:

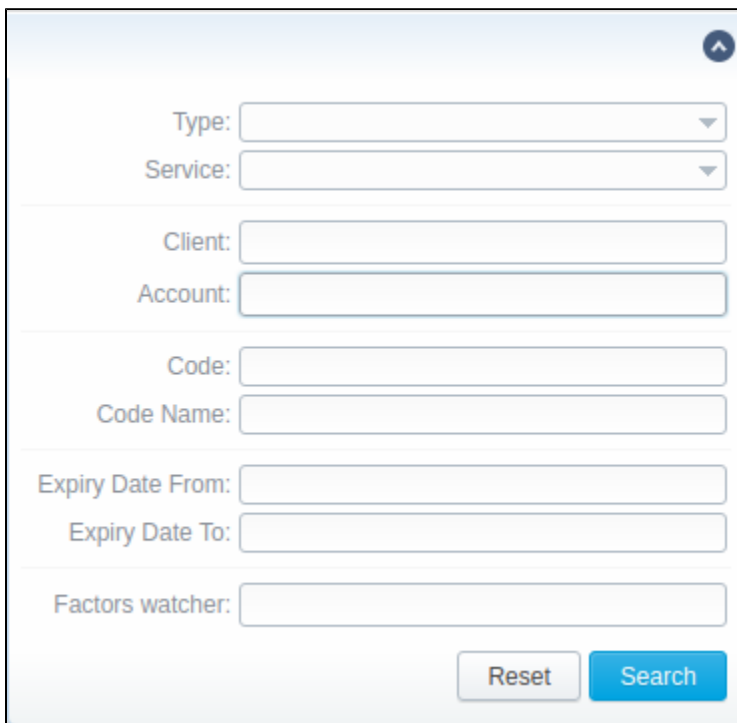
Button/Icon	Description
	Allows to create a new preset
	Allows to delete all selected presets from the list
	Allows to import file with prepared presets
	Allows to download a list of presets in a .csv file

	Indicates allowed presets
	Indicates denied presets
	Indicates that for target preset a client's account / profile has been used
	Displays all presets of a client
	Displays preset notes
	Allows to manage a preset on a list
	Allows to delete a preset 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  downwards arrow, a drop-down menu with the following structure is displayed:

Screenshot: *Advanced Search drop-down menu*



Field	Description
Type	Specify preset type: <ul style="list-style-type: none"> • Auto • Manual
Service	Select from the list of all system services
Client	Indicate a target client
Account	Define a target client's account
Code	Specify a target code
Code Name	Indicate a code name

Expiry Date	Specify time limits for a desired preset expiry date by filling in two fields: <ul style="list-style-type: none"> • Expiry Date From • Expiry Date To
--------------------	---

Factors Watcher Indicate a target factor watcher that generated automatic preset
To apply the specified search criteria, press **Search** button, to cancel the applied parameters, press **Reset** button.

Creating New Routing Preset

To add a new preset, click the **New Preset** button and enter all the required information in a pop-up window. Then, press **OK**.

The list of fields for preset creation includes:

Field Name	Field Description
Action	Specify the type of action this preset is designed for: <ul style="list-style-type: none"> • Deny - choose this action to block the current route selection • Allow - choose this action to allow particular route selection (for example: allow a route for particular account of the client)
Expiry Date	Set an exact date when the preset expires from a datepicker. If the field is empty, it will never expire.
Origination settings	Indicate origination client's profile or account that will be used for this preset. <ul style="list-style-type: none"> • Orig Client - specify origination client for a current routing rule for whom this routing rule will work • Orig Account - indicate origination client's account that will be used in current routing rule The following fields are mutually exclusive - if you indicate Orig Client field, Orig Account field becomes inactive and vice versa.
Termination settings	Indicate termination client's profile or account that will be used for this preset. <ul style="list-style-type: none"> • Term Client - specify termination client for a current routing rule for whom this routing rule will work (i.e all calls coming from clients to that specified vendor will be denied to route) • Term Account - indicate termination client's account that should be used in current routing rule The following fields are mutually exclusive.
Code	Specify a code of destination, used for matching the rule. The longest code will be in usage. By default, it won't overwrite settings if the specified code is shorter than code which is used to rate the call. To set preset for all subcodes you can use * as wild card. For example, you have 14267 in your rate table and set preset for 142 . Such settings won't include 14267 code, but 142* will.
Code Name	Indicate a target code name
Service	Specify a type of system services for the preset
Notes	Specify additional information about a preset

Screenshot: Add New Preset form

Importing and Exporting of Presets

To export all currently displayed presets, you need to click on **Export Presets** button and a .csv file will be downloaded to your computer.

By clicking on **Import Presets** button on the toolbar, you will get an access to mass import feature. This feature allows you to add new presets to already existing ones or to purge them and add new presets. You must use this feature in order to modify a huge amount of presets. Whole mass import process consists of 3 steps:

Step 1. Selecting File and Specifying Additional Parameters

Open Import tab and select a file to import. After that, specify following additional parameters:

Screenshot: Presets importing process. Step 1

Field	Description
Fields Delimiter	Specify delimiter for CSV file: <ul style="list-style-type: none"> • autodetect • comma • semicolon • tab By default, autodetect is set
Import configuration	Select an action to be executed if the duplicate presets are found while importing process

⚠ Attention

- **Update with latest value**
- **Skip duplicate rows**
- **Alert me about duplicates**

Uploaded .csv file should contain **at least 2 rows**.

After selecting a file and specifying all additional parameters, click on **Process>>** button.

Step 2. Recognizing The File

The system will recognize the file and display few first rows of it. Here you can specify default values like **Orig Client**, **Expiry Date**, **Code Deck** etc that will be applied to all presets. Moreover, you need to specify columns of the presets from a drop-down list. At least, **Code/Code Name** field must be indicated. If there's a need, make changes to the preset data and click on **Process>>** again.

Screenshot: Presets importing process. Step 2

Presets

DEFAULT VALUES

Expiry Date: Orig Client: Orig Account:

Code deck: Term Client: Term Account:

DEFAULT

Action: Service:

Deny Calls

ROWS AND COLUMNS SELECT

ID	Originator Client ID	Originator Client	Originator Account ID	Originator Account	Terminator Client ID	Terminator Client	Terminator Account ID	Terminator Account	Code	Code Name	Service	Notes	Creation Date	Expiry Date	Deny	Type	Skip
13	11	Rose orig			12	Rose term			2134		Calls		2018-02-22 10:13:08+00	2018-02-28 00:00:00+00		manual	<input type="checkbox"/>
12	11	Rose orig			12	Rose term			1256		Calls	11	2018-02-22 09:59:49+00		1	manual	<input type="checkbox"/>

« Return
Cancel
Process »

Step 3. Checking Rows

A final check must be performed in order to finish importing. On doing it, press **Process>>** for the last time and wait for progress bar to reach 100%. Congrats, your mass import is done!

Screenshot: Presets importing process. Step 3

Presets

CHECK ROWS

	Code		Code Name		Orig Clients		Orig Accounts		Term Clients		Term Accounts		Service		Expires		Deny		Skip
	Original	Parsed	Original	Parsed	Original	Parsed	Original	Parsed	Original	Parsed	Original	Parsed	Original	Parsed	Original	Parsed	Original	Parsed	
✓	Code	Code												Calls			1	Deny	<input type="checkbox"/>
✓	2134	2134												Calls			1	Deny	<input type="checkbox"/>
✓	1256	1256												Calls			1	Deny	<input type="checkbox"/>

« Return
Process »

Traffic Processing

This section allows performing a number translations. Here, you can add and remove rules for the traffic processing.

Screenshot: *Traffic Processing section*

ID	Type	Order	Applied to	Code	Code Name	Src Match	Src Replace	Dst Match	Dst Replace	Tags Match	Tags Add
55	DR	1	Client ABC	320		3206070	3206070	3206066	3206066	Any: InterLATA-InterState	Tag 1, Tag 2
54	Orig-Term	1	Client ABC	320		3207012	3207012	3207010	3207010	All: Tag Example 2	InterLATA-InterState
53	Term	1	Client ABC	320		3204012	3204012	3204010	3204010	Any: Tag C, Tag D	Tag 1, Tag C
52	Orig	1	Client ABC	320		3205015	3205015	3205013	3205013	All: Tag Example 1	InterLATA*

To add Rules for Traffic Processing

To perform a number translation, click the "Add Rule" button and fill the following fields (see screenshot below):

Screenshot: *Traffic Processing settings*

Traffic Processing

Type:

Client:

Code:

Src Match:

Dst Match:

Tags Match:

Order:

VoIP Gateway:

Account:

Code Name:

Src Replace:

Dst Replace:

Tags Add:

Field Name	Field Description
Type	<p>Specifies, at what stage a current translation rule should be applied</p> <ul style="list-style-type: none"> ORIG - For calls originated from a client. It's applied during the call authorization and affects all next steps. If the VCS doesn't take part in the authorization process and only receives an accounting data from the softswitch, Orig type will be only applied for Orig call leg (orig CDR record). TERM - For calls terminated to a client. It's applied to a term leg (term CDR record of a call) after receiving an accounting data and before the billing process. ORIG-TERM - For orig and term calls. It combines both types. DR - It's applied during routing of the call (if the VCS takes part in the routing), after routes determination and before sending reply to the softswitch. It affects a further call processing.
VoIP Gateway	Select from the drop-down list a respective VoIP gateway for which rule is applied
Client	Specify a respective client here
Account	Specify a respective account here
Code	Specify a code of destination here (use * as wildcard)

Code Name	Or select a destination name in this field if applicable
Src Match	In this field you may set a template by which a number will be analyzed, and if template matches the number, the translation will occur in respective settings in Src Replace field
Src Replace	Put a resulting action in this field, that will be performed, if translation process will take place
Dst Match	In this field you may set a template by which a number will be analyzed, and if template matches the number, the translation will occur in respective settings in Dst Replace field
Dst Replace	Allows you to put matched calls into specified Origination Routing Group
Tags Match	You can here specify respective tags that will be used while matching <i>all</i> - applies for calls with all next specified tags. <i>any</i> - applies for calls with at least one of next specified tags.
Tags Add	Here you can add tags that will be added for calls matching this rule
Order	Sets rules ordering, first matched rule will stop further number translations.

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](#).

If the number is 123#456, match field is ^123#(.*)\$ and replace field is 789\1, then the resulting number will be 789456.

You can insert random number with fixed digit length using variable \$rnd(xxx-yyy)\$, 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.

 **Tip**

Please note that all routing related functions of this section are only available with **Routing Module** installed. Orig and Term number translations will work without **Routing Module**.

Retail

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

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

The list of sections is as follows:

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

Packages

In this article

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

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. Section is designed in a form of a table that displays all packages that are currently available and has the following structure:

Screenshot: Packages section main window

ID	Status	Name	Activation Fee	Subscription Fee	Period	Reseller
4	Active	Extra Package	2.00 USD	10.00 USD	1 month(s)	Reseller 1
3	Disabled	Package 1	0.00 USD	0.00 USD	1 month(s)	Reseller 1
2	Active	Package 2	0.00 USD	0.00 USD	1 month(s)	Reseller 1

Column	Description									
ID	ID of a package									
Status	Status of a package <table border="1"> <tbody> <tr> <td></td> <td>Active</td> <td>Package is in use by a customer</td> </tr> <tr> <td></td> <td>Disabled</td> <td>Package is not used</td> </tr> <tr> <td></td> <td>Archived</td> <td>Package is not used and not available anymore</td> </tr> </tbody> </table>		Active	Package is in use by a customer		Disabled	Package is not used		Archived	Package is not used and not available anymore
	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	Renewal package period									
Reseller	Name of reseller, target package belongs to									

List of functional **buttons/icons** in the section includes:

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

Advanced Search

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

Screenshot: Advanced Search drop-down menu



The screenshot shows a search interface with two dropdown menus. The first dropdown is labeled "Reseller:" and has "all resellers" selected. The second dropdown is labeled "Status:" and has "Active" selected. Below the dropdowns are two buttons: "Reset" and "Search". The "Search" button is highlighted in blue. There is a small upward-pointing arrow icon in the top right corner of the search area.

Field	Description
Reseller	Indicate a name of a target reseller
Status	Select a status of a package: <ul style="list-style-type: none">• Active• Disabled• Archive

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

Adding New Package

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

📦 Packages

GENERAL SETTINGS

Name:

Reseller: 👤 Reseller 1 ▼

Status: Active ▼

PERIOD SETTINGS

Period: month(s) ▼

Advance Renew: hour(s) ▼

Renew Due: month(s) ▼

BILLING SETTINGS

Currency: USD ▼

Fees include taxes

Align to Payment Terms

Recalculate to Period

Charge on Event

Setup fee: Charge if billed by volume limit ▼

Client balance: Deny activate if negative ▼

Create charge on: Pre-activation time ▼

PACKAGE APPLICATION

Priority:

Dynamic Tag:

Start Date:

End Date:

FEES +

Fee Type	Fee Name	Fee Note	Rate, USD
Activation	Activation Fee		0
Subscription	Subscription Fee		0

DID LIMITS

DIDs Quantity: On Hold: day(s)

Allowed Tags:

LIMITS +

Code Deck: ▼


i No Volume Limits




DISCOUNTS +

i No Discounts

OK
Cancel
Apply

Information block	Field and Description
General settings	General information about a package
	Name Determine a 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	Settings regarding package period
	Period Specify a period for current package if it's renewable
	Advance Renew Next renewal will be made within a specified period of time in advance (before renewal date). Renew intervals of packages will be converted to the smallest units. For example, 1 day + 1 hour = 25 hours.
	<div style="display: flex; align-items: center;"> ! Warning </div> <p>Please be aware that for a correct work of your system, Advanced Renew field value must be higher than the run period of Package Manager tool in Task Scheduler section. The recommended Advanced Renew field value is 1 hour</p>
Renew Due Indicate a period the system will try to renew a package. If no value is specified, attempts to renew a package will be endless.	
Billing settings	List of settings concerning billing feature
	Currency Define a currency for this package

Fees include taxes checkbox	If enabled, taxes are included in package prices, if disabled – taxes will be calculated regarding respective Tax Profile of a customer	
Align to payment Terms checkbox	Allows system to align period of package to customer's Payment Terms, equalising Package billing with actual invoicing	
Recalculate to Period checkbox	Allows recalculation of days up to Payment Terms period if the package was activated somewhere in the middle of it	
Charge on event checkbox	If enable, package subscription fee will be applied when the first call within this package is made. Otherwise, package would be free.	
Setup fee	Select from a list of available options of setup fee settings: <ul style="list-style-type: none"> • Charge if billed by volume limit - setup fee will be charged when event is billed by volume limit • Don't charge if billed by volume limit - setup fee won't be charged when limit by volume is used for the event billing 	
Client balance	Choose one of the following options: <ul style="list-style-type: none"> • Allow activate if negative - client's package will be activated regardless of client's balance; however, package limits will be used only when it's not neegative • Deny activate if negative - client's package will be activated only if there are sufficient funds on the balance 	
Create charge on	Determine when the charge should be created: <ul style="list-style-type: none"> • Pre-activation time - create charge at the moment of period creation • Period start time - create charge at the moment when a new period starts 	
Package application	Information on package application	
	Priority	If there are multiple packages that satisfy a call, then a package with the highest priority will be used (i.e. priority 2 < priority 1). <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note that packages with minutes will always be used before packages with money regardless of the priority.</p> </div>
	Dynamic Tag	Add a tag for the events, billed by this package
	Start Date	Indicate an effective start date of a package. This feature is used for temporary packages.
	End Date	Determine an effective end date of a package. This feature is used for temporary packages.
Fees	Information block is used for package fees indication and presented in a form of a table. To add a new fee type, you need to click on  icon next to its name.	
	Fee Type	Select the type of a fee. There are two possible types: <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
	Fee Name	Specify a name of a fee
	Fee Note	Here you may enter additional information about a fee
	Rate	Indicate the price for a fee. Price is indicated in the package currency
DID Limits	Specify how many DIDs and from which group it can be assigned to a customer with this package	
	• DIDs Quantity	How many DIDs can be assigned to client's accounts

	<ul style="list-style-type: none"> • Allo wed tags 	Specify tags that are used while creating DIDs
	<ul style="list-style-type: none"> • On hold 	Indicate how many days DID is kept on hold after the package is deactivated
Limits	Here you can create promotional minute packets that will be included in the package. To add a new limit, click on  icon next to Limits .	
	<ul style="list-style-type: none"> • Code Deck 	Specify Code Deck if you plan to create limits by using Code Names
	<ul style="list-style-type: none"> • Servi ce 	Define a service this limit will be used for
	<ul style="list-style-type: none"> • Type <ul style="list-style-type: none"> • Money • Volume 	Select a limitation type from the drop down list: You can set both types within the same package
	<ul style="list-style-type: none"> • Code 	Specify a code. Please note that package limits are working only for 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 Code Name field is specified, this one will be inactive.
	<ul style="list-style-type: none"> • Code Name 	Specify a code name from selected Code Deck. If Code field is specified, this one will be inactive.
	<ul style="list-style-type: none"> • Limit 	Enter amount of free minutes or bonus money (depends on selected limitation type) that will be used for specified code or code name
	<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>	
Discounts	A promotional discount of the package subscription fee. To add a new discount, click on  icon next to Discounts .	
	<ul style="list-style-type: none"> • Activ ation Cou nt 	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.
	<ul style="list-style-type: none"> • Disc ount 	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 appears. This charge includes all amounts needed for a package activation. Also, you can add this charge in 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** and **Recalculated to Period** checkboxes are enabled.
4. Package reactivation will be stopped after **Renew Due** period. However, DID for this package will be expired after **On Hold** period. Therefore, we recommend to set 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 DID number) reactivation and DID hold date has already expired, attempts for package reactivation will be stopped.

Information concerning Packages assignment to a certain client can be found here: [Client Packages](#).

 **Attention**

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

Knowledge Base Articles

- [How to apply discounts without having to create a new package?](#)

DID Management

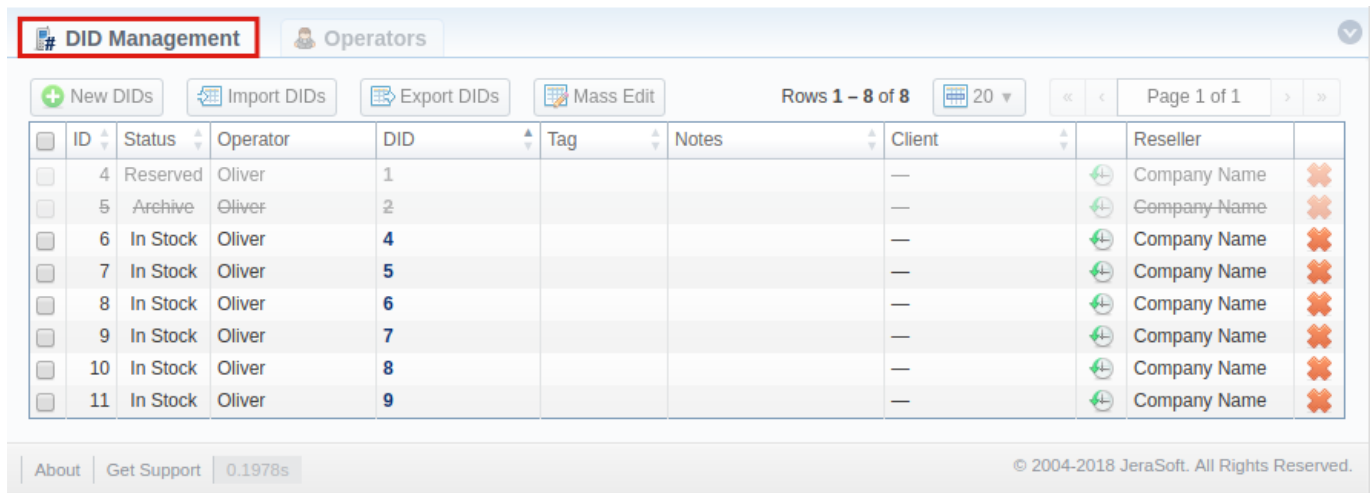
On this page

- [DID Management Section Main Window](#)
- [To edit DID Numbers](#)
- [To create DID Number](#)
- [To add multiple DID Numbers](#)
- [Mass Edit of DIDs](#)
- [DIDs Importing process](#)
- [DIDs Exporting](#)
- [Operators List Section](#)

DID Management Section Main Window

This section allows to create the DID numbers, which may be later assigned to one of the packages and finally provided to a customer under Package terms (see screenshot below).


Screenshot: DID management section main window



ID	Status	Operator	DID	Tag	Notes	Client	Reseller
4	Reserved	Oliver	1			—	Company Name
5	Archive	Oliver	2			—	Company Name
6	In Stock	Oliver	4			—	Company Name
7	In Stock	Oliver	5			—	Company Name
8	In Stock	Oliver	6			—	Company Name
9	In Stock	Oliver	7			—	Company Name
10	In Stock	Oliver	8			—	Company Name
11	In Stock	Oliver	9			—	Company Name

Column	Description
ID	ID of current DID number
Status	State of current DID number
	<ul style="list-style-type: none"> • Active 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 Temporarily not available for usage
	<ul style="list-style-type: none"> • Reserved Not used DID, but not available for purchase yet
<ul style="list-style-type: none"> • Hold Is on hold after usage, should become "In Stock" soon	

	<ul style="list-style-type: none"> • Archived 	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 respective DID number you would like to be tagged in the future	
Notes	Additional information about certain DID <div style="background-color: yellow; padding: 5px;"> <p>⚠ Attention</p> <p>This field has been introduced in VCS 3.15.0</p> </div>	
Client	Shows client and account, which current DID belongs to	
Reseller	Current DID's owner	


 When a package with **assigned DID number** is not active, this DID number will be in **"Hold"** status and routing destination is unreachable. The DID is moving **"In Stock"** when the specified holding period is over.

To edit DID Numbers

By clicking on current DID number, the new window will pop up. Here you can edit all information about current DID, including the status, operator, tag, Reseller.

Use **"After Hold"** option in order to determine which status (reserved, in stock, archived) DID should be moved to after staying *On Hold*.

Screenshot: *DID Management settings*

 **DID Management**

DID(s):

Operator:

Status:

After Hold:

Tag:

Notes:

To create DID Number

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

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 are put in "in stock" state. You can also use the "Import DID's" button.
3. Go to **Retail – Packages** section. Create a package, that will include tags specified in DID's settings and number of allowed DID's to be picked from it.
4. Assign respective Package to the customer in the **Client Packages** section.
5. Open the **DIDs** tab in the **Clients** section. Here, pick one or more DID numbers.

For more details, look through the article "**How to configure DIDs scheme?**" in our Knowledge Base.

This will effectively assign a DID number to one of the customer's accounts. Please note, that 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.

To add multiple DID Numbers

Also, you can **set the range of DID's numbers** and add multiple DIDs in one click.

Specify in the "**DID(s)**" field 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).

Mass Edit of DIDs

On top of that, you can easily change the status of selected DIDs, specify tags and number of hold days using "**Mass Edit**" button. For changing the status you need to select DIDs (for which the status should be changed), then click the "Mass Edit" button and in pop-up window specify the status from the drop-down list in respective "Set Status to" field, click the "Update" button for confirming the change. Also, using the "Mass Edit" button you can add a tag. If you click the "Delete" button only selected DIDs will be deleted.

Screenshot: DID management "Mass Edit" window

The screenshot shows the DID Management interface with the 'Mass Edit' pop-up window open. The table below shows the DIDs being managed:

ID	Status	Operator	DID	Reseller
4	Reserved	Oliver	1	Company Name
5	Archive	Oliver	2	Company Name
6	In Stock	Oliver	4	Company Name
7	In Stock	Oliver	5	Company Name
8	In Stock	Oliver	6	Company Name
9	In Stock	Oliver	7	Company Name
10	In Stock	Oliver	8	Company Name
11	In Stock	Oliver	9	Company Name

DIDs Importing process

The process of DIDs importing is pretty simple:

1. Click on **Import DIDs** button which in the section
2. In a pop-up window, you need to attach a **.csv** file you wish to be imported and fill in respective fields (see screenshot below)
3. Press **Process>>** button
4. Specify columns name from a select drop-down list (see screenshot) and once again press **Process>>** button
5. All imported DIDs will be displayed in a section table

Screenshot: Importing DIDs

DID Management

Select the file to import: No file chosen

Fields delimiter:

Operator:

Status:

After Hold:

Tag:

Notes:

Screenshot: Rows and Columns Select

DID Management

ROWS AND COLUMNS SELECT

	Status		DID	Tag	Notes						Skip
ID	Status	Operator	DID	Tag	Notes	Client	Account	Package	After Hold	Reseller	<input checked="" type="checkbox"/>
11	reserved	Op 1	1						reserved	Company Name	<input type="checkbox"/>
12	active	Op 2	10			Client 0 Orig	acc_0_orig	Pack	reserved	Company Name	<input type="checkbox"/>
13	archive	Op 2	2						reserved	Company Name	<input type="checkbox"/>
14	instock	Op 2	4						reserved	Company Name	<input type="checkbox"/>
15	instock	Op 2	5						reserved	Company Name	<input type="checkbox"/>
16	instock	Op 2	6						reserved	Company Name	<input type="checkbox"/>
17	instock	Op 2	7						reserved	Company Name	<input type="checkbox"/>
18	instock	Op 2	8						reserved	Company Name	<input type="checkbox"/>
19	instock	Op 2	9						reserved	Company Name	<input type="checkbox"/>

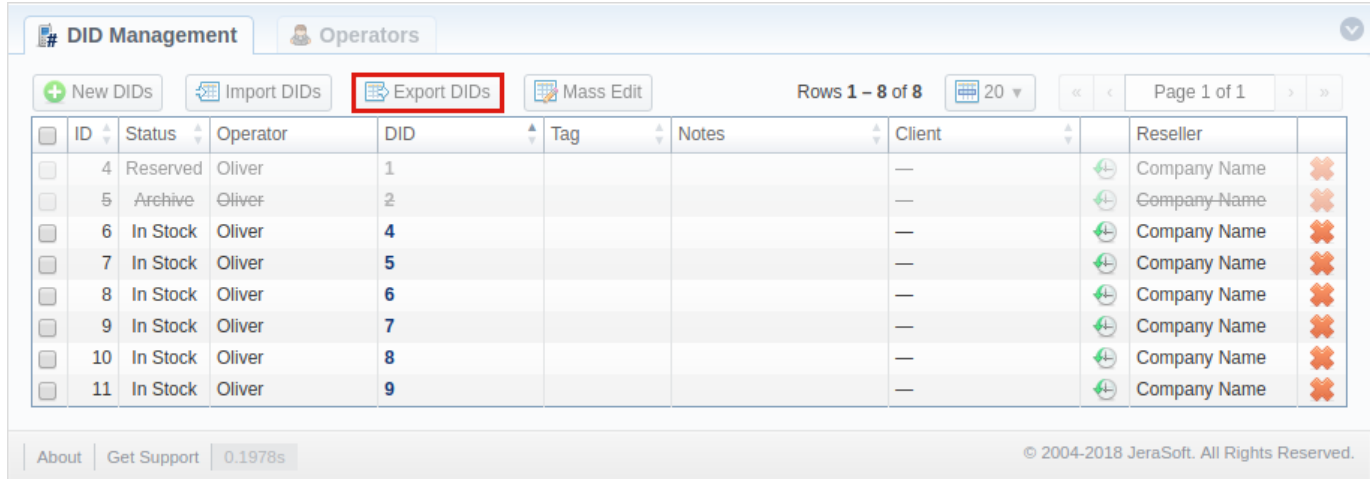
Attention

Starting from version 3.15.0, a drop-down list of column names has been added with the following names: **Operators, Status, After Hold, Tag, Notes**

DIDs Exporting

In this version, a new **Export DIDs** button has been added to the section. It allows a user to download a **.csv** file that contains information that is currently displayed in a section table. Apart from all the the columns of section table, the file contains an extra **Package** column, where respective package name, if any of the DIDs is assigned to the package, will be displayed (see screenshots below).

Screenshot: *Export DIDs button*



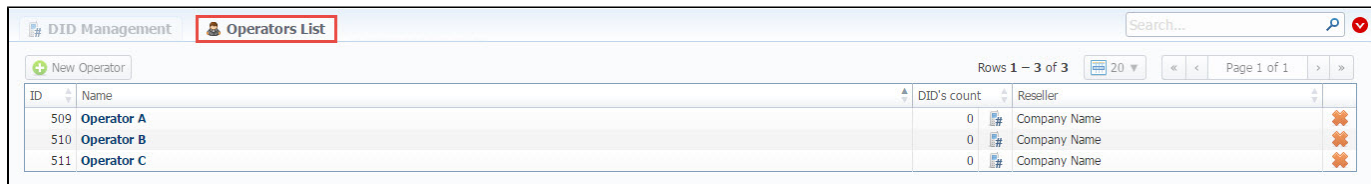
Screenshot: *Package column in exported file*

	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 List Section



This section shows the list of operators who are owners of DID numbers, also it allows you to add a new operator to the list (see screenshot below). To add a new operator according to your demands click the *"New Operator"* button and in the pop-up window and specify an operator name, then select a reseller for this operator, after click *"OK"*.

Screenshot: *Operators List Main Window*



Column	Description
ID	ID of a current operator
Name	Operators' name

DID's count	The amount of DID numbers owned by the current operator
Reseller	Current operators' reseller

Icon	Description
	Click this icon to filter DID numbers of the current operator and show results in <i>DID Management</i> main window
	Click this icon to delete the operator

Calling Cards

On this page

- [Calling Cards List](#)
- [Creating Card Series](#)
- [Calling Card Series Properties](#)

Calling Cards List

This section represents built-in calling card generator that allows you to create or change card series for prepaid customers. Each generated card is considered a billing client, so a customer can perform calls, login to his control panel to browse statistics and other relevant information.

Screenshot: Calling Cards section main window

Status	Number of Series	Name of Series	Balance	Qty	Reseller	Rate Table	Act. Fee	Maint. Fee
●	1	1234	5.00 USD	100	stest	1	—	—
●	2	5678	5.00 USD	100	stest	1	5.00 USD	1.00 every 72 hours
●	4	91011	5.00 USD	100	stest	1	1.00 USD	2.00 every 24 hours

Creating Card Series

To create card series, click the «New Cards Series» button and a new window with settings will pop-up:

Screenshot: Generate card series window

Calling Cards

SYSTEM INFORMATION

Name of Series:

Number of Series:

Balance:

Quantity:

PIN length: digits

Status:

CP Enabled

NOTES

BILLING SETTINGS

Rate Table:

Tax Profile:

Routing Plan:

Activation Fee: USD

Maintenance Fee: USD every hours

EXPIRATION SETTINGS

Expire date:

Expire period: day(s)

Field Name	Description
Name of Series	A name that describes current card series

Number of Series	A code of card series. This code will prepend serial number (only numeric, up to 100 000 000)
Balance	Cards balance value within current series
Quantity	Number of calling cards within current series
PIN length	Specify a PIN-code length for current calling card series (it can not be less than 8 digits)
Status	An initial status of created call cards within series. Can be changed later in card series settings
"CP Enabled" checkbox	Whether calling card users should be able to login to their control panels or not. If enabled, user can log in to control panel by using card serial number as login and PIN-code as password
Tax Profile	Select a respective tax profile that will be used for billing settings
Routing Plan	Select a routing plan for current card series
Activation Fee	Enter activation fee in this field
Maintenance Fee	Charged fee each X day for all activated cards
Expire date	Current calling cards series will be expired on specified date
Expire period	When specified number of days pass, starting from activation date, current calling card series will be expired



Calling Card Series Properties

After you click the «OK» button, calling cards series will be created, and appear in the list of the section. To open series properties, click on the series name and you will have access to the following information:

- **Status** – status of a card within current series. There are 4 possible statuses: activated, pending, expired, used.
- **Number** – number of a card within current series;
- **Balance** – current balance of respective calling card;
- **PIN** – respective calling card PIN-number.

Screenshot: "Cards List" tab

Status	Number	Balance	PIN
Pending	1-007944598	5 USD	8316 3745 5124
Pending	1-007944599	5 USD	6844 5999 6845
Pending	1-007944600	5 USD	9543 3282 8485
Pending	1-007944601	5 USD	6857 4219 4551
Pending	1-007944602	5 USD	6094 3544 2853
Pending	1-007944603	5 USD	2919 5265 8669
Pending	1-007944604	5 USD	8303 7550 2602
Pending	1-007944605	5 USD	4343 5015 0020
Pending	1-007944606	5 USD	8553 1871 9531
Pending	1-007944607	5 USD	1996 7695 6074
Pending	1-007944608	5 USD	2503 5948 5007
Pending	1-007944609	5 USD	8676 9165 6558
Pending	1-007944610	5 USD	5532 2655 7381
Pending	1-007944611	5 USD	1262 6546 9271
Pending	1-007944612	5 USD	7450 9779 3334
Pending	1-007944613	5 USD	9868 5589 5158
Pending	1-007944614	5 USD	7101 4930 0829
Pending	1-007944615	5 USD	1033 4464 9713
Pending	1-007944616	5 USD	1037 3643 6812
Pending	1-007944617	5 USD	2373 1834 2554

1. You can export whole card series to *xls** file by clicking the  «Download XLS» icon.
2. You can use the Quick Search toolbar to find a card, to open a search form click the down arrow  in the right-hand corner of the page.

To change parameters previously entered while creating series, please open the "Edit Cards Series" tab.

Screenshot: "Edit Cards List" tab

Cards List **Edit Cards Series** #1 1234 [USD]

SYSTEM INFORMATION

Number of Series: 1
Balance: 5 USD
Quantity: 100
Name of Series: 1234
Status: Active
 CP Enabled

NOTES

BILLING SETTINGS

Rate Table: 1
Tax Profile:
Routing Plan:
Activation Fee: 0 USD
Maintenance Fee: 0 USD every hours

EXPIRATION SETTINGS

Expire date:
Expire period: day(s)

OK Cancel Apply

Attention

Calling Cards feature works only via RADIUS-protocol, so to make use of it, you need to have RADIUS enabled. Also, you would like to use a specific platform that is able to handle calling card series authorization, for example, **Mera IP Centrex** or **Quintum Tenor DX** (class 5 switch).

Top-up Cards

On this page

- [Top-up Cards List](#)
- [Creating New Series](#)
- [Mass Top-up Cards Edit](#)

Top-up Cards List

This section allows generating series of top-up cards for your customers. These cards can be used to recharge the balance. The main window of this section is displayed on screenshot:

Screenshot: Top-Up Cards section main window

Status	Serial Number	Amount	PIN Code	Reseller	Activated	Created on
●	4-005561615	50.00 USD	3984 5829 5664	ASIA	—	03/09/2016 09:41:39 +0000
●	4-005561617	50.00 USD	3160 2374 4968	ASIA	—	03/09/2016 09:41:39 +0000
●	4-005561616	50.00 USD	8986 6153 4979	ASIA	—	03/09/2016 09:41:39 +0000
●	4-005561614	50.00 USD	8301 1781 1736	ASIA	—	03/09/2016 09:41:39 +0000
●	3-002715022	100.00 USD	6490 1310 3406	Company Name	—	03/09/2016 09:40:52 +0000
●	3-002715023	100.00 USD	6031 0976 9143	Company Name	—	03/09/2016 09:40:52 +0000
●	1-004811012	5.00 USD	5016 2986 1306	AC	—	01/08/2016 11:29:42 +0000

Creating New Series

To create new series, click the «Generate Top-Up Cards» button.

Screenshot: New Top-up Cards window

Top-up Cards

Amount: USD

Quantity:

Series:

PIN Length: digits

Reseller:




Expiry Date:

Field Name	Description
Amount	Cards balance value within series. This amount will be added to the customer's balance on activation.
Quantity	Number of cards within series

Series	A code identifier of card 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 current calling card series (it can not be less than 5 digits)
Reseller	Defines the reseller that owns current calling card series
Expiry date	Current calling cards series will be expired on specified date

After top-up card series is created, your customers will be able to enter respective PINs in their control panel in *Payment Gateways* section, to recharge their balance (respective rights for users are required).

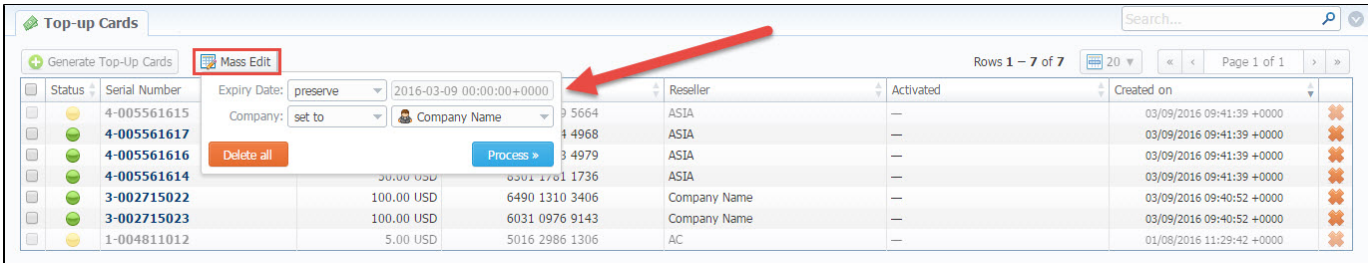
The status of top-up cards is displayed in *Top-Up Cards* main window in a form of the following icons:

Icon	Description
	Shows, that the current card is new
	Shows, that the current card is activated
	Shows, that the current card is expired

Mass Top-up Cards Edit

Also, you may delete cards or change some settings for already created top-up cards using **"Mass Edit" button**. In the following window you can specify expiration date of cards by changing state of respective *"Expiry Date"* field to *"set to"* and select data and time, and define a reseller who will be the owner of these cards by changing state of *"Company"* field to *"set to"* and select a reseller from 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*



Mass edit options	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 expiry date for all rates at once, regardless of previous configurations.
Expiry Date	Final date after which the rate will expire
Company	Name of one of your companies (or affiliates) that you can add in Reseller section

Call Shops

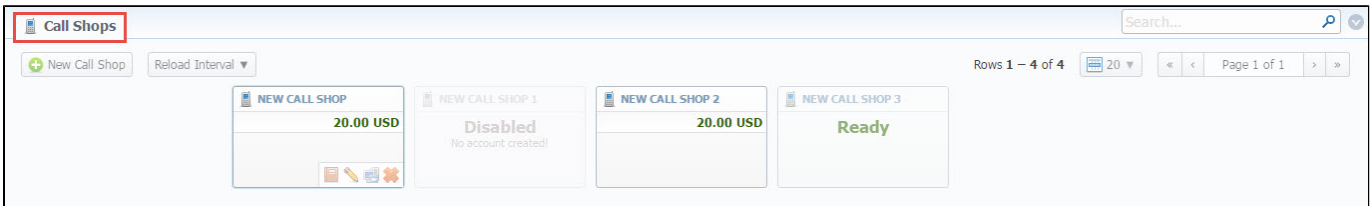
On this page

- [Call Shops List](#)
- [Creating New Call Shop](#)
 - [Steps to activate a call shop](#)
 - [The state of call shops](#)
- [To reload the interval](#)
- [Finalize/Reactivate Call Shop](#)

Call Shops List

Call Shops section allows you to create and manage call shop networks. Each call shop is a RADIUS-based customer. That's why for correct work of Call Shops module, RADIUS should be enabled. The main window is presented on screenshot:

Screenshot: Call Shops section main window



Creating New Call Shop

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

Screenshot: Creating new call shop / Clients form


Field Name	Description
Name	Enter name for call shop
Reseller	Select a reseller that will be owner of this call shop
Currency	Specify preferred currency
Timezone	Choose preferred timezone
Status	Select a status for this call shop: <ul style="list-style-type: none"> • active • stop • deleted

Allowed Credit	Specify 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

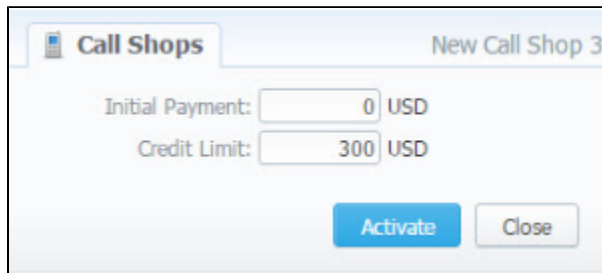
When all information is entered, click «OK» and call shop will appear on the list.

Steps to activate a call shop

When a call shop is already created you need to activate it by following these steps:

1. Click the "Edit"  icon on the respective Call Shop sub-panel and go to *Accounts* tab. Here, create a call shop's account in the same way as you did for your generic clients.
2. Return to the "Call Shop" section and click on the name of respective call shop.
3. Then fill the respective form (see screenshot below) and click the "Activate" button.

Screenshot: Call shop settings



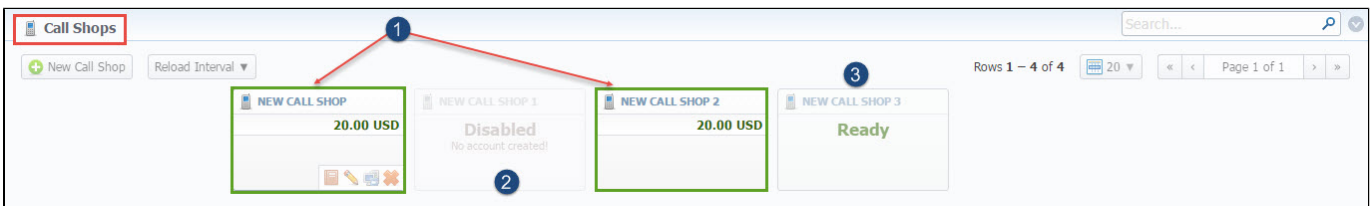
After that is done, call shop is ready to be used.

The state of call shops

Call Shops while you create them have 3 states. You can find the examples on the screenshot below.

1. **Activated** - the call shop is in usage. All steps described above are reproduced properly.
2. **Disabled** - the call shop is not enabled, check if a respective account is created and rate table is specified.
3. **Ready** - the call shop is ready for usage, but not activated. You need to activate it.

Screenshot: Call Shops section main window





To reload the interval

Also, you may **set an interval** for *Call Shops list reloading*. To do this, click the "Reload Interval" button in the toolbar and select the value from the drop-down list.

Attention

Please note, that **calculator** should be in **real time mode** for correct *Call Shops* work.

Use the **Quick Search** toolbar  at the upper right corner of the page for fast investigation in this section. This tool allows to limit the search results for higher working efficiency. For example, to find call shops belonging to a certain *Reseller* or having *Active status*. To open this form click on the down arrow .

Finalize/Reactivate Call Shop

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

Therefore, you may finish the call shop activities by clicking the **"Finalise"** button. Or you can activate once again the same call shop when it's over by clicking the **"Reactivate"** button 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

The screenshot displays a software interface for managing call shops. The window title is "New Call Shop 2". The main header is "Call Shops". The interface is divided into two main sections. The left section, titled "CURRENT SESSION", displays the following information: Duration: 0:00:00, Cost: 0.00 USD, Balance: 20.00 USD, and Credit Limit: 120.00 USD. The right section, titled "CURRENT SESSION CALLS: 0", contains a message box with an information icon and the text "No calls were made in this session". At the bottom of the window, there are four buttons: "Finalize" (blue), "Reactivate" (blue), "Print Bill" (green), and "Close" (grey).

Also, you can print the bill of the following call shop by using the **"Print Bill"** button. If no option is required, you can close the window by clicking the **"Close"** button.

Statistics

This chapter of our Guide is dedicated to **figures and various statistical reports in JeraSoft VCS**. Here, user can monitor his 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](#)
- [Reports Templates](#)
- [Archive Management](#)

Dashboard

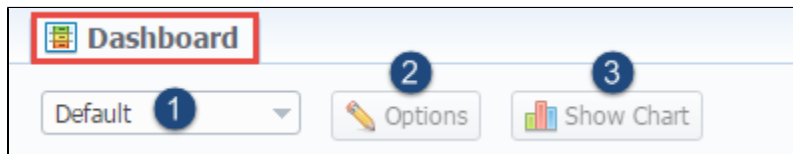
Dashboard is the customizable section with charts that makes the most relevant report data available on one screen.

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 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 Knowledge Base and look through the article "[How to create a statistic chart?](#)".

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

Screenshot: Dashboard toolbar



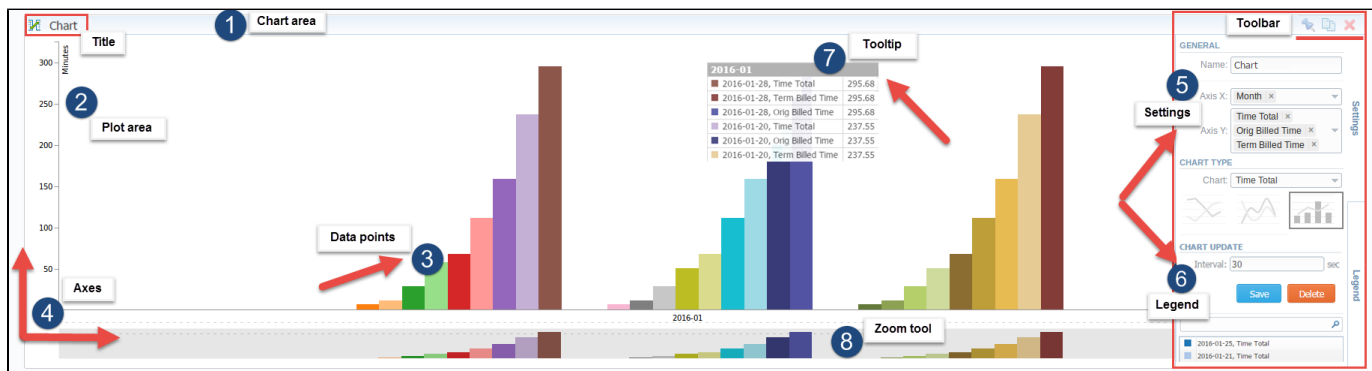
1. Here you can **browse dashboard space**. You can have several dashboards. Click on the field and select a relevant *Dashboard* (for example, *Default*) from the drop-down list.
2. To view the advanced settings click the **"Options"** button on the toolbar.
 - You can **change the name** of the respective dashboard by typing the text in the **"Dashboard name"** field, click "Save" and reload the page.
 - To **copy the dashboard**, click "Copy" and reload the page. Then you check the list of available dashboards.
 - Also, you can **remove any dashboard** by clicking the "Delete" button.

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 space.

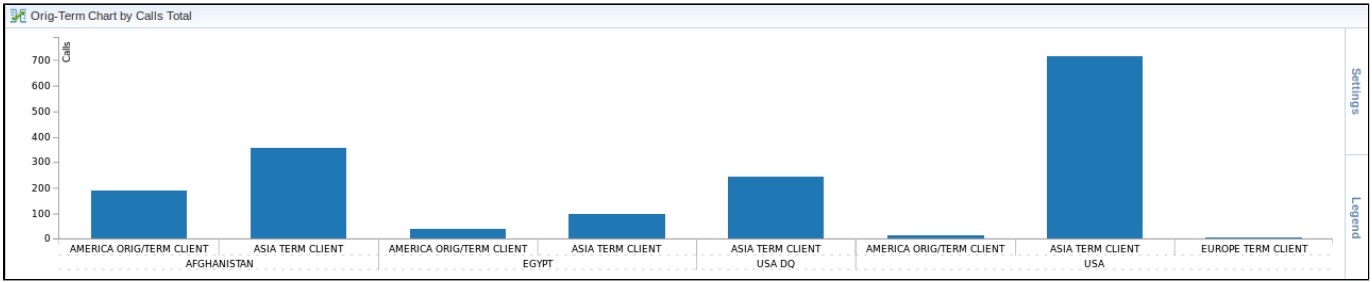
Attention

- **Resellers and admins** have its 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 date for the period.
- When you choose the **Time parameters for the Axis X** (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 on Axis X and the statistics is only presented for January, the **line chart** will be empty in this case.

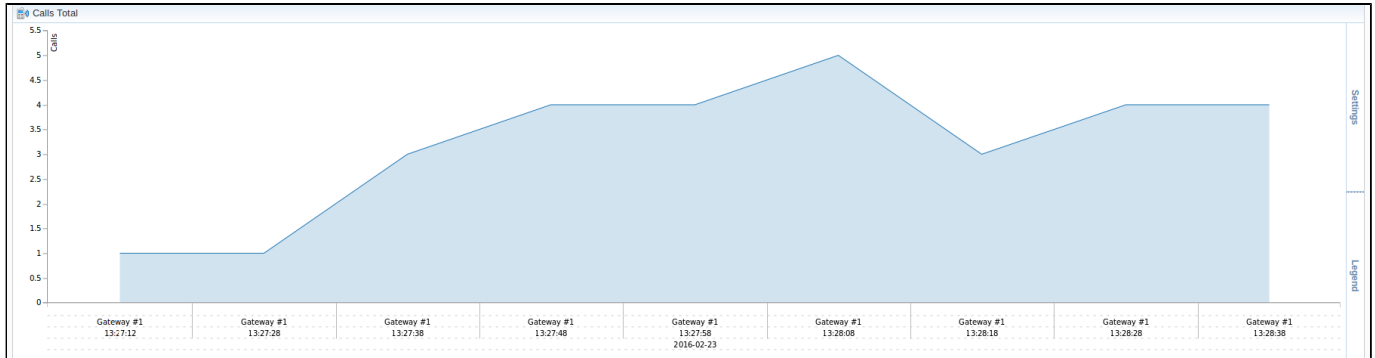
Screenshot: General example of chart



Screenshot: Orig-Term chart



Screenshot: Active calls chart



Knowledge Base Articles

- [Why there are no active sessions?](#)
- [Why it is impossible to use Code and Code Name filters in Dashboard section?](#)
- [Why Dashboard doesn't show statistics?](#)

Customer Dynamics

In this article

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


Section overview

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

Screenshot: *Customer Dynamics section/query form*

Creating New Report

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

Information block	Field Description
Filters	On the Filters menu, select required parameters for the report. To cancel any filter, click on the delete  sign next to the filter. You can start a quick search by typing filters' names in the field at the top of drop-down menu with filters.
	Period Specify the time interval for the report and a timezone. Please note that the Period 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 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 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;"> <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 in the report to the specified currency.
Active Duration	Determine the period (in months). If the customer has used any paid services within this period, he will be considered as 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 x

[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 statistic 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 last Active Duration period. Balance Pos - Total of all positive balances for the clients that used any paid services within last Active Duration period. Balance Neg - Total of all negative balances for the clients that used any paid services within last Active Duration period. Balance - Total of all balances for the clients that used any paid services within 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 activation of the package. • Renew Total - Total amount ,charged for packages renewals, during the specified period, including initial renew within activation of the package.

Also, you can create a template for reports and save specified parameters by clicking **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 Templates](#) 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 easily illustrating a crucial information

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

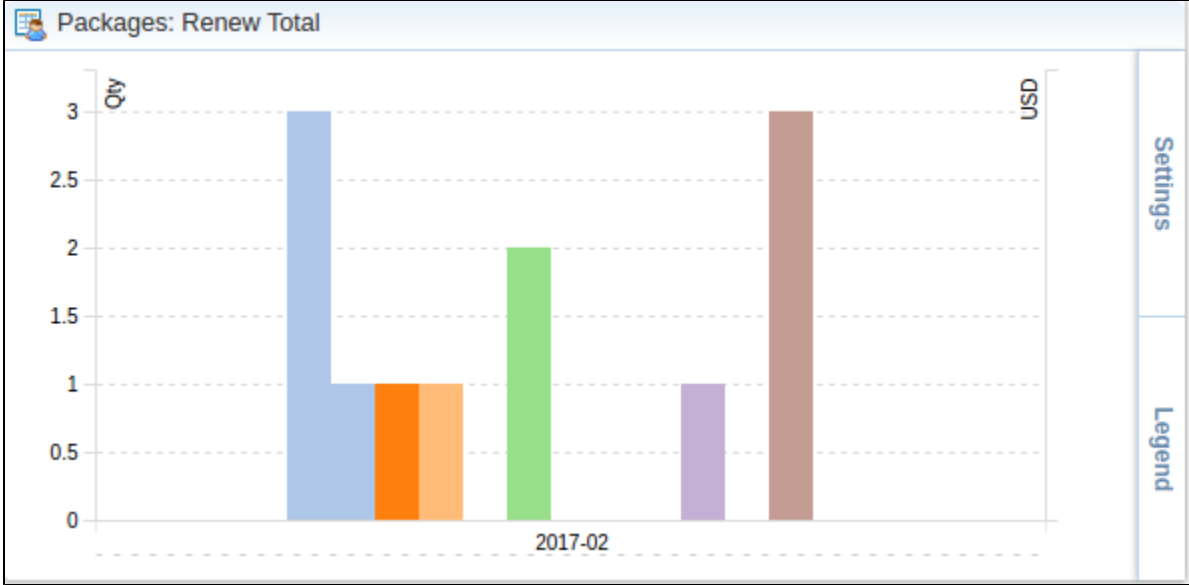
3. To create a **visual chart**, click the **Show Chart**  button above the report. There is more information available on this topic in the article **How to create a statistic chart?** in our Knowledge Base. From the drop-down list on this option, you can find the next pre-configured templates for chart:

- **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 custom chart

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

Screenshot: Customer Dynamics chart



Summary Report

In this article

- [Section overview](#)
- [Creating New Summary Report](#)
- [Simple scheme: how to generate a summary report](#)
- [Creating Query Template](#)
- [Summary Report buttons: reports, export, chart.](#)
- [Side-by-side 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 New Summary 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 required parameters for the report. To cancel any filter, click on the delete  sign next to the filter. You can start a quick search by typing filters' names in the field at the top of drop-down menu with filters.
	Period (1) Specify the time interval for the report and a timezone. Please note that the Period field is mandatory.
	Period 2 Accessible when you enable the Compare Period option by clicking on the plus  sign next to the Period . Specify the second interval for the report.
	Group By Select from the list of following accessible options to group the data in reports: <ul style="list-style-type: none"> • Time: Year, Month, Day, Hour • Clients: Client Type, Client, Account, C Series, Owner, Package Name • Events: Code, Code Name, Currency, Rate, Additive Rate, Origin, Result Code, Gateway • Totals: Setup Fee • Extras: Gateway Tag, Service Name. <div style="background-color: #ffffcc; padding: 10px; margin-top: 10px;"> <p>⚠ Attention</p> <ul style="list-style-type: none"> • Group By field is mandatory, it couldn't be empty in order to generate the report. • If you group by Client and his/her Timezone differs from system Timezone, the latter will be used in the respective report. </div>
Additional Filters	


The accessible additional filters are:

- **Clients:** *Client Tags, Client Type, Client, Account, Account Tags, Cards Serial, Package.*
- **Events:** *Code, Code Name, Cost Total, Origin, Result Code, Gateway.*
- **Extras:** *Owner, Total Volume, Total records, Not Zero Records, ASR Current, ACD Current, Service Name.*

Client Type	Select a client's type for report: Client, Reseller, Calling card or Call shop
Client	Define a client for the report
Account	Enter an account for the report
Client /Account Tags	Define a client's or account's tag
Cards Serial	Indicate cards serial for the report
Package	Enter a package for the report
Code	Specify a code of needed destination
Code Name	Specify a code name of a desired destination
Cost Total	Enter the range of total call cost
Origin	Indicate origin - origination or termination of the event
Result Code	Define a result code as a filtering parameter
Gateway	Specify a gateway
Owner	Indicate the owner
Total Volume	Enter the range of total duration
Total Records	Enter the range of total records
Not Zero Records	Define the range of records that have duration equal to or more than 1 unit
ASR Current	Specify the range of "ASR Cur" for records you would like to display
ACD Current	Specify the range of "ACD Cur" for records you would like to display
Service Name	Determine the name of service for the report

Output

This form contains settings of the report output data.

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

Accessible columns in the report

The list of additional columns include:

Columns for main period:

Cost Total, Average Rate, Package Credit, Total Volume, Billed Volume, Package Volume, Total Records, Not Zero Records, Success Records, Busy Records, No Channel Records, Error Records, ASR Std, ASR Cur, ACD Srd, ACD Cur, PDD Avg, SCD Avg, xDRs List.

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

Rate	Avg. Rate - an average cost calculated
-------------	---

Totals	<ul style="list-style-type: none"> • Cost Total - 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 respective package that billed according to the package limits • Package Credit - a volume of credit that has been charged within respective package • Total Events - Entire quantity of events • Not Zero Records - Quantity of records, that have the volume equal to or more than 1 • Success Records - Quantity of records, that have a duration equal to or more than 1 and 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 - value calculated on the base of records with status "success" divided by the total number of records minus all records with "no channel available" status • Cur - value calculated on the base records with volume > 0 divided by total number of records <p>ACD - Average call duration in minutes</p> <ul style="list-style-type: none"> • Std - Sum of all records duration divided by number of records with status "success" • Cur - Sum of all records duration divided by 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>
Extras	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 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: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note that 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>
Limit	Determine the number of rows that will be visible in the report. It is useful for displaying some top positions by chosen parameter. It is available only for 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: #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 of the report. All values will be automatically converted in the report to the specified currency.
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 the generated summary report is presented on a screenshot down below:

Screenshot: Summary Report section

Summary Report

FILTERS

Period: Last Year | 2017-01-01 00:00:00 — 2017-12-31 23:59:59 UTC

Group By: Origin x Service Name

Save Query | Load Query... | Query

OUTPUT | COLUMNS (20)

Order By: Total Volume x

Limit: No limit

Type: Web | Grouped

Currency: USD

Code Deck:

Origin	Service Name	Unit	Cost Total	Billed Volume	Average Rate	Package Volume	Total Volume	Package Credit	Total Events	Not Zero	Success	Busy	No Channel	Error	Setup Fee Cost	ASR Std	ASR Cur	ACD Std	ACD Cur	PDD Avg	SCD Avg	xDRs List
[-]	termination		-307.75	2 220.06	0.1386	0.00	1 916.25	0.0000	889	886	889	0	0	0	103.80	100.00	99.66	2.16	2.16	1.99	2.61	[+]
	termination	Calls	-221.1560	1 141.63	0.1937	0.00	844.08	0.0000	816	813	816	0	0	0	103.8000	100.00	99.63	1.03	1.04	1.70	2.32	[+]
	termination	SMS	-67.1530	564.00	0.1191	0.00	564.00	0.0000	49	49	49	0	0	0	0.0000	100.00	100.00	11.51	11.51	4.96	5.35	[+]
	termination	Data	-19.4415	514.43	0.0378	0.00	508.17	0.0000	24	24	24	0	0	0	0.0000	100.00	100.00	21.17	21.17	5.96	6.67	[+]
[+]	origination		343.56	1 413.41	0.2431	608.60	1 916.25	0.0000	889	886	889	0	0	0	0.00	100.00	99.66	2.16	2.16	1.99	2.61	[+]
	origination	Calls	314.4627	839.58	0.3745	15.00	844.08	0.0000	816	813	816	0	0	0	0.0000	100.00	99.63	1.03	1.04	1.70	2.33	[+]
	origination	SMS	0.0494	89.55	0.0006	563.45	564.00	0.0000	49	49	49	0	0	0	0.0000	100.00	100.00	11.51	11.51	4.96	5.35	[+]
	origination	Data	29.0496	484.28	0.0600	30.15	508.17	0.0000	24	24	24	0	0	0	0.0000	100.00	100.00	21.17	21.17	5.96	6.67	[+]

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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 signs. To expand all data in the report, please press 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 following:

- 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

In order to create a simple summary report you need to:

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

Tip

- If you want to sort already grouped data in columns, select respective parameters in **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 sorting by values specified in the **Group By** field.

Creating Query Template

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

Screenshot: *New Template form*

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

Tip

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




Summary Report buttons: reports, 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 easily illustrating a crucial information. And you can generate a report using the same criteria in the **Orig-Term report** and the **xDRs list** sections.


1. 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.



2. To download a **.xlsx** file, press **Export to XLSx**  button above the report
3. 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.
4. 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 periods, **two xDRs list**  icons appear:

- the first xDRs list  icon allows to generate a xDR's report based **on the first period**;
- the second xDRs list  icon allows to generate data based **on the second period** in the xDRs list.

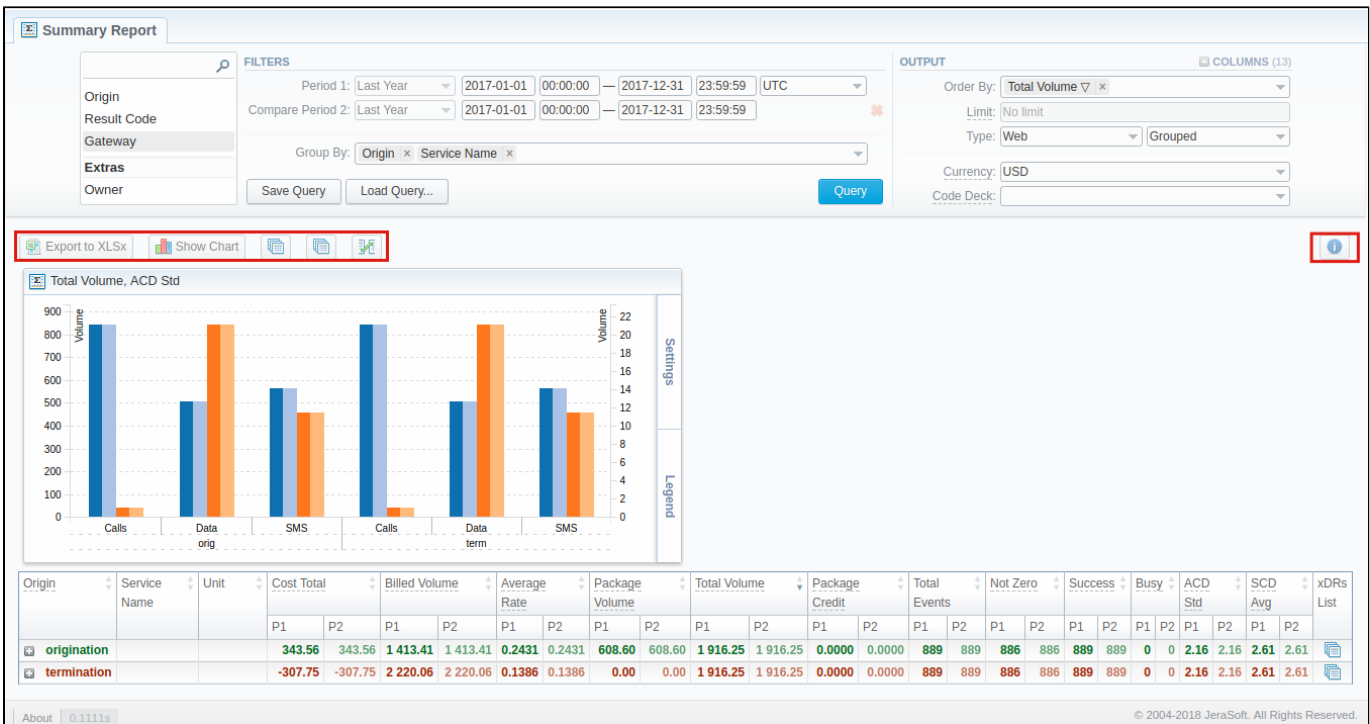
When you make a report and filter data by **Client / Client Tags / Account / Code / Code Name / Owner** parameters, two Orig-Term icons  appear. They allows to generate reports with **origination** and **termination** data separately.

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

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


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

Screenshot: *Summary Report section*

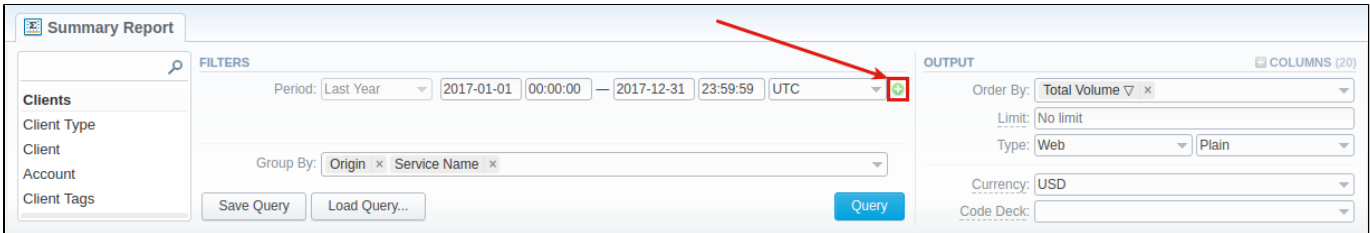


Side-by-side report


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 Period** option is designed to create a report that shows two sub-reports side-by-side.

To enable this option, click on the plus  sign next to the **Period** field and specify both intervals (**Period 1 / Period 2**) for the report.

Screenshot: Summary Report section



Then, choose columns for 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

Summary Report

FILTERS OUTPUT COLUMNS (13)

Origin
Result Code
Gateway
Extras
Owner

Columns for main period: Cost Total x Billed Volume x Average Rate x Package Volume x Total Volume x Package Credit x Total Events x Not Zero x Success x Busy x ACD Std x SCD Avg x xDRs List x

Columns for comparative period: Average Rate x Cost Total x Total Volume x Billed Volume x Package Volume x Package Credit x Total Events x Not Zero x Success x Busy x ACD Std x SCD Avg x

Save Query Load Query... Query Code Deck:

Export to XLSx Show Chart

Origin	Service Name	Unit	Cost Total		Billed Volume		Average Rate		Package Volume		Total Volume		Package Credit		Total Events		Not Zero		Success		Busy		ACD Std		SCD Avg		xDRs List
			P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	
origination			343.56	343.56	1 413.41	1 413.41	0.2431	0.2431	608.60	608.60	1 916.25	1 916.25	0.0000	0.0000	889	889	886	886	889	889	0	0	2.16	2.16	2.61	2.61	
termination			-307.75	-307.75	2 220.06	2 220.06	0.1386	0.1386	0.00	0.00	1 916.25	1 916.25	0.0000	0.0000	889	889	886	886	889	889	0	0	2.16	2.16	2.61	2.61	

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Attention

- When you use **Compare Period** option in the **Summary Report** and **Orig-Term Report** sections, default chart templates will not be accessible.
- When you select one of **Time** parameters (**Year, Month, Week**) for **Group By** field, the **End date** of the **Period 2** will be set automatically to make intervals of **Period 1** and **Period 2** equal. Moreover, **End date** field of **Period 2** becomes non editable

Knowledge Base Articles

- [Why are there differences between reports?](#)
- [How to hide rates in Summary Report for specific system users?](#)

Orig-Term Report

In this article

- [Section overview](#)
- [Creating 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](#)
- [Knowledge Base Articles](#)

Section overview

This section is designed to provide a user with a possibility to generate a report and trace all call routes from **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 New Orig-Term 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 required parameters for the report. To cancel any filter, click the delete  sign next to the filter. filter. You can start a quick search by typing filters' names in the field at the top of drop-down menu with filters.
	Period (1) Specify the time interval for the report and a timezone. Please note that the Period field is mandatory.
	Period 2 Accessible when you enable the Compare Period option by clicking on the plus  sign next to the Period . Specify the second interval for the report.
	 Tip When you select one of Time parameters for Group By , the end date of the Period 2 will be set automatically to make equal intervals of Period 1 and Period 2 .
Group By	There are following accessible options to group the data in reports: <ul style="list-style-type: none"> • Time: Year, Month, Date, Hour. • Clients: Orig Client, Orig Account, Orig Code, Orig Code Name, Orig Rate, Term Client, Term Account, Term Code, Term Code Name, Term Rate • Extras: Service Name, Orig Serial, Orig Client Type, Orig Owner, Orig Time profile, Term Client Type, Term Owner, Term Time profile <div style="background-color: #ffffe0; padding: 5px;">  Attention Please note, the Group By field is mandatory, it couldn't be empty in order to generate the report </div>
Additional Filters	

There are following accessible additional filters:

- **Clients:** *Orig Client/ Orig Account/ Orig Code/ Orig Code Name/ Orig Serial/ Orig Owner/ Orig Client's Tags/ Orig Account's Tags/ Term Client/ Term Account/ Term Code/ Term Code Name/ Term Owner/ Term Client's Tags/ Term Account's Tags*
- **Events:** *Total/ Profit/ Volume, Total/ Events Not Zero/ ASR Cur/ ACD Cur*
- **Extras:** *Service Name/ Orig Time profile/ Term Time profile*

Clients Settings


Orig Client	Define an origination client for the report
Orig Account	Enter an orig account for the report
Orig Code	Specify an orig code for the report
Orig Code Name	Indicate an orig code name
Orig Serial	Define an origination serial
Orig Owner	Define an origination Reseller for report
Orig Client's Tags	Determine tags that belong to an orig client
Orig Account's Tags	Specify tags that determined for an orig account
Term Client	Define a termination client for the report
Term Account	Enter a termination account for the report
Term Code Name	Indicate a termination code name
Term Owner	Define a Reseller for report
Term Client's Tags	Determine tags that belong to an termination client
Term Account's Tags	Specify tags determined for an termination account
Term Code	Specify a termination code for the report

Events Settings

Total	Enter the range of total events
Profit	Enter the range of the revenue you would like to display
Events Not Zero	Define the range of events, that have duration greater than 0
ASR Current	Specify the range of ASR Cur for events you would like to display
ACD Current	Specify the range of ACD Cur for events you would like to display
Volume, Total	Enter the range of total volume of services

Extra Settings

Orig Time Profile	Select an orig time profile that will be used as filter criteria
--------------------------	--

Term Time Profile	Specify a term time profile that will be used as filter criteria
Service Name	Determine the name of service for the report
Output	<p>This form contains settings of the output data of the report.</p> <p>Click plus  sign near the Columns to select respective columns to output a report data. Also, you can cancel any chosen item.</p>
Accessible columns in the report	
<p>Columns for main period are:</p> <p><i>ASR Std, ASR Cur, ACD Std, ACD Cur, Total Volume, Error, Profit, Profit (%), Orig Billed Volume, Orig Cost, Orig Avg Rate, Term Billed Volume, Term Cost, Term Avg Rate, Total Events, Not Zero, Busy, No Channel, Success.</i></p> <p>Columns for comparative period are the same as for the main period. Moreover, all parameters could be selected expressed in percentage.</p>	
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 - Revenue in respective currency, for example, USD (in fact, any system currency can be specified here) • Profit (%) - Revenue in percent value
Total Volume	Total volume of services
ASR	<p>Average successful rate (successful events percentage):</p> <ul style="list-style-type: none"> • Std - Number of events with success status divided by total number of events minus all events with no channel available status • Cur - Number of events with duration > 0 divided by total number of events
ACD	<p>Average call duration:</p> <ul style="list-style-type: none"> • Std - Sum of all event duration divided by number of events with success status • Cur - Sum of all event duration divided by number of events with duration > 0
Events	<p>Quantity of events in database</p> <ul style="list-style-type: none"> • Total Events- Total events quantity • Not Zero - Quantity of events that have duration equal to or more than 1 second • Success - Quantity of events that have duration equal to or more than 1 second and 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 next to the Type field a look of table view:</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 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 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 in the report to the specified currency.
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 a 'Period' dropdown set to 'This Year' and a date range from 2018-01-01 to 2018-12-31. The 'Group By' section is set to 'Service Name', 'Orig Client', and 'Term Client'. The 'OUTPUT' section shows 'Order By' as 'Orig Cost' and 'Term Cost', 'Limit' as 'No limit', 'Type' as 'Web', 'Currency' as 'USD', and 'Code Deck' as an empty dropdown. Below the filters are buttons for 'Export to CSV', 'Export to XLSx', and 'Show Chart'. The main data table has 19 columns: Service Name, Unit, Orig Client, Term Client, Orig Billed Volume, Orig Cost, Orig Avg Rate, Term Billed Volume, Term Cost, Term Avg Rate, Profit, Profit (%), Total Volume, Total Events, Not Zero, Success, Busy, No Channel, Error, ASR Std, ASR Cur, ACD Std, and ACD Cur. The 'Total' row shows values for each column, with Profit and Term Cost highlighted in red. The 'Calls' row shows 'min' for Unit and 'Orig Client' and 'Term Client #1' for the client fields.

Service Name	Unit	Orig Client	Term Client	Orig Billed Volume	Orig Cost	Orig Avg Rate	Term Billed Volume	Term Cost	Term Avg Rate	Profit	Profit (%)	Total Volume	Total Events	Not Zero	Success	Busy	No Channel	Error	ASR Std	ASR Cur	ACD Std	ACD Cur
Total				152.00	0.00	0.0000	152.00	-71.20	0.4684	-71.20	0.00	152.00	38	38	38	0	0	0	100.00	100.00	4.00	4.00
Calls	min	Orig Client	Term Client #1	152.00	0.0000	0.0000	152.00	-71.2000	0.4684	-71.2000	N/A	152.00	38	38	38	0	0	0	100.00	100.00	4.00	4.00

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 signs. To expand all data in the report, please press **Ctrl** and

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 following:

- 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:

- On the **Filters** menu, select desired parameters for the report.
- Enter the period.
- Select some parameters in **Group By** field, for example, *Orig Client, Service Name*.
- Then choose **Columns** in the Output form, for example, *ASR Std, ASR Cur, ACD Std, ACD Cur, Success, Error, Profit (%)*.
- Specify **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 respective parameters in **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 **Group By** field.

Also, you can sort data in report manually using special arrows  next to the name of 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

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

Screenshot: New Template creation form

Tip

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






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

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

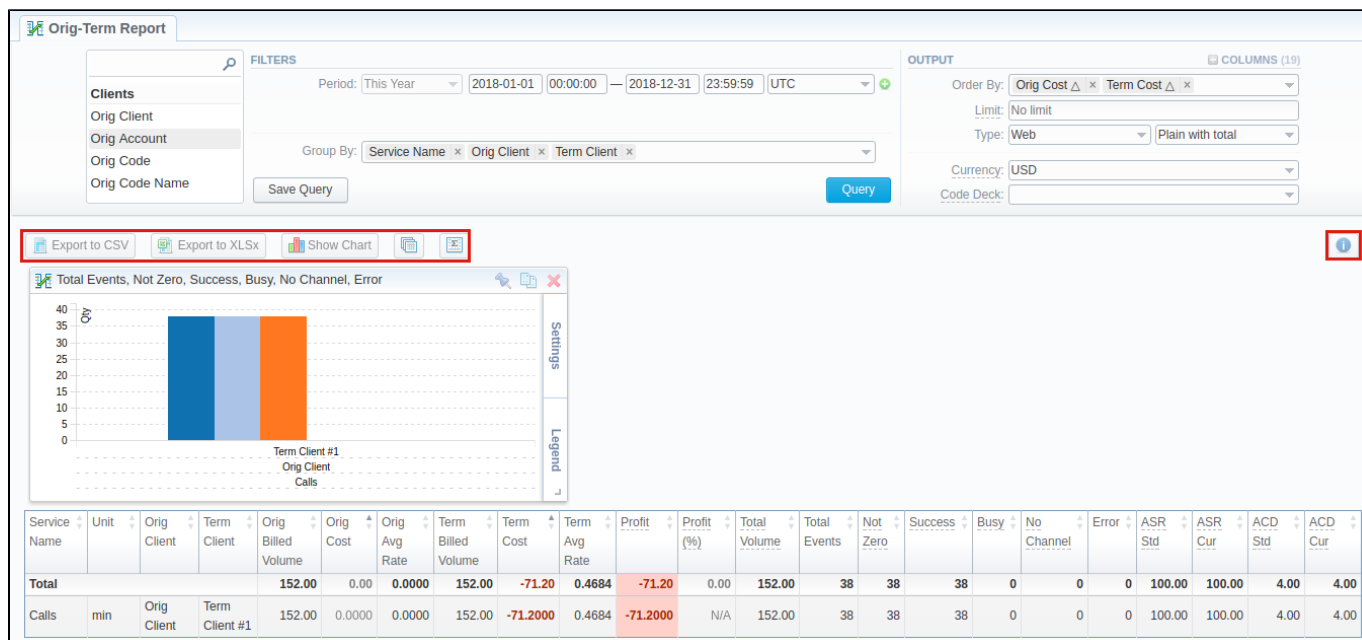
1. To download a report in .csv, click the **Export to CSV**  button on the toolbar.

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.


2. To download a .xlsx file, click the **Export to XLSx**  button on the toolbar.
3. 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?**" at our Knowledge Base.
4. You can generate a detailed report using the same criteria in the **xDRs list** section by clicking the **xDRs list**  icon on the toolbar.
5. 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.
6. 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.

Screenshot: Orig-Term Report section/ chart

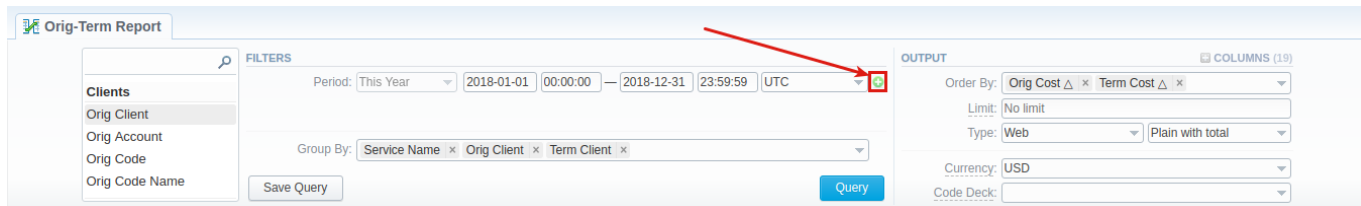



Side-by-side report

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 Period** option is designed to create a report that shows two sub-reports side-by-side.


To enable this option, click the plus  sign next to the **Period** field and specify both intervals (**Period 1/Period 2**) for the report.

Screenshot: Orig-Term Report query form



The screenshot shows the 'Orig-Term Report' query form. A red arrow points to the plus icon () next to the 'Period' field, which is currently set to 'This Year' with date and time ranges. The rest of the interface, including filters, output settings, and the 'Query' button, is visible.

After, choose columns for 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

The screenshot shows the 'Orig-Term Report' interface. On the left, there are filters for 'Clients' including 'Orig Client', 'Orig Account', 'Orig Code', and 'Orig Code Name'. The main area is divided into 'FILTERS' and 'OUTPUT'. Under 'OUTPUT', there are two sections for column configuration: 'Columns for main period' and 'Columns for comparative period'. Both sections have a list of columns with checkboxes, including 'Orig Billed Volume', 'Orig Cost', 'Orig Avg Rate', 'Term Billed Volume', 'Term Cost', 'Term Avg Rate', 'Profit', 'Profit (%)', 'Total Volume', 'Total Events', 'Not Zero', 'Success', 'Busy', 'No Channel', 'Error', 'ASR Std', 'ASR Cur', 'ACD Std', and 'ACD Cur'. A red box highlights the 'COLUMNS (19)' label. Below the configuration, there are buttons for 'Export to CSV', 'Export to XLSx', 'Show Chart', and a help icon. The main data table is displayed below, with columns corresponding to the configuration. The 'Total' row shows a profit of -71.20, and the 'Calls' row shows a profit of -71.2000.

Service Name	Unit	Orig Client	Term Client	Orig Billed Volume	Orig Cost	Orig Avg Rate	Term Billed Volume	Term Cost	Term Avg Rate	Profit	Profit (%)	Total Volume	Total Events	Not Zero	Success	Busy	No Channel	Error	ASR Std	ASR Cur	ACD Std	ACD Cur
Total				152.00	0.00	0.0000	152.00	-71.20	0.4684	-71.20	0.00	152.00	38	38	38	0	0	0	100.00	100.00	4.00	4.00
Calls	min	Orig Client	Term Client #1	152.00	0.0000	0.0000	152.00	-71.2000	0.4684	-71.2000	N/A	152.00	38	38	38	0	0	0	100.00	100.00	4.00	4.00

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Knowledge Base Articles

- [Why are there differences between reports?](#)

Profit Report

In this article

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

Section overview

This section allows generating the profit report, which analyses 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 profitability report, it allows to see his origination customers sending traffic to **Manager_2**, who owns 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 Profit Report

To generate a profit report, you need to fill in the required parameters in the form and press **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
qFilters	On the Filters menu, select required parameters for the report. To cancel any filter, click the delete  sign next to the filter. You can start a quick search by typing filters' names in the field at the top of drop-down menu with filters.
Period (1)	Specify the time interval for the report and a timezone. Please note that the Period field is mandatory.
Period 2	Accessible when you enable the Compare Period option by clicking on the plus  sign next to the Period . Specify the second interval for the report. <div style="background-color: #e0ffe0; padding: 5px;"> Tip When you select one of Time parameters for Group By, the end date of the Period 2 will be set automatically to make equal intervals of Period 1 and Period 2.</div>
Reseller	Specify the name of target Reseller.
Mode	Choose the mode of the report: <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 by solely between clients of the chosen manager will be shown. <p>By default, field value is set to All visible</p>

Group By	<p>Select a grouping option, here you can choose and swap columns, as well as change its order. There are following accessible options to group data in reports:</p> <ul style="list-style-type: none"> • Time: Year, Month, Day, Hour. • Clients: Income Client, Income Account, Income Code, Income Code Name, Orig Rate, Outcome Client, Outcome Account, Outcome Code, Outcome Code Name. • Extras: Service Name, Income Series. <div style="background-color: #ffff00; padding: 5px;"> <p> Attention</p> <p>Please note, the Group By field is mandatory, it couldn't be left empty in order to generate the report.</p> </div>
Additional Filters	
<p>There are following accessible filters:</p> <ul style="list-style-type: none"> • Clients: 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. • Extras: Package 	
Income Client	Specify an origination client(s) for the report
Income Client's Tag	Specify tag(s) assigned to origination clients
Income Account	Determine origination client's account(s)
Income Account's Tag	Indicate origination account's tags
Income Code	Define an incoming code
Income Code Name	Specify an incoming code name
Income Serial	Indicate a serial number of originator's call card
Income Reseller	Specify target reseller(s) for the report
Outcome Client	Define a termination client(s)
Outcome Client's Tag	Define termination client's tag(s)
Outcome Account	Indicate account(s) of termination client(s) for the report
Outcome Account's Tag	Specify termination account's tags if any
Outcome Code	Specify a termination code of the client
Outcome Code Name	Indicate termination code name
Package	Determine a name of the used package
Output	<p>This form contains settings of the output data of the report.</p> <p>Click plus  sign next to Columns and select required columns in order to add them to Output information block. Also, you can cancel any chosen item.</p>
Accessible columns in the report	
<div style="border: 1px solid #ccc; height: 50px; width: 100%;"></div>	

Additional columns of the report are:

Columns for main period:

Volume Total, Income Cost, Income Avg Rate, Income Billed Time, Outcome Cost, Outcome Avg Rate, Outcome Billed Time, Profit, Profit (%).

Columns for comparative period:

Total time, min; Income Rate, Outcome Rate, Income Cost, Income Avg Rate, Income Billed Time, Outcome Cost, Outcome Avg Rate, Outcome Billed Time, Profit, Profit (%), Profit Difference.

And it's possible to choose each parameter expressed as percentage.

Volume Total	Total time of calls in minutes
Rate	The call rate <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	The revenue <ul style="list-style-type: none">• Profit - a revenue in a respective currency (in fact, any system currency can be specified here)• Profit (%) - a revenue in percent value
Time	The billed time <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	The call cost <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	Select parameters to sort already grouped data in columns. There are following accessible options to order the data: by Time, Clients, Extras . 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 Also select next to the Type field a table view: <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 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 chosen parameter. It is available only for plain type of the report.
Send to	You can send generated reports via email. Also, it is possible to specify several emails. <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. And all values will be automatically converted in the report to the specified currency.

Code Deck

Using a drop-down list select a respective code deck. All codes names will be rewritten and presented according to the specified code deck.

If there is no value specified, 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' section of the software. It includes a sidebar with a search bar and a list of filters: Outcome Account, Outcome Account's Tags, Outcome Code, Outcome Code Name, Extras, and Package. The main area is divided into 'FILTERS' and 'OUTPUT' sections. The 'FILTERS' section has dropdowns for Period (Yesterday), Reseller (Reseller 1), Mode (All visible), and Group By (Month x Service Name). The 'OUTPUT' section has dropdowns for Order By, Limit (No limit), Type (Web), Currency (USD), and Code Deck. Below these is a table with columns: Month, Service Name, Unit, Volume Total, Income Cost, Income Avg Rate, Income Billed Volume, Outcome Cost, Outcome Avg Rate, Outcome Billed Volume, Profit, and Profit (%). The table shows data for 02/2018 for 'Calls' and 'N/A' units. At the bottom, there are 'Export to CSV' and 'Export to XLSx' buttons, and a footer with 'About', 'Get Support', and '© 2004-2018 JeraSoft. All Rights Reserved.'

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 signs.

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 following:

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

Creating Query Template

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

Screenshot: New Template form




The screenshot shows the 'Reports Templates' form. It is divided into 'PROFIT REPORT' and 'REPORT QUERY' sections. The 'PROFIT REPORT' section has fields for Title, Reseller (all resellers), and Visibility (Private). The 'REPORT QUERY' section has a search bar and a list of filters: Clients, Income Client, Income Client's Tags, Income Account, Income Account's Tags, and Income Code. The main area is divided into 'FILTERS' and 'OUTPUT' sections. The 'FILTERS' section has dropdowns for Period (Yesterday), Reseller (Reseller 1), Mode (All visible), and Group By (Month x Service Name). The 'OUTPUT' section has dropdowns for Order By, Limit (No limit), Type (Web), Currency (USD), and Code Deck. At the bottom, there are 'OK', 'Cancel', and 'Apply' buttons.

Section	Description	
Profit report	Here you can specify parameters for the template that will be used while running reports	
	<table border="1"><thead><tr><th>Title</th><td>Specify a name of the template</td></tr></thead></table>	Title
Title	Specify a name of the template	


Reseller	Indicate a Reseller of the report template
Visibility	<p>It allows controlling visibility of respective reports templates. Whether you want to keep templates private or leave them visible for users under specified Reseller.</p> <p>To enable this option, select one parameter from the drop-down list:</p> <ul style="list-style-type: none"> • Public - available for users according to the settings of the Reseller field; • Private - accessible strictly for creator.
Watch	<p>This tool allows to automatically generate reports at the appropriate time and send the results to the list of e-mails</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note, this tool is not available for Web output type, only for CSV / Excel XLS / Excel XLSx.</p> </div>
Recipients	Specify recipients: it can be your own email, other users of the system or even 3rd parties
Run Time	Define an appropriate time to automatically generate a report. It could be several times, for example: 10:00, 12:00, 18:00
Days of Week	Indicate days of the week to automatically generate a report. For example, you can run a report only on Monday or each day of week
Report Query	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 load already existing templates while generating statistic reports, click **Load Query** button.

Export Generated Report

You can export data to **XLSx** or **CSV** file, which contains currently presented data by pressing **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

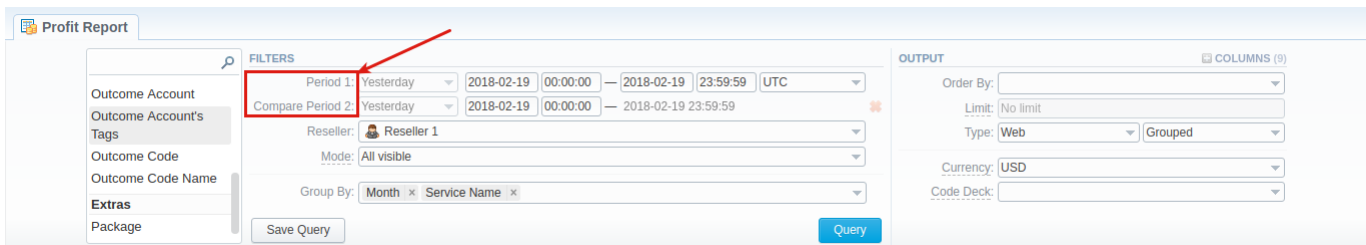
You can check an **actual date interval** of the report by clicking on **Info**  icon, and it could be different from **the Interval** specified above if there is no date for the period.

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 Period** option is designed to create a report that shows two sub-reports side-by-side.

To enable this option, click on the plus  sign next to the **Period** field and specify both intervals (**Period 1 / Period 2**) for the report.

Screenshot: *Profit Report query form*



Then, choose columns for 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 the **Profit** into separate columns (see screenshot below).

Screenshot: Profit Report query form

Profit Report
OUTPUT
COLUMNS (9)

FILTERS

Extras

Package

Clients

Income Client

Income Account

Income Code

Income Code Name

Columns for main period: Total Time, min × Profit × Profit (%) × Income Cost × Income Avg Rate × Income Billed Time × Outcome Cost × Outcome Avg Rate × Outcome Billed Time ×

Columns for comparative period: Income Cost × Income Avg Rate × Income Billed Time × Outcome Cost × Outcome Avg Rate × Outcome Billed Time × Profit × Profit (%) ×

Group By: Month ×

Code Deck:

Save Query Query

Export to XLSx
?

Month		Total Time, min	Profit		Profit (%)		Income Cost		Income Avg Rate		Income Billed Time		Outcome Cost		Outcome Avg Rate		Outcome Billed Time	
P1	P2		P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2
07/2016	07/2016	19.65	3.0	3.0	0.00	0.00	3.0	3.0	0.152	0.152	19.65	19.65	0.0	0.0	0.000	0.000	0.00	0.00
08/2016	08/2016	293.97	-73.1	-73.1	-40.82	-40.82	106.0	106.0	2.853	2.853	37.13	37.13	-179.0	-179.0	1.557	1.557	114.97	114.97
06/2016	06/2016	0.00	79.8	79.8	260.24	260.24	110.5	110.5	0.000	0.000	0.00	0.00	-30.7	-30.7	0.000	0.000	0.00	0.00
05/2016	05/2016	0.00	120.7	120.7	0.00	0.00	120.7	120.7	0.000	0.000	0.00	0.00	0.0	0.0	0.000	0.000	0.00	0.00

Invoicing Report

On this page

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

Section overview

This section allows user to build a report, based on information from issued invoices with a possibility to export data (.xls, .xlsx, and .csv). Since **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

The screenshot shows the 'Invoicing Report' interface. On the left, there is a sidebar with a search icon and a list of filter categories: Clients, Client Type, Client, Extras, and Invoice. The main area is divided into 'FILTERS' and 'OUTPUT' sections. The 'FILTERS' section includes:


- Period: This Month (dropdown), 2018-03-01 00:00:00 - 2018-03-31 23:59:59 UTC (date and time range)
- Owner: Reseller 1 (dropdown)
- Invoice Type: outgoing (dropdown)
- Buttons: Save Query and Query


 The 'OUTPUT' section includes:

- Type: Web (dropdown), Plain (dropdown)
- Currency: (dropdown)
- COLUMNS (15) (dropdown)

Creating New Invoicing Report

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

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

Payment Account	<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 Payment Accounts section</p>																																								
Output	<p>This form contains settings of the report output data</p> <p>Click plus  sign next to Columns and select required columns in order to add them to Output information block. Also, you can cancel any chosen item.</p> <table border="1"> <thead> <tr> <th colspan="2">Accessible columns in the report</th> </tr> </thead> <tbody> <tr> <td>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 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, quantity of services, country code, code name, package name, etc.</td> </tr> <tr> <td>Volume</td> <td>Volume of the service, for example, 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 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">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> You can send generated reports via email. Also, it is possible to specify several emails. <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <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. And all values will be automatically converted in the report to the specified currency</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 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, quantity of services, country code, code name, package name, etc.	Volume	Volume of the service, for example, 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 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	You can send generated reports via email. Also, it is possible to specify several emails. <div style="background-color: #ffff00; padding: 5px; margin-top: 10px;"> <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. And all values will be automatically converted in the report to the specified currency
Accessible columns in the report																																									
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Currency	Specify an output currency for the report. And all values will be automatically converted in the report to the specified currency																																								

After selecting all needed parameters, press **Query** button and the system will generate a report:
 Screenshot: [Invoicing Report](#)

Invoicing Report

FILTERS

Period: This Month | 2018-03-01 00:00:00 — 2018-03-31 23:59:59 UTC

Owner: Reseller 1

Invoice Type: outgoing

Save Query | Query

OUTPUT COLUMNS (15)

Type: Web | Plain

Currency: [Dropdown]

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
Rose term	03/28/2018	Invoice-Rose term-100001	Products	N/A	Name: Package DID, Details: Subscription Fee	328.00	N/A	N/A	984.0000	0.0000	USD	01/01/2018	12/31/2018	UTC
Rose term	03/29/2018	Invoice-Rose term-100002	Products	N/A	Name: Package DID, Details: Subscription Fee	23.00	N/A	N/A	69.0000	0.0000	USD	01/01/2018	12/31/2018	UTC

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Moreover, you can create a template for reports and save specified parameters by clicking **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 [Report Templates](#) article in our **User Guide**.

Invoicing Report 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.

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

LCR Lists

On this page

- [LCR List Query Form](#)
- [To create LCR report](#)
- [To create a new template](#)
- [Export generated report](#)

LCR List Query Form

This tool allows you to generate target lists of actual traffic for specified period.





Screenshot: LCR Lists section query form

To create LCR report

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

Section	Field Description
Filters	<p>On the Filters menu, select convenient parameters for the report. To cancel any filter, click the delete sign next to the filter.</p> <p>You can start a quick search by typing filters' names in the bar at the top of drop-down menu with filters</p>
Period	Specify an interval for the report and time zone.
Group By	<p>Select a grouping option, here you can choose respective values to sort the data. There are following accessible options to data in reports:</p> <ul style="list-style-type: none"> • Code • Code Name <p>This option is intended to simply grouping option, the system will automatically group data in specified columns.</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <ul style="list-style-type: none"> • Please note, the "Group By" field is mandatory, it couldn't be empty in order to generate the report. To group by code output. • When you select the grouping by code name, please be aware that simulation marks will not be shown and effective the next rate, may not be accurate. This data is taken from one of codes of the group. </div>
Additional Filters	
<p>There are following accessible additional filters:</p> <ul style="list-style-type: none"> • By clients: Owner • By calls: Code/ Code Name • Extras: Tags/ Routes Limit 	
Origination Settings of Clients	
Owner	Enter an owner/reseller, whose information should be displayed

Settings of Calls	
Code	Enter the code of desired destination here
Code Name Codes Name	Enter the code name you would like to display
Extra settings	
Tags	Indicate tags that will be used for the report
Routes Limit	Choose the filter "Routes Limits" and indicate the number of route limit that will be shown. To display all possible routes leave empty.

Output	<p>This form contains settings of the output data of the report.</p> <p>Click plus sign  near the "Columns" to select respective columns to output a report data. Also, you can cancel any chosen item.</p>
<p>Accessible columns in the report</p> <p>There are following columns to add to the report:</p> <ul style="list-style-type: none"> • Code • Code Name • Total Time <p>Screenshot: LCR Lists section</p> 	
<p>Other output settings</p>	
Type	<p>Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx.</p> <p>The table view of the report is Plain by default.</p>
Send to	<p>You can send generated reports via e-mail. For example, it is useful when it takes a lot of time to run the report. Also, it is specify several emails.</p> <div style="background-color: #ffff00; padding: 5px;"> <p> Attention</p> <p>This feature is available only for <i>CSV/Excel XLS/Excel XLSx</i> formats of the report, it doesn't work with Web format.</p> </div>
Currency	Specify a currency for a report. And all values will be automatically converted in the report to the specified currency.
Code Deck	<p>Select a code deck from a drop-down list. All code decks in the following report will be presented according to the specific All data will be unified by code names.</p> <div style="background-color: #ffe6e6; padding: 5px;"> <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 pull rate table. 2. Code deck should contain code names and codes used for calls, otherwise the LCR report would not show results codes and code names in the code deck. </div>
Show Vendors check box	Specify whether you need vendor/terminator names to be displayed in the report or not, tick the check box.
Show Total Calls check box	Tick this check box if you want that total calls amount will be shown.

To create a new template

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

Screenshot: New Query Template form

Reports Templates

LCR LISTS

Title:

Reseller:

Visibility:

WATCH

Recipients:

Run Time:

Days of Week:

REPORT QUERY

Tags

Routes Limit

Clients

Owner

FILTERS

Period: | | — | |

Group By:

OUTPUT

Type: |

Currency:

Code Deck:

Show Vendors:

Show Total Calls:

Section	Description
LCR Lists	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.
Watch	This tool allows to automatically generate the report at the appropriate time and send the results to the list of emails.
	Attention Please note, that this tool is not available for <i>Web</i> output type, only for <i>CSV/Excel XLS/Excel XLSx</i> .
	Recipients Specify recipients, you can indicate your own e-mail or other users of the system, or even 3rd parties
	Run Time Mention an appropriate time to automatically generate a report, it could be several times, for example: "10:00, 12:00, 18:00"
	Days of Week Mention days of the week to automatically generate a report. 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.

To load already existed templates while generating a report, click **Load Query** button in the query form. Please note, the **code deck** should be assigned in the **Rate Tables** of the **Terminator** settings in order to generate the LCR report.

Export generated report

You can export data to a CSV and XLSx file which contains only currently presented data, no automatic request to update data while exporting.

To download a report in .csv, click the "Export to CSV" button on the toolbar.

To download a .xlsx file, click the "Export to XLSx" button on the toolbar.

Attention

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

xDRs List

On this page

- [xDRs List Query Form](#)
- [To create xDR report](#)
- [To create query template](#)
- [Search by partial Session ID](#)
- [Knowledge Base Articles](#)

xDRs List Query Form

This section allows you to form a 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 main window represents a query form similar to those of other reports:

Screenshot: xDRs List query form

To create xDR report


In order to create a new XDR list go to the **Statistics** section and open the **xDRs List**. Then you need to fill out the search form with next parameters:

Section	Field Description
Filters	On the Filters menu, select convenient parameters for the report. To cancel any filter, click the delete sign 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 an interval for the report. This field is mandatory.
	Additional Filters
	There are following accessible additional filters:
	<ul style="list-style-type: none"> • By clients: <i>Client Type, Client, Client Tags, Account Tags, Cards Serial, Account, Package.</i> • By calls: <i>Code, Code Name, Origin, Result Code, Tags, Gateway,</i> • Extras: <i>Cost, Result Status, Owner, Service, Rate, Setup Fee, DST Party ID, SRC Party ID, Session ID, XDR ID, Volume, Status, Match Clients, Match Codes, Currency.</i>
	Client Type Select a client's type for 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 an account for the report
	Account Tags Determine account's tags
Cards Serial Indicate cards serial for the report	
Package Enter a package for the report	

Code	Specify a code of needed destination
Code Name	Specify a code name of the desired destination
Cost	Enter the range of event cost
Origin	Indicate event origination/termination
Result Code	Determine a disconnect code as a filtering parameter
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
Tags	Indicate labels for the report
Gateway	Specify a host as filtering criteria
Owner	Indicate the owner
Service	Select a type of service (data, call, sms) for the report
Rate	Indicate the destination rate
Additive Rate	Specify extra destination rate that was used
DST Party ID	Determine 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 SRC Party ID (source number or any other source identification)
XDR ID	XDR ID value
Session ID	ID of the session received from the gateway
Volume	Volume of the service (for example, call duration)
Status	Processing state: all/processed/in re-rating
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 output data of the report.

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

Accessible columns in the report

There are following columns to add to the report:

- **By clients:** Account, Account ID, Client Type, Client ID, Client, CC Series, Owner, Owner ID, Package ID, Package Name.
- **By calls:** Code Country, Code, Code Name, Rate, Gateway, Currency, Origin, Result Status, Result Code, Gateway ID, Setup Fee.
- **Extras:** Gateway IP, Gateway Name, SRC Party ID, SCR Party ID EXT, SCR Party ID BILL, DST Party ID, DST Party ID EXT, DST Party ID BILL, Event Time, Client Tags, Account Tags, Tags, Volume, Billed Volume, Package Volume, Package Credit, Cost, Taxes, Status, Service, Unit, XDR Source, Uniq Sign, Switch Code, Start Time, Connect Time, Finish Time, PDD, SCD, X ID, XDR ID, Session ID, Custom, Extra Data.

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: <i>Web/CSV/Excel XLS/Excel XLSx</i> . The "Plain" type of view is by default.
Send to	You can send generated reports via e-mail. For example, it is useful when it takes a lot of time to run the report. Also, it is possible to specify several e-mails. ⚠ Attention This feature is available only for <i>CSV/Excel XLS/Excel XLSx</i> formats of the report, it doesn't work with <i>Web</i> .
Currency	Specify a currency for the report. And all values will be automatically converted in the report to the specified currency.
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.

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

Screenshot: *xDRs List report window*

The screenshot shows the 'xDRs List' interface. On the left, there's a sidebar with 'Client Type' selected. The main area has 'FILTERS' with 'Period: Last Week', 'Client: Vendor', and 'DST Party ID: 38066'. The 'OUTPUT' section shows 'Order By: Event time', 'Type: Web', 'Currency: USD', and 'Code Deck: DEFAULT'. Below the filters is a 'Query' button. At the bottom, there are 'Export to CSV' and 'Export to XLSx' buttons. The data table below shows three rows of termination events.

Rate	Origin	Event time	Client Type	Client	Code	Volume	Dst Party ID	Src Party ID
0.0250	termination	05/12/2017 09:54:50 +0000	Client	Vendor	38066	11.0000	38066	38066
0.0250	termination	05/12/2017 09:53:36 +0000	Client	Vendor	38066	98.0000	38066	38066
0.0250	termination	05/12/2017 09:53:34 +0000	Client	Vendor	38066	69.0000	38066	38066

To create query template

Also, you can create a template for reports and save specified parameters by clicking **"Save Query"** button. Visit our *"Reports Templates"* article for a detailed information.

To load already existed templates while generating statistic reports click **"Load Query"** button in the *xDRs List section*.

You can export data in *CSV* or *XLSx* file that contains only currently presented data, **no automatic request to update data while exporting**.

- To download a *.csv* file, click the **"Export to CSV"** button on the toolbar.
- To download a *.xlsx* file, click the **"Export to XLSx"** button on the toolbar.

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:

- To filter calls by the **first digits of Session ID**, enter digits + asterisk(*): **16***.
- To search calls by the **middle digits of Session ID**, enter a search term by this formula: asterisk(*) + digits + asterisk(*): ***7398***. It will match any Session ID containing the string 7398, even if it occurs in the middle of a large number.
- To find calls by the **last digits of Session ID**, enter asterisk(*) + digits: ***88**.

Knowledge Base Articles

- [What to do if there is no new statistics?](#)

- Why new xDRs are not generated?

Mismatches Report

In this article

- [Section overview](#)
- [Creating a report](#)
- [Knowledge Base Articles](#)

Section overview

This section allows you to find **unrecognized calls / clients** by the system due to unavailability of respective information. Here you can see the general info about unknown clients, unknown destinations, calls stats, the total number of mismatched calls. 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

📄 Mismatches Report

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

Service: Calls

Query

UNKNOWN CLIENTS

	origination	termination	all
Total	1 229	1 776	3 005
Non Zero	630	788	1 418
Total Volume	1 019 min	1 257 min	2 276 min

UNKNOWN DESTINATIONS (KNOWN CLIENTS)

	origination	termination	all
Total	0	0	0
Non Zero	0	0	0
Total Volume	0	0	0

UNKNOWN DESTINATIONS IN RESELLERS (KNOWN RESELLERS)

	origination	termination	all
Total	0	0	0
Non Zero	0	0	0
Total Volume	0	0	0

Type: all

Duration: non-zero

Output: Web

Query xDR

Type: all

Duration: non-zero

Output: Web

Query xDR

Type: all

Duration: non-zero

Output: Web

Query xDR

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Creating a 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 **Query** button.

Fields	Description
--------	-------------

Period	Define the period the mismatches report. You can make it custom by selecting specific time and date or choose a predefined options from the list like: This Year, Last Month, Yesterday , etc.
Timezone	Select a timezone from the list. By default, field value is set to UTC
Service	Choose a desired service from the list (e.g. Calls, SMS , etc.)

Screenshot: Mismatches Report query form

- Once the data has been filtered, you need to fill in the fields to the right of a desired table and press a respective **Query xDR** button in order to create a report.

Fields	Description
Type	Choose the type of calls for generating the report: all / origination / termination .
Duration	Select the continuance of the calls: all / non-zero / zero .
Output	Indicate the output type: Web / CSV / Excel XLSx / Excel XLS .

Screenshot:

If you've selected **Web** in **Output** field, you'll be forwarded to **xDRs List** section with a detailed information on a selected mismatched data. However, if in **Output** field you've selected any file format from the list, a mismatched report of the chosen format will be downloaded to your computer.

Knowledge Base Articles

- [What does it mean when client or destination is "unknown" in reports?](#)

xDRs Rerating

In this article

- [Section overview](#)
- [Performing xDRs Rerating](#)
- [Knowledge Base Articles](#)

Section overview


This section allows to rerate calls, sms, data. It's useful when some changes were applied to the rates, currencies, client accounts or you need to correct errors with *Mismatches Report*.

Screenshot: xDRs Rerating section

Performing xDRs Rerating

The whole procedure consists of the following **3 steps**:

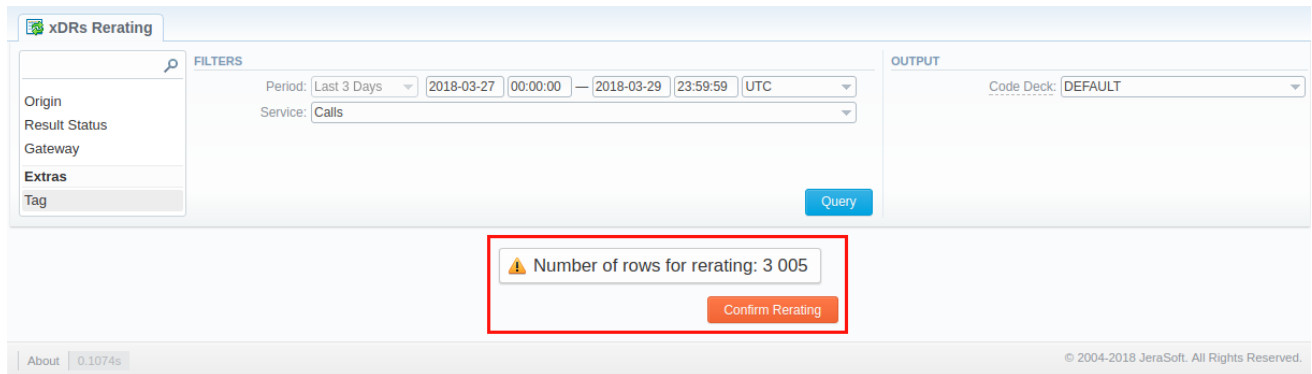
1. Choose filters, specify an interval and respective values in the query form and press **Query** button.

Information block	Field Description
Filters	On the Filters menu, select required parameters for the report. To cancel any filter, click on the delete  sign next to the filter. You can start a quick search by typing filters' names in the field at the top of drop-down menu with filters.
	Period Specify the time interval for the report and a timezone. Please note that the Period field is mandatory.
	Service Indicate a target type of services from Services section
	Additional Filters
	There are following accessible additional filters:
	<ul style="list-style-type: none"> • Clients: <i>Client</i>. • Events: <i>Code, Code Name, Call Origin, Result Status, Gateway</i>. • Extras: <i>Tag, Match Clients, Match Codes, Duration</i>.
	Client Define a client for the report.
	Code Define a code of needed destination.
	Code Name Enter a code name of 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 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.
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 (see screenshot below) and you need to approve the process by clicking **Confirm Rerating** button.

Screenshot: xDRs Rerating approval notification




3. Finally, the calls will undergo rerating, and you need to wait for the system procedure to be completed. The respective number of calls for the rerating you can see on the toolbar at the top of the page.

Screenshot: xDRs in a queue for rerating



Also, you will receive the following notification: **xDRs are settings to queue now. Please wait while the system will process them.** Then, you need to run the **Calculator** in the **Task Scheduler** 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

- [How to do rerating?](#)

Reports Templates

Reports Templates List




This section allows you to manage already existing templates of *Routing Analysis*, *Profit Report*, *CDR's list*, *Mismatches Report*, *Orig-Term Report*, *Summary report*. And send reports to E-mail to keep yourself informed about the traffic status without the need to login into the system and request reports.

To find it, please go to **Statistics > Reports Templates**.

Screenshot: Reports Templates section main window

ID	Title	Report Query	Watch	Reseller
ROUTING ANALYSIS				
19	Template_Routing Analysis	Number: Template_Routing Analysis Client: Gate1 # client Group By: Type, Rank	<input type="checkbox"/>	All resellers
PROFIT REPORT				
3	Profit Report	Interval: This Month Reseller: 1111_test_roles Group By: Income Client, Outcome Client	<input checked="" type="checkbox"/>	37.snickers@gmail.com RESELLER A
CDRS LIST				
10	Report_template_CDR's list	Interval: Today Client Type: Client Session Time: 1 - 0	<input type="checkbox"/>	All resellers
MISMATCHES REPORT				
2	Mismatches Report	Interval: 2015-07-22 11:38:37 - 2015-07-23 11:38:37 GMT+3 Call Origin: termination Duration: non-zero Group By: Type, Calls Stats	<input type="checkbox"/>	RESELLER A
ORIG-TERM REPORT				
15	Orig-Term Report Template	Interval: Today Group By: Orig Client, Term Client	<input type="checkbox"/>	All resellers
SUMMARY REPORT				
7	Summary_Report	Interval: This Year Client Type: Client Group By: Currency, Leg Origin	<input type="checkbox"/>	All resellers

To start managing, choose the respective template from the section and click on the name to open the settings.

1. You can run a report by clicking the **Play**  icon . This option is designed to run report template in the browser. It is not intended to send a report via e-mail (see screenshot above).
2. The green Watch icon  shows that the Watch option "**To send a report via e-mail**" is enabled. If the Watch icon  is gray, the option is disabled.

Column	Description
ID	Template ID
Title	Name of the template
Report Query	Template details
Watch	Tool to automatically run a report at the exact time and send the results to the list of e-mails.
Reseller	Name of the Reseller

To create a report template

You can create a template while generating report. The following steps will provide step by step directions on how to add a template:

1. Open *Balance/Summary/Orig-Term/Profit report* or *CDRs/ LCR list, Rates/Routing Analysis* section (configuration depends on your demands).
2. Fill in a query form with respective parameters.
3. Click the **Save Query** button.
4. Then, a pop-up window with template settings will appear and fill out fields.
5. Click **Apply** to save a template.

Screenshot: New Template form

Section	Description
Report	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 visibility of respective reports templates. Whether you want to keep templates private or leave them visible for users under 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 creator.
Watch	This tool allows to generate reports at the appropriate time and send 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 emails of recipients. Here you can indicate your own e-mail or other users, even 3rd parties emails.
	Run Time Mention an appropriate time to automatically generate a report, it could be several times, for example: "10:00, 12:00, 18:00"
	Days of Week Mention days of a week to automatically generate a report. For example, you can run a report only on Monday or each day of week
Report Query	Here you need to specify filters that will be used for generating correct report and choose the output type to view the report



Tip

Please be advised that it's allowed to save **Reports Templates** with empty fields.

To send a report via Email/ Watch feature

You can automatically generate a needed report at a specified time and send the following report to the list of e-mails. To do this, please open a respective template and tick the "Watch" check box. Then fill out next fields:

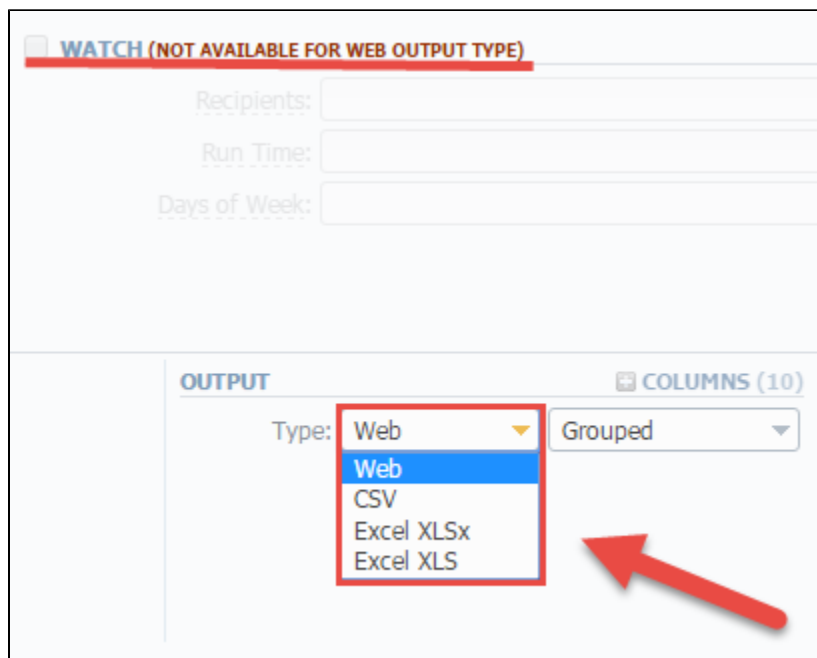
Field	Description
Recipients	Specify e-mail address where the report should be sent. Here you can specify multiple e-mails. This field is mandatory.
Run Time	Indicate the time when the report should be generated (multiple times could be specified, i.e. 10:00, 12:00).

Days of Week Mention specific days when the report should be run (i.e. only on Monday or any other day of the week).

⚠ Attention

Don't forget to specify the email address where the report should be sent to and correctly set report query. After you save query you will be receiving your reports via email in specified time frames.

Screenshot: Reports Templates settings



⚠ Warning

- If you create the report template and the option **Watch** is enabled, the client will receive the file with report even when there are no statistics for a specified period.
- Please be aware, that the templates previously existing in the **Reports to email** section could not be restored automatically. Note, that you can recreate them in the case of need.

Archive Management

On this page

- [Archive Management Section Main Window](#)
- [Active Statistics Packages](#)
- [Archived Statistics Packages](#)
- [Knowledge Base Articles](#)

Archive Management Section Main Window

This section represents an archive of system statistics packages manager. Statistics package is a pack of billing entities, created during a respective day. The main window is displayed on the screenshot below:

Screenshot: Archive Management section main window

The screenshot displays the 'Archive Management' interface. At the top, there is a tab labeled 'Archive Management'. Below it, the 'ACTIVE STATISTICS PACKAGES' section contains a table with the following data:

Date	Type	Total XDRs	Volume	Paid XDRs	New XDRs	New Volume	Re-Rating XDRs	Progress
2017, May (3)	Time	864	54 826 Sec	0	0	0 Sec	0	100.00%
2017, March (3)								
2016, November (2)								
2016, October (1)								
2016, September (2)								
2016, July (1)								
2016, June (1)								

Below the active packages, the 'ARCHIVED STATISTICS PACKAGES' section shows a table with the following data:

Date	Filename	Size
2017, May (1)		0.00 Mb
2017, March (3)		0.03 Mb
2016, November (2)		0.00 Mb
2016, October (1)		0.00 Mb
2016, September (2)		0.00 Mb
2016, July (1)		0.00 Mb
2016, June (1)		0.00 Mb
2016, May (2)		0.00 Mb








At the bottom of the screenshot, there is a note: "You can download these files from the billing server:" and a 'Process' button.

Active Statistics Packages

Active Statistics Packages sub-panel contains statistics packages, that are currently present in the database. Statistics packages are grouped by month. Click on the plus sign to expand all available packages.

Column	Description
Date	System package creation date
Type	Type of package entity: time/data/data
Total XDRs	Processed XDRs quantity: a number of XDRs (origination/termination)
Volume	Processed amount of events (origination/termination)
Paid XDRs	Amount of paid XDRs for client
New XDRs	Quantity of XDRs that have not been processed yet
New Volume	Volume that has not been processed yet
Re-rating XDRs	Quantity of events queued for re-rating
Progress	Shows overall data processing progress

Icon	Description
------	-------------



	Updates selected package to latest database format (useful after system update to new version)
	Shows the status of the package: <ul style="list-style-type: none"> The yellow icon  shows that the package is not archived for the respective day. The green icon  shows that the package is archived.
	Moves package to archive and remove from database
	Deletes package from database <i>without</i> performing balance rollback
	Deletes package from database <i>with</i> balance rollback

After “Process” button is clicked, the respective statistics package will be marked for respective operation – to rotate (move), to update, to be cleaned or to be deleted. The operation itself will be executed in the background.

Archived Statistics Packages

Archive Statistics Packages table houses statistics packages that are kept in the archive (/var/archive folder in respect to VCS root).

Column	Description
Date	System package creation date
Filename	Name of the archive file which contains system package
Size	Size of an archive file

Icon	Description
	Restores system package to database
	Deletes archive file

After pressing **Process** button, the respective statistics package will be marked for respective operation – to restore or to delete.

Tip

- System manages the statistics packages in the background. *Backup&Rotate Manager* system module must be activated to manage the packages!
- Moving or rotating the current day statistics package may result in errors! It is strongly recommended not to do any operations to current day's package.

Knowledge Base Articles

- [How to do one-day statistics re-parsing](#)
- [How to rotate statistics packages?](#)
- [Why statistics is not rotated?](#)
- [How to update statistics package to the format of latest version?](#)
- [How to use Statistics Manager Tool?](#)

Tools

This chapter describes how to **manage the rates, active calls, xDR disputes** and provides the information regarding the factors watcher tool of **the JeraSoft VCS**.

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

- [Rates Analysis](#)
- [Rates Generator](#)
- [Active Sessions](#)
- [Factors Watcher](#)
- [xDR Disputes](#)

Rates Analysis

On this page:

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


Rates Analysis Form

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

Screenshot: Rates Analysis section

Creating 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	<p>On the Filters menu, select required parameters for the report. To cancel any filter, click on the delete  sign next to the filter. You can start a quick search by typing filters' names in the field at the top of drop-down menu with filters.</p>
	<p>Outlook 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 Select a service for rates analysis</p>
	<p>Originators Specify origination clients for analysis.</p>
	<p>Terminators Indicate termination clients for analysis</p>
	<p>Rate Tables Define rate tables for analysis.</p>
	<p>Group By Select a grouping option from the following list:</p> <ul style="list-style-type: none"> • Code - aggregation by default output. • 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 simply grouping option, the system will automatically group data in specified columns.</p>
Additional Filters	

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

After pressing **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

Rates Analysis

FILTERS

Outlook: rates comparison
 Service: Calls
 Originators: Orig Client
 Terminators: Term Client #1
 Rate Tables: Rate Table Term 1, Parent Rate Norification
 Code Name:
 Group By: Code

OUTPUT

Type: Web
 Currency: USD
 Code Deck: DEFAULT
 Simulate Long:

Export to CSV | Export to XLSx

Code	Code Name	Rate Table Term 1	Parent Rate Norification	Orig Client Orig	Term Client #1 term Term	Term Client #1 term2 Term	Term Client #1 term3 Term
1	-	-	-	-	-	-	-
120	-	0.3600	-	-	-	-	-
1201	United States	-	0.9900	-	-	-	-
12011	United States	0.3600	-	-	-	-	-
1202	United States	0.1600	0.9900	-	-	-	-
1203	United States	-	0.9900	-	-	-	-

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

Rates Analysis

FILTERS

Outlook: rates comparison
 Service: Calls
 Originators: ALL
 Terminators: ALL
 Rate Tables: ALL
 Code Name:
 Group By: Code

OUTPUT

Type: Web
 Currency: USD
 Code Deck: DEFAULT
 Simulate Long:

Export to CSV | Export to XLSx

By clicking on **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

Creating New Template

Also, you can create a template and save specified parameters by clicking **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

RATES ANALYSIS

Title:

Reseller:

Visibility:

WATCH (NOT AVAILABLE FOR WEB OUTPUT TYPE)

Recipients:

Run Time:

Run Time Timezone:

Days of Week:

REPORT QUERY

Events

Code

Country name

Extras

Actual On

Master Table

Lowest Position

Get Margins For

Tag

FILTERS

Outlook:

Service:

Originators:

Terminators:

Rate Tables:

Code Name:

Group By:

OUTPUT

Type:

Currency:

Code Deck:

Simulate Long:

Section	Description						
Rates Analysis	Here you can specify parameters for the template that will be used while running reports						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Title</td> <td>Specify a name of the template</td> </tr> <tr> <td>Reseller</td> <td>Indicate a Reseller for the report template</td> </tr> <tr> <td>Visibility</td> <td> <p>It allows controlling visibility of respective reports templates. You can set up whether you want to keep templates private or leave them visible for users under specified Reseller.</p> <p>To enable this option, select one parameter from the drop-down list:</p> <ul style="list-style-type: none"> Public - available for users according to the settings of the Reseller field. Private - accessible strictly for creator. </td> </tr> </table>	Title	Specify a name of the template	Reseller	Indicate a Reseller for the report template	Visibility	<p>It allows controlling visibility of respective reports templates. You can set up whether you want to keep templates private or leave them visible for users under specified Reseller.</p> <p>To enable this option, select one parameter from the drop-down list:</p> <ul style="list-style-type: none"> Public - available for users according to the settings of the Reseller field. Private - accessible strictly for creator.
	Title	Specify a name of the template					
	Reseller	Indicate a Reseller for the report template					
Visibility	<p>It allows controlling visibility of respective reports templates. You can set up whether you want to keep templates private or leave them visible for users under specified Reseller.</p> <p>To enable this option, select one parameter from the drop-down list:</p> <ul style="list-style-type: none"> Public - available for users according to the settings of the Reseller field. Private - accessible strictly for creator. 						
<p>Attention</p> <p>Please note that this tool is not available for Web output type, only for CSV / Excel XLS / Excel XLSx</p>							
Watch	<p>This tool allows to automatically generate the report at the appropriate time and send the results to the list of emails</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Recipients</td> <td>Specify recipients, you can indicate your own email or other users of the system, or even 3rd parties</td> </tr> <tr> <td>Run Time</td> <td>Indicate an appropriate time to automatically generate a report, it could be several times, for example: 10:00, 12:00, 18:00</td> </tr> <tr> <td>Days of Week</td> <td>Indicate days of the week to automatically generate a report. For example, you can run a report only on Monday or each day of the week.</td> </tr> </table>	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 automatically generate a report, it could be several times, for example: 10:00, 12:00, 18:00	Days of Week	Indicate days of the week to automatically generate a report. For example, you can run a report only on Monday or each day of the week .
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 automatically generate a report, it could be several times, for example: 10:00, 12:00, 18:00						
Days of Week	Indicate days of the week to automatically generate a report. 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 pressing it, you can choose from a list of templates for rates analysis a report to be displayed.

Export generated report

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

Rates Generator

On this page

- [Adding New Rates Generator Query](#)
- [Setting Additional Options](#)
 - [Optimization Options](#)
 - [Adjust Options](#)
 - [Advanced Options](#)
 - [Quality Options](#)
- [Adding New Rule](#)
- [Adding Source to the Rule](#)

Adding New Rates Generator Query

Rates Generator is a useful tool for creating a price list from multiple sources, such as rate sheets or provider's rate tables and to regenerate rate tables of clients.

Screenshot: *Rates Generator form*

The screenshot shows the 'Rates Generator' form with the following fields and options:

- Name:** Example 1
- Reseller:** Company Name
- Service:** Calls
- Code Deck:** DEFAULT
- Currency:** USD
- Description:** (empty text area)
- OPTIMIZATION:**
 - SIMPLE OPTIMIZATION: Mode: min
 - VERTICAL OPTIMIZATION: Target < parent: 0%, Target > parent: 0%
 - HORIZONTAL OPTIMIZATION: Target < parent: 0%, Target > parent: 0%
- ADJUST RESULTS:**
 - ADJUST RESULTS
 - Tag: @
 - Policy: Regular
 - Rate: USD
 - Setup Fee: 0 USD
 - Min Volume: 1 sec
 - Interval: 1 sec
 - Grace Volume: 0 sec
 - Time Profile: all time
- ADVANCED OPTIONS:**
 - Detect fake: 5
 - Skip distance: 10 %
 - Rate position: 1
- QUALITY OPTIONS:**
 - Analyze period: 24 hours
 - Code min volume: 60 min
 - Unmatched price: 100

Buttons: OK, Cancel, Apply

Field	Description
Name	Specify the name of new rates generator
Reseller	Select the reseller to whom newly created rates generator should belong
Service	Choose the service to be applied for respective rates generator (calls, sms, data, etc).
Code Deck	Select the code deck that will be used to search for codes in source and name destination codes in new price list
Currency	Specify the currency of rates in new price list
Description	Additional information about current rates generator

Setting Additional Options

To refine your results, you can use following additional criteria. These additional options are accessible in the rates generator settings, "Parameters" tab.

Optimization Options

Screenshot: *Rates Generator form/ Optimization sub-panel*

Rates Generator

Name: Example 1
 Reseller: Company Name
 Service: Calls
 Code Deck: DEFAULT
 Currency: USD
 Description:

SIMPLE OPTIMIZATION
 Mode: min

VERTICAL OPTIMIZATION
 Target < parent: 0 %
 Target > parent: 0 %

HORIZONTAL OPTIMIZATION
 Target < parent: 0 %
 Target > parent: 0 %

ADJUST RESULTS
 Tag: @
 Policy: Regular
 Rate: USD
 Setup Fee: 0 USD
 Min Volume: 1 sec
 Interval: 1 sec
 Grace Volume: 0 sec
 Time Profile: all time

ADVANCED OPTIONS
 Detect fake: 5
 Skip distance: 10 %
 Rate position: 1

QUALITY OPTIONS
 Analyze period: 24 hours
 Code min volume: 60 min
 Unmatched price: 100

OK Cancel Apply

Section	Description
Simple Optimization	It allows applying the same price for all codes inside same code name by using three options
	<ul style="list-style-type: none"> min minimal available price
	<ul style="list-style-type: none"> max maximal available price
	<ul style="list-style-type: none"> avg average price of all available
Vertical Optimization	This option enables to replace longer codes by shorter codes. To activate it, tick the checkbox and satisfy <i>Target < Parent</i> and <i>Target > Parent</i> settings.
	Target < Parent If a current rate's price is less of an entered percent, then it will be optimized. The longest codes will be merged to shorter codes within the same code name.
	Target > Parent If a current rate's price is above an entered percent, then it will be optimized. The longest codes will be merged to shorter codes within the same code name.
Horizontal Optimization	This optimization enables application of the same rate to codes of same lengths, which belong to the same code name. To activate it, tick the checkbox and satisfy <i>Target < Parent</i> and <i>Target > Parent</i> settings.
	Target < Parent If a current rate's price is less of an entered percent, then it will be optimized. The price will be set for all codes with the same length within a respective code name.
	Target > Parent If a current rate's price is above an entered percent, then it will be optimized. The price will be set for all codes with the same length within a respective code name.

Adjust Options

"Adjust Results" check box enables results adjusting by data from currently selected *Code Deck*. For example, if your rules provided you with codes 380 and 38050, but your code deck has only code 38050 recorded, only that 38050 will get into resulting price list.

Screenshot: Rates Generator form/ Adjust Results sub-panel

Rates Generator

Name:

Reseller:

Service:

Code Deck:

Currency:

Description:

SIMPLE OPTIMIZATION

Mode:

VERTICAL OPTIMIZATION

Target < parent: %

Target > parent: %

HORIZONTAL OPTIMIZATION

Target < parent: %

Target > parent: %

ADJUST RESULTS

Tag:

Policy:

Rate: USD

Setup Fee: USD

Min Volume: sec

Interval: sec

Grace Volume: sec

Time Profile:

ADVANCED OPTIONS

Detect fake:

Skip distance: %

Rate position:

QUALITY OPTIONS

Analyze period: hours

Code min volume: min

Unmatched price:

Field	Description
Tag	Specify a label for rates generator
Policy	Select the policy (regular or additive) according which codes (present in code deck, but not in sources) will be put in the resulting list
Rate	Define a rate for codes which are present in code deck but were not provided by your rules, when performing <i>Adjust results</i>
Setup Fee	Define setup fee for those rates
Min Volume	Define minimum volume for those rates
Interval	Define interval for those rates
Grace Volume	Define grace volume for those rates
Time Profile	Define time profile for those rates

Advanced Options

Screenshot: Rates Generator form/ Advanced Options sub-panel

Rates Generator

Name:

Reseller:

Service:

Code Deck:

Currency:

Description:

SIMPLE OPTIMIZATION

Mode:

VERTICAL OPTIMIZATION

Target < parent: %

Target > parent: %

HORIZONTAL OPTIMIZATION

Target < parent: %

Target > parent: %

ADJUST RESULTS

Tag:

Policy:

Rate: USD

Setup Fee: USD

Min Volume: sec

Interval: sec

Grace Volume: sec

Time Profile:

ADVANCED OPTIONS

Detect fake:

Skip distance: %

Rate position:

QUALITY OPTIONS

Analyze period: hours

Code min volume: min

Unmatched price:

Section	Description
Detect fake	Enable detection of fake rates if at least specified number of rates is present. The mechanism is following: if you enter "3" and your rules provided you with 3 different rates for some destination, the cheapest rate will be compared to the direct average of those 3 rates. If the difference is more, than provided in <i>Skip distance</i> , then rate is considered fake and removed from result
Skip distance	A percentage value of difference between current rate and direct average when performing <i>Detect fake</i>
Rate position	Define what cheapest rate of all to provide as a result (for example, if you enter "1" – system will take the cheapest rate if "2" – second cheapest etc.)

Quality Options

Screenshot: Rates Generator form/ Quality Options sub-panel

Section	Description
Analyze period	Define a number of hours to analyze for picking ACD and ASR quality
Code min time	Define a number of minutes that should be available for each code that satisfies quality parameters
Unmatched price	Define price for all codes which do not satisfy quality parameters

Adding New Rule

Click on Rates list form "Add rule" button to set rules to the query (see screenshot below)

Screenshot: Add new rule form

Section	Fields And Description
Rates Filter	Set basic parameters of your rule here
	<ul style="list-style-type: none"> Code Pick a code for current rule
	<ul style="list-style-type: none"> Code Name Pick group of codes for current 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 label for a rule
	<ul style="list-style-type: none"> • Policy 	Choose a respective policy (regular/additive)
Quality Filter	Set quality parameters of your rule here	
	<ul style="list-style-type: none"> • ASR, % 	Specify ASR ranges that should be used when picking destinations from sources
	<ul style="list-style-type: none"> • ACD, min 	Specify ACD ranges that should be used when picking destinations from sources
Force Rates Settings	Specify additional parameters that should be noted when picking destinations from sources (<i>Setup Fee, Min. Volume, Interval, Grace Volume, etc.</i>)	
Sources	Select one or multiple sources for picking data for new price list	
	<ul style="list-style-type: none"> • Rate Tables 	Specify the rate tables for calls of defined account group
	<ul style="list-style-type: none"> • Terminators 	Specify a vendor or specific vendor account for whom this routing rule will work
Margins	Specify ranges of rates that should be picked from sources and apply respective margins	

Working with this tool is really simple – specify your Filters, select a source, specify code and margins and when you click «OK», your selections will be added as a new rule to the template. By adding multiple rules you can create a price list that you currently require (for example, pick one destination from *Provider A*, another one – from *Provider B*, and rest of destinations from all remaining providers). To generate a resulting price list, click on «Generate» button.

Tip

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

Adding Source to the Rule

For specifying a source in Rate Generator's Rule, during adding or editing the Rule, simply click on green plus sign in "Sources" section, hereinafter specify the kind of source you need from drop-down list, i.e. "Terminators" or "Rate Tables", and start typing the name of terminator or rate table respectively in the field.

Tip

- Taking Terminator as a Source instead of its termination Rates Table gives the possibility to use recently changed table automatically for Terminator as a whole.
- If you want to use Quality Options for Rates Generator, you have to define a Terminator as a Source for Rates Generator's rule.

Attention

Rates Generator generates **stashed rates** that should be confirmed. When you confirm rates and there are duplicate active rates, it changes the status of an active rate to "stashed" and a new confirmed rate (created by rates generator) becomes "active". You can confirm rates in the *Rates Table section*.

Active Sessions

On this page:

- [Active Sessions Search Form](#)
- [To create active sessions report](#)
- [To create a query template](#)
- [Active Sessions toolbar: reload, 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

This section is only for reference. It displays current active sessions but does not affect the billing or statistics processing.

Active Sessions

FILTERS

Group By: Gateway x

Save Query Query

OUTPUT COLUMNS (7)

Order By: Duration Δ x

Limit: No limit

Type: Web Grouped

No active sessions found

Please note, that this function requires **RADIUS Accounting Start** packets to be sent from your Gateway and **"Track Active Sessions"** option enabled in Gateways section.

Important! **"Track Active Sessions"** option **diminishes system performance**, activate it only if you use capacity control by billing and/or require active sessions status monitoring.

Screenshot: Active Sessions section

This section is only for reference. It displays current active sessions but does not affect the billing or statistics processing.

Active Sessions

FILTERS

Group By: Orig Code x

Save Query Query

OUTPUT COLUMNS (7)

Order By: Duration Δ x

Limit: No limit

Type: Web Plain

Reload options Export to CSV Export to XLSx Show Chart



Orig Code	Info	Originator	Terminator	SRC Party ID	DST Party ID	Duration	Total
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termtest-radiusd / 184.173.103.52	159159159	159159159159159	732	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termtest-radiusd / 184.173.103.52	159159159	159159159159159	733	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termtest-radiusd / 184.173.103.52	159159159	159159159159159	733	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termtest-radiusd / 184.173.103.52	159159159	159159159159159	734	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termtest-radiusd / 184.173.103.52	159159159	159159159159159	736	N/A

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 signs.

To create active sessions report

In order to create a report go to the **Tools** and open the **"Active Sessions"** section. Then you need to fill out the query form with next parameters:

Section	Field Description
---------	-------------------

Filters	<p>On the Filters menu, select convenient parameters for the report. To cancel any filter, click the Delete  sign next to the filter.</p> <p>You can start a quick search by typing filters' names in the bar at the top of drop-down menu with filters. It will display all filters that have specified letters. If you enter more letters, fewer filters will result.</p> <table border="1"> <tr> <td>Group By</td> <td> Select a grouping option, here you can choose and swap columns, change the order. There are following accessible options to group the data in the report: <ul style="list-style-type: none"> • Orig Client/ Account/ Code/ Code Name/ Serial. • Term Client/ Account/ Code/ Code Name. • Gateway. </td> </tr> </table> <p>Additional Filters</p> <p>There are following accessible additional filters:</p> <ul style="list-style-type: none"> • Orig Client/ Account/ Code/ Code Name. • Term Client/ Account/ Code/ Code Name. <p>Origination Settings of Clients</p> <table border="1"> <tr> <td>Orig Client</td> <td>Define an origination client for the report</td> </tr> <tr> <td>Orig Account</td> <td>Enter an orig account for the report</td> </tr> <tr> <td>Orig Code</td> <td>Specify an orig code for the report</td> </tr> <tr> <td>Orig Code Name</td> <td>Indicate an orig code name</td> </tr> </table> <p>Termination Settings of Clients</p> <table border="1"> <tr> <td>Term Client</td> <td>Define a termination client for the report</td> </tr> <tr> <td>Term Account</td> <td>Enter a term account for the report</td> </tr> <tr> <td>Term Code</td> <td>Specify a term code for the report</td> </tr> <tr> <td>Term Code Name</td> <td>Indicate a term code name</td> </tr> </table>	Group By	Select a grouping option, here you can choose and swap columns, change the order. There are following accessible options to group the data in the report: <ul style="list-style-type: none"> • Orig Client/ Account/ Code/ Code Name/ Serial. • Term Client/ Account/ Code/ Code Name. • Gateway. 	Orig Client	Define an origination client for the report	Orig Account	Enter an orig account for the report	Orig Code	Specify an orig code for the report	Orig Code Name	Indicate an orig code name	Term Client	Define a termination client for the report	Term Account	Enter a term account for the report	Term Code	Specify a term code for the report	Term Code Name	Indicate a term code name
Group By	Select a grouping option, here you can choose and swap columns, change the order. There are following accessible options to group the data in the report: <ul style="list-style-type: none"> • Orig Client/ Account/ Code/ Code Name/ Serial. • Term Client/ Account/ Code/ Code Name. • Gateway. 																		
Orig Client	Define an origination client for the report																		
Orig Account	Enter an orig account for the report																		
Orig Code	Specify an orig code for the report																		
Orig Code Name	Indicate an orig code name																		
Term Client	Define a termination client for the report																		
Term Account	Enter a term account for the report																		
Term Code	Specify a term code for the report																		
Term Code Name	Indicate a term code name																		
Output	<p>This form contains settings of the output data of the report.</p> <p>Click the plus sign  near the "Columns" to select respective columns to output a report data. Also, you can cancel any chosen item.</p> <p>Accessible columns in the report</p> <p>There are following columns to add in the report: <i>Total, Info, Originator, Terminator, SRC Number, DST Number, Duration.</i></p> <table border="1"> <tr> <td>Total</td> <td>Quantity of sessions in the database, total quantity.</td> </tr> <tr> <td>Info</td> <td>Click a respective icon in this column and you could see an additional data about sessions: <i>Src and Dst Party ID, code and code name, x ID, session ID, start time and gateways.</i></td> </tr> <tr> <td>Originator</td> <td>The name of the originator, orig gateway, account IP, Name or ANI.</td> </tr> <tr> <td>Terminator</td> <td>The name of the terminator, term gateway, account IP, Name or ANI.</td> </tr> <tr> <td>Src Party ID</td> <td>The source number.</td> </tr> <tr> <td>Dst Party ID</td> <td>The destination number.</td> </tr> <tr> <td>Duration</td> <td>Session duration specified in seconds.</td> </tr> </table> <p>Other output settings</p> <table border="1"> <tr> <td>Order By</td> <td>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.</td> </tr> </table>	Total	Quantity of sessions in the database, total quantity.	Info	Click a respective icon in this column and you could see an additional data about sessions: <i>Src and Dst Party ID, code and code name, x ID, session ID, start time and gateways.</i>	Originator	The name of the originator, orig gateway, account IP, Name or ANI.	Terminator	The name of the terminator, term gateway, account IP, Name or ANI.	Src Party ID	The source number.	Dst Party ID	The destination number.	Duration	Session duration specified in seconds.	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.		
Total	Quantity of sessions in the database, total quantity.																		
Info	Click a respective icon in this column and you could see an additional data about sessions: <i>Src and Dst Party ID, code and code name, x ID, session ID, start time and gateways.</i>																		
Originator	The name of the originator, orig gateway, account IP, Name or ANI.																		
Terminator	The name of the terminator, term gateway, account IP, Name or ANI.																		
Src Party ID	The source number.																		
Dst Party ID	The destination number.																		
Duration	Session duration specified in seconds.																		
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 table view:</p> <ul style="list-style-type: none"> • <i>Plain</i> - a simple table view • <i>Grouped</i> - a table view with grouped data and possibility to collapse it <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note, that <i>Grouped</i> type of table view is available only for <i>Excel XLSx</i> and <i>Web formats</i>, it doesn't work with <i>CSV</i>.</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 chosen parameter. It's available only for plain type of the report.</p>
Send to	<p>You can send generated reports via e-mail. For example, it is useful when it takes a lot of time to run a report.</p> <p>Also, it is possible to specify several e-mails.</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 <i>Web</i>.</p> </div>

To create a query template

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

Section	Description
Active Sessions	Here you can specify parameters for the template that will be used while running reports
	Title Specify a name of the template
	Reseller Indicate the Reseller for the template
Watch	<p>This tool allows to automatically generate reports at the appropriate time and send the results to the list of e-mails</p> <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Please note, that this tool is not available for Web output type, only for <i>CSV/Excel XLS/Excel XLSx</i>.</p> </div>
	Recipients Specify recipients, you can indicate your own e-mail or other users of the system, or even 3rd parties
	Run Time Mention an appropriate time to automatically generate a report, it could be several times, for example: "10:00, 12:00, 18:00"
	Days of Week Indicate days of the week to automatically generate a report. For example, you can run a report only on Monday or each day of week
Report Query	Here the system automatically saves already specified search parameters. You can edit these values for generating correct report and modify the output type to view the report

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

To load already existed templates while generating statistic reports, click **"Load Query"** button in the *Active Sessions* section.


Active Sessions toolbar: reload, export, chart.

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

1. To refresh the report, click the respective button **"Reload options"** on the toolbar and choose a needed value for the **"Interval"** from the drop-down list.

 **Tip**


Also you may indicate an additional interval for which the system displays active sessions statistics. In order to do this, specify the time parameter in the **"Show last"** field. For example, if you want to display the data for 1 day, click the *"Reload options"* button and set the period *1440 min* in the *"Show last"* field.

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?"* at our Knowledge Base.

 **Tip**

If you want to properly create a **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 *"Date"* and *"Time"* parameters on *Axis X*, *"Calls Total"* parameter on *Axis Y*.
- specify a *line type* of the chart and click the *"Save"* button.

Knowledge Base Articles

- [Why there are no active sessions?](#)

Factors Watcher

On this page

- [Factors Watcher List](#)
- [Creating New Query](#)
- [Configuring Watcher Rules](#)

Factors Watcher List

This section represents built-in tool to monitor statistics and generate alerts if some conditions are met, as well as, block numbers, codes/code names, destinations, clients or accounts.

Screenshot: Factors Watcher main section

ID	Name	Watch Rules	Presets	Query
2	FW 1 Analyze by: Summary Report Check time: 30 minute(s) / 30 minute(s) No check has been made yet	0	0	Client: Vendor Profit / account_1 Code Name: - Group By: Code
1	FW 2 Analyze by: Summary Report Check time: 30 minute(s) / 60 minute(s) Last check on 08/18/2017 09:24:06 +0000	1	0	Client: Customer C Code Name: - Group By: Client, Account

Creating New Query

The tool workout is based on periodical queries of a statistic information. To create a new query, click the "New Factors Watcher" button and specify parameters in the following form:

Screenshot: Adding new Factors Watcher query

Factors Watcher

New Factors Watcher

Rows 1 - 2 of 2 | Page 1 of 1

Name:

Analyze by:

Report Template:

Analyze interval of: minute(s)

Period Offset: minute(s)

Check every: minute(s)

Period Start:

Time Zone:

Time Profile:

QUERY

Client: Account:

Code Name: Code:

Company: Code Deck: Gateway:

Group By #1: Group By #2: Group By #3:

Field	Description
Name	Query name. This field is mandatory. And you can't specify the name longer than 128 symbols.

Analyze by	Select a base report (<i>Summary</i> or <i>xDRs List</i>) as the ground for a current query. Different reports provide a different set of parameters that are available for monitoring. For instance, <i>xDRs List</i> allows you to manipulate with service sources (phone numbers, data) while <i>Summary</i> allows such operations with ACD and ASR.
Report Template	Specify the template for a further usage ⚠ Attention Please note, that the system enables to set a limited number of parameters overridden from the assigned template. For example: If there are 2 or more clients assigned to the respective template, the system will take the first value for Factors Watcher settings, all other clients will be ignored.
Analyze interval of, min	What interval of time to check. Please note, this option checks a current period, not the past hour .
Period Offset	this period is used to compare results of different intervals. It deducts a specified period from the "Period Start" date, then takes the statistics according to the "Analyze interval of" value and the date calculated above.
Check every, min	How often to perform checks
Period Start	Enter the specific time to start counting the period from
Time Zone	Specify timezone that will be used when pulling reports / blocking routes
Time Profile	When you choose the time profile, it will take into account the statistics in the <i>Factors Watcher</i> according to the chosen value, for example at peak times. However, if you click the "Test Query", it displays the statistics without the selected time profile.
Client	Select a client. You can set multiple clients.
Account	Select an account
Code Name	Select a code group
Code	Specify the code
Company	Specify a Reseller
Code Deck	Select a code deck to pull code names from
Gateway	Select a respective gateway
Group by #	Group query by selectable parameter (client, account, code name, code or gateway)
"Test Query" Button - click this button to test your query as <i>Summary Report</i> or <i>xDRs List</i> report for period specified "Check Every" and "Analyze Interval of" fields	


When you click "OK", the new query will appear on the list in the main window. You can edit properties of this query later by clicking  the edit icon.

⚠ Attention

In the previous version, user could come across an issue when **Factors Watcher** would block all **termination client's accounts** instead of termination clients himself according to the **watcher rule**. In **3.15.0**, this issue has been solved.

Configuring Watcher Rules

Next step you need to take is to configure the watcher rules – what parameters under which conditions to monitor. To do this:

1. Choose the already existed Factors Watcher from the list or create a new.
2. Click the name of the Factors Watcher or click the  icon.
3. In the new window click "add rule" button and fill the set of fields to add an appropriate rule.

Screenshot: Editing Factors Watcher rules

Factors Watcher FW 1

+ Add rule

Priority	Match	Origin	Code	Factors	Action	Lock Period	Periodic lock	Expiration Date
0	Calls	origination			Alert	0 min	<input type="checkbox"/>	



Match — you can use "*" wildcard in these fields.

Factors — you should list watch rules in this field delimited by ";". List of correct fields:
 - total_volume, billed_volume, acd_std, acd_cur, pdd, scd, package_volume - with measurement unit specified in service
 - total_records, notzero_records, success_records, busy_records, nochannel_records, error_records - with measurement unit: numbers;
 - total_cost, rate_avg - with measurement unit: money;
 - asr_std, asr_cur - with measurement unit: percentage (%).

OK Cancel Apply

Here is the full list of possible configurable fields:

Field	Description
Priority	Define a priority of rules execution if they have similar Match parameters
Match	A set of parameters that are used as base for checks
	<ul style="list-style-type: none"> Service Determine the type of service (for example, calls/sms/data)
	<ul style="list-style-type: none"> Origin Type of route to check (<i>Origination, Termination</i>)
	<ul style="list-style-type: none"> Client Specify the client to apply rules to
	<ul style="list-style-type: none"> Account Specify the account to apply rules to
	<ul style="list-style-type: none"> Code Name Specify the code name to apply rules to
	<ul style="list-style-type: none"> Code Specify the code to apply rules to
	<ul style="list-style-type: none"> Gateways Specify the gateway to apply rules to
<div style="background-color: #e0ffe0; padding: 10px;"> <p> Tip</p> <p>To create a temporary rule that will override other rules with the same match parameters, you need to set up the rule with the highest priority and specify an appropriate <i>Expiration Date</i>. Therefore, existed multiple rules with the same match parameters will override each other and the rule with the highest priority will be applied.</p> </div>	

Factors	<p>Enter factors that will be applied to a current rule.</p> <p>Parameters should be listed with semi-colon “;” as a delimiting symbol.</p> <p>The list of parameters available for usage:</p> <ul style="list-style-type: none"> • total_volume, billed_volume, acd_std, acd_cur, pdd, scd, package_volume - with measurement unit specified in service • total_records, notzero_records, success_records, busy_records, nochannel_records, error_records - with measurement unit: numbers; • total_cost, rate_avg - with measurement unit: money; • asr_std, asr_cur - with measurement unit: percentage (%). <p>For example, if you enter “total_volume > 100” this will mean that when total calls time count for respective match parameters goes over 100 minutes, system will create an alert</p> <p>It's possible to add factors watcher rule with negative values. For example, total_cost < -10.</p>
	<p>Factors with reference to the side-by-side reports:</p> <p>You can adjust these factors by your own using the next formula and pre-existing factors mentioned above: <i>factors_name_1</i> - value for the first period; <i>factors_name_2</i> - value for the second period; <i>factors_name_diff</i> - difference between periods.</p> <p>For example: total_cost_1 (of the 1st period), total_cost_2 (of the 2ndperiod), total_cost_diff (difference in %).</p> <div style="background-color: #e0ffe0; padding: 10px;"> <p> Tip</p> <p>The users can add the Factors Watcher based on the side-by-side Summary Report. All you need to do is:</p> <ul style="list-style-type: none"> • click the "New Factors Watcher" button; • fill out the "Name" field and others according to your needs; • then specify intervals in the next fields: "Analyze interval of", "Period Start" and "Period Offset". • and click the "Test Query" button. </div>
Action	<p>An action that should be taken if a matched rule is found.</p> <p>There are respective options: Alert, Block Code/Code Name/Account/Client When one of these options is applied, the message will be shown in the section <i>Events log</i>.</p> <div style="background-color: #ffffe0; padding: 10px;"> <p> Attention</p> <p>The options <i>Block Client/Account</i> will be invisible if you skip the second step (i.e. create a new factors watcher and group by the Client /Account) and "Group By #" fields are empty. If you group by the Client, the option "<i>Block Account</i>" won't be visible in the drop-down list of the "<i>Action</i>" column.</p> </div>
Lock Period	<p>If action was block of number, destination or code, then define duration of that block in this field</p>
Periodic lock	<p>If either calendar period or fixed period is enabled, this lock will be expired at the end of a given period</p>
Expiration Date	<p>Specify date when the rule should be automatically deleted</p>

 **Attention**

Please note, that the **set of rules** in the "**Action**" field depends on how many parameters you defined in "**Group by #**" fields when a current query was created.

The "**Block Code**" option in the "**Action**" is available only if you set respective grouping in the *Tools / Factors Watcher settings*. For example, if you defined a code in the query, you will be able to block codes in watcher rules, etc.

xDR Disputes

On this page

- [xDR Disputes List](#)
- [Creating New Dispute](#)
 - [Step 1. Selecting File and Specifying All Required Parameters](#)
 - [Step 2. Recognizing The File](#)
 - [Step 3. Receiving Results of comparison](#)
- [Mass Edit Button](#)

xDR Disputes List

xDR Disputes Manager is 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
3	GermanyTelecom/Orig / all accounts	07/25/2017 - 07/25/2017	0	0	0	07/25/2017 18:17:52 +0300
1	GermanyTelecom/Orig / all accounts	07/19/2017 - 07/19/2017	1342	0	439	07/19/2017 12:34:11 +0300

Column	Description
ID	ID of a dispute
Client/Account	Client and Accounts of a current dispute
Period	Period of compared xDR files
Total Qty	Total amount of compared xDRs
No L	Number of xDRs which were not found in the system
No E	Number of xDRs which were not found in the external xDR file
Updated	Date of the last dispute update

Icon	Description
	Is used to open a dispute details window
	Is used to delete a dispute from the system

Attention

If *xDRs Disputes Manager* is not displayed in *Tools* section, you need to enable it in *System > Roles* section.

Creating New Dispute

Whole creating dispute process logically divided into three steps.

Step 1. Selecting File and Specifying All Required Parameters

To create a new dispute press "*Add New Dispute*" button. You need to specify the next information in the pop-up window:

Screenshot: *Adding New Dispute. Step 1*

Field	Description
Client	Specify a client for the dispute
Account	Specify an account for the dispute
Type	Choose the type of compared xDRs: <ul style="list-style-type: none"> • <i>origination</i> • <i>termination</i>
Code Name	Specify code name of a desired destination
Code	Specify code of a desired destination
Code Deck	Select a code deck that should 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: yellow; padding: 5px; margin-top: 10px;"> <p>⚠ Attention</p> <p>Please note that by default date format is set "auto" which has the following format <code>YYYY-MM-DD HH:MM:SS</code>.</p> </div>
Period	Specify a period of a dispute
"Override timezone" checkbox	If enabled, the timezone in the importing file will be replaced with the specified timezone in the "Period" section

When you filled in all required fields press "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 should contain only 6 columns** for correct auto-detection while importing.

Step 2. Recognizing The File


The system will recognize the file, and display few first rows of it. Note that comparison of xDRs can be made only by the following parameters: SRC Number, DST Number, Session Time, Connect Time, Finish Time, so if there's a need, make changes to the recognition of data and press "Process>>" again (Screenshot).

Screenshot: New dispute creation. Step 2


Src Number	Dst Number	Session Time	Connect Time	Disconnect Time	Skip
38050	380501112233	25	08/10/2014 18:34:16 +0000	08/10/2014 18:34:41 +0000	<input type="checkbox"/>
38050	380501112233	21	08/10/2014 18:31:31 +0000	08/10/2014 18:31:52 +0000	<input type="checkbox"/>
38050	380501112233	68	08/10/2014 18:29:28 +0000	08/10/2014 18:30:36 +0000	<input type="checkbox"/>
38050	380501112233	63	08/10/2014 17:30:15 +0000	08/10/2014 17:31:18 +0000	<input type="checkbox"/>
38050	380501112233	30	08/10/2014 17:30:28 +0000	08/10/2014 17:30:58 +0000	<input type="checkbox"/>
38050	380501112233	5	08/10/2014 17:30:34 +0000	08/10/2014 17:30:39 +0000	<input type="checkbox"/>
380509595465	380504523212	109	08/10/2014 15:39:53 +0000	08/10/2014 15:41:42 +0000	<input type="checkbox"/>
380509595465	380504523212	6	08/10/2014 15:38:22 +0000	08/10/2014 15:38:28 +0000	<input type="checkbox"/>


Step 3. Receiving Results of comparison

After you click the "Process>>", the system will process the comparison and "Dispute Details" window will be opened, where you need to click on "Update" button and specify Compare Options in respective pop-up window, then click on "Refresh" button for showing the disputes' results (Screenshots below).

Click the down arrow  on the top on the page to quickly search disputes.

Screenshot: Disputes Details window. Step 3

Dispute Details


 Update

No items were found

COMPARISON OPTIONS

SRC Number:

DST Number:

Connect Time:

Disconnect Time:

Session Time:

Refresh

Field	Description
SRC Number	Enter number of the last digits for source number comparison
DST Number	Set number of the last digits for destination number comparison
Connect Time	Specify possible time offset (in seconds) between the system and external xDRs
Finish Time	Define possible time offset (in seconds) between the system and external xDRs
Session Time	Specify possible time offset (in seconds) between the system and external xDRs

Screenshot: Disputes Details window. Step 3

Dispute Details						
Update						
Rows 1 – 20 of 10856 Pages: 543 1 2 3 4 5 ▶						
	SRC Number	DST Number	Connect Time	Disconnect Time	Session Time	
L	No matched CDRs					
E	380509595123	380671240103	2014-09-24 16:41:36+00	2014-09-24 16:42:14+00	38	
L	No matched CDRs					
E	380509595923	380671240103	2014-09-24 16:41:40+00	2014-09-24 16:42:14+00	34	
L	380509595123	380671240103	2014-09-24 16:41:40+00	2014-09-24 16:42:14+00	34	
E	380509595123	380671240103	2014-09-24 16:41:40+00	2014-09-24 16:42:16+00	36	
L	380509595123	380671240103	2014-09-24 16:44:02+00	2014-09-24 16:44:28+00	26	
E	No matched CDRs					
L	380631224578	380687892315	2014-09-24 16:44:03+00	2014-09-24 16:44:39+00	36	
E	380631224578	380687892315	2014-09-24 16:44:03+00	2014-09-24 16:44:39+00	36	
L	No matched CDRs					
E	380662569874	380502992345	2014-10-01 11:17:33+00	2014-10-01 11:19:33+00	120	
L	No matched CDRs					
E	380662569874	380502992345	2014-10-01 11:17:33+00	2014-10-01 11:19:33+00	120	
L	No matched CDRs					
E	380662569874	380502992345	2014-10-01 11:17:33+00	2014-10-01 11:19:33+00	120	
L	No matched CDRs					
E	380662569874	380502992345	2014-10-01 11:17:34+00	2014-10-01 11:19:32+00	118	
L	No matched CDRs					
E	380662569874	380502992345	2014-10-01 11:17:34+00	2014-10-01 11:19:32+00	118	
L	No matched CDRs					
E	380662569874	380502992345	2014-10-01 11:17:34+00	2014-10-01 11:19:34+00	120	

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)
L	Green color indicates the exact 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 to the range of values specified in the **Update** option, it will be indicated as exact matched xDRs (green color).

Also, you can change the results mode using special search form (Screenshot below).

Here you can set exact **DST Number** or **SRC Number** for showing results only for that number, also, filtration can be made by **Type** of compared records, and results can be also saved in .csv format using **Output** field. For applying the made changes click the **Query** button, and if you want to clear the specified settings click the **Reset** button.

Screenshot: *Dispute Details* window. Search form

The screenshot shows the 'Dispute Details' window with a search form overlay. The search form has the following fields and options:

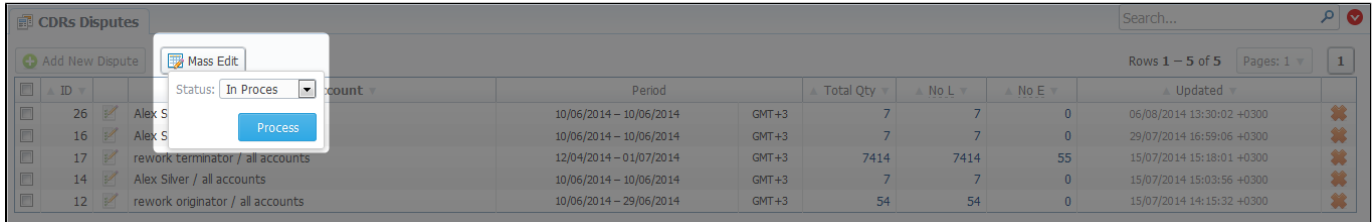
- SRC Number:
- DST Number:
- Type:
- Output:
- Buttons:

The background table is dimmed, showing the same data as the first screenshot.

Mass Edit Button

You may change the status of a group of disputes by using "Mass Edit" button (Screenshot). In the following window you can specify the status of selected disputes in respective "Status" field, then click the "Process" button and all changes will be applied.

Screenshot: Mass Edit button



The screenshot shows a web application interface for managing CDRs Disputes. A "Mass Edit" dialog box is open, allowing the user to change the status of selected disputes. The dialog has a "Status" dropdown menu currently set to "In Proces" and a blue "Process" button. The background table displays a list of disputes with columns for ID, Name, Period, Timezone, Total Qty, No L, No E, and Updated. The table shows 5 rows of data.

ID	Name	Period	Timezone	Total Qty	No L	No E	Updated
26	Alex S	10/06/2014 - 10/06/2014	GMT+3	7	7	0	06/08/2014 13:30:02 +0300
16	Alex S	10/06/2014 - 10/06/2014	GMT+3	7	7	0	29/07/2014 16:59:06 +0300
17	rework terminator / all accounts	12/04/2014 - 01/07/2014	GMT+3	7414	7414	55	15/07/2014 15:18:01 +0300
14	Alex Silver / all accounts	10/06/2014 - 10/06/2014	GMT+3	7	7	0	15/07/2014 15:03:56 +0300
12	rework originator / all accounts	10/06/2014 - 29/06/2014	GMT+3	54	54	0	15/07/2014 14:15:32 +0300

Routing

This chapter describes **routing capabilities of JeraSoft VoIP Carrier Suite**. Please note that your JeraSoft VCS must include the **Routing Module** to have functional capabilities described below.

Introduction to VCS Routing Module

JeraSoft VCS is able to provide so-called Dynamic Routing features, also often called *External Routing*. Depending on your switch manufacturer, VCS provides these functions via RADIUS Protocol or SIP Redirect Server. To find out more about possible options of your switch manufacturers, please look through [VCS Integration Manual](#) or contact [JeraSoft Support](#).

In VCS, the Dynamic Routing work is based on three principles: *Routing Plans, Routing Policies and Routing Table generation*. So, there are few easy steps how 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 desired [policy](#) for your rules – a special formula to decide which routes should get a top priority (for example, this way you decide whether you want to do LCR or Quality Routing);

Step 3: Assign created Routing Plan to your origination customer(s). Then, you need to wait until the Routing Table is created.

Please check 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 New Routing Plan](#)
- [Routing Rules tab](#)
- [Import / Export tab](#)
- [Routing Plan](#)
- [Knowledge Base Articles](#)

Section overview

Routing Plans section is available if your JeraSoft VCS includes the *Routing Module*. To access *Routing Plans* section, please log in to your system and go to **Routing > Routing Plans**.

This section allow to manage your routing rules for customers, providers and destinations. Each routing plan should be assigned to a respective customer (originator) for proper work of 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		
5	DR: Complex LCR	Reseller 1	—	longest only	by code / appeal	1		
4	DR: Complex Quality	Reseller 1	—	longest only	by code / appeal	1		
6	DR: DID + Simple LCR	Reseller 1	—	longest only	by code / appeal	2		
3	DR: Proportional	Reseller 1	—	longest only	by code / appeal	1		
2	DR: Simple LCR	Reseller 1	—	longest only	by code / appeal	1		
1	DR: Simple Quality	Reseller 1	—	longest only	by code / appeal	1		
7	Routing Plan	Reseller 1	DEFAULT	longest only	by code / appeal	2		

Column	Description
ID	ID number of a routing plan
Name	Name of a routing plan
Reseller	Name of reseller, a corresponding routing plan has been assigned to as 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	An amount of rules specified in a respective routing plan

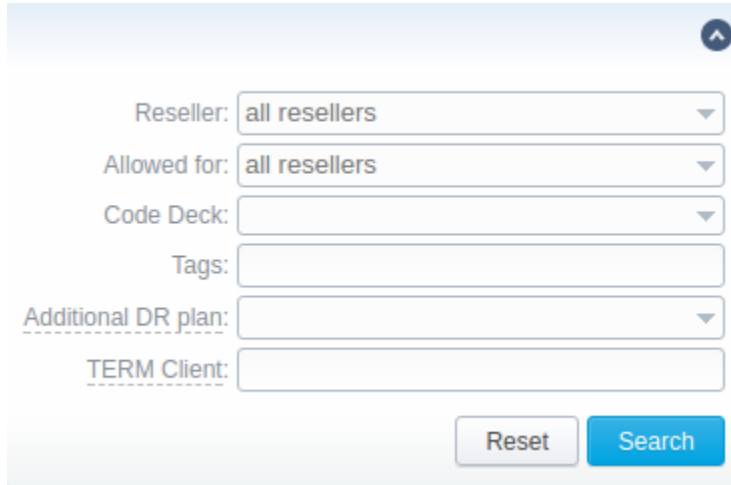
Functional **buttons/icons**, presented in the section, are as follows:

Button/Icon	Description
	Allows to create a new routing plan
	Allows to copy an existing routing plan to the section

Advanced Search

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

Screenshot: Advanced Search drop-down menu



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

- Reseller:** all resellers
- Allowed for:** all resellers
- Code Deck:** (empty)
- Tags:** (empty)
- Additional DR plan:** (empty)
- TERM Client:** (empty)
- Buttons:** Reset, Search

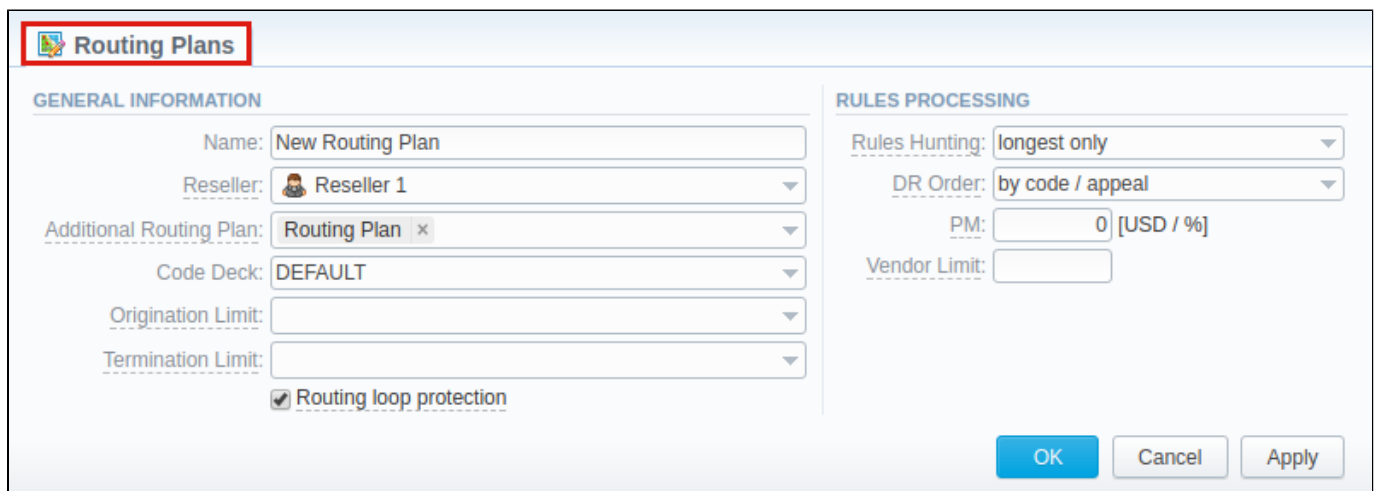
Field	Description
Reseller	Select from the list of all Resellers, Sub-resellers and Managers registered in the system
Allowed for	Select from the list of all Resellers, Sub-resellers and Managers that are assigned to routing plan in Origination Limit field
Code Deck	Select from the list of all Code Decks in the system
Tags	Specify a certain Tag that was added to routing plan
Additional DR Plan	Select a routing plan that was assigned as an additional in Additional Routing Plan field
TERM Client	Specify a termination client that was assigned to any of a routing plan rule

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

Adding New Routing Plan

To create a new routing plan click the “*New Routing Plan*” button, and fill out the following fields in the pop-up window.

Screenshot: Routing Plans window



The screenshot shows the Routing Plans window with the following fields and options:

- GENERAL INFORMATION**
 - Name:** New Routing Plan
 - Reseller:** Reseller 1
 - Additional Routing Plan:** Routing Plan
 - Code Deck:** DEFAULT
 - Origination Limit:** (empty)
 - Termination Limit:** (empty)
 - Routing loop protection
- RULES PROCESSING**
 - Rules Hunting:** longest only
 - DR Order:** by code / appeal
 - PM:** 0 [USD / %]
 - Vendor Limit:** (empty)
- Buttons:** OK, Cancel, Apply

Information block	Fields description

General information	General routing plan information	
	Name	Title of a routing plan
	Reseller	Define the reseller/owner of a current routing plan
	Additional Routing Plan	Specify DR plan which will be additional for 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 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 company or companies which will have limit in termination for vendors who use it (sub-companies are not included)
	Routing 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, longest only option is set.
	DR Order	Specify a method of routes sorting in routing table. The options are: <ul style="list-style-type: none"> • by appeal / code – routes will be sorted in accordance 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, by code / appeal option is set.
	PM	Define a Profit Margin value for 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 **Origination Limit** and **Termination Limit** fields are visible only during:

- new routing plan creation;
- editing of already created routing plan if 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 routing plan's name and you will enter **Routing Rules** tab, then press **Add rule** button and fill in the following fields:

Screenshot: *Routing Rules tab*

Routing Rules | Import / Export | Routing Plan | DR: Complex LCR | Search...

Rows 1 - 1 of 1 | 20 | Page 1 of 1

Priority	Code	Code name	Type	Terminator / Policy	PM	Params	Capacity	Stop Hunt
1	*		Dynamic	Complex LCR		TP: all time		<input type="checkbox"/>

OK Cancel Apply

Field	Description
Priority	Define a priority of rule execution if two or more rules have similar code or code name specified
Code	<p>Enter a code which will be used in current routing rule, use * as wildcard.</p> <p>If DID type for current routing rule is selected, you may specify a code:</p> <ul style="list-style-type: none"> • Any destination – rules with longer codes will be ahead of DID route, possibly leaving it out entirely if longest only mode is used (* wildcard will be used as DID code) • Full DID – DID route will always be the first route (entire DID number will be used as a code) <p>By default, Full DID option is selected.</p>
Code Name	If you have a code deck assigned to this routing plan, a corresponding name of code, specified in Code field, will be displayed automatically. If no code deck is attached, field will remain empty.
Type	<p>Select a type of routing for a current rule:</p> <ul style="list-style-type: none"> • Static lient - if selected, in Terminator / Policy field you can to specify a certain termination client • Static Account - if selected, in Terminator / Policy field you can to specify a certain termination account of a client • Dynamic - if selected, in Terminator / Policy field you can to specify a certain dynamic policy for the rule • DID - if selected, Terminator / Policy field becomes inactive, and Code field is automatically changed to Full DID
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 rule
PM	<p>Define a <i>Profit Margin</i> value for current rule here.</p> <p>⚠ Attention</p> <p>If PM field has been specified both for the entire routing plan and for a certain rule, the latter has a higher priority.</p>
Params	<p>A number of additional parameters available by clicking on icon (see screenshot below)</p> <ul style="list-style-type: none"> • Time Profile Specify time profile from the list • Number Length Set minimum and maximum length of destination number, that will be matched by this routing rule • Balancing Define percentage or proportion amount of traffic which will be sent to respective vendor who participates in balancing <ul style="list-style-type: none"> • ⚠ Attention • Please note that after changing <i>balancing value</i>, it is needed to restart SIP and/or RADIUS daemons. • Originator Tags You can here specify respective originator tags. If nothing is specified, it works for all. <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 specified tags is presented.

	<ul style="list-style-type: none"> • Terminator Tags 	Here you can add terminator tags that that will be used for terminators. If nothing is indicated, it works only for terminators without tags. Please note, this parameter is available only for dynamic rules
Capacity	Limit capacity for the current rule (leave blank for unlimited)	
Stop Hunt checkbox	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 executed for current call	

Screenshot: Routing rules settings

Import / Export tab

Import / Export tab allows user to either upload a desired routing rules (choose a file on a computer through a form and press **Process** button) or download current routing plan rules in .csv file by pressing **Process** button (see screenshot).

Screenshot: Import / Export tab

Please pay attention that the column order in importing file must correspond to the one presented on 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 info 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 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** DR: Complex LCR

GENERAL INFORMATION

Name: DR: Complex LCR

Reseller: Reseller 1

Additional Routing Plan:

Code Deck:

Origination Limit:

Termination Limit:

Routing loop protection

RULES PROCESSING

Rules Hunting: longest only

DR Order: by code / appeal

PM: 0 [USD / %]

Vendor Limit:

OK Cancel Apply

Knowledge Base Articles

- [How to route by SRC Number / Orig Group?](#)
- [US Billing & Taxation](#)
- [How to set calls to come from one specific originator?](#)
- [How to set up a functional capacity?](#)
- [How to exclude specific vendor from Dynamic Routing?](#)

Routing Analysis

On this page:

- [Routing Analysis Form](#)
- [To create Routing Analysis Report:](#)
- [Export generated report](#)

Routing Analysis Form

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 a case when you are using **Dynamic Routing feature**.

Routing Analysis section represents a query form with 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 **Task Scheduler** section (**System > Task Scheduler**). Routing Analysis shows routes based on **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**.

To create Routing Analysis Report:


In order to generate routing analysis enter next parameters in the query form:

Section	Field Description
Filters	In the Filters menu, select desired parameters for the report. To cancel any filter, click the delete sign  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, field value is set to Calls .
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 calling shops . This field is mandatory.
Account	Select an account for the report.
Additional Filters	
There are following accessible additional filters:	
<ul style="list-style-type: none"> • Events: Gateway. • Extras: Scr Party ID; Dynamic Tags; Routing Plan; Verbose. 	
Events Settings	
Gateway	Define a gateway that specified in the term account
Extra Settings	
Dynamic Tags	Enter additional dynamic tags for this routing

Routing Plan	Enter the plan with a respective routing rule
Scr Party ID	Specify a source number or any other source identification in order to check the translations
Verbose	Select which routes should be displayed (<i>active, active and non-profit or all routes</i>).

Output




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




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

Accessible columns in the report

Following additional columns can be added to the report: *Rank, Route Type, Route Status, Profit, Appeal, Termination, Code, Term Rate, Account IP / Name, Dst Party ID, Src Party ID, Gateway.*

Rank	Vendor position during routing. It's applicable and the system puts values in order when route status is accepted.
-------------	--

Route Type	<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 blue  icon in the column shows a static route</p> <p>A violet  icon indicates a DID route</p> <p>A green  icon in the column shows a dynamic route</p> <p>To view a detailed information on route type hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on route type</i></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Rule Destination: 1202 Static route</p> <p>Rule Properties: Balancing: 100% Priority: 1</p> <p>Debug Info: #1 {DST#1202 TP#1 P#1 RP#7 T#s C#12 "Term Client #1 / term"}</p> </div>
-------------------	--

Route Status	<p>The following information is displayed in the column: the state of the route, routing rule capacity, termination client / account / reseller capacity</p> <p> for accepted</p> <p> for no capacity</p> <p> for denied (for example, not matched Reseller/ number length limit)</p> <p>To view a detailed information on route status hover over a corresponding icon in the column.</p> <p><i>Screenshot: Detailed information on route status</i></p>
---------------------	---




Route Status:
accepted

Routing Rule Capacity
— 0 active sessions

Terminator Account Capacity:
— 0 active sessions

Terminator Client Capacity:
— 0 active sessions

Terminator Reseller Capacity:
— 0 active sessions

<p>Profit</p>	<p>Information on Profit and Profit Margin in the currency, indicated in the Client's settings, is displayed in the section. Also, it shows Term Rate, Profit and Profit Margin in the system currency only if system currency differs from the one in Client's settings.</p> <p>To view detailed information hover over Profit  icon in the respective column.</p> <p>Screenshot: <i>Routing Analysis / Profit</i></p> <div style="border: 1px solid black; padding: 5px;"> <p>Profit: 0.9875 EUR</p> <p>Profit Margin: 25%</p> <p>Term Rate: 0.2000 USD</p> <p>Profit: 0.7900 USD</p> <p>Profit Margin: 25%</p> </div> <div style="background-color: #e0ffe0; padding: 5px;"> <p> Tip</p> <p>Please note, it analyses the profitability by comparing orig and term rate. Therefore, an orig rate should be equal or greater than a term rate and profit margin.</p> </div>
<p>Appeal</p>	<p>Shows the appeal automatically calculated by the system according to the chosen DR Policies (Routing section > DR Policies)</p>
<p>Terminator or</p>	<p>The name of the respective terminator or his account name specified in the Client's settings</p>
<p>Code</p>	<p>Here you can see matched code in the terminator's rate table</p>
<p>Term Rate</p>	<p>Rate that is used to terminate the call</p>
<p>Account IP / Name</p>	<p>The name or IP of the account</p>
<p>Dst Party ID</p>	<p>Shows destination party ID that is sent to provider when all matching number translations are performed</p>
<p>Scr Party ID</p>	<p>Shows source party ID after all number translations</p>
<p>Gateway</p>	<p>Displays a respective gateway that is specified in the term account</p>
<p>Other output settings</p>	
<p>Type</p>	<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: #ffff00; padding: 5px;"> <p> Attention</p> <p>Please note, that Grouped type of table view is available only for Excel XLSx and Web formats, it doesn't work with CSV or Excel XLS.</p> </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 to.</p>

After selecting all needed parameters click **Query** button and the system will generate a report.
 Screenshot: *Routing Analysis*

Routing Analysis

Gateway
Extras
Src Party ID
Dynamic Tags
Routing Plan
Verhnee

FILTERS
Service: Calls
Dst Party ID: 1202
Client: Orig Client
Account:

Save Query Load Query... Query

OUTPUT COLUMNS (12)
Type: Web Grouped

Dst Party ID: 1202
Routing Plan: Routing Plan
DR Order: by code / appeal
Rules Hunting: longest only

Client: Orig Client
Destination: 1202 | United States
Orig Rate: 1.2375 EUR | Parent Rate Notification

Export to XLSx

Type	Rank	Route Type	Route Status	Profit	Appeal	Terminator	Code	Term Rate	Account IP / Name	Dst Party ID	Src Party ID	Gateway
Normal	1	S	●	1.0000	1.0000	Term Client #1 term2	1202 United States	0.9375 EUR	100.100.14.1/32	1202		Any
Normal	2	S	●	1.0000	1.0000	Term Client #1 term	1202 USA	0.2000 EUR	term	1202		Any
Normal	3	S	●	1.0000	1.0000	Term Client #1 term3	1202 United States	0.5625 EUR	term3	1202		Any

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Moreover, you can create (save) and display previously saved report template by clicking on **Save Query** and **Load Query** buttons respectively. Keep in mind that load button will be present only if there is at least one routing analysis report in **Report Templates** section.



Tip

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

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

Screenshot: *Expand / collapse report data*

Routing Analysis

Gateway
Extras
Src Party ID
Dynamic Tags
Routing Plan
Verhnee

FILTERS
Service: Calls
Dst Party ID: 1202
Client: Orig Client
Account:

Save Query Load Query... Query

OUTPUT COLUMNS (12)
Type: Web Grouped

Dst Party ID: 1202
Routing Plan: Routing Plan
DR Order: by code / appeal
Rules Hunting: longest only

Client: Orig Client
Destination: 1202 | United States
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Export to XLSx


Type	Rank	Route Type	Route Status	Profit	Appeal	Terminator	Code	Term Rate	Account IP / Name	Dst Party ID	Src Party ID	Gateway
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Normal	2	S	●	1.0000	1.0000	Term Client #1 term	1202 USA	0.2000 EUR	term	1202		Any
Normal	3	S	●	1.0000	1.0000	Term Client #1 term3	1202 United States	0.5625 EUR	term3	1202		Any

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If applicable, you can check the **Future Terminator's Rate** and **its effective date** in the report, by hovering over a current rate in **Term Rate** column (see screenshot below).

Screenshot: *Future Terminator's Rate*

Term Rate	Account IP / Name
0.5625 EUR	term3
0.2000 EUR ▲	term
Next Rate: 0.3000 ▲ 0.1000 EUR Effective From: 01/24/2018 00:00:00 +0000	

By clicking on **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 generated report

You can export report data either in .xls file or .csv that would contain currently presented data. Press **Export to XLSx** or **Export to CSV** button to download a file of the respective format. Be advised that **Export to CSV** button is only available if **Output** is set to **Web / Plain**.

Attention

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 an immediate Routing Analysis functioning.

Knowledge Base Articles

- [Why does not Routing Analysis show routing according to rule's changes?](#)
- [Why there is no route observed?](#)
- [What to do if routing doesn't work?](#)

Dynamic Routing Policies

In this article

- [Section overview](#)
- [Management of DR Policies](#)

Section overview

This section describes the list of **currently available routing policies for VCS**. **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

Status	Name
●	Complex LCR
●	Complex Quality
●	DID Routing
●	Proportional
●	Simple LCR
●	Simple Quality

Policy	Description
Complex LCR	Three cheapest routes that are sorted by the quality.
Complex Quality	Three routes with the highest quality that are sorted by price.
DID Routing	The only applicable policy if your routing plan has DID type of rule.
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.

Management of DR Policies

In the section, you are unable to **add** or **delete** any of policy. Nor can you edit its appeal. However, you can edit **policy name** or its **status**. To do so, click on its name on the list, and a pop-up window, displaying policy details, will be displayed. Window's structure is as follows:

Screenshot: DR Policies management

DR Policies

Complex LCR

Name:

Status:



Appeal:

```
CASE WHEN rate > (SELECT d.rate FROM tmp_dr_table
d WHERE d.code = tmp_dr_table.code ORDER BY rate
LIMIT 1 OFFSET 3) THEN 100000*rate ELSE
1000/(asr*acd) END
```

OK

Cancel

Apply

Field	Description
Name	Name of the respective policy. Can be modified by a user
Status	Policy can have two statuses: <ul style="list-style-type: none">• Active - represented by green  icon in the section• Disabled - represented by red  icon in the section Status can be modified by a user
Appeal	Regulations and principles represented as a formula for terminators prioritizing. Cannot be modified

Dynamic Routing Table

The **JeraSoft VCS solution** operates with its own **Routing Table** that is automatically generated over specified regular periods of time 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 update, 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 on  button opposite **Dynamic Routing Manager**.

Configuration

This chapter of our Guide contains information that relates to section designed for **setting up and configuration of JeraSoft VoIP Carrier Suite**. Here, user 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](#)
- [Payment Gateways](#)
- [Time Profiles](#)
- [Taxes Profiles](#)
- [Tags](#)
- [Invoices Templates](#)
- [Services](#)
- [Settings](#)

Code Decks

In this article

- [Section overview](#)
- [Creating 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 same codes and change them in the real time.

Section is presented in a 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	Deck Name	Reseller	Codes		
1	DEFAULT	All Resellers	19998		
3	Default_new	All Resellers	175132		
2	Demo_default	All Resellers	33027		

Column Name	Description
ID	Code deck's identification number
Deck Name	Name of a code deck
Reseller	List of resellers corresponding deck was assigned to
Codes	Total number of codes presented in the deck

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 to delete a code deck from the system. Requires confirmation

Creating New Code Deck


To create a new code deck:

- Click **New Code Deck** button
- Fill in all required fields of a pop-up window (see screenshot below)
- Press **OK**

Subsequently, a new code deck will be added to the general list in the section.

Screenshot: Code Deck pop-up window

Managing Code Decks

In order 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

Adding Codes

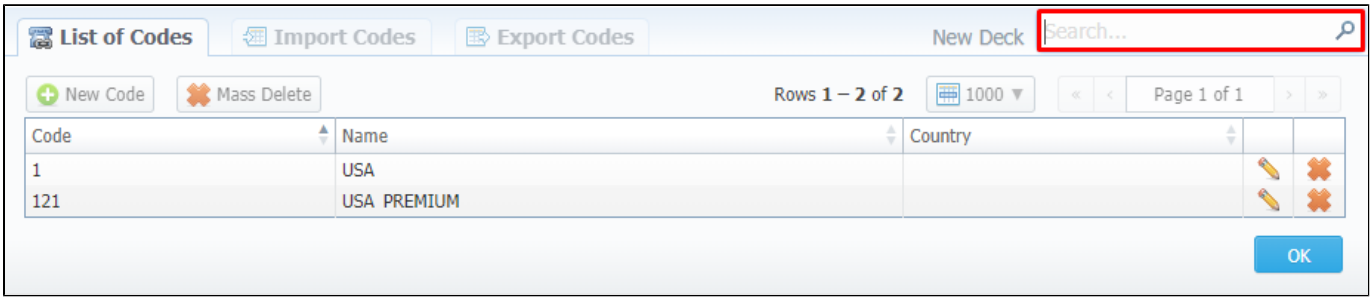
In **List of Codes** tab, click on **New Code** button to add a code group to your deck. The pop-up window contains the following parameters (see screenshot below):

Screenshot: Adding new codes

Field	Description
Code Deck	Name of the code deck. Autofilled by the system
Code	New destination code
Code Name	Displayed name of a code group
Country	Country the codes in 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 searchbox



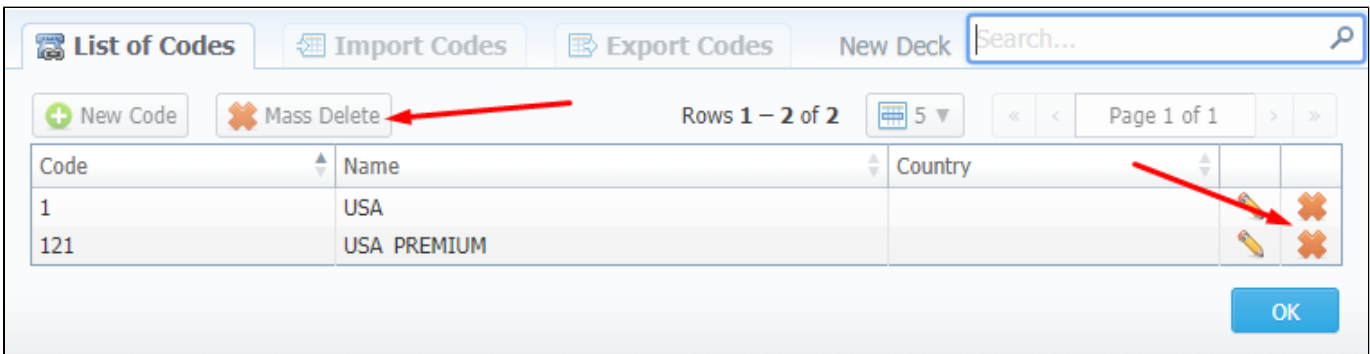
Attention

The spaces at the beginning and the end of code names will not be shown up starting from the [VCS 3.10.4](#). Although, the spaces between separate words of code names are saved and respectively reflected in the web interface.

Deleting Codes

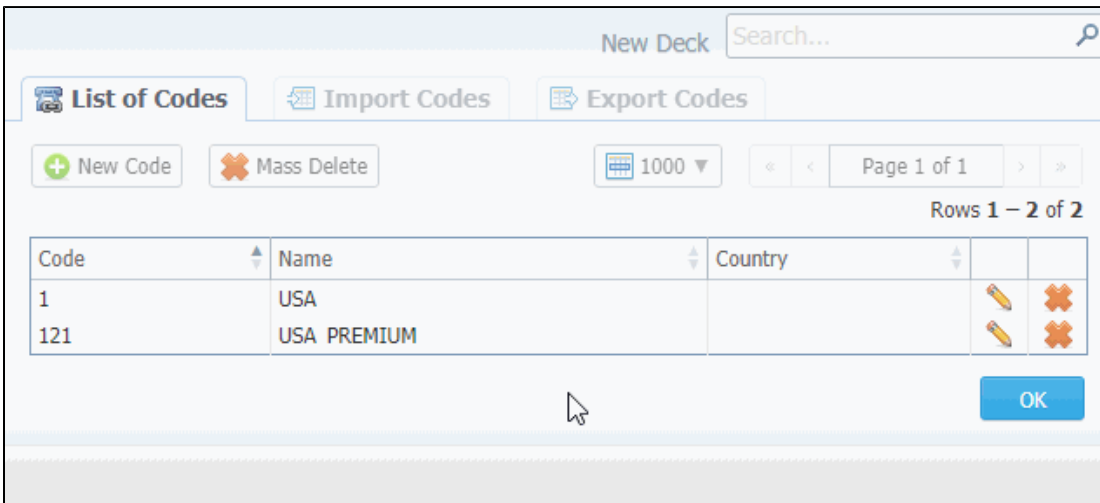
You can either delete **each** code separately by pressing  delete icon opposite corresponding code on the list or delete **all** codes at once by pressing **Mass Delete** button (see screenshot below).

Screenshot: Codes deletion



To verify mass deletion, press **OK** button 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 on **Process>>** button.

Screenshot: *Import Codes - Step 1*

Section	Field	Description
File Process	Select file to import	Select an import file by pressing Choose File button
	Fields delimiter	Specify here a delimiter symbol. Possible options are: <ul style="list-style-type: none"> • Autodetect • , • ; • Tab By default, 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 an inconsistency or error was found in 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, Import correct rows and show all found errors option is chosen.

During the **second step**, system will recognize the file and display 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 **Skip** column (see screenshot). To abort importing process, click on **Return** button, and you will be redirected to **Import Codes** tab. To finish importing, click on **Import** button (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"/>

After you click on **Import** button, the system will start importing process. When the progress bar reaches 100%, your import is done. Congrats!

Knowledge Base Tip

See what happens if your file contains [Country Code](#) column.

Exporting Codes

This feature allows you to export a content of a code deck to a file. To initiate export, do the following:

- Go to **Export Codes** tab (screenshot down below)
- Specify delimiter symbol in **Fields delimiter** field and 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

Currencies

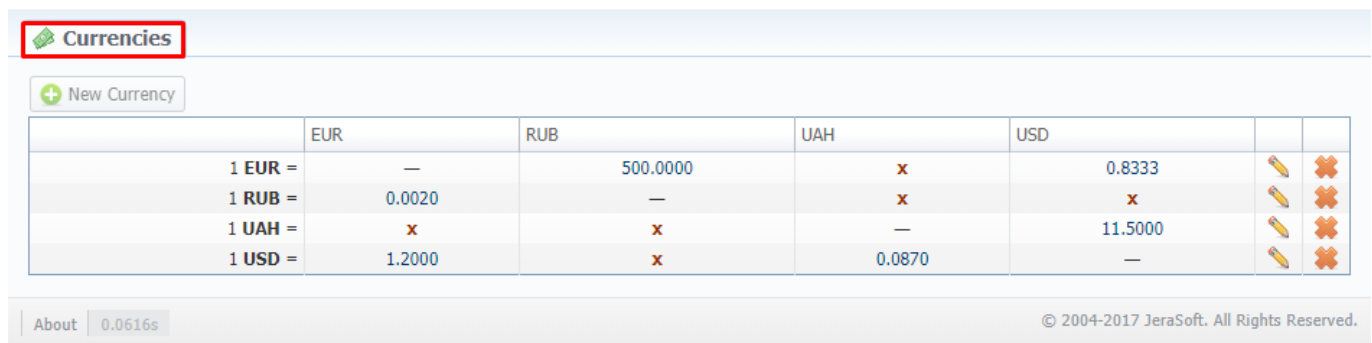
In this article

- [Section overview](#)
- [Adding New Currency](#)
- [Specifying Currency Rate](#)

Section overview

This section displays the list of all **currencies**, registered in the system, in a 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 corner stone 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 to manage an existing currency on a list
	Allows to delete a currency from the system. Requires confirmation
	Allows to manage an exchange rate of a currency

Adding New Currency

You can add a new currency by clicking **New Currency** button above the list. In a pop-up window (see screenshot below), you need to fill in the **required fields** and press **OK**.

Screenshot: New Currency pop-up window

New Currency

Name:

Rates precision:

Details precision:

Totals precision:

Field	Description
Name	Name of a new currency
Rates precision	Number of decimal places for rates formatting. By default, field value is set to 4 .
Details precision	Number of decimal places for detailed monetary values formatting. By default, field value is set to 4 .
Totals precision	Number of decimal places for total monetary values formatting. By default, field value is set to 2 .

The respective numbers will be displayed in all reports (**details precision** is used for all reports except CDR report) with cost and rate values in the statistics. Also, they will be shown in the invoices, except total values (totals **always** have 2 decimal places in invoices).


Specifying Currency Rate

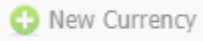
After you add currency, you need to specify the rate. To do this, you need to (see animation dow below):

- Click on icon in the currency column whose exchange rate you wish to specify
- Press 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 **Date** column.

Animation: Specifying currency rate

 **Currencies**



	EUR	RUB
1 EUR =	—	
1 RUB =	0.0020	
1 UAH =	x	
1 USD =	1.2000	

About | 0.0563s

 **Tip**

Statistical data of a new currency will be available after its adding into the system, but 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 *routing table* with rates in the new system currency.

Payment Accounts

In this article

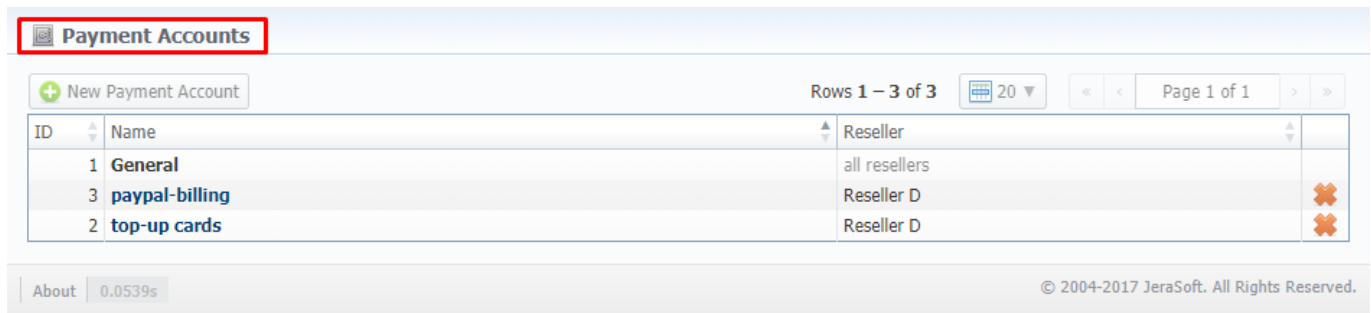
- [Section overview](#)
- [Adding New Payment Account](#)

Section overview

Payment accounts serve as the exact definitions used in [Transactions](#) section. For example, you can have **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.

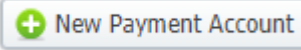

This section allows you to **create different payment accounts** for correct and precise **transactions (payments) management**. Section is presented in a form of a list of payments with the following structure (see screenshot):

Screenshot: *Payment Accounts section*



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

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

Button/Icon	Description
	Allows to create a new payment account
	Allows to delete a payment account from the system. Requires confirmation

Attention

Please note, the user **cannot** edit or delete the **General** payment account with id = 1. (see screenshot above)

Adding New Payment Account

The following steps are to be taken in order to create a new payment account:

- Click **New Payment Account** button
- Specify an account name in **Name** field and a **Reseller** from a drop-down list of all registered resellers (see screenshot below).
- Press **OK**.

A new account will be added to the list and will become available in **Transactions** section.

Screenshot: *Payment Account creation form*

Payment Accounts

Name:

Reseller:

Payment Terms

In this article

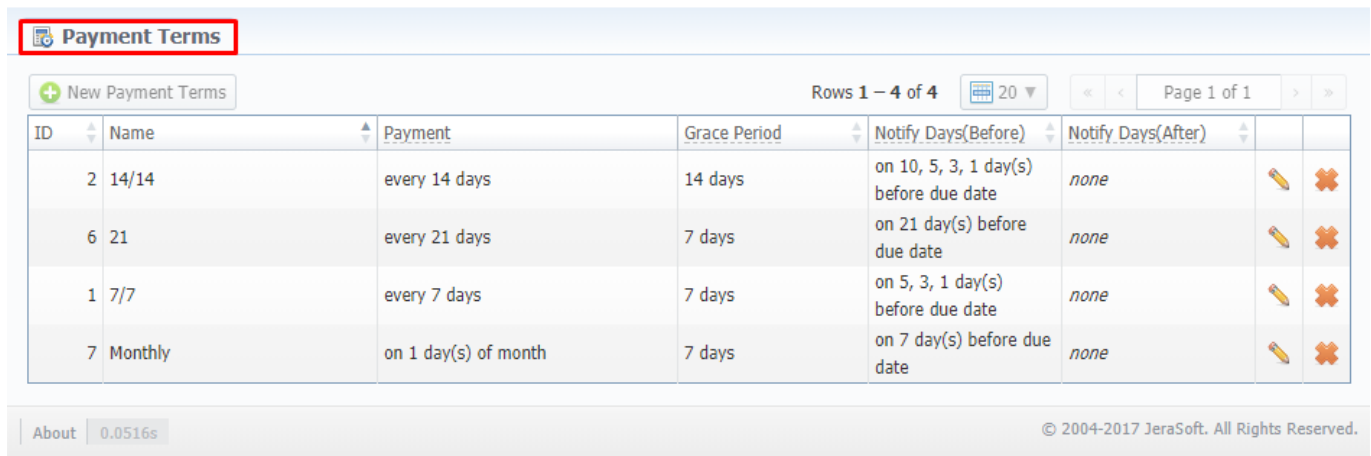
- [Section overview](#)
- [Adding New Payment Terms](#)

Section overview

In JeraSoft Carrier Suit, **payment terms** are implemented as sets of rules and regulations that define the **clients' payment dates** and **noticing periods** (before or/and 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 as a list of profiles that determine **payment terms**. 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)		
2	14/14	every 14 days	14 days	on 10, 5, 3, 1 day(s) before due date	none		
6	21	every 21 days	7 days	on 21 day(s) before due date	none		
1	7/7	every 7 days	7 days	on 5, 3, 1 day(s) before due date	none		
7	Monthly	on 1 day(s) of month	7 days	on 7 day(s) before due date	none		

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 to delete 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 on **New Payment Terms** button
- Specify the **required fields** in the appeared pop-up window (see table below);
- Confirm new payment terms profile creation by pressing **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	The exact day when a payment must be performed or its frequency (for example, on the 7-th day of the month or every 10 days)
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.

Payment Gateways

In this article

- [Section overview](#)
- [Configuring Payment Gateways](#)

Section overview

This section is designed to configure methods your customers may use to recharge their balance. Currently, there are following default methods in the system (see screenshot below):

- [Authorize.net](#)
- [PayPal](#)
- [Top-Up cards](#)
- [Moneybookers](#)
- [QIWI](#)

Screenshot: Payment Gateways section

Payment Gateways

Settings for: Sub-Reseller A ▾

AUTHORIZE.NET

ORDER POSITION:

Login:	<input type="text"/>	Add your API login ID
Transaction Key:	<input type="text"/>	Add your API transaction key
Amount Limits:	<input type="text"/>	Possible values for top-up separated by comma (eg "5, 20, 100"). If empty — user can specify any value. Field should be empty for top-up cards.
Payment Account:	General ▾	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	A user will see this text as a help-tip for respective payment method.

MONEYBOOKERS

ORDER POSITION:

E-mail:	<input type="text"/>	Your Moneybookers e-mail, payment recipient
Secret word:	<input type="text"/>	Your Moneybookers secret word you set in your Moneybookers profile Merchant Tools
Gateway Currency:	U.S. Dollar (USD) ▾	Currency which will be used by user to perform a payment
System Currency:	USD ▾	This setting reflects currency of the gateway. Amount received will be treated as specified currency. Leave empty if not required for the gateway (eg. top-up cards).
Amount Limits:	<input type="text"/>	Possible values for top-up separated by comma (eg "5, 20, 100"). If empty — user can specify any value. Field should be empty for top-up cards.
Payment Account:	General ▾	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	A user will see this text as a help-tip for respective payment method.

PAYPAL

ORDER POSITION:

E-mail:	<input type="text"/>	You PayPal e-mail, payment recipient.
Gateway Currency:	U.S. Dollar (USD) ▾	Currency which will be used by user to perform a payment.
System Currency:	USD ▾	This setting reflects currency of the gateway. Amount received will be treated as specified currency. Leave empty if not required for the gateway (eg. top-up cards).
Amount Limits:	<input type="text"/>	Possible values for top-up separated by comma (eg "5, 20, 100"). If empty — user can specify any value. Field should be empty for top-up cards.
Payment Account:	General ▾	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	A user will see this text as a help-tip for respective payment method.

QIWI

ORDER POSITION:

E-mail:	<input type="text"/>	Your QIWI e-mail, payment recipient.
Provider ID:	<input type="text" value="0"/>	QIWI provider ID.
IP:	<input type="text"/>	QIWI gateway IP. Separated by comma without spaces.
Payment Account:	General ▾	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	A user will see this text as a help-tip for respective payment method.

TOP-UP CARDS

ORDER POSITION:

Payment Account:	General ▾	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	A user will see this text as a help-tip for respective payment method.

UKASH

ORDER POSITION:

Security Request Token:	<input type="text"/>	20-Character alphanumeric unique Request-Token provided by Ukash. The token is used to validate the merchant account.
Security Response Token:	<input type="text"/>	20-Character alphanumeric unique Response-Token provided by Ukash. The token is used to validate the merchant account.
Brand ID:	<input type="text"/>	Unique Brand ID provided by Ukash

Gateway Currency:	U.S. Dollar (USD)	Currency which will be used by user to perform a payment
System Currency:	USD	This setting reflects currency of the gateway. Amount received will be treated as specified currency. Leave empty if not required for the gateway (eg. top-up cards).
Amount Limits:		Possible values for top-up separated by comma (eg "5, 20, 100"). If empty — user can specify any value. Field should be empty for top-up cards.
Payment Account:	General	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	A user will see this text as a help-tip for respective payment method.

Update

About 0.0667s

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Configuring Payment Gateways

To configure the gateways, you need to select a **Reseller** by using **Settings for** drop-down menu in the top-right corner of the section (see screenshot below). It means that **all clients** belonging to the selected Reseller will have these settings. The settings depend on the payment system and can include specific options for each. Below, as an example, you can find a description of fields that have to be specified while choosing **QIWI** service.

Screenshot: Settings for drop-down menu

Field	Description
Email	Respective QIWI email that should be used
Provider ID	Identification number of Qiwi provider
IP	Qiwi gateway IP . Specified IP address must be separated by comma without spaces
Payment Account	Payment account that should be used for payment from respective payment gateway
Description	User will see this text as tooltip for current payment method

What is more, you may specify the order of displayed payment methods (if more than one method is selected) in the **Order position** field in the top-right corner of the **Payment method** section.

Screenshot: Order position field

Payment Gateways Settings for: Sub-Reseller A ▾

AUTHORIZE.NET ORDER POSITION: 0

Login:	<input type="text"/>	Add your API login ID
Transaction Key:	<input type="text"/>	Add your API transaction key
Amount Limits:	<input type="text"/>	Possible values for top-up separated by comma (eg "5, 20, 100"). If empty — user can specify any value. Field should be empty for top-up cards.
Payment Account:	General ▾	Specify account which will be used for transactions from this payment gateway.
Description:	Here you can add funds to your balance by using your PayPal account.	
		A user will see this text as a help-tip for respective payment method.

MONEYBOOKERS ORDER POSITION: 0

E-mail:	<input type="text"/>	Your Moneybookers e-mail, payment recipient
Secret word:	<input type="text"/>	Your Moneybookers secret word you set in your Moneybookers profile Merchant Tools

⚠ Attention

For proper work of **PayPal service**, you should **enable an access for a list of IP addresses in your Firewall settings**, which can be found here: https://ppmts.custhelp.com/app/answers/detail/a_id/92

Moreover, you can find **detailed description on how to enable IPN** by visiting the following link: https://ppmts.custhelp.com/app/answers/detail/a_id/14/related/1

Time Profiles

In this article

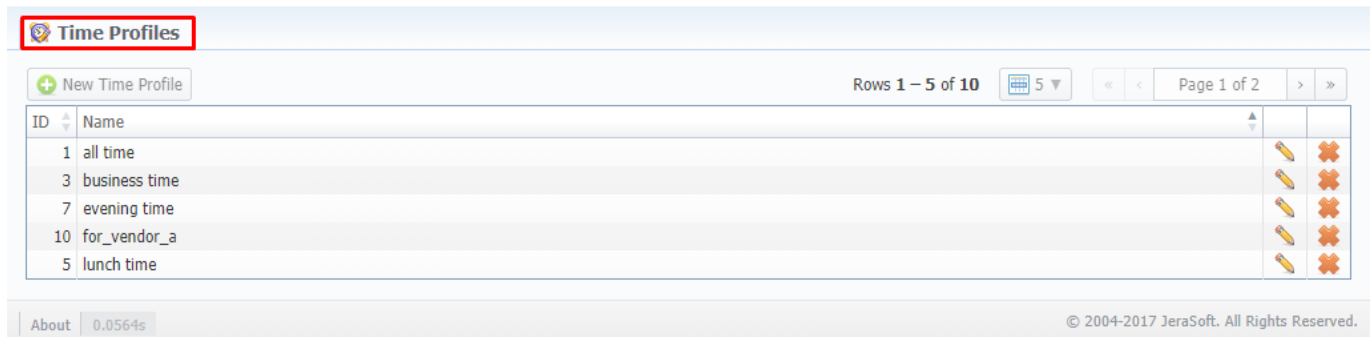
- [Section overview](#)
 - [Adding New Time Profile](#)

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 on the basis of time of usage. For instance, such profile can be used to sell traffic for an **increased** price in business hours, and for the **reduced** one during non-business hours.

This section is used to create and manage time profiles. Structure of the section is presented on a screenshot below.

Screenshot: Time Profiles section main window



ID	Name		
1	all time		
3	business time		
7	evening time		
10	for_vendor_a		
5	lunch time		

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 to delete a time profile from the system. Requires confirmation

Adding New Time Profile

To add a new time profile, you need to:

- Press **New Time Profile** button
- In the appeared dialog-window, fill in the required fields
- Press **OK**

Screenshot: Adding new time profile



Time Profiles

Name:

Hours:

Week Days:

OK

Cancel

Apply

Field	Description
Name	Name of a new time profile
Hours	Select hours that will be used for the particular time profile. More than one hour range can be added (e.g. 03.00 - 03.59, 08.00 - 08.59)
Week Days	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 New Taxes Profile](#)
- [Tax Values Management](#)

Section overview

Taxes profiles, equally as [Time profiles](#), is a VCS tool that makes the process of clients' [rate tables](#) management exceptionally agile. Taxes profile is a **set of taxation 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 a form of a table with the following columns (see screenshot):

Screenshot: Taxes Profiles section

ID	Name	Profile Owner	Notes
7	complex tax	Reseller A	
10	GrTax10,5	Reseller C	GrTax10,5Notes
6	high tax	Reseller A	
2	Low tax	Reseller A	
4	medium tax	Reseller A	
8	Tax_high_A	Reseller D	
9	Tax_National_A	Reseller D	
11	Test12		

Column Name	Description
ID	Taxes profile's identification number
Name	Name of a taxes profile
Profile Owner	List of resellers corresponding taxes profile was assigned to
Notes	Additional information regarding a text profile

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 to delete a taxes profile from the system. Requires confirmation
	Allows to manage list of tax values a particular profile
	Opens 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 downwards arrow, 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 a status of a taxes profile: <ul style="list-style-type: none"> • Active • Archive

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

Creating New Taxes Profile


To create new profile, you need to:

- Click on **New Taxes Profile** button
- Fill in mandatory fields (specified in the table below)
- Press **OK** button

Screenshot: New Taxes Profile window

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
Invoice Notes	If specified, this information will be displayed in issued invoices
Notes	Additional information regarding a text profile

Tax Values Management

To manage a tax value, you need to click on  icon to the left of corresponding profile name on the list. In the pop-up window you can add new rule by clicking **Add Tax Value** button or edit already existing values. Structure of a pop-up window is as follows:

Taxes Profiles
complex tax

Add Tax Value
Rows 1 – 3 of 3 20 ▼
<< < Page 1 of 1 > >>

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 a corresponding tax value. If not tags are added, "@" must be inserted
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 red downwards arrow in the top right corner of the pop-up window and set 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 > Date** field value, 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 **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 **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

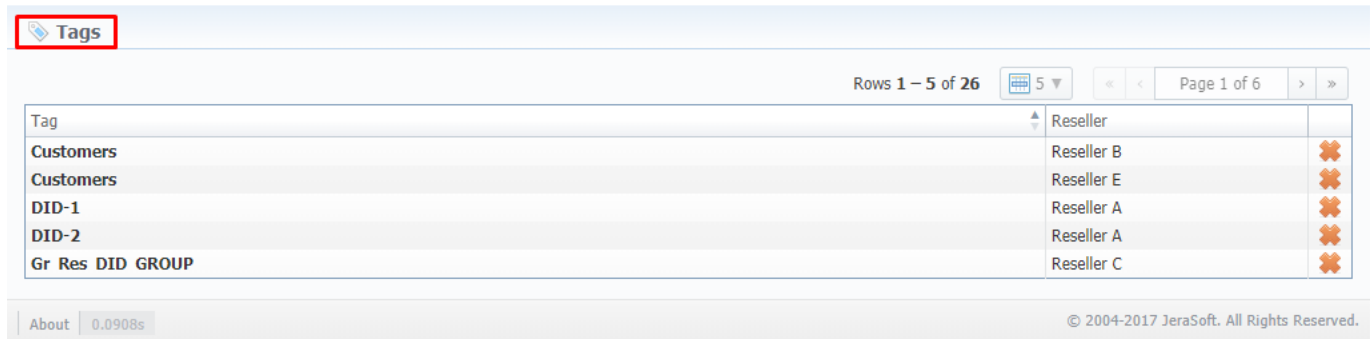
In this article

- [Section overview](#)
- [Adding 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 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 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:

page: 

To remove a tag from the system click on  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" (@) sign 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 [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 accounts 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. On the left, there is a 'Clients' sidebar with options: Client Type, Client, Account, and Client Tags. The main area contains a 'FILTERS' section with a 'Period' dropdown set to 'This Year', date and time pickers for '2017-01-01 00:00:00' and '2017-12-31 23:59:59', and a 'UTC' dropdown. An 'OUTPUT' section on the right shows 'Order By: Event time', 'Type: Web', 'Currency: USD', and 'Code Deck'. Below the filters are 'Export to CSV' and 'Export to XLSx' buttons. The table below shows 5 rows of data. The columns are: 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 box. The footer shows 'About 0.5873s' and '© 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 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. Section is presented in a form of a table of invoices templates with the following columns (see screenshot below):

Screenshot: Invoices Templates section main window

ID	Name	Type	Reseller	Notes
1	default	PDF	all resellers	default invoice template
5	default_extended	PDF	all resellers	
6	Default_new	PDF	all resellers	
2	estonian	PDF	all resellers	estonian default template
8	internet	PDF	all resellers	
7	New_Res_A	PDF	Reseller D	
9	test	XLS	all resellers	

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 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

Name:

Reseller:

Anonymized Codes:

Locale:

Totals Calculation:

Taxes Calculation:

Attach xDRs list to the invoice

Notes:

EXCEL TEMPLATE PARAMETERS

Statistics Columns:

Include packages charges to invoice

Template:

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 invoice
	<ul style="list-style-type: none"> Locale 	Language for text representation of totals in 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 are summed; sum then round - raw values are summed first, then are 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 checkbox 	If enabled, creates xDR file for invoicing period and attaches it to invoice. To view advanced settings, click on icon next to its name.	

		<ul style="list-style-type: none"> • xDRs List Format 	List of xDR file format (.csv, .xlsx or .xls)
		<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 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 attached xDR file
	<ul style="list-style-type: none"> • Notes 	Additional information concerning the invoice template	
Excel Template Parameters	Settings of 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 selected period	
	<ul style="list-style-type: none"> • Template 	Defined displaying format of xDRs list in a template	

 **Tip**

When you select **Non-zero payable** parameter in the **Attached CDRs list to the invoice** advanced settings, then:

1) created **outgoing** Invoice for Client **will have attached xDRs file with:**

- incoming/outcoming non-free calls that should be paid by the Client
- outcoming free calls with non-zero duration
- outcoming free calls by package volume limits with non-zero duration

2) created **incoming** Invoice for Client **will have attached xDRs file with:**

- incoming/outcoming 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 CDR's 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

Name:

Reseller:

Anonymized Codes:

Locale: English

Totals Calculation: Round then sum

Taxes Calculation: Percent from total amount

Attach CDRs list to the invoice

Notes:

EDIT PDF TEMPLATE

HTML | | | | | | | | Paragraph | Font family | Font size

Path: p Words: 0

Invoice Settings

- {number}**
Invoice Number
- {due_days}**
To be paid within (days)
- {due_date}**
To be paid before (data)
- {period_start}**
Start Period: invoicing period start
- {period_finish}**
Finish Period: invoicing period finish
- {date}**
Date Of Invoice: actual invoice date
- {tz}**
Timezone
- {group_notes}**
Group notes

▶ Personal Data

▶ Stats Table

▶ Packages Table

▶ CDRs Table

▶ Custom Items Table

▶ Custom Taxes Table

▶ Financial Summary

▶ Global Totals

OK

Close

Apply

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 **Class** field (*stats, xDRs, packages, suretax_items, custom*) in **General** tab;
2. Fill table with relevant information which should be present in invoice by using **functional variables**, which you can pick from a list provided in same window on the right drop-down panels;
3. After invoice template is created, fill in its **Name** and other **fields** in the **General Information** section, then press **OK**;
4. Go to **Management > Resellers** and in reseller's properties select your invoice template. This will insure that **all customers** of this reseller will be using this template;
5. When creating invoice in **Management > Invoices**, you can use invoice template prior to generating an invoice. JeraSoft VCS includes several **default .pdf templates**, called **default** and **default extended**.

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 names of packages. Moreover, it's advisable to **avoid** names with special symbols like **%001 name, -001 name**.

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

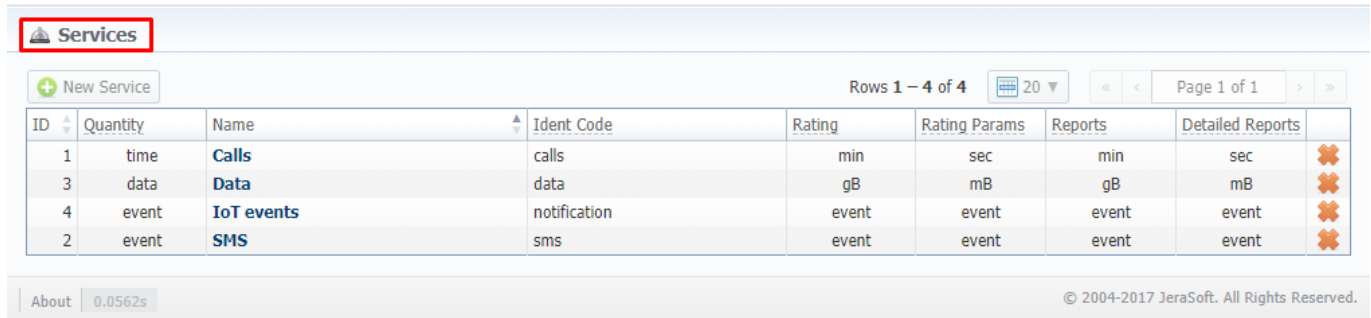
In this article

- [Section overview](#)
- [Adding New Service](#)

Section overview

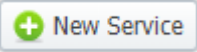

Services, presented in this section, reflect the major utilities for billing all types of data, including **calls**, **sms**, **IoT events**, etc. This section represents a list of all existing in the system services.

Screenshot: Services section



ID	Quantity	Name	Ident Code	Rating	Rating Params	Reports	Detailed Reports	
1	time	Calls	calls	min	sec	min	sec	
3	data	Data	data	gB	mB	gB	mB	
4	event	IoT events	notification	event	event	event	event	
2	event	SMS	sms	event	event	event	event	

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

Button/Icon	Description
	Allows to create a new service
	Allows to delete a service from the system. Requires confirmation

Adding New Service

In order to proceed to service creation process:

- Click on **New Service** button
- Fill in all required fields in a pop-up window (screenshot below)
- Press **OK**

Screenshot: New service creation form

 **Services**

GENERAL

Name:

Quantity:

Ident Code:

UNITS

Rating:

Rating Params:

Reports:

Detailed Reports:

Section	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"> Ident Code 	ID that will be used to identify unit in the xDRs
Units	Depending on a unit group chosen in Quantity field , the following unit values will be applied to the fields of Units section	
	<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 report

Settings

This section is designed for management of system notify messages distribution, as well as specifying of system time and date format. Section is divided into 10 information blocks listed below.

- [System Settings](#)
- [Mail Server Settings](#)
- [Output and Import / Export](#)
- [Invoicing Settings](#)
- [RADIUS Server](#)
- [SIP Server](#)
- [Dynamic Routing](#)
- [Notification and Monitoring](#)
- [Auto-rotation and Cleaning](#)
- [Backup Settings](#)

To apply any changes, made in the section, press

A blue rectangular button with the word "Update" written in white text.

button. The whole **Settings** section is presented on the screenshot below:

Screenshot: Settings section

SYSTEM SETTINGS

Default Currency:	USD	Select which currency is the default one, it will be used for generation of routing tables and matching of profitability margin and while creation of new entities.
Domain name:		Domain name field (it should always start with "https://" and should not be empty!)
Public IP:		The system's public IP address used for LNP DIP requests. This field is mandatory if LNP is enabled in the system.
Default language:	English	Choose which language will be selected by default on login screen
Timezone:	UTC	Default system timezone, you can change timezone in statistic reports queries
Statistics processing order:	old calls first	Order of statistics processing when the queue is large
Calculator workers:	4	Number of threads processing calculator tasks (number of CPU cores / 2).
Calculator mode:	periodically run	Select calculator processing mode: periodic – runs every X minutes by Tasks Scheduler, faster processing bulk of XDRs, but causes some delay realtime – processes calls in realtime, slower processing in case of XDRs bulks, only if you really need realtime
<input type="checkbox"/> Round monetary value		Round monetary value in xDR's report and xDR's files. Default without rounding.
<input checked="" type="checkbox"/> Collect Anonymised Data		Allow collection of the anonymised 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 info will be collected.
Default PIN Length:	12	For Calling Cards only — default length of PIN code for generated cards

MAIL SERVER SETTINGS

Host:	localhost	Hostname or IP address of SMTP server
Port:	25 Plain	Port/Security of SMTP server
From:		Specify e-mail address to send mail from, it is system address for the SMTP server, not the one that appears in From field in e-mails
Login:		login of SMTP server (if login and password fields are empty, no authentication)
Password:		Password of SMTP server

OUTPUT AND IMPORT/EXPORT

Date Format:	%m/%d/%Y	Output format for dates, you can check syntax for this field in the User Manual
Datetime Format:	%m/%d/%Y %H:%M:%S %z	Output format for datetimes, you can check syntax for this field in the User Manual
Items Per Page:	20	Default number of items per page in system interfaces.
CSV Delimiter:	.	Default delimiter used for CSV files when importing/exporting
CSV Decimal Point:	,	What will be used as decimal separation point for numbers ("," - for most cases)
Close rates marked by:	delete, block, close	When importing rate table, if some rates have notes that they are closed, system will close the appropriate destinations after importing them. This field defines what marking words should be taken as ones closing a rate. System also search for longer words, for example: close - closed, delete - deleted, etc. Please avoid sentences and use only single words, separated by comma (block, close).
Hidden Numbers:	0	Number of digits which should be hidden in destinations number
Output Encoding:	UTF-8	Encoding, that will be used during exporting data to file.
Import Encoding:	UTF-8	Encoding, that will be used during importing data from file.

INVOICING SETTINGS

Invoice No Template:	%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:	100332	Last Invoice No used in system for generation of invoices
Autoinvoicing Default State:	to verify	Default state for all automatically created invoices.
Autoinvoicing Delay:	5 hour(s)	Time in hours from end of previous day to wait before invoicing. Required to be positive integer, otherwise system will invoice 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 field "Code Name" is not presented in Rate table of a client, invoice will not be generated.
<input type="checkbox"/> Allow zero invoices		Enables creation of zero invoices.

RADIUS SERVER

Bind to address:		Specify your server IP addresses (separated by comma) to bind to, empty field means bind to all addresses.
Accounting port:	1813	Listen for accounting packets on specified port
Authorization port:	1812	Listen for authorization packets on specified port, same for dynamic routing if available
Number of workers:	2	Number of threads that process packets. The value of this parameter also affects on numbers of SIP workers.
Max call length:	7200	Maximum call duration in seconds, for customers in postpaid mode.
Changes will be only applied after you restart RADIUS server from Task Scheduler section		

SIP SERVER

SIP port:	5060	Listen for auth packets on specified port.
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DYNAMIC ROUTING

Analyze Period:	300 minute(s)	What amount of last minutes of statistics will be analyzed to build a routing table.
<input type="checkbox"/> Log empty routes		Enable to get messages to Events Log about zero-routes (degrades performance)

NOTIFICATION AND MONITORING

<input checked="" type="checkbox"/> Event on missing account		Send 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 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 call has zero length
Resend low-balance events every:	24 hour(s)	How often to resend e-mail regarding low customer's balance
Rate changes notification period:	0 hour(s)	Customer will be informed regarding rates changes in given amount of hours after the actual change.
Period to notify future changes:	7 day(s)	Customer will be informed about rates for next X days.
Watch for free space at:	/opt/jerasoft:20:/var/lib/pgsqt:30	Monitor free disk space, you can specify full path where to monitor and percent of space delimited by ":". When free space will be less than specified percent of whole disk size - system will send alert.

AUTO-ROTATION AND CLEANING

Delete events from log after:	1 day(s) (from 1 to 90)	Delete events from Events Log after specified period of days.
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Statistics archiving delay:	<input type="text" value="0"/> day(s) (0 - do not archive)	Archive statistics in advance. Each day minimize 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)	After what number of days already parsed and processed XDR-files should be deleted from local server.
Delete archived log-files after:	<input type="text" value="90"/> day(s) (0 - do not delete)	After what number of days archived log-files should be deleted from local server.

BACKUP SETTINGS

System backup period:	<input type="text" value="0"/> hour(s) (0 - do not backup)	How often to backup system, please note that actual backup will be done at the time when Backup Manager process runs.
Number of Backup Manager workers:	<input type="text" value="1"/>	Number of threads that run database backup.
Destination for backup packages:	<input type="text"/>	Absolute path where to put backup packages, it can not be inside root of VCS system.
Leave last X packages:	<input type="text" value="3"/>	How many last backup packages to leave.

[Update](#)

Warning

We strongly recommend that you **do not add any symbols** (for example, a slash) after a domain name.

System Settings

System settings information block contains default system parameters specified below:

Screenshot: System Settings window

SYSTEM SETTINGS

Default Currency:	USD	Select which currency is the default one, it will be used for generation of routing tables and matching of profitability margin.
Domain name:	https://vcs.example.jerasoft.net	Domain name field (It should always start with "https://" and should not be empty!)
Public IP:	10.10.10.10	The system's public IP address used for LNP DIP requests. This field is mandatory if LNP is enabled in the system.
Default language:	English	Choose which language will be selected by default on login screen
Timezone:	UTC	Default system timezone, you can change timezone in statistic reports queries
Statistics processing order:	old calls first	Order of statistics processing when the queue is large
Calculator workers:	1	Number of threads processing calculator tasks (number of CPU cores / 2).
Calculator mode:	periodically run	Select calculator processing mode: periodic – runs every X minutes by Tasks Scheduler, faster processing bulk of CDRs, but causes some delay realtime – processes calls in realtime, slower processing in case of CDRs bulks, only if you really need realtime
	<input checked="" type="checkbox"/> Round monetary value	Round monetary value in CDR's report and CDR's files. Default without rounding.
	<input checked="" type="checkbox"/> Enable clients panel	Enables client's access to control panel with rates and statistics at /clients/
Default PIN Length:	7	For Calling Cards only — default length of PIN code for generated cards

Field	Description
Default Currency	Specify currency that will be used as default for generation of routing and new entities creation (accounts, invoices, transactions, clients, resellers, etc). However, this currency won't be used for reports.
Domain Name	Enter relevant domain address of your VCS server. In most cases, VCS 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
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
Statistics processing order	Specify what statistics to process first (newer or older)
Calculator workers	Specify number of threads processing calculator tasks (number of CPU cores / 2)
Calculator mode	Defines the calculator workout , whether is will start periodically through Task Scheduler, or will be constantly running
Round monetary value checkbox	It forces the values in the xDRs report and xDRs files to be rounded according to currency settings
Default PIN length	Sets the default length of PIN-code when creating calling card series

Attention

If you change the **Default Currency**, you need to restart **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

The screenshot shows a window titled "MAIL SERVER SETTINGS" with the following fields and descriptions:

Host:	localhost	Hostname or IP address of SMTP server
Port:	11 Plain	Port/Security of SMTP server
From:	example@localhost	Specify e-mail address to send mail from, it is system address for the SMTP server, not the one that appears in From field in e-mails
Login:		login of SMTP server (if login and password fields are empty, no authentication)
Password:		Password of SMTP server

Field	Description
Host	Mail server address that is used by system
Port	Specify port and security type of SMTP server: <ul style="list-style-type: none">• Plain• TLS• SSL
From	Email address that will be specified as sender
Login	Login for SMTP server
Password	Password for SMTP server

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		
Date Format:	%m/%d/%Y	Output format for dates, you can check syntax for this field in the User Manual
Datetime Format:	%m/%d/%Y %H:%M:%S %z	Output format for datetimes, you can check syntax for this field in the User Manual
Items Per Page:	10	Default number of items per page in system interfaces.
CSV Delimiter:	,	Default delimiter used for CSV files when importing/exporting
CSV Decimal Point:	,	What will be used as decimal separation point for numbers ("," - for most cases)
Close rates marked by:	delete, block, close	When importing rate table, if some rates have notes that they are closed, system will close the appropriate destinations after importing them. This field defines what marking words should be taken as ones closing a rate. System also search for longer words, for example: close - closed, delete - deleted, etc. Please avoid sentences and use only single words, separated by comma (block, close).
Hidden Numbers:		Number of digits which should be hidden in destinations number
Output Encoding:	UTF-8	Encoding, that will be used during exporting data to file.
Import Encoding:	UTF-8	Encoding, that will be used during importing data from file.

Field	Description
Date Format	Specify date 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
Datetime Format	<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"> • %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"> • %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
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
Close rates marked by	When importing rate sheets , system will be able to close respective rates if Rate column has one of the key-words entered here
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 while importing data from a file

Invoicing Settings

Below, you will find a list of fields of **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 system for generation of invoices
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 from end of previous day to wait before invoicing. Required to be positive integer, otherwise system will invoice 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 field "Code Name" is not presented in 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 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 system will wait until doing invoicing
Check empty code names in invoices checkbox	Enables checking of the correspondence of a Code with a Code name , and in case of finding some mismatching , the system will give an alert and invoice will not be generated
Allow zero invoices checkbox	Allows to create invoices with zero amount

RADIUS Server

VCS RADIUS server settings can be managed in this information block:

Screenshot: RADIUS Server settings window

Field	Description
Bind to address:	Specify your server IP addresses (separated by comma) to bind to, empty field means bind to all addresses.
Accounting port:	Listen for accounting packets on specified port
Authorization port:	Listen for authorization packets on specified port, same for dynamic routing if available
Number of workers:	Number of threads that process packets. The value of this parameter also affects on numbers of SIP workers.
Max call length:	Maximum call duration in seconds, for customers in postpaid mode.

Changes will be only applied after you restart RADIUS server from Task Scheduler section

Field	Description
Bind to address	Specify your VCS server IP addresses , separated by comma to bind RADIUS to
Accounting port	Specify accounting port here. By default, field value is 1813
Authorization port	Specify authorization port here. By default, field value is 1812
Number of workers	Number of RADIUS workers . The value of this parameter also affects SIP workers' number .
Max call length	Limit maximum call length in seconds

SIP Server

SIP Server information block consists of a single **SIP port** field where you need to specify a SIP port that system should listen to. Below, you can find the screenshot of the following information block.

Screenshot: SIP Server settings window

RADIUS SERVER

Bind to address:	<input type="text"/>	Specify your server IP addresses (separated by comma) to bind to, empty field means bind to all addresses.
	empty - bind to all	
Accounting port:	<input type="text" value="1813"/>	Listen for accounting packets on specified port
Authorization port:	<input type="text" value="1812"/>	Listen for authorization packets on 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 on numbers of SIP workers.
Max call length:	<input type="text" value="7200"/>	Maximum call duration in seconds, for customers in postpaid mode.
Changes will be only applied after you restart RADIUS server from Task Scheduler section		

SIP SERVER

SIP port:	<input type="text" value="5060"/>	Listen for auth packets on specified port.
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Dynamic Routing

Settings for VCS Dynamic Routing is presented in the information block with the following fields:

Screenshot: *Dynamic Routing settings window*

The screenshot shows a settings window with two sections. The first section, titled "SIP SERVER", contains a field for "SIP port" with the value "1000" and a description: "Listen for auth packets on specified port." The second section, titled "DYNAMIC ROUTING", contains a field for "Analyze Period" with the value "300" and the unit "minute(s)", with a description: "What amount of last minutes of statistics will be analyzed to build a routing table." Below this is a checkbox labeled "Log empty routes" with a description: "Enable to get messages to Events Log about zero-routes (degrades performance)".

Field	Description
Analyze Period	An amount of minutes of last available statistics that will be used to build routing table
Log empty routes checkbox	Enable to get log messages regarding zero routes

Notification and Monitoring

Notify messages distribution and other monitoring settings contain underwritten fields:

Screenshot: Notification and Monitoring settings window

NOTIFICATION AND MONITORING		
<input checked="" type="checkbox"/>	Event on missing account	Send 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 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 call has zero length
Resend low-balance events every:	<input type="text" value="24"/> hour(s)	How often to resend e-mail 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.
Period to notify future changes:	<input type="text" value="7"/> day(s)	Customer will be informed about rates for next X days.
Watch for free space at:	<input type="text" value="/opt/jerasoft:20;/var/lib/postgresql:30"/>	Monitor free disk space, you can specify full path where to monitor and percent of space delimited by ":". When free space will be less than specified percent of whole disk size - system will send alert.

Field	Description
Event on not found account checkbox	If checked, activates notification sending when no account was found
Event on not found tariff 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 (hours)	Set the frequency of low balance notification resend service
Rate changes notification period (hours)	Specify the frequency of rate changes notification period
Period to notify future changes, day(s)	Specify number of days , for customer to be informed about rate change in advance
Watch for free space at	Here you can specify folders that will be monitored for available disk space. To add a folder, specify its path, and by using ":" sign choose the percent of disk space, below which the system will send warning notifications For example - /opt/jerasoft:20 means that if free disk space is below 20 percent in folder /opt/jerasoft/ the notification will be sent. You can add multiple folders in this field by delimiting them with ";" sign

Auto-rotation and Cleaning

Automatic statistics and backup management parameters are configured here:

Screenshot: Auto-rotation and Cleaning settings window

AUTO-ROTATION AND CLEANING		
Delete events from log after:	<input type="text" value="1"/> day(s) (from 1 to 90)	Delete events from Events Log after specified period of days.
Statistics archiving delay:	<input type="text" value="0"/> day(s) (0 - do not archive)	Archive statistics in advance. Each day minimize 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 system, when they are not actual and effective date is older than specified number of days.
Delete parsed XDR-files after:	<input type="text" value="180"/> day(s) (0 - do not delete)	After what number of days already parsed and processed XDR-files should be deleted from local server.
Delete archived log-files after:	<input type="text" value="90"/> day(s) (0 - do not delete)	After what number of days archived log-files should be deleted from 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.
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 moved to archive)
Delete not actual rates after	Cleans non-actual rates from database when effective date is older than specified number of days
Delete parsed xDR-files after	Define when system should delete old parsed xDR-files
Delete archived log-files after	Define when system should delete archived log-files

Backup Settings

Backup settings are presented with the following fields:

Screenshot: Backup Settings window

BACKUP SETTINGS

System backup period:	<input type="text" value="0"/> hour(s) (0 - do not backup)	How often to backup system, please note that actual backup will be done at the time when Backup Manager process runs.
Number of Backup Manager workers:	<input type="text" value="1"/>	Number of threads that run database backup.
Destination for backup packages:	<input type="text"/>	Absolute path where to put backup packages, it can not be inside root of VCS system.
Leave last X packages:	<input type="text" value="3"/>	How many last backup packages to leave.

[Update](#)

Field	Description
System backup period	Field value specifies when system should backup itself (for example, if you enter 24 as a value, this will mean that that system will backup itself every 24 hours)
Number of Backup Manager workers	Specify a number of system managers that run database backup
Destination for backup packages	Absolute path to the folder where 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 folders!</p></div>
Leave last X packages	Parameter that 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)

Integration

In this chapter of our Guide, a focus is made upon sections that are called to govern **integration process** of 3rd party software **with JeraSoft VoIP Carrier Suite**. Please look for more information in the following sections:

- [Gateways](#)
- [Number Portability](#)
- [Provisioning API](#)
- [API Testbed](#)
- [CoreAPI Docs](#)

Gateways

In this article

- [Gateways List](#)
- [Adding New Gateway](#)
- [Files Downloading History](#)
- [Knowledge Base Articles](#)

Gateways List

This section allows you to configure and integrate all switches into billing via RADIUS, SIP or xDR-files upload.

Section is presented in a form of a table of all created gateways in the system with the following columns (see screenshot):

Screenshot: Gateways section

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)
LNP Files Collector	Description of current status and collector type of applied LNP Files Collector (if such is applied)
Files Downloader	Description of current status and collector type of applied Files Downloader (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 creating a new gateway
	Allows to set up traffic processing rules
	Displays a current status— enabled or disabled —of RADIUS / SIP Server, Files Collector, etc.
	Allows to delete a gateway from the system. Requires confirmation

Adding New Gateway

To add a gateway to the list, click on **New Gateway** button and specify parameters in a pop-up window with settings. You can access the advanced settings by clicking on downwards arrow icon next to the name of respective information block.

Screenshot: Adding new Gateway

Gateways
Gateway 1

GENERAL INFORMATION

Name:

IP Address:

Gateway Type:

Allowed For:

Service:

Tag:

Code deck:

FILES DOWNLOADER

Type: Port:

Login: Password:

From path:

FILES COLLECTOR

Collector Type:

RADIUS SERVER


Collector Type:


Secret:

SIP SERVER

Collector Type:

Information blocks	Fields and Descriptions
General Information	General gateway and events processing information
	Name Gateway name
	IP Address Gateway IP address
	Gateway Type Select the type of the gateway: <ul style="list-style-type: none"> Regular - a default gateway that uses SIP, RADIUS or xDR files. LNP / MNP - a specific gateway that is used to download LNP / MNP file updates.
	Allowed For Specify here, which resellers can use current gateway
	Service Select a service (call, sms, data, etc.) for a current gateway
	Tag Indicate a particular tag to filter events by gateways while creating invoices and using reports.
	Code Deck The selected code deck will be used to pick codes and destination names for Mobile Number Portability feature. By browsing information from selected code deck, VCS will be able to perform appropriate number translations, which are processed by a current gateway.
Files Downloader	<p>Click the downwards 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, 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 (options available: 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 Rate TERM events by Dst Out code checkbox - activation/deactivation of terminating events billed by DST PARTY ID OUT Rate event only with "success" status checkbox - activation/deactivation of processing of events that have "success" end code. If it's activated, events with error diconnect code won't be billed
	Files Downloader settings

<ul style="list-style-type: none"> • Typ pe 	<p>Specify port type:</p> <ul style="list-style-type: none"> • SSH • FTP • IMAP - mail mode to download files. • Web (Numuri) - web mode to download files <div style="background-color: #ffff00; padding: 5px;"> <p>⚠ Attention</p> <p>Depending on a type you've chosen, the list of fields in the information block may differ</p> </div>
<ul style="list-style-type: none"> • Port 	<p>Specify port for SSH, IMAP or FTP type</p>
<ul style="list-style-type: none"> • Lo gin 	<p>Specify gateway server login . Default value is root</p>
<ul style="list-style-type: none"> • Pa ss wo rd 	<p>Password for FTP connection, IMAP mailbox and Numuri web service. For SSH, you have to create SSH-keys.</p>
<ul style="list-style-type: none"> • Fr om path 	<p>Specify xDR-files path (mask paths are allowed). Available only for SSH and FTP</p>
<ul style="list-style-type: none"> • Se nd er Ma tch 	<p>Indicate the sender name or email. Solely for IMAP</p>
<ul style="list-style-type: none"> • Su bj ct Ma tch 	<p>Use a regular expression to search by message titles. Solely for IMAP</p>
<p>Files Collector</p>	<p>Information block regarding File Collector settings. Files Collector gathers event data from xDR-files (activate this option if you plan to use integration via xDR-files)</p> <p>Collect or Type Select a collector type you plan to use from the list</p> <p>Click the downwards 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, system will ignore a timezone stored in 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> <p>Co lle cto r Typ pe Select a collector type you plan to use from the list</p>


	<ul style="list-style-type: none"> • Secret <p>RADIUS-server password</p>
	<p>Click the downwards arrow  icon next to the RADIUS Server information block to access advanced settings:</p> <ul style="list-style-type: none"> • Overwrite TZ - timezone selection (if you select a different timezone, system will ignore a timezone information stored in 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 database. By default, this checkbox is marked.
SIP Server	<p>Allows acceptance of SIP packets from current gateway. Required for SIP Redirect routing feature</p>
	<ul style="list-style-type: none"> • Collector Type <p>Select a collector type you plan to use from the list</p>
LNP Files Collector	<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"> • Collector Type <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 **Downloads History** tab. Also, you can remove files from the list by selecting them and clicking on the **Delete** button above the tab.

Gateways

Downloads History

 Delete
Rows 1 – 11 of 11
20
Page 1 of 1

<input type="checkbox"/>	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

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Knowledge Base Articles

- [How to set up a functional capacity?](#)

- [How to add a new gateway to VCS?](#)

Number Portability

In this article

- [Section overview](#)
- [Creating New Range/Number](#)
- [Quick Search tool](#)
- [LNP/MNP Configurations](#)

Section overview

This section represents local databases of two providers: **Numuri** and **TJA**. Here, you can find the list of Numuri ranges and TJA 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: During translation of the call, system verifies the code of TJA number, identifies the number, and changes the Dst Number to **372+RN Number**.
Numuri: During translation of the call, the number is verified with Numuri ranges, and system **applies a dynamic tag** (owner's name) to the call for further billing.

Section is presented in a form of a table of ranges of numbers with a following columns:

Screenshot: *Number Portability*

ID	Range Start	Range End	Owner	Modification Date
1	5657000	5657999	Operator1	10/20/2016 10:00:00 +0000
2	1002350	1002999	Operator2	10/20/2016 10:00:00 +0000
3	5105000	5105999	Operator3	10/20/2016 10:00:00 +0000

Column Name	Description
ID	Identification number of a number range
Range Start	Starting number in a respective range
Range End	Final number in a respective range
Owner	Name of a number range owner
Modification Date	Indication of the latest date of numbers range modification

Functional buttons/icon that are present in a section are as follows:

Button/Icon	Description
	Allows creating a new range of numbers
	Allows managing an existing range of numbers on a list
	Allows to delete a range of numbers from the system. Requires confirmation

Apart from Numuri and TJA, **JeraSoft VCS** is integrated with the following providers:

1. Broadvox
2. Vera Networks
3. PCT

Therefore, you can configure the translation with and one of these providers by following these simple steps:

- open **Traffic Processing** section and create a rule for a respective gateway.
- specify the *Dst Match* (if applicable) and determine the *LNP / MNP* provider that will be used for this rule (see screenshot below).

Screenshot: Traffic Processing settings

The screenshot shows the 'Traffic Processing' configuration window. The 'LNP / MNP Provider' dropdown is highlighted with a red box, and a red arrow points to the 'Broadvox' option in the list. Other fields include 'Type: Orig-Term', 'VoIP Gateway: gateway name', 'Client', 'Account', 'Code', 'Code Name', 'Src Match', 'Src Replace', 'Dst Match: ^2550(.*)\$', 'Dst Replace', 'Tags Match: Any', 'Tags Add', and 'Order: 1'.

Creating New Range/Number

Numuri range of numbers can be created manually. Click the "New Range" button on the toolbar to add a range. Then, you need to specify the lowest and highest numbers, owner and date.

Screenshot: Number Portability section/Numuri range adding form

The screenshot shows the 'Number Portability' section with the 'Numuri range adding form'. The form contains the following fields: 'Range Start', 'Range End', 'Owner', and 'Modification Date' (pre-filled with '2017-07-11 12:00:00+0000'). There are three buttons at the bottom: 'OK', 'Cancel', and 'Apply'.

Section	Fields Description
General Information	General information about Numuri range
	<ul style="list-style-type: none"> • Range Start Set the range's start position
	<ul style="list-style-type: none"> • Range End Set the end position
	<ul style="list-style-type: none"> • Owner Determine an operator that owns a respective range of numbers <div style="background-color: yellow; padding: 5px;"> <p>⚠ Attention</p> <p>Further, the owner's name will be applied to the call as tag (for example, EU Carrier 1) for billing the call.</p> </div>
<ul style="list-style-type: none"> • Modification Date 	Indicate the last modification date

TJA numbers can be added manually. Click the "New Number" button on the toolbar to add them. Then, you need to specify the lowest and highest numbers, owner and date.

Screenshot: Number Portability section/TJA number adding form

Section	Fields Description	
General Information	General information about TJA number	
	<ul style="list-style-type: none"> • Code 	Specify the code of TJA number
	<ul style="list-style-type: none"> • RN Number 	Indicate a registration number
	<ul style="list-style-type: none"> • Code Name 	Specify a respective code name of TJA provider
<ul style="list-style-type: none"> • Owner 	Determine an operator that owns a respective number	

Tip

By default, this section shows Numuri ranges. If you want the list of TJA numbers to be shown, you need to change the filter settings in the **Quick Search** toolbar - **Provider** field

Quick Search tool

Use the **Quick Search** toolbar for fast investigation in this section. This tool provides a filter to limit the search results for higher working efficiency. For example it's could be used to find ranges belonging to a certain provider. To open the advanced search settings, click on the down arrow on the toolbar.

Screenshot: Number Portability section

ID	Range Start	Range End	Owner
1	111	222	Client 1
2	333	444	Client 2

LNP/MNP Configurations

To configure a download of external data, namely LNP/MNP file updates, you need to follow next steps:

1. Go to the **Traffic Processing** section and open the settings of respective rule.
 - a. Select a convenient provider from the drop-down list of "LNP/MNP provider" field.
2. Go to the **Gateways** section and open the settings of respective gateway.
 - a. Choose the LNP/MNP provider in the "Gateway Type" field .
 - b. Select the type (*IMAP/ Web (Numuri)*) of gateway mode in the *Files Downloader* sub-panel.



Tip

- **IMAP** - mail mode to download files. For this type, the format of the file should be ***csv.zip**.
- **Web (Numuri)** - web mode to download files. For this type, the format of the file should be ***csv**.

- c. Then, enable the "*LNP Files Collector*" check box and specify the type of collector.
3. After completing these steps, *Files Collector* and *Files Downloader* should start the process.
4. Then, you can open the **Number Portability** section to check LNP/MNP numbers.

Provisioning API

On this page

- [Section overview](#)
- [Execution Logs tab](#)

Section overview

The following section allows **configuring and monitoring of hooks for Provisioning API**.

Provisioning API provides a mechanism for a real-time integration with 3rd party systems, including softswitches, gateways, and CRM systems. It calls pre-defined handlers on an occurrence of specific events in the system. The handlers are allowed to modify data, forbid or allow the action or simply process given event.

For detailed information about [Provisioning API](#) functionality, go to [APIs](#) section of our User Guide.

To configure handlers and check their call log, go to the **Integration > Provisioning API**.



Tip

The full list of **Provisioning API** parameters matches with [CoreAPI](#) and they are available upon an individual request of your current clients.



Screenshot: Provisioning section

ID	Priority	Name	Event	Handler
1	1	Block client on the switch	After Clients Balance Became <= 0	script /usr/local/script
2	1	Create client in the CRM	After Accounts Create	http crm.net/client-add

Column Name	Description
ID	Handler's identification number
Priority	Priority of handlers execution
Name	Handler's title
Event	Description of the event and performance period (before/after) of the handler
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

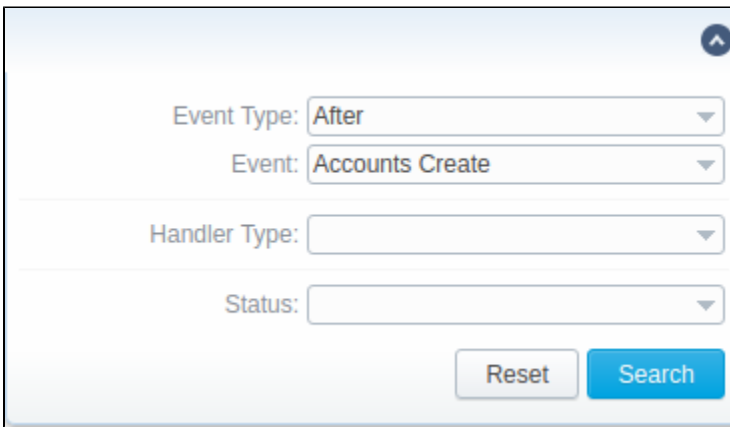
 **Tip**

For a quick switch between **enabled** and **disabled** statuses, click on a respective *status icon* in the section. However, to change **archived** status, you need to do it from a handler edit form

Advanced Search

Advanced Search drop-down menu, located in the top right corner of the section, is called to facilitate an easy access to required information. By clicking on  *red downwards arrow*, the following drop-down menu is displayed:

Screenshot: *Advanced Search drop-down menu*



Field	Description
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
Handler Type	Indicate type of handler: <ul style="list-style-type: none"> • script • http
Status	Choose a target status: <ul style="list-style-type: none"> • Enabled • Disabled • Archived or leave this field blank. In this case, both enabled and disabled handlers will be displayed. This field is empty by default

Creating New Handler

To start with provisioning, you need to create a handler manually. Press **New Handler** button and specify respective parameters of in the appeared pop-up window:

Screenshot: *Provisioning section/Handler adding form*

Provisioning API

Name:

Event:

Task:

Status: Priority:

Field	Description
Name	Specify a particular title for a handler
Event	<p>Select an action and the period (<i>before/after</i>) when a handler should be run</p> <ul style="list-style-type: none"> • After Action - in this case, you simply handle the action. In most cases, if you don't need to modify data, we recommend using handlers with <i>After</i> type of event. • Before Action - in this case, you can modify incoming data and push it back to the VCS or forbid the action.
Task	<p>Determine a type of handler and details:</p> <ul style="list-style-type: none"> • script - here you need to specify the path where a following script is located, for example: <i>user/local/vcs/script.py</i>. • http:// - here specify the port and method, for example: <i>120.0.0.1:5000/api</i>.
Status	<p>Choose the state of the handler:</p> <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	<p>Establish an order of handler performing. Note: The handler with <i>1 priority</i> will precede all other handlers in order.</p>

✔ Best practice example

Here there is an example how to apply the **script handler**.

1. Open the **Provisioning section** and create a handler.
 - a. Specify the name, type, and status.
 - b. In **Event** field select **Before** and **Clients Create** event from the drop-down list.
 - c. In **Task** field indicate **script** type and determine the location of the script, for example: */provisioning/script.py*.
 - d. Click **Apply**.

We have the next script (see below) with the following location: */provisioning/script.py*.

```
#!/usr/bin/env python2.7
import sys
import json
input = '\n'.join(sys.stdin.readlines())

data = json.loads(input)
data['name'] = data['name'] + "testprefix"

print json.dumps(data)
```

As a result, this handler will add the prefix to the name of the client after creation.

Here there is an example based on **http:// handler** usage.

2. Open the **Provisioning section** and start to create a handler.
 - a. Specify the name, type, and status.
 - b. In **Event** field select **After** and **Clients Create** event from the drop-down list.
 - c. In **Task** field indicate **http://** type and determine the port and method, for example: *120.0.0.1:5000/api*.
 - d. Click **Apply**.

Find below an example of the **http:// handler**:

```
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()
```

⚠ Attention

In order to put handler into action, you need to **restart Cache Manager**. To do so, click on corresponding icon in **Task Scheduler** section

Execution Logs tab

You can access the details about handler execution in this tab. For more details, check out a related article: [Execution Logs](#).

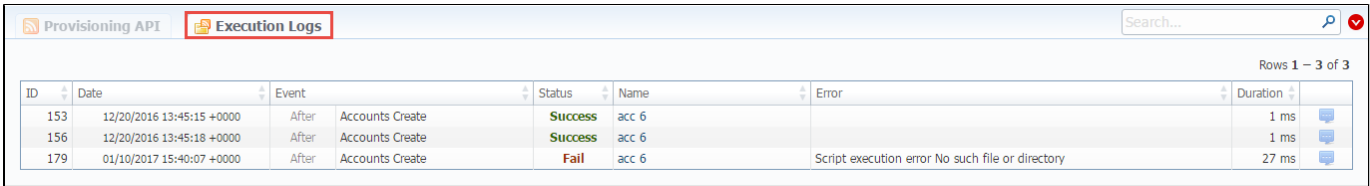
⚠ Warning

Please note, the Provisioning functionality is experimental and may be changed completely in future releases.

Execution Logs


Execution Logs tab provides information about handlers execution such as date and time of execution, status, duration, etc. Tab is presented in a 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 windows contains an information that VCS billing sends via 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: "1pre-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 <p>After event type is set by default</p>
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 last date of handler execution

API Testbed

This section allows to send/receive JSON-RPC API calls via the web interface. It is important to understand that this section allows you to **actually run** API requests, and **it is not a simulation**. So, if you requested to delete or modify a client by running an API request, this client will be actually deleted from the system or modified.

Screenshot: API Testbed settings

Field	Description
JSON-RPC URL	URL is set by default according to current server settings
Module	Select which module to call
Action	Set which action to call
Login	Specify a login that will be used during the call
Password	Specify a password that will be used during the call
Parameters	Enter JSON data that will be sent to the API

After the **Send Request** button is pressed, you will see:

- **API Request** - full JSON message that has been sent;
- **API Response** - full JSON response from RPC server.

Both request and response are shown as JSON tree with the ability to switch to RAW JSON (see screenshot below).

Screenshot: API Request & API Response

```
API REQUEST
{
  jsonrpc: "2.0",
  method: "clients.didsList",
  - params: {
    - auth: {
      login: "admin",
      password: "admin"
    }
  },
  id: "api-testbed"
}

API RESPONSE
{
  jsonrpc: "2.0",
  id: "api-testbed",
  - result: {
    code: false,
    session_id: "1-dkh1vhdb9p05f9euuupptekbe1",
    - messages: [
      + { - }
    ],
    return: [ ],
    errors: [ ]
  }
}
```

Warning

1. **API Testbed allows only to test Management API, not CoreAPI.**
2. If the user has access to delete gateways via *API Testbed*, he can **remove all gateways regardless of which Reseller owns** a respective gateway.

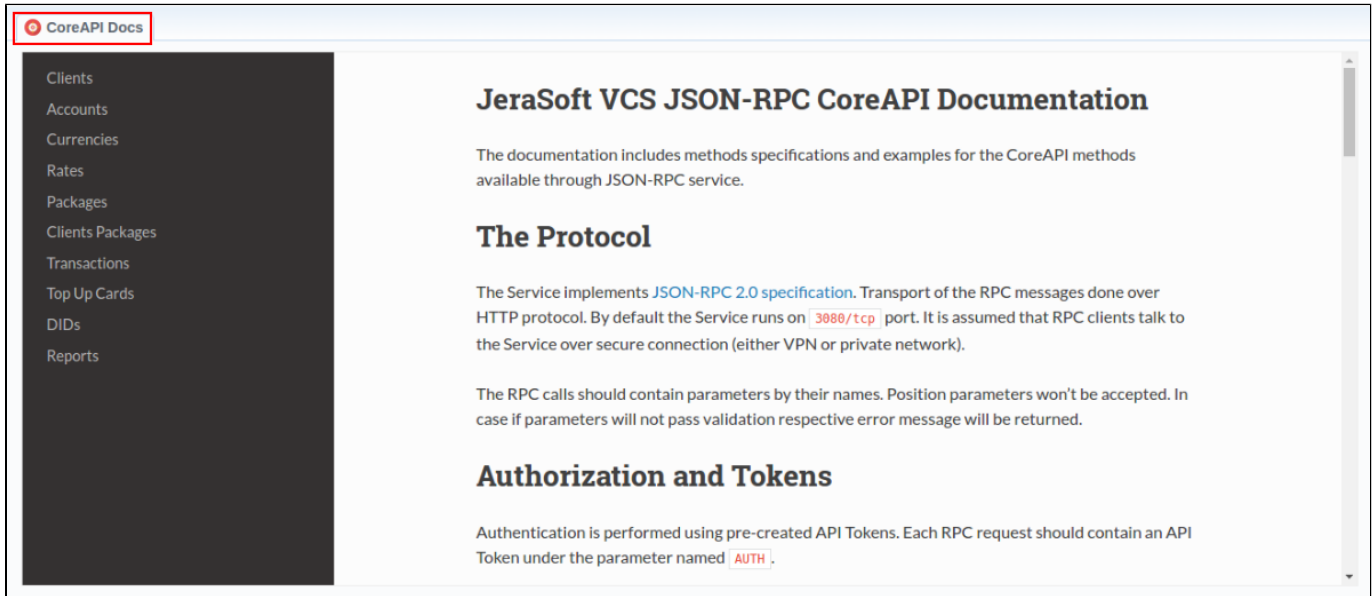
CoreAPI Docs

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:

- **Clients**
- **Account**
- **Currencies**
- **Rates**
- **Packages**
- **Client's Packages**
- **Transactions**
- **Top Up Cards**
- **DIDs**
- **Reports**

Screenshot: CoreAPI Docs section



For more information about CoreApi, open the [CoreAPI](#) article in APIs section of our User Guide.

System

Information in this chapter of the Guide provides overview of major **JeraSoft VCS 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](#)
- [Task Scheduler](#)
- [Users](#)
- [Roles](#)

Events Log

In this article

- [Section overview](#)
- [Events Log tab](#)
 - [Advanced Search](#)
 - [Detailed Description of Event](#)
- [Configuration Tab](#)
 - [Adding new rule](#)

Section overview

Since keeping track of all **events** that occur in the system is crucial, VCS offers you **Events Log** section where you can view information regarding all **errors, alerts, and messages**, as well as configure the rules for email notifications sending. Section is divided into two tabs: **Events Log** and **Configuration**.

Events Log tab

Information in the tab is presented in a form of a list of all events recorded by the system. For example, system records the following events:

- incoming or outgoing event of the client that is not registered within the system;
- number prefix that are not registered within the system;
- incoming call price that is higher than outgoing one;
- incoming or outgoing call that was rejected and others.

Tab structure is presented on the screenshot below:


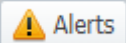
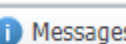



Screenshot: Events Log tab

ID	Type	Sender	Date	Message	Tags
499985	Alert	Task Scheduler	05/22/2017 14:46:02 +0000	CHECK: task jsonrpcd@127.0.0.1 was finished abnormally	
499986	Message	Task Scheduler	05/22/2017 14:46:02 +0000	RUNNER: starting task "calculator"	
499987	Message	Task Scheduler	05/22/2017 14:46:03 +0000	RUNNER: starting task "cache_manager"	
499988	Message	Cache Manager	05/22/2017 14:46:03 +0000	Cache was generated in 0.3313 sec	
499989	Message	Calculator	05/22/2017 14:46:04 +0000	Queue: loaded 0 xDRs from xdrs_queue	

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
Tags	Tags that might have been added to the event

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
 Delete Events	Allows to delete currently displayed events
	Allows to view a detailed description of the event (if possible)
	Opens Advanced Search drop-down menu

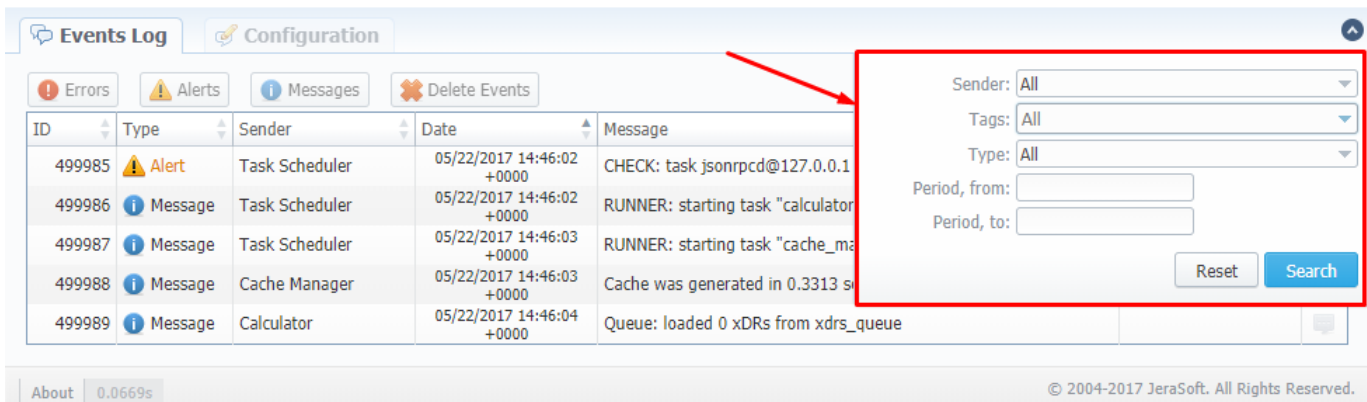
Warning

When you click the **Delete Events** button, **all events** that satisfy current search query **will be deleted from the system**

Advanced Search

You can find the build-in **Advanced Search** drop-down menu that provides an easy way of navigation between multiple columns of the table. Click  downwards arrow to open menu with the following fields:

Screenshot: *Advanced Search drop-down menu*




The screenshot shows the 'Events Log' interface with a table of events. A red box highlights the 'Advanced Search' drop-down menu, which includes the following fields and buttons:

- Sender: All
- Tags: All
- Type: All
- Period, from: [input field]
- Period, to: [input field]
- Reset button
- Search button

Field	Description
Sender	Select a respective sender from the given list. By default, field value is All .
Tags	Select one or multiple tags from the provided list. By default, field value is All .
Type	Specify a type of event: error , alert , or message . By default, 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, press **Search** button to apply them. Press **Reset** to cancel the applied search

Detailed Description of Event

You can view detailed descriptions of some events by pressing  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 event*

Events Log Message #500033

DYNAMIC ROUTING MANAGER 05/22/2017 14:46:29 +0000

DynRouting table generated: 682735 rows in 0.24 minutes (2815056.53 rpm)

```

Simple LCR: 682734 routes
Complex Quality: 455156 routes
Simple Quality: 113789 routes
DID Routing: 682735 routes
Static Routing: 568945 routes
Complex LCR: 341367 routes
Proportional: 227578 routes
  
```

Configuration Tab

In **Configuration** tab, you can create rules for email notifications about respective events within the system. Main window represents a set of rules, presented in the form of a table (screenshot below):

Screenshot: Configuration tab

Events Log **Configuration**

+ Add Rule Rows 1 – 1 of 1 20 Page 1 of 1

ID	Title	E-mails	Filters	Group Limit
1	SIP/RADIUS ALERT	test@jerasoft.net	Services: RADIUS Server, SIP Redirect Server Types: Errors, Alerts	0

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Column name	Description
ID	Identification number of the rule
Title	Name of the rule
Emails	List of receipients' 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 new rule

For adding a new rule to the system, you need to click the button. Following this, **Watch Rule** pop-up window will show up with respective settings (shown below):

Screenshot: Watch Rule pop-up window

Watch Rule

Title:

E-mails:

Group Limit: events

Details Limit: characters

FILTERS

Services: ▼

Types: ▼

Tags: ▼

RegExp Match:

Information Block	Field	Description
General	Genetal information block consisting of the following fields:	
		Name of the rule that will be put into subject of the message
	Emails	Email addresses of the recipient
	Group Limit	<p>The boundary to control the amount of messages to be sent. If there are more messages available for delivery within one monitoring cycle than specified value they will be sent as a single email.</p> <p>Set to 0 if you want to get all messages separately. Set to ultimately high value if you always want to receive grouped message. By defaul, filed value is set to 0 events.</p>
	Details Limit	Data will be limited and cut to specified number of characters in the grouped messages. By default, filed 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 into this event rules.</p> <p>List of available services:</p> <ul style="list-style-type: none"> • Backup Manager; • Balances Manager; • Cache Manager; • Calculator; Calling Cards Manager; • Cleaner; Email Rates Manager; • Dynamic Routing Manager; • Events Manager; • Factors Watcher; • Files Collector; • Files Downloader; • Invoicing Manager; • JSON-RPC Core API; • Log Rotator; • Jurisdiction Manager; • Mail Manager; • Notificator; • Packages Manager; • Payment Gateways; • Provisioning Manager; • RADIUS Server; • Rates Notificator; • Report Generator; • Reports Watcher; • SIP Redirect Server; • Statistics Manager; • Task Scheduler; • Web.
Types	Specify category of events for the rule: errors, messages, alerts
Tags	<p>Set labels that will be applied to filter the rule.</p> <p>List of available tags:</p> <ul style="list-style-type: none"> • aaa - includes all accounting tags: aaa.fraud; aaa.ident; aaa.ident.client; aaa.ident.rate; aaa.ident.service; aaa.routing; aaa.traffic_processing; • api -includes all api tags: api.core; api.core.jsonrpcd; api.management; api.provisioning; • coreapi; • dids; • factors watcher; • 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;
RegExp Match	Regular Expression Match option to filter rules. Use POSIX standart while specifying regular expressions

After pressing **OK** button, a new rule will be added to the genetal 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, **Audit Log** section come to your rescue. This section displays detailed information concerning all **actions** performed by users in VCS with [Clients](#), [Resellers](#), [Accounts](#), [Calling Cards](#), [DIDs](#) (see screenshot below):

Screenshot: Audit Log section main window

Item	Changes	Modification Time	Called By	User
Customer E	Last Invoiced: 2017-06-07 ← 2017-05-24	12/26/2017 13:20:03 +0000	— invoicing	
Customer E	Last Invoiced: 2017-05-24 ← 2017-05-10	12/26/2017 12:20:02 +0000	— invoicing	
My Client	Role: both ← none	12/26/2017 12:15:29 +0000	Account Creation CoreAPI JSON-RPC	Demo User
My Client	Routing Plan ID: 20 ← 6	12/26/2017 11:56:04 +0000	Client Modification CoreAPI JSON-RPC	Demo User
My Client	Orig Rate Table ID: 64 ← 56 Term Rate Table ID: 63 ← 56	12/26/2017 11:55:38 +0000	Client Modification CoreAPI JSON-RPC	Demo User
My Client	ID: 640 Reseller ID: 3 Type: 0	12/26/2017 11:49:33 +0000	Client Creation CoreAPI JSON-RPC	Demo User

Column	Description
Action Type	Depending on the type of action, one of the following icons will be displayed in the columns: <ul style="list-style-type: none"> - a new system item was created - a system item was edited - a system item was deleted
Item	System item (Client, Account, Reseller, Calling Card, DID Management) that a certain action was applied to
Changes	The list of changes with detailed information on what exactly was changed
Modification Time	Data and time of applied actions
Called by	Action Name (<i>Account Creation, Client Removal, etc.</i>) and Service that is responsible for a specific action
User	Name and IP address of a user who performed an action

Attention

If you change the **Mail Templates** in the **Reseller** settings, these updates **will not** be displayed in the **Audit logs**

Advanced Search

The displayed list of audit action is automatically filtered by **Client** item that is indicated by **Advanced Search** drop-down menu. Search menu is presented with the following fields:

Screenshot: Advanced Search drop-down menu

Audit Log

Clients

Item	Changes	Modification
Customer E	Last Invoiced: 2017-07-05 ← 2017-06-21	12/26/2017 12:15:29
Customer E	Last Invoiced: 2017-06-21 ← 2017-06-07	12/26/2017 12:15:29
Customer E	Last Invoiced: 2017-06-07 ← 2017-05-24	12/26/2017 12:15:29
Customer E	Last Invoiced: 2017-05-24 ← 2017-05-10	12/26/2017 12:15:29
My Client	Role: both ← none	12/26/2017 12:15:29

Item Type: **Clients**

Name:

Action:

User:

Period: Custom —

Called By:

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Field	Description
Item Type	<p>Select a respective item type from the given list:</p> <ul style="list-style-type: none"> • Client • Account • Reseller • Calling Card • DID Management <p>By default, field value is Clients.</p>
Name	Insert a name of the respective item (e.g. Customer A, 3439-005318618, etc.)
Action	Choose a type of action: Creation, Modification or Removal
User	When search settings are applied, only events whose Date value Period, from value will be displayed
Period	You can choose either Custom period (e.g. Today, Last 7 Days, Last Month, This Year) or set an exact date and time with Datepicker
Called By	<p>Select Action Name from the provided list:</p> <ul style="list-style-type: none"> • Client Creation • Client Modification • Client Removal • Full Client Removal • Mass Client Modification • Note Creation • Forced Rate Notification • Account Creation • Account Modification • Account Removal • Reseller Creation • Reseller Modification • Reseller Removal • Calling Card Creation • Calling Card Modification • Calling Card Removal • DID Creation • DID Modification • DID Removal • DID Import • DID Mass Edit

Attention

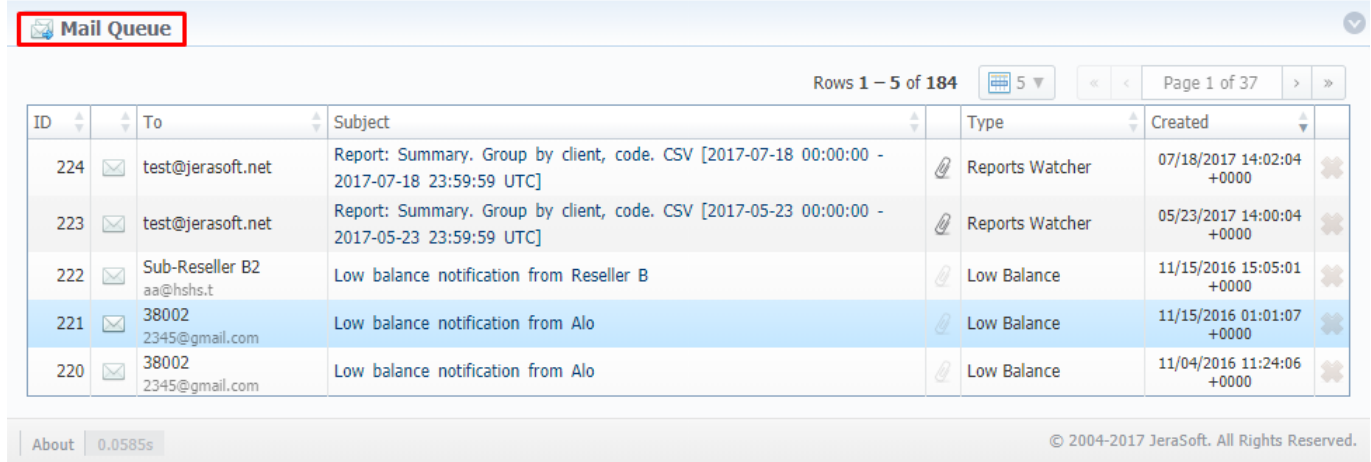
In case a **client, account, or reseller** was **deleted** (but not **fully**), there is a possibility to see a state of this item at the time of its removal, by clicking on its **name** in **Item** column.

Mail Queue

Section overview

Mail Queue is a section designed to provide 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**. Section is presented in a 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 the 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 attached file
	Allows to delete an email from the queue. Requires confirmation

Attention

Emails that have been sent **cannot** be deleted from the list; only those that are currently **in a queue**

Quick Search toolbar

You can filter data, presented in the section, using **Advanced Search** drop-down menu Use this toolbar for fast investigation in this section. It makes a search filter to limit the search results for higher working efficiency. To open this form click on the down arrow 

Screenshot: Mail Queue search toolbar

Mail Queue

Rows

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	

Client:

Type:

Status:

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Field	Description
Client	Type the name of client that you want 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 **Subject** column. A pop-up window with the following structure will appear:

Screenshot: Detailed view of email letter

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

 Sent
11/20/2015 14:04:01 +0000

 rates-Rates-all_time-20151120-135801-PARTIAL.csv

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

Close

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 email has the attached file , its name will be specified in the field. By clicking on it, 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

System Status
MASTER

CPU: **1 Core(s)**
 LA: **0 / 0 / 0**
 Memory: **1.57 GB / 1.83 GB**
 Services: **3**

ID	Service	Started on	Uptime		
31262	RADIUS Server	12/27/2017 03:23:03 +0000	13:18:25	⏸	⏹
30722	JSON-RPC Core API	12/27/2017 03:16:46 +0000	13:24:43	⏸	⏹
983	System Tracker	12/27/2017 04:00:03 +0000	12:41:26	⏸	⏹




Some processes can not be stopped via web interface, so you have to login on server via SSH to stop them.

MASTER DATABASE SESSIONS

ID	Application	Session Start	Query Start	Duration	Query
4490	webAdmin:demo:system_status/info:91.195.97.74	12/27/2017 16:41:28 +0000	12/27/2017 16:41:28 +0000	00:00:00	SELECT *, (now()-backend_start) AS duration FROM pg_stat_activity WHERE TRUE AND "datname" = 'vcs' AND "username" = 'vcs' ORDER BY "duration"
987	System Tracker	12/27/2017 04:00:03 +0000	12/27/2017 04:00:03 +0000	12:41:25	IDLE
986	System Tracker	12/27/2017 04:00:03 +0000	12/27/2017 16:41:07 +0000	12:41:25	IDLE
985	System Tracker	12/27/2017 04:00:03 +0000	12/27/2017 04:00:03 +0000	12:41:25	IDLE
31275	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 03:23:03 +0000	13:18:24	IDLE
31274	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 03:23:03 +0000	13:18:24	IDLE
31273	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 16:30:39 +0000	13:18:24	IDLE
31272	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 16:30:02 +0000	13:18:24	IDLE
31271	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 03:23:03 +0000	13:18:24	IDLE
31270	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 16:41:20 +0000	13:18:24	IDLE
31269	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 16:15:02 +0000	13:18:24	IDLE
31268	RADIUS Server	12/27/2017 03:23:03 +0000	12/27/2017 03:23:03 +0000	13:18:24	IDLE
30732	JSON-RPC Core API	12/27/2017 03:16:46 +0000	12/27/2017 15:02:21 +0000	13:24:42	IDLE
30731	JSON-RPC Core API	12/27/2017 03:16:46 +0000	12/27/2017 16:20:02 +0000	13:24:42	IDLE
30730	JSON-RPC Core API	12/27/2017 03:16:46 +0000	12/27/2017 15:02:21 +0000	13:24:42	IDLE
30729	JSON-RPC Core API	12/27/2017 03:16:46 +0000	12/27/2017 16:41:25 +0000	13:24:42	IDLE
30728	JSON-RPC Core API	12/27/2017 03:16:46 +0000	12/27/2017 16:20:02 +0000	13:24:42	IDLE
30727	JSON-RPC Core API	12/27/2017 03:16:46 +0000	12/27/2017 03:16:46 +0000	13:24:42	IDLE

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Information block	Column	Description
Localhost	CPU	Number of Central Processing Unit cores
	LA	System Load Average
	Memory	Amount of Used and Total Memory
	Services	Number of currently running services
	ID	System service identification number
	Service	Name of the system service
	Started on	Start date and time of the service
	Uptime	Current uptime of the service
Master Database Sessions	ID	Database session ID
	Application	Name of the application
	Session Start	Session start date and time
	Query Start	Query start date and time
	Duration	Session duration
	Query	Description of the query

Icon	Description
	Allows to start any service that is not currently running
	Allows to restart a service that is currently
	Allows to stop a service

Section allows a user to start, stop, and restart services **manually** with help of certain icons.

 **Attention**

Note that you **cannot** stop some processes via **web interface**. To do so, you need to login on server via **SSH** to stop them.

Task Scheduler

In this article

- [Task Scheduler](#)
- [Utility management](#)

Task Scheduler

Task Scheduler section represents a list of all **system utilities** (see screenshot below) and aimed at providing possibility to manage and **configure** them as **user** desires. List of system utilities has the following structure:

Screenshot: *Task Scheduler section*

Active	Manual Run	Name	Run at	In Queue From	Last Run	
		Backup Manager	20 minute(s), 3 hour(s), every 1 day(s)	—	01/12/2017 16:33:35 +0000	
		Balances Manager	20 minute(s), 3 hour(s), every 1 day(s)	—	01/12/2017 16:33:35 +0000	
		RADIUS Server	every 10 minute(s)	—	01/04/2017 09:32:54 +0000	
		SIP Redirect Server	every 10 minute(s)	—	01/04/2017 09:32:55 +0000	
		Cache Manager	every 5 minute(s)	—	01/10/2017 13:59:41 +0000	
		Calculator	every 6 minute(s)	—	01/04/2017 09:32:51 +0000	
		Calling Cards Manager	5 minute(s), every 1 hour(s)	—	01/12/2017 16:33:35 +0000	
		Cleaner	20 minute(s), 1 hour(s), every 1 day(s)	—	01/04/2017 09:47:35 +0000	
		Dynamic Routing Manager	3 minute(s), every 1 hour(s)	—	01/04/2017 09:32:55 +0000	
		Email Rates Manager	1 minute(s), 3 hour(s), every 1 day(s)	—	01/12/2017 16:33:35 +0000	
		Events Manager	every 5 minute(s)	—	01/12/2017 16:33:35 +0000	
		Provisioning Manager	every 5 minute(s)	—	01/12/2017 16:33:35 +0000	
		Factors Watcher	every 5 minute(s)	—	01/12/2017 16:33:35 +0000	
		Files Collector	every 10 minute(s)	—	01/12/2017 16:33:35 +0000	
		Files Downloader	every 5 minute(s)	—	01/12/2017 16:33:35 +0000	
		Invoicing Manager	20 minute(s), every 1 hour(s)	—	01/12/2017 16:33:35 +0000	
		JSON-RPC Core API	every 1 minute(s)	—	01/05/2017 11:18:08 +0000	
		Jurisdiction Manager	20 minute(s), 0 hour(s), every 1 day(s)	—	01/12/2017 16:33:35 +0000	
		Log Rotator	10 minute(s), 1 hour(s), every 1 day(s)	—	01/12/2017 16:33:35 +0000	
		Mail Manager	every 5 minute(s)	—	01/12/2017 16:33:35 +0000	
		Notifier	5 minute(s), every 1 hour(s)	—	01/12/2017 16:33:35 +0000	
		Packages Manager	every 10 minute(s)	—	01/12/2017 16:33:35 +0000	
		Rates Notificator	every 5 minute(s)	—	01/12/2017 16:33:35 +0000	
		Report Generator	every 16 minute(s)	—	01/12/2017 16:33:35 +0000	
		Reports Watcher	every 6 minute(s)	—	01/12/2017 16:33:35 +0000	
		Statistics Manager	20 minute(s), every 1 hour(s)	—	01/12/2017 16:33:35 +0000	

Column Name	Description
Active	Status of the utility. Depending on the icon, status can be either enabled or disabled . In order to change a utility status, click on the icon in the table
Manual Run	Each utility is run with a certain periodicity , specified in Run at column. By pressing Run utility icon, you manually start this utility regardless of its Run at column value.
Name	Name of the utility. The full list of system utilities with their descriptions is provided in a table below
Run at	Periodicity at which each utility is run
In Queue From	If utility is run manually, time and date when its launch was initiated will be specified in the column
Last Run	Time and date when the last run was initiated


Utility Name	Description
Backup Manager	Utility that manages system backup processes
Balances Manager	Creates automatic charges

RADIUS Server	RADIUS server process
SIP Redirect Server	SIP Redirect server process
Cache Manager	Cache Manager process whose main function is to continuously monitor and include client-related changes for RADIUS and SIP Redirect
Calculator	Utility that processes all data collected from CDR-files
Calling Card Manager	<i>Calling Cards</i> manager process
Cleaner	Utility that automatically cleans old messages from <i>Events Log</i> section
Dynamic Routing Manager	Utility that creates routing tables used in Dynamic Routing feature
Email Rates Manager	Utility that imports rate tables updates from emails
Events Manager	Process that sends events to e-mails according to <i>Events Config</i>
Provisioning Manager	Utility that processes event asynchronously
Factors Watcher	Utility that controls <i>Factors Watcher</i> tool
Files Collector	Utility that controls file collectors
Files Downloader	Utility that automatically downloads cdr-files from switch host
Invoicing Manager	Utility that manages the autoinvoicing feature
Log Rotator	Utility that controls log-files
Mail Manager	Sends e-mails from mail queue (invoices, notifications etc)
Notifier	Notifies in case of low balance or HDD space events
Packages Manager	Utility that manages your packages
Rates Notificator	Utility that notifies clients about rate changes
Report Generator	Utility that manages data generation for reports
Statistics Manager	Utility that manages statistics packages
Statistics Watcher	Utility that sends generated statistic reports by scheduled time
XML-RPC Server	XML-RPC server process


Attention

Please note that if customer had no assigned **packets**, **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 customer previously had absolutely no items listed above, in other words, if you add second account to customer, then that change will be effective instantly.

Utility management

You can always configure the run time of any utility by pressing a respective **edit**  icon. A pop-up window for utility management has the following structure (see screenshot below):

Screenshot: *Utility editing*

 **Task Scheduler**

Factors Watcher

Name: Factors Watcher

Last Run: 01/02/2018 09:35:05 +0000

Active

RUN AT

every ▼

every ▼

every ▼

Day of week: ▼

minute(s)

hour(s)

day(s)

OK

Cancel

Apply

Field	Description
Name	Name of the utility
Last Run	Time and date when the last run was initiated
Active	Checkbox. If it's marked, utility is considered active
Run at	To set a periodicity , insert desired values into minute(s) , hour(s) , and/or day(s) fields and select every or once on condition for each the abovementioned field.
Day of week	Specify the days of week when the utility will be run according to Run at fields values. You can choose either one specific day or all of them (set by default).

Users

In this article

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

Section overview

Users is a core section that provides overview of all registered users in the system. Section allows to **create**, **edit**, and **disable** existing users. The list of users is presented in a form of a table with the following columns:

Screenshot: *Users section*

Active	Login	Reseller	Full name	Role
	admin	all resellers	Administrator	Administrator
	api-client	Reseller A	API Client Portal	API - Client Portal
	jerasupport	Reseller J	JeraSoft Support	Administrator

Column	Description
Active	Users status . Depending on the icon, status can be either active or disabled .
Login	User's account name
Reseller	Name of a company whom user belongs to
Full name	Mailto links of users (if specified in user's account)
Role	User's role that determines the access level or permissions

Tip

If your role implies relevant permits, by clicking on a status icon in **Active** column, you can **change user's status** from *active* to *disabled* and vice versa

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

Button/Icon	Description
	Allows to create a new user
	Opens 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 **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 user's status is active or not, by selecting from a drop-down list: <ul style="list-style-type: none"> • Yes • No • Empty (to display users with both statuses)

Adding New User

What you need to do to create a new user is:

- Click on **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 pressing **OK** button

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 drop-down list
Disabled checkbox	Check if you need to temporary prevent a user from having access to the system
Full name	Enter a user's name . Note that if user's email is specified, full name in the section serves a mailto link .
E-mail	Specify a user's email
Reseller	Specify a reseller, subreseller or manager user belongs to
CoreAPI Token	This field cannot be specified in 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. user will have access to the system only if he/she logs in via specified IPs

 **Attention**

While creating a new user, bare in mind the following things:

- Each user can have only **one** assigned role for.
- We strongly recommend **avoiding non-latin characters** in users' login/passwords

Roles

In this article

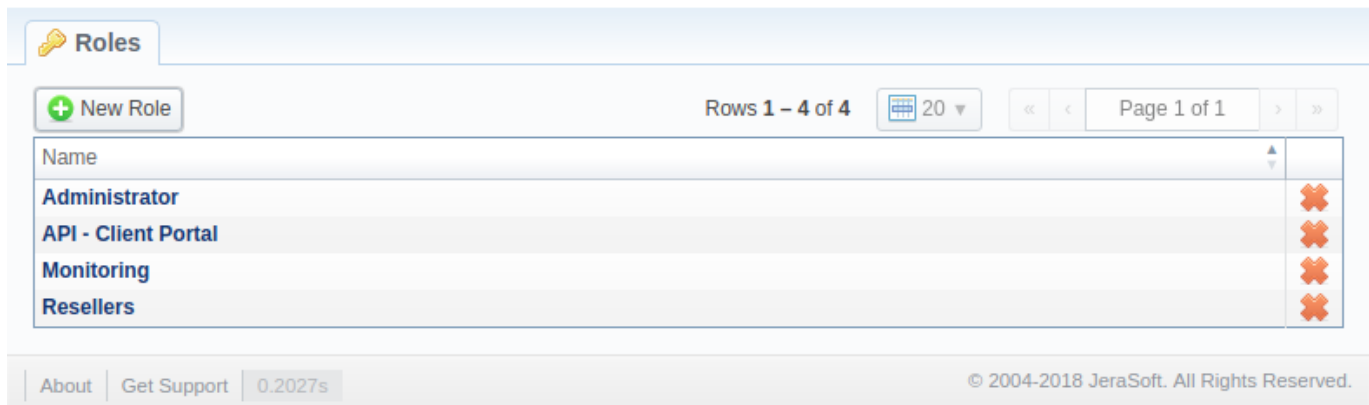
- [Roles List](#)
- [Adding New Role](#)
- [Knowledge Base Articles](#)

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 that include viewing clients lists and summary reports, work with Factors Watcher, etc. However, the role doesn't stipulate for access to technical settings and some statistic info that is only available to Administrator;
- **Resellers** – this role has advanced access permissions for a complete work with the clients. User with this role also doesn't have access to technical settings and some statistic info that is only available to Administrator (use this role when adding Reseller or Agent user).
- **API - Client Portal** - this role has been created to simplify user's access to Client Portal and has next to none permissions for work inside VCS.

Screenshot: Roles section




Name	
Administrator	
API - Client Portal	
Monitoring	
Resellers	

Adding New Role

To add a new role, click the **New Role** button on the toolbar. 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 **Entires** table. The **Default Module** field specifies a default section that will be displayed when you log in into 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 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 in a section

⚠ Attention

- **Parent Reseller has access to all information of his *Sub-Resellers***, a therefore can assign **any routing plan and rate table** to them
- A user with disabled **Management/Clients** module in the **Roles section** will not see the Clients List from the *Clients Panel*.

Knowledge Base Articles

- [How to hide rates in Summary Report for specific system users?](#)

Client Portal

On this page

- [General](#)
 - [Functional advantages](#)
- [Portal Features](#)
 - [Overview](#)
 - [Billing and Payments](#)
 - [Usage History](#)
 - [Account Settings](#)
- [Portal Configuration](#)
 - [Configuration File](#)
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- [Panel Access](#)
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 - [How to set your own domain name for the portal?](#)
 - [How to add your logo or styles?](#)
 - [How to make an advanced panel customization?](#)

This article represents a quick overview of standard options available while using the **Client Portal**. Explore this article to get more about the user interface, functions, and deployment configurations.

General

The **Client Portal** is a separate application integrated with JeraSoft VCS via API. It has a user friendly interface and it's tailored for your clients to manage 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 open source, so it can be used as starting point for your own development or as a reference and example.

Tip

Starting from the VCS 3.13, the Client Portal will be hosted by default on port 9080. To access it, open <http://VCS-IP-ADDRESS:9080/>. Moreover, you could assign your own domain name to the portal.

Functional advantages

1. Fully API based

The system is fully based on API integration. Therefore, it does not require any direct access to the VCS database and provides more secure approach.

2. Can be hosted separately

You can move the Clients Portal to other server and just configure VCS IP address in the API settings. As result you can fully isolate VCS from the public internet.

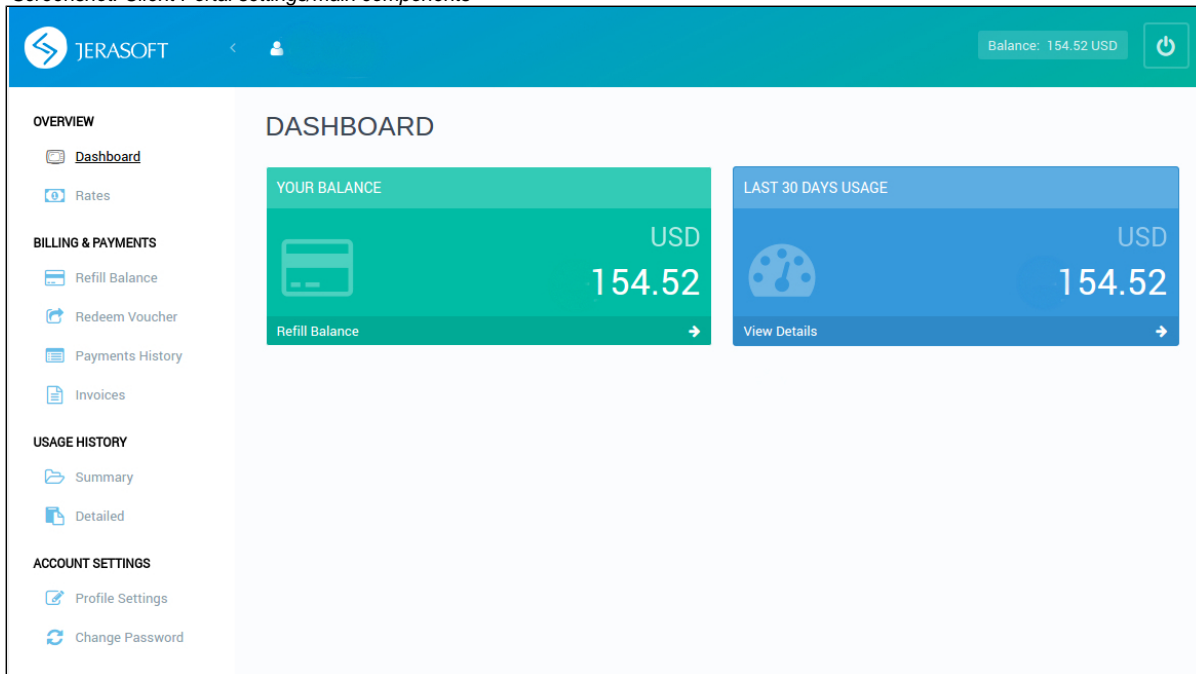
3. Full Open Sourced

The portal comes with all source code. It allows you to either customize the system or extend it or just use as a reference guide for development of your own portal.

Portal Features

There are 4 main section in the Client Portal – overview, billing & payments, usage history and account sections. Let's view them in more details below.

Screenshot: Client Portal settings/main components



Overview

- **Dashboard** – displays an overview of a real-time user's balance and recent service usage. Click the "Refill Balance" or arrow on the toolbar to open billing settings. If you click the "View Details", it takes you to the *Detailed* section to view a relevant usage history.
- **Rates** – shows all rates and allows to easily sort and search them by services.

Billing and Payments

- **Refill balance** - here user can recharge the account via payment gateways.
- **Redeem Voucher** - here the user can refill the balance with a respective voucher code.
- **Payment History** - shows a list of all transactions that belong to the user.
- **Invoices** - shows all invoices that belong to the user with possibility to download them.

Usage History

- **Summary** - shows summary statistics of the services used by the client, allows to easily filter data by period, service, account or package.
- **Detailed** - shows detailed statistics of the client's usage, including rates used for billing.

Account Settings

- **Profile Settings** - allows user to update the profile settings, including company name, e-mail, address, registration and tax ID.
- **Change Password** - allows user to change the password for the portal.

Portal Configuration

There are few steps to be performed before the **Client Portal** can be used:

- Put access credentials into the Client Portal config file
- Configure firewall to allow users access

Configuration File

In order to tune Client Portal configuration you have to:

1. Login to the VCS server via SSH
2. Go to the `/opt/jerasoft/vcs/portal-backend/config` directory.
3. Make a copy of the file `customer-params.default.json` and name it, for example, `customer-params.json`.
4. Open `customer-params.json` file to edit and set the **mandatory settings**:
 - a. `coreApi.authToken`
 - b. `managementApi.login`
 - c. `managementApi.password`
 - d. `billingUri`

e. logFile

Below we provide description of all settings you can find in the file. You can also find sample configuration with all available settings at:

/opt/jerasoft/vcs/portal-backend/config/customer-params.json.sample

Setting Name	Description	Default Value
General Settings		
coreApi.uri	URL for the Core API JSON-RPC service	"uri": "http://127.0.0.1:3080"
coreApi.authToken	CoreAPI Auth Token (<i>could be found in the Users section "CoreAPI Token" field</i>)	"authToken": "example"
managementApi.uri	URL for the Management API	"uri": "https://127.0.0.1/jsonrpc"
managementApi.login	Login of the user under which all request will be performed (<i>should be same user for which you use CoreAPI Auth Token</i>)	"login": "login"
managementApi.password	Password of the user under which all request will be performed	"password": "password"
billingUri	Admin Panel web-address	"billingUri": "https://127.0.0.1"
Payment Gateways: PayPal		
Check your PayPal panel for the required parameters. Get more details.		
paypal.clientId	PayPal Client ID	
paypal.clientSecret	PayPal Client Secret Key	
Payment Gateways: Authorize.Net		
Check your Authorize.Net panel for the required parameters. Get more details.		
authorizenet.apiLoginId	Authorize.Net API Login ID	
authorizenet.apiTransactionKey	Authorize.Net API Transaction Key	
authorizenet.apiSignatureKey	Authorize.Net API Signature Key	

Firewall Settings

Client Portal works on ports 9080 and 9090. Make sure you open them on your firewall in order for portal to work correctly.

Panel Access

Access to the panel for your customers is configured in a respective customer's properties in the VCS web-interface: *Clients* section *Client Info* tab *Client's Panel* sub-section. Make sure, you have enabled the access and specified login and password.

Screenshot: *Clients* section/*Client Info* tab

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 Deployment

As mentioned above, JeraSoft Client Portal is provided as an open source software, so you can look into it, learn from it, and adapt it to your needs. You can use it as is, make it a starting point for your own development or use as a reference guide to build an own solution.

! Warning

JeraSoft team is responsible for providing support **only** for original *Client Portal* functionality with an initial unchanged source code.

How to set your own domain name for the portal?

To add your own domain name for the Client Portal, you have to do the following:

1. Deploy a small node that will accept all requests (VPS, Cloud Instance or physical server)
2. Install any light-weight HTTP proxy daemon (for example, [NGINX](#))
3. Configure virtual host with your domain name and SSL certificates (optionally)
4. Configure HTTP daemon to forward all requests from `https://your_domain_name/` to `http://vcs-ip-address:9080`

How to add your logo or styles?

You may personalize your panel to make it better fit to your company look and feel. 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 are relative 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`


How to make an advanced panel customization?

As mentioned above, Client Portal comes with all source code and you can use it as a reference guide or a starting point for your own development. 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 example a functional implementation.

The technologies used for the development of the Clients Portal are:

- a. PHP: Yii2
- b. JavaScript: Angular 2
- c. HTML/CSS: Bootstrap

d. Tools: Swagger

 **Warning**

Please make sure that you clone the source code before making any changes to it. Otherwise, all the changes you made will be removed during the system upgrade.

System Shell Tools

On this page

- [Requirements Checker](#)
- [Services Manager](#)
- [Cluster Manager](#)
 - [Init Master](#)
 - [Master: Add new Slave](#)
 - [Slave: Promote to Master](#)
 - [Slave: Sync Files](#)
 - [Cluster Status](#)

This section describes **shell tools** required for management of the system at the very system level. All these tools are shipped with the VCS distributive. You need to use SSH or direct access to the server in order to run any of these tools. Please notice that most of given tools require "root" access and show inline help when run without arguments.

Important!

Please use these tools **only if you have a clear understanding** of what you are doing. Misuse of the tools may cause an improper functioning of the system.

Requirements Checker

The tool is aimed to check **minimal requirements** and **security recommendations** at your server before and after installation.

Usage

```
/usr/local/vcs/bin/setup-checker
```

The tool should be run under "root" permissions without any arguments. When the tool is run it will perform a list of checks and show results for each of them. Use it:

1. Before installation of the VCS to check **minimal hardware and software requirements**. At this stage you may [download the tool](#) separately from the VCS.
2. After installation of the VCS to check **security recommendations**. Usually you need to tune your firewall settings according to the [JeraSoft Billing First Steps](#).

Attention

The tool checks only minimal requirements. **Real hardware requirements** highly depend on your traffic and deployment model.

Services Manager

The tool is used for **managing the VCS Services**. It allows to correctly start, stop, get status of the VCS Services as RADIUS Server, SIP Server, Calculator, etc.

Usage

```
/usr/local/vcs/bin/service <service-name> <action> [<options>]
```

The tool should be run under "root" or "vcs" user. Service manager takes 2 arguments:

Argument	Description
<service-name>	Short name of the service. Run the tool without arguments to get list of the services at your system.

<code><action></code>	Action to perform, one of the following: <ul style="list-style-type: none"> • <i>start</i> - start the service • <i>stop</i> - stop the service • <i>restart</i> - stop and then start the service • <i>reload</i> - force config re-read without restart • <i>status</i> - return current status of the tool
-----------------------------	--

Additionally you may pass next options:

Option	Description
<code>--path=<path></code>	Specify the VCS location. Only if different from <code>/usr/local/vcs</code> .
<code>--user=<user></code>	Specify user the VCS runs under. Only if different from "vcs".

For your convenience there are some examples below:

Restart RADIUS Server

```
/usr/local/vcs/bin/service bbradiusd restart
```

Start Files Downloader

```
/usr/local/vcs/bin/service files_downloader start
```

Get status of SIP Server

```
/usr/local/vcs/bin/service bbsipd status
```



The tool also complies with [LSB Init Scripts](#) standard. It allows to analyse exit code of each action in case of automated usage.

Cluster Manager

The tool is used to **manage cluster**. It allows to init the cluster, add and promote slave to master, etc.

Usage

```
/usr/local/vcs/bin/cluster <command> [<options>]
```

The tool requires "root" permissions. Cluster Manager takes command as mandatory argument and additional options. Some of commands may be run only on Master and others only on Slave. There are two available types of Slave: redundancy and reporting. All extra options for the commands are explained below in the corresponding subsection.

Init Master

The command is **run on Master** and used for Master to configure its parameters.

Bash

```
/usr/local/vcs/bin/cluster init-master --ip=<IP-of-master> [<extra-options>]
```

This command may require additional options:

Option	Description	Default
--ip=<ip>	IP Address of the Master server	none
--ssh-port=<port>	SSH Port at the master server	22
--data=<path>	PostgreSQL data path on master system	autodetect
--vcs-path=<path>	Path to the VCS on Slave	/usr/local/vcs

Master: Add new Slave

The command is **run on the Master** and used for:

- **first time initialisation** of the cluster;
- **addition of the new slave** node to the cluster;
- addition of the **old master to work as slave** after failover.

Bash

```
/usr/local/vcs/bin/cluster init-slave --ip=<IP-of-slave> [<extra-options>]
```

This command encapsulates 4 sub-commands:

- configuration of the *Master* to ship replication logs (*init-master*)
- configuration of the *Master* to accept connections from the *Slave* (*init-master-access*)
- configuration of the *Slave* to receive replication logs (*init-slave*)
- show status of the cluster (*status*).

Each of this commands may be performed separately if you know exactly what you need.

This command may require additional options:

Option	Description	Default
--ip=<ip>	IP Address of the Slave server	none
--ssh-port=<port>	SSH Port at the slave server	22
--username=<login>	Login to the slave server	jerasupport
--data=<path>	PostgreSQL data path on slave system	same as master
--vcs-path=<path>	Path to the VCS on Slave	/usr/local/vcs
--role=<role>	Role of the secondary system. Could be [redundancy or reporting]	redundancy

Slave: Promote to Master

The command is **run on the Slave** and used to promote current *Slave* to *Master*.

Bash

```
/usr/local/vcs/bin/cluster promote
```

The command is used for failover. After you fix old *Master* you may add it as new *Slave* using "*init*" command.

Attention

In case when you have more than 2 nodes in cluster, you need to re-init all other slaves from this new *Master*.

Slave: Sync Files

The command is **run on the Slave** and used to synchronise files from the *Master*. The command is mostly used in crontab for auto-sync.

Bash

```
/usr/local/vcs/bin/cluster sync-files
```

During initialisation of the cluster tool adds this command to the crontab (*/etc/cron.d/vcs-cluster*) at the *Slave* node.

Cluster Status

The command may be run **on any node** and used to get status of the cluster.

Bash

```
/usr/local/vcs/bin/cluster status
```

When command is run on the *Master* it shows type of the node and attached Slaves, that are up to date:

```
[ NOTICE ] Cluster Status
ifconfig | grep 'inet addr:' | grep -v '127.0.0.1' | cut -d: -f2 | awk '{ print $1}'

Master (master ip): ACTIVE
Redundancy (slave ip): ACTIVE
```

When command is run on the *Slave* it shows type of the node and synchronisation delay.

```
[ NOTICE ] Cluster Status
ifconfig | grep 'inet addr:' | grep -v '127.0.0.1' | cut -d: -f2 | awk '{ print $1}'

Master (master ip): NOT AVAILABLE | Activity delay: -00:00:58.393423
Redundancy (slave ip): ACTIVE
```

Please don't worry if you see the following:

```
the row: Master (master ip): NOT AVAILABLE
```

It's a normal behaviour. Instead, please pay attention to **Activity delay** parameter it shows large values if replication is broken and servers are not in sync.

In case when the *Slave* is not in synchronisation (NOT-in-sync) with the *Master* you need to re-initialise.

APIs

This section of our Guide contains detailed information about **JeraSoft VCS API** that lets you integrate 3rd party applications with VCS platform or develop your own tools on top of it. The API makes it easy to get data in and out of the VCS. Depending on your needs you may need to choose which type of APIs 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](#)
- [ProvisioningAPI](#)
- [Management API](#)

CoreAPI

The **CoreAPI** is the high-performance mechanism for a 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 system.

⚠ Attention

1. The full list of **CoreAPI methods** is available upon an individual request of your current clients.
2. The JeraSoft team may modify the attributes and methods related to the CoreAPI usage from time to time without advance notice.
3. In order 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 done over 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

On this page

- [Handlers](#)
- [Events](#)

The **Provisioning API** provides a mechanism for a real-time integration with 3rd party systems, including softswitches, gateways and CRM systems. The mechanism calls pre-defined handlers on an occurrence of specific events in the system. The handlers are allowed to modify data, allow or forbid the action or simply process given event.

Prior to that, *VCS Core API* and *Management API* provide utilities needed to receive requests from external systems. Now, you can configure VCS billing platform to send requests to your 3rd party system.

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 that the billing will send to an external system a notification in order to avoid any disruptions to your organization current processes.

Tip

The full list of *Provisioning API* parameters matches with *CoreAPI* and they are available upon an individual request of your current clients.

Handlers

There are two types of handlers that can be used:

- **HTTP** scripts, called via POST requests (used in most cases)
- **Local server scripts**, called locally on the server (used in very specific cases)

The handlers can be called at two different stages of the event:

- **After Action** - in this case, you simply handle the action. In most cases, if you don't need to modify data, we recommend using handlers with "after" type of event.
- **Before Action** - in this case, you can modify incoming data and push it back to the VCS or forbid the action.

✔ Best practice example

Here there is an example how to apply the **script handler**.

1. Open the **Provisioning section** and start to create a handler.
 - a. Specify the name, type and status.
 - b. Find "**Event**" field. Here, select "*Before*" and "*Clients Create*" event from the drop-down list.
 - c. Find "**Task**" field in this form. Here, indicate "*script*" type and determine the location of the script, for example: *user/local/vcs/script.py*.
 - d. Click "*Apply*".

We have the next script (see below) with the following location: *devel/vcs/script.py*.

```
#!/usr/bin/env python2.7
import sys
import json
input = '\n'.join(sys.stdin.readlines())

data = json.loads(input)
data['name'] = data['name'] + "testprefix"

print json.dumps(data)
```

As a result, this handler will add the prefix to the name of the client after creation.

Here there is an example based on **http:// handler** usage.

2. Open the **Provisioning section** and start to create a handler.
 - a. Specify the name, type and status.
 - b. Find "**Event**" field. Here, select "*After*" and "*Clients Create*" event from the drop-down list.
 - c. Find "**Task**" field in this form. Here, indicate "*http://*" type and determine the port and method, for example, *120.0.0.1:5000/api*.
 - d. Click "*Apply*".

Find below an example of the http:// handler:

```
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()
```

Events

The Provisioning API supports the following list of events:

Title	Action
Clients	<ul style="list-style-type: none">• create• update• delete• archive• custom fields update• balance became >=0• balance became <=0

Accounts	<ul style="list-style-type: none">• create• update• delete
Clients Packages	<ul style="list-style-type: none">• assign• activate• deactivate• renew• close

 **Tip**

- For more information about **configuring and monitoring of hooks for Provisioning API**, visit our *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.

Management API

On this page

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The **Management API** allows you to easily integrate 3rd party applications with VCS platform. It may be accessed using [JSON-RPC](#) - a standard protocol for remote procedure calls.

Most programming languages have libraries to work with this protocol. The API uses the same logic as the web interface and works very similar, which makes its usage easier.

Access the API

To access **JSON-RPC** interface use:

```
https://<your-system-IP>/jsonrpc/
```

Before accessing the system make sure that your **IP is allowed** on the firewall. Also, please make sure that rest of the world is blocked by firewall. You can get more details about it in the [JeraSoft Billing First Steps](#).

Authentication

In order to make any request to the API, you need to **authenticate** using login and password.

We strongly recommend having **separate API account** for each application you make calls from. Besides this, we recommend having dedicated Role for API users, which allows only needed actions. Authentication is done by sending the following array along with other arguments:

```
{
  "auth": {
    "login": "admin",
    "password": "password"
  }
}
```

In order to increase performance you may not authenticate for each call but do it once and **save Session ID** given back to you in response. This Session ID may be sent in further requests instead of login and passwords to continue using the same session without re-authentication. Session ID should be sent with other arguments in the following format:

```
{
  "SID": "1-dsglnqr4qnsdihr8djj6da7qr4"
}
```

It should be mentioned that authentication should be made **within** the first call to the API.

API Request

Each request besides authentication information should include:

Name	Description	Example
------	-------------	---------

Method Name	Name of the module and action to call	clients.editForm
Arguments	List of arguments for the method call	id_clients = 11 auth[login] = admin auth[password] = password

API Response

Each response will include the following information:

Name	Description	Example
code	Return code, usually true on success or false on failure	1
return	Array with data returned by method	[client] => Array ([id] => 11 [id_companies] => 3 [type] => 0 [name] => Customer A [groups] => Customers [c_dt] => 2013-03-30 16:26:15+03 [status] => active [credit] => 100 ...)
session_id	Session ID which may be used to speed up next calls	1-dsglnqr4qnsdih8djj6da7qr4
messages	List of success / warning messages returned by message	array()
errors	List of abnormal errors if they fired during processing	array()

Work with files

There is a specific case when your request to the billing should provide file response. For example, it could be an invoice file download, CDRs List download, etc. Using plain JSON-RPC with base64 on top of it is not effective here as the file may contain hundreds of megabytes. This special case is handled with common **HTTP Request** to:

```
https://<your-system-IP>/admin/
```

The request may be either GET or POST and should include either Login and Password or Session ID. In response, the server will send the file according to HTTP protocol.

Examples: Pure JSON-RPC

JSON-RPC Request

```
{
  "method": "clients.editForm",
  "params": {
    "id_clients": 11,
    "SID": "1-bmdgeu6bn22jlmkuffg391t513"
  },
  "id": 1
}
```

JSON-RPC Response

```
{
  "jsonrpc": "2.0",
  "id": 1,
  "result": {
    "code": true,
    "session_id": "1-bmdgeu6bn22jlmkuffg391t513",
    "messages": [],
    "return": {
      "client": {
        "id": 11,
        "name": "Customer A",
        "groups": "Customers",
        "c_dt": "2013-03-30 16:26:15+03",
        "status": "active",
        "credit": 100,
        "c_company": "Mancy",
        "c_address": null,
        "c_email": "admin@example.net",
        "c_email_tech": "admin@example.net",
        "c_email_billing": "admin@example.net",
        "c_email_rates": "admin@example.net",
        "id_currencies": 27
      },
    },
    "errors": []
  }
}
```

Examples: PHP Library

For your convenience, it is always better to have higher level class on top of the simple RPC protocol. You can [download](#) an example of such class for PHP. Below is example:

PHP Example

```
include 'class.VcsApi.php';

// create an API object
$api = new VcsApi('vcs.demo.jerasoft.net', 'demo', 'demo', 80);

// make a call to the API
$data = $api->clients->editForm(array('id_clients' => 8));

/*
VcsApiResponse Object
(
    [code] => 1
    [messages] => Array
        (
        )
    [data] => Array
        (
            [client] => Array
                (
                    [id] => 8
                    [id_companies] => 3
                    [type] => 0
                    [cc_serial] =>
                    [name] => Customer 01
                    [groups] => Vendors, IntraLATA-IntraState, IntraLATA-InterState, InterLATA-IntraState,
                    InterLATA-InterState, Customers
                    [c_dt] => 2012-03-20 09:29:49+00
                    [status] => active
                    [credit] => 1000
                    ...
                )
            )
)
*/
```

Examples: Python Library

To download a sample library for Python, please visit [/usr/local/vcs/lib/pycore/tools/vcsapi.py](#). It will simplify work with API. You can find an example below:

Python Example

```
import vcsapi

# create an API object
api = vcsapi.Api('vcs-demo.jerasoft.net', 'demo', 'demo', 443)

# make a call to the API
response = api.clients.editForm({'id_clients': 8})

print response.code      # True
print response.messages # [ ]
print response.data      # {'client': {'id': 8, 'type': 0, 'name': 'Customer 01', ...}}
```

Methods Reference

At the moment we are working hard to bring you a full and detailed list of methods, arguments and expected output. However as API fully duplicates web methods, it is easy to find their names and arguments yourselves. Let's check a quick example, like creating a reseller.

In the web interface the link to this action is "<https://<your-billing-IP>/admin/companies/add>", with "*companies*" being a module and "*add*" being a method. The resulting method to call via API is "*companies.add*".

In order to find out arguments for this method, you may look for HTTP request in your browser (using FireBug in Firefox, Developer Tools in Chrome). Another way is to check for dump in **/opt/jerasoft/vcs/core/pycore/tools/runtime.log** which looks like:

```
[20-Jan-2012 17:32:06+0200] [webAdmin/#260808] REQUEST: /companies/add
Array
(
    [type] => 10
    [name] => TESTCOMPANY
    [id_companies] =>
    [prepaid] => 1
    [credit] => 0.00
    ...
)
```

This log entry includes the full list of the arguments used. However many of them are optional. Try calling the method with the arguments you need and the system will let you know if you are missing any of the arguments.

Warning

The JeraSoft team may modify the attributes and methods related to the Management API usage from time to time without advance notice.