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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 Details](#)
- [Statistics](#)
- [Tools](#)
- [Routing Details](#)
- [Configuration](#)
- [System](#)
- [Client Portal](#)
- [System Shell Tools](#)
- [APIs](#)

Interface Basics

On this page

- [Global Search Bar](#)
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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.*

Screenshot: Global search bar



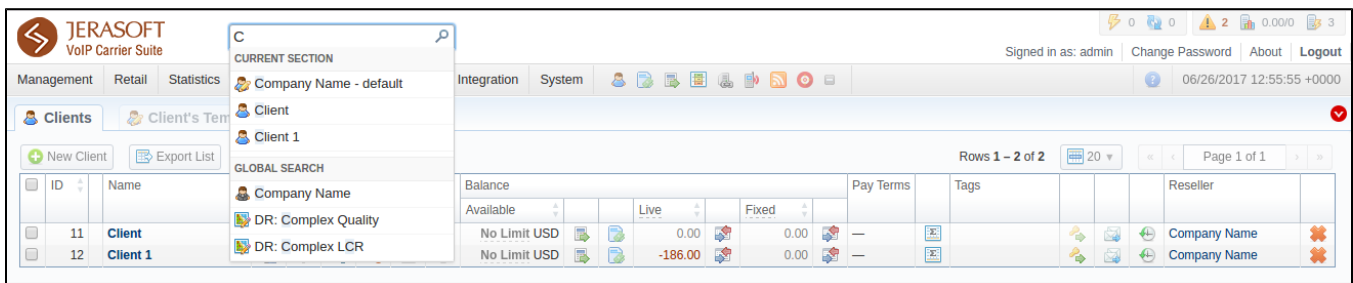
This bar is located on the top of the system and it's designed to predict a user's search and show results while you type. It is a time-saving feature. The items found as a result of your search are placed on the drop-down list as links and headings. You can click on the item to open respective settings.



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 the whole system in general (see screenshot below).



1. When you type the keyword and click ENTER, the search will be applied to the current section.
2. If you search in the section with no list of items to select and click 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/example



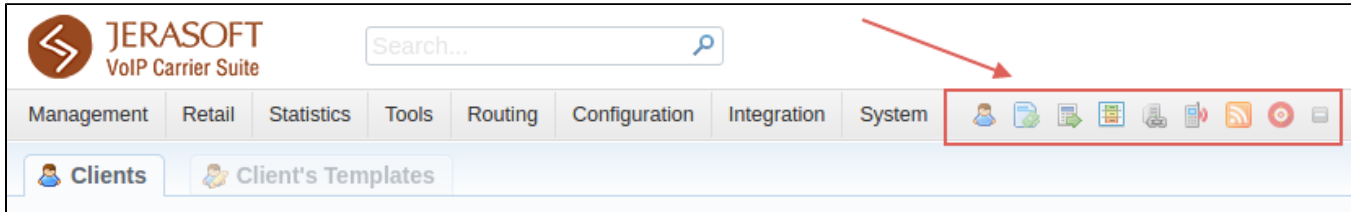
Several VCS sections have advanced search settings. To open these settings, click the **downwards arrow**  on the toolbar of a respective section. The red downwards arrow  on the toolbar means that the data is sorted by default (see screenshot above).

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.

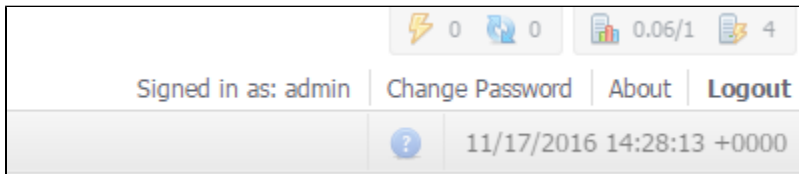
Screenshot: SmartBar panel









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

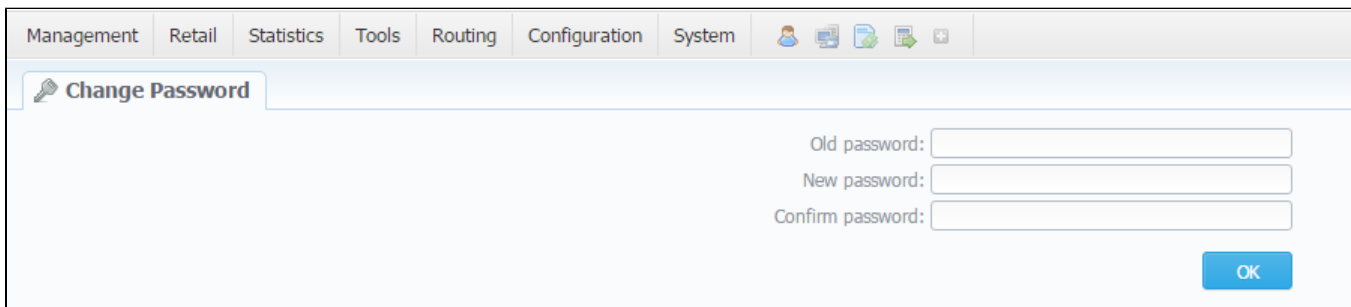


Icon	Description
	CDR queue
	CDRs in queue for rerating
	CDRs in queue for parsing
	Information about system alerts
	Load average on server / Number of CPU cores
	Number of running billing services

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

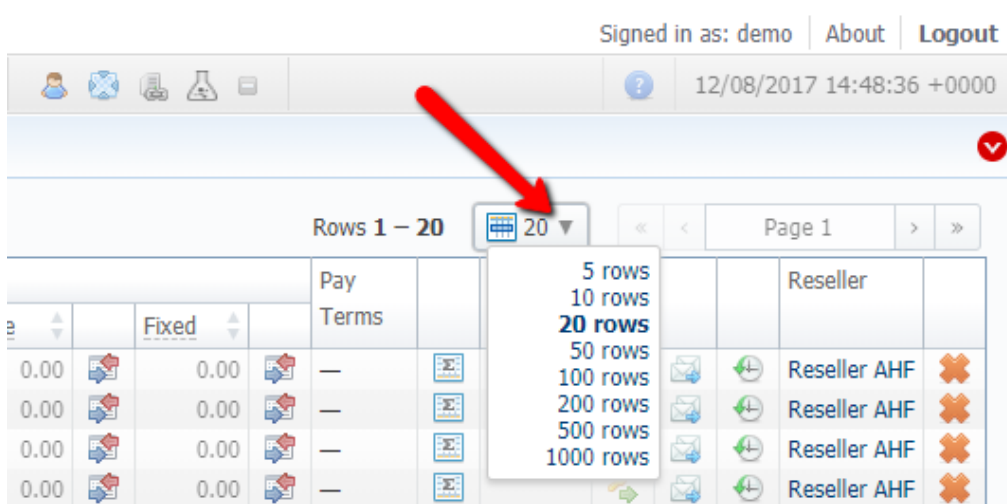
To get more details about the VCS system, current version, license number, limits, and other components, click **About** either on the **InfoBar** or in the bottom-left corner of the system.

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).



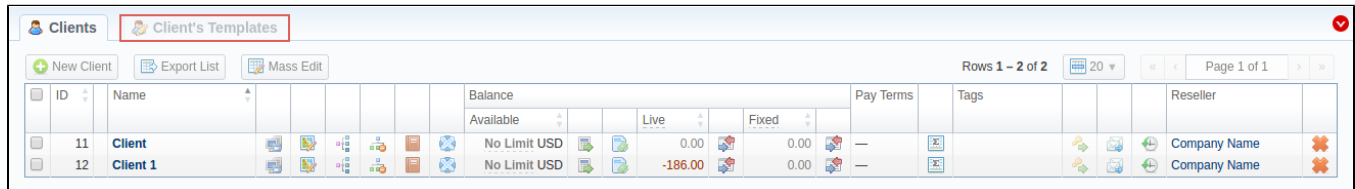
System Logout

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



Management

This chapter introduces how **the main components of the JeraSoft VCS** could be used to provide different management through the system.

Take a note, that while the **system walk-through**, you can find plenty of tooltips for not being stuck. It's easy to determine, whether there is a hint or not.

All tooltips in the system are shown as the text with a dotted underline, for example, ORIGINATOR SETTINGS. All you need to do is to point to the title and an additional information becomes visible.

For more details please go to the related subsections:

- [Clients](#)
- [Accounts](#)
- [Rate Tables](#)
- [Invoices](#)
- [Transactions](#)
- [Balance Report](#)
- [Resellers](#)
- [Client Packages](#)
- [Presets](#)
- [Traffic Processing](#)

Clients

On this page

- [Clients List](#)
- [To add a new client](#)
- [Clients Templates](#)
- [Knowledge Base Articles](#)

Clients List










This section is used to manage your customers, providers, and all related information. The main window of this section is represented by list of all available clients:



Screenshot: Clients section main window


ID	Name	Balance	Pay Terms	Tags	Reseller
3897	Customer A	No Limit USD	—	Tag Example 1, Tag C, Tag 1	Company Name
3898	Customer B	1 000.00 USD	000	Tag Example 2, Tag D	Company Name


Column Name	Description
ID	Client's identification number
Name	Client's name
Balance	Client's balance values
	<ul style="list-style-type: none"> • Available "Live" client's balance including allowed credit
	<ul style="list-style-type: none"> • Live Client's balance calculated on 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	Set a label (tag) for respective client you would like to be tagged in the future
Reseller	Name of Reseller's company that respective client belongs to


Icon	Description
	Is used to identify the Orig/Term client
	Is used to identify the Orig client
	Is used to identify the Term client
	Is used to edit accounts (gateways, sip-accounts etc.)
	Is used for accessing client's current routing plan (icon will be colored if plan is assigned)
	Is used to add additional configurations to dynamic routing for current client
	Is used to display client's rates


<ul style="list-style-type: none"> • ORIG 	Rate tables for origination calls
<ul style="list-style-type: none"> • TERM 	Rate tables for termination calls
	Is used to assign and manage your packages
	Is used to manage client's balance. It's a shortcut to <i>Transactions</i> section
	Is used to manage client's invoices. It's a shortcut to <i>Invoices</i> section
	Is used to manage client's balance report (Live or Fixed). It's a shortcut to <i>Balance Report</i> section
	Is used to manage client's summary report. It's a shortcut to <i>Summary Report</i> section
	Allows access to current client control panel (icon will be colored if access is available for customer)
	Is used to view sends history. It's a shortcut to <i>Mail Queue</i> section
	Is used to view change history. It's a shortcut to <i>Audit Log</i> section
	Is used to delete a client from the system

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

 **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 Call Duration" set in *Configuration – Settings*.

Use the **Quick Search** toolbar for fast investigation in Clients section. This tool makes a search filter to limit the search results for higher working efficiency. For example, to find clients belonging to a certain *Group* or having *Active status*. To open this form click on the down arrow .

 You can search through clients by Name and only by first letters ("*start with*" rule).
To find all clients with specified main e-mail, use * (asterisk) in the "*Main E-mail*" field.

 *Orig Group, Term Group, DID Group* filters will be visible and active only if you click on "*Advanced*" button.

Screenshot: *Quick Search form*

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 clients;
- click the "*Mass Edit*" button and specify the date in "*Last Invoiced*" field;
- click "*Update*" button.



To add a new client


For adding a new customer in the system, click the "**New client**" button in the toolbar under client's list. A dialog window will show up:


Screenshot: Adding new client


Then fill next fields to set client's parameters:


Section	Fields Description
System Information	General information about client
	<ul style="list-style-type: none"> Name A client's name
	<ul style="list-style-type: none"> Reseller Here you can select the name of one of your companies (or affiliates) that you can add in Reseller section (this name will be used in invoices)
	<ul style="list-style-type: none"> Currency 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. <div style="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> 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. </div>
	<ul style="list-style-type: none"> Status Select respective current 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 to a new customer
<ul style="list-style-type: none"> Tags You can specify a tag that a current client will belong to. 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 	<p>You can specify a tax profile which will be reflected in invoices (refers to <i>Taxes Profiles</i> section).</p> <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="border: 1px solid #f0e68c; padding: 5px; margin-top: 10px;">  For proper usage of SureTax, the <i>Invoice Number</i> should contain only Latin and numeric characters. Max length is 40 symbols. <i>Dst</i> and <i>Src Numbers</i> should be in format <i>NPANXXNNNN</i> (10 digits). </div>	
<ul style="list-style-type: none"> • Bill Calls By 	<p>Select how the system should bill calls of current client – by setup time, connect time or disconnect time (most switch models use disconnect time)</p>	
<ul style="list-style-type: none"> • "Hidden Numbers " check box 	<p>Allows you to hide some part of numbers from calls made by this client in invoices, xDR's reports and during export.</p> <div style="border: 1px solid #c8e6c9; padding: 5px; margin-top: 10px;">  If the client has an 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. </div>	
<p>"Client Panel" check box</p>	<p>Activates/deactivates the log in procedure to the client's control panel for a current client. Customer can get access to this control panel by using the following link: http://vcs_address/clients/</p> <p>Sections that are available for clients within that control panel can be turned on or off by respective check boxes. A full list of available sections is the following: Client Info, Invoices, Rates List, Summary Report, xDRs List, Balance Report, Payment Gateways, Change Password.</p> <p>Important: if no login for "Client Panel Access" is specified or no fields are selected, then access to control panel will be forbidden. This access is configured with a list of available fields and following parameters</p>	
	<ul style="list-style-type: none"> • Login 	<p>Client's login</p>
	<ul style="list-style-type: none"> • New password 	<p>Client's password</p>
	<ul style="list-style-type: none"> • Access 	<p>Here you can select the sections that are available for current client</p>
<p>Originator Settings</p>	<p>Settings for your customers, who send calls to your switch. Current clients' billing settings are specified here</p>	
	<ul style="list-style-type: none"> • "Postpaid" check box 	<p>Here you can set needed paid mode for a client. If you enable the postpaid mode, the client doesn't have unlimited credit. It is disabled by default.</p>
	<ul style="list-style-type: none"> • Credit 	<p>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.</p>
	<ul style="list-style-type: none"> • Payment Terms 	<p>Select the payment terms template</p>
	<ul style="list-style-type: none"> • Rate table 	<p>Select the origination rate table</p>
	<ul style="list-style-type: none"> • Routing Plan 	<p>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)</p>
	<ul style="list-style-type: none"> • Orig groups 	<p>Choose the respective orig group for managing an extra rate and extra routing</p>

	<ul style="list-style-type: none"> • Threshold 	Specify the balance threshold below which a special capacity will be applied
	<ul style="list-style-type: none"> • Capacity 	Summary origination capacity for this client
Termination or Settings	Settings for your vendors, whom you send calls from your switch. Current clients' billing settings are specified here	
	<ul style="list-style-type: none"> • Rate table 	Select the termination rate table
	<ul style="list-style-type: none"> • Capacity 	Summary termination capacity for this client
Low Balance Notifications	Here you can setup whether system should make low balance notifications or not	
	<ul style="list-style-type: none"> • Notify Client 	When clients' balance+credit is below entered value, system will send a notification to clients' <i>Billing e-mail</i>
	<ul style="list-style-type: none"> • Notify Admin 	When clients' balance+credit is below entered value, system will send a notification to administrator via <i>Events Log</i>
	<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" check box	Activates/deactivates the automatic invoice generation feature for a current client. It can be configured with parameters	
	<ul style="list-style-type: none"> • Template 	Select an invoice template for this customer
	<ul style="list-style-type: none"> • Last Invoiced 	Specify last day, that the client has already been invoiced for
"Rate Notification" check box	Here you can enable or disable automatic rates notification for current client	
	<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"> • <i>All rates</i> - full price list • <i>Only changed rates</i> - only changed rates will be sent • <i>All rates - unique mode</i> - if there two or more new rates with different effective dates for one code, several files will be sent and each will contain all unchanged rates and only one rate change for one code • Account - allow to manually notify customers on changes of rates assigned to the account. Here you can select an one account or select all. Then ,click the "Notify Now" button. <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> 1. The system will push a notification after new rates were added. Please note, if the user changes manually the "effective from" field of current rates, it won't activate notifications.</p> <p>2. If the parent rate was changed, it won't send a notification.</p> <p>3. 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>

"Auto Payment" check box	<p>Activates/deactivates the automatic charge to customers' credit card registered at <i>Authorize.net</i> electronic payment service. You can register a credit card via <i>Refill balance section</i> in <i>the Client's panel</i>. To open <i>Client's panel</i>, please click the icon  in the <i>Client's List</i>. This sub-panel is accessible in the Client's form when the <i>Authorize.net</i> is activated in the <i>Payment Gateways</i> section.</p>	
	<ul style="list-style-type: none"> • Extra Amount 	<p>Define a payment amount</p>
Company Info	<p>Some additional information about client can be entered here</p>	
	<ul style="list-style-type: none"> • Name 	<p>Company name.</p>
	<ul style="list-style-type: none"> • Main E-mail 	<p>Company e-mail for general inquiries. Use only Latin characters.</p>
	<ul style="list-style-type: none"> • NOC E-mail 	<p>Company email for technical related questions. Use only Latin characters.</p>
	<ul style="list-style-type: none"> • "Notify about Factor Watcher blocks" check box 	<p>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</p>
	<ul style="list-style-type: none"> • Billing E-mail 	<p>Automatically generated invoices and notifications will be sent to this e-mail address. Use only Latin characters.</p>
	<ul style="list-style-type: none"> • Rates E-mail 	<p>Company e-mail for rates related questions. Use only Latin characters.</p>
	<ul style="list-style-type: none"> • Address 	<p>Physical company address</p>
	<ul style="list-style-type: none"> • ZIP Code 	<p>Postal code</p>
	<ul style="list-style-type: none"> • Tax ID 	<p>Customer's tax ID</p>
	<ul style="list-style-type: none"> • Reg ID 	<p>Customer's registration ID</p>
	<ul style="list-style-type: none"> • Account Details 	<p>Reference information about client's bank account or payment details</p>
<ul style="list-style-type: none"> • Locale 	<p>Preferred locale, that will be sent as a reply to RADIUS Authorization. It is used for IVR platforms to define the language</p>	

 **Autoinvoicing tool** sends rates in separate files for each time profile used in certain Rate Table. Please note, **e-mail 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.

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 a related section: **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

This tab 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.

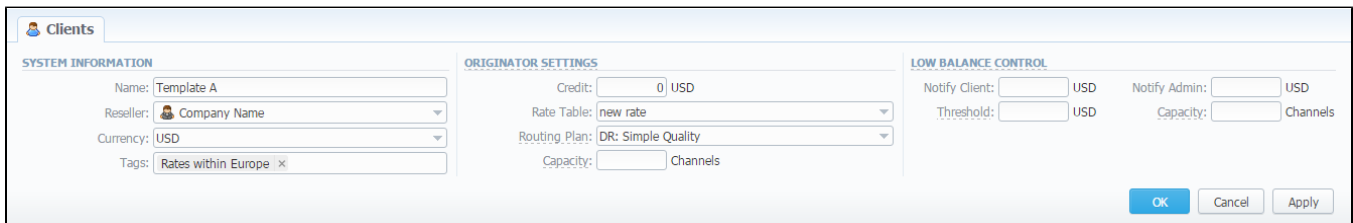
Screenshot: Client's Templates List



To create a new template you need to click the "New Client Template" button.


A new dialog window will show up, here you need to fill out all required fields, for instance, Name, Reseller, Currency, Rate Table, etc.

Screenshot: New Client Template settings



Section	Fields Description
System Information	General information
	<ul style="list-style-type: none"> Name - The title of client's template
	<ul style="list-style-type: none"> Reseller - Here you can select the name of one of your companies (or affiliates) that you can add in Resellers section (this name will be used in invoices)
	<ul style="list-style-type: none"> Currency - Preferred currency (will be used in invoices)
Originator Settings	<ul style="list-style-type: none"> Tags - Specify tags that will belong to a current client
	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
Low Balance Notifications	<ul style="list-style-type: none"> Routing Plan - Select an appropriate routing plan that will be used to route all calls for this customer
	<ul style="list-style-type: none"> Capacity - Summary origination capacity for the client
	Here you can setup whether system should make low balance notifications or not

<ul style="list-style-type: none"> • Notify Client 	When clients' balance+credit is below entered value, the system will send a notification to clients' <i>Billing e-mail</i>
<ul style="list-style-type: none"> • Notify Admin 	When clients' balance+credit is below entered value, the system will send a notification to administrator via <i>Events Log</i>
<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 (that is 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 check box, 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 out 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 out the *Client's Template* field by selecting a template from the drop-down list

Also, you can assign the Routing Plan in the **Client's Templates**.

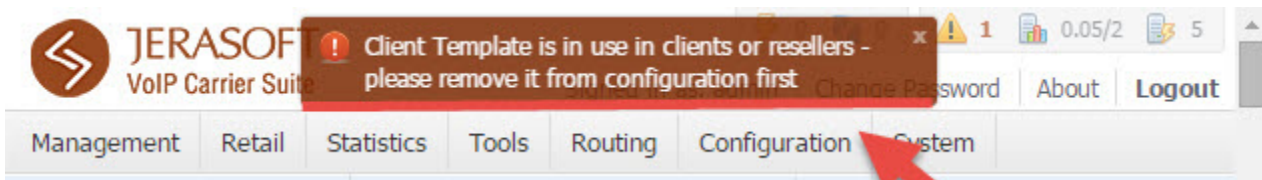
 **Tip:** Please be advised that values overridden from templates, i.e. *Routing Plan, Rate Table, Credit*, are displayed only on the Client list. They will not be shown on the Client's account.

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



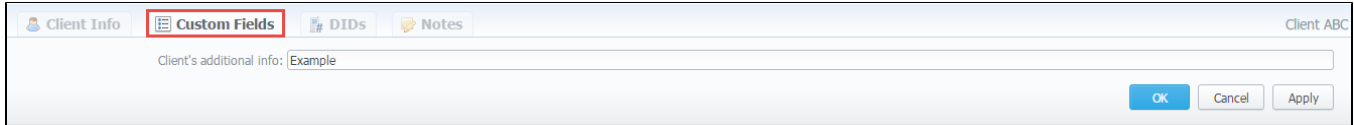
Reports

1. If the **credit** overridden from the template is already applied for the Client, there is no way to add the package in *Clients/Account section*. This option will appear in the next version.
2. The drop-down list of available **templates for the Client/Reseller** is similar for *Routing Plans, Rate Tables*.
3. If you want to **change the Reseller**, you will proceed without any application checks of this template by the *Client/Manager/Reseller*.
4. The **currency** indicated in the *Client Template* and the currency of the customer to which it applies should be the same to work properly.
5. 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

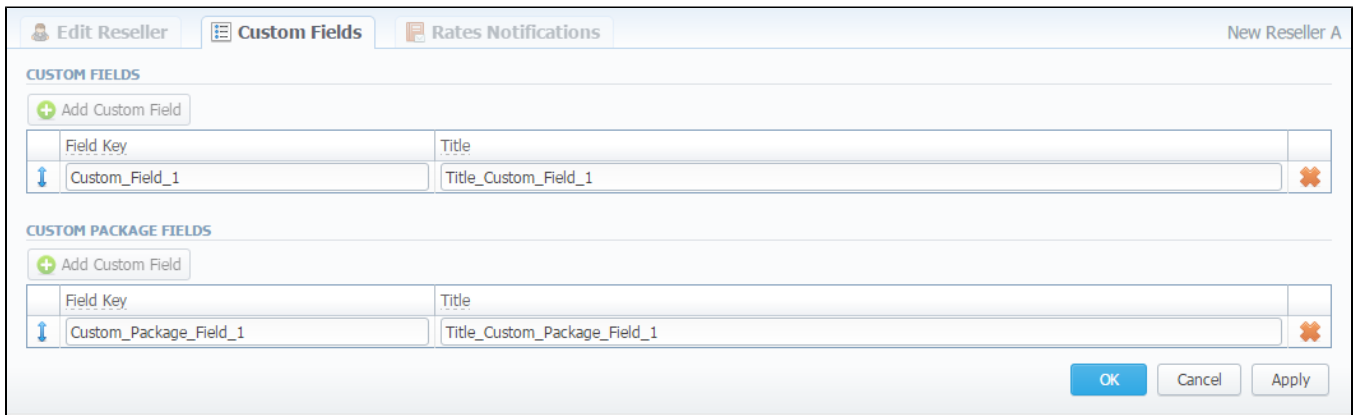
This tab represents the list of *Custom Fields* that have already been added and assigned to the respective *Client* by the *Reseller*. The data specified in these fields will be used in invoice templates as custom functions.

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 <i>unique</i> 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 existed DID numbers to a certain clients' account.

Screenshot: *DIDs section*

DID	Status	Assigned to	Package
	Active	Acc2	TESTPackages

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
	Click this icon to start the DID
	Click this icon to pause the DID
	Click this icon to hold 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, the number which you previously specified during package creation.



Detailed instructions on how to create a DID number you can find in the [DID Management](#) section, chapter "To create 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 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

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 between themselves.

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 *the 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 *the delete icon* .

Screenshot: Notes tab



The screenshot shows a software interface with a top navigation bar containing 'Client Info', 'Custom Fields', 'DIDs', and 'Notes' (which is 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		

At the top right of the table area, it says 'Rows 1 - 1 of 1'.

Accounts

On this page

- [Accounts List](#)
- [Quick Search](#)
- [Adding New Account](#)
- [Knowledge Base Articles](#)

Accounts List

This section is designed to create and manage clients' accounts. Main window is represented by the list of all available accounts in the system:

Screenshot: Accounts section

ID	Client	Account	Name / ANI / IP	Tech Prefix	Orig Details	Term Details
177	Client orig	account_orig	Name: account_orig		RT: Rate 2	OC: - RT: + TC: -
176	Client term	account_term	Name: account_term		RT: Rate 3	OC: - RT: + TC: -


Column Name	Description
ID	Client'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


It's possible to add multiple accounts with the same IP address and different protocols/ports.

Icon	Description
	To filter accounts by <i>Client</i>
	To open the list of <i>Clients</i>
	To view the history in the <i>Audit log</i> section

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.

Quick Search

Use the **Quick Search toolbar** and click the down arrow on the top of the page for fast investigation (for instance, accounts belonging to a certain *Client*). When you click the red down arrow , a drop-down menu appears.

You can start a quick search by typing your keywords into the bar at the top of a page and clicking the "Search" button. To hide the drop-down search menu, click the upward pointing arrow .

Screenshot: Quick Search form

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

- Name:
- IP:
- ANI:
- Tech Prefix:
- Origination:
- Orig Rate Table:
- Routing Plan:
- Tags:
- Termination:
- Term Rate Table:
- Tags:
- Client Type:
- Client:
- Buttons:

Adding New Account

To add a new account, click the "New Account" button. A dialog-window will show up where you should fill all needed fields:



Screenshot: Adding new account

The screenshot shows a dialog window titled "Accounts" with three tabs:

- GENERAL** (Active):
 - Client:
 - Name:
 - IP:
 - Tech Prefix:
 - Password:
 - Gateway:
 - Notes:
- ORIGINATOR SETTINGS** (Checked):
 - Rate Table:
 - Routing Plan:
 - Tags:
 - Capacity:
- TERMINATOR SETTINGS** (Checked):
 - Rate Table:
 - Tags:
 - Capacity:
 - Proxy:
 - Protocol:
 - Port:

Buttons:

Section	Fields Description
General	General information about account

	<ul style="list-style-type: none"> • Client 	Specify a client whom this account will belong to
	<ul style="list-style-type: none"> • Name 	Define a name of an account for JeraSoft VCS system
	<ul style="list-style-type: none"> • Ident by 	<p>The VCS system allows client identification in 3 different ways, you need to select one of mentioned below:</p> <ul style="list-style-type: none"> • IP – gateway IP-address. You can specify multiple addresses, by dividing them with “;”. Also 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, that is 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 same gateway
	<ul style="list-style-type: none"> • Password 	<p>Set a user password that is used with login/password identification. Also can be used through default authentication mechanism. For more info please consult your switch system manuals</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Note that the password can be automatically generated, you need just to click on the icon  in the password field.</p> </div>
	<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 account (it will have higher priority than rate table set for whole client) for origination side
	<ul style="list-style-type: none"> • Routing Plan 	You can specify a custom routing plan for origination from this 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, to whom you send calls from your switch
	<ul style="list-style-type: none"> • Rate Table 	Select rate table for current account (it will have higher priority than rate table set for whole client) for termination side
	<ul style="list-style-type: none"> • Tag 	Specify a tag for a current termination account
	<ul style="list-style-type: none"> • Capacity 	Set capacity for respective traffic direction

• Protocol	Select respective protocol for current termination gateway
• Proxy	Specify proxy for current termination gateway
• Port	Specify port for current termination gateway

You can add the unlimited number of accounts for each client.



Please note that two identical accounts can be assigned only to 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

On this page

- [Rate Tables List](#)
 - [To add a new rate table](#)
 - [To configure rates](#)
 - [Import](#)
- [Knowledge Base Articles](#)

Rate Tables List

This section allows you to manage your rate tables. The main window of this section is presented on screenshot below:

Screenshot: Rate Tables section main window

ID	Name	Currency	Code deck	Reseller	Notes
77	Rate_Africa	USD	DEFAULT	Company Name	
89	Rate_Antarctica	USD	DEFAULT	Company Name	
15	Rate_Australia	USD	DEFAULT	Company Name	
88	Rate_Europe	USD	DEFAULT	Company Name	
76	Rate_North America	USD	DEFAULT	Company Name	
78	Rate_South America	USD	DEFAULT	Company Name	

To add a new rate table

In order to add a new rate table, click the **“New Rate Table”** button, then 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 rable 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="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <p>i</p> <ol style="list-style-type: none"> 1. Please note, that the currencies of a parent and current rate tables should be the same. 2. 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” check box	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.
Descripti on	Additional information

Screenshot: New rate table window

Rate Tables

GENERAL RATE TABLE SETTINGS

Name:

Reseller:

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 tab panel with following values:

Tab	Description
Rates	Rates configuration
Simulate	Call simulation tool
Rate Formulas	Time parameter for calls billing process
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

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 Search...

New Rate Table Import

Rows 1 – 6 of 6 20 Page 1 of 1

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

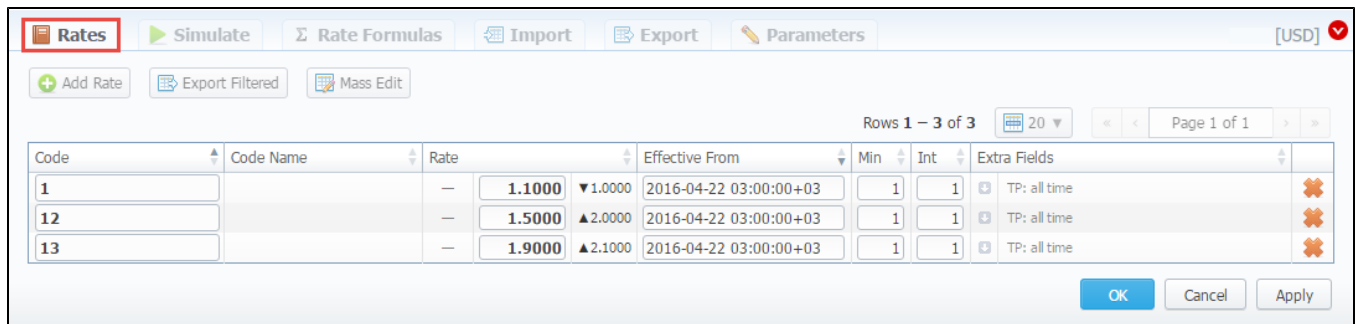
On this page

- [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



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.</p> <p>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><i>Screenshot: Rates settings/ column Code</i></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 	<p>This option allows selecting a rate's type for a code: regular rate or an additive (extra) rate:</p> <ul style="list-style-type: none"> regular rate - this policy signifies a usual rate definition for the event; additive (extra) rate - this policy signifies that this rate will be added to a regular rate for the event. <p>During 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.</p>
<ul style="list-style-type: none"> Profile 	<p>Which time profile will be used for current rate, for example, <i>business time</i>, <i>non-business time</i>, <i>weekends</i>, etc.</p>
<ul style="list-style-type: none"> End Date 	<p>After specified date the rate would not be used</p>
<ul style="list-style-type: none"> Setup Fee 	<p>Setup fee (charged when call duration is longer than 0 seconds)</p>
<ul style="list-style-type: none"> Grace Time 	<p>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</p>
<ul style="list-style-type: none"> Notes 	<p>Additional information about current rate</p>

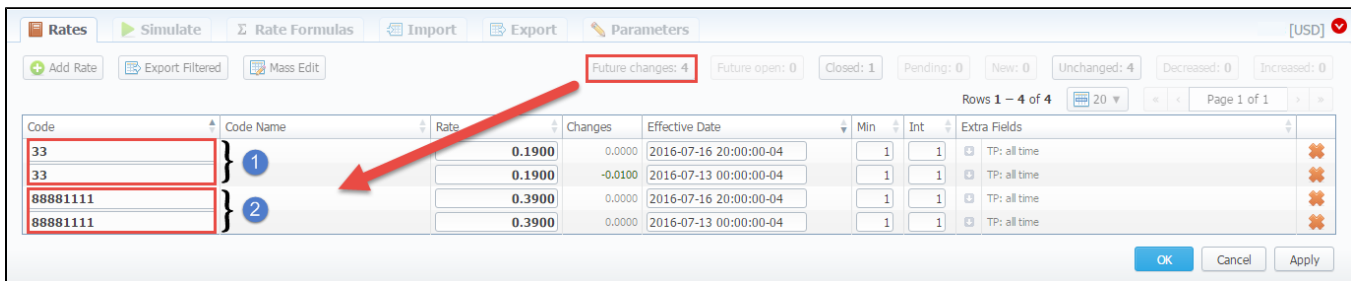
After you finish filling all fields, click the "" button.

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

How to manage future changes of rates manually

To do so, 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.

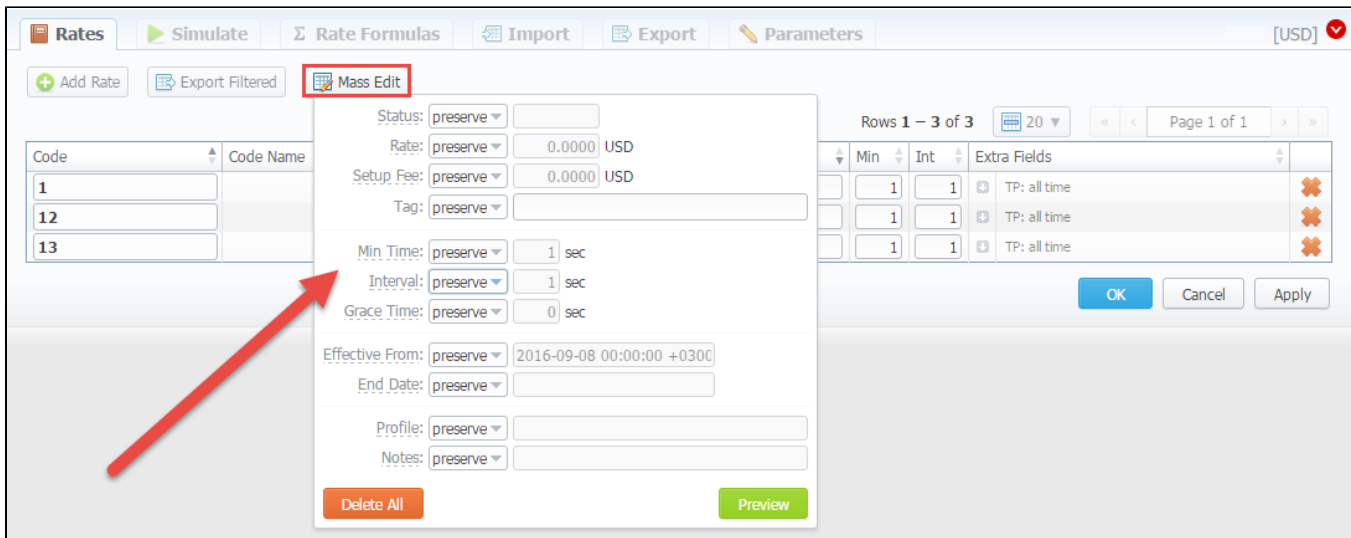
Screenshot: Rates tab



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

 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 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

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

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

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

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 the software interface. On the left, there are input fields for 'Number' (empty), 'Date' (2014-07-09 10:50:52), and 'Duration' (60 sec). A blue 'Process' button is located below these fields. On the right, a message box with an information icon contains the text 'Please select parameters for report'. The top navigation bar includes 'Rates', 'Extra', 'Simulate', 'Rate Formulas', 'Import', 'Export', and 'Parameters'.

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

After specifying all necessary parameters, press "Process" button and wait for query results, that is a table with information concerning simulated call:

Screenshot: Call simulating results

The screenshot shows the 'Simulate' tab with the results table displayed. The input fields now show 'Number: 1204', 'Date: 2014-07-09 11:01:39', and 'Duration: 60 sec'. The results table has the following data:

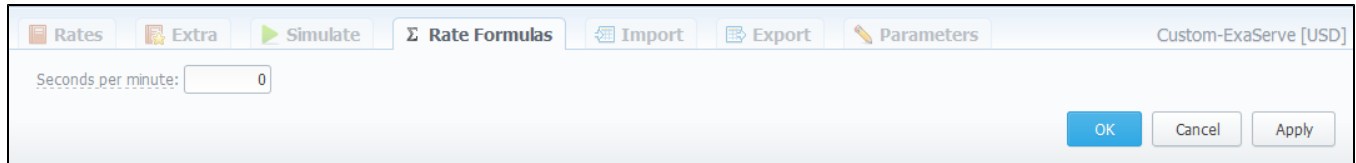
Code	Call Cost	Effective Date	Rate	Parameters	Billed Time
1204 CANADA MANITOBA PROPER	0.0010 USD	09/04/2014 21:00:00 +0000	0.0010 USD	1 / 1 / 0	60 sec

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)

Rate Formulas

This section allows you to set the amount of seconds in one minute that will be used during calls' billing process. You need to set this amount in "Seconds per minute" field, then click "Apply" or "OK" button.

Screenshot: Rate Formulas section



Import

On this page

- [Import Section Tab](#)
- [Rates Importing Process](#)
 - [Step 1. Selecting File and Specifying Additional Parameters](#)
 - [Step 2. Recognizing The File](#)
- [Import History](#)
- [Mass Import](#)

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 the application. At the top, there are tabs for 'Rates', 'Simulate', 'Rate Formulas', 'Import' (highlighted), 'Export', and 'Parameters'. Below the tabs, the 'FILE PROCESS' section contains a 'Select file for import:' field with a 'Choose File' button and a 'Fields Delimiter:' dropdown set to 'autodetect'. The 'IMPORT PROCESS' section includes 'Import Template', 'Auto Confirm', 'A-Z' status, and 'A-Z Close Date' fields. An 'ADVANCED OPTIONS' section is collapsed. An 'IMPORT HISTORY (LAST IMPORT OPERATIONS)' table shows two recent import operations with columns for Date, User Login, File, Total, New, Increased, Decreased, Unchanged, A-Z Closed, and A-Z Stashed.

Date	User Login	File	Total	New	Increased	Decreased	Unchanged	A-Z Closed	A-Z Stashed
2016-09-15 12:26:06+03	email	list_of_new_rates.csv	22	22	0	0	0	28	8
2016-09-15 12:25:26+03	email		49	49	0	0	0	0	0

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. These settings are following:

Field	Description
Select file to import	Select a file to load into workspace for import
Fields Delimiter	Specify here a delimiter symbol
Import template	Select the rate table template for rates importing
Auto Confirm	Here you may indicate whether the system should confirm rates automatically during the import

A-Z import	<p>This tool allows to close active/future rates according to the specified mode:</p> <ul style="list-style-type: none"> • Simple mode: active rates from current Rate Table will be closed by the Close date if they aren't present in this import. • Extended mode: already existing future rates and active rates (not presented in this import) from current Rate Table will be closed by the Close date. Then, these rates will be marked as stashed. 	
A-Z Close date	<p>End date of rates which are not presented in the current importing process. A-Z import mode should be enabled.</p>	
Advanced settings		
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>	
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>	
	Disabled	<p>Leave selected code deck unchanged</p>
	Import only not existing codes	<p>Code deck will be updated with codes and their names, if it doesn't currently have this information</p>
	Import all codes (update existing)	<p>Code deck will be updated and codes will be updated with code names taken from file with overwriting of existent code names</p>
	Import all codes (purge code deck first)	<p>Code deck is fully cleared and then all codes and code names are imported from file</p>
Code Deck	<p>Code Deck that will be used for <i>Update Code Deck</i> option. 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>	
On duplicate rates	<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 	<p>If multiple duplicates were found, the last value is stored</p>
	<ul style="list-style-type: none"> • Skip duplicate rows 	<p>If there are multiple duplicates, only first value will be stored</p>
	<ul style="list-style-type: none"> • Alert me about duplicates 	<p>If duplicate is found, VCS will alert you about their presence</p>
<div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <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 Rate Tables section/<i>Import tab</i>.</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 	<p>Import error-free rows and display the list of errors, if any</p>
	<ul style="list-style-type: none"> • If errors are found, abort import and show all errors 	<p>If any error is found, stop import and display a list of errors</p>

<p>"Optimize Codes" heck box</p>	<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="border: 1px solid green; padding: 5px; margin-top: 10px;"> <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>
<p>Notifier Code Deck</p>	<p>Specify code decks, that will be used for the next rates notification</p>

If you **import the rates** and the **"A-Z import" option is enabled**, then all existing rates which are not presented in the current importing process will be closed by specified *Close Date*.

When you **import the rates** via **Automatic Email Import**, all existing rates which are not presented in this importing process will be closed by the *current date*.

After selecting a file and specifying all additional parameters click "Process>>" button.

Step 2. Recognizing The File

The system will recognize the file, and display few first rows of it. If there's need, make changes to the recognition of data (for instance, you can switch columns if the guess was not precise), and click "Process>>" again. Also, on this step you can save the importing rate table as a template for further usage in importing or exporting process, you only need to click the "Save Template" button, specify a template name in the pop-up window and click the "Save" button (Screenshot).

Additionally, while importing process (Step 2. Recognizing The File) you can apply a tag to the imported rates. And it's possible to **import regular and additive rates at once**. To do so, select a column "Policy" during the 2nd step of an import process to load different rates to the system.

Screenshot: Rates importing process. Step 2

Code	Code Name	Rate	Skip
1143	USA	0,0800	<input type="checkbox"/>
1204	CANADA MANITOBA PROPER	0,0020	<input type="checkbox"/>
1204555	CANADA MANITOBA PROPER	0,0013	<input type="checkbox"/>
1226	CANADA ONTARIO PROPER	0,0020	<input type="checkbox"/>
1226555	CANADA ONTARIO PROPER	0,0013	<input type="checkbox"/>
1236	USA	0,0018	<input type="checkbox"/>
1242	BAHAMAS	0,0600	<input type="checkbox"/>
1242357	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242359	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242375	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242376	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242395	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242421	BAHAMAS MOBILE	0,1092	<input type="checkbox"/>
1242422	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242423	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>
1242424	BAHAMAS MOBILE	0,0700	<input type="checkbox"/>

After you press "Process>>" for the last time, the system will start importing process. When the progress bar reaches 100%, your import is done! Don't forget to confirm the rates, if you chose to import in "confirm mode".

Please pay your attention during specifying the *Effective Date* and *End Date* that by default the *Time zone* is *UTC (+0000)*.

Please note, 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.


Import History

If you have already imported at least one file, during a new importing process you will also see the history table.

This table displays the quantity of imported rates in the system and provides information about them. However, your next actions after import (for example, rate change, deletion) will not be shown in the history.

Column	Description
Date	Date and time when the file was imported
Login	By whom the importing process was made
File	The name of an importing file
New	The number of new rates which was added from the file
Increased	The number of rates, that have been increased
Decreased	The number of rates, that have been decreased
Unchanged	The number of rates, that remained unchanged
A-Z Stashed	The number of rates, that were stashed. Stashed means that rate will not be used for billing or routing purposes.
A-Z Closed	The number of rates, that were closed by specified "End Date" or using "Full A-Z import" functionality
Total	The total amount of imported rates



Please note, if you click the undo icon  in the *Import History* to delete the import, this action will not automatically re-open old rates that were closed while importing process.

Mass Import

If you need to upload several rates tables return to the main *Rate Tables* list and check boxes of required tables and then click "Import" button. Then please keep the procedure in the same as usual rates importing.

Screenshot: Mass rates importing

Rate Tables			
Code	Code Name	Description	Rate table
		RATE TABLE: O_TERM RATE	
		Imported rows: 2 ; Rows with errors: 0	
		RATE TABLE: RATE TABLE 1	
		Imported rows: 2 ; Rows with errors: 0	
		RATE TABLE: RATE TABLE_1	
		Imported rows: 2 ; Rows with errors: 0	
		RATE TABLE: RATE TABLE EXAMPLE	
		Imported rows: 2 ; Rows with errors: 0	

Close

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 the JeraSoft VCS interface. The window is titled '0 [USD]' and contains several sections for configuring the export process:

- TEMPLATE SETTINGS:** Includes an 'Export Template' dropdown and a 'Save' button.
- STEP 1: SPECIFY FILTER PARAMETERS:** Contains fields for 'current / future' status, a timestamp '2016-11-22 10:43:11', 'Code', 'Code Name', 'Status', 'Policy', 'Tag', 'Import File', 'Prev Diff Status', and 'Next Diff Status'. There is also a 'Join Parent' checkbox and fields for 'Rate', 'Setup Fee', 'End Date', 'Min Time', 'Interval', 'Grace Time', and 'Profile'.
- STEP 2: SPECIFY DATE AND FORMAT OPTIONS:** Includes 'Last export date', 'Code Deck', 'Data format' (set to CSV), 'Date Format' (set to %m/%d/%Y %H:%M:%S %z), 'Codes Output' (set to separate rows), and 'Fields Delimiter'.
- 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.
- HEADER TEXT** and **FOOTER TEXT** sections are visible at the bottom.
- Buttons for 'Process' and 'Cancel' are located at the bottom right.

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 tha 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	
	<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 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	



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 From	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>

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 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.



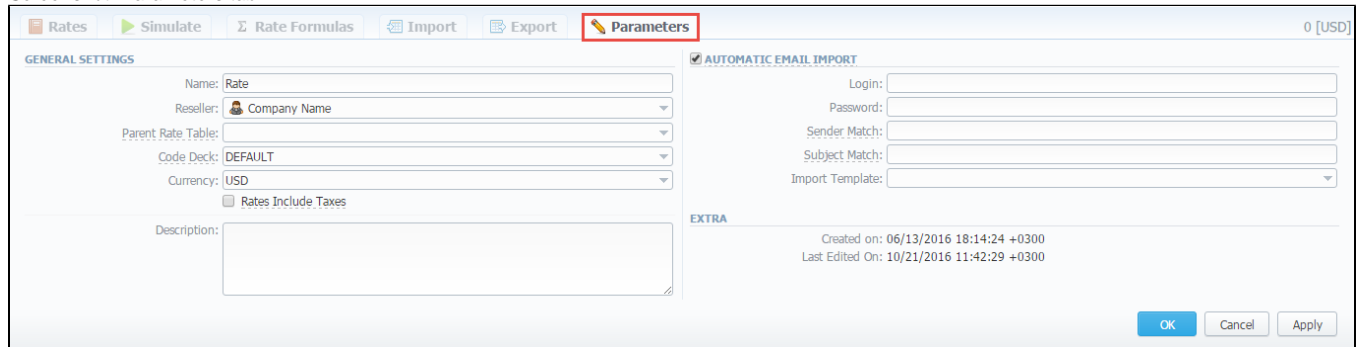
Tip: rates sorting will be made by the very first column. For example, if you want rates to be sorted by A-Z destination name than make Code Name as first column.

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

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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 the software. The 'AUTOMATIC EMAIL IMPORT' checkbox is checked and highlighted with a red box. Below it are input fields for Login, Password, Sender Match, Subject Match, and Import Template. The 'EXTRA' section shows creation and last edit timestamps.

Field	Description
Login	Specify the login of an email box
Password	Enter a password of the specified email <div style="border: 1px solid yellow; padding: 5px; margin-top: 5px;"> Please note that the password should contain at least 10 symbols. </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

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

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

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

Template Name: Save


« Return Process »

Invoices

On this page

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

Invoices List




This section allows you to create and manage all outgoing and incoming invoices. By clicking the *Download icon*  you can load and view respective invoice. By using the "Export List" option, you can download currently a stored list of invoices in *CSV format.





The main window of this section presents a list of generated invoices:

Screenshot: Invoices section main window



Invoice No	Client / Reseller	ID Client / Reseller	Amount	Period	Due Date	Invoice Date
Invoice-Payment Notification-100123	Payment Notification	181	398.86 USD <small>Paid: 223 USD</small>	01/01/2017 – 12/31/2017	GMT+3 6 days ago 07/25/2017	07/28/2017 00:00:00 +0300
Invoice-Payment Notification-100121	Payment Notification	181	49.00 USD	07/25/2017 – 07/27/2017	GMT+3 07/24/2017	07/27/2017 19:04:51 +0300
Invoice-Payment Notification-100119	Payment Notification	181	49.00 USD	07/25/2017 – 07/27/2017	GMT+3 07/30/2017	07/27/2017 19:00:28 +0300
Invoice-Payment Notification-100117	Payment Notification	181	30.00 USD	07/16/2017 – 07/22/2017	GMT+3 08/03/2017	07/27/2017 15:58:28 +0300
Invoice-Payment Notification-100115	Payment Notification	181	0.00 USD	07/09/2017 – 07/15/2017	GMT+3 08/03/2017	07/27/2017 15:58:26 +0300
Invoice-Payment Notification-100113	Payment Notification	181	0.00 USD	07/02/2017 – 07/08/2017	GMT+3 08/03/2017	07/27/2017 15:58:24 +0300
Invoice-Payment Notification-100120	Payment Notification	181	49.00 USD	07/25/2017 – 07/27/2017	GMT+3 07/25/2017	07/27/2017 00:00:00 +0300

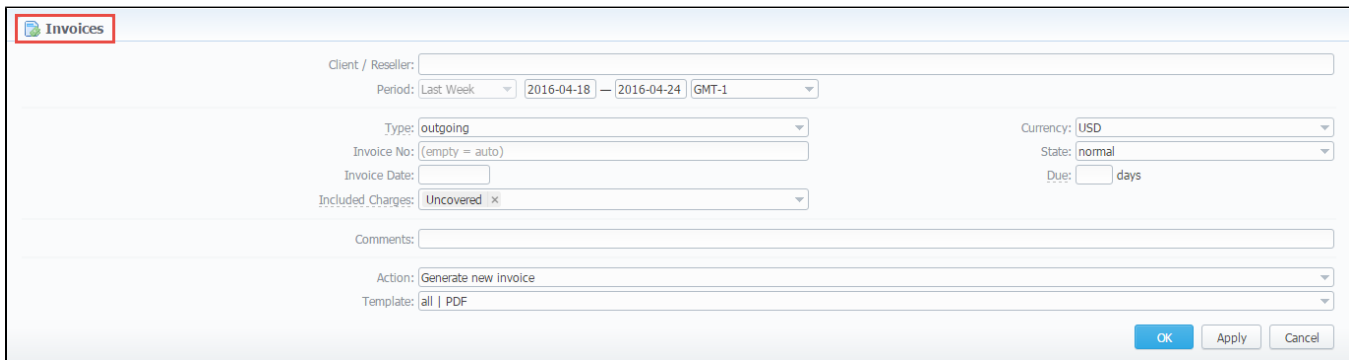
Column Name	Description
Invoice No	Number of invoice
Client / Reseller	Name of Client or Reseller. Tip: You can create an invoice for a root Reseller.
ID Client / Reseller	Client or Reseller identification number
Amount	Total sum of invoice
Period	Invoice period
Due Date	Shows due date for each invoice
Invoice Date	Date of creation the invoice. Tip: When you leave the " Invoice Date " field empty, it will be the same that the time of an invoice creation. In case you determine it, the system sets the midnight of a specified day.
Icon	Description
	This icon tells you that respective invoice was paid in full. If the invoice is not fully paid, this icon will be grey
	This icon defines <i>to verify state</i> and tells you that this invoice is waiting to be checked before it will be sent to client
	This icon defines <i>to send state</i> , and this means that invoice is in sending queue

	Outgoing invoice
	Incoming invoice
	By clicking this icon you can download and view respective invoice file
	By clicking this icon you can delete respective invoice

Creating New Invoice


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

Screenshot: Create Invoice window





The screenshot shows a window titled "Invoices" with the following fields and options:

- Client / Reseller: [Text input field]
- Period: [Last Week] | [2016-04-18] - [2016-04-24] | [GMT-1]
- Type: [outgoing]
- Invoice No.: [(empty = auto)]
- Invoice Date: [Text input field]
- Included Charges: [Uncovered x]
- Currency: [USD]
- State: [normal]
- Due: [] days
- Comments: [Text input field]
- Action: [Generate new invoice]
- Template: [all | PDF]
- Buttons: [OK] [Apply] [Cancel]

Name of column	Description
Client /Reseller	Name of the <i>Client</i> or <i>Reseller</i>
Period	Define period of statistics that will be included in to invoice
Type	Specify the type of invoice (<i>outgoing/incoming</i>)
Currency	Using the drop down menu select the currency in which you would like to generate invoice
Invoice	Number of Invoice. The number length can't exceed 200 symbols
State	Select the state of this newly created invoice (<i>to send, to verify</i> or <i>normal</i>)
Invoice Date	Specify the actual invoicing date
Due (days)	Indicate the payment due in days
Included Charges	<p>Select the type of charges for invoices:</p> <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="border: 1px solid green; padding: 5px; margin-top: 10px;"> <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	Leave comments

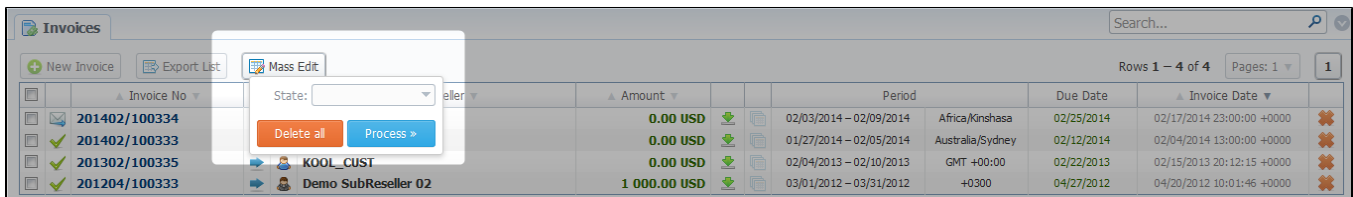
Action	Using the drop down menu select an appropriate action: <i>"Generate new invoice"</i> or <i>"Attach existing invoice"</i> . When <i>"Attaching existing invoice"</i> you can only additionally specify the invoice destination (incoming or outgoing), specify the sum of the invoice and attach the invoice file. This feature is mainly used when your invoice was generated by some other third-party software.
Template	Select a template that should be used to create a current invoice. These templates define your invoice contents and look and are created and managed in <i>Configuration – Invoices Templates</i> section.


 **Tip:** All automatically created invoices will be **"to verify"** state. To send the invoice to a client you will need to change the state to *send* manually!

 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 for another client, i.e. avoid generating them simultaneously. That is important for avoiding the situation of having *invoices with an identical number* in the system.

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 respective *"State"* field, press *"Process"* button for applying the change. Also using the following window you may delete all existing invoices by pressing *"Delete all"* button.

Screenshot: Invoices "Mass Edit" window



 Please note:

- 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. And avoid names with special symbols as *%001 name, -001 name*.
- 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 notice when you make different reports like the *Summary report, CDRs list* and then generate an invoice, you get different totals. Here is a little background on what makes those differences.

Due to the option **"Included Calls"** (*Attach CDRs 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** - permits including calls with non-zero duration that have any cost and use packages.

Therefore, invoice totals depend on selected parameters and settings, for example, whether include calls with any cost, duration, package or not, etc. However, when you generate a report (*Summary report, CDRs list*), the statistics is usually based on all calls. As the result, it appears a difference between invoice and report totals, even an invoice may have completely another totals vs report data.



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: the method of calculating and rounding values.

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 CDR 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

On this page


- [Transactions List](#)
- [Adding New Payment/Charge](#)
- ["Import Transactions" and "Export List" Buttons](#)


Transactions List

This section allows you to perform financial operations with client's / reseller's balances and also review all balance changes within the system.

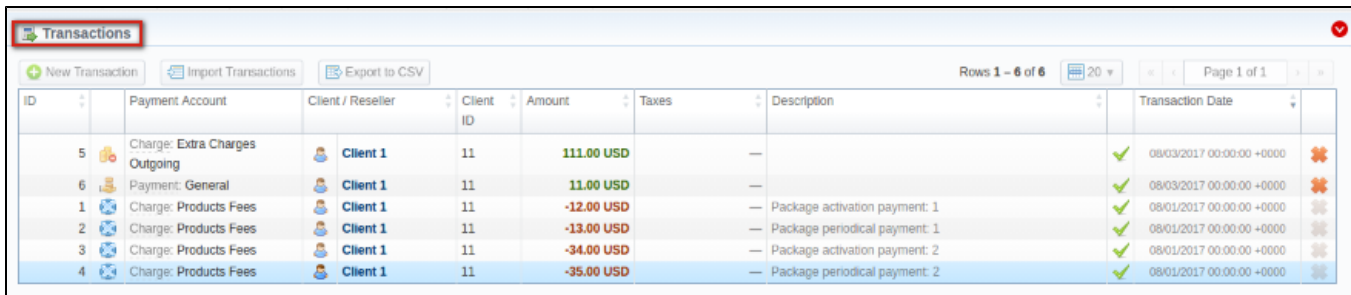
Transaction charges will be created according to the **configurations of Tax Profiles, Rate Tables**(including tax or not) and the **next parameters**:

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

 In case you change one of the parameters listed above and the re-rating is done, you might have additional transactions (with zero or nonzero taxes).

-  1) 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.
- 2) If you see a transaction with a tax represented as a dash (), it means that all taxes were included in rate tables.

Screenshot: Transactions section main window



ID	Payment Account	Client / Reseller	Client ID	Amount	Taxes	Description	Transaction Date
5	Charge: Extra Charges Outgoing	Client 1	11	111.00 USD	—		08/03/2017 00:00:00 +0000
6	Payment: General	Client 1	11	11.00 USD	—		08/03/2017 00:00:00 +0000
1	Charge: Products Fees	Client 1	11	-12.00 USD	—	Package activation payment: 1	08/01/2017 00:00:00 +0000
2	Charge: Products Fees	Client 1	11	-13.00 USD	—	Package periodical payment: 1	08/01/2017 00:00:00 +0000
3	Charge: Products Fees	Client 1	11	-34.00 USD	—	Package activation payment: 2	08/01/2017 00:00:00 +0000
4	Charge: Products Fees	Client 1	11	-35.00 USD	—	Package periodical payment: 2	08/01/2017 00:00:00 +0000

Payments list columns have the following meaning:

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, products, 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

Adding New Payment/Charge



To add a payment click “*New Transaction*” button. In new window specify respective parameters and click “*Apply*” button.

Screenshot: New transaction settings

The screenshot shows a 'Transactions' window with the following fields and values:

- Client:** Client ABC
- Type:** Payment
- Payment Account:** General
- Amount:** 100 USD
- Transaction Date:** 2016-10-26 00:00:00+0000
- Transaction Status:** Approved
- Description:** (empty)
- System Info:** (empty)

Buttons at the bottom: OK, Cancel, Apply.

Column name	Description
Client	The name of the client
Type	The type of the transaction. For incoming payment, select “ <i>Payment</i> ” operation type, for outgoing charge – select “ <i>Charge</i> ”.
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. <div style="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> <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 <i>extra charges outgoing</i>, it will guarantee that this charge will be visible in the invoice.</p> </div>
Amount	<p>The positive/negative amount. This fields is available for charge type of transactions.</p> <ul style="list-style-type: none"> • positive amount is credited to client; • negative amount is debited from client. <p>Tip: Transaction amounts could be specified with comma as a decimal delimiter, for example, 2,45.</p> <p>You can set an amount and choose whether a specified amount includes a tax or not, choose a respective value in the drop-down list next to the currency of the amount.</p> <ul style="list-style-type: none"> • no taxes; • including taxes; • excluding taxes. <p>While creating a new transaction with taxes, the system will calculate a tax rate right away and display it under the amount in the same pop-up window.</p> <p><i>Screenshot: New transaction settings</i></p> 

Transaction Date	The actual date of the transaction
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>The state of the transaction:</p> <ul style="list-style-type: none"> • pending • approved <p>Tip: If you change transaction Status in the respective field from "Approved" to "Pending" when adding a payment, that payment will have to pass additional approval check by billing operator.</p>



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.

"Import Transactions" and "Export List" Buttons

While using the "Import Transactions" option, you can perform an import of payments. Simply click the "**Import Transactions**" button and follow on-screen instructions.



You can edit payment properties by clicking respective transaction icon in the list of all available payments.

The process of the import can be logically divided into two steps:

- Selecting File and Specifying Additional Parameters.** Follow this step to set some configurations in regard to the import process.

Screenshot: Transactions importing process. Step 1

? Unknown Attachment

- Recognizing The File.** The system will recognize the file and you can make changes to the recognition of data (for instance, switch columns) and press "Process>>" again.

Screenshot: Transactions importing process. Step 2

? Unknown Attachment

If you click "**Export List**" button, you will be able to export all currently stored payments as CSV file.

Balance Report

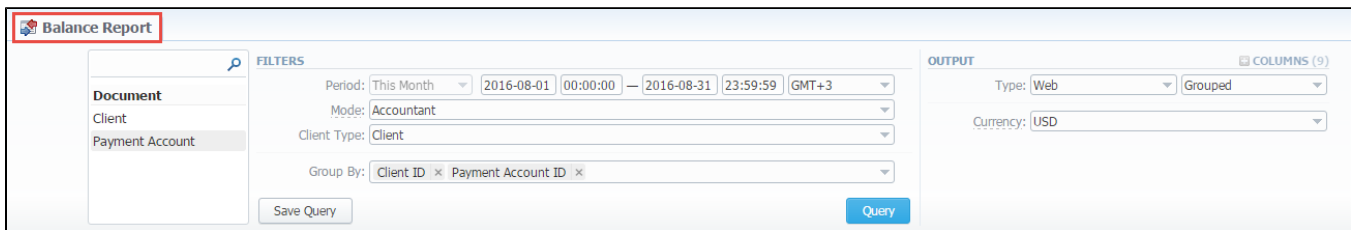
On this page:

- [Balance Report Form](#)
- [To create a new balance report](#)
- [Simple scheme: how to generate a balance report](#)
- [To create reports templates](#)
- [Export generated report](#)

Balance Report Form

This section represents a balance analysis tool. It shows a full history of client's charges and payments for the selected period.


Screenshot: *Balance Report section main window*











To create a new balance report

In order to create a balance report go to the **Management** and open the **Balance Report** section. Then, you need to specify required values. To get information sorted by date, client and payment account ID, use the "Group by" option and choose respective values from the drop-down list.

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 drop-down menu with filters.												
	<table border="1"> <tr> <td>Period</td> <td>Specify an interval for the report. This field is mandatory.</td> </tr> <tr> <td>Mode</td> <td> Select a balance mode to show a respective set of data <ul style="list-style-type: none"> • Accountant balance - 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 </td> </tr> <tr> <td>Client Type</td> <td> Choose the type of the report to gather the data <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop </td> </tr> <tr> <td>Group By</td> <td> Select a grouping option, here you can choose respective values to sort the data. There are following accessible parameters to group the data in reports: <ul style="list-style-type: none"> • Time: Month, Date. • Document: Client ID, Payment account ID. </td> </tr> <tr> <td colspan="2">Additional Filters: By document</td> </tr> <tr> <td>Client</td> <td>Define an origination client for the report</td> </tr> </table>	Period	Specify an interval for the report. This field is mandatory.	Mode	Select a balance mode to show a respective set of data <ul style="list-style-type: none"> • Accountant balance - 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	Choose the type of the report to gather the data <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop 	Group By	Select a grouping option, here you can choose respective values to sort the data. There are following accessible parameters to group the data in reports: <ul style="list-style-type: none"> • Time: Month, Date. • Document: Client ID, Payment account ID. 	Additional Filters: By document		Client	Define an origination client for the report
	Period	Specify an interval for the report. This field is mandatory.											
	Mode	Select a balance mode to show a respective set of data <ul style="list-style-type: none"> • Accountant balance - 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	Choose the type of the report to gather the data <ul style="list-style-type: none"> • Client • Reseller • Calling Card • Call Shop 											
	Group By	Select a grouping option, here you can choose respective values to sort the data. There are following accessible parameters to group the data in reports: <ul style="list-style-type: none"> • Time: Month, Date. • Document: Client ID, Payment account ID. 											
Additional Filters: By document													
Client	Define an origination client for the report												

Payment Account	Enter an orig account for the report
Output	This form contains settings of output data of the report.
<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 in the report:</p>	
<p><i>Client, Client ID, Payment Account, Document Icon, Document Info, Start Balance, Debit, Credit, End Balance, Type, NO, Notes, Date.</i></p>	
Client	Name of the <i>client/reseller/calling card/call shop</i> for that current operation is assigned to
Client ID	Client identification that also is present in the full list of <i>Transactions</i> and <i>Invoices</i> .
Payment Account	Respective payment account, where performed payment was assigned
Document Icon	<p>File icons that generally display a type of the document in the report:</p> <ul style="list-style-type: none"> • This icon  shows different payments in the system. • This icon  appears when extra charges incoming/outgoing are presented. • This icon  means different charges or payments of the calls. • This icon  presents payments of the packages. • And the menu icon  represents the invoices in the system.
Document Info	The document that an operation corresponds to (<i>charge, payment, invoice 100, for example</i>)
Type	Here you can see a document type
No	The number of transactions
Notes	The 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 etc)
Credit	Operation sum, that has negative income (outgoing payment / invoice etc)
Other output settings	
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 <i>"Type"</i> field the 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 data-bbox="407 1583 1484 1675" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <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>
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 possible to specify several e-mails.</p> <div data-bbox="407 1780 1484 1864" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> This feature is available only in <i>CSV/Excel XLS/Excel XLSx</i> formats of the report, it doesn't work with <i>The Web</i>.</p> </div>
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

Balance Report

Document

Client

Payment Account

FILTERS

Period: This Year | 2016-01-01 00:00:00 — 2016-12-31 23:59:59 | UTC

Mode: Accountant

Client Type: Client

Group By:

Save Query Query

OUTPUT

Type: Web | Grouped

Currency: USD

Export to XLSx i

Client	Payment Account	Client ID	Document Icon	Document Info	Start Balance	Debit	Credit	End Balance
					0.00 USD	18 000 878.79 USD	277.98 USD	18 000 600.81 USD
Originator	General	16		Payment 37	0.000 USD		77.000 USD	-77.000 USD
Originator	General	22		Payment 40	-77.000 USD			-77.000 USD
Originator	Accounts Receivable	15		Invoice invoice	-77.000 USD	60.000 USD		-17.000 USD
Originator	Accounts Receivable	15		Invoice invoice	-17.000 USD	60.000 USD		43.000 USD
Originator	General	24		Payment 46	43.000 USD		40.000 USD	3.000 USD
Originator	General	26		Payment 47	3.000 USD	40.000 USD		43.000 USD

i 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 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 convenient parameters for the report.
- Enter the period.
- 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*.
- Leave **"Type"** *Web/Grouped* settings by default.
- Click the **"Query"** button.

! Please note, the **"Order By"** option is active when the **"Type"** of the *Output form* is **Plain**. When it is **Grouped**, the system sort data by the values specified in the **"Group By"** field.

To create reports templates

To create a template for reports and save specified parameters, click the **"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

Section	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
Watch	This tool allows to automatically generate reports at the appropriate time and send the results to the list of e-mails. <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> Please note, that this tool is not available for <i>Web</i> output type, only for <i>CSV/Excel XLS/Excel XLSx</i>. </div>
	Recipients Specify recipients, also 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 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

To load already created templates while generating statistic reports, click the **"Load Query"** button in the *Balance Report* section.

Export generated report

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.

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.

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

Screenshot: Balance Report section

Balance Report

Document

Client

Payment Account

FILTERS

Period: This Year | 2016-01-01 00:00:00 — 2016-12-31 23:59:59 | UTC

Mode: Accountant

Client Type: Client

Group By: Payment Account ID

Save Query Query

OUTPUT

Type: Web | Plain

Currency: USD

Export to CSV
Export to XLSx

Columns (9)

Payment Account	Client	Client ID	Document Icon	Document Info	Start Balance	Debit	Credit	End Balance
N/A	N/A	N/A			0.000 USD	18 000 878.790 USD	277.977 USD	18 000 600.813 USD
General		16		Payment 37	0.000 USD		77.000 USD	-77.000 USD
General		22		Payment 40	-77.000 USD			-77.000 USD
Accounts Receivable		15		Invoice invoice	-77.000 USD	60.000 USD		-17.000 USD
Accounts Receivable		15		Invoice invoice	-17.000 USD	60.000 USD		43.000 USD
General		24		Payment 46	43.000 USD		40.000 USD	3.000 USD
General		26		Payment 47	3.000 USD	40.000 USD		43.000 USD

Please note, that 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.

Please note, that 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

On this page

- [Resellers List](#)
- [Adding New Company](#)
- [Adding New Manager](#)
- [Reseller Removal](#)
- [Custom Fields](#)
- [Rates Notifications](#)
- [Configuring Mail Templates](#)
- [Configuration Syntax](#)
- [Knowledge Base Articles](#)

Resellers List

This section covers features and functions that are available for *Reseller/Manager*. Here you can specify the details about your company or affiliate.

For information on creating *New Company/Reseller/Manager* and administrating the full list of Resellers see below.

Screenshot: Resellers section main window

ID	Name	Available Balance	Clients	Cards	Call Shops
3	Company Name	No Limit USD	2	2	0
16	Company_Name	0.00 USD	1	0	0
13	Manager		2	0	0
18	LNP Reseller	50 000.00 USD	2	0	0

Icon	Description
	To assign an orig rate table for a respective Reseller
	To assign a term rate table
	To view users of a following Reseller
	To view the history in the <i>Audit log</i> section
	To view balance operations in the <i>Transactions</i> section
	To show clients for a current Reseller in the <i>Clients</i> section
	To display calling cards for the Reseller
	To view call shops for a current Reseller

Adding New Company

To add a company, click the *"New Company"* button on the toolbar and a pop-up window with properties will appear.

Screenshot: Adding new company

Edit Reseller
Custom Fields
Rates Notifications
Reseller

SYSTEM INFORMATION

Name:

Parent:

Currency:

Status:

Client's Template:

Tax Profile:

Gateways:

TERMINATOR SETTINGS

TERM Rates:

TERM Capacity:

FRAUD PROTECTION

Notification frequency:

Skip digits:

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

ORIGINATOR SETTINGS

Postpaid:

ORIG Rates:

ORIG Capacity:

INVOICING INFORMATION

Date:

Template:

No Tpl:

Last No:

EMAIL RATES IMPORT SETTINGS

Host:

Port:

SURETAX SETTINGS

Client Number:

Validation Key:

CONTACT INFORMATION

E-mail:

Postal Address:

Tax ID:


Reg ID:

Bank Account:

COMPANY LOGO

No file chosen

Section	Fields Description
System Information	General information
	<ul style="list-style-type: none"> • Name Here you can specify the name of one of your companies (or affiliates). This field is mandatory.
	<ul style="list-style-type: none"> • Parent Select a parent for this Reseller
	<ul style="list-style-type: none"> • Currency Preferred currency for rates and invoices
	<ul style="list-style-type: none"> • Status Current status of the Reseller
	<ul style="list-style-type: none"> • Client Template Template that will be used for all clients belonging to this Reseller or Manager by default
	<ul style="list-style-type: none"> • Tax Profile Select a tax profile, that will be used for this Reseller. You can specify a tax profile which will be reflected in invoices (refers to <i>Taxes Profiles</i> 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="border: 1px solid #ffc107; padding: 5px; margin-top: 10px;"> <p> For proper usage of SureTax, the <i>Invoice Number</i> should contain only Latin and numeric characters. Max length is 40 symbols. <i>Dst</i> and <i>Src Numbers</i> should be in format <i>NPANXXNNNN</i> (10 digits).</p> </div>

	<ul style="list-style-type: none"> • Gateways 	Select respective gateways that are allowed for this Reseller	
Originator Settings	Current Reseller's billing settings for incoming calls		
	<ul style="list-style-type: none"> • "Postpaid" check box 	<p>Here you can set specific paid mode for a client.</p> <p>If postpaid mode not selected, this client's Balance + Credit value will be checked on RADIUS or SIP authorization, in other case client will have unlimited credit.</p>	
	<ul style="list-style-type: none"> • Credit 	Additional field in the row of Postpaid check box. Credit limit allowed for client.	
	<ul style="list-style-type: none"> • ORIG Rates 	Rates for incoming calls from customers under current Reseller. Requires resellers billing mode enable	
	<ul style="list-style-type: none"> • Routing Plan 	Default routing plan for customers of this Reseller, if no other is specified in Client's profile	
	<ul style="list-style-type: none"> • ORIG Capacity 	Origination capacity of this Reseller for all clients that belong to him. Leave this field empty for unlimited capacity	
Terminator Settings	Current Reseller's billing settings for outgoing calls		
	<ul style="list-style-type: none"> • TERM Rates 	Rates for outgoing calls to providers under this Reseller (i.e the Reseller's rate by which the call is billing). Requires Resellers billing mode enable	
	<ul style="list-style-type: none"> • TERM Capacity 	Termination capacity of this Reseller for all clients that belong to him. Leave this field empty for unlimited capacity	
Invoicing Information	Current Reseller's invoicing settings		
	<ul style="list-style-type: none"> • Date 	<p>Allows you to select how system sets invoicing date:</p> <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"> • Template 	Select an invoice template to use with this 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 here	
"Fraud Protection" check box	<p>Enables/disables administrator notification in case of multiple simultaneous calls made to the same number from the current Reseller.</p> <div style="border: 1px solid orange; padding: 5px; margin: 5px 0;">  Please note that all notifications can be found in <i>System - Events Log</i> section. If you want to receive its on exact email, go to <i>System - Events Log - Configuration</i> section, here specify an email and tick the "A" check box (stands for Alerts) of "RADIUS: Fraud Protection" service, then click the "Update" button for saving changes. </div> <p>Here you need to specify the following:</p>		
	<ul style="list-style-type: none"> • Notification frequency 	Set minimum time in seconds between sent notifications (minimum interval should be greater or equal to 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
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 the 993 port is set
SureTax Settings		<p>SureTax profile settings. SureTax is 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".</p> <ul style="list-style-type: none"> • Client Number - unique number that identify an individual in the SureTax service. • Validation Key - unique validation key of the SureTax service.
Contact Information		Some additional information
	<ul style="list-style-type: none"> • E-mail 	Company's e-mail (it is required to specify e-mail in order to receive notifications). Use only Latin characters. After update to the latest version, make sure that all e-mail addresses of your Resellers are specified in their settings.
	<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 the 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 an old logo.



Please be aware, that changes of Resellers' settings will not be applied instantly. They will be automatically reloaded every 5 minutes.



Please note, that **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, click the "New Manager" button and complete by supplying required information.

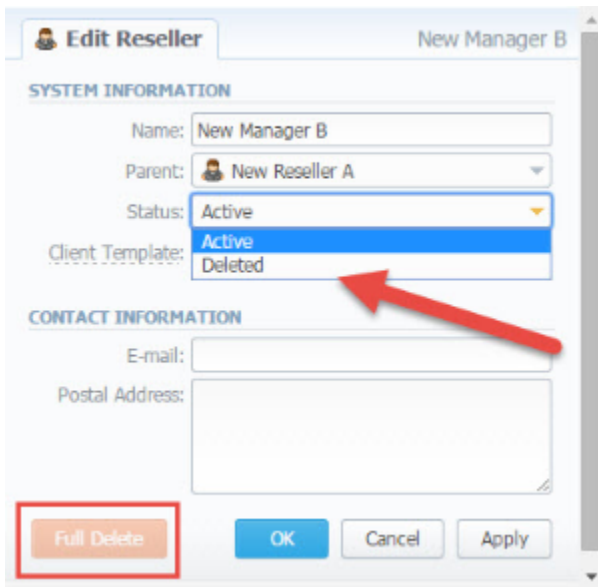
Screenshot: Adding new manager.

Section	Fields Description	
System Information	General information about Manager	
	• Name	Here you can specify the name of Manager. This field is mandatory.
	• Parent	Select a parent for this Manager
	• Status	Current status of Manager
Contact Information	Some additional information	
	• E-mail	Manager's e-mail. Use only Latin characters.
	• Postal Address	Manager's postal address

Reseller Removal

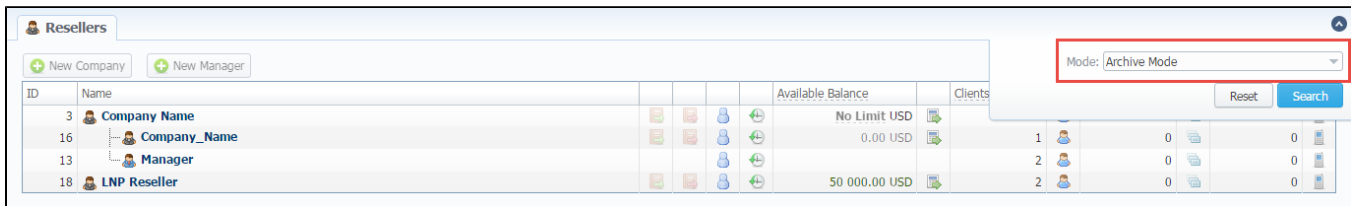
To delete a *Reseller/Manager* from the system you need to **change the status** from *Active* to *Deleted* in *Reseller's Properties window*.

Screenshot: *Edit Reseller status*



Please note, that in fact *Reseller/Manager* will not be deleted fully, it will be put to *Archive*. To find it just choose *Archive Mode* in the right top under Resellers List. To delete a profile completely you need to click the "Full Delete" bottom.

Screenshot: Resellers section/ search toolbar



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 to add an information about package.

To add new field follow next steps:

1. Click the "Add Custom Field" button.
2. Specify *Field Key* and *Title* for custom item: for example: "voip_phone_sell" as Key and "Sell of 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 in the *Client's settings/Package settings Custom Fields* tab.
4. Create an invoice template and assign it to the Reseller. Then, **Clients Custom Fields** and **Package Custom Fields** tables will appear in the *Invoice Template* settings. You need to add these tables in the invoice template.
5. Finally, you can generate an invoice.

Screenshot: Custom Field



Rates Notifications

Rates Notifications settings in *Resellers* section allows to create **default rate notification** for clients that belong to relative Reseller.

Screenshot: *Reseller/Rates Notifications*

You may find a description of all columns that could be selected for rate notification below:

Field	Description
Code / Name	Code or Code Name of respective rate
Effective From	Date on which a rate to be applied
Rate	Price
Min Time	Minimal time interval of tarificated calls (sec)
Interval	Tarification interval (sec)
Grace Time	Interval of free time
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	Show how differs current rate from previous
Prev Diff Status	Shows the status how differs current rate from 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 <i>"unchanged"</i> status if the <i>Effective date</i> of rate is lower than the <i>Last Notification Date</i>

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	Choose the column with label to be shown
Policy	Choose the column with policy of the rate
Status	Choose the state to be shown

Fill here next fields:

Field	Description
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
	<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 output file format, XLS or CSV
Fields Delimiter	Set delimiter for fields if you've chosen CSV
"With headers row" check box	Include column names into the file
"Codes from code deck" check box	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

Configuring Mail Templates

Also, there are different mail templates you can configure for your company:

Template Name	Description
Mail Template: Invoice	Is used when sending invoice to the customer
Mail Template: Invoice Unpaid Reminder	Is used when sending payment notification to the customer (sending notification on "Notify Days(Before)")
Mail Template: Overdue Reminder	Is used when sending payment notification to the customer (sending notification on "Notify Days(After)")
Mail Template: Low Balance Notification	Is used when sending low balance notification to the customer <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> 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 of the Reseller settings and specify the number of rounding decimals in the "Totals precision" in the <i>Currencies</i>. </div>
Mail Template: Rates Notificator	Is used when sending rate changes notification to the customer
Mail Template: Factors Watcher	Is used when sending notification to the customer once adding Preset by Factors Watcher
Mail Template: Reports Watcher	Is used when sending reports by email

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	Name of Company, e-mail of the Company
BCC	Here specify who will receive a blind copy of an email
Subject	Name of Company that is used for Factors Watcher notification
Direction {direction}	<i>Code</i> or <i>Code name</i> , this field fills in automatically by the system
Reason {reason}	Values specified in Factors Watcher settings (for example: calls_total >0).

To configure any of these templates, click on its name. Here presented 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>	A client name
<code>#{client['balance']}</code>	A client live balance
<code>#{client['balance_accountant']}</code>	A client fixed balance
<code>#{client['credit']}</code>	A client available credit
<code>#{client['c_company']}</code>	A client official company name
<code>#{client['c_address']}</code>	The post address of a client's company
<code>#{client['c_email']}</code>	The email of a client
<code>#{client['locale']}</code>	A client location
<code>#{client['id_currencies']}</code>	The currency ID used by a client
<code>#{client['tz']}</code>	The time zone of a client
<code>#{client['id_taxes_profiles']}</code>	The taxes profiles used by a client
<code>#{client['tax_id']}</code>	Customers tax ID of a clients' company
<code>#{client['reg_id']}</code>	The registration ID of a clients' company

General Configuration Syntax Concerning Company/Reseller Data

Templates Configuration Syntax	Description
<code>#{company['status']}</code>	A company/reseller status: <ul style="list-style-type: none"> • active • deleted
<code>#{company['balance']}</code>	A company/reseller current balance
<code>#{company['balance_accountant']}</code>	A company/reseller fixed balance
<code>#{company['credit']}</code>	A company/reseller available credit
<code>#{company['c_address']}</code>	The post address of a company
<code>#{company['c_email']}</code>	The email of a company
<code>#{company['locale']}</code>	A company location
<code>#{company['id_currencies']}</code>	A company currency ID
<code>#{company['tz']}</code>	A company time zone
<code>#{company['id_taxes_profiles']}</code>	A company/reseller taxes profiles
<code>#{company['name']}</code>	Name of a company
<code>#{company['tax_id']}</code>	Customers tax ID of a company
<code>#{company['reg_id']}</code>	The registration ID of a company

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>	A client currency

Configuration Syntax for Mail Template: Low Balance Notification

Templates Configuration Syntax	Description
<code>\${client['balance_avail']}</code>	A client live balance + credit
<code>\${client['currency']}</code>	A client currency
<code>\${client['alert_threshold']}</code>	Notification for a client of reached balance limit
<code>\${client['alert_athreshold']}</code>	Notification for an administrator of reached 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>	Data when Rate table was last time edited
<code>\${date}</code>	Data when the notification was sent

Configuration Syntax for Mail Template: Reports Watcher

Templates Configuration Syntax	Description
<code>\${report["title"]}</code>	Head of report template
<code>\${report["interval"]}</code>	Actual report period of time
<code>\${report["title-full"]} = \${report["title"]} + \${report["interval"]}</code>	
<code>\${report["webUrl"]}</code>	URL to view report in the web portal
<code>\${report["id"]}</code>	ID of report template



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

Knowledge Base Articles

- [How to set up a functional capacity?](#)

Client Packages

On this page

- [Client Packages Main Window](#)
- [To assign the package](#)
- [To add the package](#)

Client Packages Main Window

This section provides a possibility to see the full list of all packages, assign relevant packages to clients and accounts. To access these settings, go to *Management Client Packages*.

Screenshot: Client Packages list

Client	Account	Package	Limits	Current period start/stop	Package start/stop			
Company Name		Package 1	+1 100 Min +1 50 Event +1 100 GB	06/01/2017 00:00:00 07/01/2017 00:00:00	06/01/2017 00:00:00 06/30/2017 00:00:00			
Client		Package 2	+1 20 Min +1 30 Event	06/01/2017 00:00:00 07/01/2017 00:00:00	06/01/2017 00:00:00 06/30/2017 00:00:00			

Column	Description
Client	Name of Client to whom package is assigned
Account	Name of Account to whom package is assigned Shows for whom package is assigned
Package	Name of assigned package
Limits	Shows, if respective package has some volume limits and time or money left 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

Icon	Description
	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
	Click this icon to edit the "Deal End Date"
	Click this to insure that package will not be renewed, even if all requirements are met
	This icon allows to revert changes triggered by the previous icon until <i>Packages Manager</i> starts
	It allows to renew the package. Besides, we strongly recommend not to renew the package on the expiration date.
	Click this icon to cancel the package

To assign the package

Click the **"Assign Package"** button and a new window with settings appears. Then fill the form according to your demands 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

Column	Description
Client	Name of Client to whom package is assigned
Account	Name of Account to whom package is assigned Shows for whom package is assigned
Package	Name of assigned package
Deal Start Date	Package's limits and discounts are only effective after specified date
Deal End Date	Package's limits and discounts are disabled after specified date
Quantity	Number of packages to be assigned.
"Align to Payment Terms" check box	If enable, it takes client's assigned payment terms as date of package first reactivation
"Recalculate to Period" check box	If enable, it recounts charge to next reactivation date. For example, if specified payment terms are 30/1, the following package is activated on 20th of the current month and you enable this option, only 10 days charge will be applied, and a package will be reactivated on 1st of the next month.

Tip 1: you can also **assign packages to the Resellers** in this section.

Tip 2: It is possible to **assign a backdating package** in the **Client Packages**. In order to update the deal end date of a package you need to change it in the *Client Package* settings and then restart the *Package Manager*.

Please be aware that you should run the *Package Manager* several times until the current period of the package or its end date.

Please note that when you edit the *"Deal End Date"* field of already assigned package, transactions will not remain unchanged.



If you click the delete icon (i.e. **remove an archived package entirely**) in the *Client Packages* section you will delete a package with all transactions from the system. Also, this package will be removed from the *Client Info* form.

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

- delete the package from the list in the Client Packages section
- open System/Task Scheduler section
- run Packages Manager
- return to the list of packages in the Client Packages section
- sort the list of packages by the status "archive"
- find a respective package and click the icon to delete completely from the system.

To add the package

You can add a new package in the *Retail section / Packages*. Click "**Add Package**" button and in the pop-up window fill the form with settings. Read more about it in the **Packages** article.



When you change the **name of the package** in the *Retail → Packages*, it will automatically change it in the *Management → Client Packages*, even when this package is already assigned. The result is the following: you could not find and check changed package the system because there would be specified only an old name of the package in *Invoices* and *Transactions*.

We do not recommend to edit the name of already assigned package in the *Retail → Packages*.

Presets

On this page

- [Client Presets](#)
- [Adding Routing Presets](#)
- [Presets "Import" Feature](#)
 - [Step 1. Selecting File and Specifying Additional Parameters](#)
 - [Step 2. Recognizing The File](#)

Client Presets

This section provides the possibility to exclude (block) routes from routing scheme. Here, you can add and remove routing presets either for origination or termination routes.

Screenshot: Presets section

ID	Originator	Terminator	Code	Code Name	Creation Date	Expiry Date	Type	Notes
144	Client B	Balance_term Any	+231	Any	2016-05-12 11:53:49+00	2016-05-28 00:00:00+00	manual	
143	Client A	Balance_term Any	+1 242	Any	2016-05-12 11:51:24+00	2016-05-26 00:00:00+00	manual	
141	Client C	Balance_term Any	+33	Any	2016-05-12 11:44:13+00		manual	
139	Client A		*	Any	2016-05-10 12:58:54+00		auto	
138	Client B		*	Any	2016-05-10 12:56:06+00		manual	
137	Client A		*	Any	2016-05-10 12:55:16+00		manual	
136	Client C		*	Any	2016-05-10 12:54:52+00		manual	
135	Client A	Balance_term Any	38097	Any	2016-04-27 09:31:02+00		manual	



To quick open this section from the full list of the system, click the *Presets icon*.

Adding Routing Presets






To add a route click the "**+** New Preset" button and enter all required information:

Field Name	Field Description
Origination settings	<ul style="list-style-type: none"> • Orig Client - specify origClient for a current routing rule for whom this routing rule will work • Orig Account - indicate origination Client's account, that should be used in current routing rule
Termination settings	<ul style="list-style-type: none"> • Term Client - specify term 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 term Client's account, that should be used in current routing rule
Code	<p>Specify a code of destination. The code is used for matching the rule. The longest code will be in usage.</p> <p>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 38067 in your rate table and set preset for 380. Such settings won't include 38067, but 380* will do.</p>
Code Name	Indicate a code name or select it in this field
Expiry Date	Set an exact date for which the block should be active. If the field is empty it will never expire.
Action	<ul style="list-style-type: none"> • Deny - choose this action to block the current route selection • Allow - choose this action to accept particular route selection (for example: allow a route for particular account of the client)

Notes	Shows, when and how the rule was originally added. <i>Manual</i> rules added using this section, <i>auto</i> rules added by the Factors Watcher. Click arrow for additional information about the blocking factor that was used for the code or code name.
--------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Screenshot: Add New Preset form

To **delete several particular presets**, you need to select them from the full list of presets and then click the **"Delete selected"** button on the toolbar.

Icon	Description
	Is used to identify allowed presets
	Is used to identify denied presets
	Is used to edit accounts
	Is used to see all presets for current client
	Is used to see the notes


Presets "Import" Feature

By clicking the **"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 or to purge all existing presets and add new ones. You must use this feature in order to modify a huge amount of presets.

Whole mass 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.


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

Screenshot: Presets "Import" feature main window

The screenshot shows the 'Presets' interface. At the top, there is a 'Presets' header with a logo. Below it, the 'FILE PROCESS' section contains a 'Select file to import:' field with a 'Choose File' button and 'No file chosen' text. Below that is a 'Fields Delimiter:' dropdown menu set to 'autodetect'. A 'Process >>' button is on the right. The 'IMPORT CONFIGURATION' section below has an 'On duplicate presets:' dropdown menu set to 'Update with latest value'.

This step also allows you to choose some additional parameters, such as:

Field	Description
Delimiter	Set delimiter for CSV file: comma, semicolon or tab
Import configuration	Select an action if the duplicate presets will be found while an importing process <ul style="list-style-type: none"> • Update with latest value • Skip duplicate rows • Alert me about duplicates

After selecting a file and specifying all additional parameters click "Process>>" button.

Step 2. Recognizing The File

The system will recognize the file and display few first rows of it. If there's need, make changes to the recognition of data and click "Process>>" again.

Screenshot: Presets "Mass Import" feature. Step 2

The screenshot shows the 'Presets' interface in Step 2. The 'DEFAULT VALUES' section includes fields for 'Expiry Date:', 'Orig Client:', 'Orig Account:', 'Code deck:', 'Term Client:', and 'Term Account:'. There is also an 'Action:' dropdown menu set to 'Deny'. The 'ROWS AND COLUMNS SELECT' section features a table with three columns and a 'Skip' column with checkboxes. At the bottom, there are buttons for '<< Return', 'Cancel', and 'Process >>'.

After you press "Process>>" for the last time, the system will start importing process. When the progress bar reaches 100%, your mass import is done!

✔ You can import presets by *Code* and *Code Name* at the same time from one file.

To export all presets, you need to click the "**Export Presets**" on the toolbar.

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: VoIP Gateway:

Client: Account:

Code: Code Name:

Src Match: Src Replace:

Dst Match: Dst Replace:

Tags Match: Tags Add:

Order:

Field Name	Field Description
Type	Specifies, at what stage a current translation rule should be applied <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 all - applies for calls with all next specified tags. any - 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 Details

This chapter digs into the **retail functions of JeraSoft VoIP Carrier Suite**. Please note, 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, and you may find among features the 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.

For more detailed information please check the related subsections:

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

Packages

On this page

- [Packages List](#)
- [Adding New Package](#)
- [Knowledge Base Articles](#)

Packages List

The Packages section helps to add and manage any one-time or regular supplementary services that your company may provide in addition to VoIP. For example, you can create a package with rent of some equipment or create a free minutes promotional package.

The main window is a list that displays all packages that are currently available:

Screenshot: Packages section main window

ID	Status	Name	Activation Fee	Subscription Fee	Period	Reseller
2		1	12.00 USD	13.00 USD	1 month(s)	Company Name
3		2	34.00 USD	35.00 USD	1 month(s)	Company Name

Column	Description
ID	ID of current package
Status	Status of current package
	Active Is in use by a customer
	Disabled Not in usage
	Archived Not used and not available anymore
Name	Current title of the package. Max length is 64 symbols.
Activation fee	Shows a fee that will be charged upon package activation
Subscription fee	Current fee that will be charged upon package renewal
Period	Shows the period of the package
Reseller	Current package's owner

Adding New Package

You can add new package by clicking the «New Package» button. New window with settings contains the following information:

Screenshot: Package properties

Packages

GENERAL SETTINGS

Name:

Reseller:

Status:

PERIOD SETTINGS

Period:

Advance Renew:

Renew Due:

BILLING SETTINGS

Currency:

Fees include taxes

Align to Payment Terms

Recalculate to Period

Charge on Event

PACKAGE APPLICATION

Priority:

Dynamic Tag:

Start Date:

End Date:

FEES +

Fee Type	Fee Name	Fee Note	Rate, USD
Activation	Activation Fee	<input type="text"/>	0
Subscription	Subscription Fee	<input type="text"/>	0

DID LIMITS

DIDs Quantity: On Hold: days

Allowed Tags:

VOLUME LIMITS +


Code Deck:


i No Volume Limits

DISCOUNTS +

i No Discounts

Field Name	Description
Name	Name of your package
Reseller	Specify an owner for this package
Status	Select a current status for the package: <i>active/disabled/archived</i>
Period	Specify a period for current package if it's renewable
Advance Renew	Determine a period before renewal date to process renewal. Tip: Renew intervals of packages will be converted to the smallest units. For example, 1 day + 1 hour = 25 hours.
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.
Currency	Define a currency for this package
"Fees include taxes" check box	If enabled, taxes are included in package prices, if disabled – taxes will be calculated with respective Tax Profile of customer
"Align to payment Terms" check box	Allows system to align period of package to customer's payment Terms, evening Package billing with actual invoicing for voice traffic
"Recalculate to Period" check box	Allows recalculation of days up to Payment Terms period, if the package was activated somewhere in the middle

"Charge on call" check box	If enable, package subscription fee will be applied when the first call within this package is made. Otherwise, package would be free.
Priority	<p>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).</p> <div style="border: 1px solid yellow; padding: 5px; margin-top: 10px;">  Please note that packages with minutes will always be used before packages with money, regardless of the priority. </div>
Dynamic Tag	Add a tag for the events billed by this package
Start Date	Indicate an effective date that the package should run. For temporary packages.
End Date	Determine an effective date that the package should end. For temporary packages.
Fee Type	<p>Select the type of a fee. There are two possible types:</p> <ul style="list-style-type: none"> • Activation – a fee that will be charged upon package activation • Subscription – a fee that will be charged upon package renewal
Fee Name	Specify a name of a fee
Fee Note	Here you may enter additional information about a fee
Rate	Indicate the price for fees
Code Deck	Specify Code Deck if you plan to create <i>limits</i> by using Code Names
DID Limits	Specify how many DID's and from which group can be assigned to a customer with this package
	<ul style="list-style-type: none"> • DIDs Quantity <p>How many DID's can be assigned at the same time</p>
	<ul style="list-style-type: none"> • Allowed tags <p>Specify tags that are used while creating DIDs</p>
<ul style="list-style-type: none"> • On hold <p>Indicate how many days keep the DID on hold after the package deactivation</p>	
Volume Limits	Here you can create promotional minute packets that will be included in the package. You can set both types (Money/Time) of Volume Limits within the same package
	<ul style="list-style-type: none"> • Code <p>Specify a code. Please note that package limits are working only for exact code, i.e. if a short code (for instance, '380') was added, package limits will work only for this code and won't automatically work for long codes like '38067'. To make volume limits work for long codes you must add *(for example, code 380*).</p>
	<ul style="list-style-type: none"> • Code Name <p>Specify a code name from selected Code Deck</p>
<ul style="list-style-type: none"> • Type <p>Select a limitation type from the drop down list. You can set both types (Money/Time) within the same package</p>	

	<ul style="list-style-type: none"> • Li mi t 	<p>Enter amount of free minutes or bonus money (depends on selected limitation type) that will be used in current promotion for specified code or code name</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	<p>A promotional discount of the package subscription fee. To set you need to specify the sequence number of the reactivation and indicate the discount value.</p>	
	<ul style="list-style-type: none"> • Ac tiv ati on C ou nt 	<p>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.</p>
	<ul style="list-style-type: none"> • Di sc ou nt 	<p>The amount of subscription fee cut. Please specify the value with currency symbols (20 USD), not in percents</p>



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 April 12, but you want that the package has been used since April 1. Then , apply package re-rating to recalculate the tariffication during the period. Please, run the re-rating after the assignment of the package for a current month



Volume Limits will be recalculated according to payment terms if the period is specified and both check boxes "Align to payment terms" and "Recalculated to Period" are enabled.



1. When **two similar packages** (for example, with the same destinations) are **assigned to the client**, the system takes the package with the highest priority or earlier expiration date. Thus, only one package is being 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.

Note: the 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.

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



When you change the **name of the package** in the *Retail* → *Packages*, it will automatically change it in the *Management* → *Client Packages* in the *Package section*, even already assigned packages. The result is the following: you could not find and check changed package the system because there would be specified only an old name of the package in *Invoices* and *Transactions*.
We do not recommend to edit the name of already assigned package in the 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](#)
- [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	DID	Tag	Operator	Client	Reseller
31	Reserved	400100100	Tag Example 1	Operator A	—	Company Name
32	Active	400100101	Tag Example 2	Operator A	—	Company Name
33	Hold	400100102	Tag Example 3	Operator A	—	Company Name
34	Blocked	400100103	Tag 1	Operator A	—	Company Name
35	In Stock	400100104	Tag Example 1	Operator A	—	Company Name
36	Archive	400100104	Tag-2	Operator-A	—	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	
DID	Current DID number
Tag	Specify the tag for respective DID number you would like to be tagged in the future
Operator	Current DID's operator, an owner of a current DID number
Client	Shows client and account, which current DID belongs to

Reseller	Current DID's owner
-----------------	---------------------

i 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

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

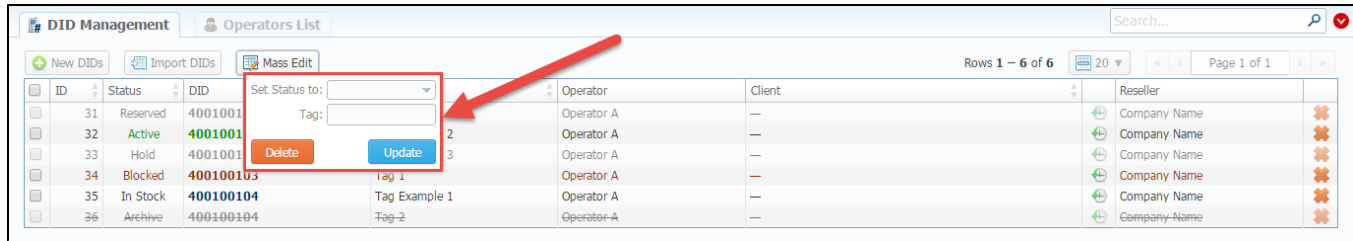
Also, you can **set the range of DID's numbers** and add multiple DIDs in one click.

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.

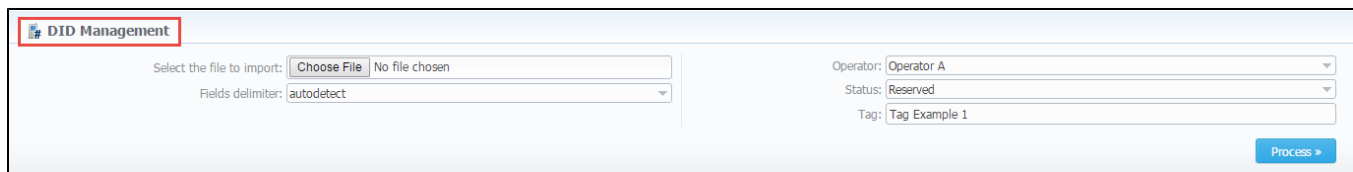
Screenshot: DID management "Mass Edit" window



DIDs Importing process

The process of DIDs importing is pretty simple. Firstly, you should click the "Import DIDs" button which can be found in the *DID Management* section. Secondly, in a pop-up window, you should fill in all needed fields (see screenshot below), that is select a file for importing, specify an operator, etc., and after that click the "Process" button. Please note that in the second step you can specify which group an imported list of DIDs will belong to.

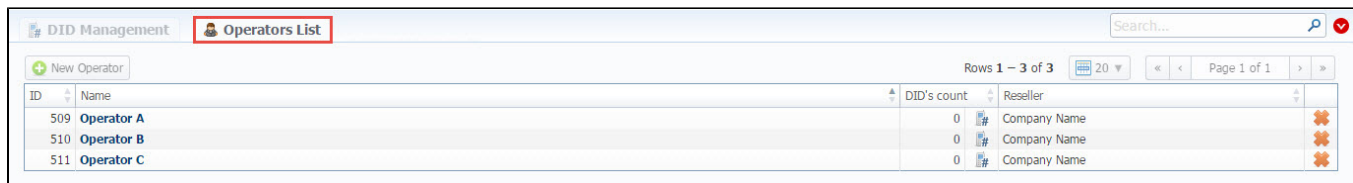
Screenshot: Importing DIDs



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

Note: 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: Company Name




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).

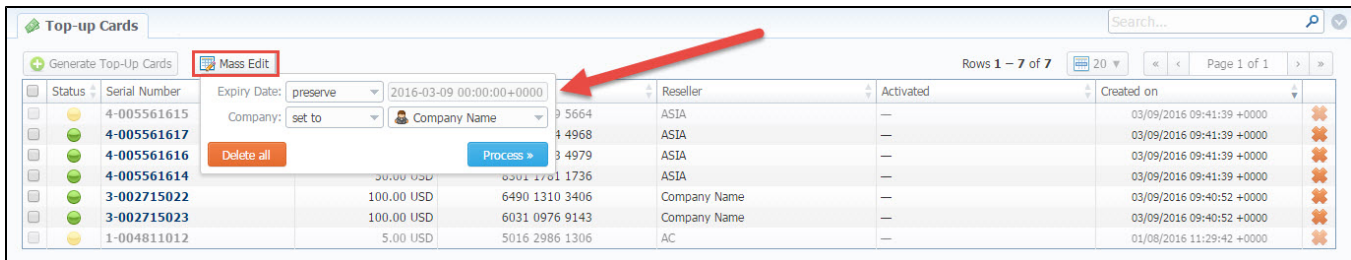
The status of top-up cards is displayed in *Top-Up Cards* main window in a form of the following icons:

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

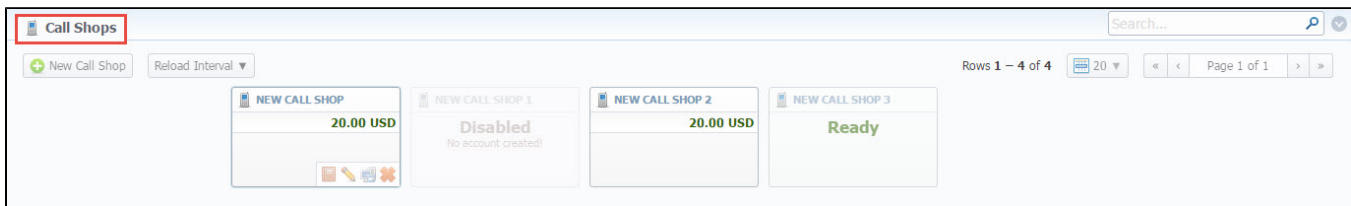
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- [Finalize/Reactivate Call Shop](#)

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

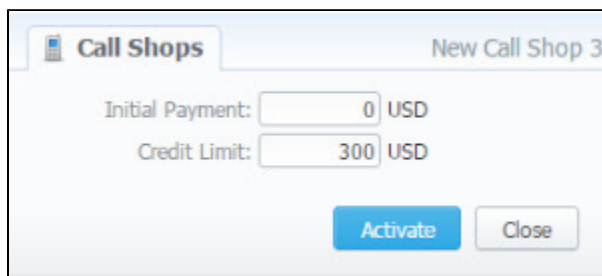
When all information is entered, click «OK» and call shop will appear on the list.

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



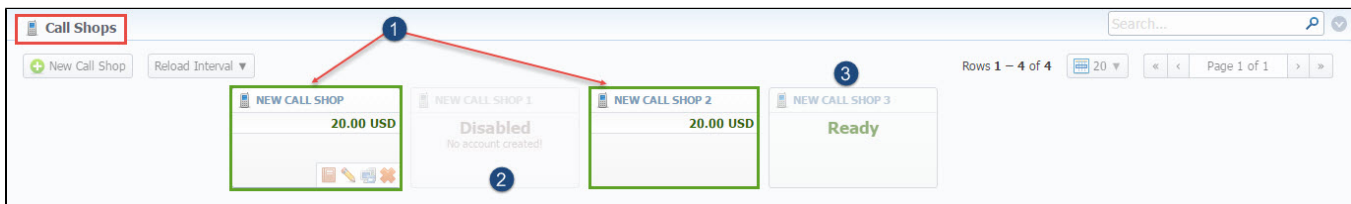
After that is done, call shop is ready to be used.

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.

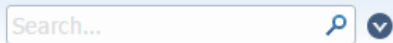

Screenshot: Call Shops section main window



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.

 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 shows a software interface for managing call shops. At the top, there is a header bar with a 'Call Shops' tab (highlighted with a red box) and a 'New Call Shop 2' label. Below the header, the interface is divided into two main sections. The left section, titled 'CURRENT SESSION', displays session statistics: 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' and 'Reactivate' (both in blue), and 'Print Bill' (in green) and 'Close' (in 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 **establish statistics through VCS**, for example, to monitor customer's activities, to form different reports, etc. 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

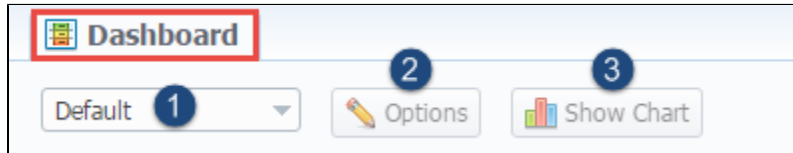
Dashboard is the customizable section with charts that makes the most relevant report data available on one screen.

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



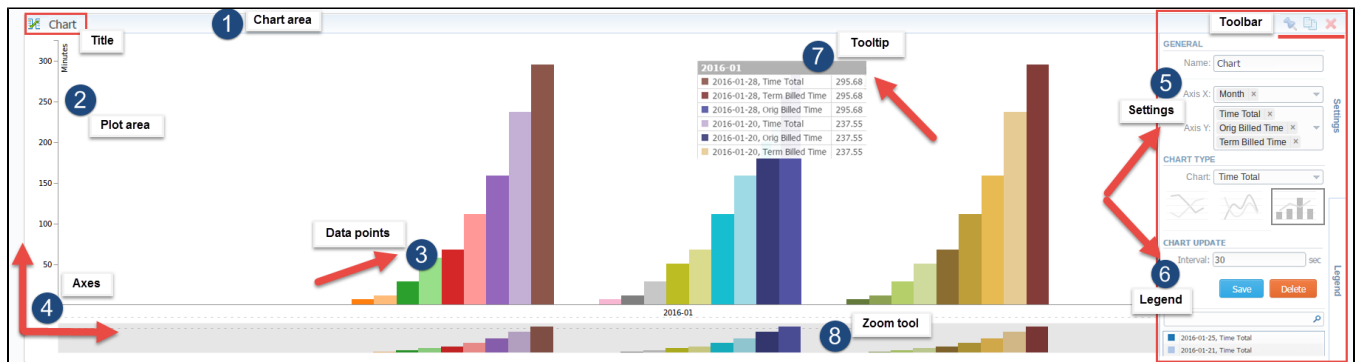
- Here you can **browse dashboard space**. You can have several dashboards. Click on the field and select a relevant *Dashboard* (for example, *Default*) from the drop-down list.
- To view the advanced settings click the **"Options"** button on the toolbar.
 - You can **change the name** of the respective 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.

i Please note, the **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.

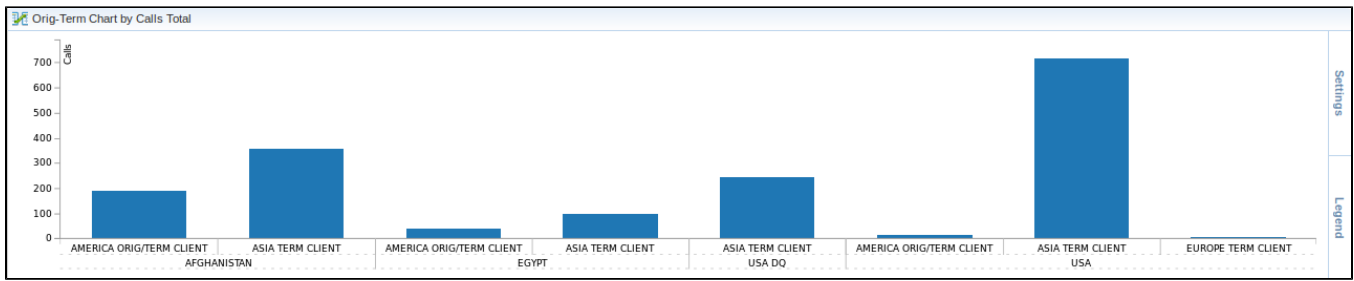
✓ Please note that you can **plot in the chart only existing statistics** in the report. It doesn't show time periods where there is no data. You can check an actual date interval by clicking the **Info icon** **i** and it could be different from the specified interval if there is no date for the period.

! 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.

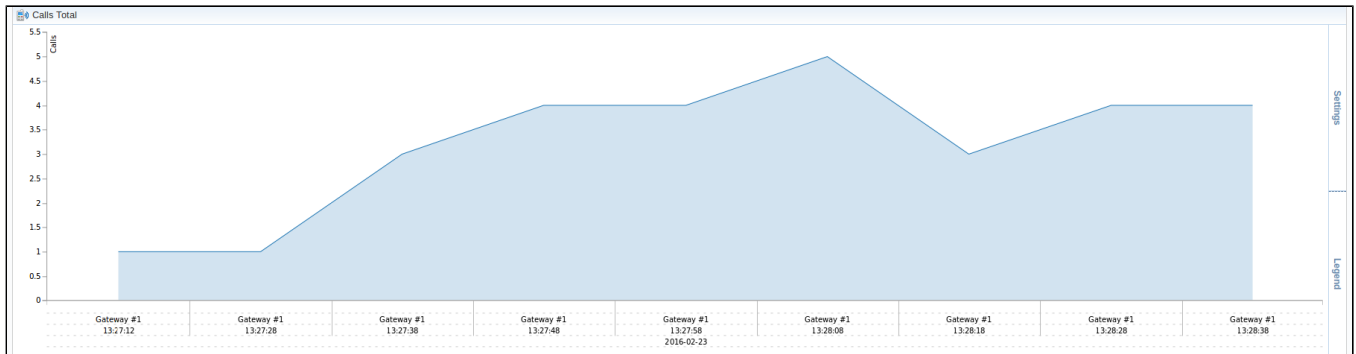
Screenshot: General example of chart



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

On this page

- [To create new report](#)
- [Customer Dynamics toolbar: export, chart.](#)

This section enables to generate statistics reports and get state snapshots of clients, balances, package's usage. Customer Dynamics 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*

To create new report

In order to create a statistic report go to the **Statistics** and open the **Customer Dynamics** section. Then you need to fill out the 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. It will display all filters with taped letters.					
	Period Specify an interval for the report. Please note, that the "Period" field is mandatory.					
	Client Type Choose a respective parameter for statistics data: <i>Client/Reseller/Calling Card/Call Shop.</i>					
	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> 					
	<table border="1"> <tr> <td>Client Tags</td> <td>Select labels to filter clients and show more detailed results in the report</td> </tr> <tr> <td>Owner</td> <td>Define a reseller for the report</td> </tr> <tr> <td>Package</td> <td>Enter a package for the report</td> </tr> </table>	Client Tags	Select labels to filter clients and show more detailed results in the report	Owner	Define a reseller for the report	Package
Client Tags	Select labels 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> • <i>Package Name.</i> 					
Output	This form contains settings of the output data of the report.					
	Type Choose a format of the report from a drop-down list: <i>Web/CSV/Excel XLS/Excel XLSx.</i>					
	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. 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.
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.

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

Screenshot: Customer Dynamics report example

Customer Dynamics

CLIENTS

- Client Tags
- Owner
- Extras
- Package

FILTERS

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

Client Type: Client

Group By: Month x Package Name x

Save Query Query

OUTPUT

Type: Web

Currency: USD

Active Duration: 3 month(s)

Export to CSV
Export to XLSx
Show Chart

	01/2017	02/2017	03/2017	04/2017	05/2017	06/2017	07/2017	08/2017	09/2017	10/2017	11/2017	12/2017
Clients - Active												
Qty	0	1	1	1	1	0	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	-11 947.74	-11 947.74	-11 947.74	-11 947.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Balance	N/A	-11 947.74	-11 947.74	-11 947.74	-11 947.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clients - Overall Active												
Qty	0	1	1	1	1	1	1	1	1	1	1	1
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	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74
Balance	0.00	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74
Clients - All												
Qty	0	4	4	4	4	4	4	4	4	4	4	4
Balance Pos	N/A	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59	2 599.59
Balance Neg	N/A	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74	-11 947.74
Balance	0.00	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15	-9 348.15
Balance Refill												
Qty	0	0	0	0	0	0	0	0	0	0	0	0
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
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
Pay As You Go												
Total	N/A	-9 347.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Active Avg	N/A	-9 347.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Packages												
Activation Qty	0	1	0	0	0	0	0	0	0	0	0	0
Activation Total	N/A	-0.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Renew Qty	0	0	0	0	0	0	0	0	0	0	0	0
Renew 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
Package "NewTestPackages"												
Activation Qty	0	1	0	0	0	0	0	0	0	0	0	0
Activation Total	N/A	-0.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Renew Qty	0	0	0	0	0	0	0	0	0	0	0	0
Renew 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

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




Screenshot: New Template form



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


Customer Dynamics toolbar: export, chart.

You can 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 *CDRs list* sections.

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

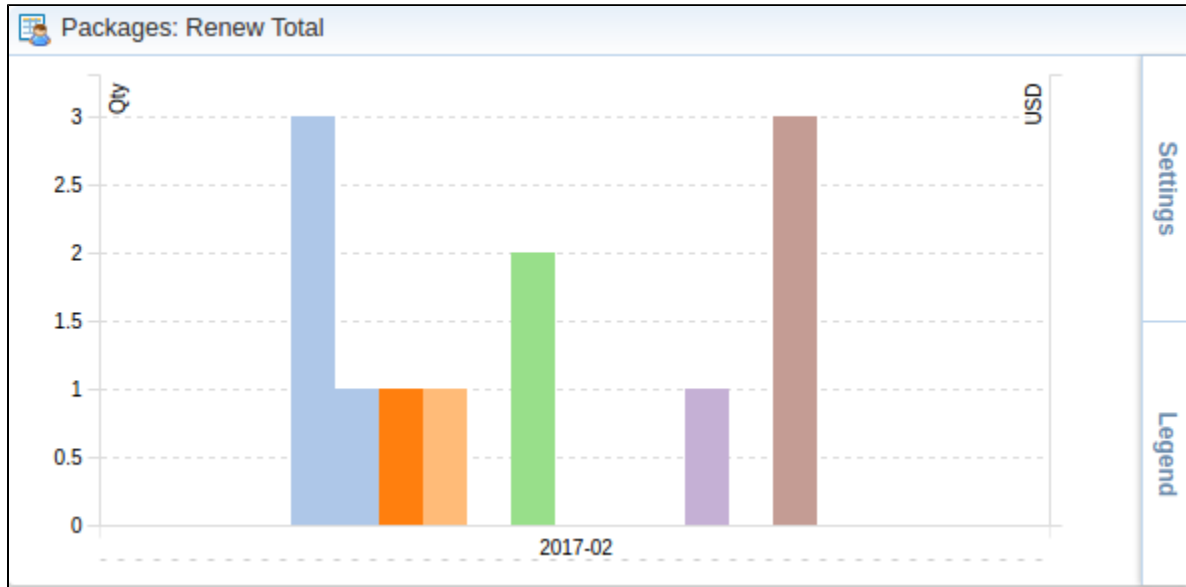
Therefore, you can create a new template based on currently configured charts or select "Blank Chart" to have a new empty worksheet for configuring custom templates

4. You can check an **actual date interval** by clicking the *Info icon*  .

 **Best practice example**

If you would like to check information of a specific package usage along with its short description (number of activations, renewals, totals, frequency of package use and assignment). Moreover, you can compare results of different periods and plot data in the chart.

Screenshot: *Customer Dynamics section/chart*



Summary Report

On this page

- [Summary Report Query Form](#)
- [To create new report](#)
- [Simple scheme: how to generate a summary report](#)
- [To create query template](#)
- [Summary Report toolbar: reports, export, chart.](#)
- [Side-by-side report](#)
- [Knowledge Base Articles](#)

Summary Report Query Form





This section allows you to generate a summary statistical report. Here you can create a report based on an existing template or generate a new one. Also, you can get the information sorted by date, clients and services, etc.

Screenshot: Summary Report query form



To create new report

In order to create a statistic report go to the **Statistics** and open the **Summary Report** section.

Then you need to fill out the 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>
Period 1	Specify the first interval for the report. Please note, that the "Period" field is mandatory.
Period 2	<p>Accessible when you enable the "Compare Period" option by clicking the plus sign  next to the "Period". Specify the second interval for the report.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> When you select one of Time parameters for Group By, the end date of the <i>Period 2</i> will be set automatically to make equal intervals of <i>Period 1</i> and <i>Period 2</i>.</p> </div>
Group By	<p>Select a grouping option, here you can choose and swap columns, change its order. There are following accessible options to group the data in reports:</p> <ul style="list-style-type: none"> • Time: Year, Month, Date, Time. • 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="border: 1px solid blue; padding: 5px; margin-top: 10px;"> <p> Please note, the "Group By" field is mandatory, it couldn't be empty in order to generate the report. It's intended to simply grouping option, the system groups data in specified columns.</p> </div>

Additional Filters	
<p>There are following accessible additional filters:</p> <ul style="list-style-type: none"> • By clients: <i>Client Tags, Client Type, Client, Account, Account Tags, Cards Serial, Package.</i> • By events: <i>Code, Code Name, Cost Total, Origin, Result Code, Gateway.</i> • Extras: <i>Owner, Total Volume, Total records, Not Zero Records, ASR Current, ACD Current, Service Name.</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
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 origination/termination of the event
Result Code	Define a result code as a filtering parameter
Gateway	Specify a host
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	<p>This form contains settings of the output data of the report.</p> <p>Click plus sign  near the "Columns" and select 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 at the report:</p>	
<p>Columns for main period:</p> <p><i>Cost Total, Setup Fee Cost, 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.</i></p>	
<p>Columns for comparative period are the same as for the main period, as well as, all parameters could be selected expressed in percentage.</p>	
Rate	Avg. Rate - an average cost calculated

Cost	<p><i>The cost of the event</i></p> <ul style="list-style-type: none"> • Cost Total - Full price of all services including additional services • Setup Fee Cost - Price of an initial fee that is charged. Please note, the amount of setup fee is displayed in the reports and invoices no matter if event were charged by the package or via balance.
Volume	<p><i>The volume of the event</i></p> <ul style="list-style-type: none"> • Total Volume - a whole volume of the events in units (<i>specified in the Services settings "Reports" field</i>) • 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
Records	<p><i>Quantity of records in database</i></p> <ul style="list-style-type: none"> • Total Records - Entire quantity of records • 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 • Error Records - Quantity of declined records
Statistics	<p>ASR - <i>Average successful rate (successful records percentage)</i></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, min - <i>Average event duration in minutes</i></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 - <i>Average post dial delay in seconds</i></p> <p>SCD Avg - <i>Average session connect delay in seconds</i></p>
Extras	xDRs List - <i>list of detailed records statistics</i>
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: <i>Web/CSV/Excel XLS/Excel XLSx</i>.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <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> <p>Also, select next to the "<i>Type</i>" field a look of 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
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 e-mail.</p> <p>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.</p> <div style="border: 1px solid #ffc107; padding: 5px; margin: 5px 0;"> <p> 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>.</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	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: Summary Report section

The screenshot shows the 'Summary Report' interface. On the left, there's a 'FILTERS' section with a dropdown menu containing 'Clients', 'Client Type', 'Client Tags', 'Account Tags', and 'Cards Serial'. Below this is a 'Group By' field with 'Origin' and 'Service Name' selected. A 'Query' button is visible. On the right, the 'OUTPUT' section shows 'Order By' set to 'Total Volume', 'Limit' as 'No limit', 'Type' as 'Web', 'Currency' as 'USD', and 'Code Deck' as an empty field. Below these are 'Export to XLSx' and 'Show Chart' buttons. The main part of the screenshot is a data table with 20 columns and 2 rows of data.

Origin	Service Name	Unit	Cost Total	Setup Fee Cost	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 Std	ACD Cur	PDD Avg	SCD Avg	xDRs List
termination			-0.57	0.00	0.0010	0.0000	565.03	565.03	0.00	580	577	580	0	0	0	100.00	99.48	0.97	0.98	0.00	5.24	
origination			1.13	0.00	0.0020	0.0000	565.03	565.03	0.00	580	577	580	0	0	0	100.00	99.48	0.97	0.98	0.00	5.24	

i 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.

! 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;
- the parameters of the time are rounded to the nearest hundredth. For example, 4.8763 to 4.88;
- and others are rounded to the nearest ten thousandth. For example, 3.879256 to 3.8793.

Simple scheme: how to generate a summary report

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

- On the **Filters** menu, select convenient parameters for the report.
- Enter the period.
- Select some parameters in the **“Group By”** field, for example, *Currency, Leg Origin*.
- Then choose **“Columns”** in the Output form, for example, *Average Rate, ASR Std, ASR Cur, ACD Std, ACD Cur, Total Records*.
- Leave **“Type”** *Web/Grouped* settings by default.
- Specify the currency and choose the code deck (if applicable).
- Click the **“Query”** button.

✓ If you want to **sort already grouped data** in columns, select respective parameters in **“Order By”**. 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.

To create query template

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 form

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

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

Summary Report toolbar: reports, export, chart.

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

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 by clicking the *xDRs list icon* on the toolbar.

When you make a report based **on two periods**, two *xDRs list icons* appears on the toolbar:

- the first *xDRs list icon* allows to generate a CDR'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 on the toolbar.

They allow 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. And it is possible to generate a report using the same criteria in the Orig-Term report by clicking the *Orig-Term icon* on the toolbar.

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

Screenshot: *Summary Report* section

Summary Report

FILTERS

Result Code
Cost Total
Gateway
Extras
Owner

Period 1: This Year 2017-01-01 00:00:00 — 2017-12-31 23:59:59 GMT+3
Compare Period 2: Last Month 2017-06-01 00:00:00 — 2017-06-30 23:59:59

Group By: Origin x Service Name x

Save Query Load Query... Query

OUTPUT COLUMNS (13)

Order By: Total Volume x
Limit: No limit
Type: Web Grouped
Currency: USD
Code Deck: Europe & USA

Origin	Service Name	Unit	Package Credit		Billed Volume		Average Rate		Cost Total		Total Volume		Package volume		Total Records		Not Zero Records		Success Records		Busy Records		No Channel Records		Error Records		Setup Fee Cost			
			P1	P2	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			21.6324	0.0000	1 001.83	0.00	0.5531		554.16	0.00	460.70	0.00	1 001.83	0.00	966	0	962	0	966	0	0	0	0	0	0	0	0	0	12.00	0.00
termination			0.7613	0.0000	1 001.83	0.00	0.7458		-747.12	0.00	0.73	0.00	1 001.83	0.00	966	0	962	0	966	0	0	0	0	0	0	0	0	0.00	0.00	

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"** and specify both intervals (*Period 1/Period 2*) for the report.

Screenshot: Summary Report section

Summary Report

FILTERS

Period: This Year 2016-01-01 00:00:00 — 2016-12-31 23:59:59 GMT+3

Group By: Call Origin x

Save Query Load Query... Query

OUTPUT COLUMNS (2)

Order By: Time Total x
Limit: No limit
Type: Web Grouped
Currency: USD
Code Deck:

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: Summary Report section

Summary Report

FILTERS

Result Code
Cost Total
Gateway
Extras
Owner

Period: This Year 2016-01-01 00:00:00 — 2016-12-31 23:59:59 GMT+3

Group By: Call Origin x

Save Query Load Query... Query

OUTPUT COLUMNS (13)

Order By: Time Total x
Limit: No limit
Type: Web Grouped
Currency: USD
Code Deck: Europe & USA

Origin	Service Name	Unit	Package Credit		Billed Volume		Average Rate		Cost Total		Total Volume		Package volume		Total Records		Not Zero Records		Success Records		Busy Records		No Channel Records		Error Records		Setup Fee Cost		
			P1	P2	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			21.6324	0.0000	1 001.83	0.00	0.5531		554.16	0.00	460.70	0.00	1 001.83	0.00	966	0	962	0	966	0	0	0	0	0	0	0	0	12.00	0.00
termination			0.7613	0.0000	1 001.83	0.00	0.7458		-747.12	0.00	0.73	0.00	1 001.83	0.00	966	0	962	0	966	0	0	0	0	0	0	0	0	0.00	0.00



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*.



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

Knowledge Base Articles

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

Orig-Term Report

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- [Orig-Term Report Query Form](#)
- [To create a new orig-term report](#)
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Orig-Term Report Query Form


This tool allows you to generate a report and trace all call routes from the 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 and events, etc.


Screenshot: *Orig-Term Report form*

To create a new orig-term report

In order to create a statistic report go to the **Statistics** and open the **Orig-Term Report** section. 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 drop-down menu with filters.
Period 1	Specify an interval for the report. Please note, that the "Period" field is mandatory. You can generate the report also for last 3,7 and 30 days.
Period 2	Accessible when you enable the "Compare Period" option by clicking the plus sign  next to the "Period". Specify the second interval for the report <div style="border: 1px solid green; padding: 5px; background-color: #e6ffe6;">  When you select one of Time parameters for Group By, the end date of the <i>Period 2</i> will be set automatically to make equal intervals of <i>Period 1</i> and <i>Period 2</i>. </div>
Group By	Select a grouping option, here you can choose and swap columns, change its order. There are following accessible options to group the data in reports: <ul style="list-style-type: none"> • Time: Year, Month, Date, Time. • Clients: Orig Account/ Orig Code/ Orig Code Name/ Orig Rate/ Term Account/ Term Code/ Term Code Name/ Term Rate. • Extras: Orig Serial/ Orig Client Type/ Orig Owner/ Term Client Type/ Term Owner. <div style="border: 1px solid blue; padding: 5px; background-color: #e6f2ff;">  Please note, the "Group By" field is mandatory, it couldn't be empty in order to generate the report. </div> <p>This option is intended to simply grouping option, now the system will automatically group data in specified columns.</p>

Additional Filters	
<p>There are following accessible additional filters:</p> <ul style="list-style-type: none"> • By clients: <i>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/</i> • By events: <i>Total/ Profit/ Volume, Total/ Events Not Zero/ ASR Cur/ ACD Cur.</i> • Extras: <i>Service Name, Orig/Term Time profile.</i> 	
Origination Settings of Clients	
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
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
Termination Settings of Clients	
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
Term Owner	Define a termination Reseller for report
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 and comparative period are following:</p> <p><i>ASR Std, ASR Cur, ACD Std, ACD Cur, Total, Success, Error, Profit, Profit (%), Orig Billed Time, Orig Cost, Orig Avg Rate, Term Billed Time, Term Cost, Term Avg Cost, Term Avg Rate, Session Time, Not Zero, Busy, No Channel.</i></p>	
Orig	<p><i>Origination information:</i></p> <ul style="list-style-type: none"> • Billed Time - Billed call time • Cost - Price of the call • Avg. Rate - Average call rate
Term	<p><i>Termination information:</i></p> <ul style="list-style-type: none"> • Billed Time - Billed call time • Cost - Call cost • Avg. Rate - Average call rate
Profit	<p><i>The revenue</i></p> <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	<i>Total volume of services</i>
ASR	<p><i>Average successful rate (successful events percentage)</i></p> <ul style="list-style-type: none"> • Std - Number of events with status "success" 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, min	<p><i>Average call duration</i></p> <ul style="list-style-type: none"> • Std - Sum of all event duration divided by number of events with status "success" • Cur - Sum of all event duration divided by number of events with duration > 0
Events	<p><i>Quantity of events in database</i></p> <ul style="list-style-type: none"> • Total - 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
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: <i>Web/CSV/Excel XLS/Excel XLSx</i>.</p> <p>Also, select next to the "Type" field a look of 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="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <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	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.
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: Orig-Term Report window

The screenshot shows the 'Orig-Term Report' window. It includes a 'Filters' section with a date range from 2017-07-16 to 2017-08-14, a 'Group By' field set to 'Service Name', and a 'Query' button. The 'Output' section shows 'Order By' set to 'Orig Cost' and 'Term Cost', 'Type' set to 'Web', and 'Currency' set to 'USD'. Below these are buttons for 'Export to XLSx', 'Show Chart', and 'Print'. A data table is displayed with columns for various metrics and a row of values.

Service Name	Unit	Orig Billed Volume	Orig Cost	Orig Avg Rate	Term Billed Volume	Term Cost	Term Avg Rate	Profit	Profit (%)	Total Volume	ASR Std	ASR Cur	ACD Std	ACD Cur	Not Zero	Success	Error	Busy	No Channel	Total
Calls	min	1.42	0.00	0.0020	1.42	-0.00	0.0010	0.00	100.00	1.42	100.00	100.00	1.42	1.42	1	1	0	0	0	0

i 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 .

! 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;
- the parameters of the time are rounded to the nearest hundredth. For example: 4.8763 to 4.88;
- and others are rounded to the nearest ten thousandth. For example: 3.879256 to 3.8793.

Simple scheme: how to generate a orig-term report

In order to create a simple orig-term report you need to:

- On the **Filters** menu, select convenient parameters for the report.
- Enter the period.
- Select some parameters in the **"Group By"** field, for example, *Orig Client*, *Orig Code*.
- Then choose **"Columns"** in the Output form, for example, *ASR Std*, *ASR Cur*, *ACD Std*, *ACD Cur*, *Total*, *Success*, *Error*, *Profit (%)*.
- Leave **"Type"** *Web/Grouped* settings by default.
- Specify the currency and choose the code deck (if applicable).
- Click the **"Query"** button.

✓ If you want to **sort already grouped data** in columns, select respective parameters in **"Order By"**. Also, you can sort from highest to lowest values (or vice versa). To do this, select a respective value with arrows: or and change the **"Type"** of output from *Grouped* to *Plain*.

! 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.

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

To create 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 form

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

Orig-Term Report toolbar: export, chart.

You can 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 *CDRs list* sections.

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

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 CDRs list by clicking the **CDRs list icon** on the toolbar.
5. And it is possible to generate a report using the same criteria in the Summary report 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

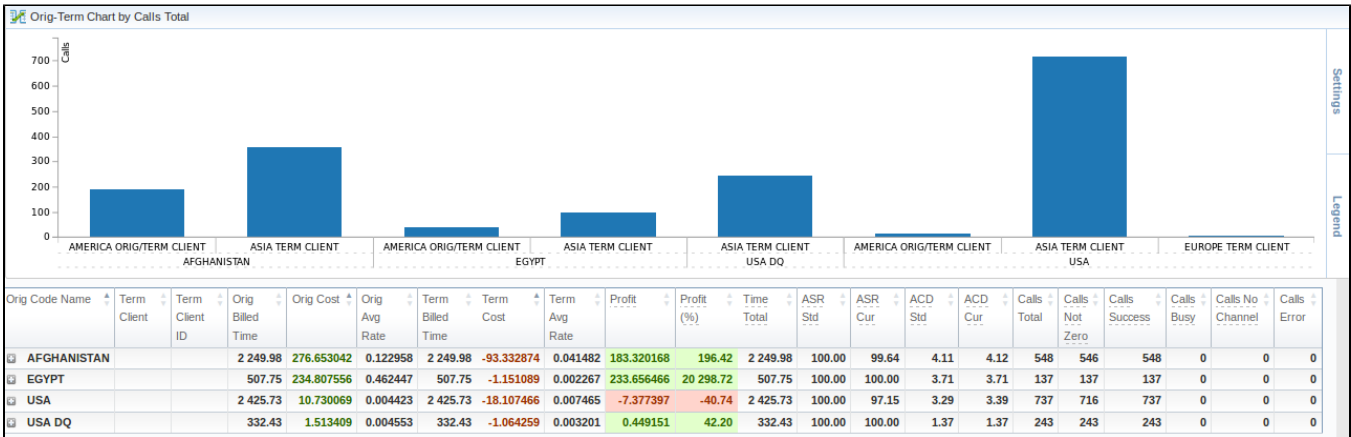
Orig-Term Report

FILTERS
 Period: Last Week | 2016-08-01 00:00:00 — 2016-08-07 23:59:59 UTC
 Group By: Month

OUTPUT
 Order By: Orig Cost, Term Cost
 Limit: No limit
 Type: Web (Plain)
 Currency: USD
 Code Deck: DEFAULT

Month	Orig Billed Time	Orig Cost	Orig Avg Rate	Term Billed Time	Term Cost	Term Avg Rate	Profit	Profit (%)	Time Total	ASR Std	ASR Cur	ACD Std	ACD Cur	Calls Total	Calls Not Zero	Calls Success
08/2016	4 499 303.55	8 998 653.617	2.0000	4 499 300.42	-4 499 300.417	1.0000	4 499 353.200	100.00	4 499 306.42	100.00	99.35	1 618.46	1 629.00	2 780	2 762	2 780

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" and specify both intervals (Period 1/Period 2) for the report.

Screenshot: Orig-Term Report query form

Orig-Term Report

FILTERS
 Period 1: This Year | 2016-01-01 00:00:00 — 2016-12-31 23:59:59 UTC
 Compare Period 2: This Year | 2016-01-01 00:00:00 — 2016-12-31 23:59:59 UTC
 Group By: Month

OUTPUT
 Order By: Orig Cost, Term Cost
 Limit: No limit
 Type: Web (Plain)
 Currency: USD
 Code Deck: DEFAULT

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 profit of the two periods is in percentage terms, choose the "Profit (%)" value from the Columns. Therefore, the final report splits the Profit (%) into separate columns.

Screenshot: Orig-Term Report example

Orig-Term Report

OUTPUT COLUMNS (8)

Columns for main period: Orig Billed Time x Orig Cost x Orig Avg Rate x Term Billed Time x Term Cost x Term Avg Rate x Profit x Profit (%) x

Columns for comparative period: Orig Billed Time x Orig Cost x Orig Avg Rate x Term Billed Time x Term Cost x Term Avg Rate x Profit x Profit (%) x

Save Query Query Code Deck: DEFAULT

Export to CSV Export to XLSX Show Chart Print Help

Month		Orig Billed Time		Orig Cost		Orig Avg Rate		Term Billed Time		Term Cost		Term Avg Rate		Profit		Profit (%)	
P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2	P1	P2
06/2016	06/2016	0.00	0.00	0.000	0.000	0.0000	0.0000	0.00	0.00	0.000	0.000	0.0000	0.0000	0.000	0.000	0.00	0.00
07/2016	07/2016	713.00	713.00	1 426.000	1 426.000	2.0000	2.0000	714.00	714.00	-714.000	-714.000	1.0000	1.0000	712.000	712.000	99.72	99.72
08/2016	08/2016	4 499 307.38	4 499 307.38	8 998 734.117	8 998 734.117	2.0000	2.0000	4 499 304.25	4 499 304.25	-4 499 304.250	-4 499 304.250	1.0000	1.0000	4 499 429.867	4 499 429.867	100.00	100.00

Knowledge Base Articles

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

Profit Report

On this page:

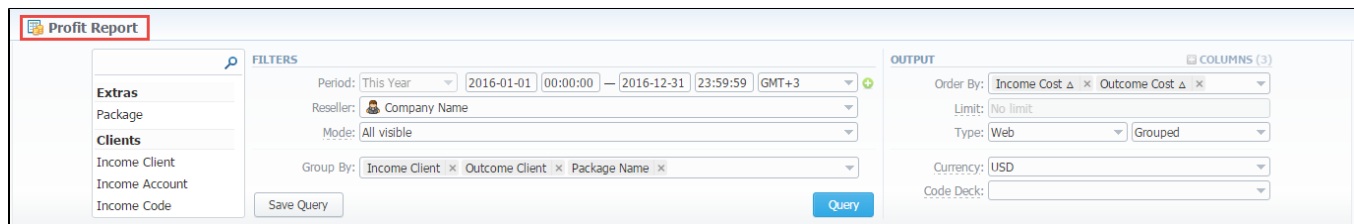
- [Profit Report Query Form](#)
- [Creating Profit Report](#)
- [To create query template](#)
- [Export generated report](#)
- [Side-by-side report](#)

Profit Report Query Form

This section allows generating the profit report. It 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 permissions apply to every query, it 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

For generating a profit report you need to go to the **Statistics** and open the **Profit Report** section. Then, form the report by specifying required values. To get information sorted, use the "Group by" option and choose respective values from the drop-down list.

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. You can start a quick search by typing filters' names in the bar at the top of drop-down menu with filters.</p> <p>There are following accessible filters:</p> <ul style="list-style-type: none"> • By clients: <i>Income Client/ Income Account/ Income Code/ Income Code Name/ Income Serial/ Income Reseller/ Outcome Client/ Outcome Account/ Outcome Code/ Outcome Code Name.</i> • Extras: <i>Package</i> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Please use the Scroll Bar to see all settings in the pull-down list.</p> </div>
Period 1	Specify an interval for the report.
Period 2	<p>Accessible when you enable the "Compare Period" option by clicking the plus sign  next to the "Period". Specify the second interval for the report.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> 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.</p> </div>

Reseller	Specify the name of respective Reseller.										
Mode	Choose the mode of the report: <ul style="list-style-type: none"> • All visible - all represented visually. • Hide External Originators - prevent from being seen all external originators. • Hide External Clients - prevent from being discovered all external clients. 										
Group By	Select a grouping option, here you can choose and swap columns, change its order. There are following accessible options to group the data in reports: <ul style="list-style-type: none"> • Time: <i>Year, Month, Date, Time;</i> • Clients: <i>Income Client/ Inc Account/ Inc Code/ Inc Code Name/ Income Rate/ Inc Reseller/ Outcome Client/ Out Account/ Out Code/ Out Code Name/ Expense Rate / Package Name</i> • Extras: <i>Income Series</i> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  Please note, the "Group By" field is mandatory, it couldn't be empty in order to generate the report. </div>										
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 report data. Also, you can delete any chosen value by clicking delete sign.</p> <p>Following columns to add to the report</p> <p>Columns for main period:</p> <p><i>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 (%).</i></p> <p>Columns for comparative period:</p> <p><i>Total time, min; Income Rate, Outcome Rate, Income Cost, Income Avg Rate, Income Billed Time, Outcome Cost, Outcome Avg Rate, Outcome Billed Time, Profit.</i> And it's possible to choose each parameter expressed as percentage.</p> <table border="1" data-bbox="240 1115 1495 1822"> <tr> <td data-bbox="240 1115 326 1184">Total Time</td> <td data-bbox="326 1115 1495 1184">Total time of the calls in minutes</td> </tr> <tr> <td data-bbox="240 1184 326 1367">Rate</td> <td data-bbox="326 1184 1495 1367"> <i>The call rate</i> <ul style="list-style-type: none"> • Income Rate - a call rate that is used for origination • Income Avg Rate - an average call rate that is used for origination • Outcome Rate - a call rate that is used for termination • Outcome Avg Rate - an average call rate that is used for termination </td> </tr> <tr> <td data-bbox="240 1367 326 1503">Profit</td> <td data-bbox="326 1367 1495 1503"> <i>The revenue</i> <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 </td> </tr> <tr> <td data-bbox="240 1503 326 1640">Time</td> <td data-bbox="326 1503 1495 1640"> <i>The billed time</i> <ul style="list-style-type: none"> • Income Billed Time - the whole billed time for origination • Outcome Billed Time - the whole billed time for termination </td> </tr> <tr> <td data-bbox="240 1640 326 1822">Cost</td> <td data-bbox="326 1640 1495 1822"> <i>The call cost</i> <ul style="list-style-type: none"> • Income Cost - a call cost that is used for origination • Income Avg Cost - an average call cost that is used for origination • Outcome Cost - a call cost that is used for termination • Outcome Avg Cost - an average call cost that is used for termination </td> </tr> </table> <p>Other output settings</p>	Total Time	Total time of the calls in minutes	Rate	<i>The call rate</i> <ul style="list-style-type: none"> • Income Rate - a call rate that is used for origination • Income Avg Rate - an average call rate that is used for origination • Outcome Rate - a call rate that is used for termination • Outcome Avg Rate - an average call rate that is used for termination 	Profit	<i>The revenue</i> <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	<i>The billed time</i> <ul style="list-style-type: none"> • Income Billed Time - the whole billed time for origination • Outcome Billed Time - the whole billed time for termination 	Cost	<i>The call cost</i> <ul style="list-style-type: none"> • Income Cost - a call cost that is used for origination • Income Avg Cost - an average call cost that is used for origination • Outcome Cost - a call cost that is used for termination • Outcome Avg Cost - an average call cost that is used for termination
Total Time	Total time of the calls in minutes										
Rate	<i>The call rate</i> <ul style="list-style-type: none"> • Income Rate - a call rate that is used for origination • Income Avg Rate - an average call rate that is used for origination • Outcome Rate - a call rate that is used for termination • Outcome Avg Rate - an average call rate that is used for termination 										
Profit	<i>The revenue</i> <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	<i>The billed time</i> <ul style="list-style-type: none"> • Income Billed Time - the whole billed time for origination • Outcome Billed Time - the whole billed time for termination 										
Cost	<i>The call cost</i> <ul style="list-style-type: none"> • Income Cost - a call cost that is used for origination • Income Avg Cost - an average call cost that is used for origination • Outcome Cost - a call cost that is used for termination • Outcome Avg Cost - an average call cost that is used for termination 										

Order By	Select parameters to sort already grouped data in columns. There are following accessible options to order the data: <i>by Time, Clients, Extras</i> . 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> . Also select next to the "Type" field a table view: <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="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  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> </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 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. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px; background-color: #fff9c4;">  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>. </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.

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

Screenshot: Profit report section

Profit Report

- Extras
- Package
- Clients
- Income Client
- Income Account
- Income Code

FILTERS

Period: This Year | 2016-01-01 | 00:00:00 — 2016-12-31 | 23:59:59 | GMT+3

Reseller: Company Name

Mode: All visible

Group By: Month

OUTPUT

Order By: Income Cost | Outcome Cost

Limit: No limit




Type: Web | Grouped


Currency: USD

Code Deck:

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
07/2016	19.65	3.0	N/A	3.0	0.152		19.65	0.0	0.000
08/2016	293.97	-73.1	-40.82	106.0	2.853		37.13	-179.0	1.557
06/2016	N/A	79.8	260.24	110.5	0.000		0.00	-30.7	0.000
05/2016	N/A	120.7	N/A	120.7	0.000		0.00	0.0	0.000

 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 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.

To create query template

Also, you 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



Section	Description
Profit 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 of 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 automatically generate reports at the appropriate time and send the results to the list of e-mails
	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 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 existed templates while generating statistic reports, click the **"Load Query"** button in the *Profit Report* section.

Export generated report

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

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

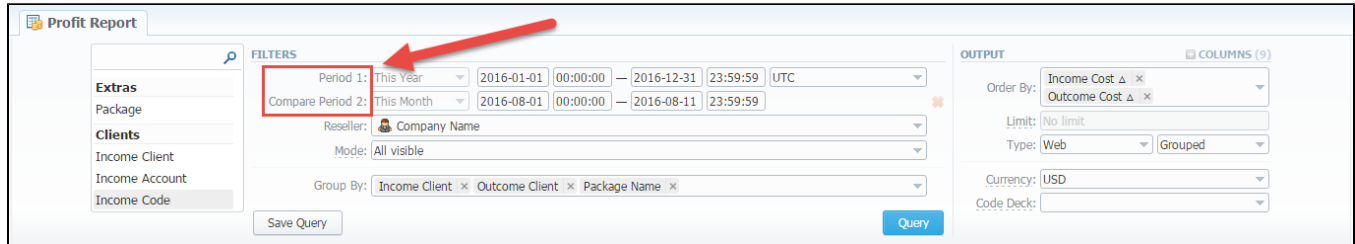
 Please note, that you can check an **actual date interval** of the report by clicking the icon  and it could be different from *the Interval* specified above if there is no date for the period.

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" and specify both intervals (*Period 1/Period 2*) for the report.

Screenshot: Profit Report query form

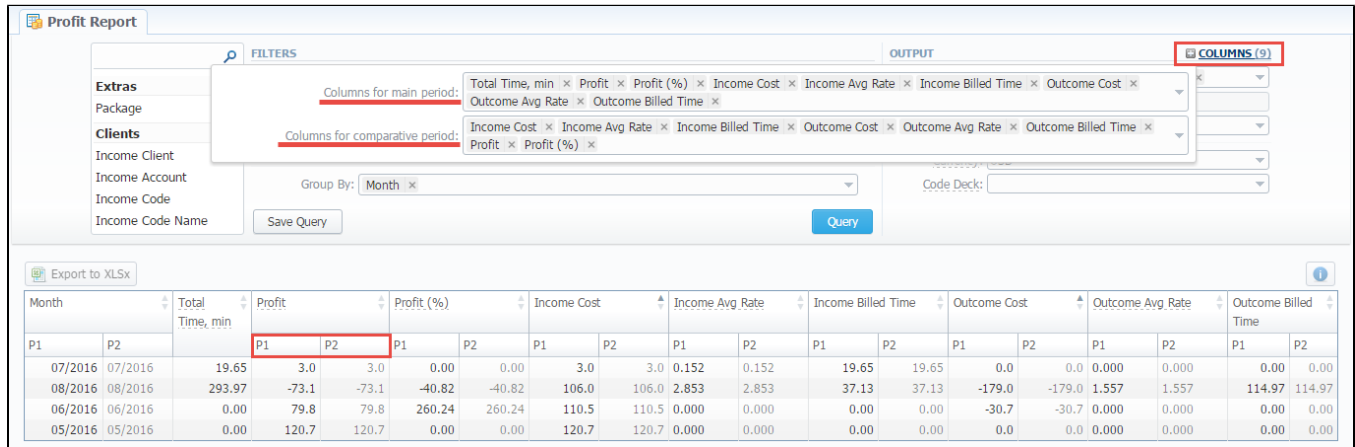


After, choose columns for main and comparative period in the report output form. When all required parameters are specified, click the "Query" button.

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 profit of the two periods is in percentage terms, 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



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

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 group the data in reports:</p> <ul style="list-style-type: none"> • Code • Code Name <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <p> Please note, the "Group By" field is mandatory, it couldn't be empty in order to generate the report. To group by code is default output.</p> </div> <p>This option is intended to simply grouping option, the system will automatically group data in specified columns.</p> <div style="border: 2px solid red; padding: 5px; margin: 5px 0;"> <p> When you select the grouping by code name, please be aware that simulation marks will not be shown and effective date, also the next rate, may not be accurate. This data is taken from one of codes of the group.</p> </div>
Additional Filters	<p>There are following accessible additional filters:</p> <ul style="list-style-type: none"> • By clients: <i>Owner</i> • By calls: <i>Code/ Code Name</i> • Extras: <i>Tags/ Routes Limit</i>
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 this field 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><i>Screenshot: LCR Lists section</i></p>  <p>Other output settings</p> <table border="1"> <tr> <td>Type</td> <td>Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx. The table view of the report is Plain by default.</td> </tr> <tr> <td>Send to</td> <td>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. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> This feature is available only for <i>CSV/Excel XLS/Excel XLSx</i> formats of the report, it doesn't work with Web format.</div></td> </tr> <tr> <td>Currency</td> <td>Specify a currency for a report. And all values will be automatically converted in the report to the specified currency.</td> </tr> <tr> <td>Code Deck</td> <td>Select a code deck from a drop-down list. All code decks in the following report will be presented according to the specified code deck. All data will be unified by code names. <div style="border: 2px solid #f00; padding: 10px; margin-top: 10px;"> <ol style="list-style-type: none">1. Please be aware, that if you do not specify the code deck, the system will use the code decks assigned to each pulled client or rate table.2. Code deck should contain code names and codes used for calls, otherwise the LCR report would not show results for missing codes and code names in the code deck.</div></td> </tr> <tr> <td>Show Vendors check box</td> <td>Specify whether you need vendor/terminator names to be displayed in the report or not, tick the check box.</td> </tr> <tr> <td>Show Total Calls check box</td> <td>Tick this check box if you want that total calls amount will be shown.</td> </tr> </table>	Type	Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx . The table view of the report is Plain by default.	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. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> This feature is available only for <i>CSV/Excel XLS/Excel XLSx</i> formats of the report, it doesn't work with Web format.</div>	Currency	Specify a currency for a 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 code decks in the following report will be presented according to the specified code deck. All data will be unified by code names. <div style="border: 2px solid #f00; padding: 10px; margin-top: 10px;"> <ol style="list-style-type: none">1. Please be aware, that if you do not specify the code deck, the system will use the code decks assigned to each pulled client or rate table.2. Code deck should contain code names and codes used for calls, otherwise the LCR report would not show results for missing codes and code names in the code deck.</div>	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.
Type	Choose a format of the report from a drop-down list: Web/CSV/Excel XLS/Excel XLSx . The table view of the report is Plain by default.												
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. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> This feature is available only for <i>CSV/Excel XLS/Excel XLSx</i> formats of the report, it doesn't work with Web format.</div>												
Currency	Specify a currency for a 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 code decks in the following report will be presented according to the specified code deck. All data will be unified by code names. <div style="border: 2px solid #f00; padding: 10px; margin-top: 10px;"> <ol style="list-style-type: none">1. Please be aware, that if you do not specify the code deck, the system will use the code decks assigned to each pulled client or rate table.2. Code deck should contain code names and codes used for calls, otherwise the LCR report would not show results for missing codes and code names in the code deck.</div>												
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

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 e-mails.
	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.

Please note, that 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.

Invoicing Report

On this page



- [To create new report](#)
- [Invoicing Report toolbar: export, chart.](#)

This section enables to overview and analyse invoicing items across the system with possibility to export data (*.xls,*xlsx and *csv). Here reports are presented in the form of the table. *Invoicing Report* generates the statistics according to the 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 *invoice template*.

Screenshot: *Invoicing Report* section/query form

To create new report

In order to create a statistic report go to the **Statistics** and open the **Invoicing Report** section. Then you need to fill out the 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. It will display all filters with taped letters.
	Period Specify an interval for the report. Please note, that the "Period" field is mandatory.
	Owner Define a reseller for the report
	Invoice Type Select from the drop-down list the type of invoice: outgoing/incoming
	Client Type Choose a respective parameter for statistics data: <i>Client/Reseller/Calling Card/Call Shop.</i>
	Client Define a client for the report
	Invoice Specify the name/number of invoice
	Payment Account Select from the drop-down list the type of payment account: <i>Services/Products fees/Extra charges outgoing/Extra charges incoming/SureTax/Calling Cards Fees/Accounts Receivable/Accounts Payable/General</i>
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
	Client Name of the client
	Date The date when an invoice was generated

Payment Account	Type of payment account: services/packages
Invoice Number	Number of 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
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 the invoice
Period Finish	End period of the invoice
TZ	Timezone of invoices
Other output settings	
Type	Choose a format of the report from a drop-down list: <i>Web/CSV/Excel XLS/Excel XLSx</i> .
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. 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 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, click **“Query”** button and the system will generate a report:

Screenshot: Invoicing Report report example

The screenshot shows the 'Invoicing Report' interface. On the left, there is a sidebar with 'Clients', 'Client', 'Extras', and 'Invoice'. The main area is divided into 'FILTERS' and 'OUTPUT' sections. The 'FILTERS' section includes dropdowns for 'Period' (This Month), 'Owner' (Company Name), 'Invoice Type' (outgoing), 'Client Type' (Client), and 'Payment Account' (Products Fees). The 'OUTPUT' section has dropdowns for 'Type' (Web) and 'Currency'. Below these are 'Export to CSV' and 'Export to XLSx' buttons. At the bottom, a table displays the generated report data.

Client	Date	Payment Account	Service	Description	Volume	Unit	Rate	Cost	Tax	Currency	Period Start	Period Finish	TZ
Cli_1_Orig	07/03/2017	Products	N/A	Name: Package Orig = 55202, Details: Activation Fee	1.00	N/A	N/A	10.0000	1.2000	USD	07/03/2017	07/03/2017	UTC
Cli_1_Orig	07/03/2017	Products	N/A	Name: Package Orig = 55202, Details: Subscription Fee	1.00	N/A	N/A	55.0000	6.6000	USD	07/03/2017	07/03/2017	UTC
Cli_1_Orig	07/03/2017	Products	N/A	Name: Package Orig = 55202, Details: Activation Fee	1.00	N/A	N/A	10.0000	1.2000	USD	07/03/2017	07/03/2017	UTC
Cli_1_Orig	07/03/2017	Products	N/A	Name: Package Orig = 55202, Details: Subscription Fee	1.00	N/A	N/A	55.0000	6.6000	USD	07/03/2017	07/03/2017	UTC
Cli_1_Orig	07/03/2017	Products	N/A	Name: Package Orig = 55202	2.00	N/A	N/A	65.0000	7.8000	USD	07/03/2017	07/03/2017	UTC
Cli_1_Orig	07/05/2017	Products	N/A	Name: Package Orig = 55202	2.00	N/A	N/A	65.0000	7.8000	USD	01/01/2017	12/31/2017	UTC




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 form.



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

Invoicing Report toolbar: export, chart.

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

1. To download a report in .csv, click the "Export to CSV"  button on the toolbar.
2. To download a .xlsx file, click the "Export to XLSx"  button on the toolbar.
3. You can check an **actual date interval** by clicking the *Info icon*  .

xDRs List

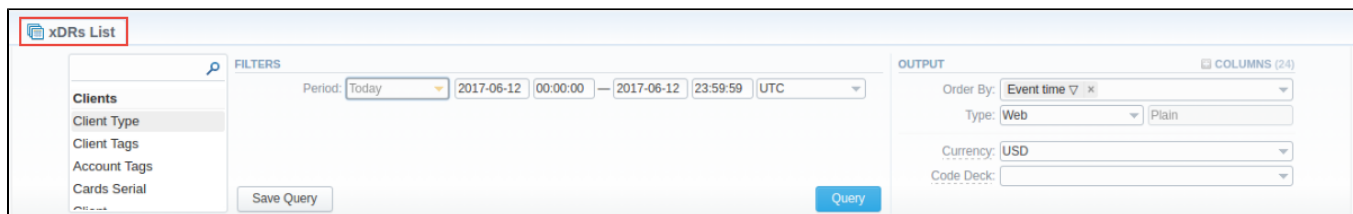
On this page

- [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

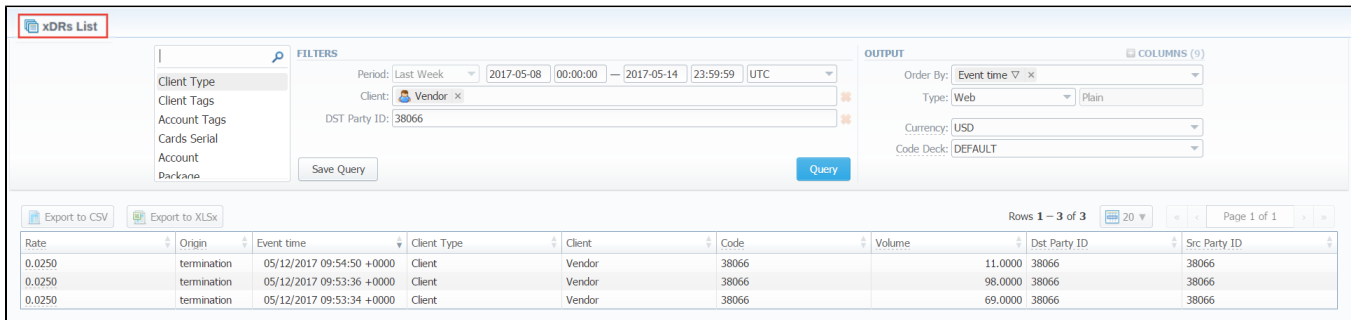
There are following columns to add to the report:

- **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. <div style="border: 1px solid #ffc107; padding: 5px; background-color: #fff3cd;">  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>. </div>
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' report window. It includes a 'FILTERS' section with options for Client Type, Client Tags, Account Tags, Cards Serial, Account, and Parkane. The 'OUTPUT' section shows settings for Order By (Event time), Type (Web), Currency (USD), and Code Deck (DEFAULT). Below these are 'Export to CSV' and 'Export to XLSx' buttons. The main area displays a table with columns: Rate, Origin, Event time, Client Type, Client, Code, Volume, Dst Party ID, and Src Party ID. The table contains three rows of data for 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

On this page:

- [Mismatches Report List](#)
- [Running New Mismatches Report](#)
- [Knowledge Base Articles](#)


Mismatches Report List

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.

Running New Mismatches Report

To create a report you need to fill out the following fields in the form and click the **“Query”** button nearby.

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

Also, you can specify the **“Interval”** for the report by clicking the icon  at the top of the page and an additional form will appear.

Screenshot: *Mismatches Report section additional form*



Then, the system processes your request and transfers to the *CDRs List section* for detailed data collection. In the *CDRs List section*, you will have a query form with pre-selected values. In order to receive the details about respective calls click the **“Query”** button in the *CDRs List section*.

There are 3 types of the report with mismatched calls:

- **Calls with Unknown Clients** - means calls with unrecognized clients.
- **Calls with Known Clients** - means calls with unrecognized destinations.
- **Calls with Known Reseller** - means calls with unrecognized destinations or unknown destinations in Resellers.

Screenshot: *Mismatches Report section main window*

Mismatch Report
✖

CALLS WITH UNKNOWN CLIENTS

	origination	termination	all
Total Calls	0	0	0
Non Zero Calls	0	0	0
Total Time	0 min	0 min	0 min

CALLS WITH UNKNOWN DESTINATIONS (KNOWN CLIENTS)

	origination	termination	all
Total Calls	25	25	50
Non Zero Calls	25	25	50
Total Time	112 min	112 min	223 min

CALLS WITH UNKNOWN DESTINATIONS IN RESELLERS (KNOWN RESELLERS)

	origination	termination	all
Total Calls	0	0	0
Non Zero Calls	0	0	0
Total Time	0 min	0 min	0 min

Type:

Duration:

Output:

Query

Type:

Duration:

Output:

Query

Type:

Duration:

Output:

Query

Type:

Duration:

Output:

Query

Knowledge Base Articles

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

xDRs Rerating

On this page

- [xDRs Rerating Query Form](#)
- [Performing xDRs Rerating](#)
- [Knowledge Base Articles](#)

xDRs Rerating Query Form

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/ query form

Performing xDRs Rerating

This procedure has 3 steps to perform a rerating:

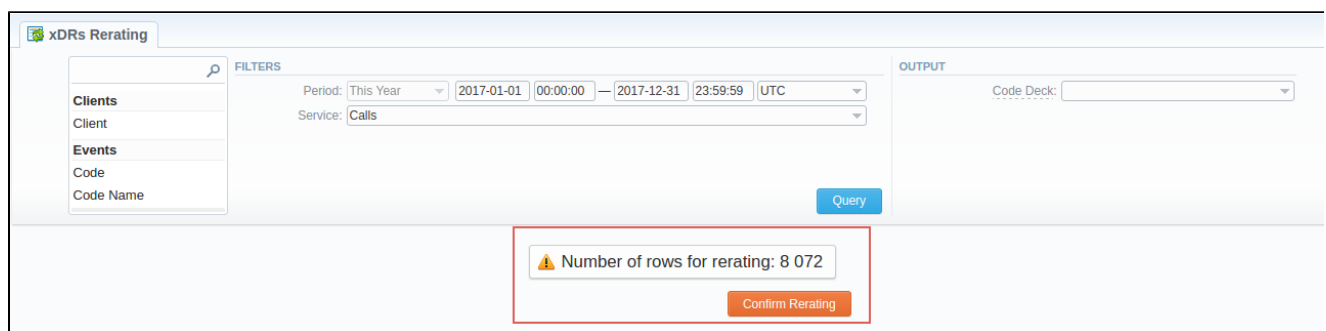
1. **Choose filters, specify an interval and respective values in the query form** (ex. client, code name, respective VoIP Gateway) and click “Query” button.

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 drop-down menu with filters.				
	Additional Filters				
	There are following accessible additional filters:				
	<ul style="list-style-type: none"> • Clients: Client. • Calls: Code, Code Name, Call Origin, Result Status, VoIP Gateway. • Extras: Tag, Match Clients, Match Codes, Duration. 				
	Settings of the Clients				
	<table border="1"> <tr> <td>Client</td> <td>Define a client for the report.</td> </tr> </table>	Client	Define a client for the report.		
	Client	Define a client for the report.			
	Call Settings				
	<table border="1"> <tr> <td>Code</td> <td>Define a code of needed destination.</td> </tr> <tr> <td>Code Name</td> <td>Enter a code name of desired destination.</td> </tr> </table>	Code	Define a code of needed destination.	Code Name	Enter a code name of desired destination.
	Code	Define a code of needed destination.			
Code Name	Enter a code name of desired destination.				
<table border="1"> <tr> <td>Call Origin</td> <td>Specify a call origin for the report: <ul style="list-style-type: none"> • <i>origination,</i> • <i>termination.</i> </td> </tr> </table>	Call Origin	Specify a call origin for the report: <ul style="list-style-type: none"> • <i>origination,</i> • <i>termination.</i> 			
Call Origin	Specify a call origin for the report: <ul style="list-style-type: none"> • <i>origination,</i> • <i>termination.</i> 				

Result Status	Indicate the status of the call for the report: <ul style="list-style-type: none"> • <i>success</i>, • <i>busy</i>, • <i>no channel</i>, • <i>error</i>.
VoIP Gateway	Choose available gateways.
Extras	
Tag	Specify respective tags
Match Clients	Indicate a respective type: <ul style="list-style-type: none"> • <i>matched</i> (identified), • <i>mismatched</i> (not identified).
Match Codes	Choose an appropriate type: <ul style="list-style-type: none"> • <i>matched</i>, • <i>mismatched</i>.
Duration	Select the continuance of the call: <ul style="list-style-type: none"> • <i>zero</i>, • <i>non-zero</i> (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 pulled 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. And all data will be unified by code names.

2. Then you will see a respective notification and you need to approve the process by clicking “*Confirm Rerating*” button.

Screenshot: *xDRs Rerating section/ approval notification*



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

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*.

⚠ 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 of calls at once).

Knowledge Base Articles

- [How to do rerating?](#)

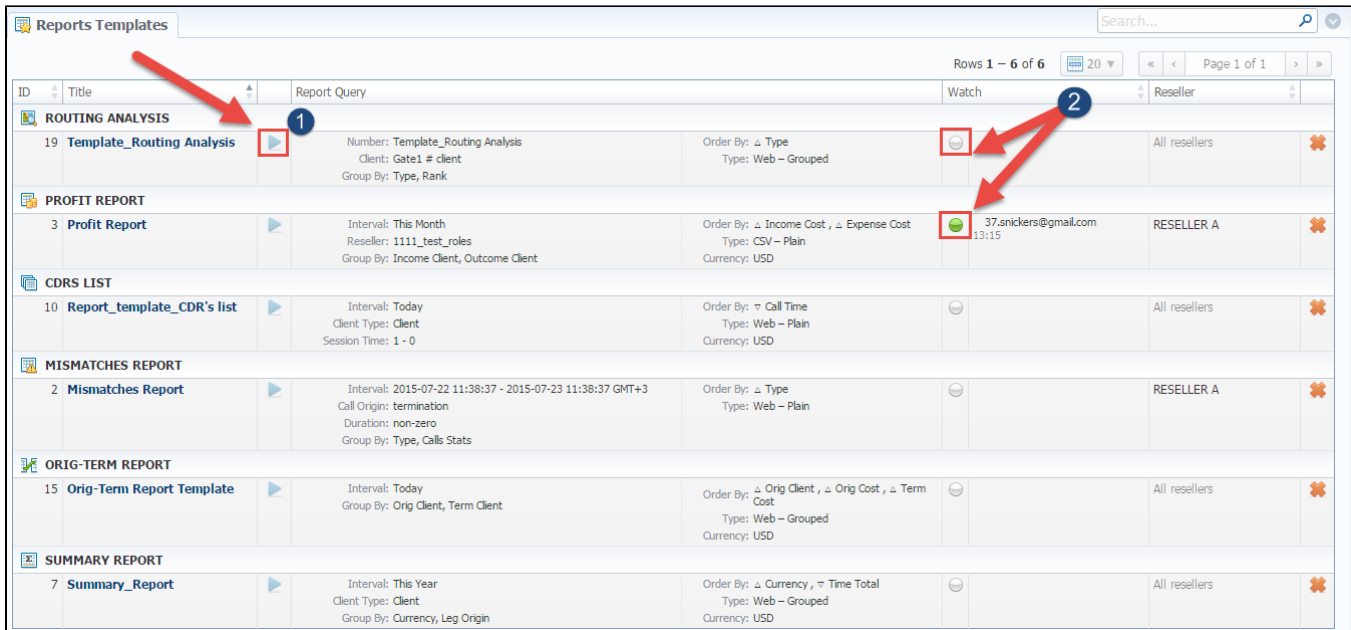
Reports Templates

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* section.

Screenshot: Reports Templates section main window



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 e-mails <div style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> Please note, that this tool is not available for <i>Web</i> output type, only for <i>CSV/Excel XLS/Excel XLSx</i>. </div>
	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

It's allowed to save **Reports Templates** with empty fields.

To send a report via E-mail/ 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).

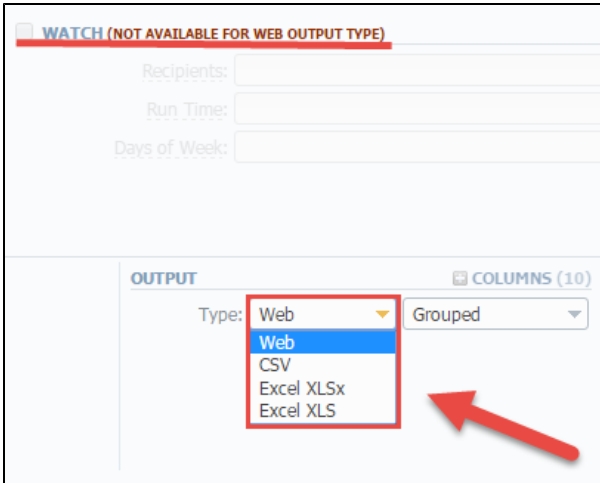


Don't forget to specify the e-mail address where the report should be sent to and correctly set report query. After you save query you will be receiving your reports via e-mail in specified time frames.



Please note this option is not available for Web type of the *Output*. To use this option, choose another type (*CSV, Excel XLSx, Excel XLS*).

Screenshot: Reports Templates settings



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 e-mail**" 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

ACTIVE STATISTICS PACKAGES

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)								

ARCHIVED STATISTICS PACKAGES








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

You can download these files from the billing server:

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 “Process” button is clicked, 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!



Tip: 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, CDR's disputes and provides the information according 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](#)
- [xDR Disputes](#)
- [Factors Watcher](#)

Rates Analysis

On this page:

- [Rates Analysis Form](#)
- [To create a new analysis report](#)
- [To create a 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




To create a new analysis report

In order to create an analysis report go to the **Tools** and open the **Rate Analysis section**.


To analyze and compare different rates, select one or few rate tables in the form, specify code names or specific code (you can use «*» sign to specify all), the date for which these rates were actual, desirable output format and click the «*Query*» button. The system will form a list of rates with prices for each destination. The highest rate available for the destination is colored in red, the lowest – in green, and middle rates are colored in black.

In «*Group by*» field you can define how you want to sort the resulting data – by codes or code names.


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 drop-down menu with filters.
	<p>Outlook Choose the form of the rate analysis report to display the data. Please note, that this field is mandatory and should be filled out in order to make a report.</p> <ul style="list-style-type: none"> • Rates comparison (compares specified rates of different <i>Resellers</i>). • Least costs list (shows routes with cheaper rates, groups by the price of rate).
	<p>Originators Enter originators for analysis.</p>
	<p>Terminators Indicate terminators to run an analysis report.</p>
	<p>Rate Tables Define rate tables for analysis.</p>
	<p>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 reports:</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	


There are following accessible additional filters:

- **By calls:** Code, Code Name, Code Country.
- **Extras:** Rate Tables, Originators, Terminators, Actual On, Master Table, Lowest Position, Get Margins For, Tag, Rate Age.

 Please use the Scroll Bart to see all settings in the pull-down list.

Settings of the calls

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 day and time of the rates.
Master table	Specify a rate table which rates will be compared.  Please note that this field is active only during rate tables analysis.
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 "Master table" option.
Tag	Indicate a tag to which this rate belongs
Get margins for	Define a rate table from which respective margins will be taken. It is used to analyze margins.
Rate age	Specify the number of days.

Output	This form contains settings of the output data of the report.
Type	Choose a format of the report from a drop-down list: <i>Web/CSV/Excel XLS/Excel XLSx</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. Select a code deck to pull code names from
"Simulate long codes" check box	Check if a rate table does not have codes which are presented in other tables for simulating them using shorter codes.  If you check the « <i>simulate long codes</i> » 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 <i>380</i> , and the other has <i>380</i> and <i>38044</i> codes. When mentioned check box is active, the first rate table will have unavailable <i>38044</i> code simulated with the price of available <i>380</i> . Rates such as these have « <i>Simulated</i> » label when you hover the mouse pointer over them and are colored in light-red, light-green and grey respectively.

Screenshot: Rates Analysis section

The screenshot shows the 'Rates Analysis' section. On the left is a sidebar with 'Extras' and a list of filters: Actual On, Master Table, Lowest Position, Get Margins For, Tag, Rate Age, and Calls. The main area is divided into 'FILTERS' and 'OUTPUT'. The 'FILTERS' section includes: Outlook (least costs list), Originators (orig x Originator x), Terminators (term x Terminator x), Rate Tables (ORIG RT - Originator x ORIG RT - Originator for Europe x), and Group By (Code x). The 'OUTPUT' section includes: Type (Web), Currency (USD), Code Deck, and Simulate Long (checkbox). Below the filters are 'Export to CSV' and 'Export to XLSx' buttons. At the bottom is a table with columns: Code, Code Name, Route #1, Route #2, Route #3, and Route #4. The table contains two rows of data with values like 10.0000 and 2.0000.

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

Screenshot: Rates Analysis section

This screenshot is similar to the previous one but highlights the 'ALL' options in the filter fields. A red box surrounds the 'Originators: ALL x', 'Terminators: ALL x', and 'Rate Tables: ALL x' fields. A red arrow points from the top right towards these fields. The 'Outlook' is set to 'rates comparison' and 'Group By' is 'Code x'.


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 Template form

The screenshot shows the 'Reports Templates' form. It is divided into 'RATES ANALYSIS' and 'REPORT QUERY' sections. The 'RATES ANALYSIS' section includes: Title (text field), Reseller (dropdown: all resellers), Visibility (dropdown: Private), Recipients (text field), Run Time (dropdown: 06:00), and Days of Week (dropdown: Mo x Tu x We x Th x Fr x Sa x Su x). There is a 'WATCH' checkbox. The 'REPORT QUERY' section includes a sidebar with 'Extras' and a list of filters: Actual On, Master Table, Lowest Position, Get Margins For, Tag, Rate Age, and Calls. The main area has 'FILTERS' and 'OUTPUT'. 'FILTERS' includes: Outlook (least costs list), Originators (Originator x), Terminators (Terminator x), Rate Tables (ORIG RT_acc1 x ORIG RT - Originator x ORIG RT - Originator for Europe x), and Group By (Code x). 'OUTPUT' includes: Type (CSV), Currency (USD), Code Deck, and Simulate Long (checkbox). At the bottom right are 'OK', 'Cancel', and 'Apply' buttons.

Section	Description	
Rates Analysis	Here you can specify parameters for the template that will be used while running reports	
	<table border="1"> <tr> <td>Title</td> <td>Specify a name of the template</td> </tr> </table>	Title
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. 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 the report at the appropriate time and send the results to the list of e-mails</p> <div data-bbox="266 436 1484 516" style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <p> Please note, that this tool is not available for <i>Web</i> output type, only for <i>CSV/Excel XLS/Excel XLSx</i>.</p> </div> <table border="1" data-bbox="253 548 1494 709"> <tr> <td data-bbox="253 548 370 594">Recipients</td> <td data-bbox="370 548 1494 594">Specify recipients, you can indicate your own e-mail or other users of the system, or even 3rd parties</td> </tr> <tr> <td data-bbox="253 594 370 640">Run Time</td> <td data-bbox="370 594 1494 640">Mention 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 data-bbox="253 640 370 709">Days of Week</td> <td data-bbox="370 640 1494 709">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.</td> </tr> </table>		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.
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.							

Export generated report

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.

 Please note, that 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.

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 sections:

- Basic Information:** Name (Example 1), Reseller (Company Name), Service (Calls), Code Deck (DEFAULT), Currency (USD), and a Description field.
- 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*

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"> • <i>min</i> minimal available price
	<ul style="list-style-type: none"> • <i>max</i> maximal available price
	<ul style="list-style-type: none"> • <i>avg</i> 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

The screenshot shows the 'Rates Generator' form with several sections:

- General Information:** Name (Example 1), Reseller (Company Name), Service (Calls), Code Deck (DEFAULT), Currency (USD), and a Description field.
- 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
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

This screenshot is identical to the one above, but the 'ADVANCED OPTIONS' sub-panel is highlighted with a green border. The sub-panel contains:

- Detect fake: 5
- Skip distance: 10%
- Rate position: 1

Buttons: OK, Cancel, Apply

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: Please note that 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.



Tip: 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.



1. 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.
2. If you want to use Quality Options for Rates Generator, you have to define a Terminator as a Source for Rates Generator's rule.



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

Orig Client
Orig Account
Orig Code Name
Orig Code
Term Client

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

Orig Client
Orig Account
Orig Code Name
Orig Code
Term Client

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 / termttest-radiusd / 184.173.103.52	159159159	159159159159159159	732	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termttest-radiusd / 184.173.103.52	159159159	159159159159159159	733	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termttest-radiusd / 184.173.103.52	159159159	159159159159159159	733	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termttest-radiusd / 184.173.103.52	159159159	159159159159159159	734	N/A
159159159	ⓘ	Cli_1_Orig / orig / 100.100.10.1	Cli_1_Term / termttest-radiusd / 184.173.103.52	159159159	159159159159159159	736	N/A



i 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>	
	<p>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:</p> <ul style="list-style-type: none"> • Orig Client/ Account/ Code/ Code Name/ Serial. • Term Client/ Account/ Code/ Code Name. • Gateway. 	
	<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>	
	<p>Orig Client Define an origination client for the report</p>	
	<p>Orig Account Enter an orig account for the report</p>	
	<p>Orig Code Specify an orig code for the report</p>	
	<p>Orig Code Name Indicate an orig code name</p>	
	<p>Termination Settings of Clients</p>	
	<p>Term Client Define a termination client for the report</p>	
	<p>Term Account Enter a term account for the report</p>	
	<p>Term Code Specify a term code for the report</p>	
	<p>Term Code Name Indicate a term code name</p>	
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>	
	<p>Total Quantity of sessions in the database, total quantity.</p>	
	<p>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></p>	
	<p>Originator The name of the originator, orig gateway, account IP, Name or ANI.</p>	
	<p>Terminator The name of the terminator, term gateway, account IP, Name or ANI.</p>	
	<p>Src Party ID The source number.</p>	
	<p>Dst Party ID The destination number.</p>	
	<p>Duration Session duration specified in seconds.</p>	
	<p>Other output settings</p>	
	<p>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.</p>	

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="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <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="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> 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>.</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="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Please note, that this tool is not available for <i>Web</i> 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.


 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 *14 40 min* in the "**Show last**" field.

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

 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.

 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*.
 - then 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


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 or 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 <div style="border: 1px solid #ccc; padding: 5px; background-color: #fff9c4;">⚠ 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.</div>
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.

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*

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
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.		
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>	

Factors with reference to the side-by-side reports:

You can adjust these factors by your own using the next formula and pre-existing factors mentioned above: *factors_name_1* - value for the first period; *factors_name_2* - value for the second period; *factors_name_diff* - difference between periods.

For example: **total_cost_1** (of the 1st period), **total_cost_2** (of the 2ndperiod), **total_cost_diff** (difference in %).



The users can add the Factors Watcher based on the side-by-side Summary Report. All you need to do is:

- 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.

Action

An action that should be taken if a matched rule is found.

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 *Events log*.



The options *Block Client/Account* 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 "Block Account" won't be visible in the drop-down list of the "Action" column.

Lock Period

If action was block of number, destination or code, then define duration of that block in this field

Periodic lock

If either calendar period or fixed period is enabled, this lock will be expired at the end of a given period

Expiration Date

Specify date when the rule should be automatically deleted



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

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="border: 1px solid yellow; padding: 5px; margin-top: 10px;">  Please note that by default date format is set "auto" which has the following format YYYY-MM-DD HH:MM:SS. </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.

 **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, Disconnect 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

Import					
ROWS AND COLUMNS SELECT					
SRC Number	DST Number	Session Time	Connect Time	Disconnect Time	Skip
Src Number	Dst Number	Session Time	Connect Time	Disc Time	<input type="checkbox"/>
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

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
Disconnect 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						
	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	

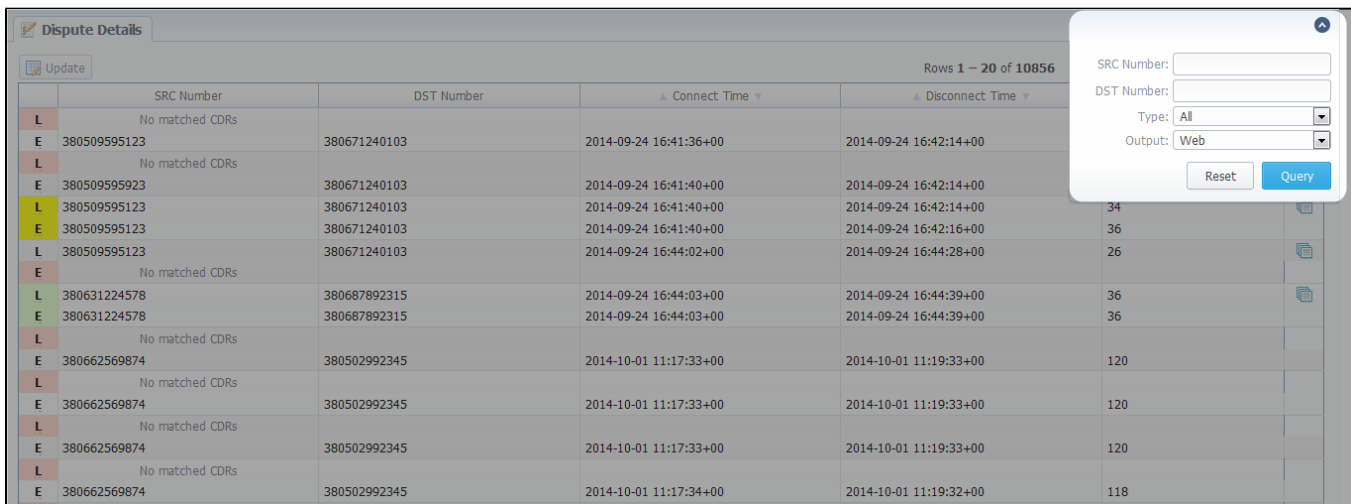
Icon	Description
E	Red color indicates the mismatched xDRs (external or local, it depends on the marked letter L or E)
L	Yellow color indicates the matched xDRs with offset (external or local, it depends on the marked letter L or E)
L	Green color indicates the exact matched xDRs (external or local, it depends on the marked letter L or E).

 Please note, if at least one of the xDR's comparison parameters (*Session Time/Connect Time* or *Session Time/Disconnect 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



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 the 'CDRs Disputes' application window. 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 Proce...' and a blue 'Process' button. The background table displays the following data:

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

Routing Details

This chapter describes **routing capabilities of JeraSoft VoIP Carrier Suite**. Please note, that your JeraSoft VCS installation should include the *Routing Module* to have the following available.

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 for 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 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. The main module can be found in *Routing* section of the system if it is activated.

- [Routing Plans](#)
- [Routing Analysis](#)
- [Dynamic Routing Policies](#)
- [Dynamic Routing Table](#)

Routing Plans

On this page

- [Routing Plans List](#)
- [Adding New Routing Plan](#)
- [Editing Routing Rules](#)
- [Knowledge Base Articles](#)

Routing Plans List

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 (*i.e. 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 main window

ID	Name	Reseller	Code Deck	Rules Hunting	DR Order	Rules
8	DR: Simple Quality	Company Name	—	longest only	by code / appeal	1
7	DR	Company Name	—	longest only	by code / appeal	2
9	DR	Company Name	—	longest only	by code / appeal	1
5	DR: Complex LCR	Company Name	—	longest only	by code / appeal	1
4	DR: Complex Quality	Company Name	—	longest only	by code / appeal	1
6	DR: DID + Simple LCR	Company Name	—	longest only	by code / appeal	2
3	DR: Proportional	Company Name	—	longest only	by code / appeal	1
2	DR: Simple LCR	Company Name	—	longest only	by code / appeal	1
1	DR: Simple Quality	Company Name	—	longest only	by code / appeal	1

Column	Description				
ID	ID number of routing plan				
Name	A name of routing plan				
Reseller	Choose a reseller-owner of this routing plan. Additionally, you may choose any additional resellers that will be able to use this routing plan in «Allow Routing Plan only to following resellers» to the right				
Code Deck	Select a Code Deck if you want to route by code names				
Rules Hunting	Choose a hunting mode. Note, that this only applies to rules listed in Routing Plan Two options are available <table border="1" style="width: 100%;"> <tbody> <tr> <td>• longest only</td> <td>Routing will find only the longest matching code and will stop looking for shorter codes that comply to routing rule otherwise</td> </tr> <tr> <td>• all matching</td> <td>All possible matches will be found, including even shortest codes</td> </tr> </tbody> </table>	• longest only	Routing will find only the longest matching code and will stop looking for shorter codes that comply to routing rule otherwise	• all matching	All possible matches will be found, including even shortest codes
• longest only	Routing will find only the longest matching code and will stop looking for shorter codes that comply to routing rule otherwise				
• all matching	All possible matches will be found, including even shortest codes				
DR Order	Select mode of routes sorting in the routing table. The options here are: <i>by appeal / code</i> – routes will be sorted in accordance to their resulting appeal value; <i>by code / appeal</i> – routes will be grouped by codes and then sorted by appeal value <table border="1" style="width: 100%;"> <tbody> <tr> <td>• by appeal / code</td> <td>Routes will be sorted in accordance to their resulting appeal value and then grouped by codes</td> </tr> </tbody> </table>	• by appeal / code	Routes will be sorted in accordance to their resulting appeal value and then grouped by codes		
• by appeal / code	Routes will be sorted in accordance to their resulting appeal value and then grouped by codes				

	<ul style="list-style-type: none"> • by code / appeal 	Routes will be grouped by codes and then sorted by appeal value
Rules	An amount of rules, which refers to the respective routing plan	

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 a 'Routing Plans' window with two main sections: 'GENERAL INFORMATION' and 'RULES PROCESSING'.
GENERAL INFORMATION: Fields include Name (text input), Reseller (dropdown with 'Company Name'), Parent Routing Plan (dropdown), Code Deck (dropdown), Origination Limit (dropdown), Termination Limit (dropdown), and a checked checkbox for 'Routing loop protection'.
RULES PROCESSING: Fields include Rules Hunting (dropdown with 'longest only'), DR Order (dropdown with 'by code / appeal'), PM (input field with '0' and '[USD / %]'), and Vendor Limit (input field).
 At the bottom right are buttons for 'OK', 'Cancel', and 'Apply'.

Section	Fields description	
General information	General routing plan information	
	• Name	Title of a routing plan
	• Reseller	Define the reseller/owner of current routing plan
	• Parent Routing Plan	Specify DR plan which will be parent for current plan
	• Code Deck	Select a Code Deck if you want to route by code names
	• 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 to view 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)

	<ul style="list-style-type: none"> • "Rooting Loop protection" check box 	<p>Excludes originating client from the list of terminators. If it is disable, it will be possible to route calls between different accounts of the same client.</p> <p>It is enable by default.</p>
Rules processing	Options of rules processing	
	<ul style="list-style-type: none"> • Rules Hunting 	<p>Select a hunting mode (the way how rules will be executed). They are the following:</p> <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
	<ul style="list-style-type: none"> • DR Order 	<p>Specify a method of routes sorting in routing table. The options are:</p> <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
	<ul style="list-style-type: none"> • PM 	<p>Define a Profit Margin value for current rule here</p>
	<ul style="list-style-type: none"> • Vendor Limit 	<p>Determine the number of used routes from the same vendor (if a vendor has multiple accounts).</p> <p>You can set the limit only for accepted account routes, not including the accounts blocked by the term groups.</p>



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.


Editing Routing Rules

Now you need to fill it with routing rules (see screenshot below). To do that click on routing plan's name, click the "Add rule" button and fill the following:

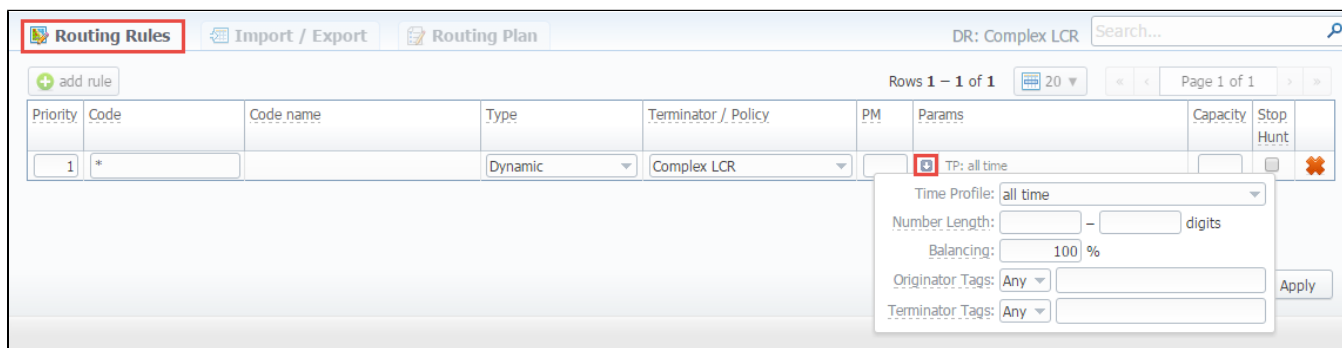
Screenshot: Routing Rules tab

Field	Description
Priority	Define a priority of rules execution, if they 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 code)
Code Name	You may select a code name here if you have code deck attached to routing plan. This code name is used in same fashion as code – to perform routing based on group of codes

Type	Select a type for routing for a current rule: <ul style="list-style-type: none"> • Static lient/Account • Dynamic • DID 										
Terminator / Policy	If you selected static type, you may specify a terminator here; if you selected dynamic type, specify routing policy for current rule										
PM	Define a <i>Profit Margin</i> value for current rule here										
Params	A number of additional parameters available here <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">• Time Profile</td> <td>specify time profile</td> </tr> <tr> <td>• Number Length</td> <td>set minimum and maximum length of destination number, that will be matched by this routing rule</td> </tr> <tr> <td>• Balancing</td> <td>define percentage or proportion amount of traffic which will be sent to respective vendor who participates in balancing <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> i Please note that after changing <i>balancing value</i>, it is needed to restart SIP and/or RADIUS daemons. </div> </td> </tr> <tr> <td>• Originator Tags</td> <td>You can here specify respective orig tags. If nothing is specified, it works for all. all - applies for originators with all next specified tags. any - applies for originators with at least one of next specified tags. </td> </tr> <tr> <td>• Terminator Tags</td> <td>Here you can add term tags that that will be used for terminators. If nothing is indicated, it works only for terminators without tags. Please note, this parameter available only for dynamic rules</td> </tr> </table>	• Time Profile	specify time profile	• 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 <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> i Please note that after changing <i>balancing value</i>, it is needed to restart SIP and/or RADIUS daemons. </div>	• Originator Tags	You can here specify respective orig tags. If nothing is specified, it works for all. all - applies for originators with all next specified tags. any - applies for originators with at least one of next specified tags.	• Terminator Tags	Here you can add term tags that that will be used for terminators. If nothing is indicated, it works only for terminators without tags. Please note, this parameter available only for dynamic rules
• Time Profile	specify time profile										
• 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 <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> i Please note that after changing <i>balancing value</i>, it is needed to restart SIP and/or RADIUS daemons. </div>										
• Originator Tags	You can here specify respective orig tags. If nothing is specified, it works for all. all - applies for originators with all next specified tags. any - applies for originators with at least one of next specified tags.										
• Terminator Tags	Here you can add term tags that that will be used for terminators. If nothing is indicated, it works only for terminators without tags. Please note, this parameter available only for dynamic rules										
Capacity	Limit capacity for current rule (leave blank for unlimited)										
Stop Hunt	If this field is checked, this means that rule search will be stopped on that rule and rules after the checked rule will not be executed for current call										

To view more details you can click *the Parameters icon*  and the following advanced settings will be available: *Time Profile, Number Length, Balancing, Tags.*

Screenshot: Routing rules settings



Also, you may go to *Routing Plan* tab to edit any information you entered during plan creation process or to *Import / Export* tab to import or export list of routing rules respectively. Please pay attention that the column order in importing file must correspond to presented on the screenshot below.

Screenshot: Importing file format

code	code name	priority	type	client	account	policy	profit margin	time profile	num length min	num length max	balance	orig groups	term groups	capacity	hunted
	Afghanistan MTN mobile	0	static	test				---			100				
	Afghanistan MTN mobile	1	static	test				---			100				
	Azerbaijan Azercell mobile	0	static	test				---			50				
	Azerbaijan Azercell mobile	0	static	test				---			50				
	Azerbaijan Azerfon mobile	0	static	test				---			50				
	Azerbaijan Bakcell mobile	0	static	test				---			50				
	Cambodia	0	static	test				---			100				
	Cambodia mobile	0	static	test				---			100				
	Cambodia mobile	1	static	test				---			100				
	Chad Airtel mobile	0	static	test				---			100				
	Chad Airtel mobile	1	dynamic			Simple LCR		---			100				
216*		0	dynamic			Simple LCR		---			100				
220*		0	dynamic			Simple LCR		---			100				
297*		0	static	test				---			100				
370*		0	dynamic			Simple LCR		---			100				



Note: After all info is entered and rules created, you need to go to *Management - Clients* section and assign this routing plan to one or more of your origination clients.

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](#)
- [Knowledge Base Articles](#)

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. To access go to the **Routing – Routing Analysis**. It should be noted, that this tool can be of use only when you are using **Dynamic Routing feature**.


The main window of *Routing Analysis* section represents a query form with following parameters:













Screenshot: *Routing Analysis form*


i Please note, that if there are changes in **the Term Rate Table** you need to launch **the Dynamic Routing Manager in the Task Scheduler** (*System section -Task Scheduler*). **Routing Analysis** shows routes based on routing table built on the last run of the Dynamic Routing Manager. So won't be able to see the last changes with Routing Rules until Dynamic Routing Manager will be restarted.

To create Routing Analysis Report:

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

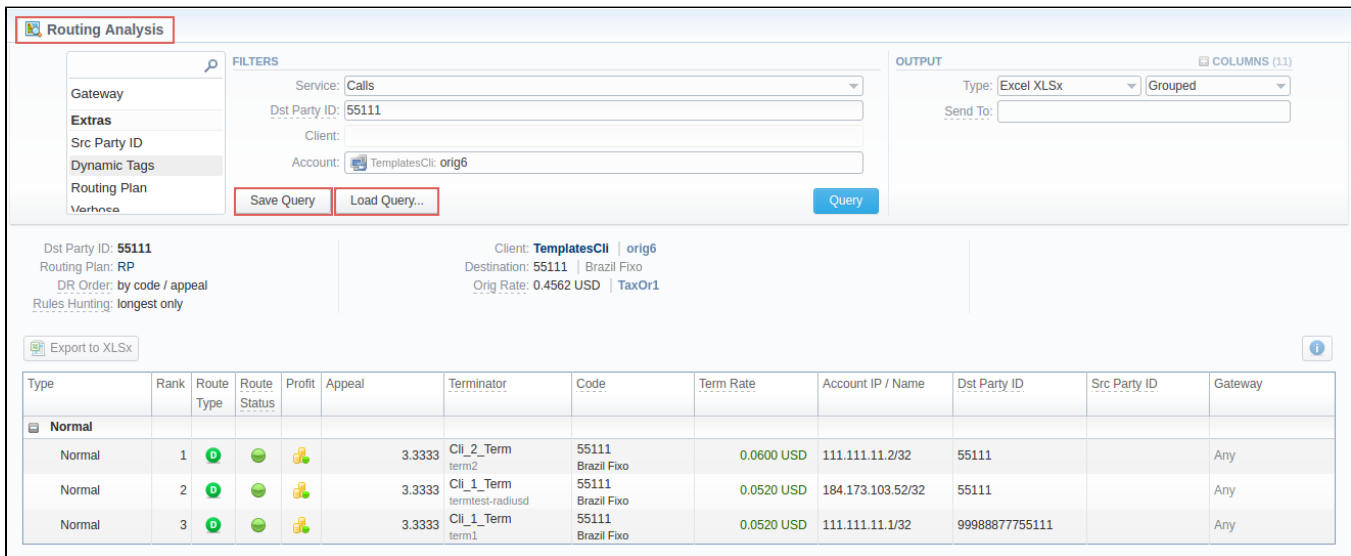
Section	Field Description
Filters	On the Filters menu, select convenient parameters for the report. To cancel any filter, click the delete sign  next to the filter. You can start a quick search by typing filters' names in the bar at the top of drop-down menu with filters. It will display all filters that have specified letters. If you enter more letters, fewer filters will result.
	Service Select the service for the report. This field is mandatory.
	Dst Party ID Enter the destination party id to define a destination.
	Client Select a client for the report. Also, you can specify respective calling shops .
	Account Select an account for the report.
	Additional Filters
	There are following accessible additional filters:
	<ul style="list-style-type: none"> • By calls: Gateway. • Extras: Dynamic Tags; Routing Plan; Scr Party ID; Verbose.
	Settings of Calls
	Gateway Define a gateway that specified in the term account
Extra Settings	

Dynamic Tags	Enter tags that this rate belongs to.
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	<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 in the report: <i>Rank, Route Type, Route Status, Profit, Appeal, Termination, Code, Term Rate, Account IP/Name, Dst Party ID, Src Party ID, Gateway.</i></p>
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 current info please point to the Type icon  in the Route Type column.</p>
Route Status	<p>Shows 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 current info please point to the Status icon  in the Route Status column.</p>
Profit	<p>Displays the Profit and the Profit Margin in the currency indicated in the Client's settings. Also, it shows the Term Rate, Profit and Profit Margin in the currency previously mentioned in the Rate Table specified in the Client's termination settings.</p> <p>To view a current info please point to the Profit icon  in the respective column.</p> <p><i>Screenshot: Routing Analysis / Profit</i></p>  <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <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>
Appeal	Shows the appeal automatically calculated by the system according to the chosen DR Policies (<i>Routing section - DR Policies</i>)
Terminator	The name of the respective terminator or his account name specified in the Client's setting
Code	Here you can see matched code in the terminator's rate table
Term Rate	Rate that is used to terminate the call
Account IP /Name	The name or IP of the account
Dst Party ID	Shows destination party ID that is sent to provider when all matching number translations are performed

Scr Party ID	Shows source party ID after all number translations
Gateway	Displays a respective gateway that specified in the term account
Other output settings	
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"> • <i>Plain</i> - a simple table view • <i>Grouped</i> - a table view with grouped data and possibility to collapse it <div style="border: 1px solid red; padding: 5px; margin-top: 10px;"> <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>

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

Screenshot: Routing Analysis



The screenshot shows the 'Routing Analysis' interface. On the left, there's a sidebar with 'Extras' expanded, showing 'Src Party ID', 'Dynamic Tags', 'Routing Plan', and 'Varhnesa'. The main area has 'FILTERS' with 'Service: Calls', 'Dst Party ID: 55111', 'Client: TemplatesClt', and 'Account: orig6'. Below filters are 'Save Query' and 'Load Query...' buttons. The 'OUTPUT' section shows 'Type: Excel XLSx' and 'Grouped' view. A summary bar displays 'Dst Party ID: 55111', 'Routing Plan: RP', 'DR Order: by code / appeal', 'Rules Hunting: longest only', 'Client: TemplatesClt | orig6', 'Destination: 55111 | Brazil Fixo', and 'Orig Rate: 0.4562 USD | TaxOr1'. An 'Export to XLSx' button is present. The main table has 11 columns: Type, Rank, Route Type, Route Status, Profit, Appeal, Terminator, Code, Term Rate, Account IP / Name, Dst Party ID, Src Party ID, Gateway. It shows three rows of 'Normal' data.

Type	Rank	Route Type	Route Status	Profit	Appeal	Terminator	Code	Term Rate	Account IP / Name	Dst Party ID	Src Party ID	Gateway
Normal	1				3.3333	Clt_2_Term term2	55111 Brazil Fixo	0.0600 USD	111.111.11.2/32	55111		Any
Normal	2				3.3333	Clt_1_Term termtest-radiusd	55111 Brazil Fixo	0.0520 USD	184.173.103.52/32	55111		Any
Normal	3				3.3333	Clt_1_Term term1	55111 Brazil Fixo	0.0520 USD	111.111.11.1/32	99988877755111		Any

Also, you can save and load the following report by clicking respective buttons **"Save Query"** and **"Load Query"** in the form. To 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.


 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

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

Export generated report

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

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

To 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.



If applicable, you can check the **Next Rate** in the report, find **Term Rate** column, and then point to the specified amount.



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

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

Screenshot: DR Policies section main window

Status	Name
●	Complex LCR
●	Complex Quality
●	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.
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.

You may browse each policy routing formula by clicking on respective policy's name. Please do not change formulas to avoid unexpected routing results.

Dynamic Routing Table

The **JeraSoft VCS solution** operates with its own **Routing Table**, that is automatically obtained over specified regular periods of time to provide the «*dynamic*» part of the *Routing*.

The **Routing Table** includes latest changes of whole routing process, that includes 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 manual mode.

To generate a routing table manually, please **go to *System – Task Scheduler*, and click the respective  button**. And then the routing table will be generated.

Configuration

This chapter of our Guide contains everything that relates to the **Configuration** tab of **JeraSoft VoIP Carrier Suite**. 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

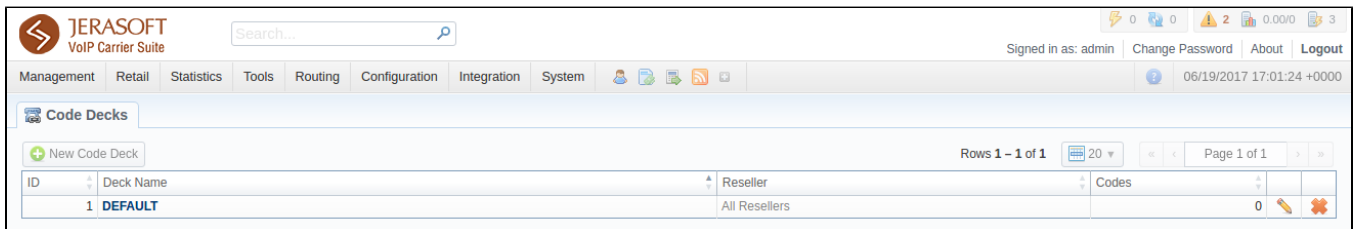
On this page

- [Code Decks List](#)
- [Creating New Code Deck](#)
- [Managing Code Decks](#)
 - [Adding Codes](#)
 - [Importing Codes](#)
 - [Exporting Codes](#)

Code Decks List

This section contains all code decks, i.e. respective names for your codes. The deck consists of a destination code and name. By having multiple code decks you can freely operate in different names for same codes and change them in the real time.

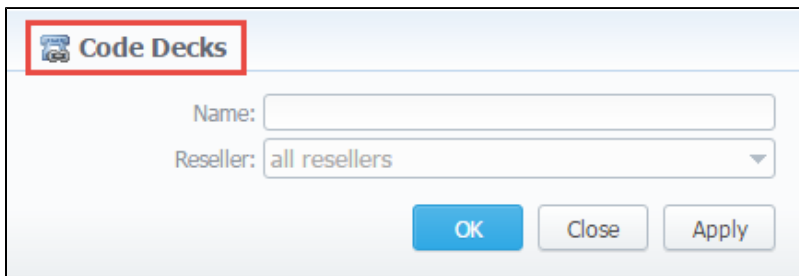
Screenshot: Code Decks section main window




Creating New Code Deck

To create a code deck, click the “New Code Deck” button and fill out all required fields.

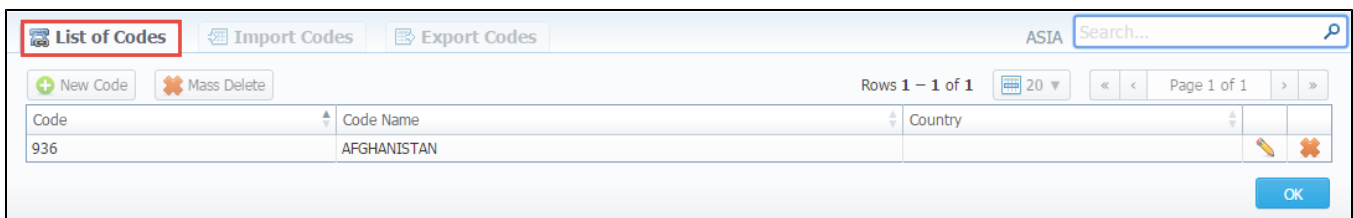
Screenshot: Code Deck window



Managing Code Decks

To manage your code deck left-click on the deck's name or click the edit icon . In the window with the list of all existing codes, you will be able to perform operations pointed out below.

Screenshot: Code deck's contents




Adding Codes

When you click the "New Code" button, you will be able to add a code group to your deck. The pop-up window contains the following parameters (Screenshot):

Screenshot: Code Decks settings

Field	Description
Code	Destination code
Code Name	Displayed name of a code group
Country	Which country the codes in current group will belong to

 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.

Importing Codes

It is the possibility to import a list of codes and code names 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) then select a file to import and set some additional configurations.

Screenshot: "Import Codes" Step 1

These settings are the following:

Section	Field	Description
File Process	Select file to import	Select an import file
	Fields delimiter	Specify here a delimiter symbol
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)
	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

After selecting a file and specifying all additional parameters click "Process>>" button.

On the second step system will recognize the file, and display few first rows of it. Then you need to select the header of each column and then press "Import" button.

Screenshot: "Import Codes" Step 2

			Skip
1	Code Name-1		<input type="checkbox"/>
2	Code Name0		<input type="checkbox"/>
4	Code Name2		<input type="checkbox"/>
5	Code Name3		<input type="checkbox"/>
6	Code Name4		<input type="checkbox"/>
7	Code Name5		<input type="checkbox"/>
8	Code Name6		<input type="checkbox"/>
9	Code Name7		<input type="checkbox"/>
10	Code Name8		<input type="checkbox"/>
11	Code Name9		<input type="checkbox"/>
12	Code Name10		<input type="checkbox"/>
13	Code Name11		<input type="checkbox"/>
14	Code Name12		<input type="checkbox"/>
15	Code Name13		<input type="checkbox"/>
16	Code Name14		<input type="checkbox"/>
17	Code Name15		<input type="checkbox"/>
18	Code Name16		<input type="checkbox"/>

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

Code	Code Name	Country	Country Code
33	Brasil	Brasil	55
313, 5531210	Brasil – Belo Horizonte	Brasil	55
312111	Brasil – Belo Horizonte	Brasil	55

Country Code column contains an additional information about the code and during import will be joined with Code column. As the result, it will be shown the next combination after the import: Country Code+Code: 5533, 55313,55312111.

Exporting Codes

This feature allows you to export a content of a code deck to file. To export info to file, do the following: go to "Export Codes" section tab (Screenshot down below) and specify the following: delimiter symbol in "Fields delimiter" field and first CSV file row as a title row with a "With headers row" checkbox (optional). After you click "OK", you will be prompted to save a file. Enter respective path on your hard drive.

Screenshot: "Export Codes" section tab

Currencies

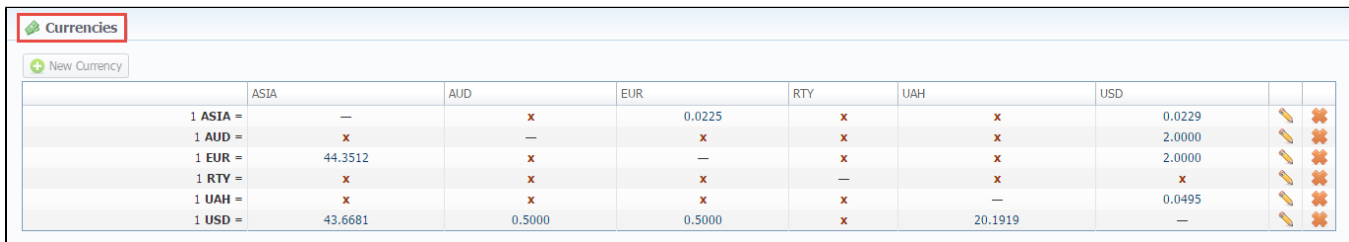
On this page

- [Currencies List](#)
- [Adding New Currency](#)
- [Specifying Currencies Rate](#)

Currencies List

This section displays the list of all currencies, registered in the system:

Screenshot: Currencies section main window



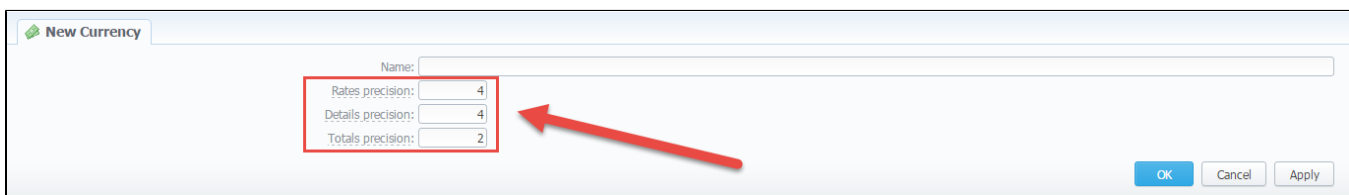
	ASIA	AUD	EUR	RTY	UAH	USD		
1 ASIA =	—	x	0.0225	x	x	0.0229		
1 AUD =	x	—	x	x	x	2.0000		
1 EUR =	44.3512	x	—	x	x	2.0000		
1 RTY =	x	x	x	—	x	x		
1 UAH =	x	x	x	x	—	0.0495		
1 USD =	43.6681	0.5000	0.5000	x	20.1919	—		

The list is displayed as currency exchange table, where each currency has direct exchange rate with any other currency.

Adding New Currency

You can add new currency by clicking the "New Currency" button. In pop-up window (see screenshot below), you should specify name for the new currency.

Screenshot: New Currency window



New Currency

Name:

Rates precision:

Details precision:

Totals precision:

OK Cancel Apply

Also, while creating a new currency you can specify decimal places for accurate monetary values formatting in the system:

- **"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 CDR report.
- **"Totals precision"** - the number of decimal places for total monetary values formatting.

The respective number of symbols 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).

Specifying Currencies Rate

After you add currency, you need to specify the rate. To do this, click the  icon from the currencies list to open exchange rate settings.

In pop-up window you can view a history of currency's rate changes that were made from currency's creation up to this moment.

Screenshot: Currency's rate changes history

The screenshot shows the 'Exchange Rate' management interface for UAH / EUR. The title 'Exchange Rate' is highlighted with a red box. Below the title, there is an '+ Add' button, a 'Rows 1 - 1 of 1' indicator, a '20' rows per page dropdown, and pagination controls showing 'Page 1 of 1'. A table with the following data is displayed:

Date	Rate	Change	
04/13/2016 15:00:00 +0000	0.26000000	0.00000000	

An 'OK' button is located at the bottom right of the interface.

To add new currency's rate click the "Add" button. Then you can specify currency's rate in "Rate" field. "Date" field displays the date of current currency's rate change, which will be recorded by system (Screenshot).

Screenshot: Adding new currency's rate

This screenshot shows the 'Exchange Rate' management interface with the '+ Add' button highlighted by a red box. A form for adding a new rate is open, showing the following fields:

- 1 UAH = EUR
- Date:

The table from the previous screenshot is visible in the background, showing the existing rate of 0.26000000. An 'Add' button is located below the form, and an 'OK' button is at the bottom right of the interface.

Tip: Statistics data in new currency will be available after adding currency 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.

Please note that *changing of the system currency* requires running of *Dynamic Routing Manager* to generate *routing table* with rates in new system currency.

Payment Accounts

On this page

- [Payment Accounts List](#)
- [Adding New Payment Account](#)

Payment Accounts List

This section allows you to **create different payment accounts** for correct and **precise transactions (payments) management**.

These accounts are exact payment definitions which will be visible in *Transactions* section. For example, you can have *Bank Transfer* and *Credit Card* accounts, and while applying respective payments, you will be able to define that payment origin by selecting a respective account.

Screenshot: *Payment Accounts* section

ID	Name	Reseller
3	Authorise.Net Acc A	all resellers
4	Authorise.Net Acc B	all resellers
5	PayPal Acc A	all resellers
6	PayPal Acc B	all resellers

Adding New Payment Account

To create new payment account, simply click "New Payment Account" button, specify an account name and a reseller (see screenshot below). After this, this account will be available in *Transactions* section.

Screenshot: *Payment Account form*

Payment Accounts

Name:

Reseller:

OK Cancel Apply



Please note, the user can not edit or delete the "General" payment account with id = 1.

Payment Terms

On this page

- [Payment Terms List](#)
- [Adding New Payment Terms](#)

Payment Terms List

This section helps to make the clients' invoicing easier and faster by allowing to use auto-invoicing profiles.

Screenshot: *Payment Terms section*

ID	Name	Payment	Grace Period	Notify Days(Before)	Notify Days(After)		
48	Case 1	every 7 days	10 days	on 7 day(s) before due date	on 2 day(s) after due date		
49	Case 2	every 7 days	1 days	on 7 day(s) before due date	on 4 day(s) after due date		
50	Case 3	every 7 days	12 days	on 7 day(s) before due date	on 2 day(s) after due date		

This list houses the profiles that determine payment terms. These profiles are used to auto-invoice your clients.

Adding New Payment Terms

You can add a new such profile by pressing "New Payment Terms" button. A dialog window (Screenshot below) allows you to specify next parameters:

Screenshot: *Adding new payment form*

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	Current profile name
Payment	You can specify the exact day or the frequency of payments here (for example, on 7-th day of the month or every 10 days)
Grace Period	Period that specifies how much time the client has to pay the bill after he was invoiced, it's the Due Date in invoices (so-called "Deferral period")
"Notify Days (Before)"	Here you can set how many days before the payment date (invoicing date + grace period) reminders will be sent to the client. For example, if you will enter 10 as a value, the reminder will be sent 10 days before the payment date. You can specify more than one value in this field dividing them with comma symbol - "

"Notify Days (After)"	Specify how many days after the payment date reminders will be sent to the client and then apply these payment terms to the client.
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Payment Gateways

On this page

- [Payment Gateways Section Main Window](#)
- [Configuring Payment Gateways](#)
 - [PayPal Integration Details](#)

Payment Gateways Section Main Window

This section is dedicated to configure methods your customers may use to recharge their balance.

Currently, there are few default methods: *Authorize.net*, *Moneybookers*, *PayPal*, *Top-Up cards*, *QIWI* and *Ukash and Top-Up Cards* (see screenshot below).

Screenshot: Payment Gateways section

Payment Gateways
Settings for: Company Name

TOP-UP CARDS ORDER POSITION:

Payment Account: <input type="text"/> Description: Here you can add funds to your balance by using your PayPal account.	Specify account which will be used for transactions from this payment gateway. A user will see this text as a help-tip for respective payment method.
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AUTHORIZE.NET ORDER POSITION:

Login: <input type="text"/> Transaction Key: <input type="text"/> Amount Limits: <input type="text"/> Payment Account: <input type="text"/> Description: Here you can add funds to your balance by using your PayPal account.	Add your API login ID Add your API transaction key 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. Specify account which will be used for transactions from this payment gateway. A user will see this text as a help-tip for respective payment method.
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MONEYBOOKERS ORDER POSITION:

E-mail: <input type="text"/> Secret word: <input type="text"/> Gateway Currency: U.S. Dollar (USD) System Currency: USD Amount Limits: <input type="text"/> Payment Account: <input type="text"/> Description: Here you can add funds to your balance by using your PayPal account.	Your Moneybookers e-mail, payment recipient Your Moneybookers secret word you set in your Moneybookers profile Merchant Tools Currency which will be used by user to perform a payment 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). 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. Specify account which will be used for transactions from this payment gateway. A user will see this text as a help-tip for respective payment method.
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PAYPAL ORDER POSITION:

E-mail: <input type="text"/> Gateway Currency: U.S. Dollar (USD) System Currency: USD Amount Limits: <input type="text"/> Payment Account: <input type="text"/> Description: Here you can add funds to your balance by using your PayPal account.	You PayPal e-mail, payment recipient. Currency which will be used by user to perform a payment. 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). 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. Specify account which will be used for transactions from this payment gateway. A user will see this text as a help-tip for respective payment method.
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QIWI ORDER POSITION:

E-mail: <input type="text"/> Provider ID: <input type="text" value="0"/> IP: <input type="text"/> Payment Account: <input type="text"/> Description: Here you can add funds to your balance by using your PayPal account.	Your QIWI e-mail, payment recipient. Qiwi provider ID. Qiwi gateway IP. Separated by comma without spaces. Specify account which will be used for transactions from this payment gateway. A user will see this text as a help-tip for respective payment method.
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UKASH ORDER POSITION:

Security Request Token: <input type="text"/> Security Response Token: <input type="text"/> Brand Id: <input type="text"/> Gateway Currency: U.S. Dollar (USD) System Currency: USD Amount Limits: <input type="text"/> Payment Account: <input type="text"/> Description: Here you can add funds to your balance by using your PayPal account.	20-Character alphanumeric unique Request-Token provided by Ukash. The token is used to validate the merchant account. 20-Character alphanumeric unique Response-Token provided by Ukash. The token is used to validate the merchant account. Ukash will supply a brand id to the merchant for each of the brands they wish to differentiate between. The appropriate brand id must then be sent through on each transaction request. Currency which will be used by user to perform a payment 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). 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. Specify account which will be used for transactions from this payment gateway. A user will see this text as a help-tip for respective payment method.
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Update

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 window. It means that all customers belonging to selected Reseller will have these settings. The settings depend on the payment system and can include specific options for each.

Option	Description
E-Mail	Respective system e-mail, that should be used
Gateway Currency	Currency of the gateway that will be used to perform payment
System Currency	Select a currency from available in VCS to be used during payment. It should match <i>Gateway Currency</i>
Amount Limits	Specify allowed values for balance recharge, divided by comma (for example, "5, 10" means that user will be able to recharge only for 5 or 10 USD). If left empty – user can specify any value
Payment Account	Select which payment account should be used for payment from respective payment gateway
Description	User will see this text as tooltip for current payment method

Also, you may specify the order of displaying *Payment methods* (if more than one method is selected) in the field called **ORDER POSITION** in the top right corner of the *Payment method* window.

PayPal Integration Details

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://pmts.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://pmts.custhelp.com/app/answers/detail/a_id/14/related/1

Time Profiles

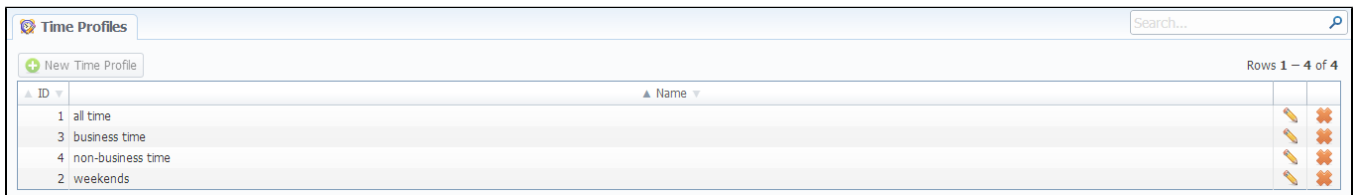
On this page

- [Time Profiles List](#)
- [Adding New Time Profile](#)

Time Profiles List

This section is used to create and manage time profiles. It allows you to divide rates by time of usage. For example, this can be used to sell traffic for more in business-time, and lower the price in non-business time. Main window looks like on Screenshot:

Screenshot: Time Profiles section main window



Adding New Time Profile

You can add new time profile by pressing "New Time Profile" button. A dialog-window will show-up:

Screenshot: Adding new time profile

You must enter name of new profile in the "Name" field, specify time in "Hours" section, and days of the week in "Week Days", then press "OK" button. Also, you can use "check all" and "uncheck all" options for selection.

Taxes Profiles

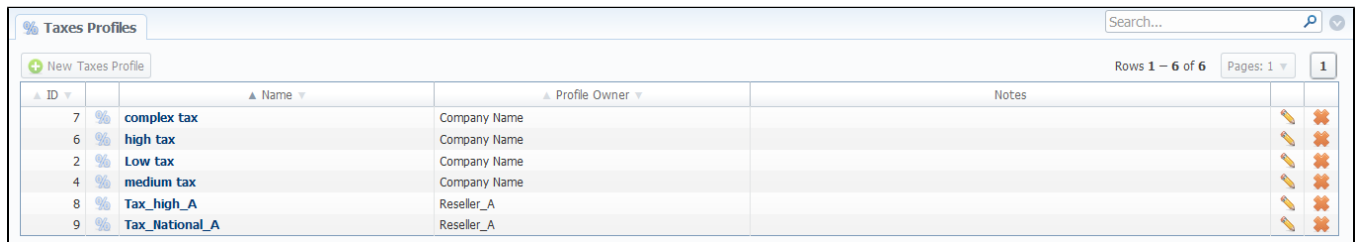
On this page

- [Taxes Profiles List](#)
- [Creating New Taxes Profile](#)
- [Adding Taxation Rules](#)

Taxes Profiles List

This section allows you to create so-called tax profiles, a set of taxation rules that could be applied to your rate tables in different taxation schemes.

Screenshot: Taxes Profiles section main window



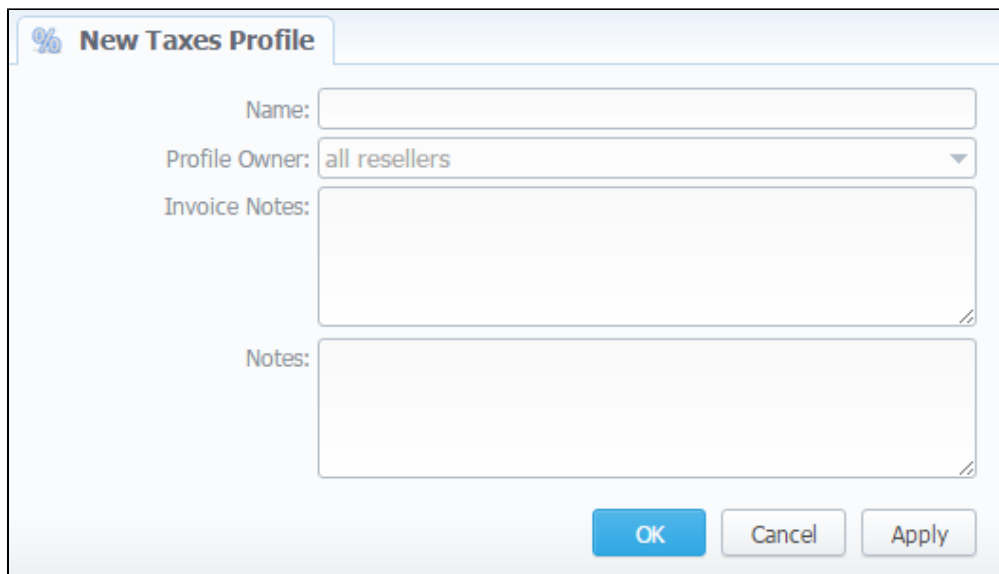
ID	Name	Profile Owner	Notes
7	complex tax	Company Name	
6	high tax	Company Name	
2	Low tax	Company Name	
4	medium tax	Company Name	
8	Tax_high_A	Reseller_A	
9	Tax_National_A	Reseller_A	

Creating New Taxes Profile

To create new profile click "New Taxes Profile" button and fill mandatory fields, specify a name and Reseller-owner of current profile. Also, you can add *notes* and *invoice notes*.

The "Invoice notes" field consists of information about tax profile and it will be specified in invoiced.

Screenshot: "New Taxes Profile" window



New Taxes Profile

Name:


Profile Owner:

Invoice Notes:

Notes:

OK Cancel Apply

Adding Taxation Rules

To add a taxation rules, you need to click  icon near the name of profile in the list. In the pop-up window you can add new rule by clicking "Add Tax Value" button or edit already existed tax rule.

Here you can specify current tax name, a percent value, an effective start date, tag and priority.

Screenshot: "Edit Tax Values" window

Taxes Profiles
21

Add Tax Value
Rows 1 – 1 of 1 20 ▼
« < Page 1 of 1 > »

Name	Value, %	Effective From	Tag	Priority	
<input type="text" value="new"/>	<input type="text" value="0"/>	<input type="text" value="2016-08-09 00:00:00+0000"/>	<input type="text" value="Tag 1"/>	<input type="text" value="1"/>	
<input type="text" value="general"/>	<input type="text" value="21"/>	<input type="text" value="2016-01-01 00:00:00+00"/>	<input type="text" value="Regular"/>	<input type="text" value="1"/>	

Tip: Priority is a way to build more complex tax schemes than simple “add % of tax to operation sum”.

In cases when you determine a priority status, you 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 previous priorities values.

For example:

If operation sum is 100 USD, and there is 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 respective values of 10% and 20%, then 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.

You can not delete or archive a tax profile assigned to the *Client, Call shop, Reseller, Calling card*

Tags

On this page

- [Tag List](#)
- [Adding New Tag](#)
- [Quick Tag Search](#)
- [CDRs list tags](#)

This section represents a list of your tags that are created in the system. Tags enable you to organize resources more flexible for your billing environment.

Tag List

This section represents a list of tags that you created within the system and those belonging to your Reseller. Tag can be applied to *clients*, *accounts*, *VoIP gateways*, *rate tables*, *routing plans*, *traffic processing and rate rules*, *packages*, *DiDs*, *taxes profiles*.

Screenshot: *Tags section*

Name	Reseller	
Rates within Europe	AutoTest_Company	
Regular	AutoTest_Company	
Tag A	AutoTest_Company	
Tag B	AutoTest_Company	
Tag Group B (orig)	AutoTest_Company	

Adding New Tag

To get started with tags, you do not need to open the *Tags* section to create labels.

You can add a tag right in the settings of *clients*, *client's templates*, *accounts*, *rates*, *VoIP gateways*, *routing rules*, *traffic processing rules*, *packages*, *DiDs* that you would like to be tagged in the future.



For example, to create a new tag, find the "Tag" field of the *Client's settings* and enter a name. Then, the system will create this tag and show up a respective notification on the top of the page:

Note: you can provide with an unlimited number of tags for each resource.

To remove a tag from the system click the delete icon from the full list of tags.



1. Use the "at" (@) sign as a **default tag for rates**.
2. Also, you can **see tags that you created** in the system and **those belonging to your Reseller**.
3. Please, **avoid using commas** in the name of the tags.
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 create a rule for the *Traffic Processing* with *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 result, calls within a respective operator will be billed by an added tag.



1. If you applied a tag for the *Taxes Profile*, please check, this **tag should match** 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.

Quick Tag Search

Use the Quick Search toolbar and click the down arrow  on the top of the page for fast investigation.

Screenshot: Tags section



CDRs list tags

Also, you can find **tags that were used while the call processed in the CDRs list**. These new columns are available for creating a CDRs report:

- **Client Tags** — respective labels that are assigned directly to the *Client*.
- **Static Tags** — tags assigned to *Accounts*, *Clients* and *Clients Templates*. It's used for reports, invoices, billing and routing. Routing rules are matched by originator tags in the next priority: account orig tags, client tags, client template tags.
- **Dynamic Tags** — labels assigned to *Accounts*, *Clients*, *VoIP Gateways* and are taken from the *Traffic Processing*.
- **Rate Tag**— tag that was taken for the rate
- **Additive Rates Tag** — tag that was taken for an additive (extra) rate

Screenshot: CDRs List section

Call Origin	Client Type	Client	Account	Client Tags	Static Tags	Dynamic Tags	Rate Tag	Extra Rates Tags	Code	Session Time	Billed Time	Package Time	Package Name	Currency	Rate Total	Cost Total	Taxes Value	DST Number	Disconnect Code	DST Number EXT
termination	Client	term	acc_term	VIP term client	Minsk				666	0:11:10	0:11:10	N/A	N/A	USD	1.0000	-11.1667	N/A	666	16	666
termination	Client	term	acc_term	VIP term client					666	0:12:59	0:12:59	N/A	N/A	USD	1.0000	-12.9833	N/A	666	16	666
termination	Client	term	acc_term	VIP term client	Portland				666	0:12:01	0:12:01	N/A	N/A	USD	1.0000	-12.0167	N/A	666	16	666
termination	Client	term	acc_term	VIP term client	Minsk				666	0:00:31	0:00:31	N/A	N/A	USD	1.0000	-0.5167	N/A	666	16	666
termination	Client	term	acc_term	VIP term client	Boston				666	0:00:05	0:00:05	N/A	N/A	USD	1.0000	-0.0833	N/A	666	16	666

Invoices Templates

On this page

- [Invoices Templates List](#)
- [Creating New Invoice Template](#)
- [The method of calculating and rounding values](#)

Invoices Templates List

This tool allows you to create invoice templates, for usage under different circumstances. For example, you may create a customized invoice according to the needs of company. To open this section, go to the *Configuration – Invoices Templates* section and proceed with browsing default templates or creating a new one (see screenshot below).

Screenshot: Invoices Templates section main window

ID	Name	Type	Reseller	Notes
22	default	PDF	all resellers	
34	all [variables]	PDF	all resellers	
11	All variables	PDF	ASIA	
13	All Variables origin	PDF	all resellers	

Creating New Invoice Template

When creating new template, you need to choose the type of a template. Currently there are **two types – xls and pdf**. For creating new template, click the respective button: **"New PDF Template"** or **"New XLS Template"**.

Screenshot: Example of XLS invoice template

Name: All Variables
 Reseller: Company Name
 Anonymized Codes: DEFAULT
 Locale: English
 Totals Calculation: Round then sum
 Taxes Calculation: Percent from total amount
 Attach CDRs list to the invoice

EXCEL TEMPLATE PARAMETERS
 Statistics Columns:
 CDRs List Format: csv
 Included Calls: All payable
 Select Columns: Call Time, Code Name
 Template: default

Buttons: OK, Close, Apply

Section	Fields Description	
General Information	General information about the invoice template	
	<ul style="list-style-type: none"> • Name 	Unique invoice template 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 	Codes which will have hidden numbers in invoice

	<ul style="list-style-type: none"> • Locales 	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, that means raw values are rounded first according to the currency settings, then are summed; • sum then round, that means raw values are summed first, then are rounded. 						
	<ul style="list-style-type: none"> • Taxes Calculation 	The way how taxes will be calculated: <ul style="list-style-type: none"> • percent from total amount, that means taxes are calculated as a percentage from the total amount; • sum of individual taxes, that means taxes are calculated as a sum of respective taxes. 						
	<ul style="list-style-type: none"> • "Attach CDRs list to the invoice" check box 	If enabled, creates CDR file for invoicing period and attaches it to invoice <table border="1" data-bbox="647 583 1494 1016"> <tr> <td data-bbox="647 583 810 720"> <ul style="list-style-type: none"> • CDRs List Format </td> <td data-bbox="810 583 1494 720">List of CDR file format (csv or xls)</td> </tr> <tr> <td data-bbox="647 720 810 905"> <ul style="list-style-type: none"> • Included Calls </td> <td data-bbox="810 720 1494 905"> 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 have any cost and use packages. </td> </tr> <tr> <td data-bbox="647 905 810 1016"> <ul style="list-style-type: none"> • Select Columns </td> <td data-bbox="810 905 1494 1016">List of columns which can be presented in attached CDR file</td> </tr> </table>	<ul style="list-style-type: none"> • CDRs List Format 	List of CDR file format (csv 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 have any cost and use packages. 	<ul style="list-style-type: none"> • Select Columns 	List of columns which can be presented in attached CDR file
<ul style="list-style-type: none"> • CDRs List Format 	List of CDR file format (csv 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 have any cost and use packages. 							
<ul style="list-style-type: none"> • Select Columns 	List of columns which can be presented in attached CDR 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"> • Template 	Defined displaying format of CDRs list in a template						



Best practice example

When you select **"Non-zero payable"** parameter in the *"Attached CDRs list to the invoice"* menu, then:

1) created **outgoing** Invoice for Client **will have attached CDRs 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 CDRs 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)



- CDRs table of the created invoice displays calls according to the settings of *"Attach CDR's list to the invoices"*.
- Stats table of the created Invoice shows calls included in the CDR's table.

Screenshot: Example of an invoice PDF template

The process of creating new invoice *PDF* template is following:

- Add a table to your workspace, right-click on it and define table class (stats, cdrs, packages, package_fees, positions);
- 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 at the right drop-down panels;
- After invoice template is created, fill in its name and click OK;
- 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;
- When creating invoice in *Management – Invoices* you can switch invoice template prior generating an invoice.

JeraSoft VCS includes several default pdf templates, called *default* and *default extended*.



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*).



Please note, 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. And avoid names with special symbols as *%001 name*, *-001 name*.

The method of calculating and rounding values

There are two features "**Totals Calculation**" and "**Taxes Calculation**" in the *Invoices Templates* that helps to avoid rounding issues with float numbers and missing cents.



Best practice example:

If you have the next parameters:

- calls with the cost: \$0.005 (the tax is \$0.00105)
- package with activation fee: \$ 7.1144 per month (the tax is \$1.494024)
- package with activation fee: \$ 5.1144 per month (the tax is \$1.074024)
- package with activation fee: \$ 3.1144 per month (the tax is \$0.654024)
- tax 21%

And you select respective options:

Round then sum and Percent from the total amount	Sum then round and Sum of individual taxes
<p>Then, it rounds specified above values in the invoice just like that:</p> <ul style="list-style-type: none"> • calls - \$0.01 • packages - \$7.11, \$5.11, \$3.11 <p>After it calculates the total amount (\$0.01+\$7.11+\$5.11+\$3.11) = \$15.34. The total amounts are following:</p> <ul style="list-style-type: none"> • amount without tax - \$15.34 • tax - \$3.22 (15.34*0.21) • amount including tax - (\$15.34+\$3.22) = \$18.56 	<p>It takes specified above <i>not rounded values</i> and calculates the total amount (\$0.005+\$7.1144+\$5.1144+\$3.1144) = \$15.3482.</p> <p>After, it rounds a received sum (\$15.3482) and the total amounts are following:</p> <ul style="list-style-type: none"> • amount without tax - \$15.35 • tax - \$3.22 (1.494024+1.074024+0.654024+0.00105) • amount including tax - (\$15.35+\$3.22) = \$18.57

Therefore, it's less than \$0.01 cent from the total amounts. Totals may not match due to the selected option of the rounding method.

LNP-MNP Databases

On this page

- [LNP / MNP Ranges List](#)
- [Creating New Range/Number](#)
- [Quick Search tool](#)
- [LNP/MNP Configurations](#)

LNP / MNP Ranges List

This section represents LNP/MNP local databases of two providers: Numuri and TJA. Here you can find the list of Numuri ranges and TJA numbers downloaded by LNP Files Collector. It's intended to facilitate the administration of number portability.

LNP/MNP stands for *Local Number Portability / Mobile Number Portability*. It 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 does to work?

TJA: During translation of the call, it 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 verifying with Numuri ranges and it applies a dynamic tag (owner's name) to the call for further billing.

To open this section, go to the **Configuration LNP/MNP Databases** section and proceed with creating a new range or number.

Screenshot: LNP / MNP Databases

ID	Range Start	Range End	Owner	Modification Date
364	21000	21999	EU Carrier 1	08/29/2016 15:00:00 +0300
365	22000	22999	EU Carrier 2	08/29/2016 15:00:00 +0300
366	23000	23999	EU Carrier 3	08/29/2016 15:00:00 +0300

Apart from Numuri and TJA, **JeraSoft VCS** is integrated with these providers:

1. **Broadvox**
2. **Vera Networks**
3. **PCT**

Therefore, you can configure the translation with and one of these providers be following these steps:

- open the *Traffic Processing* section, create a rule for 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 page. The 'LNP / MNP Provider' dropdown menu is expanded, and 'Broadvox' is selected. Other options visible in the dropdown include Numuri, PCT, Vera Networks, and tja.ee.

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: LNP / MNP Databases section/Numuri range adding form

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="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> Further, the owner's name will be applied to the call as tag (for example, EU Carrier 1) for billing the call. </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: LNP / MNP Databases section/TJA number adding form


Section	Fields Description
General Information	General information about TJA number

• Code	Specify the code of TJA number
• RN Number	Indicate a registration number
• Code Name	Specify a respective code name of TJA provider
• Owner	Determine an operator that owns a respective number

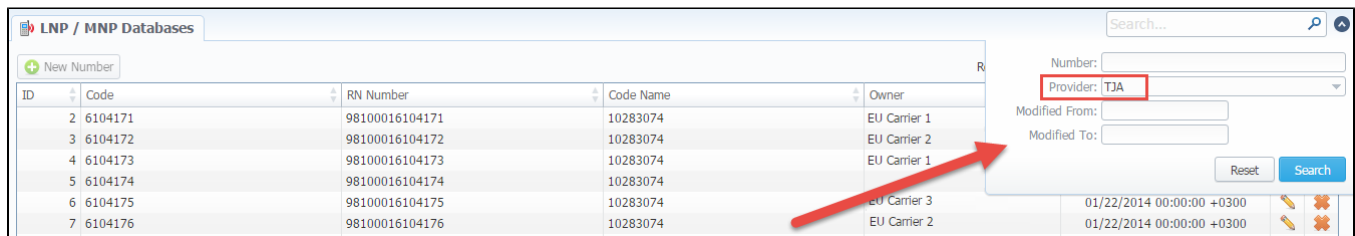


How to switch from the list of Numuri ranges to the list of TJA numbers? By default, this section shows Numuri ranges on the first page. If you want the list of TJA numbers to be shown, you need to change the filter settings in the **Quick Search** toolbar.

Quick Search tool

Use the **Quick Search** toolbar for fast investigation in this section. This tool makes a search filter to limit the search results for higher working efficiency. For example, to find ranges belonging to a certain provider. To open the advanced search settings, click on the down arrow .

Screenshot: *LNP / MNP Databases* section



The screenshot shows the 'LNP / MNP Databases' section. On the left, there is a table with columns: ID, Code, RN Number, Code Name, and Owner. The table contains 7 rows of data. On the right, there is a search toolbar with a search input field, a dropdown menu for 'Provider' (set to 'TJA'), and fields for 'Modified From' and 'Modified To'. A red arrow points to the 'Provider' dropdown menu.

LNP/MNP Configurations

To configure a download of external data, namely LNP/MNP file updates, you need to follow next steps:

- Go to the **Traffic Processing** section and open the settings of respective rule.
 - Select a convenient provider from the drop-down list of "*LNP/MNP provider*" field.
- Go to the **VoIP Gateways** section and open the settings of respective gateway.
 - Choose the *LNP/MNP provider* in the "*Gateway Type*" field .
 - Select the type (*IMAP/ Web (Numuri)*) of gateway mode in the *Files Downloader* sub-panel.



- **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**.

- Then, enable the "*LNP Files Collector*" check box and specify the type of collector.
- After completing these steps, *Files Collector* and *Files Downloader* should start the process.
 - Then, you can open the **LNP/MNP Databases** section to check LNP/MNP numbers.

Services

On this page

- [Services List](#)
- [Adding New Service](#)

This section represents a list of services for billing a limitless data of all types (calls, sms, bytes, etc.)

Services List

This section represents a list of services that are created in the system.

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	B	gB	B
2	event	SMS	sms	event	event	event	event


Adding New Service

To get started with services, click "New Service" button and fill out the next form:

Screenshot: Services section/ add form

Section	Fields Description
General Information	General information about service
	<ul style="list-style-type: none"> • Name Indicate the title of the service
	<ul style="list-style-type: none"> • Quantity Select the type of unit (i.e. time, event, data) that will measure the service
	<ul style="list-style-type: none"> • Ident Code Define ID that will be used to identify unit in the XDR

Units	<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"> • for time: <i>sec, min, hour, day</i>; • for event: <i>event</i>; • for data: <i>B, kB (1000 B), KB (1024 B), mB, MB, gB, GB</i>.
	<ul style="list-style-type: none"> • Rating Params 	Indicate the unit for extra rate params 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

To remove a service from the system, click the delete icon  from the full list.

Settings

This section is used to manage system notify messages distribution, and specifying system time and date format. The main window is presented on screenshot:

Screenshot: Settings section main window

Settings

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:		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:	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 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

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:		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:	100366	Last Invoice No used in system for generation of invoices
Autoinvoicing Default State:	to verify	Default state for all automatically created invoices.
Default invoice fields:	Country × Code Name × Rate × Minutes × Cost ×	List of fields that will be selected by default during invoices generation. Same fields will be used during auto-invoicing generation.
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 checked="" type="checkbox"/> Allow zero invoices		Enables creation of zero invoices.
CDR fields for invoices:	Call Time × Code Name × Code × DST Number × Billed Time × Rate × Cost ×	List of fields that will be selected by default when adding CDR-list to invoice. Same fields will be used during auto-invoicing generation.

RADIUS SERVER

Bind to address:		Specify your server IP addresses (separated by comma) to bind to, empty field means bind to all addresses.
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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 CDRs 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 CDRs 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:	/usr/local/20/var/lib/pgsql:30	Monitor free disk space, you can specify full path where to monitor and percent of space delimited by ":". When free space will be less than specified percent of whole disk size - system will send alert.
Message Limit for Events Config:	5	Sends all messages from one worker in single e-mail, if message count is larger than specified amount

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.
Statistics archiving delay:	1 day(s) (0 - do not archive)	Archive statistics in advance. Each day minimize time needed for backup.
Statistics rotate delay:	100 day(s) (0 - do not rotate)	Rotate statistics to archive after specified number of days.
Delete not actual rates after:	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 CDR-files after:	180 day(s) (0 - do not delete)	After what number of days already parsed and processed CDR-files should be deleted from local server.
Delete archived Inn-files after:	on day(s) (0 - do not delete)	After what number of days archived log-files should be deleted from local server.

Delete DIDs history from log after: <input type="text" value="89"/> day(s) (from 1 to 90)		Delete DIDs history from DIDs history after specified period of days.
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		



We strongly recommend that you **do not add any symbols** (for example, a slash) after a domain name.

System Settings

Timezone and default system parameters are 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 while creation of new entities (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 CDR's report and CDR's files to be rounded according to currency settings
"Enable client's panel" checkbox	Switch customer's interface on/off with one click
Default PIN length	Sets the default length of PIN-code when creating calling card series



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

Here you can 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"> • <i>Plain</i> • <i>TLS</i> • <i>SSL</i>
From	The e-mail address that will be specified as sender
Login	Login for SMTP server
Password	Password for SMTP server

Output and Import / Export

Here 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:	<input type="text" value="%m/%d/%Y"/> Output format for dates, you can check syntax for this field in the User Manual
Datetime Format:	<input type="text" value="%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:	<input type="text" value="10"/> Default number of items per page in system interfaces.
CSV Delimiter:	<input type="text" value=","/> Default delimiter used for CSV files when importing/exporting
CSV Decimal Point:	<input type="text" value=","/> What will be used as decimal separation point for numbers ("," - for most cases)
Close rates marked by:	<input type="text" value="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:	<input type="text"/> Number of digits which should be hidden in destinations number
Output Encoding:	<input type="text" value="UTF-8"/> Encoding, that will be used during exporting data to file.
Import Encoding:	<input type="text" value="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
	<ul style="list-style-type: none"> • %Y Number of the year, that consists of 4 numbers. Value example: 1999, 2005, 2010
Datetime Format	Specify datetime parameters here
	<ul style="list-style-type: none"> • %d Day of the month in numeric form. Allowed values: from 01 to 31
	<ul style="list-style-type: none"> • %m Month number. Allowed values: from 01 to 12
	<ul style="list-style-type: none"> • %Y Number of the year, that consists of 4 numbers. Value example: 1999, 2005, 2010
	<ul style="list-style-type: none"> • %H Hours in 24-hour format with leading zeroes. Allowed values: from 00 to 23
	<ul style="list-style-type: none"> • %M Minutes with leading zeroes. Allowed values: from 00 to 59
	<ul style="list-style-type: none"> • %S Seconds with leading zeroes. Allowed values: from 00 to 59
	<ul style="list-style-type: none"> • %z Timezone settings
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 <i>Rate Changes</i> 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

Invoicing settings are grouped here:

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="100000"/>	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.
Default invoice fields:	<input type="text" value="Country"/> × <input type="text" value="Code Name"/> × <input type="text" value="Rate"/> × <input type="text" value="Minutes"/> × <input type="text" value="Cost"/> ×	List of fields that will be selected by default during invoices generation. Same fields will be used during auto-invoicing generation.
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.	
CDR fields for invoices:	<input type="text" value="Call Time"/> × <input type="text" value="Code Name"/> × <input type="text" value="Code"/> × <input type="text" value="DST Number"/> × <input type="text" value="Billed Time"/> × <input type="text" value="Rate"/> × <input type="text" value="Cost"/> ×	List of fields that will be selected by default when adding CDR-list to invoice. Same fields will be used during auto-invoicing generation.

Field	Description
Invoice No Template	Default template for invoice number
Invoice Last No	Number of last issued invoice
Autoinvoicing Default State	You can set the state (such as <i>normal</i> , <i>to sent</i> or <i>to verify</i>) for all automatically created invoices
Default invoice fields	You can select the displayable fields in automatically generated invoices here. This is used by autoinvoicing feature – if you don't use the autoinvoicing, you may ignore this setting
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 <i>Code</i> with a <i>Code name</i> , and in case of finding some mismatching the system will give an alert and invoice will be not generated
"Allow zero invoices" checkbox	Allows to create invoices with zero amount
CDR fields for invoices	Select default fields that should be in CDR list which is attached to invoices

RADIUS Server

VCS RADIUS server settings can be changed here:

Screenshot: RADIUS 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="1000"/>	Listen for accounting packets on specified port
Authorization port:	<input type="text" value="1000"/>	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		

Field	Description
Bind to address	Specify your VCS server IP addresses, separated by comma to bind RADIUS to
Accounting port	Specify accounting port here (default is 1813)
Authorization port	Specify authorization port here (default is 1812)
Number of workers	Number of RADIUS workers. The value of this parameter also affects on SIP workers' number.
Max call length	Limit maximum call length in seconds

SIP Server

SIP Server settings can be changed in this sub-section. On the screenshot below you can find the following configurations:

Fields	Description
SIP Port	Specify a SIP port that system should listen to

Screenshot: SIP Server settings window

RADIUS SERVER

Bind to address:	<input type="text" value="10.10.10.10"/> <small>empty - bind to all</small>	Specify your server IP addresses (separated by comma) to bind to, empty field means bind to all addresses.
Accounting port:	<input type="text" value="1000"/>	Listen for accounting packets on specified port
Authorization port:	<input type="text" value="1000"/>	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.
<small>Changes will be only applied after you restart RADIUS server from Task Scheduler section</small>		

SIP SERVER

SIP port:	<input type="text" value="1000"/>	Listen for auth packets on specified port.
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Dynamic Routing

Dynamic routing settings can be altered here:

Screenshot: Dynamic Routing settings window

SIP SERVER

SIP port: Listen for auth packets on specified port.

DYNAMIC ROUTING

Analyze Period: minute(s) What amount of last minutes of statistics will be analyzed to build a routing table.

Log empty routes 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 are configured here:

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 CDRs 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 CDRs 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="0"/> 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"/>	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.
Message Limit for Events Config:	<input type="text" value="5"/>	Sends all messages from one worker in single e-mail, if message count is larger than specified amount

Field	Description
"Event on not found account" Checkbox	Activates/deactivates notify sending when no account was found
"Event on not found tariff" Checkbox	Activates/deactivates notify sending when no rate was found
"Event on zero time calls" Checkbox	Activates/deactivates all previous checkboxes effects when calls with zero duration were found
Resend low balance events every, hour(s)	Resend low balance notification once in a specified period
Rate changes notification period, hour(s)	Specify amount of time which needs to pass after actual rate change, so notification will be sent
Period to notify future changes, day(s)	Specify number of days, for customer to beinformed 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 notifies For example - /usr/local/:20 means that if free disk space is below 20 percent in folder /usr/local/ the notify will be sent. You can add multiple folders in this field by delimiting them with ";" sign
Message Limit for Events Config	Specify how many same type messages shall be included into single email. If generated messages number is less than specified, each message will be sent in separate email

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="1"/> 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 CDR-files after:	<input type="text" value="180"/> day(s) (0 - do not delete)	After what number of days already parsed and processed CDR-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.
Delete DIDs history from log after:	<input type="text" value="89"/> day(s) (from 1 to 90)	Delete DIDs history from DIDs history after specified period of days.

Field	Description
Delete events from log after	Here you can 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	Statistics packages rotation delay (for example, if you will enter "3" as a value here, 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 specified number of days passed
Delete parsed CDR-files after	Define when system should delete old parsed CDR-files
Delete archived log-files after	Define when system should delete archived log-files
Delete DIDs history from log after	Delete DIDs history from DIDs history after specified period of days

Backup Settings

Backup settings can be set here:

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.

Field	Description
System backup period	Period of time that 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)
Destination for backup packages	Absolute path to the folder where system backup copies will be stored <div style="border: 1px solid red; padding: 5px; margin: 5px 0;"> Warning! This folder shouldn't be within any system folders! </div>
Leave last X packages	Parameter, that specifies how many backup copies will be stored at one given time (for example, if you will enter 3 as a value here, then only three copies will be stored. When the fourth copy is added, the oldest one will be deleted)

Integration

This chapter of our Guide contains everything that relates to the **Integration** component of **JeraSoft VoIP Carrier Suite**. For more details please go to the related sections:

- [Gateways](#)
- [Number Portability](#)
- [Provisioning API](#)
- [API Testbed](#)
- [CoreAPI Docs](#)

Gateways

- [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 or CDR-files upload.

Screenshot: Gateways section main window

ID	Name	RADIUS Server	Files Collector	LNP Files Collector	Files Downloader	SIP Server
17	Gateway 1 127.0.0.1	JeraSoft VCS Common	JeraSoft VCS Common	—	—	✖
18	Gateway 2 124.12.32.12	JeraSoft VCS Common	JeraSoft VCS Common	—	—	✖
19	Gateway 3 123.23.23.12	JeraSoft VCS Common	JeraSoft VCS Common	—	—	✖

Adding New Gateway

To add a new switch, click the “New Gateway” button and specify parameters in a pop-up window with settings. You can access to the advanced settings by clicking the down arrow next to the name of respective section.

Screenshot: Adding new Gateway

GENERAL INFORMATION

Name: Gateway 1
 IP Address:
 Gateway Type: Regular
 Allowed For: Company Name, Reseller
 Service: Calls
 Tag:
 Code deck:

FILES COLLECTOR

Collector Type: JeraSoft VCS Common sec

RADIUS SERVER

Collector Type: JeraSoft VCS Common sec
 Secret:

SIP SERVER


Collector Type: Default RFC



FILES DOWNLOADER

Type: SSH Port: 22
 Login: root Password:
 From path:

Buttons: OK, Cancel, Apply

Section	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 CDR 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 label 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 current gateway.
Click the down arrow  next to the <i>General Information</i> to access advanced settings: <ul style="list-style-type: none"> • Ident Priority - a hierarchy of account identification (<i>ex.: ip,name,ani</i>) • ORIG ANI Ident - originating events ANI identification (options available: SRC number ext, SRC number bill, DST ext, DST number bill) • TERM ANI Ident - terminating events ANI identification (options available: SRC number ext, SRC number bill, DST ext, DST number bill) • "Rate ORIG events by Dst In code" check box - activation/deactivation of originating events billed by DST PARTY ID IN • "Rate TERM events by Dst Out code" check box - activation/deactivation of terminating events billed by DST PARTY ID OUT • "Rate event only with "success" status" check box - activation/deactivation of processing of event that have "success" end code. If it's activated, events with error diconnect code won't be billed 	
Files Downloader	Downloader settings
• Type	Specify port type: <ul style="list-style-type: none"> • SSH • FTP • IMAP - mail mode to download files. • Web (Numuri) - web mode to download files
• Port	Specify port for SSH or FTP
• Login	Gateway server login (default value is "root")
• Password	Password for FTP connection, IMAP mailbox and Numuri web service. For SSH you have to create SSH-keys.
• From path	Specify CDR-files path (mask paths are allowed)
• Sender Match	Indicate the sender name or email
• Subject Match	Use a regular expression to search by message titles

Files Collector	<i>File Collectors</i> gather event data from CDR-files (activate this option if you plan to use integration via CDR-files)	
	Collect or Type	Which collector type should be used
<p>Click the down arrow  next to the <i>Files Collector</i> 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 CDRs-file and use current value) • "Skip Zero Events" check box - activation/deactivation of zero duration events ignoring • "Skip Released Events" check box - activation/deactivation of released events ignoring 		
RADIUS Server	<i>RADIUS Collectors</i> gather packets from RADIUS-server via RADIUS-protocol (activate this option if you plan to use integration via RADIUS-protocol)	
	Collector Type	Which collector type should be used
	Secret	RADIUS-server password
<p>Click the down arrow  next to the <i>RADIUS Server</i> 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 CDR file and use current value) • "Track Active Events" check box - 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" check box - activation/deactivation of zero duration events ignoring • "Skip Released Events" check box - activation/deactivation of released events ignoring • "Collect Accounting Data" check box - 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. 		
SIP Server	Allows acceptance of SIP packets from current gateway. Required for SIP Redirect routing feature	
	Collector Type	Which collector type should be used
LNP Files Collector	This collector processes downloaded LNP/MNP files and stores them in the database. It's accessible when you select the <i>LNP/MNP</i> type of gateway.	
	Collector Type	The kind of collector that should be used for a respective gateways

Files Downloading History

To view files downloading history, open the *"Downloads History"* tab. Also, you can remove files from the list by selecting them and clicking the *"Delete"* button on the toolbar.

Knowledge Base Articles

- [How to set up a functional capacity?](#)
- [How to add a new gateway to VCS?](#)

Number Portability

On this page

- [Number Portability Ranges List](#)
- [Creating New Range/Number](#)
- [Quick Search tool](#)
- [LNP/MNP Configurations](#)

Number Portability Ranges List

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 does to work?

TJA: During translation of the call, it 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 verifying with Numuri ranges and it applies a dynamic tag (owner's name) to the call for further billing.

To open this section, go to the **Integration Number Portability** section and proceed with creating a new range or number.

Screenshot: Number Portability

ID	Range Start	Range End	Owner	Modification Date
1	111	222	Client 1	07/11/2017 12:00:00 +0000
2	333	444	Client 2	07/11/2017 12:00:00 +0000

Apart from Numuri and TJA, **JeraSoft VCS** is integrated with these providers:

1. **Broadvox**
2. **Vera Networks**
3. **PCT**

Therefore, you can configure the translation with and one of these providers be following these steps:

- open the *Traffic Processing* section, create a rule for 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

Type: VoIP Gateway:
 Client: Account:
 Code: Code Name:
 Src Match: Src Replace:
 Dst Match: Dst Replace:
 Tags Match: Tags Add:
 Order: LNP / MNP Provider:

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

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="border: 1px solid yellow; padding: 5px; margin-top: 10px;">  Further, the owner's name will be applied to the call as tag (for example, EU Carrier 1) for billing the call. </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

✔ How to switch from the list of Numuri ranges to the list of TJA numbers?

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



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.



- **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

- [Creating New Handler](#)
- [Execution Logs tab](#)
- [Quick Handler Search](#)

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, allow or forbid the action or simply process given event.

For detailed information about [Provisioning API](#) functionality, go to the [APIs](#) section of your User Guide.

To configure handlers and check their call log, go to the **Integration Provisioning API**.



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	Example 1	Before Clients Create	script /vcs/script.py
2	1	Example 2	After Clients Custom Fields Update	script /vcs/script.py
3	2	Example 3	After Clients Balance Became <= 0	http 127.0.0.1:5000/api
4	1	Example 4	Before Clients Create	http 127.0.0.1:5000/api

Column Name	Description
ID	Handler's identification number
Status	State of the handler: <i>enabled/disabled/archived</i>
Priority	Order of importance to perform handlers
Name	Handler's title
Event	Description of the event and performance period (<i>before/after</i>) 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)

Icon	Description
	Is used to identify a disabled state of handler
	Is used to identify an enabled state of handler
	Is used to quick open of execution logs tab
	Is used to delete a handler from the system




1. Click the *status icon*  to quickly update the state of the handler.
2. To view the details of handlers' performance, click the *logs icon*  from the full list of the section.

Creating New Handler

To start with provisioning, you need to create a handler manually. Click the "New Handler" button on the toolbar to add it. Then, specify respective parameters.

Screenshot: Provisioning section/Handler adding form

Section	Fields Description
General Information	General information about handler
• Name	Specify a particular title for the handler
• Event	Select an action and the period (before/after) that a handler should be run <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 "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.
• Task	Determine a type of handler and details: <ul style="list-style-type: none"> • script - here you need to specify the path where a following script is located, for example: <code>user/local/vcs/script.py</code>. • http:// - here specify the port and method, for example: <code>120.0.0.1:5000/api</code>.
• Status	Choose the state of the handler: <ul style="list-style-type: none"> • enabled - select it to make a handler active; • disabled - select it to unnable a handler; • archived - select it to archive a handler.
• Priority	Establish an order of handler performing. <i>Note: The handler with 1 priority will precede all other handlers in order.</i>

 **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`.

```
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"**.

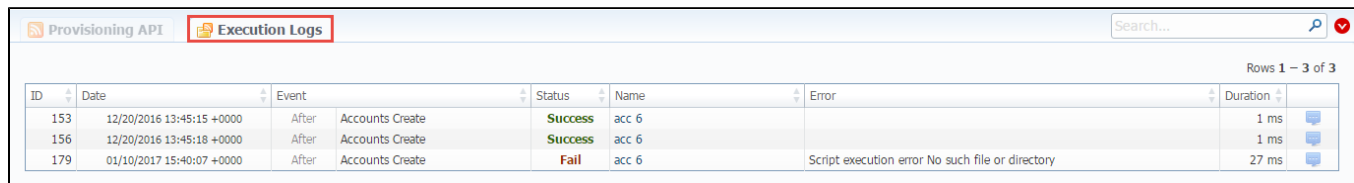
Find below an example of the http:// handler:

```
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()
```

Execution Logs tab


You can access the details about handler execution in this tab. Here there is a list of logs with handler's status, execution duration, errors and date, information that the billing sends via handler.


Screenshot: List of execution logs



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	Particular period of time
Event	Details of the handler type and event
Status	State of the handler: <i>success/fail</i>
Name	Title of the handler
Error	Description of the event
Duration	Period of time during which the handler was performing
Icon 	Details icon for access to an additional information about handler performance

When you click the *Details icon* , a new window with a description of respective handler execution appears (see screenshot below). This window contains an information that the billing sends via handler.

Click this icon  to expand logs.

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
}
                
```



 For example, logs for handlers with "before" type of event will only show modified data.

Quick Handler Search

Use the **Quick Search** toolbar for fast investigation in this section. This tool makes a search filter to limit the results for higher working efficiency. For example, to find handlers by the status or event. To open this form click on the down arrow .

Screenshot: Provisioning section/quick search toolbar

The screenshot shows the 'Provisioning API' interface with a table of handlers and a search toolbar. The table has columns for ID, Priority, Name, Event, and Handler. The search toolbar includes a search input field, a search icon, and dropdown menus for Event Type, Event, Handler Type, and Status. A red arrow points to the search toolbar.

ID	Priority	Name	Event	Handler
1	1	Example 1	Before Clients Create	script /vcs/script.py
2	1	Example 2	After Clients Custom Fields Update	script /vcs/script.py
3	2	Example 3	After Clients Balance Became <= 0	http 127.0.0.1:5000/api
4	1	Example 4	Before Clients Create	http 127.0.0.1:5000/api

✔ To effective search, use an asterisk * for the next fields: *Name, Task, Data, Error*.

⚠ Please note, the Provisioning functionality is experimental and may be changed completely in future releases.

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, 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 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: [ ]
  }
}
    
```



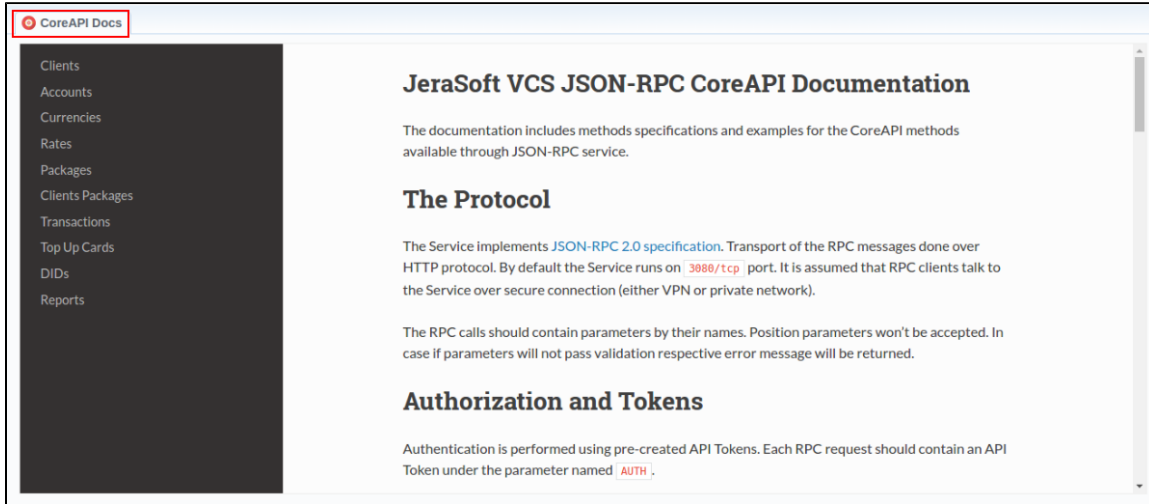
1. **API Testbed allows only to test Management API, not CoreAPI.**
2. If the user has access to delete gateways via *API Testbed*, he can **remove all gateways regardless of which Reseller owns a respective gateway.**

CoreAPI Docs

This section contains overall information describing CoreAPI as 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 article "[CoreAPI](#)" in APIs section of our User Guide.

System

This section of our Guide contains everything that relates to the *System* tab of JeraSoft VoIP Carrier Suite. For more details please go to the related subsections:

- [Events Log](#)
- [Audit Log](#)
- [Mail Queue](#)
- [System Status](#)
- [Task Scheduler](#)
- [Users](#)
- [Roles](#)

Events Log

On this page

- [Events Log Section Main Window](#)
- [Configuration Section Tab](#)

Events Log Section Main Window

This section displays the list of all events recorded by the system. Examining the events in these logs can help to trace activities, errors and alert notifications.

Screenshot: Events Log section main window

ID	Type	Sender	Date	Message
281694	Message	RADIUS Server	03/24/2016 15:23:41 +0000	clearing active calls table (1 rows hanged, longer than 7200 seconds)
281693	Alert	RADIUS Server	03/24/2016 13:23:41 +0000	Got 4 packets / 0.07 pps / 19.26 Kb in buffer for last minute
281692	Message	RADIUS Server	03/24/2016 13:03:33 +0000	clearing active calls table (4 rows hanged, longer than 7200 seconds)
281691	Message	RADIUS Server	03/24/2016 13:01:33 +0000	clearing active calls table (2 rows hanged, longer than 7200 seconds)
281690	Alert	RADIUS Server	03/24/2016 11:13:28 +0000	Got 2 packets / 0.03 pps / 19.26 Kb in buffer for last minute
281689	Alert	Calculator	03/24/2016 11:13:00 +0000	calculation (119.80 rpm) - total: 2, summary (119.80 rpm) - total: 2
281688	Message	Calculator	03/24/2016 11:12:59 +0000	no cdrs for processing
281687	Alert	Calculator	03/24/2016 11:10:50 +0000	calculation (652.89 rpm) - total: 11, summary (178.06 rpm) - total: 3
281686	Message	Calculator	03/24/2016 11:10:49 +0000	no cdrs for processing
281685	Alert	Calculator: Accounts	03/24/2016 11:10:48 +0000	can not identify TERM client - ip: "None" / name: "None" / ani: "9739" from CDR #1
281684	Message	Task Scheduler	03/24/2016 11:10:28 +0000	Starting tool "xmlrpcd"
281683	Message	Task Scheduler	03/24/2016 11:10:27 +0000	Starting tool "xml_collector"
281682	Error	Task Scheduler	03/24/2016 11:10:27 +0000	Task "files_downloader" returned message:
281681	Message	Task Scheduler	03/24/2016 11:10:26 +0000	Starting tool "files_downloader"
281680	Alert	Cache Manager	03/24/2016 11:10:26 +0000	Cache was generated in 0.2927 sec
281679	Message	Task Scheduler	03/24/2016 11:10:25 +0000	Starting tool "cache_manager"
281678	Error	Calculator	03/24/2016 11:10:24 +0000	Cache is too old - check cache manager
281677	Message	Task Scheduler	03/24/2016 11:10:24 +0000	Starting tool "calculator"
281676	Message	Task Scheduler	03/24/2016 11:10:23 +0000	Starting tool "rates_notificator"
281675	Alert	Factors Watcher	03/24/2016 11:10:23 +0000	"FOXFACORWATCHER" alert: [time_total = 0.0]

There are few types of events:

Event	Description
	Errors
	Alerts
	Messages


In *Sender* row you can view the name of the system sender module (module, that sent the event).

Main window displays general list of events by default. You can filter them by types or groups by using search panel tools.

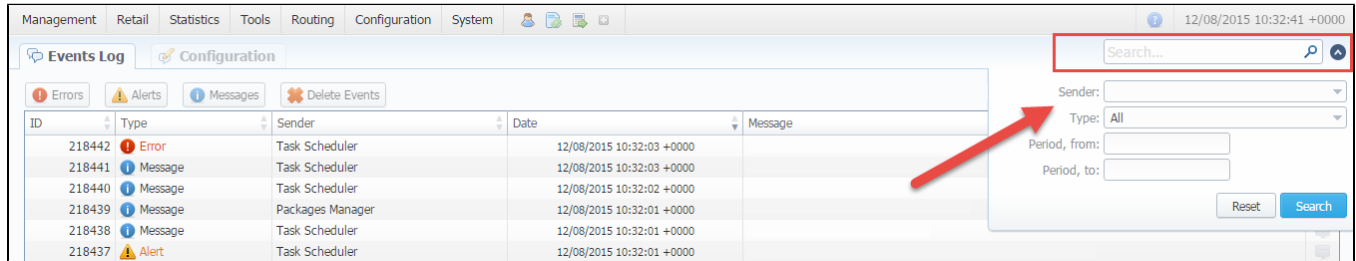
For example, system records following events:

- incoming or outgoing call client that is not registered within the system;
- phone number prefix not registered within system;
- incoming call price that is more than outgoing call price;
- incoming or outgoing call that was rejected;
- etc.

Warning! When you click the "Delete Events" button, all events that satisfy current search query will be deleted from the system!

You can find the built-in **quick search toolbar** that provides an easy way of searching against multiple rows. Click the down arrow  on the toolbar to use the advanced settings.

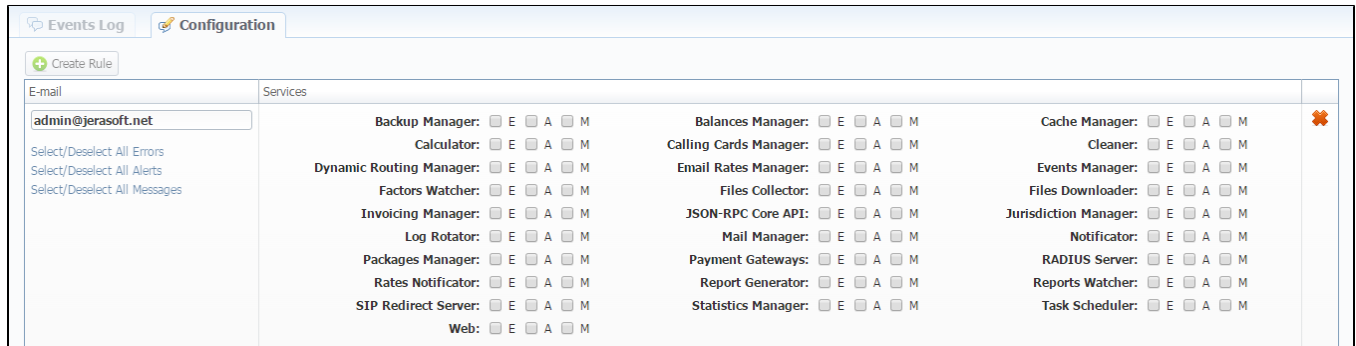
Screenshot: Events Log section/ Search panel



Configuration Section Tab

This section is used to inform system's users about all recorded events.

Screenshot: Configuration section tab main window



You may choose group and type of event, and specify an e-mail address to which notifications of the chosen type will be sent. You can add new set of empty fields by clicking the "Create Rule" button. You can confirm current configuration of events by clicking the "Update" button.

Audit Log

Audit Log List

This section displays detailed information concerning all actions performed by users in VCS with *Clients, Resellers, Accounts, Calling Cards* (see screenshot below):

Screenshot: Audit Log section main window

Modification Time	Item	Action	Changes	DB Action	User	Context
12/25/2014 14:15:27 +0000	Vendor A	Client Modification	Orig Rate Table ID: 43 Routing Plan ID: 3	UPDATE	Administrator	Web
12/25/2014 14:15:24 +0000	Vendor A	Client Creation	ID: 113 Reseller ID: 14 Name: Vendor A	INSERT	Administrator	Web
12/25/2014 14:03:14 +0000	Client1	Client Modification	Client Panel: true Login: client Password: 62608e08adc29a8d6bc9754e659f125	UPDATE	Administrator	Web
12/25/2014 14:01:47 +0000	Cl_for_rates_analysis_2	Client Removal	Status: deleted ← active	UPDATE	Administrator	Web
12/25/2014 14:00:26 +0000	Client A	Client Modification	Groups: Customers	UPDATE	Administrator	Web
12/25/2014 14:00:26 +0000	Client A	Client Modification	Groups: Customers	UPDATE	Administrator	Web

Column	Description
Modification Time	Data and time of made actions or modifications
Item	The list of objects which were modified
Action	The list of made actions: creation, modification or removal
Changes	The list of changes and detailed information on what exactly were changed
DB Action	Actions made in database
User	This column shows the user name by whom manipulations were made
Context	In what way manipulations were made, i.e. using Web interface or API

Quick Search toolbar in *Audit Log section* main window helps in finding items and actions made over item (for instance, make filtration by clients which were modified etc.). To open this form click on button.

Screenshot: Quick Search form

Modification Time	Item	Action	Changes	DB Action	User	Context
10/09/2014 09:51:09 +0000	Customer A	Client Modification	Orig Rate Table ID: 43 Routing Plan ID: 4			
10/09/2014 09:50:59 +0000	Customer 1	Client Removal	Status: deleted ← active			
10/09/2014 09:47:35 +0000	Customer 1	Client Creation	Orig Rate Table ID: 43 Routing Plan ID: 4	INSERT	demo	Web
10/09/2014 09:46:43 +0000	Customer A	Client Creation		INSERT	demo	Web
10/09/2014 09:39:28 +0000	Client1	Client Modification	Allowed Credit: 50.00 ← 10.00	UPDATE	demo	Web

Using this tool, you can find logs separately corresponding to a respective action (*creation/modification/removal*) or according to context elements (*Clients/Accounts/Calling Cards/Rate Tables/Invoices*).

In the case when a client, reseller etc. was fully deleted, there is a possibility to see a state of this object at the time of its removal, so called *Historic State*, by clicking on its name in *Item* column respectively.

Screenshot: Historic State window

Historic State
test_client

SYSTEM INFORMATION

Name:

Reseller:

Currency:

Timezone:

Status:

Groups:

Tax Profile:

Bill Calls by:

Hidden Numbers

CLIENT PANEL

Login:

Password:

Access:

TERMINATOR SETTINGS

Rate Table:

Capacity: channels

ORIGINATOR SETTINGS

Allowed Credit: DKK

Payment Terms:

Rate Table:

Routing Plan:

Capacity: channels

LOW BALANCE NOTIFICATION

Notify Client: DKK

Notify Admin: DKK

AUTOINVOICING

Template:

Last Invoiced:

RATE NOTIFICATION

Format:

Notify type:

COMPANY INFO

Name:

Main E-mail:

NOC E-mail:

Billing E-mail:

Rates E-mail:

Address:

Tax ID:

Reg ID:

Account Details:

Locale:



If you change the **mail templates** in the **Reseller settings**, these updates will not be displayed in the *Audit logs*.

Mail Queue

Mail Queue section displays all system e-mails that were already sent or are waiting to be sent. Main window may look like on the screenshot below:

Screenshot: Mail Queue section main window

ID	To	Subject	Type	Created
253	Orig_o_client mail@site.com	Rates notification from Company Name	Rates Notificator	06/24/2016 16:40:53 +0000
252	Orig_o_client mail@site.com	Rates notification from Company Name	Rates Notificator	06/24/2016 16:36:24 +0000
251	Orig_o_client mail@site.com	Rates notification from Company Name	Rates Notificator	06/24/2016 16:35:38 +0000
250	Orig_o_client mail@site.com	Rates notification from Company Name	Rates Notificator	06/24/2016 16:33:50 +0000
249	Orig_o_client mail@site.com	Rates notification from Company Name	Rates Notificator	06/24/2016 16:32:19 +0000
248	Orig_o_client mail@site.com	Rates notification from Company Name	Rates Notificator	06/24/2016 16:31:24 +0000

✔ These can be invoices, low balance notifications or other types of messages system sends in form of e-mails.

Quick Search toolbar

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

Search... 🔍

Client:

Type:

Status:

Reset Search

Name	Description
Client	Type the name of client that you want filter by
Type	Select the type of mail: <ul style="list-style-type: none"> • <i>invoice</i> • <i>notify (before)</i> • <i>notify (after)</i> • <i>low balance</i> • <i>reports watcher</i> • <i>rates notificator</i>
Status	Choose a state of mail: <ul style="list-style-type: none"> • <i>in queue</i> • <i>sent</i>

System Status

This section displays all currently launched system services, system load info and current system database sessions of the main server. In addition, this section displays the status of *Redundancy and Reporting servers* (see screenshot below):

Screenshot: System Status section main window

System Status
MASTER

LOCALHOST

CPU: **1 Core(s)**
 LA: **0 / 0.01 / 0**
 Memory: **1.83 GB / 1.54 GB**
 Services: **4**

ID	Service	Started on	Uptime		
24051	RADIUS Server	12/23/2014 23:01:19 +0000	17:40:08		
24152	SIP Redirect Server	12/23/2014 23:01:26 +0000	17:40:01		
24191	Calculator	12/23/2014 23:02:02 +0000	17:39:24		
23864	XML-RPC Server	12/23/2014 23:01:04 +0000	17:40:22		

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
10993	webAdmin/demo/system_status/info:...	12/24/2014 16:41:26 +0000	12/24/2014 16:41:26 +0000	00:00:00	SELECT *, (row()-backend_start) AS duration FROM pg_stat_activity WHERE TRUE AND 'datname' = 'vcs' AND 'username' = 'vcs' ORDER BY 'duration' ASC
10992	Calculator	12/24/2014 16:41:26 +0000	12/24/2014 16:41:26 +0000	00:00:00	SELECT 1
24207	Calculator	12/23/2014 23:02:02 +0000	12/24/2014 16:41:26 +0000	17:39:24	IDLE
24206	Calculator	12/23/2014 23:02:02 +0000	12/23/2014 23:02:02 +0000	17:39:24	IDLE
24205	Calculator	12/23/2014 23:02:02 +0000	12/23/2014 23:02:02 +0000	17:39:24	IDLE
24204	Calculator	12/23/2014 23:02:02 +0000	12/23/2014 23:02:02 +0000	17:39:24	IDLE
24203	Calculator	12/23/2014 23:02:02 +0000	12/23/2014 23:02:02 +0000	17:39:24	IDLE
24197	Calculator	12/23/2014 23:02:02 +0000	12/24/2014 16:41:26 +0000	17:39:24	IDLE
24190	Task Scheduler	12/23/2014 23:02:02 +0000	12/23/2014 23:02:02 +0000	17:39:24	IDLE
24158	SIP Redirect Server	12/23/2014 23:01:26 +0000	12/23/2014 23:01:26 +0000	17:40:00	IDLE
24157	SIP Redirect Server	12/23/2014 23:01:26 +0000	12/23/2014 23:01:26 +0000	17:40:00	IDLE
24154	SIP Redirect Server	12/23/2014 23:01:26 +0000	12/24/2014 16:40:57 +0000	17:40:00	IDLE
24059	RADIUS Server	12/23/2014 23:01:19 +0000	12/23/2014 23:01:19 +0000	17:40:07	IDLE
24058	RADIUS Server	12/23/2014 23:01:19 +0000	12/23/2014 23:01:19 +0000	17:40:07	IDLE
24057	RADIUS Server	12/23/2014 23:01:19 +0000	12/23/2014 23:01:19 +0000	17:40:07	IDLE
24053	RADIUS Server	12/23/2014 23:01:19 +0000	12/23/2014 23:01:19 +0000	17:40:07	IDLE
23866	XML-RPC Server	12/23/2014 23:01:04 +0000	12/23/2014 23:01:04 +0000	17:40:21	IDLE

Localhost table columns description is following:

Column	Description
ID	System service ID
Service	Name of system service
Started on	Service start date
Uptime	Service current uptime

By using button the service is started, with button it is restarted, and with button service is stopped.

Master Database Sessions table columns description is following:

Column	Description
ID	Database session ID
Application	Name of the application
Session Start	Session start date
Query Start	Query start date
Duration	Session duration
Query	Query description

You can kill any of current sessions by pressing button.

Task Scheduler

On this page

- [Task Scheduler](#)
- [Cache Manager](#)

Task Scheduler

This section represents a task scheduler to manage system utilities (see screenshot below):

Screenshot: Task Scheduler section main window

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	

Utility	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
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)
Notificator	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

Cache Manager

Cache Manager is rather specific tool, because it continuously monitors and includes client-related changes for RADIUS and SIP Redirect (among other things). That tool is listed among others in Task Scheduler.

So, the tip regarding *Cache Manager* is following: 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 it's 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.

Users

On this page

- [Users List](#)
- [Adding New User](#)

Users List

This section displays system's registered users, see a screenshot below:

Screenshot: Users list main window

Active	Login	Reseller	Full name	Role
●	User A	Company Name	User A	Administrator
●	User B	Company Name	User B	Call Shop Manager
●	User C	Company Name	User C	Resellers

Column	Description
Active	Users status
Login	Users accounts name
Reseller	Owners to whom users belong
Full name	Mailto links of users
Role	User role that determines the access level or permissions

Adding New User

You can add new user by clicking the "New User" button. Then, in pop-up window, you need to specify login, password, user's full name, e-mail, and configure his access rights (so called "roles") .

Don't forget to specify a reseller that this user will represent. By doing so you will allow new user to see and manipulate only clients, rate tables and other specific data that belong to specified reseller and his agents (for example, if you create client under Reseller A, which already has Agent A under him, this user will only see clients that belong to Reseller A and Agent A etc).

Click "OK" to add new user.

Screenshot: Adding new user window

Field	Description
Login	Specify a user login.
Password	Define a password
Role	Select a role for a user from drop down list
"Disabled" checkbox	Check if you need to temporary restrict access to the system for a user
Full name	Enter a user name. Please note that <i>"Full name"</i> is a mailto link displayed in <i>"Users"</i> section
E-mail	Specify a user e-mail
Reseller	Select a reseller for a user
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



Tip 1: Each user can have only one assigned role for.

Tip 2: We strongly recommend avoiding non-latin characters in login/passwords at the creating of users.

Roles

On this page

- [Roles List](#)
- [Adding New Role](#)
- [Knowledge Base Articles](#)

Roles List

This section allows to specify access rights for different sections of the system (see screenshot below):

Screenshot: Roles section main window

Name	
Accounting	
Administrator	
Call Shop Manager	
Call Shop Operator	
Monitoring	
Resellers	

Adding New Role


To add a new role, click the "New Role" button on the toolbar. A new window with role settings appears and you need to enter the name, choose the default module and select respective access rights for sections in *Access Permissions* table.



The "Default Module" field specifies a default section, that will be displayed when you login 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 than it.

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 read permission
Write	Allows / forbids edit permission
Execute	Allows / forbids system services execution
Full Delete	Allows / forbids full delete permission
Billing data	Allows / forbids billing data permission

-  **Tip:** System has 5 pre-installed roles:
- **Administrator** – has all access permissions;
 - **Monitoring** – has access permissions with ability to monitor them. Also doesn't have access to technical settings and some statistic info that is only available to Administrator;
 - **Resellers** – has access permissions to productively work with its clients. 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).
 - **Call Shop Manager** – has access permissions to work with call shops, clients, packages and rate tables.
 - **Call Shop Operator** – has access permissions to work with call shops and summary/CDRs reports, see rate tables.

 Please note, that the **Parent Reseller** has access to all information of his **Sub-Resellers**, can assign **any routing plan and rate table** to them.

 The 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](#)
 - [Firewall Settings](#)
- [Panel Access](#)
- [Panel Deployment](#)
 - [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 the 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.



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.

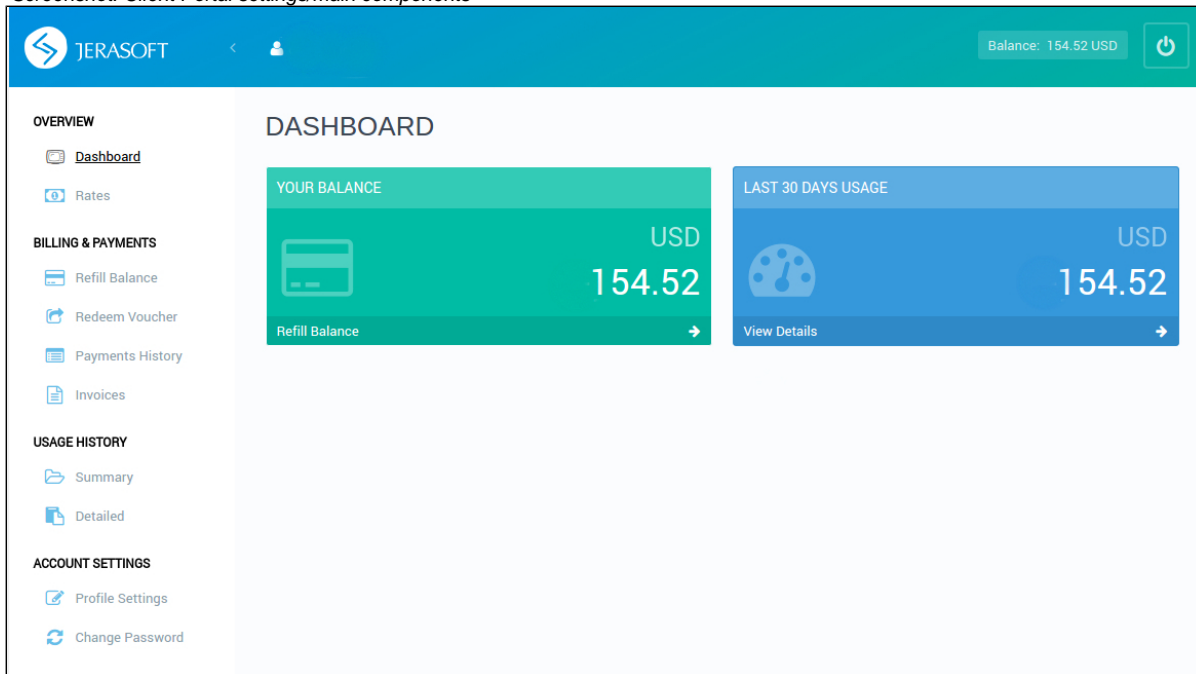
3. Full Open Sourced

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.
2. Go to the `usr/local/vcs/www/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`

Below we provide description of all settings you can find in the file. You can also find sample configuration with all available settings at:

`/usr/local/vcs/www/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.clientId	PayPal Client ID	
paypal.clientSecret	PayPal Client Secret Key	
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. The "Access" field is deprecated and will be removed in further versions.

Screenshot: Clients section/Client Info tab

The screenshot shows the 'Client Info' configuration page. The 'CLIENT'S PANEL' section is highlighted with a red border and contains the following fields:

- CLIENT'S PANEL
- Login:
- New Password:
- Access:

Panel Deployment

As mentioned above, JeraSoft Client Portal is offered 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.

Client Portal Support

Please note, that 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 `/usr/local/vcs/www/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



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](#).



Please Note!

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.



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.



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"
    }
  }
]
```



You can access the user's CoreAPI token in his edit form, go to the *System Users* section.

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.



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 based on **http:// handler** usage.

2. Open the **Provisioning section** and start to create a handler.
 1. 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



If you need to process some of the actions that are not listed here, contact our support for a feature request.



For more information about **configuring and monitoring of hooks for Provisioning API**, visit our *User Guide* [System Provisioning API](#).

Management API

On this page

- [Access the API](#)
- [Authentication](#)
- [API Request](#)
- [API Response](#)
- [Work with files](#)
- [Examples: Pure XML-RPC](#)
- [Examples: Pure JSON-RPC](#)
- [Examples: PHP Library](#)
- [Examples: Python Library](#)
- [Methods Reference](#)

The **Management API** allows you to easily integrate 3rd party applications with VCS platform. It may be accessed using either [XML-RPC](#) or [JSON-RPC](#). Both are fairly standard protocols for remote procedure calls.

Most programming languages have libraries to work with any of these protocols. The API uses the same logic as the web interface and works very similar, which makes its usage easier.

Access the API

To access **XML-RPC** interface use:

```
https://<your-system-IP>/xmlrpc/
```

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](#).



Starting from the VCS 3.13, **the XML-RPC protocol will be considered as deprecated**. We strongly recommend using the **JSON-RPC** protocol that provides the same functionality. Please note, the support of the XML-RPC protocol will be completely removed in the VCS 3.14.

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	<code>clients.editForm</code>
Arguments	List of arguments for the method call	<code>id_clients = 11</code> <code>auth[login] = admin</code> <code>auth[password] = password</code>

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	<code>[client] => Array</code> <code>(</code> <code> [id] => 11</code> <code> [id_companies] => 3</code> <code> [type] => 0</code> <code> [name] => Customer A</code> <code> [groups] => Customers</code> <code> [c_dt] => 2013-03-30 16:26:15+03</code> <code> [status] => active</code> <code> [credit] => 100</code> <code> ...</code> <code>)</code>
session_id	Session ID which may be used to speed up next calls	1-dsglnqr4qnsdihr8djj6da7qr4
messages	List of success / warning messages returned by message	<code>array()</code>
errors	List of abnormal errors if they fired during processing	<code>array()</code>

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 XML-RPC or 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 XML-RPC

XML-RPC Request

```

<?xml version="1.0" encoding="iso-8859-1"?>
<methodCall>
<methodName>clients.editForm</methodName>
<params>
<param>
<value>
<struct>
<member>
<name>id_clients</name>
<value>
<int>11</int>
</value>
</member>
<member>
<name>auth</name>
<value>
<struct>
<member>
<name>login</name>
<value>
<string>admin</string>
</value>
</member>
<member>
<name>password</name>
<value>
<string>password</string>
</value>
</member>
</struct>
</value>
</member>
</struct>
</value>
</param>
</params>
</methodCall>

```

XML-RPC Response

```

<?xml version="1.0" encoding="utf-8"?>
<methodResponse>
<params>
<param>
<value>
<struct>
<member>
<name>code</name>
<value>
<boolean>1</boolean>
</value>
</member>
<member>
<name>session_id</name>
<value>
<string>1-dsglnqr4qnsdihr8djj6da7qr4</string>
</value>
</member>
<member>
<name>messages</name>
<value>
<array>
<data/>
</array>
</value>

```



```

</member>
<member>
  <name>return</name>
  <value>
    <struct>
      <member>
        <name>client</name>
        <value>
          <struct>
            <member>
              <name>id</name>
              <value>
                <int>11</int>
              </value>
            </member>
            <member>
              <name>name</name>
              <value>
                <string>Customer A</string>
              </value>
            </member>
            <member>
              <name>groups</name>
              <value>
                <string>Customers</string>
              </value>
            </member>
            <member>
              <name>c_dt</name>
              <value>
                <string>2013-03-30 16:26:15+03</string>
              </value>
            </member>
            <member>
              <name>status</name>
              <value>
                <string>active</string>
              </value>
            </member>
            <member>
              <name>credit</name>
              <value>
                <double>100</double>
              </value>
            </member>
          </struct>
        </value>
      </member>
    </struct>
  </value>
</member>
</params>
</methodResponse>

```

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 you 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.



The JeraSoft team may modify the attributes and methods related to the Management API usage from time to time without advance notice.