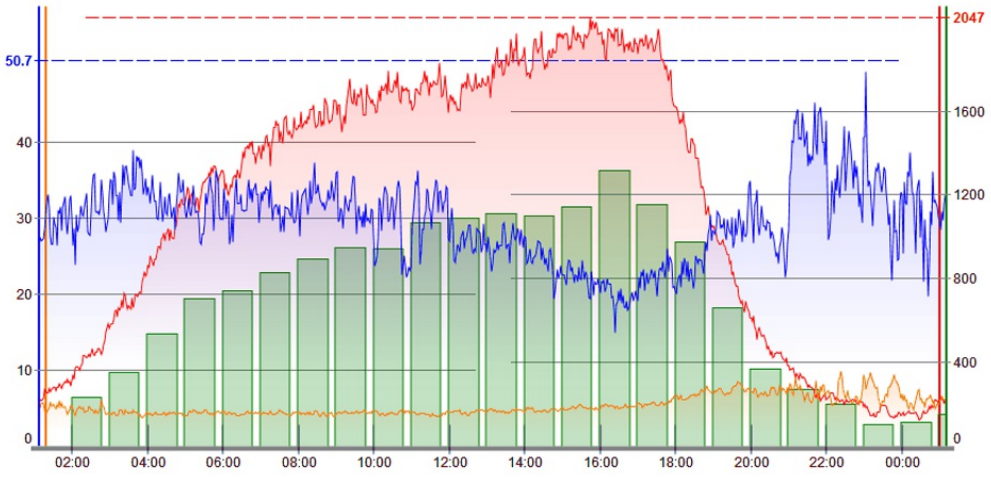
Rate management



User manual

Product version: 2.3

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1. Introduction

5gVision Rate management system (RMS) is part of the 5gVision suite of products for monitoring, alerting, packet sniffing, rate management, routing, and billing that share a common web interface: quick, intuitive, and flexible.

1.1. Overview

The **Rate management** allows you to import into 5gVision all Vendor rates that are coming to your emails as attachments, or import rate files manually. Imported Vendor rates then can be uploaded to a billing system or exported as a .csv file.

The whole scenario of the Vendor rates import is as follows:

- Contact 5gVision support to set up the access of 5gVision to the email account, which is used for receiving the rate notifications. We can use your email or set up our own mail box where you can forward all incoming messages with attached rate adjustments.
- 5gVision will monitor this mail box for the incoming mail. If the System encounters an email with an XLS (XLSX) or CSV attachment, this attachment will be taken for further processing. The System is also able to unzip the attached archives to search for XLS (XLSX) and CSV files in them.
- 5gVision processes the extracted files trying to determine the type and content of each column in the file automatically.
- Once original file processing is complete, the results of rate recognition may go through several steps for you to view them in a convenient form and manually adjust them, in case you feel they require some polish. These steps are linked to the following screens:
    - Inbox - here you can see all automatically processed emails or manually loaded rate sheet files.
    - Parsing log - here you can see all parsed rate sheets and alter the way 5gVision matches columns in them.
    - Import edit - here you can edit the results of column matching made in the Parsing log screen.
    - Compare - here you can see what was changed in the file being processed as compared to the already existing rate plan.
    - Final check - here you can make some final edits to those rates only that are about to be changed.

  You may skip some of the steps if you consider them unnecessary.
- Once all adjustments are made, the resulting rates may be imported into the Main RateVend table and used for profit calculation. You may as well export the resulting parsed rates to CSV files in any format, adding extra columns that you need, etc. These CSV files can then be loaded to your switch or a billing system you use.

It is also possible to start rate file processing manually either by clicking the Import rate file button and choosing a file from your hard drive, or by dragging and dropping the required file from your hard drive onto the browser window. This will let you skip the email part and get straight to file parsing and column recognition.

The **Rate management** module has all needed facilities to generate, manage and analyse Customer rates daily.

2. Rate plans

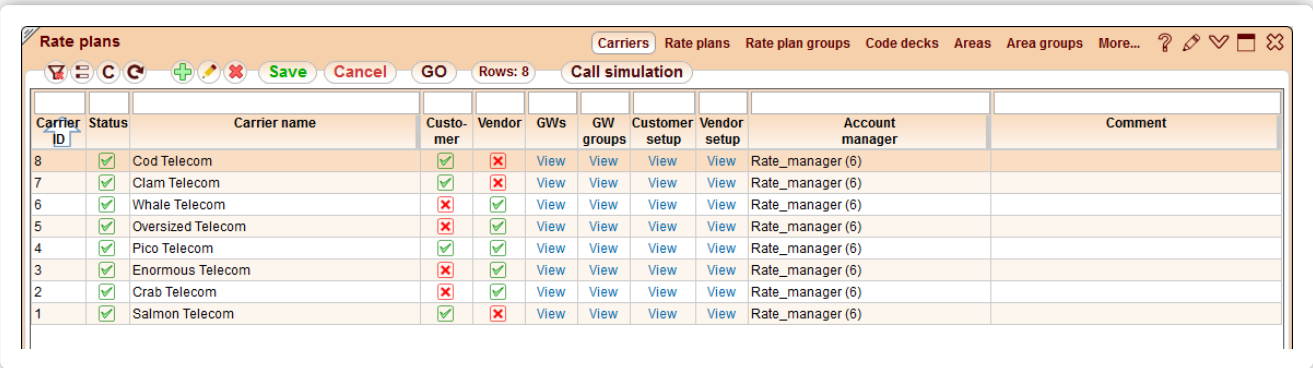
*The **Rate plans** screen contains general information for Customer and Vendor rate plans.*

2.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

2.2. Carriers

The **Carriers** table contains Customers and Vendors which you interconnect to.

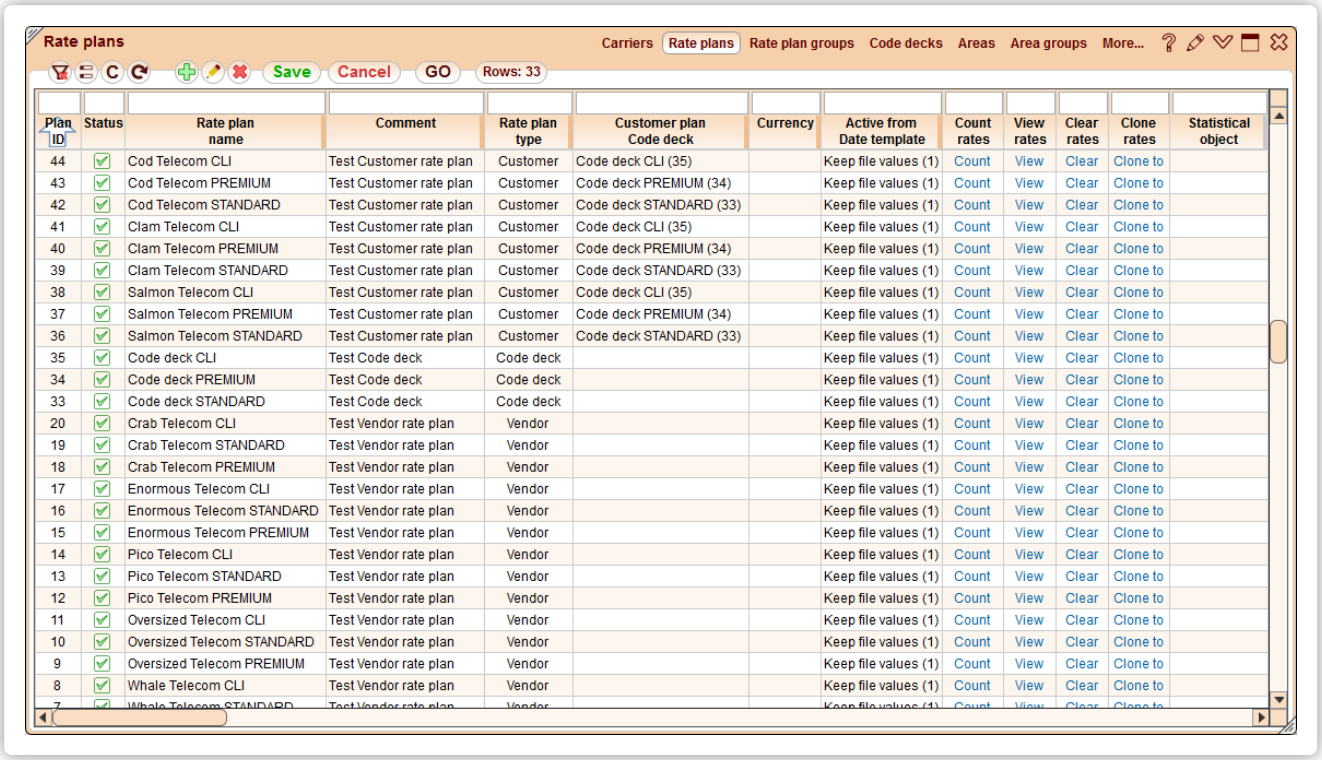


Carrier ID	Status	Carrier name	Customer	Vendor	GWs	GW groups	Customer setup	Vendor setup	Account manager	Comment
8	☑	Cod Telecom	☑	☒	View	View	View	View	Rate_manager (6)	
7	☑	Clam Telecom	☑	☒	View	View	View	View	Rate_manager (6)	
6	☑	Whale Telecom	☒	☑	View	View	View	View	Rate_manager (6)	
5	☑	Oversized Telecom	☒	☑	View	View	View	View	Rate_manager (6)	
4	☑	Pico Telecom	☑	☑	View	View	View	View	Rate_manager (6)	
3	☑	Enormous Telecom	☒	☑	View	View	View	View	Rate_manager (6)	
2	☑	Crab Telecom	☒	☑	View	View	View	View	Rate_manager (6)	
1	☑	Salmon Telecom	☑	☒	View	View	View	View	Rate_manager (6)	

A carrier may be only a customer, only a vendor or a customer/vendor at the same time. You can assign a responsible **Account manager** to a carrier. He will receive email notifications for rate imports and amendments if configured. The **Call Simulation** button, the columns **GWs**, **GW groups**, **Customer setup** and **Vendor setup** links are intended for 5gVision Routing module.

2.3. Rate plans table

The **Rate plans** table stores settings for all the rate plans in the system. If you open this module from the **Vendor rates** or **Customer rates** screen, then it contains the filter **Vendor** or **!Vendor** correspondingly, and you see only Vendor Rate plans or Customer Rate plans and Code decks. The table contains the following columns:

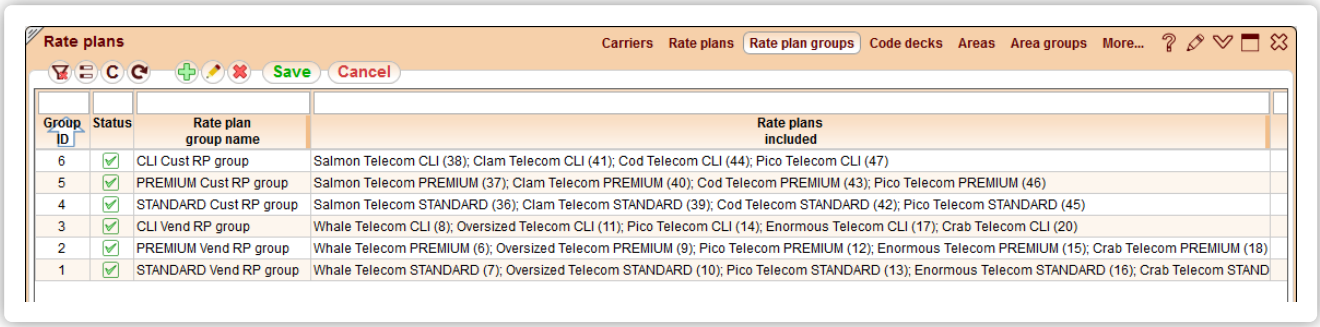


Plan ID	Status	Rate plan name	Comment	Rate plan type	Customer plan Code deck	Currency	Active from Date template	Count rates	View rates	Clear rates	Clone rates	Statistical object
44	☑	Cod Telecom CLI	Test Customer rate plan	Customer	Code deck CLI (35)		Keep file values (1)	Count	View	Clear	Clone to	
43	☑	Cod Telecom PREMIUM	Test Customer rate plan	Customer	Code deck PREMIUM (34)		Keep file values (1)	Count	View	Clear	Clone to	
42	☑	Cod Telecom STANDARD	Test Customer rate plan	Customer	Code deck STANDARD (33)		Keep file values (1)	Count	View	Clear	Clone to	
41	☑	Clam Telecom CLI	Test Customer rate plan	Customer	Code deck CLI (35)		Keep file values (1)	Count	View	Clear	Clone to	
40	☑	Clam Telecom PREMIUM	Test Customer rate plan	Customer	Code deck PREMIUM (34)		Keep file values (1)	Count	View	Clear	Clone to	
39	☑	Clam Telecom STANDARD	Test Customer rate plan	Customer	Code deck STANDARD (33)		Keep file values (1)	Count	View	Clear	Clone to	
38	☑	Salmon Telecom CLI	Test Customer rate plan	Customer	Code deck CLI (35)		Keep file values (1)	Count	View	Clear	Clone to	
37	☑	Salmon Telecom PREMIUM	Test Customer rate plan	Customer	Code deck PREMIUM (34)		Keep file values (1)	Count	View	Clear	Clone to	
36	☑	Salmon Telecom STANDARD	Test Customer rate plan	Customer	Code deck STANDARD (33)		Keep file values (1)	Count	View	Clear	Clone to	
35	☑	Code deck CLI	Test Code deck	Code deck			Keep file values (1)	Count	View	Clear	Clone to	
34	☑	Code deck PREMIUM	Test Code deck	Code deck			Keep file values (1)	Count	View	Clear	Clone to	
33	☑	Code deck STANDARD	Test Code deck	Code deck			Keep file values (1)	Count	View	Clear	Clone to	
20	☑	Crab Telecom CLI	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
19	☑	Crab Telecom STANDARD	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
18	☑	Crab Telecom PREMIUM	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
17	☑	Enormous Telecom CLI	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
16	☑	Enormous Telecom STANDARD	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
15	☑	Enormous Telecom PREMIUM	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
14	☑	Pico Telecom CLI	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
13	☑	Pico Telecom STANDARD	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
12	☑	Pico Telecom PREMIUM	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
11	☑	Oversized Telecom CLI	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
10	☑	Oversized Telecom STANDARD	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
9	☑	Oversized Telecom PREMIUM	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	
8	☑	Whale Telecom CLI	Test Vendor rate plan	Vendor			Keep file values (1)	Count	View	Clear	Clone to	

- **Status** - lets you easily enable/disable a rate plan.
- **Rate plan name** - enter a name of the rate plan.
- **Comment** - just a comment.
- **Rate plan type** - you can choose one of 3 types:
  - **Vendor** - a rate plan containing rates received from vendors.
  - **Customer** - a rate plan containing rates sent to customers. It's created on basis of a **Code deck** defined in the **Customer plan Code deck** column.
  - **Code deck** - a special type of rate plans that contains only a code-area map and used as a template for **Customer** rate plans. (See more in the Code decks).
- **Customer plan Code deck** - a code deck used to form a customer rate plan.
- **Currency** - a currency used for the rate plan.
- **Customer plan Parent Rate plan** - a parent rate plan which takes effect if there is no a certain prefix in the current plan.
- **Parent rate multiplic.** - a multiplicator to apply to parent rate plan rates.
- **Active from, GMT** - date/time from which the rate plan is valid. If blank - the system will insert the current time.
- **Active till, GMT** - date/time till which the rate plan is valid. If blank - the plan is valid indefinitely.
- **Active from Date template** - a Date template used to set **Active from** date for rates automatically depending on Customer or Vendor changes.
- **Contract Date template** - a Date template to compare the dates as they should be by a Vendor contract for rates or codes changes with **Active from** dates in Vendor rate sheet.
- **Count rates** - count all rates in the rate plan.
- **View rates** - opens a floating table with the rate plan rates.
- **Clear rates** - delete all rate from the rate plan.
- **Clone rates** - clones rates to this rate plan. Cloned rates will replace the existing rates.
- **Statistical object** - choose a customer or a vendor in statistics corresponding to this Rate plan. This correspondence can be used then in Rate alerts.
- **Last change, GMT** - the last time when the rate plan was changed.

2.4. Rate plan groups

The **Rate plan groups** table allows you to create a logical group of rate plans in order to use it during the vendor import and the customer rate generation process.



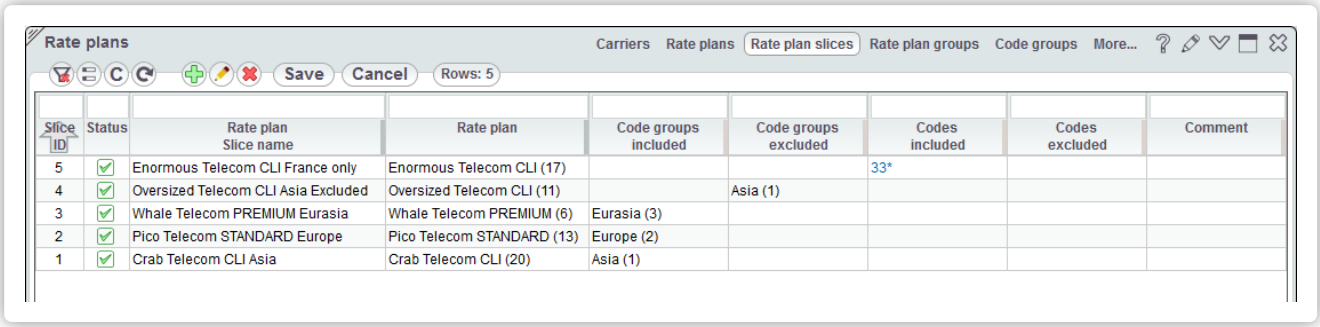
Group ID	Status	Rate plan group name	Rate plans included
6	☑	CLI Cust RP group	Salmon Telecom CLI (38); Clam Telecom CLI (41); Cod Telecom CLI (44); Pico Telecom CLI (47)
5	☑	PREMIUM Cust RP group	Salmon Telecom PREMIUM (37); Clam Telecom PREMIUM (40); Cod Telecom PREMIUM (43); Pico Telecom PREMIUM (46)
4	☑	STANDARD Cust RP group	Salmon Telecom STANDARD (36); Clam Telecom STANDARD (39); Cod Telecom STANDARD (42); Pico Telecom STANDARD (45)
3	☑	CLI Vend RP group	Whale Telecom CLI (8); Oversized Telecom CLI (11); Pico Telecom CLI (14); Enormous Telecom CLI (17); Crab Telecom CLI (20)
2	☑	PREMIUM Vend RP group	Whale Telecom PREMIUM (6); Oversized Telecom PREMIUM (9); Pico Telecom PREMIUM (12); Enormous Telecom PREMIUM (15); Crab Telecom PREMIUM (18)
1	☑	STANDARD Vend RP group	Whale Telecom STANDARD (7); Oversized Telecom STANDARD (10); Pico Telecom STANDARD (13); Enormous Telecom STANDARD (16); Crab Telecom STAND

2.5. Rate plan slices

A concept of Rate plan slices allows to separate the rate management and routing. A Rate plan slice is a part of a vendor Rate plan with certain codes or whole countries allowed/blocked. This way, if you are only buying 10 countries from a vendor, and are not interested in full A-Z, you may create a slice and use it in routing instead of a full Rate plan. Routing, thus, will look more elegant, you may implement very complex schemes with just 10-20 routes, as you wont need to set up routes (dialpeers) separately for each code or area. For instance, you may assign 50 Rate plan slices to just one route and do LCR among them. For each call, only the slices that have corresponding codes open will be chosen.

During rate management you may easily load the full Rate plan of the vendor to the system and be sure that only necessary rates will be used for termination.

There are 2 ways to apply restrictions to Rate plans in the Rate plan slices configuration: Code groups included/excluded and separate codes included/excluded.



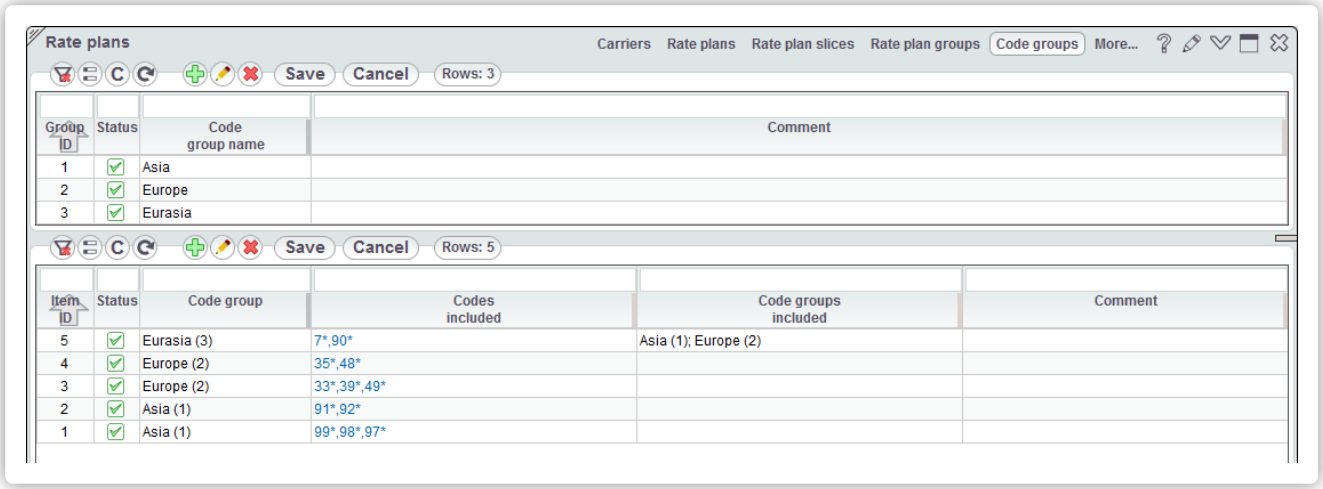
Slice ID	Status	Rate plan Slice name	Rate plan	Code groups included	Code groups excluded	Codes included	Codes excluded	Comment
5	☑	Enormous Telecom CLI France only	Enormous Telecom CLI (17)			33*		
4	☑	Oversized Telecom CLI Asia Excluded	Oversized Telecom CLI (11)		Asia (1)			
3	☑	Whale Telecom PREMIUM Eurasia	Whale Telecom PREMIUM (6)	Eurasia (3)				
2	☑	Pico Telecom STANDARD Europe	Pico Telecom STANDARD (13)	Europe (2)				
1	☑	Crab Telecom CLI Asia	Crab Telecom CLI (20)	Asia (1)				

Code groups are configured in the corresponding module. **Codes** should contain comma-separated list of codes included/excluded in/from the Rate plan slice. **"*"** at the end means any digit after, for instance, **33** means all codes in France.

Rate plan slices can be used during the LCR1 and LCR2 reports generation.

2.6. Code groups

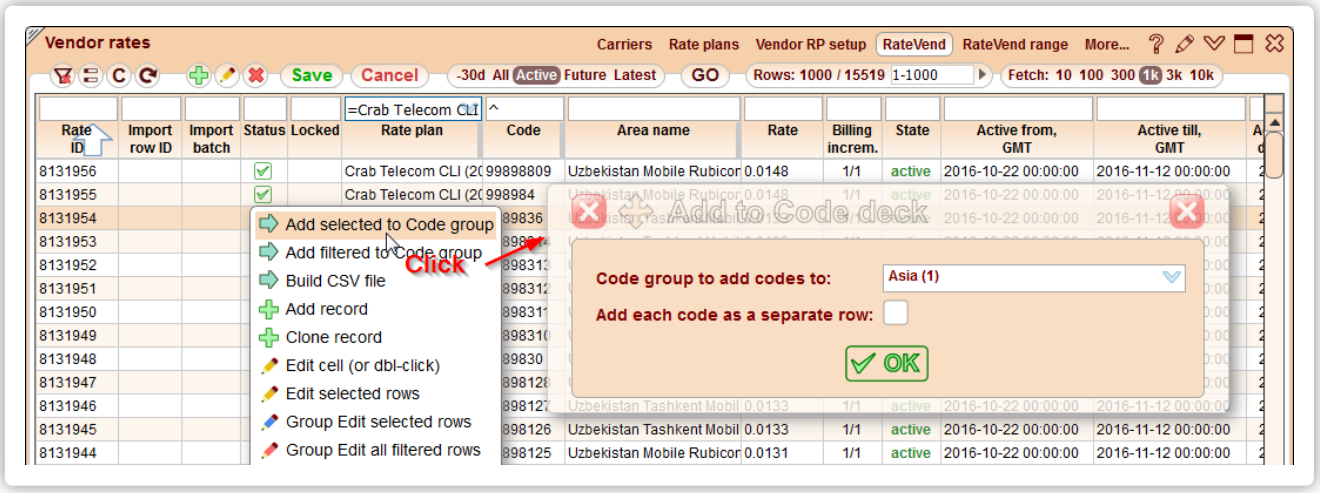
Here you can create logical groups of codes which then may be applied to vendor Rate plans in the Rate plan slices configuration for including or excluding certain codes.



When you start your configuration, at first you should create a code group in the upper table and only then include separate codes or child code groups to it in the bottom table.

Codes from code groups are used like a mask which overlaid with a Rate pan. For example, a Rate plan contains 33, 3312, 3398 codes, and a code group has 33, 3312. If a Rate plan slice formed by this Rate plan and only this code group then calls to the prefix 3398 won't pass. If you need to add a whole country to a slice and not to list all separate codes, you can use **"*"** at the end of the country code. For instance, **33*** for France.

You can add codes to a code group right from the RateVend table using a context menu options **Add selected to Code group** and **Add filtered to Code group**.



3. Rate import

*The **Rate import** module allows you to import into 5gVision all rates that are coming to your emails as attachments, or import rate files manually.*

3.1. Overview

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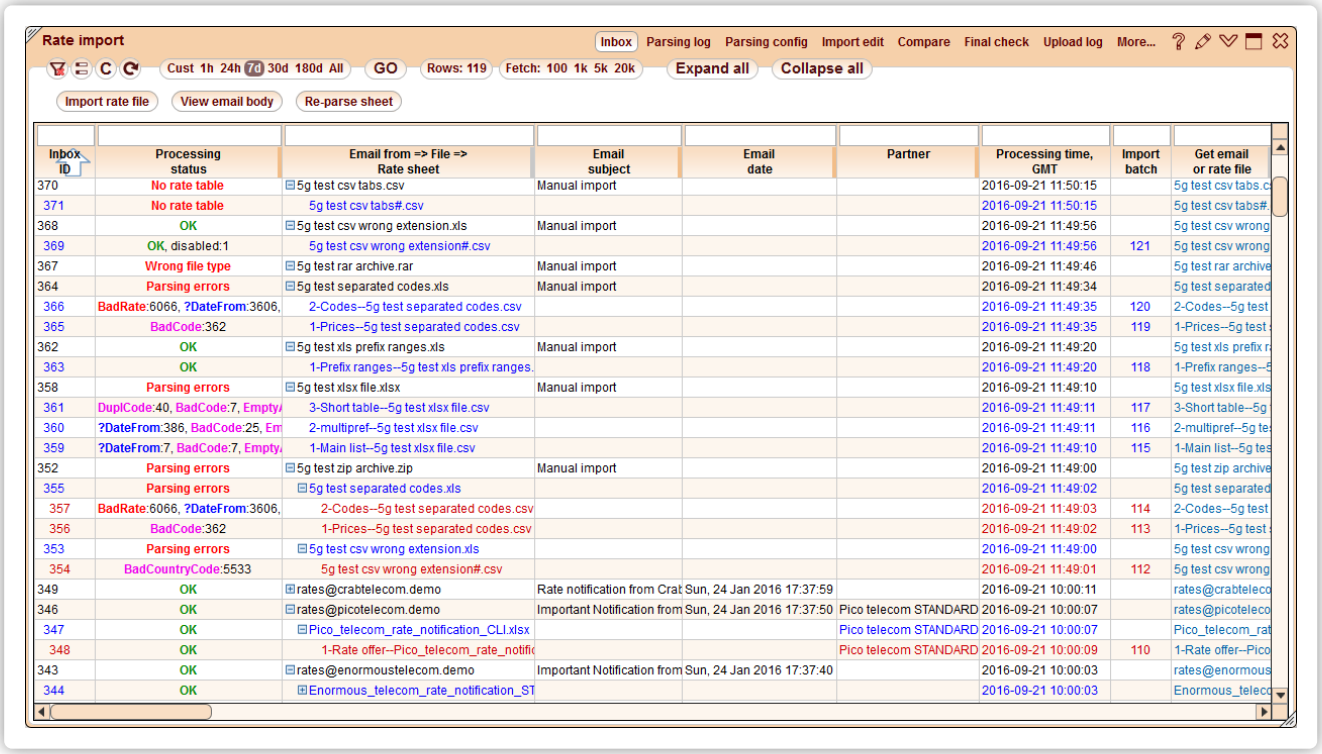
3.2. Inbox

This is the module you should start your work with. Here your processed rate sheet files show up (either when imported manually via Import rate file or when extracted from emails). The **Inbox** table contains combinations like **Email from -> File -> Rate sheet** or just **File -> Rate sheet** if you import a file manually.



You can easily expand them by means of the plus sign on the left of the object name. The system supports importing of .csv and .xlsx files, so the end level of processed objects is **Rate sheet**.

If the system detects an enabled Parsing config for received email, it is shown in the **Partner** field and automatically used during the parsing process. Otherwise the default import parameters are applied.

The **Processing status** field displays one of the following statuses of the import:

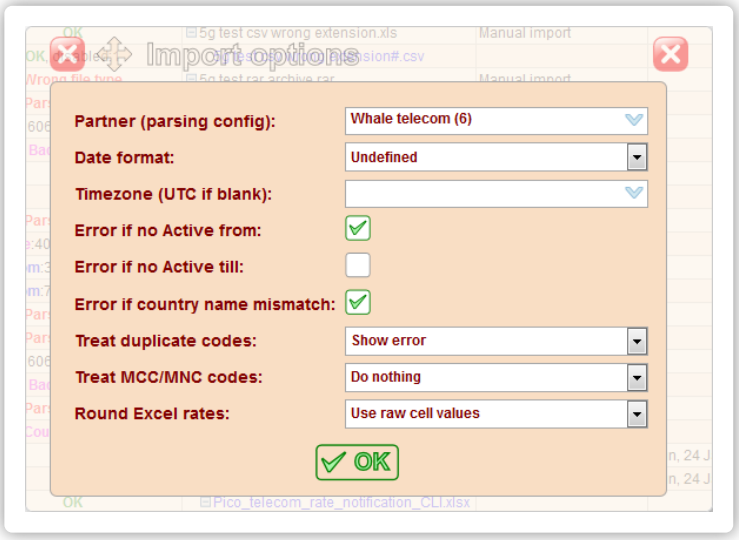
- **OK** - email or rate file was processed properly.
- **Ignored by config** - file or sheet is ignored by Parsing config.
- **No attachments** - the system was not able to find any attachment to the email.
- **No extension** - file has no extension.
- **Wrong file type** - file type not supported for processing.
- **Cant open archive** - can not open an archive file.
- **Empty file** - file is empty.
- **Conversion error** - cant convert from .xls/.xlsx/.html/.xml, etc. to .csv.
- **No rate table** - file has no rate table.
- **Insert error** - cant insert parsed rates to the DB.
- **Parsing errors** - you can expand the row by the plus sign and check what exact Parsing errors have been detected in the file. Clicking

on the row with errors opens the Match columns window with the parsed rates, where you may edit and re-parse them.

The View email body button allows you to check a received email body. The **Re-parse sheet** button opens a new window, similar to the one in Import rate file, where you can choose a parsing config, define the required date format and determine whether absence of certain date columns should raise errors or not. One additional option is available here: **Use batch config for re-parsing** - enabling the flag allows you to use the existing config for this batch for re-parsing (from a Parsing config table), no auto-parsing. Ignored if **Partner** is chosen.

3.3. Import rate file

This option lets you import a rate file manually. Click the **Import rate file** button in the Inbox module and select the file to be parsed. You can also do it by drag-n-drop a file right to the screen. The System will open a window with the following parameters:

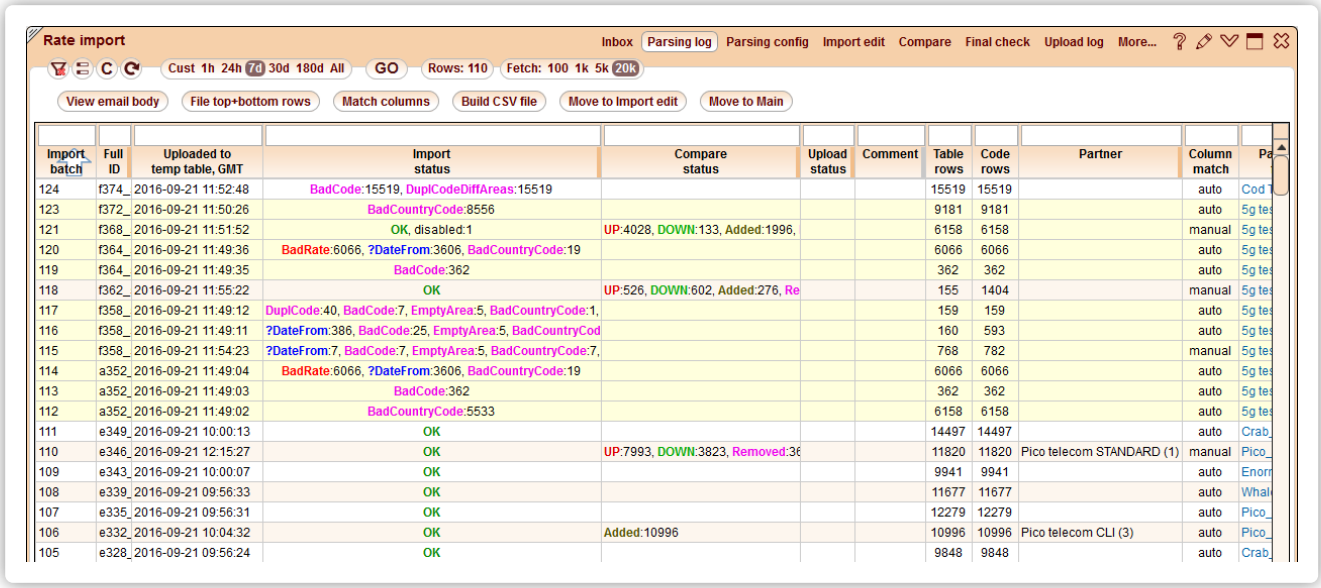


- **Partner (parsing config)** - select the partner in the pop-up window. The System will take the partner's options (as defined in the Parsing config table) and fill out the rest of the parameters in the window with them.
- **Date format** - choose how the System will process dates. **Undefined** means that the System will try to determine date format on its own. **Day/Month (25/02)** and **Month/Day (02/25)** tell the System exactly how it should process months and days.
- **Timezone (UTC if blank)** - timezone of the dates in a rate file.
- **Error if no Active from** - activate the checkbox if the System should generate an error if it is unable to find a date when the rates comes into effect.
- **Error if no Active till** - activate the checkbox if the System should generate an error if it is unable to find a date when the rate expires.
- **Error if area name mismatch** - activate the checkbox if the System should generate an error when the area name in the rate does not match the master area name in 5gVision for that rate code (see Country codes).
- **Treat duplicate codes** - how to treat duplicate codes within the same Area if they occur in imported rates. Duplicate codes in different Areas can not be corrected this way. Please contact your vendor to get a correct rate sheet.
- **Treat MCC/MNC codes** - if imported codes are MCC/MNC codes for SMS termination - it is recommended to pad MNC with zeros to 3 digits.
- **Round Excel rates** - raw values of rates in Excel files may differ from what is shown in each cell when a file is open in an Excel application. This option allows to load the rate values as they are shown in Excel cells, not the actual raw values from the file.

When done, click **OK** to start the import process. The System will create an import batch (or several batches, if there were several spreadsheets in the file)

3.4. Parsing log

The system assigns a unique **Import batch** to every imported rate sheet and creates a separate row in the **Parsing log** table for it.



Import batch	Full ID	Uploaded to temp table, GMT	Import status	Compare status	Upload status	Comment	Table rows	Code rows	Partner	Column match	Pa
124	f374_	2016-09-21 11:52:48	BadCode:15519, DuplCodeDiffAreas:15519				15519	15519		auto	Cod T
123	f372_	2016-09-21 11:50:26	BadCountryCode:8556				9181	9181		auto	5g tes
121	f368_	2016-09-21 11:51:52	OK, disabled:1	UP:4028, DOWN:133, Added:1996,			6158	6158		manual	5g tes
120	f364_	2016-09-21 11:49:36	BadRate:6066, ?DateFrom:3606, BadCountryCode:19				6066	6066		auto	5g tes
119	f364_	2016-09-21 11:49:35	BadCode:362				362	362		auto	5g tes
118	f362_	2016-09-21 11:55:22	OK	UP:526, DOWN:602, Added:276, Re			155	1404		manual	5g tes
117	f358_	2016-09-21 11:49:12	DuplCode:40, BadCode:7, EmptyArea:5, BadCountryCode:1,				159	159		auto	5g tes
116	f358_	2016-09-21 11:49:11	?DateFrom:386, BadCode:25, EmptyArea:5, BadCountryCod				160	593		auto	5g tes
115	f358_	2016-09-21 11:54:23	?DateFrom:7, BadCode:7, EmptyArea:5, BadCountryCode:7,				768	782		manual	5g tes
114	a352_	2016-09-21 11:49:04	BadRate:6066, ?DateFrom:3606, BadCountryCode:19				6066	6066		auto	5g tes
113	a352_	2016-09-21 11:49:03	BadCode:362				362	362		auto	5g tes
112	a352_	2016-09-21 11:49:02	BadCountryCode:5533				6158	6158		auto	5g tes
111	e349_	2016-09-21 10:00:13	OK				14497	14497		auto	Crab_
110	e346_	2016-09-21 12:15:27	OK	UP:7993, DOWN:3823, Removed:36			11820	11820	Pico telecom STANDARD (1)	manual	Pico_
109	e343_	2016-09-21 10:00:07	OK				9941	9941		auto	Enorr
108	e339_	2016-09-21 09:56:33	OK				11677	11677		auto	Whal
107	e335_	2016-09-21 09:56:31	OK				12279	12279		auto	Pico_
106	e332_	2016-09-21 10:04:32	OK	Added:10996			10996	10996	Pico telecom CLI (3)	auto	Pico_
105	e328_	2016-09-21 09:56:24	OK				9848	9848		auto	Crab_

The table lists the imported batches and their parameters - parsing time, number of rows, partner, type of column match, etc. Every row stores a group of parsing options which can be clustered to the so-called **Batch config** (date format, timezone, treat duplicate codes, errors if no date from or date till, etc). If a partner is not defined during the rates import, the System processes the rate sheet using default values of them. Otherwise, if a partner is chosen during manual Import rate file or the System automatically detects a partner based on the email data, the corresponding values from the Parsing config table is used. You always can change **Batch config** options using **Re-parse options** in the Match columns window.

The Parsing log table displays several statuses of each batch:

- **Import status** - identical to **Processing status** for Rate sheets in the Inbox module.
- **Compare status** - rates comparison status as in the Compare table is written after every comparison, however, the comparison table is saved (accessible via clicking the status) only after moving compared results to Final check table or Main rate table.
- **Upload status** - status of uploading to an external billing.

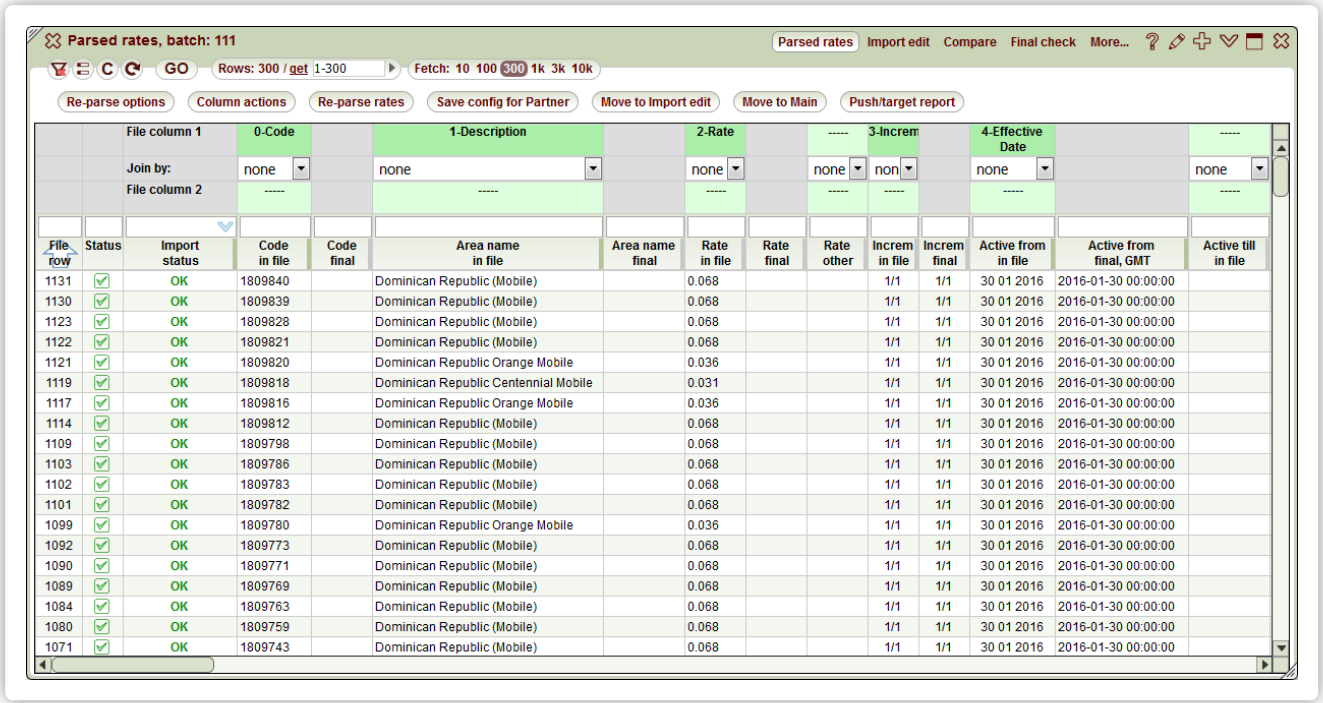
You may do initial editing of the imported rates with the help of the Match columns window and, if there are no errors, send the batch to the next processing step - Import edit by clicking the **Move to Import edit** button, or directly to the Main RateCust / RateVend table by clicking the **Move to Main** button (see Move to Main from Parsing log / Import edit / Compare).

Here you can also View email body and check File top+bottom rows.

If you don't need to import the rates to the Main table, but only create a CSV file and get it, you can use the Build CSV file button available here.

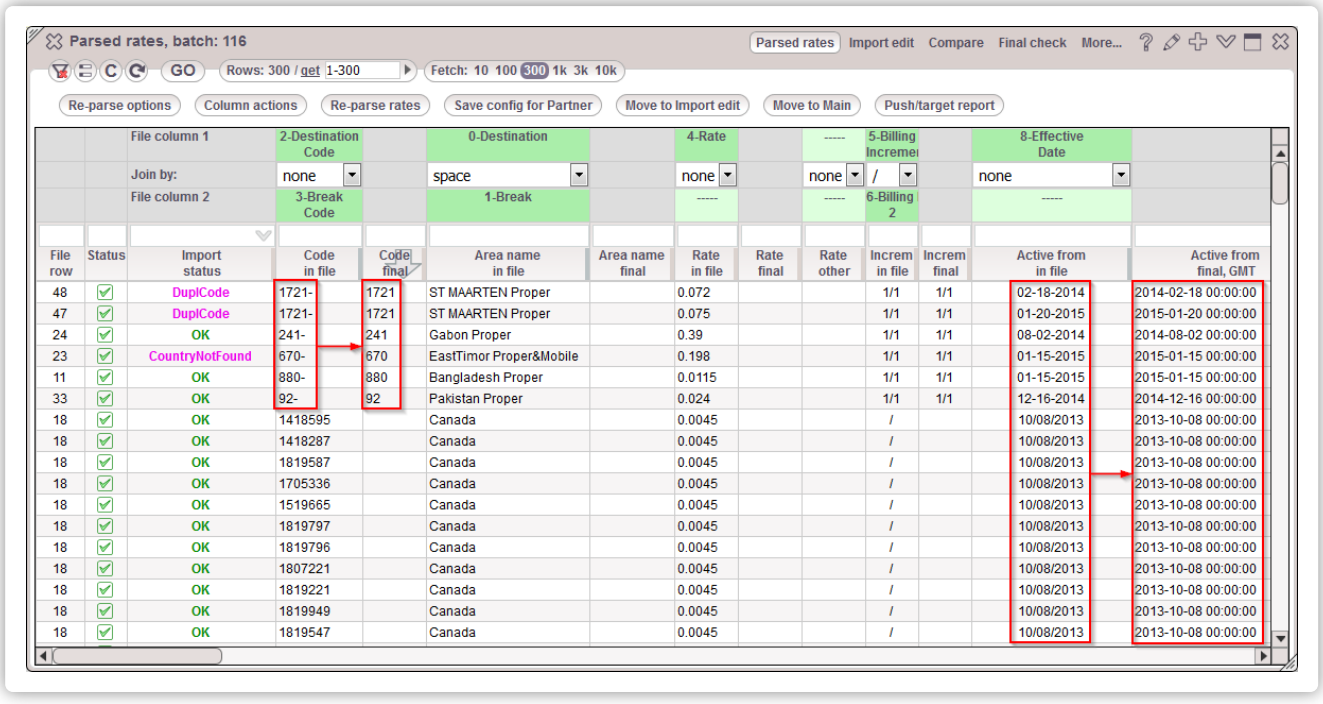
3.5. Match columns

To make manual post-processing adjustments to a rate file, click an **Import status** cell, double click a required import batch or select it and click **Match columns**.



The opened **Parsed rates** window shows the way the System recognized the column content and matched it to the predefined columns of 5gVision. The olive-colored column headers are 5gVision predefined columns, while the green column headers are columns from the original file. It is possible to drag and drop the green headers to the desired position creating a new match, if you are not satisfied with the automatic processing results. It is also possible to combine two original columns into one by dragging one green column under another and selecting the separator for the merged columns in the **Join by** listbox.

The System also makes some minor corrections on the spot, like removing "-" sings from codes or adding time to dates without time. These changes are displayed in the "final" columns (like **Code final**).

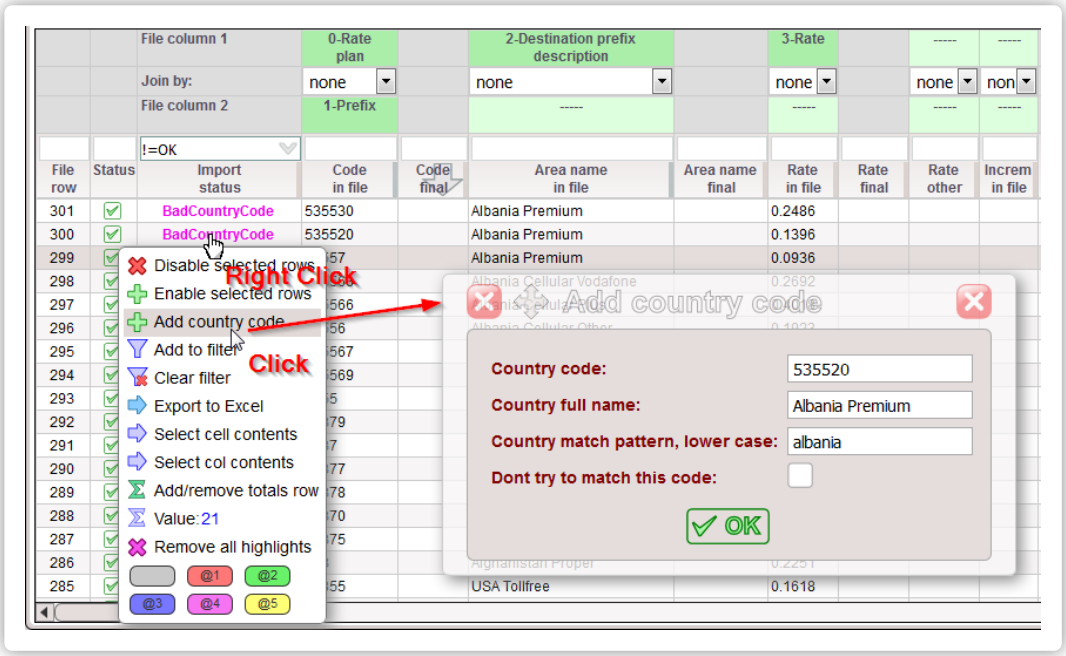


In case of errors occurred during processing, the opened window will be initially filtered to show errors only (see the full list of the errors in Parsing errors).

Unlike most of the errors, it is possible to fix the **CountryNotFound** , **BadCountryCode**, **?DateFrom**, **?DateTill**, **NoDateFrom**, **NoDateTill**, and **DuplCode** errors on the spot.

The **CountryNotFound** error occurs when the System was unable to find the country name in the reference dictionary. The **BadCountryCode** error occurs when the country prefix does not match the prefix defined in the 5gVision DB. As the System processes the file and tries to match the prefixes and names from the rate file to the reference prefixes and names kept in the DB, it is possible to stumble upon a country or code not present in the dictionary (e.g. due to spelling errors and such). You can either change the country records in 5gVision (if you are sure they are

the wrong ones) or fix the original file. To repair the error, go to the Country codes module or invoke the pop-up menu and click **Add country code**.



In the opened window you can specify the following parameters:

- **Code** - the country phone number prefix.
- **Full Country Name** - the full official name of the country.
- **Country name to search for, one or two consecutive names** - the name of the country to search for in processed rate files during the auto import. Once this name is found, the System will try to match it to the corresponding prefix using this table. The searched words must be unique across the table. If the first word of country name is shared among different countries (like "western"), the parameter should contain two words for the match to be unambiguous (e.g. "western sahara" and "western samoa").
- **Dont try to match this code** - activate the checkbox, if you want the System to ignore the specified code when matching codes to country names. This may be useful for satellite routes as they are numerous and have too many naming variants.

The **?DateFrom** and **?DateTill** errors may occur when the System is unable to determine the correct date format, as the date string can result in multiple valid dates. For instance, there is no way of telling whether the following format is Day/Month or Month/Day: 09/11/2014.

Another date-related errors are **NoDateFrom** and **NoDateTill**, which are signalled when the System expected the original file to contain dates but found none. To fix both kinds of errors, you need to click **Re-parse options** in the **Match columns** window. A new window will open, similar to the one in Import rate file, where you can define the required date format and determine whether absence of certain date columns should raise errors or not.

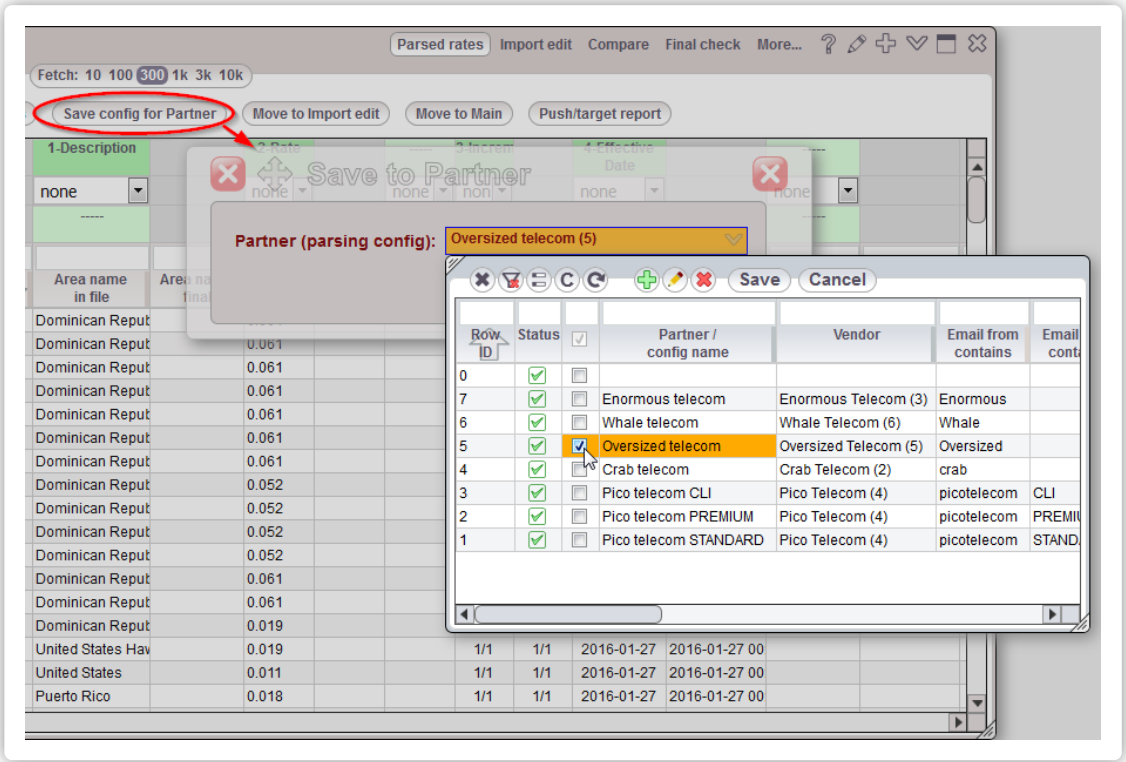
If you get **DuplCode**, you can also click **Re-parse options** and define how to treat duplicate codes.

After trying to correct these issues, you may click **Re-parse rates** in the **Match columns** window, and the system will try to process the rate file using new country, date definitions and duplicate codes settings. Please mention that the buttons **Re-parse rates** in this module and the **Re-parse sheet** in the Inbox act differently. The first one tries to fix the issues by changing column order right in the DB, which is quicker. But this wont work in all situations, then we need to try doing **Re-parse sheet** - loading info anew from file to the DB.

Some errors may be fixed using Column actions functionality. Column actions for the current batch can be opened using the **Column actions** button, or if you click the **Column actions** button or the **Edit Column actions to fix errors** link in the **Re-parse options** window and click , the **ColAction-batch** window will appear, filtered to display column actions for this batch only (see Column actions).

All other errors require alterations of the original file for now, however you can disable the row with the error and import the file without it. To disable one or several rows, select them, invoke the pop-up menu and click **Disable selected rows**.

In order not to repeat the manual column match process again for the same Partner, it is possible to save the resulting column layout. Once all processing is complete, click **Save config for Partner** in the **Match columns** window. This will store the selected match for this current Partner, which can be viewed in the Parsing config table. This also copies batch column actions back to the partner column actions config (see Column actions). When the System gets another rate file from the same partner, it will try to parse it using the stored options. Please note that all the changes to batch matching process are valid for the batch only and do not affect the partner config unless saved to it.

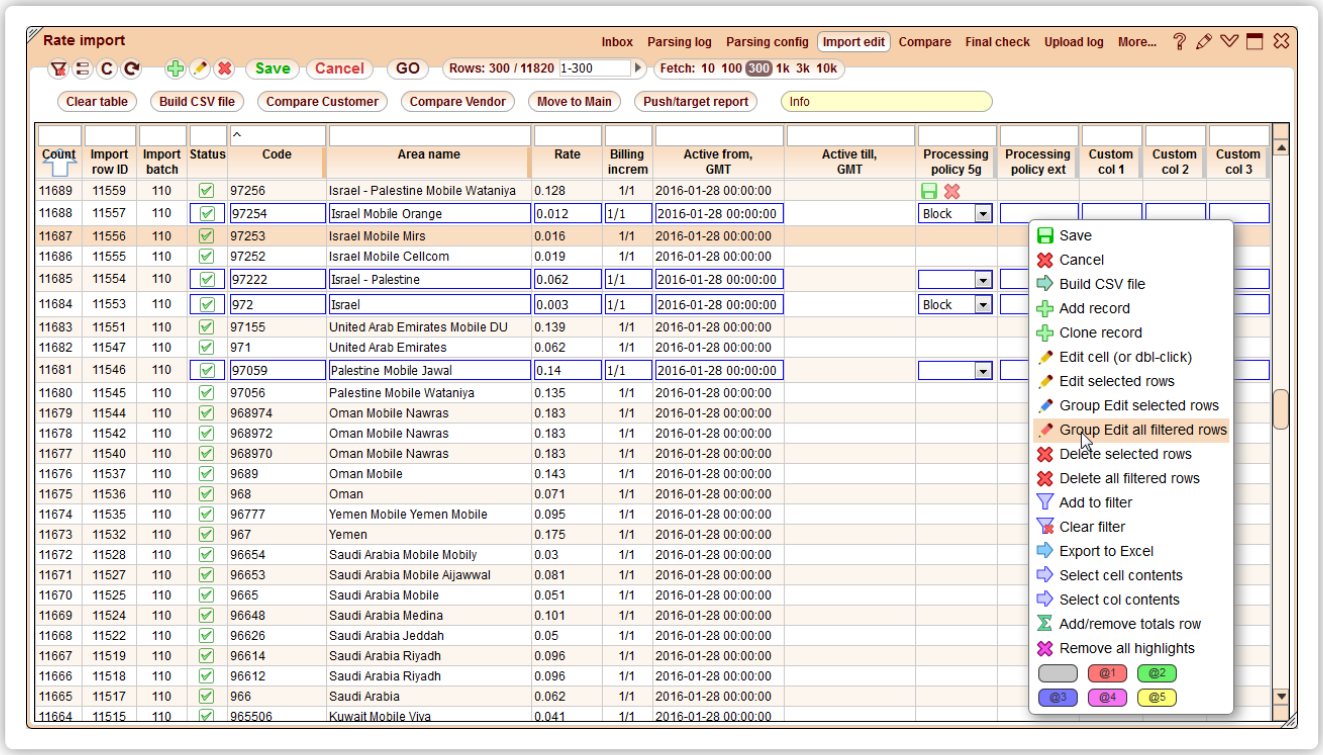


Once all the preparations are complete and the batch has no errors or all erroneous rows are disabled, you may proceed with the next step in batch processing and import the rates into the Import edit table (click **Move to Import edit**) or directly into the Main RateCust / RateVend table (click **Move to Main**, see Move to Main from Parsing log / Import edit / Compare).

If you loaded a push/target list on the previous step, you can make a push/target report right from the **Parsed rates** window using the **Push/target report** button (see more in Push/target).

3.6. Import edit

During the rate processing in the **Import edit** table, you may fully customize the imported rates.



Each record is editable. You may also add new ones from scratch using the standard **green plus** sign or delete them using the **red cross**.

At this step, it is also possible to export the rates in the CSV file (see Build CSV file).

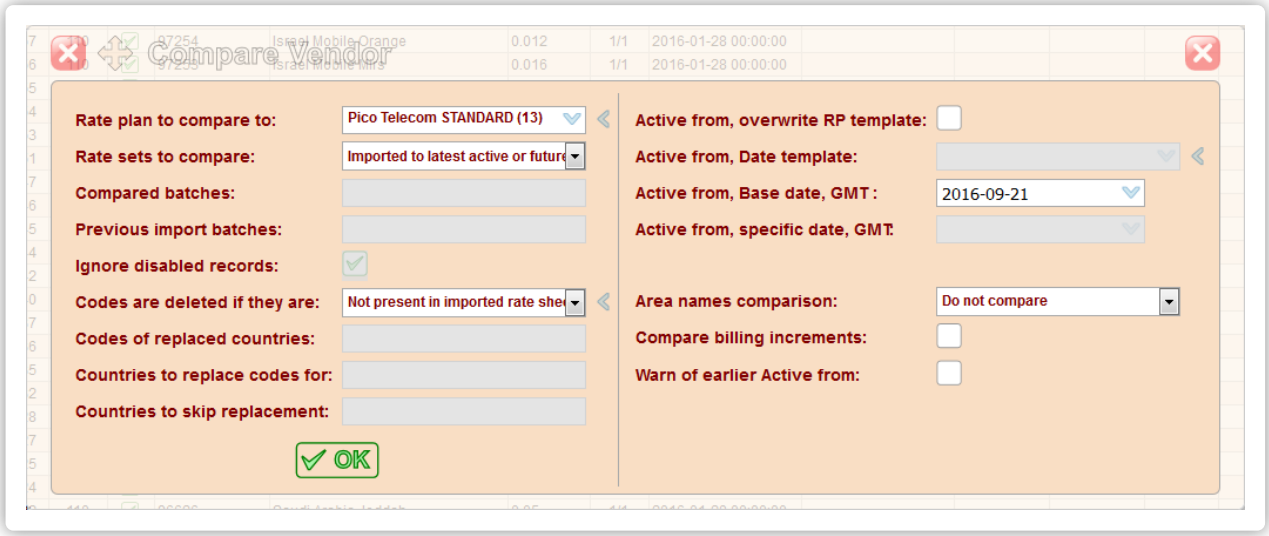
When done, you may move the rates to the next step - start Compare by clicking the **Compare Vendor** or **Compare Customer** (see Initial Customer rate plans load), or make a shortcut and import them directly to the main RateCust / RateVend table using the **Move to Main** button (see Move to Main from Parsing log / Import edit / Compare).

If you loaded a push/target list on the previous step, you can make a push/target report right from the **Import edit** window using the **Push/target report** button (see more in Push/target).

3.7. Compare

The Compare process concerns mostly Vendor rates import. For Customer rates it is applicable during Initial Customer rate plans load.

When you click the **Compare Vendor** button in the Import edit module, the System will display a dialog, where you can specify the comparison options.

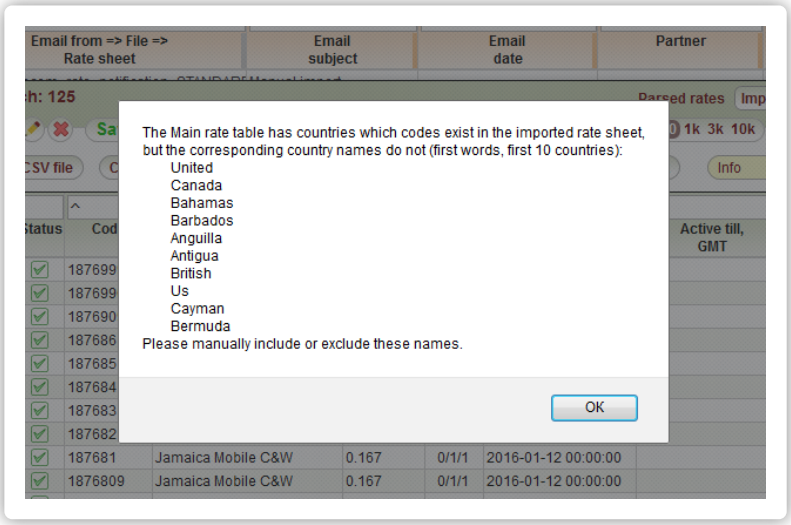


- **Rate Plan to compare to** - select a Vendor rate plan to compare the imported rates to.
- **Rate sets to compare** - choose from the following options:
  - **Imported to latest active or future in Main table** - compare the imported rates to the rates, that are already active or will be active in the selected rate plan.
  - **Imported to previous import batches** - compare the imported rates to batches entered in the **Previous import batches** field.
  - **Compared batches to previous import batches** - compare batches entered in the **Compared batches** field to batches entered in the **Previous import batches** field.
- **Compared batches** - enter source batches used for comparison with the help of the **Compared batches to previous import batches** option. You may enter several batches delimiting them with commas.
- **Previous import batches** - enter destination batches used for comparison with the help of **Imported to previous import batches** and **Compared batches to previous import batches** options. You may enter several batches delimiting them with commas.
- **Ignore disabled records** - select the checkbox if you do not want disabled records to be used in comparison (valid for **Imported to previous import batches** and **Compared batches to previous import batches** options only).
- **Codes are deleted if they are** - choose the way the System recognizes records to be deleted:
  - **Not present in imported rate sheet or marked as deleted** - the System deletes the record from the plan if there were no such codes in the compared records or it is marked as deleted.
  - **Marked as "deleted" in imported rate sheet** - the System deletes the record only if it was marked with **block**.
  - **Not present in each country of a partial rate sheet, AUTO code find** - the System automatically form a country codes list based on the partial rate sheet and use it for deciding what records to delete.
  - **Not present in each country of a partial rate sheet, MANUAL code set** - the System uses country codes from the **Codes of replaced countries** field for deciding what records to delete.
- **Codes of replaced countries** - for the **Not present in each country of a partial rate sheet, MANUAL code set** mode, the list of country codes (eg. 33 for France) for all countries that are fully replaced in a partial rate sheen, comma separated.
- **Countries to replace codes for** - the list of country names (first word only) for which the codes will be replaced from the partial rate sheet, comma separated.
- **Countries to skip replacement** - the list of country names (first word only) for which the codes will NOT be replaced from the partial rate sheet, comma separated.

- **Active from, overwrite RP template** - if not set - the Date template from the Rate plan is used.
- **Active from, date template** - select a Data template from the Date templates table if you chose to overwrite RP template.
- **Active from, Base date, GMT** - enter a Base date in GMT to add X days to (a number of days is set in the Date template).
- **Active from, specific date, GMT** - fill out the **Active from** date with this specific date in GMT, replaces all other options.
- **Area names comparison** - choose the options for code area name comparison - **Do not match**, **Exact match**, **Ignore cases**, **Ignore cases and symbols**, **Check only the first 10 letters**.
- **Compare billing increments** - activate the checkbox if you want to compare billing increments as well.
- **Warn of earlier Active from** - warn if the Active from date in a processed file is earlier than the Active from of the current rate. The Date template should be set to "From file" in this case.

There is a need to explain additionally a partial rate sheet processing with full country replacements. For the most cases the option **AUTO code find** is proper and enough because most countries have unique prefixes. However, with some countries we may face situations when automating which codes should be chosen for comparison from the Main table is not possible, so you have to use the additional fields **Countries to replace codes for** and **Countries to skip replacement** along with **AUTO code find** or choose **MANUAL code set** together with the **Codes of replaced countries** list.

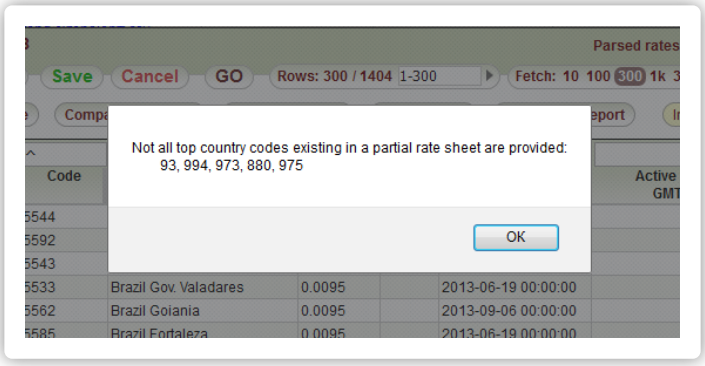
For example, prefixes **1** (USA, Canada, Jamaica, etc) or **7** (Russia, Kazakhstan) represent several countries. If we have a partial rate sheet for Jamaica which has a prefix **1876**, the System is not be able to detect an exact list of top prefixes for comparison, and you will get a warning:



In this case you have 2 possible ways to fix the issue:

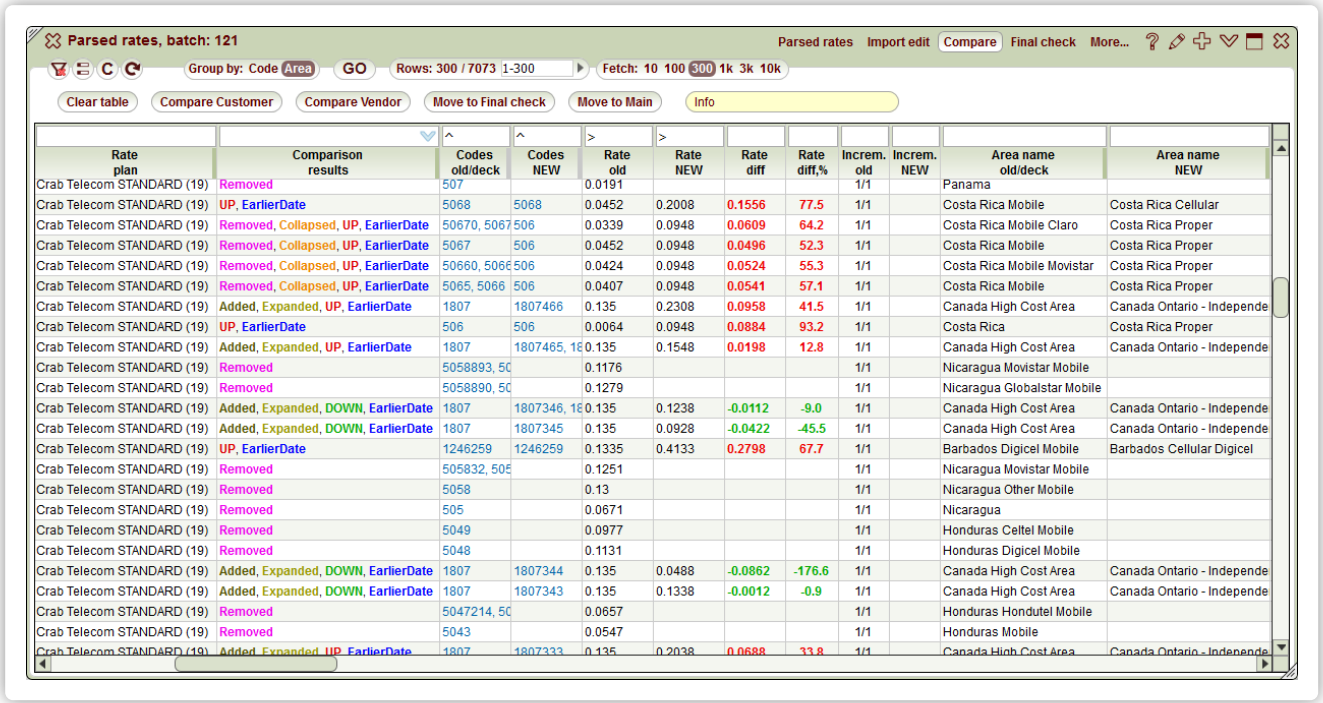
- Use the **MANUAL code set** option and enter explicitly all imported top (country) codes to the **Codes of replaced countries** field (1876 in our case).
- Use the **AUTO code find** option and add all countries that should be excluded (USA, Canada, etc) to the **Countries to skip replacement**.

If some of the top codes from the amendment are not present in the **Codes of replaced countries** field, the system will warn you and stop the comparison:



If you have a partial rate sheet that contains codes for a lot of countries, and the System can't automatically determine which codes to delete, it is better to split the sheet into 2 separate ones: one with normally detected counties for automatic loading and one with countries like Jamaica.

When the filling is done, click **OK**. The System will make the comparison and display the results in the **Compare** table.



Rate plan	Comparison results	Codes old/deck	Codes NEW	Rate old	Rate NEW	Rate diff	Rate diff,%	Increm. old	Increm. NEW	Area name old/deck	Area name NEW
Crab Telecom STANDARD (19)	Removed	507		0.0191				1/1		Panama	
Crab Telecom STANDARD (19)	UP, EarlierDate	5068	5068	0.0452	0.2008	0.1556	77.5	1/1		Costa Rica Mobile	Costa Rica Cellular
Crab Telecom STANDARD (19)	Removed, Collapsed, UP, EarlierDate	50670, 5067	506	0.0339	0.0948	0.0609	64.2	1/1		Costa Rica Mobile Claro	Costa Rica Proper
Crab Telecom STANDARD (19)	Removed, Collapsed, UP, EarlierDate	5067	506	0.0452	0.0948	0.0496	52.3	1/1		Costa Rica Mobile	Costa Rica Proper
Crab Telecom STANDARD (19)	Removed, Collapsed, UP, EarlierDate	50660, 5066	506	0.0424	0.0948	0.0524	55.3	1/1		Costa Rica Mobile Movistar	Costa Rica Proper
Crab Telecom STANDARD (19)	Removed, Collapsed, UP, EarlierDate	5065, 5066	506	0.0407	0.0948	0.0541	57.1	1/1		Costa Rica Mobile	Costa Rica Proper
Crab Telecom STANDARD (19)	Added, Expanded, UP, EarlierDate	1807	1807466	0.135	0.2308	0.0958	41.5	1/1		Canada High Cost Area	Canada Ontario - Independe
Crab Telecom STANDARD (19)	UP, EarlierDate	506	506	0.0064	0.0948	0.0884	93.2	1/1		Costa Rica	Costa Rica Proper
Crab Telecom STANDARD (19)	Added, Expanded, UP, EarlierDate	1807	1807465, 18	0.135	0.1548	0.0198	12.8	1/1		Canada High Cost Area	Canada Ontario - Independe
Crab Telecom STANDARD (19)	Removed	5058893, 50		0.1176				1/1		Nicaragua Movistar Mobile	
Crab Telecom STANDARD (19)	Removed	5058890, 50		0.1279				1/1		Nicaragua Globalstar Mobile	
Crab Telecom STANDARD (19)	Added, Expanded, DOWN, EarlierDate	1807	1807346, 18	0.135	0.1238	-0.0112	-9.0	1/1		Canada High Cost Area	Canada Ontario - Independe
Crab Telecom STANDARD (19)	Added, Expanded, DOWN, EarlierDate	1807	1807345	0.135	0.0928	-0.0422	-45.5	1/1		Canada High Cost Area	Canada Ontario - Independe
Crab Telecom STANDARD (19)	UP, EarlierDate	1246259	1246259	0.1335	0.4133	0.2798	67.7	1/1		Barbados Digicel Mobile	Barbados Cellular Digicel
Crab Telecom STANDARD (19)	Removed	505832, 505		0.1251				1/1		Nicaragua Movistar Mobile	
Crab Telecom STANDARD (19)	Removed	5058		0.13				1/1		Nicaragua Other Mobile	
Crab Telecom STANDARD (19)	Removed	505		0.0671				1/1		Nicaragua	
Crab Telecom STANDARD (19)	Removed	5049		0.0977				1/1		Honduras Celtel Mobile	
Crab Telecom STANDARD (19)	Removed	5048		0.1131				1/1		Honduras Digicel Mobile	
Crab Telecom STANDARD (19)	Added, Expanded, DOWN, EarlierDate	1807	1807344	0.135	0.0488	-0.0862	-176.6	1/1		Canada High Cost Area	Canada Ontario - Independe
Crab Telecom STANDARD (19)	Added, Expanded, DOWN, EarlierDate	1807	1807343	0.135	0.1338	-0.0012	-0.9	1/1		Canada High Cost Area	Canada Ontario - Independe
Crab Telecom STANDARD (19)	Removed	5047214, 50		0.0657				1/1		Honduras Hondutel Mobile	
Crab Telecom STANDARD (19)	Removed	5043		0.0547				1/1		Honduras Mobile	
Crab Telecom STANDARD (19)	Added, Expanded, UP, EarlierDate	1807	1807333	0.135	0.2038	0.0688	33.8	1/1		Canada High Cost Area	Canada Ontario - Independe

The table shows the old and new values for each rate parameter and summarizes the outcome in the **Comparison result** column. The possible results are:

- **Added** - a new code is added to the rate plan.
- **Deleted** - the code is deleted from the rate plan.
- **Collapsed** - a longer code is deleted and rates for a shorter code take precedence.
- **Expanded** - a new longer code is added and its rate takes precedence over the rate for the shorter one.
- **UP** - the rate is increased.
- **DOWN** - the rate is decreased.
- **Increment** - the billing increment is changed (displayed only if **Compare billing increments** was active in the comparison options).
- **DescrChange** - the area description is changed (displayed only if **Area names comparison** was active in the comparison options).

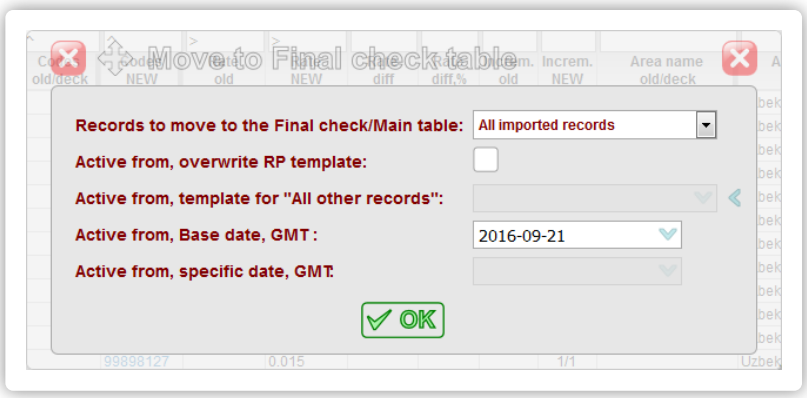
The **Group by** strip lets you choose between 2 types of comparison results displaying: grouping rows by Code or Area.

Right from the Compare table you can run the comparison anew using the **Compare Vendor** or **Compare Customer** buttons. If you need to empty the table, please use the **Clear table** button.

After you review the results, you can either move the rates to the Final check table (using the **Move to Final check** button) or import them directly to the Main RateVend / RateCust table using the **Move to Main** button (see Move to Main from Parsing log / Import edit / Compare).

3.8. Final check

When you choose to move the rates being processed from the Compare table to the **Final check** table, a new window will appear where you may choose the move options.

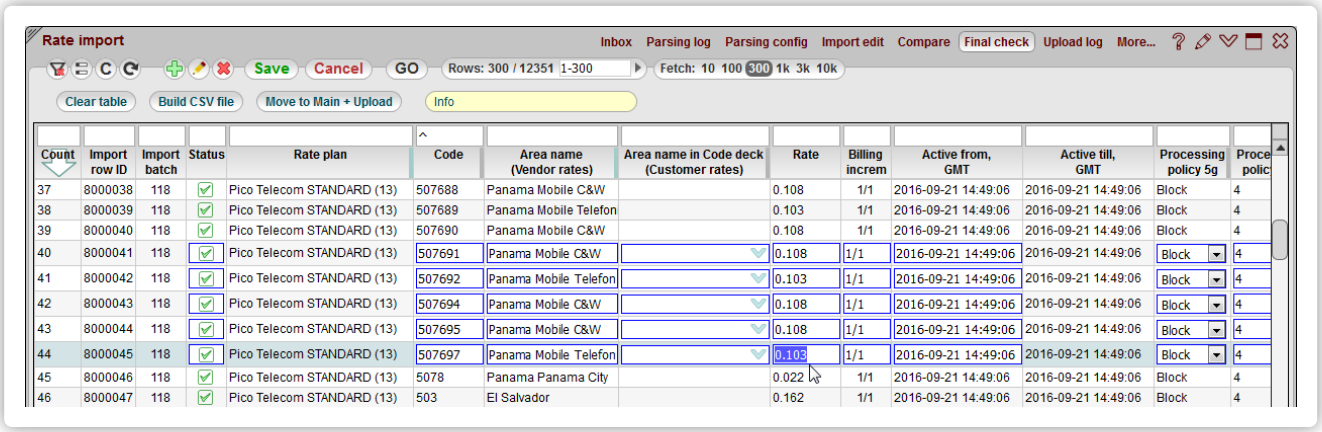


The available options are:

- **Records to move to the Final check/Main table** - select which records to move - **All imported records** or **Only changed records**. **All imported records** also include records that did not differ from those in the rate plan and thus that were not displayed in the Compare table.
- **Active from, overwrite RP template** - if not set - the Date template from the Rate plan is used.
- **Active from, template for "All other records"** - the **Active from** date will be set according to the **All other records** rule in the Date template for all records with no changes, or if we don't know which records were changed (if comparison was not done yet).
- **Active from, Base date, GMT** - enter the Base date in GMT to add X days to (a number of days is set in a Date template).
- **Active from, specific date, GMT** - fill out the **Active from** date with this specific date in GMT, replaces all other options.

When done, click **OK**. The rates will be imported from the Compare table to the **Final check** table, and you will be forwarded to the last one automatically.

The **Final check** table allows you to review and adjust the rates once again before committing them to the main RateCust / RateVend table.

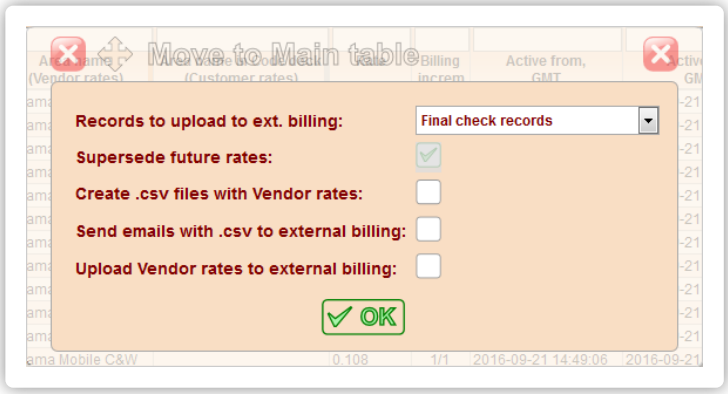


Count	Import row ID	Import batch	Status	Rate plan	Code	Area name (Vendor rates)	Area name in Code deck (Customer rates)	Rate	Billing increm	Active from, GMT	Active till, GMT	Processing policy 5g	Proce polic
37	8000038	118	✓	Pico Telecom STANDARD (13)	507688	Panama Mobile C&W		0.108	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
38	8000039	118	✓	Pico Telecom STANDARD (13)	507689	Panama Mobile Telefon		0.103	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
39	8000040	118	✓	Pico Telecom STANDARD (13)	507690	Panama Mobile C&W		0.108	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
40	8000041	118	✓	Pico Telecom STANDARD (13)	507691	Panama Mobile C&W		0.108	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
41	8000042	118	✓	Pico Telecom STANDARD (13)	507692	Panama Mobile Telefon		0.103	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
42	8000043	118	✓	Pico Telecom STANDARD (13)	507694	Panama Mobile C&W		0.108	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
43	8000044	118	✓	Pico Telecom STANDARD (13)	507695	Panama Mobile C&W		0.108	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
44	8000045	118	✓	Pico Telecom STANDARD (13)	507697	Panama Mobile Telefon		0.103	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
45	8000046	118	✓	Pico Telecom STANDARD (13)	5078	Panama Panama City		0.022	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4
46	8000047	118	✓	Pico Telecom STANDARD (13)	503	El Salvador		0.162	1/1	2016-09-21 14:49:06	2016-09-21 14:49:06	Block	4

All rate records are editable and the table functionality is basically the same as the Import edit table.

At this step, it is also possible to export the rates in the CSV file (see Build CSV file).

When done, click **Move to Main + Upload**. The new window with the following options will open:

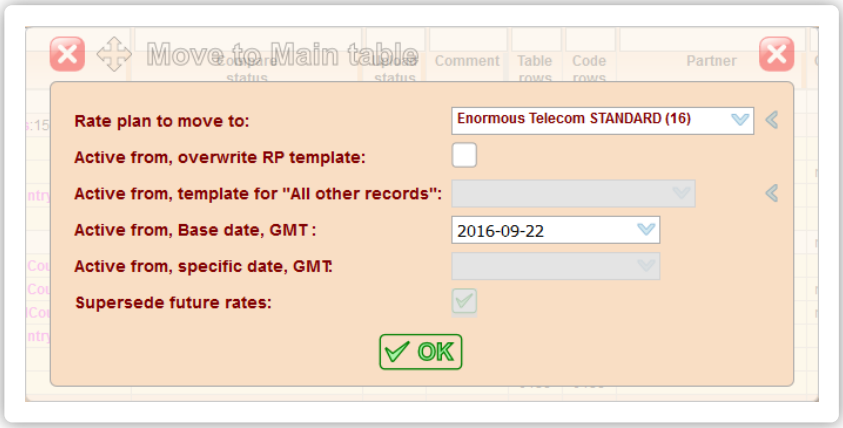


- **Records to upload to ext. billing** - select which records to upload to an external billing - **Final check records**, **Full new A-Z , currently active**, **Full new A-Z , latest active or future** or **Full new A-Z , all active and future**.
- **Supersede future rates** - disable all rates from the Main table that have same codes as the newly loaded rates and that will become active in future (always done in the current design). For example, today is October 5, a rate plan has a rate with prefix 1234 active from October 10 and you want to import a rate with the same prefix active from October 20. If you set the checkbox, the October 10 rate will be replaced with the October 20 rate. If you do not set the checkbox, the October 10 rate will last for 10 days and be then overridden with the October 20 rate (see Deleting and overriding rates).
- **Create .csv files with new Vendor rates** - select if you need to generate .csv files.
- **Send emails with .csv to external billing** - select if it is necessary to send emails with .csv to the external billing system.
- **Upload new Vendor rates to external billing** - select if it is necessary to upload new Vendor rates to your billing (if supported).

By clicking **OK** the rates will be imported to the Main RateCust / RateVend table into the previously chosen Rate plan.

3.9. Move to Main from Parsing log / Import edit / Compare

If you are sure you do not need to go through all the processing steps, you may import the rates directly from the Parsing log, Import edit or Compare table using the **Move to Main** button.



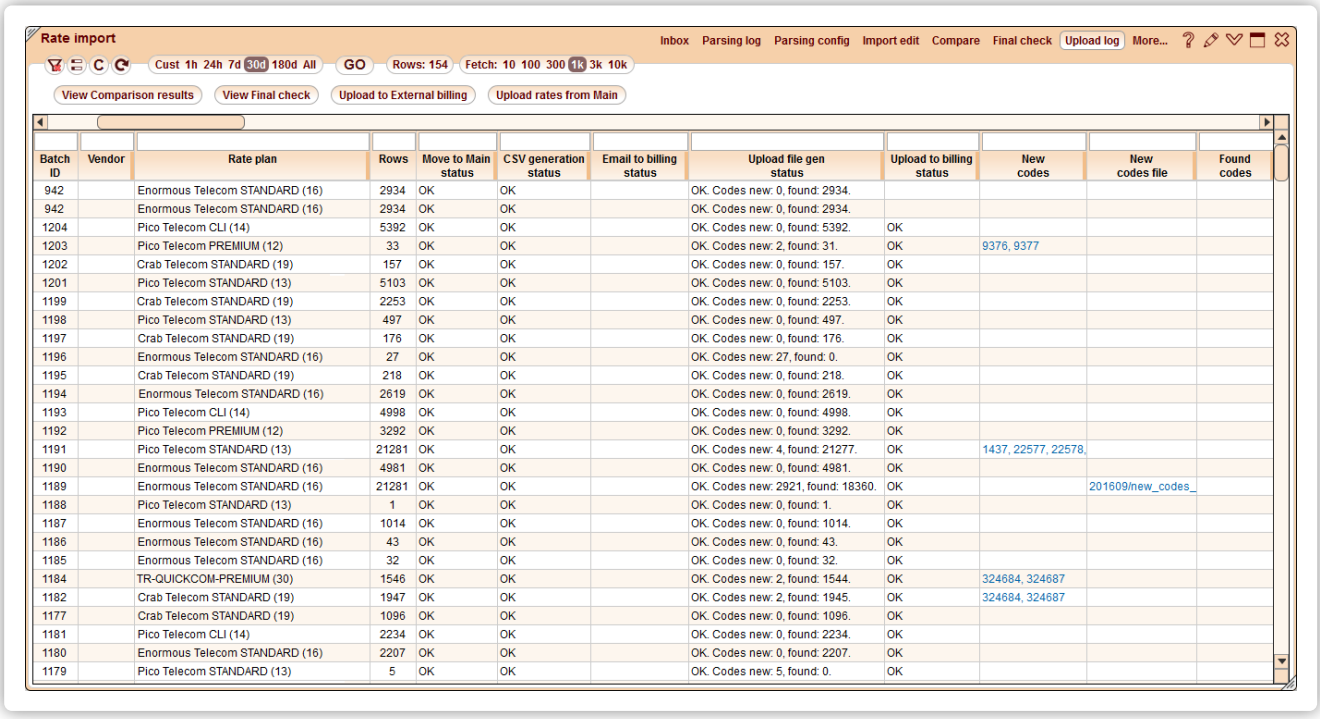
The floating windows in all the tables contain the similar set of options except the first one. In the Parsing log and Import edit tables you should select **Rate plan to move to**, while the Compare table has **Records to move to the Final check/Main table**, where you should choose which records to move - **All imported records** or **Only changed records**. **All imported records** also include records that did not differ from those in the rate plan and thus that were not displayed in the Compare table. The difference here is because when you are in the Compare table, you already selected a Rate plan on the previous step. The similar options are:

- **Active from, overwrite RP template** - if not set - the Date template from the Rate plan is used.
- **Active from, template for "All other records"** - the **Active from** date will be set according to the **All other records** rule in the Date template for all records with no changes, or if we don't know which records were changed (if comparison was not done yet).
- **Active from, Base date, GMT** - enter the Base date in GMT to add X days to (a number of days is set in a Date template).
- **Active from, specific date, GMT** - fill out the **Active from** date with this specific date in GMT, replaces all other options.
- **Supersede future rates** - disable all rates from the Main table that have same codes as the newly loaded rates and that will become active in future (always done in the current design).

When done, click **OK**. The rates will be imported to the Main RateCust / RateVend table into the chosen Rate plan.

3.10. Upload log

The **Upload log** table stores history of all imports to the Vendor rates, CSV generations and uploads to external billing (if supported).



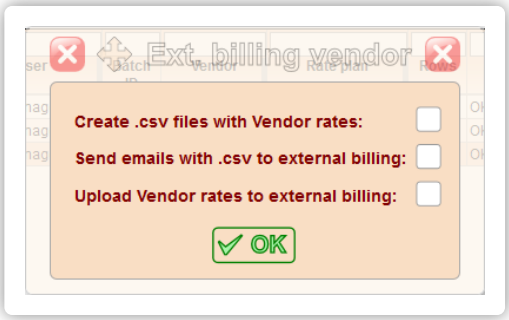
Batch ID	Vendor	Rate plan	Rows	Move to Main status	CSV generation status	Email to billing status	Upload file gen status	Upload to billing status	New codes	New codes file	Found codes
942		Enormous Telecom STANDARD (16)	2934	OK	OK		OK. Codes new: 0, found: 2934.				
942		Enormous Telecom STANDARD (16)	2934	OK	OK		OK. Codes new: 0, found: 2934.				
1204		Pico Telecom CLI (14)	5392	OK	OK		OK. Codes new: 0, found: 5392.	OK			
1203		Pico Telecom PREMIUM (12)	33	OK	OK		OK. Codes new: 2, found: 31.	OK	9376, 9377		
1202		Crab Telecom STANDARD (19)	157	OK	OK		OK. Codes new: 0, found: 157.	OK			
1201		Pico Telecom STANDARD (13)	5103	OK	OK		OK. Codes new: 0, found: 5103.	OK			
1199		Crab Telecom STANDARD (19)	2253	OK	OK		OK. Codes new: 0, found: 2253.	OK			
1198		Pico Telecom STANDARD (13)	497	OK	OK		OK. Codes new: 0, found: 497.	OK			
1197		Crab Telecom STANDARD (19)	176	OK	OK		OK. Codes new: 0, found: 176.	OK			
1196		Enormous Telecom STANDARD (16)	27	OK	OK		OK. Codes new: 27, found: 0.	OK			
1195		Crab Telecom STANDARD (19)	218	OK	OK		OK. Codes new: 0, found: 218.	OK			
1194		Enormous Telecom STANDARD (16)	2619	OK	OK		OK. Codes new: 0, found: 2619.	OK			
1193		Pico Telecom CLI (14)	4998	OK	OK		OK. Codes new: 0, found: 4998.	OK			
1192		Pico Telecom PREMIUM (12)	3292	OK	OK		OK. Codes new: 0, found: 3292.	OK			
1191		Pico Telecom STANDARD (13)	21281	OK	OK		OK. Codes new: 4, found: 21277.	OK	1437, 22577, 22578,		
1190		Enormous Telecom STANDARD (16)	4981	OK	OK		OK. Codes new: 0, found: 4981.	OK			
1189		Enormous Telecom STANDARD (16)	21281	OK	OK		OK. Codes new: 2921, found: 18360.	OK		201609/new_codes_	
1188		Pico Telecom STANDARD (13)	1	OK	OK		OK. Codes new: 0, found: 1.	OK			
1187		Enormous Telecom STANDARD (16)	1014	OK	OK		OK. Codes new: 0, found: 1014.	OK			
1186		Enormous Telecom STANDARD (16)	43	OK	OK		OK. Codes new: 0, found: 43.	OK			
1185		Enormous Telecom STANDARD (16)	32	OK	OK		OK. Codes new: 0, found: 32.	OK			
1184		TR-QUICKCOM-PREMIUM (30)	1546	OK	OK		OK. Codes new: 2, found: 1544.	OK	324684, 324687		
1182		Crab Telecom STANDARD (19)	1947	OK	OK		OK. Codes new: 2, found: 1945.	OK	324684, 324687		
1177		Crab Telecom STANDARD (19)	1096	OK	OK		OK. Codes new: 0, found: 1096.	OK			
1181		Pico Telecom CLI (14)	2234	OK	OK		OK. Codes new: 0, found: 2234.	OK			
1180		Enormous Telecom STANDARD (16)	2207	OK	OK		OK. Codes new: 0, found: 2207.	OK			
1179		Pico Telecom STANDARD (13)	5	OK	OK		OK. Codes new: 5, found: 0.	OK			

Every imported batch has its own record in the upload log, where you can find a status and time of moving rates to the Main RateVend table. Besides, if you chose the corresponding options of the **Move to Main + Upload** window in the Final check table, you can see a status and time of the CSV file generation, sending email and file uploading to an external billing system.

The **Upload file gen status** field shows you how many imported codes were found in an external billing system and how many from them are new (only if supported by an external billing system). Depending on the amount and ratio of new and found codes the System fill up one of the

following columns: **New codes**, **New codes file**, **Found codes Found codes file**. If there are only new or only found codes, all the above fields are left empty because the full list of the codes is already available in the uploaded CSV file. By default, the new codes are displayed in the table if a ratio of them to the total number of the imported codes is less than 80%. Otherwise, the found codes are shown. In order not to overload the table by a huge amount of codes in the **New codes** or **Found codes** columns, the System instead represents them as a link to a CSV file in the **New codes file** or **Found codes file** fields (by default the number of codes should be more than 100).

When you perform **Move to Main + Upload** in the Final check table, at first the System makes a snapshot of the actual rates and saves it to a CSV file (its link is available in the hidden by default **CSV file snapshot** column of this table). This approach allows you to restart uploading of a specific rates batch anytime by means of the **Upload to External billing** button in case of an error (for example, a break of connection to an external billing) using exactly the same state of rates which was during the initial import.



The available options are similar to the **Move to Main + Upload**: create CSV files, send emails and upload files to an external billing system.

If you need to upload certain Vendor rates right from the Main RateVend table to an external billing system, you can use the Upload rates from Main button.

The **View Comparison results** button allows you to view comparison results for each upload in a separate Compare table if the comparison for this batch was done. If the upload was done from the Final check table, you can view its saved copy by clicking the **View Final check** button.

4. Rate import, advanced

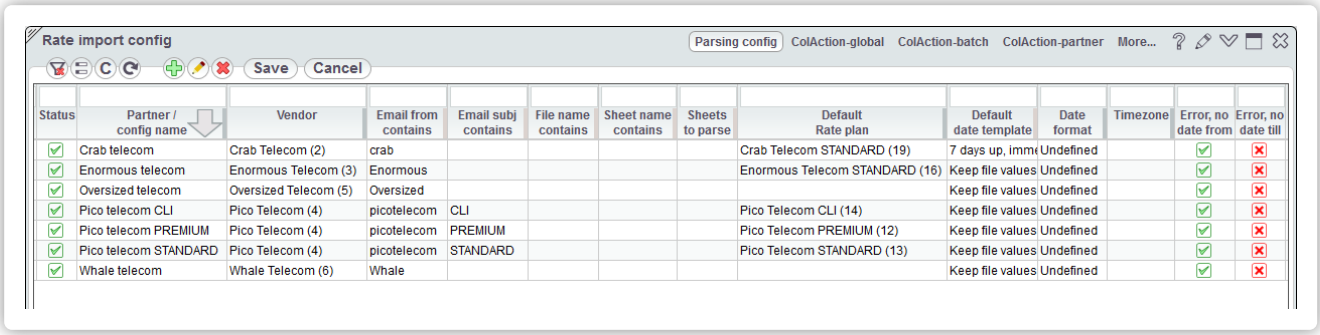
Here you can find description of advanced modules which can be used during the rate import process.

4.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

4.2. Parsing config

The **Parsing config** table defines the parsing options for a partner.



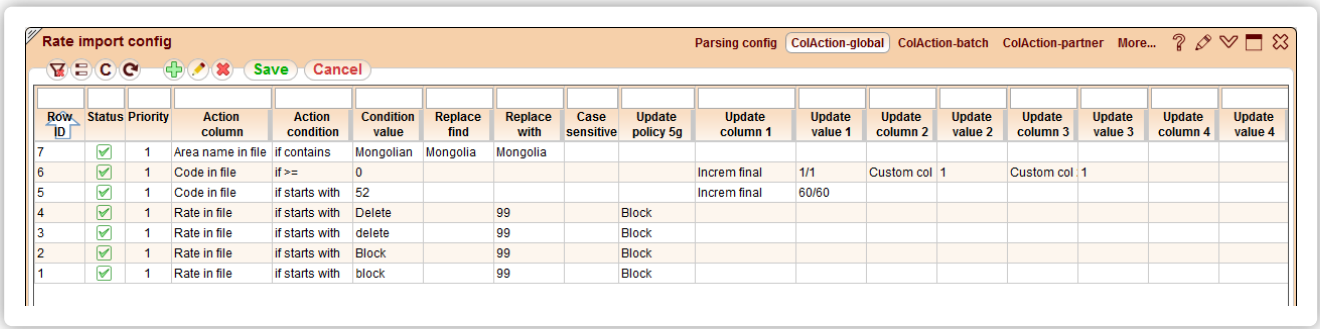
Status	Partner / config name	Vendor	Email from contains	Email subj contains	File name contains	Sheet name contains	Sheets to parse	Default Rate plan	Default date template	Date format	Timezone	Error, no date from	Error, no date till
☑	Crab telecom	Crab Telecom (2)	crab					Crab Telecom STANDARD (19)	7 days up, imm	Undefined		☑	☒
☑	Enormous telecom	Enormous Telecom (3)	Enormous					Enormous Telecom STANDARD (16)	Keep file values	Undefined		☑	☒
☑	Oversized telecom	Oversized Telecom (5)	Oversized						Keep file values	Undefined		☑	☒
☑	Pico telecom CLI	Pico Telecom (4)	picotelecom	CLI				Pico Telecom CLI (14)	Keep file values	Undefined		☑	☒
☑	Pico telecom PREMIUM	Pico Telecom (4)	picotelecom	PREMIUM				Pico Telecom PREMIUM (12)	Keep file values	Undefined		☑	☒
☑	Pico telecom STANDARD	Pico Telecom (4)	picotelecom	STANDARD				Pico Telecom STANDARD (13)	Keep file values	Undefined		☑	☒
☑	Whale telecom	Whale Telecom (6)	Whale						Keep file values	Undefined		☑	☒

Batch config options are not the same as **Parsing config** options. When a batch is created in the Parsing log table, 5gVision copies the parsing configuration for a partner into the batch (if a partner is not found, the default values are taken). All adjustment to the batch options will not affect the parsing config, unless you explicitly choose to save them using the **Save config for Partner** button in the Match columns window.

In order the System to detect a certain partner config, you can use a group of **contain** parameters: email from, email subj, file name, sheet name. A parsing config will be chosen only if the received email corresponds to all the filled **contain** options.

4.3. Column actions

The **ColAction-global**, **ColAction-batch** and **ColAction-partner** tables let you configure rules to automatically replace and modify rate values during the import. All they have the similar set of columns.



Row ID	Status	Priority	Action column	Action condition	Condition value	Replace find	Replace with	Case sensitive	Update policy 5g	Update column 1	Update value 1	Update column 2	Update value 2	Update column 3	Update value 3	Update column 4	Update value 4
7	☑	1	Area name in file	if contains	Mongolian	Mongolia	Mongolia										
6	☑	1	Code in file	if >=	0					Increm final	1/1	Custom col	1	Custom col	1		
5	☑	1	Code in file	if starts with	52					Increm final	60/60						
4	☑	1	Rate in file	if starts with	Delete		99		Block								
3	☑	1	Rate in file	if starts with	delete		99		Block								
2	☑	1	Rate in file	if starts with	Block		99		Block								
1	☑	1	Rate in file	if starts with	block		99		Block								

The **ColAction-global** actions are applied globally for all imported files. The **ColAction-partner** table contains rules associated with partners from the Parsing config table. When 5gVision receives an email from a partner or you assign a partner to a manually imported rate file, the System copies these rules from the partner config to the **ColActions-batch** table, where they are assigned to a specific batch. Once copied, these rules become valid for this batch only and changes in the batch rules do not affect the partner rules and vice versa. The only way to copy them back to **ColActions-partner** is to use the **Save config for Partner** button in the Match columns window.

A rule basically consists of two parts: a condition and an action. In the condition part, you may define the inspected column (**Action column**), the condition proper (**Action condition**) and the condition value (**Condition value**). The action part lets you specify what to do when the condition is satisfied. You may find and replace the value in the **Action column** (**Replace find** and **Replace with**), update the **Processing policy 5g** column (**Update policy 5g**) or any other column for that matter (**Update column N** and **Update value N**). If it is required, you can set **Case sensitive**. It applies to both the **Condition value** and the **Replace find** value.

Suppose you need to set up two rules:

- Rule 1 - correct the spelling error in the name "New Zealand" when it is written as "Newzealand".
- Rule 2 - mark rates as "blocked" when the **Changed** column in rate file contains "Deleted".

For the first rule you need the following parameters:

- **Action columns** = **Area name in file**.
- **Action condition** = **if contains**.
- **Condition value** = **Newzealand**.
- **Replace find** = **Newzealand**.
- **Replace with** = **New Zealand**.

This will look for the word "Newzealand" in **Area name in file** and replace it with "New Zealand".

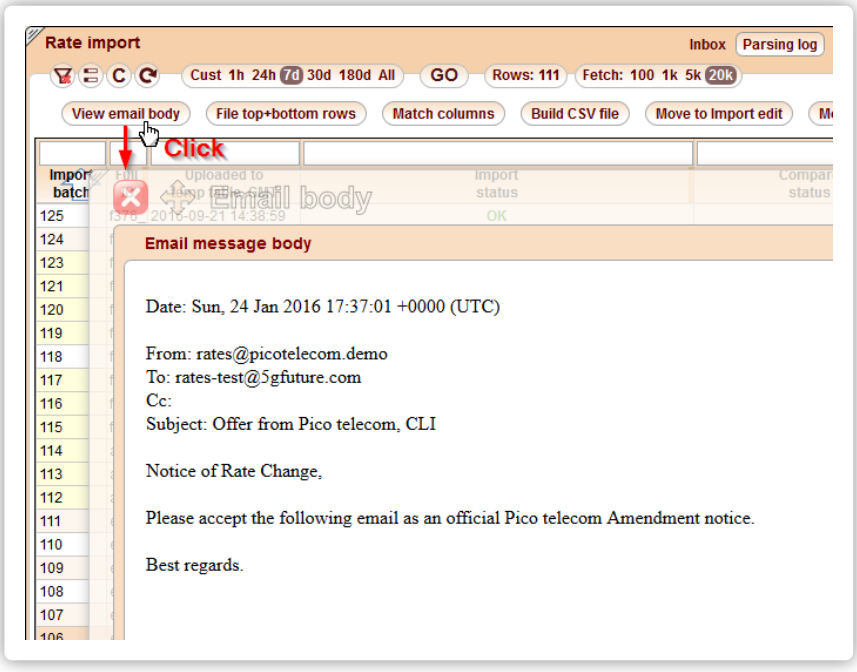
For the second rule you need the following parameters:

- **Action columns** = **Changed**.
- **Action condition** = **if contains**.
- **Condition value** = **Deleted**.
- **Update policy 5g** = **Block**.
- **Update column 1** = **Processing policy ext**.
- **Update value 1** = **block**.

This will look for the word "Deleted" in the **Changed** column, mark such rate as blocked for 5gVision and add a comment "block" in the **Processing policy ext** column. The latter may be useful if you plan to export the file into CSV and load it into your billing system. In this way, you can tell your billing system to block this rate.

4.4. View email body

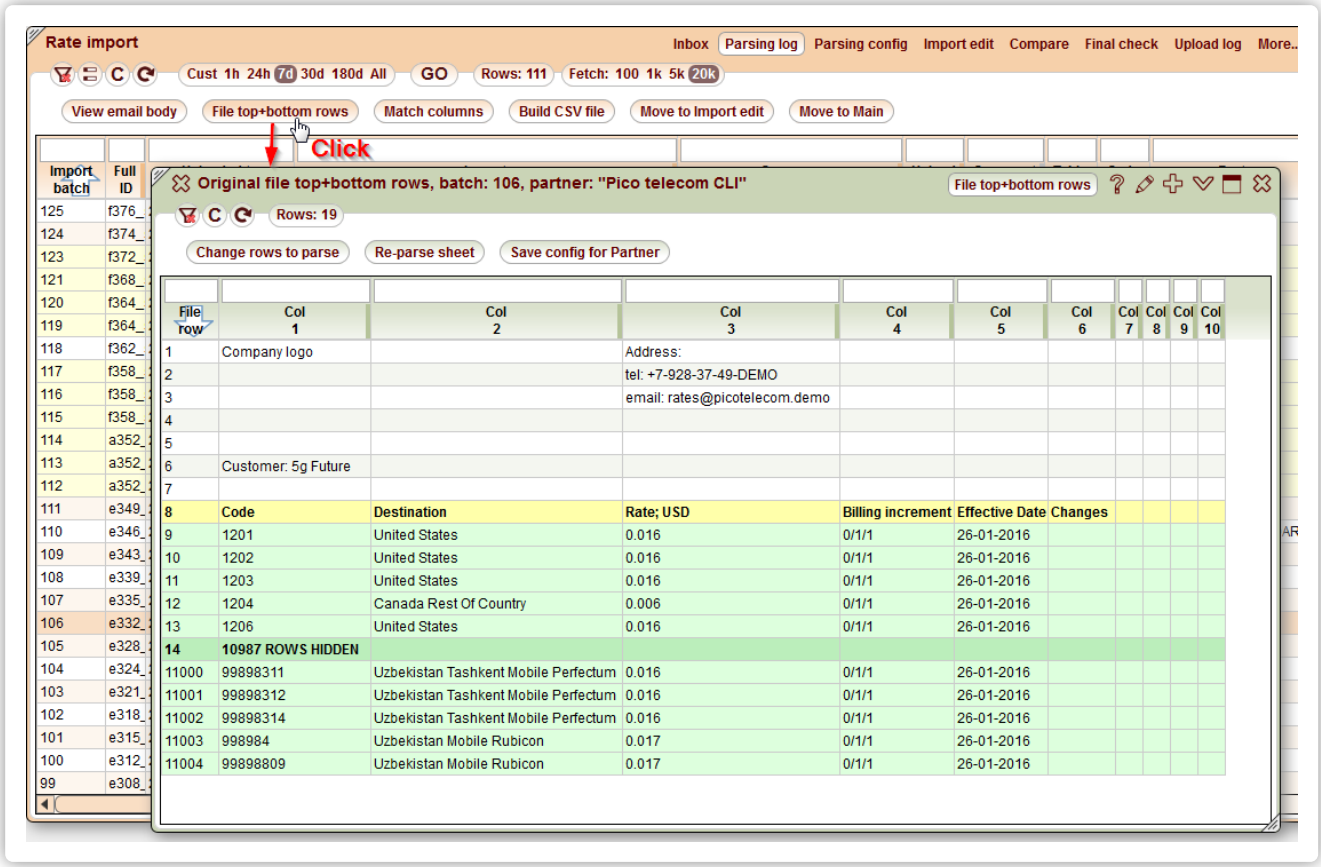
To view the text of the email message which contained the processed rate files, click the **View email body** button in the Inbox and Parsing log modules.



Naturally, this option is available only if the rate files were received via email and not imported manually.

4.5. File top+bottom rows

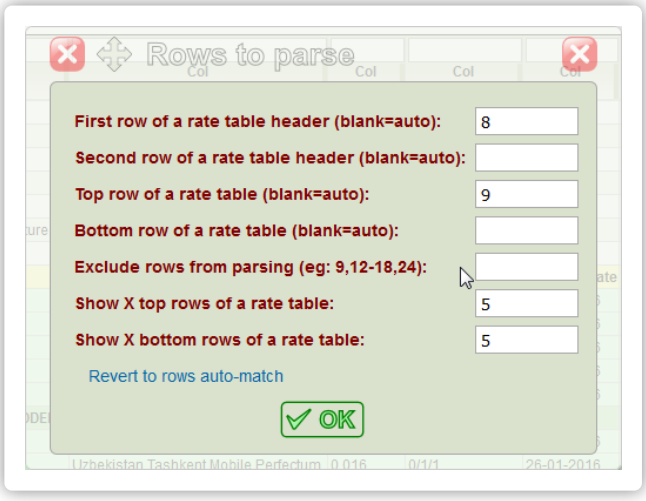
The **File top+bottom rows** window, called by means of the corresponding button in the Parsing log module, is used to find out whether the System processed the file completely.



File row	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10
1	Company logo		Address:							
2			tel: +7-928-37-49-DEMO							
3			email: rates@picotelecom.demo							
4										
5										
6	Customer: 5g Future									
7										
8	Code	Destination	Rate; USD	Billing increment	Effective Date	Changes				
9	1201	United States	0.016	0/1/1	26-01-2016					
10	1202	United States	0.016	0/1/1	26-01-2016					
11	1203	United States	0.016	0/1/1	26-01-2016					
12	1204	Canada Rest Of Country	0.006	0/1/1	26-01-2016					
13	1206	United States	0.016	0/1/1	26-01-2016					
14	10987 ROWS HIDDEN									
11000	99898311	Uzbekistan Tashkent Mobile Perfectum	0.016	0/1/1	26-01-2016					
11001	99898312	Uzbekistan Tashkent Mobile Perfectum	0.016	0/1/1	26-01-2016					
11002	99898314	Uzbekistan Tashkent Mobile Perfectum	0.016	0/1/1	26-01-2016					
11003	998984	Uzbekistan Mobile Rubicon	0.017	0/1/1	26-01-2016					
11004	99898809	Uzbekistan Mobile Rubicon	0.017	0/1/1	26-01-2016					

It contains the information located before the rate table, the rate table header, several rows from the table top, several rows from the table bottom and the information located after the table.

Normally, 5gVision detects the top and bottom of the rate table on its own; but if you are not satisfied, you can click the **Change rows to parse** button and hint the System.



The following parameters may be adjusted:

- **First row of a rate table header** - the number of the row where the first table header is located.
- **Second row of a rate table header** - the number of the row where the second table header is located. Leave blank if the rate table has no second header.
- **Top row of a rate table** - the number of the row where the rates start.
- **Bottom row of a rate table** - the number of the last row in the rates table.
- **Exclude rows of a rate table** - list a range of rows to ignore.
- **Show X top rows of a rate table** - show more top rows of the rate table if you need it for debug.
- **Show X bottom rows of a rate table** - show more bottom rows of the rate table if you need it for debug.

If you change the row settings, you can immediately re-parse the file for the settings to apply by clicking **Re-parse file**. If re-parsing was successful and there were no errors, you can save this configuration in the partner Parsing config using the **Save config for Partner** button.

4.6. Parsing errors

Here you find the full list of errors that may occur during the rates parsing process:

- **Disabled** - row was manually disabled in the rates table.
- **DuplCodeSkip** - row was skipped according to the "Treat duplicate codes" rule. Only one of duplicate codes is left enabled.
- **EmptyCol** - empty column.
- **BadRate** - rate is empty, not numeric, or not within the range.
- **BadCode** - code has characters other than digits or is longer than 20 digits.
- **DuplCode** - duplicate codes exist in the rate sheet for the same Area.
- **DuplCodeDiffAreas** - duplicate codes exist in the rate sheet for different Areas, cant be corrected by the "Treat duplicate codes" rule.
- **EmptyArea** - no area name.
- **BadCountryCode** - the processed country prefix does not match the reference one in the Country codes table.
- **CountryNotFound** - the processed country name is not found in the Country codes table.
- **ErrDateParse** - Undefined date parsing error occurred.
- **NoDateFrom** - Active from date is required, but is empty.
- **ShortDateFrom** - Active from date is too short to be parsed.
- **BadDateFrom** - Active from date has an incorrect format (e.g. **10 Ju 2014**).
- **BadTimeFrom** - Active from time has an incorrect format.
- **?DateFrom** - Uncertain Active from date, eg: 5/6 is "May 6" or "June 5"?.
- **NoDateTill** - Active till date is required, but is empty.
- **ShortDateTill** - Active till date is too short to be parsed.
- **BadDateTill** - Active till date has an incorrect format (e.g. **10 Ju 2014**).
- **BadTimeTill** - Active till time has an incorrect format.
- **?DateTill** - Uncertain Active till date, eg: 5/6 is "May 6" or "June 5"?.
- **BadIncrem** - Increment is not in the format of "digit + separator + digit".
- **Empty file** - File is empty.
- **No prefix column** - No prefix column in rate table.
- **No rates column** - No rates column in rate table.
- **Insert error** - Cant insert parsed rates to the DB.
- **Import in progress** - Import of rate file started, but has not ended yet, or ended with an unexpected error.

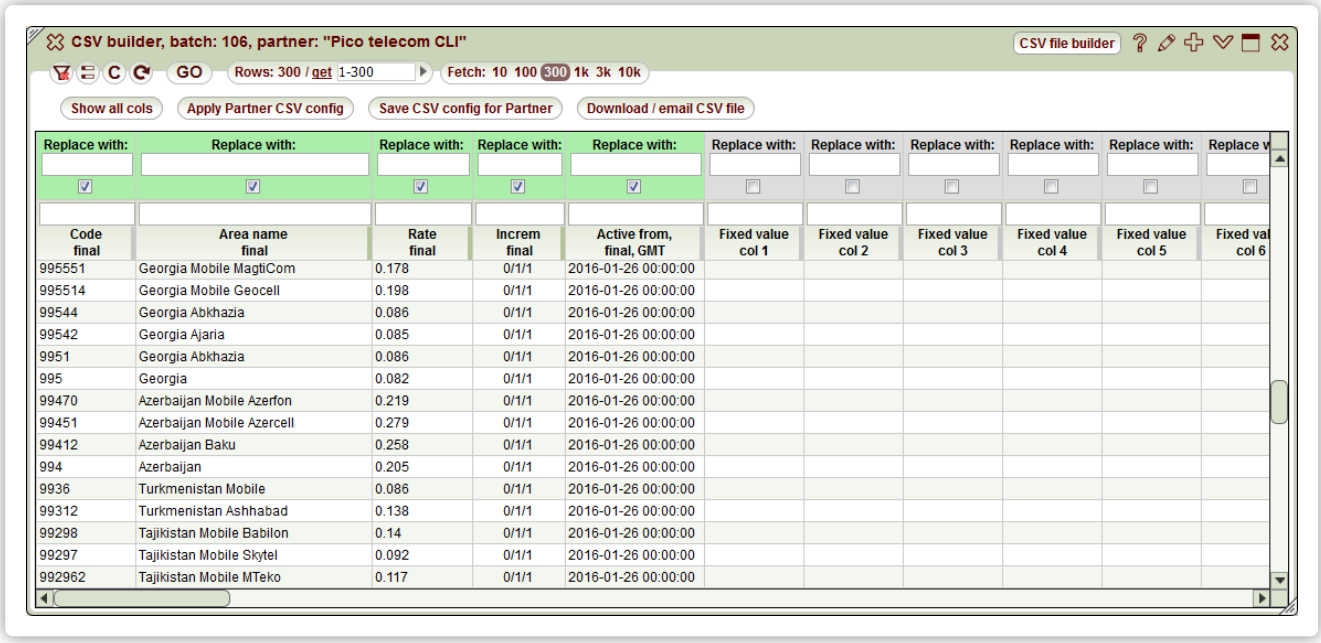
4.7. Deleting and overriding rates

Each rate is characterized by its activity time. As there can be several rates for the same code in a rate plan at the same time, the System determines the active one as follows: its **Active from** time is the most recent and it is not expired (**Active till** is greater than current time). When the active rate expires, the previous active rate takes its place. Thus you can easily set a base rate with no expiration time and the adjust it using short-lived correction rates.

There may be cases when you halt any business with your partner and you need to remove a code from the rate plan completely. If you set an expiration time for it, you will achieve nothing as the System will fall back to the previously active rate. What you need is to mark the rate as **blocked** in the **Processing policy 5g** column in the Import edit or Final check table. When 5gVision encounters such mark, it will suppress all rates for this prefix, effectively blocking this destination from rate processing.

4.8. Build CSV file

To export the resulting rate file once all processing is complete, please click the **Build CSV file** button.



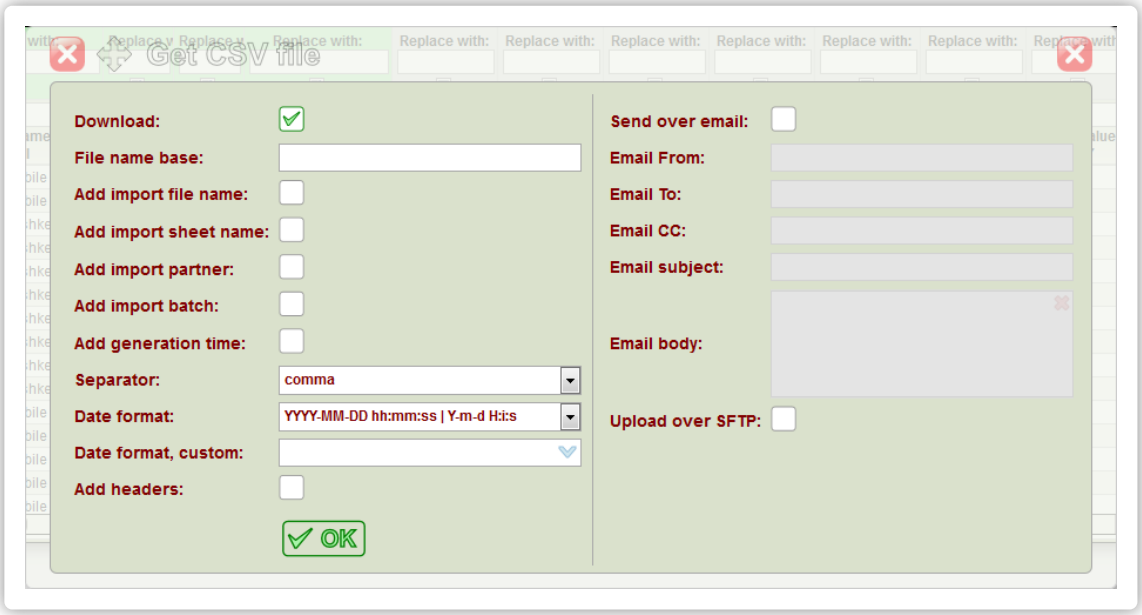
It is possible to select the very columns you wish to see in the final file. To do so, activate/deactivate the checkboxes above the required columns. To replace the values of the whole column in the final CSV file with some predefined value, enter the value in the text box **Replace with** above the checkbox.

The textbox below the checkbox serves as a regular filter for the column, please don't confuse it with the **Replace with** fields.

Please note that by default the System does not show all the available CSV columns for you. You can display all of them by clicking the **Show all colls** button or you can pick individual ones using the standard **C** button (see Column selection).

You may save the resulting CSV column layout for future use. Once all processing is complete, click **Save CSV layout to Partner** and select the Partner to be associated with this CSV layout. In the next time you can load the saved configuration using the **Apply Partner CSV config** button.

The resulting CSV file may be downloaded to your hard drive and/or emailed to a specific address. Click **Download / email CSV file** and define the following settings in the opened window.



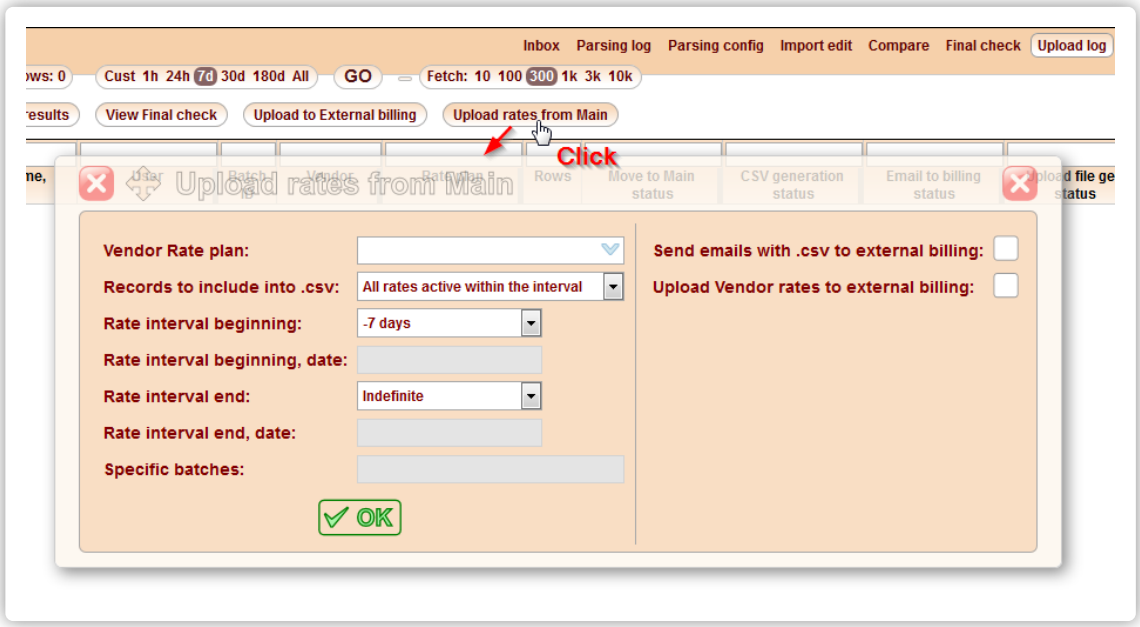
- **Download** - select the checkbox if you want to download the CSV file. Please note that if you select neither this checkbox nor **Send over email**, the System will do nothing.
- **File name base** - enter the CSV file name base.
- **Add import file name** - select the checkbox if you want to add the import file name to the CSV file name base.
- **Add import sheet name** - select the checkbox if you want to add the import sheet name to the CSV file name base.
- **Add import partner** - select the checkbox if you want to add the import partner to the CSV file name base.

- **Add import batch** - select the checkbox if you want to add the import batch to the CSV file name base.
- **Add generation time** - select the checkbox if you want to add the generation time to the CSV file name base.
- **Separator** - choose the separators in the CSV file from **comma**, **semicolon** or **tab**.
- **Date format** - choose the date format in the CSV file.
- **Date format, custom** - enter your own custom date and time format in a PHP notation that will overwrite the above settings.
- **Add headers** - select the checkbox to add headers to the CSV file.
- **Send over email** - select the checkbox if you want to email the file to a specified address.
- **Email From** - enter the reply email address.
- **Email To** - enter the destination email address.
- **Email CC** - enter the copy email address.
- **Email Subject** - enter the subject of the email.
- **Email Body** - enter the body of the email.

When done, click **OK** to download and/or email the file.

4.9. Upload rates from Main

Sometimes there is a need to upload certain Vendor rates from the Main RateVend table to an external billing system. The **Upload rates from Main** button in the Upload log module is at your convenience.



The following options are available:

- **Vendor Rate plan** - select a Vendor Rate plan to get rates for.
- **Records to include into .csv** - choose what rate records to include into .csv.
- **Rate interval beginning** - interval from the current time to find all rates active after the date set by the interval.
- **Rate interval beginning, date** - date to find all rates active after this date. Available if you chose **Specific date** in the previous option.
- **Rate interval end** - interval from the current time to find all rates active before the date set by the interval.
- **Rate interval end, date** - date to find all rates active before this date. Available if you chose **Specific date** in the previous option.
- **Specific batches** - enter specific batches to get al rates for.
- **Send emails with .csv to external billing** - select if it is necessary to send emails with .csv to your external billing system.
- **Upload new Vendor rates to external billing** - select if it is necessary to upload new Vendor rates to your billing (if supported).

When you click **OK**, a new record will be added to the Upload log.

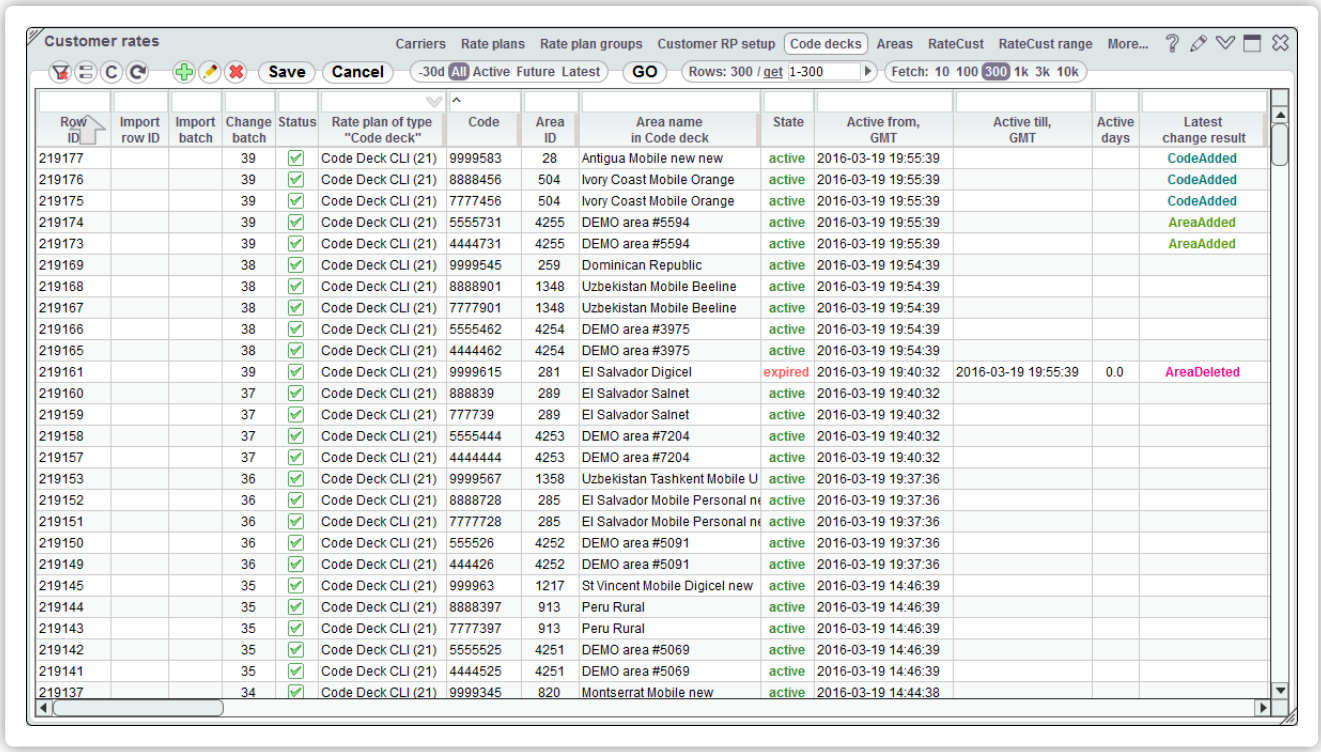
5. Customer rates

5.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

5.2. Code decks

The **Code decks** table contains area names and codes per each area.

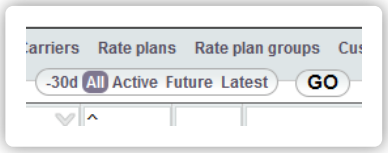


Row ID	Import row ID	Import batch	Change batch	Status	Rate plan of type "Code deck"	Code	Area ID	Area name in Code deck	State	Active from, GMT	Active till, GMT	Active days	Latest change result
219177			39	☑	Code Deck CLI (21)	9999583	28	Antigua Mobile new new	active	2016-03-19 19:55:39			CodeAdded
219176			39	☑	Code Deck CLI (21)	8888456	504	Ivory Coast Mobile Orange	active	2016-03-19 19:55:39			CodeAdded
219175			39	☑	Code Deck CLI (21)	7777456	504	Ivory Coast Mobile Orange	active	2016-03-19 19:55:39			CodeAdded
219174			39	☑	Code Deck CLI (21)	5555731	4255	DEMO area #5594	active	2016-03-19 19:55:39			AreaAdded
219173			39	☑	Code Deck CLI (21)	4444731	4255	DEMO area #5594	active	2016-03-19 19:55:39			AreaAdded
219169			38	☑	Code Deck CLI (21)	9999545	259	Dominican Republic	active	2016-03-19 19:54:39			
219168			38	☑	Code Deck CLI (21)	8888901	1348	Uzbekistan Mobile Beeline	active	2016-03-19 19:54:39			
219167			38	☑	Code Deck CLI (21)	7777901	1348	Uzbekistan Mobile Beeline	active	2016-03-19 19:54:39			
219166			38	☑	Code Deck CLI (21)	5555462	4254	DEMO area #3975	active	2016-03-19 19:54:39			
219165			38	☑	Code Deck CLI (21)	4444462	4254	DEMO area #3975	active	2016-03-19 19:54:39			
219161			39	☑	Code Deck CLI (21)	9999615	281	El Salvador Digicel	expired	2016-03-19 19:40:32	2016-03-19 19:55:39	0.0	AreaDeleted
219160			37	☑	Code Deck CLI (21)	888839	289	El Salvador Salnet	active	2016-03-19 19:40:32			
219159			37	☑	Code Deck CLI (21)	777739	289	El Salvador Salnet	active	2016-03-19 19:40:32			
219158			37	☑	Code Deck CLI (21)	5555444	4253	DEMO area #7204	active	2016-03-19 19:40:32			
219157			37	☑	Code Deck CLI (21)	4444444	4253	DEMO area #7204	active	2016-03-19 19:40:32			
219153			36	☑	Code Deck CLI (21)	9999567	1358	Uzbekistan Tashkent Mobile U	active	2016-03-19 19:37:36			
219152			36	☑	Code Deck CLI (21)	8888728	285	El Salvador Mobile Personal n	active	2016-03-19 19:37:36			
219151			36	☑	Code Deck CLI (21)	7777728	285	El Salvador Mobile Personal n	active	2016-03-19 19:37:36			
219150			36	☑	Code Deck CLI (21)	555526	4252	DEMO area #5091	active	2016-03-19 19:37:36			
219149			36	☑	Code Deck CLI (21)	444426	4252	DEMO area #5091	active	2016-03-19 19:37:36			
219145			35	☑	Code Deck CLI (21)	999963	1217	St Vincent Mobile Digicel new	active	2016-03-19 14:46:39			
219144			35	☑	Code Deck CLI (21)	8888397	913	Peru Rural	active	2016-03-19 14:46:39			
219143			35	☑	Code Deck CLI (21)	7777397	913	Peru Rural	active	2016-03-19 14:46:39			
219142			35	☑	Code Deck CLI (21)	5555525	4251	DEMO area #5069	active	2016-03-19 14:46:39			
219141			35	☑	Code Deck CLI (21)	4444525	4251	DEMO area #5069	active	2016-03-19 14:46:39			
219137			34	☑	Code Deck CLI (21)	9999345	820	Montserrat Mobile new	active	2016-03-19 14:44:38			

- **Import row ID** -
- **Import batch** -
- **Change batch** - change batch ID of the code, if generated via Change deck.
- **Status** - let you easily enable/disable the record.
- **Rate plan of type "Code deck"** - a code deck which the code belongs to.
- **Code** - a code forming the Code deck.
- **Area ID** - ID of an area which the code is bound to in the Areas table.
- **Area name in Code Deck** - name of an area which the code is bound to in the Areas table.
- **State** - a state of the code. It can be:
  - **active** - the code is currently active.
  - **future** - the Active from date of this code is in the future.
  - **expired** - the Active till date of this code is in the past.
  - **void** - the Active till date of this code is **before** the Active from date. This may happen when a future code is automatically closed as it is superseded by a newly loaded code with an earlier Active from date.
  - **off** - the code is disabled.
- **Active from, GMT** - date/time in GMT the code active from. If it is more than the current time the system considers the code as **Future**.
- **Active till, GMT** - date/time in GMT the code active till. If it is less than the current time the system considers the code as **Expired**.
- **Active days** - number of days this code was or will be active for.
- **Processing policy 5g** - displays a 5g policy assigned to this code.
- **Processing policy ext** - displays a policy used for this code during export to an external billing system.

- **Latest change result** - displays the result of the most recent Code deck change made via Change deck. It can be:
  - **CodeAdded** - a new code has been added.
  - **CodeDeleted** - the code has been deleted.
  - **AreaAdded** - a new area has been added.
  - **AreaDeleted** - the area has been deleted.
- **Latest change, User** - displays a user that made the last change.
- **Latest change, GMT** - displays date/time when the last change was made.

You may edit and filter the codes using standard methods. The filter field of the **Rate plan of type "Code deck"** column has drop-down table which allows you to easily filter codes of a certain Code deck. Another filtering control is located at the top panel.



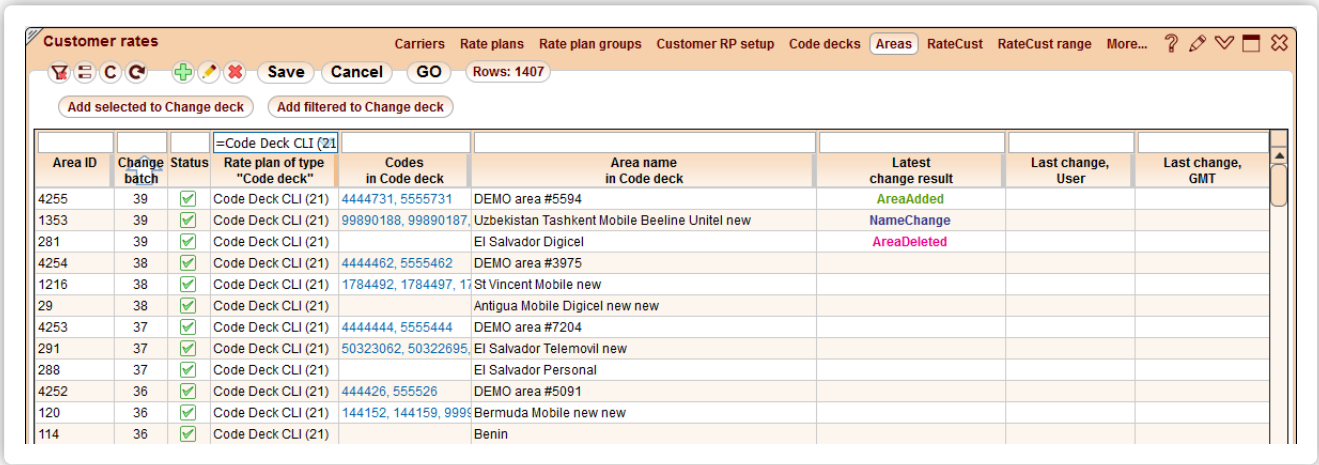
There you may choose:

- **-30d** - Show codes active now, in future, and up to 30 days ago (possibly several codes per Code deck).
- **All** - Show all codes.
- **Active** - Show only codes active right now (one code per Code deck).
- **Future** - Show codes active right now and in future (possibly several codes per Code deck).
- **Latest** - Show codes with the latest Active from date (one code per Code deck).

If you you need to populate a new Code deck with codes please refer to Initial Code decks load.

5.3. Areas

The **Areas** table allows you to manage names of areas used in Code decks and displays **active** or **future** codes for each area in a convenient way.



You can also disable a certain area using the **Status** column. Several **change** columns display information concerning changes performed via the Change deck. **Latest change result** displays the result of the most recent area change made via Change deck.

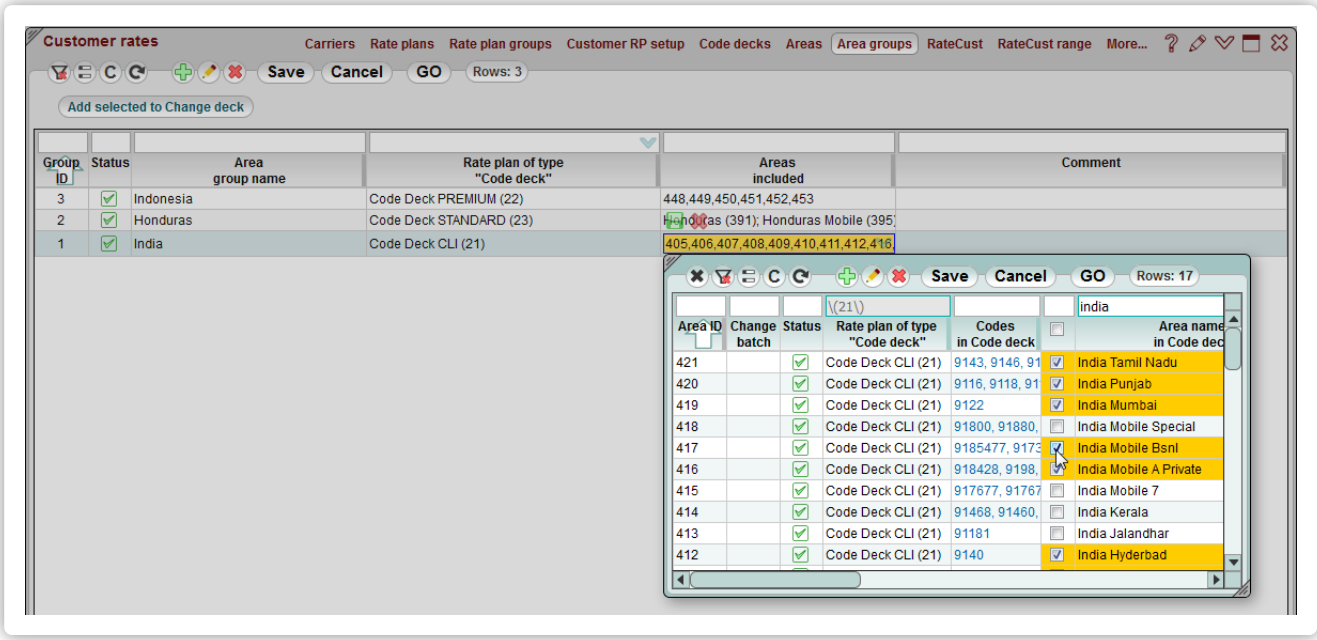
- **AreaAdded** - a new area has been added.
- **AreaDeleted** - the area has been deleted.
- **NameChange** - the area name has been changed compared to the previous name.

The buttons **Add selected to Change deck** and **Add filtered to Change deck** let you add selected or all filtered areas to the Change deck for further modifications.

The option **View codes in code deck** in the context menu opens a floating Code decks window with filtered codes of the chosen area.

5.4. Area groups

If you frequently work with the same several Areas you can create a logical group to quickly choose them.

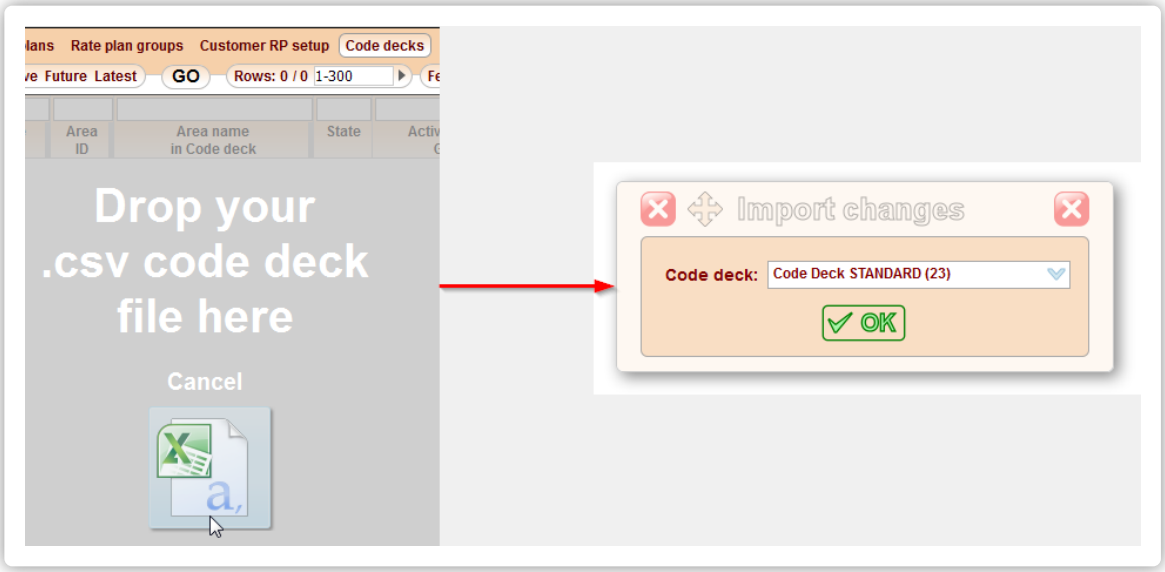


Just enter an area group name, choose a code deck which areas belong to and add corresponding areas in the **Areas included** field.

The button **Add selected to Change deck** let you add selected area groups to the Change deck for further modifications.

5.5. Initial Code decks load

In order to import codes to a newly created Code deck, you should just drag-n-drop a CSV file with columns **code** and **area name** to the **Code decks** table. A separator in a CSV file can be a comma, a semicolon or a tab. The system will ask you to choose a Code deck and a value for the **Match areas by** option:



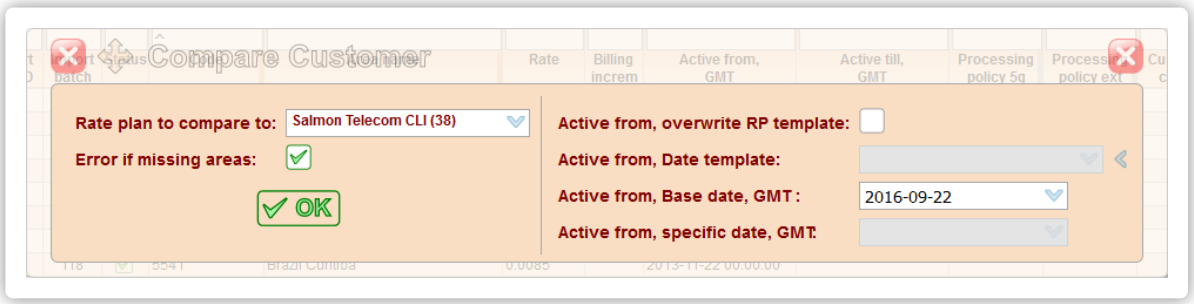
- **Area name** - imported areas will be matched with areas in the Code deck by area names.
- **Area ID** - an **area name** column of a CSV file can contain IDs in parentheses in addition to direct area names. This option allows you to match the imported areas with areas in the Code deck by IDs. It is useful if you exported a Code deck from 5gVision before and want to import it back.

When you click **OK**, the codes will be loaded the Code deck.

5.6. Initial Customer rate plans load

When you need to make initial Customer rate plans load to 5gVision, you should use the Rate import tools which however mostly concern Vendor rates.

At first, you should create a new Customer rate plan and load a corresponding Code deck for it (see Initial Code decks load). Then you go through the similar steps which you perform during Vendor rates import: Import rate file, Match columns, Import edit. When your Customer rates are loaded and adjusted in Import edit, you should make a comparison by means of the **Compare Customer** button. The System will display a dialog, where you can specify the comparison options.

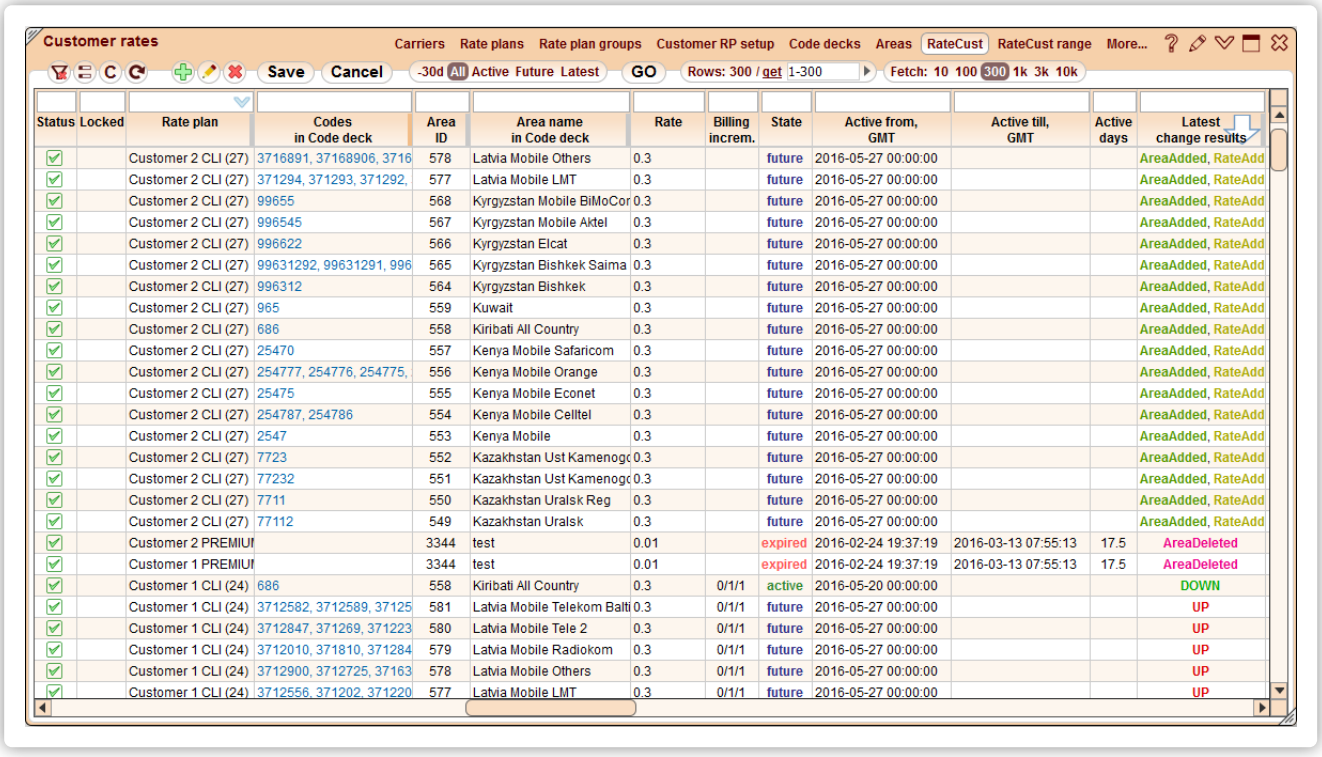


- **Rate Plan to compare to** - select a Customer rate plan to compare the imported rates to.
- **Errors if missing areas** - show error if not all Code deck areas are present in the compared Customer rates.
- **Active from, overwrite RP template** - if not set - the Date template from the Rate plan is used.
- **Active from, date template** - select a Data template from the Date templates table if you chose to overwrite RP template.
- **Active from, Base date, GMT** - enter the Base date in GMT to add X days to (a number of days is set in the Date template).
- **Active from, specific date, GMT** - fill out the **Active from** date with this specific date in GMT, replaces all other options.

When done, click **OK**. The System will make the comparison and display the results in the Compare table. As the new Customer rate plan had no rates, all the records in the table will be with the comparison result **Added**. Actually there is no need to move rates to the Final check table, so you may move them directly to the main rates table RateCust using the **Move to Main** button.

5.7. RateCust

The **RateCust** table includes all the Customer rates that were ever imported into the System. It allows you to view all/active/future Customer rates and manually add/edit/delete them if it is required.



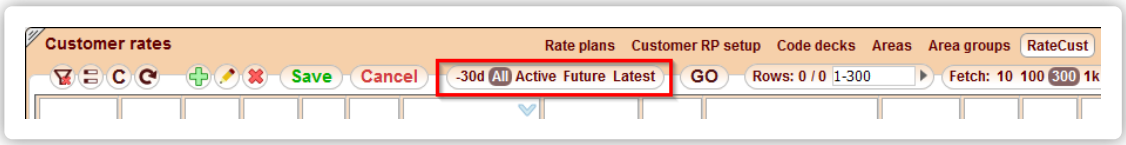
Status	Locked	Rate plan	Codes in Code deck	Area ID	Area name in Code deck	Rate	Billing increm.	State	Active from, GMT	Active till, GMT	Active days	Latest change results
☑		Customer 2 CLI (27)	3716891, 37168906, 3716	578	Latvia Mobile Others	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	371294, 371293, 371292,	577	Latvia Mobile LMT	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	99655	568	Kyrgyzstan Mobile BiMoCor	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	996545	567	Kyrgyzstan Mobile Aktel	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	996622	566	Kyrgyzstan Elcat	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	99631292, 99631291, 996	565	Kyrgyzstan Bishkek Saima	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	996312	564	Kyrgyzstan Bishkek	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	965	559	Kuwait	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	686	558	Kiribati All Country	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	25470	557	Kenya Mobile Safaricom	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	254777, 254776, 254775,	556	Kenya Mobile Orange	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	25475	555	Kenya Mobile Econet	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	254787, 254786	554	Kenya Mobile Celltel	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	2547	553	Kenya Mobile	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	7723	552	Kazakhstan Ust Kamenogo	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	77232	551	Kazakhstan Ust Kamenogo	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	7711	550	Kazakhstan Uralsk Reg	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 CLI (27)	77112	549	Kazakhstan Uralsk	0.3		future	2016-05-27 00:00:00			AreaAdded, RateAdd
☑		Customer 2 PREMIUI		3344	test	0.01		expired	2016-02-24 19:37:19	2016-03-13 07:55:13	17.5	AreaDeleted
☑		Customer 1 PREMIUI		3344	test	0.01		expired	2016-02-24 19:37:19	2016-03-13 07:55:13	17.5	AreaDeleted
☑		Customer 1 CLI (24)	686	558	Kiribati All Country	0.3	0/1/1	active	2016-05-20 00:00:00			DOWN
☑		Customer 1 CLI (24)	3712582, 3712589, 37125	581	Latvia Mobile Telekom Balti	0.3	0/1/1	future	2016-05-27 00:00:00			UP
☑		Customer 1 CLI (24)	3712847, 371269, 371223	580	Latvia Mobile Tele 2	0.3	0/1/1	future	2016-05-27 00:00:00			UP
☑		Customer 1 CLI (24)	3712010, 371810, 371284	579	Latvia Mobile Radiokom	0.3	0/1/1	future	2016-05-27 00:00:00			UP
☑		Customer 1 CLI (24)	3712900, 3712725, 37163	578	Latvia Mobile Others	0.3	0/1/1	future	2016-05-27 00:00:00			UP
☑		Customer 1 CLI (24)	3712556, 371202, 371220	577	Latvia Mobile LMT	0.3	0/1/1	future	2016-05-27 00:00:00			UP

- **Import row ID** - ID of the rate record in the auto-import table.
- **Import batch** - import batch of the rate, if imported from a file.
- **Change batch** - change batch ID of the rate, if generated via Change deck.
- **Status** - let you easily enable/disable the record.
- **Locked** - let you lock/unlock the rate.

- **Rate plan** - rate plan which the rate belongs to.
- **Codes in Code deck** - codes belonging to the area of the rate. Only the most recent active or future codes are shown.
- **Area ID** - ID of an area which the code is bound to in the Areas table.
- **Area name in Code Deck** - name of an area which the code is bound to in the Areas table.
- **Rate** - rate in Rate plan currency.
- **Billing increm.** - billing scheme **x**/**y**/**z** where **x** denotes the non-chargeable interval of an established connection, **y** stands for the initial period, i.e. chargeable minimum in seconds, **z** is the subsequent bulling increment. The first section is optional. Blank is "0/1/1".
- **State** - state of the rate. It can be:
  - **active** - the rate is currently active.
  - **future** - the Active from date of this rate is in the future.
  - **expired** - the Active till date of this rate is in the past.
  - **void** - the Active till date of this rate is **before** the Active from date. This may happen when a future rate is automatically closed as it is superseded by a newly loaded rate with an earlier Active from date.
  - **off** - the rate is disabled.
- **Active from, GMT** - date/time in GMT the rate active from. If it is more than the current time the system considers the rate as **Future**.
- **Active till, GMT** - date/time in GMT the rate active till. If blank - the record active indefinitely. If it is less than the current time the system considers the code as **Expired**.
- **Active days** - number of days this rate was or will be active for.
- **Processing policy 5g** - displays a 5g policy assigned to this rate.
- **Processing policy ext** - displays a policy used for this rate during export to an external billing system.
- **Custom col 1, 2, 3** - custom columns that can be used for CSV/XLSX files creation during Amendments generation.
- **Latest change result** - displays the result of a comparison with the previous most recent rate. The possible results are:
  - **UP** - the rate has been increased.
  - **DOWN** - the rate has been decreased.
  - **AreaAdded** - a new area has been added to the Customer rate plan.
  - **AreaDeleted** - the area has been deleted from the Customer rate plan.
  - **Increment** - the billing increment is changed.
- **Latest change, User** - displays a user that made the last change.
- **Latest change, GMT** - displays date/time when the last change was made.

You may edit and filter the rates using standard methods.

Another filtering control is located at the top panel.

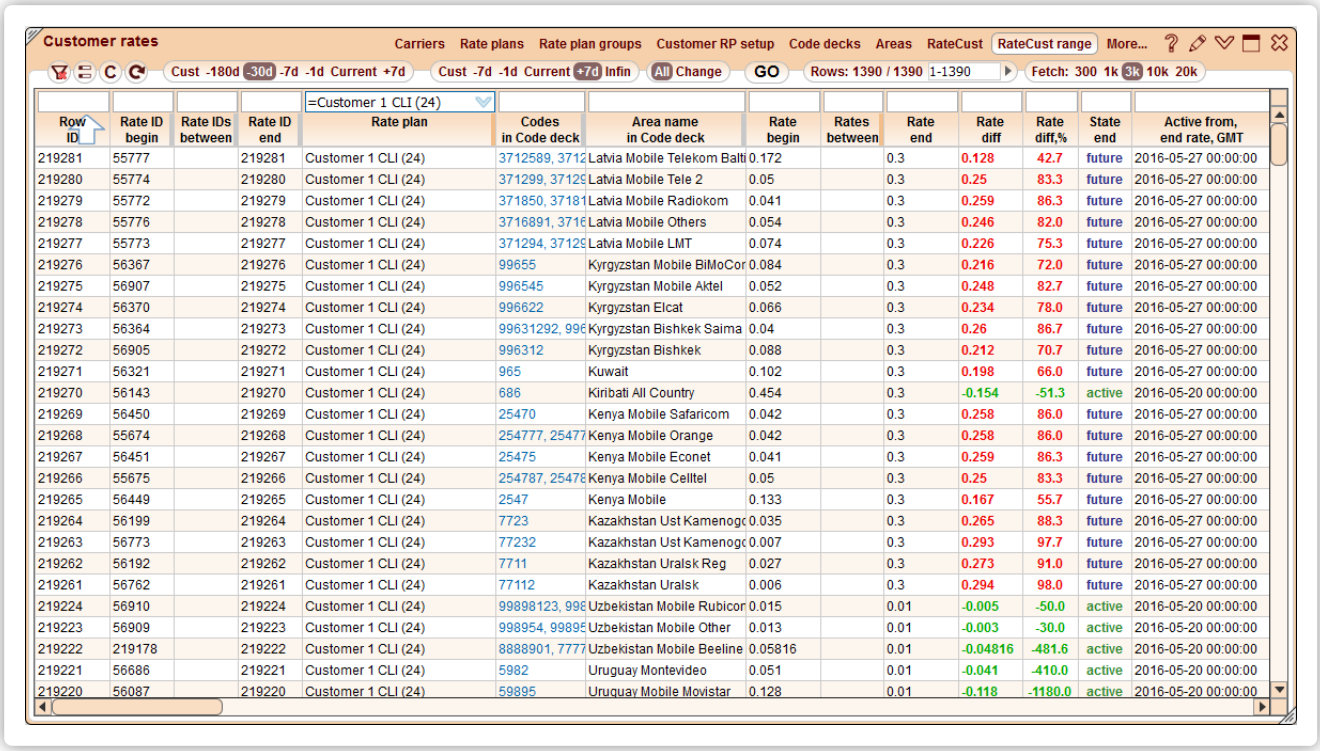


There you may choose:

- **-30d** - show rates/codes active now, in future, and up to 30 days ago (possibly several rate/codes per Rate plan/Code deck).
- **All** - show all rates/codes.
- **Active** - show only rates/codes active right now (one rate/code per Rate plan/Code deck).
- **Future** - show all rates/codes active now or in future (possibly several rate/codes per Rate plan/Code deck).
- **Latest** - show latest rates/codes active now or in future (which the latest Active from date) that are or will be active indefinitely (one rate/code per Rate plan/Code deck). Records with non-empty Active till are not shown.

5.8. RateCust range

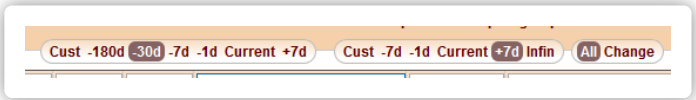
If you need to check how your Customer rates had been changed for a certain period, the **RateCust range** table is for your convenience.



Row ID	Rate ID begin	Rate IDs between	Rate ID end	Rate plan	Codes in Code deck	Area name in Code deck	Rate begin	Rates between	Rate end	Rate diff	Rate diff,%	State end	Active from, end rate, GMT
219281	55777		219281	Customer 1 CLI (24)	3712589, 3712	Latvia Mobile Telekom Balti	0.172		0.3	0.128	42.7	future	2016-05-27 00:00:00
219280	55774		219280	Customer 1 CLI (24)	371299, 37129	Latvia Mobile Tele 2	0.05		0.3	0.25	83.3	future	2016-05-27 00:00:00
219279	55772		219279	Customer 1 CLI (24)	371850, 37181	Latvia Mobile Radiokom	0.041		0.3	0.259	86.3	future	2016-05-27 00:00:00
219278	55776		219278	Customer 1 CLI (24)	3716891, 3716	Latvia Mobile Others	0.054		0.3	0.246	82.0	future	2016-05-27 00:00:00
219277	55773		219277	Customer 1 CLI (24)	371294, 37129	Latvia Mobile LMT	0.074		0.3	0.226	75.3	future	2016-05-27 00:00:00
219276	56367		219276	Customer 1 CLI (24)	99655	Kyrgyzstan Mobile BiMoCor	0.084		0.3	0.216	72.0	future	2016-05-27 00:00:00
219275	56907		219275	Customer 1 CLI (24)	996545	Kyrgyzstan Mobile Aktel	0.052		0.3	0.248	82.7	future	2016-05-27 00:00:00
219274	56370		219274	Customer 1 CLI (24)	996622	Kyrgyzstan Elcat	0.066		0.3	0.234	78.0	future	2016-05-27 00:00:00
219273	56364		219273	Customer 1 CLI (24)	99631292, 996	Kyrgyzstan Bishkek Saima	0.04		0.3	0.26	86.7	future	2016-05-27 00:00:00
219272	56905		219272	Customer 1 CLI (24)	996312	Kyrgyzstan Bishkek	0.088		0.3	0.212	70.7	future	2016-05-27 00:00:00
219271	56321		219271	Customer 1 CLI (24)	965	Kuwait	0.102		0.3	0.198	66.0	future	2016-05-27 00:00:00
219270	56143		219270	Customer 1 CLI (24)	686	Kiribati All Country	0.454		0.3	-0.154	-51.3	active	2016-05-20 00:00:00
219269	56450		219269	Customer 1 CLI (24)	25470	Kenya Mobile Safaricom	0.042		0.3	0.258	86.0	future	2016-05-27 00:00:00
219268	55674		219268	Customer 1 CLI (24)	254777, 25477	Kenya Mobile Orange	0.042		0.3	0.258	86.0	future	2016-05-27 00:00:00
219267	56451		219267	Customer 1 CLI (24)	25475	Kenya Mobile Econet	0.041		0.3	0.259	86.3	future	2016-05-27 00:00:00
219266	55675		219266	Customer 1 CLI (24)	254787, 25478	Kenya Mobile Celltel	0.05		0.3	0.25	83.3	future	2016-05-27 00:00:00
219265	56449		219265	Customer 1 CLI (24)	2547	Kenya Mobile	0.133		0.3	0.167	55.7	future	2016-05-27 00:00:00
219264	56199		219264	Customer 1 CLI (24)	7723	Kazakhstan Ust Kamenogo	0.035		0.3	0.265	88.3	future	2016-05-27 00:00:00
219263	56773		219263	Customer 1 CLI (24)	77232	Kazakhstan Ust Kamenogo	0.007		0.3	0.293	97.7	future	2016-05-27 00:00:00
219262	56192		219262	Customer 1 CLI (24)	7711	Kazakhstan Uralsk Reg	0.027		0.3	0.273	91.0	future	2016-05-27 00:00:00
219261	56762		219261	Customer 1 CLI (24)	77112	Kazakhstan Uralsk	0.006		0.3	0.294	98.0	future	2016-05-27 00:00:00
219224	56910		219224	Customer 1 CLI (24)	99898123, 998	Uzbekistan Mobile Rubicor	0.015		0.01	-0.005	-50.0	active	2016-05-20 00:00:00
219223	56909		219223	Customer 1 CLI (24)	998954, 99895	Uzbekistan Mobile Other	0.013		0.01	-0.003	-30.0	active	2016-05-20 00:00:00
219222	219178		219222	Customer 1 CLI (24)	8888901, 7777	Uzbekistan Mobile Beeline	0.05816		0.01	-0.04816	-481.6	active	2016-05-20 00:00:00
219221	56686		219221	Customer 1 CLI (24)	5982	Uruguay Montevideo	0.051		0.01	-0.041	-410.0	active	2016-05-20 00:00:00
219220	56087		219220	Customer 1 CLI (24)	59895	Uruguay Mobile Movistar	0.128		0.01	-0.118	-1180.0	active	2016-05-20 00:00:00

- **Rate ID begin** - internal ID of the beginning rate.
- **Rate IDs between** - internal IDs of all records for each in-between rate.
- **Rate ID end** - internal ID of the end rate.
- **Rate plan** - a rate plan which the rate belongs to.
- **Codes in Code deck** - codes belonging to the area of the rate. Only the most recent active or future codes are shown.
- **Area name in Code Deck** - name of an area which the codes are bound to in the Areas table.
- **Rate begin** - rate active at the beginning of the chosen interval.
- **Rates between** - rates with Active from/Active till times completely in inside of the chosen interval.
- **Rate end** - rate active at the end of the chosen interval.
- **Rate diff** - rate difference between the beginning and the end rates.
- **Rate diff,%** - rate difference in %.
- **State end** - a state of the rate. The possible values are the same as in **State** of the RateCust.
- **Active from, end rate, GMT** - date/time in GMT the end rate active from.
- **Active till, end rate, GMT** - date/time in GMT the end rate active till. If blank - the record active indefinitely.
- **Active days** - number of days the end rate was or will be active for.

This is a powerful tool to see the history of changes and analyse your Customer rates. The two **Interval strips** on the top allows you to easily choose the beginning and the end of the interesting interval.



For example, if you want to see rates for the interval, where beginning rates are the rates, that were active 30 days ago, and end rates are the rates that are active right now, you should choose **-30d** and **Current** correspondingly. Besides the given preconfigured values like **-180d**, **Current**, **+7d** and so on, you can use the **Cust** option, which let you choose non-standard intervals. The **All/Change** strip allows you to manage whether to display all rates active at the beginning and end of the time range, or to view only the rates that changed between the interval.

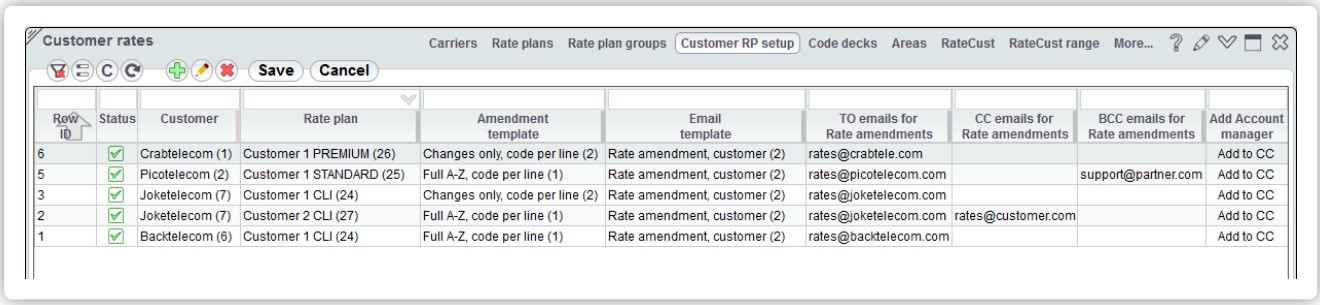
6. Rate generation

6.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

6.2. Customer RP setup

This table is used to configure Customer rate plans. Every record contains settings for unique pair **Customer - Rate plan**.

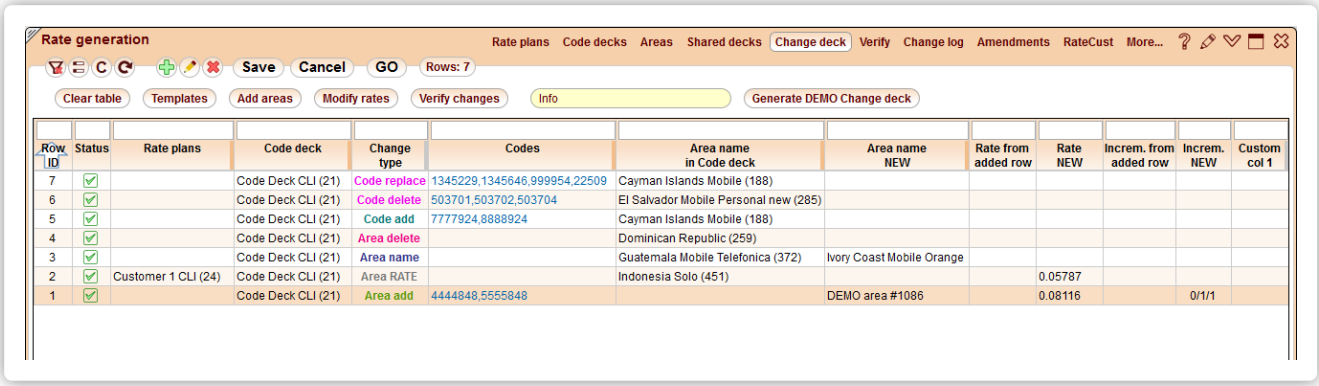


Row ID	Status	Customer	Rate plan	Amendment template	Email template	TO emails for Rate amendments	CC emails for Rate amendments	BCC emails for Rate amendments	Add Account manager
6	☑	Crabtelecom (1)	Customer 1 PREMIUM (26)	Changes only, code per line (2)	Rate amendment, customer (2)	rates@crabtele.com			Add to CC
5	☑	Picotelecom (2)	Customer 1 STANDARD (25)	Full A-Z, code per line (1)	Rate amendment, customer (2)	rates@picotelecom.com		support@partner.com	Add to CC
3	☑	Joketelecom (7)	Customer 1 CLI (24)	Changes only, code per line (2)	Rate amendment, customer (2)	rates@joketelecom.com			Add to CC
2	☑	Joketelecom (7)	Customer 2 CLI (27)	Full A-Z, code per line (1)	Rate amendment, customer (2)	rates@joketelecom.com	rates@customer.com		Add to CC
1	☑	Backtelecom (6)	Customer 1 CLI (24)	Full A-Z, code per line (1)	Rate amendment, customer (2)	rates@backtelecom.com			Add to CC

- **Status** - lets you easily enable/disable a record.
- **Customer** - choose a Customer from the drop-down Carriers table.
- **Rate plan** - choose a Rate plan from the drop-down Rate plans table.
- **Amendment template** - choose an Amendment template from the drop-down table. It is used to generate **.xlsx** files to send to customers in amendments.
- **Email template** - choose an Email template from the drop-down table. It is used to set the format and additional recipients (TO, CC, BCC) of emails with rate amendments.
- **TO emails for Rate amendments** - comma-separated list of emails to send rate amendments to, in TO field.
- **CC emails for Rate amendments** - comma-separated list of emails to send rate amendments to, in CC field.
- **BCC emails for Rate amendments** - comma-separated list of emails to send rate amendments to, in BCC field.
- **Add Account manager** - add an account manager email to one of the address fields.
- **CSV template** - choose an CSV template from the drop-down table. It is used to generate **CSV** files to upload to an external billing.
- **Ext billing Customer** - enter or choose from the drop-down table an external billing customer id for which to upload rates automatically (if supported).
- **Ext billing Rate plan** - enter or choose from the drop-down table an external billing rate plan id for which to upload rates automatically (if supported).
- **Comment** - just a comment.

6.3. Change deck

The **Change deck** is a very working place where you start the Customer rate generation process. The table contains change actions that should be performed with Areas, Codes and Rates depends on the **Change type**.



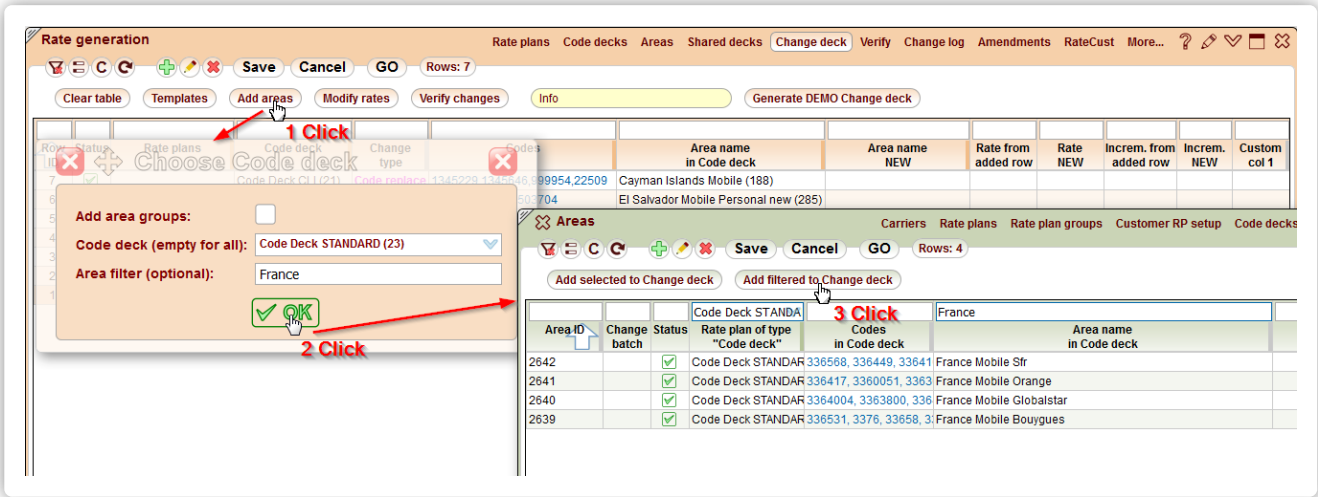
Row ID	Status	Rate plans	Code deck	Change type	Codes	Area name in Code deck	Area name NEW	Rate from added row	Rate NEW	Increm. from added row	Increm. NEW	Custom col 1
7	☑		Code Deck CLI (21)	Code replace	1345229,1345646,999954,22509	Cayman Islands Mobile (188)						
6	☑		Code Deck CLI (21)	Code delete	503701,503702,503704	El Salvador Mobile Personal new (285)						
5	☑		Code Deck CLI (21)	Code add	7777924,8888924	Cayman Islands Mobile (188)						
4	☑		Code Deck CLI (21)	Area delete		Dominican Republic (259)						
3	☑		Code Deck CLI (21)	Area name		Guatemala Mobile Telefonica (372)	Ivory Coast Mobile Orange					
2	☑	Customer 1 CLI (24)	Code Deck CLI (21)	Area RATE		Indonesia Solo (451)			0.05787			
1	☑		Code Deck CLI (21)	Area add	4444848,5555848		DEMO area #1086		0.08116		0/1/1	

- **Status** - let you easily enable/disable the record.
- **Rate plans** - choose one or several Rate plans from the drop-down table for which the **Area RATE** change should be done. It can be left empty.
- **Rate plan groups** - choose one or several Rate plan groups from the drop-down table for which the **Area RATE** change should be done. It can be left empty.
- **Code deck** - choose a Code deck from the drop-down table for which the **Area** or **Code** change should be done.
- **Change type** - choose one of the following change type:
  - **Area RATE** - changes the rate of the area in the chosen Rate plans.
  - **Area name** - renames the area in the chosen Code deck.
  - **Area add** - adds an area to the chosen Code deck.
  - **Area delete** - deletes the area from the chosen Code deck.
  - **Code add** - adds one or several codes to the area in the chosen Code deck.
  - **Code delete** - deletes one or several codes from the area in the chosen Code deck.
  - **Code replace** - replaces codes in the area of the chosen Code deck.
- **Codes** - comma-separated list of codes. Required only for Change types: **Area add**, **Code add**, **Code delete**, **Code replace**.
- **Area name in Code Deck** - choose an area from the the drop-down table for which the change should be done.
- **Area name NEW** - enter a new area name for the changed or created area. Required only for Change types: **Area name**, **Area add**.
- **Rate from added row** - for info only: the rate in the Rate plan that was used to add this Area to a Change deck.
- **Rate NEW** - enter a new rate to apply to all chosen Rate plans. Required only for Change types: **Area RATE**.
- **Increm. from added row** - for info only: the increment in the Rate plan that was used to add this Area to a Change deck.
- **Increm. NEW** - enter a new increment to apply to all chosen Rate plans. Required only for Change types: **Area RATE**.
- **Custom col 1, 2, 3** - custom columns that can be used for CSV/XLSX files creation during Amendments generation.
- **Latest change, User** - displays a user that made the last change in the Change deck table.

The **Clear table** button allows you to empty the Change deck table and start the process anew.

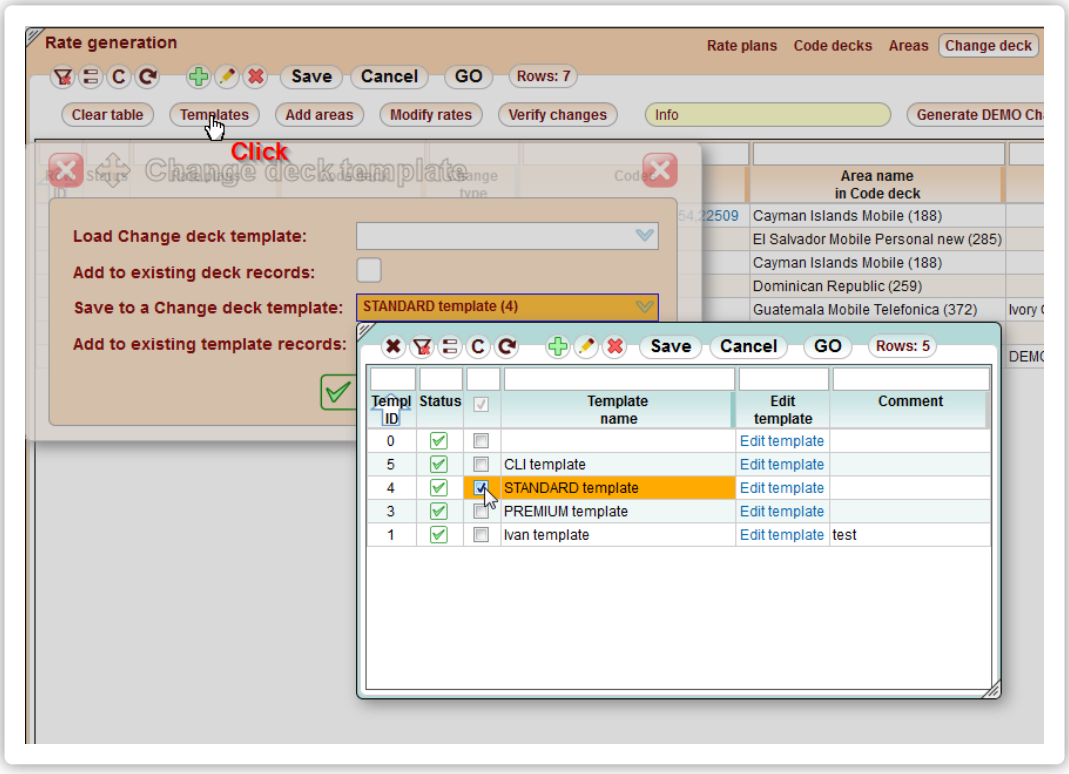
There are several ways available to populate the Change deck table with new records:

- The **Add** button of the standard Config menu as in the most of other config tables.
- The **Add to Change deck** option of the context menu in the RateCust module. New records with change type **Area RATE** will be created in a change deck on basis of the selected rates.
- The **Add selected to Change deck** and **Add filtered to Change deck** buttons in the Areas module.
- The **Add selected to Change deck** button in the Area groups module.
- The **Add areas** button. Actually this is an assistant to simply get one of two previous ways right from the Change deck module.



Clicking **OK** opens a floating window with filtered by a code deck and an area name Areas or Area groups, from where you can add all filtered or just selected rows using the corresponding buttons.

- The **Templates** button in the Change deck module. It opens a window where you can load or save **Change deck templates**.



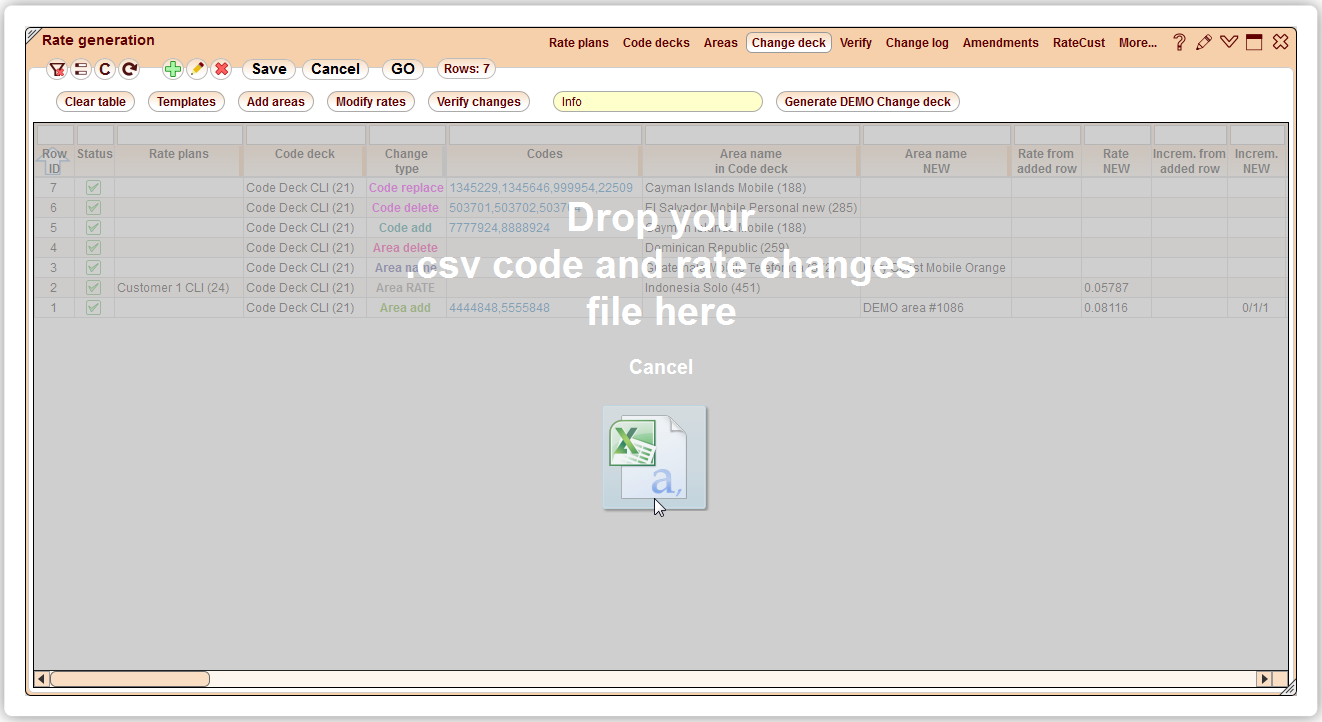
If you frequently repeat the same actions in the Change deck table, it makes sense to save them to a template and load in the future as soon as required. It is possible to add new records from a Change deck to an existing template and vice versa - add new records from a template to an existing Change deck. You can manage it using the corresponding check boxes. You can even load one template to another and merge them. In fact a template is the same Change deck but stored in a separate table and can't be verified as is - you have to load it to the Change deck table before.

- **Import changes** - load your .csv file with code and rate changes to the Change deck table. In this case you should prepare a .csv file with changes. The following column headers are available:
  - **code deck**
  - **rate plans**
  - **rate plan groups**
  - **change type**
  - **codes**
  - **area name in code deck**
  - **area name new**
  - **rate new**
  - **increm. new**

- **increm. part 1**
- **increm. part 2**
- **increm. part 3**

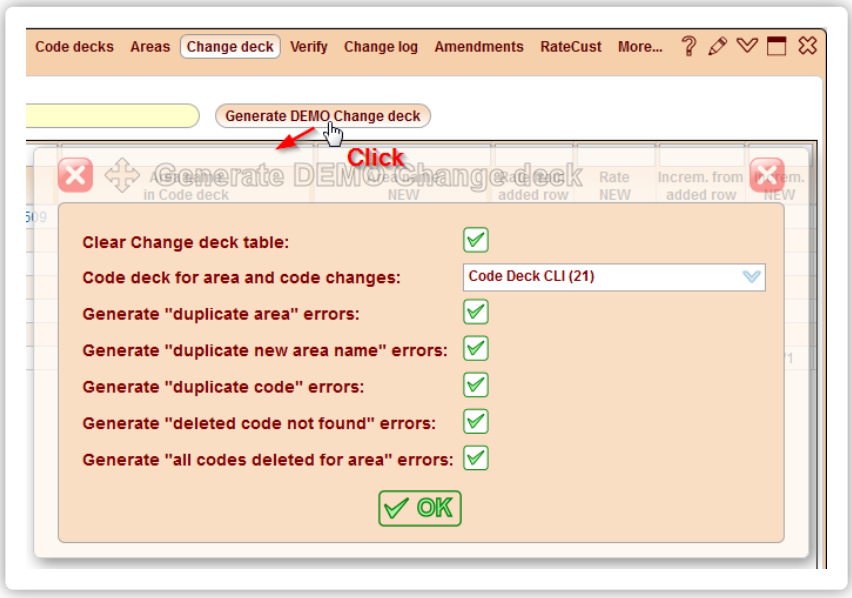
For each header you can find the corresponding column in the Change deck table except **increm. part 1,2,3**. They allows you to substitute the **increm. new** field and load 3 parts of the billing increment **x/y/z** in separate columns. You should take into account, that all areas in the uploaded list should be present in the corresponding Code deck. The **change type** is mandatory for all change types except cases, when the file contains the **rate new** column. In this case the system automatically determines the change type as **Area RATE**.

When the file is ready you should just drag-n-drop it to the Change deck table. By the way, you can drop your file to any module of the **Rate generation** screen, except the Code decks which allows to import codes to a Code deck by itself, and the system automatically will switch you to the Change deck module for the file importing.



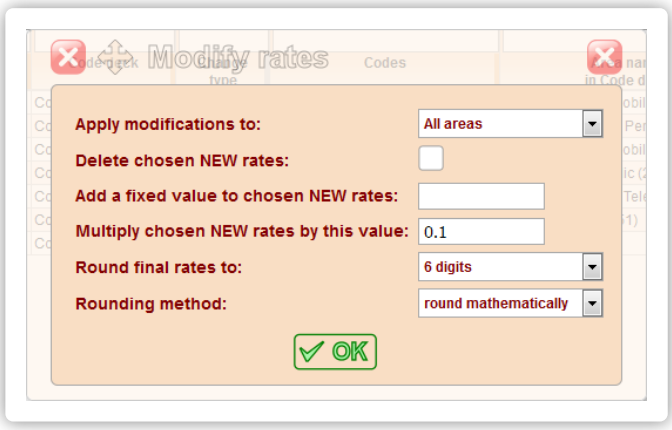
The system asks you what code deck to use for importing and inform you, if there are some errors detected. When it is successfully completed, you can edit the Change deck with loaded rows and then Verify it as usual.

There is also one additional special way to populate the Change deck table: **Generate DEMO change deck**.



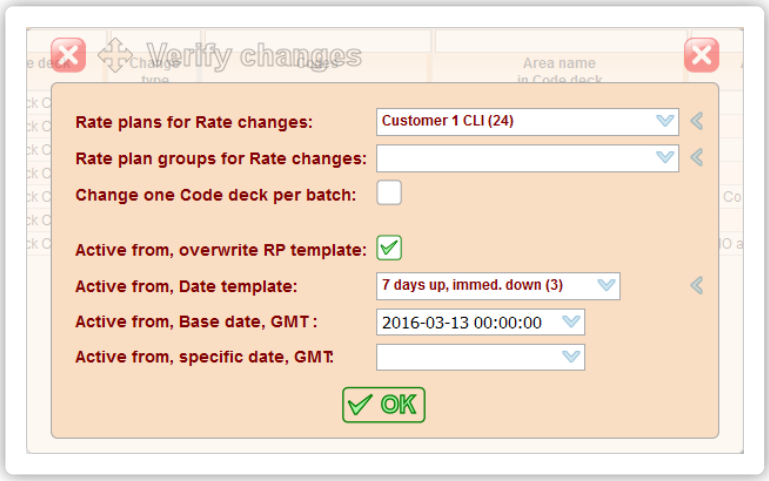
This is useful for learning and demonstration purposes. The system automatically generates records of each change type for a chosen code deck. It may insert several types of errors in order to better understand the way how the system handles them.

Sometimes it is needed to make similar modifications to a bulk of rates at the same time. The **Modify rates** button is to help in this case. The following options are available in the opened window:



- **Apply modifications to** - choose to apply modifications to all or only filtered areas.
- **Delete chosen NEW rates** - the chosen NEW rates will be set to blank, then the add/multiply actions will be applied.
- **Add a fixed value to chosen NEW rates** - this value will also be set for the chosen blank NEW rates. Negative rates will revert to 0.
- **Multiply chosen NEW rates by this value** - blank NEW rates out of all chosen will remain blank and will need to be set manually.
- **Round final rates to** - round final rates to this many digits after the dot (1-8 digits).
- **Rounding method** - choose one of the following methods: **up**, **down** and **mathematically**.

When you finish with the Change deck filling, you should verify the changes by clicking on the **Verify changes** button. The system will check correctness of each change record, and if there is an error it will give a pop-up message with a row ID of an incorrect record. Please fix it and click the button once again. If everything is ok, the floating window with the following options will appear:



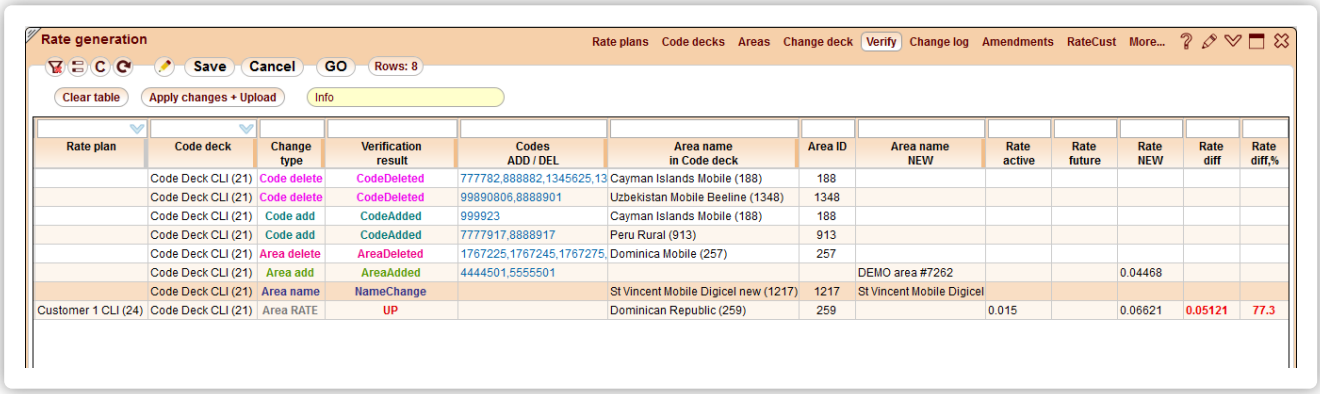
- **Rate plans for Rate changes** - choose one or several Rate plans for which the changes will be applied.
- **Rate plan groups for Rate changes** - choose one or several Rate plan groups. Individual Rate plans and Rate plans in all selected groups are combined.
- **If all codes in an area are deleted** - what to do with an area if all codes of this area are included in the **Code delete** change type. Alternatively, you may use the **Area delete** type to remove an area completely.
- **Change one Code deck per batch** - allow changes to only one Code deck at each change cycle. If you make changes per each Code deck individually, it is recommended to keep this ON to get warnings if you try to change multiple decks incidentally.
- **Dont add new areas/rates** - don't automatically add new areas with new rates to a Rate plan if they don't exist in this Rate plan already.
- **Active from, overwrite RP template** - if not set - the Date template from the Rate plan is used.
- **Active from, Date template** - choose a Date template to overwrite RP template.
- **Active from, Base date, GMT** - enter a Base date/time manually or choose it from the drop-down table with preconfigured date presets to add X days to (numbers of days is set in a Date template). Format: 2014-10-24 or 2014-10-24 18:30:00.
- **Active from, specific date, GMT** - fill in if you want to replace any other date options with an entered value. Format: 2014-10-24 or 2014-10-24 18:30:00.

The **Rate plans for Rate changes**, **Rate plan groups for Rate changes** and **Active from, Date template** options contain a special pointer on the right. Clicking on it sets the previously used value. This is useful if you constantly work with the same Rate plan, Rate plan group or Data template.

Clicking the **OK** button starts the verification process. When it is completed the Verify module is opened with the verification results.

6.4. Verify

The **Verify** table contains the results of the verification of Customer rate changes made in the Change deck. It allows you to check each modification before applying them to the main rate table RateCust and uploading to an external billing system.



Rate plan	Code deck	Change type	Verification result	Codes ADD / DEL	Area name in Code deck	Area ID	Area name NEW	Rate active	Rate future	Rate NEW	Rate diff	Rate diff,%
	Code Deck CLI (21)	Code delete	CodeDeleted	777782,888882,1345625,13	Cayman Islands Mobile (188)	188						
	Code Deck CLI (21)	Code delete	CodeDeleted	99890806,8888901	Uzbekistan Mobile Beeline (1348)	1348						
	Code Deck CLI (21)	Code add	CodeAdded	999923	Cayman Islands Mobile (188)	188						
	Code Deck CLI (21)	Code add	CodeAdded	7777917,8888917	Peru Rural (913)	913						
	Code Deck CLI (21)	Area delete	AreaDeleted	1767225,1767245,1767275,	Dominica Mobile (257)	257						
	Code Deck CLI (21)	Area add	AreaAdded	4444501,5555501			DEMO area #7262			0.04468		
	Code Deck CLI (21)	Area name	NameChange		St Vincent Mobile Digicel new (1217)	1217	St Vincent Mobile Digicel					
Customer 1 CLI (24)	Code Deck CLI (21)	Area RATE	UP		Dominican Republic (259)	259		0.015		0.06621	0.05121	77.3

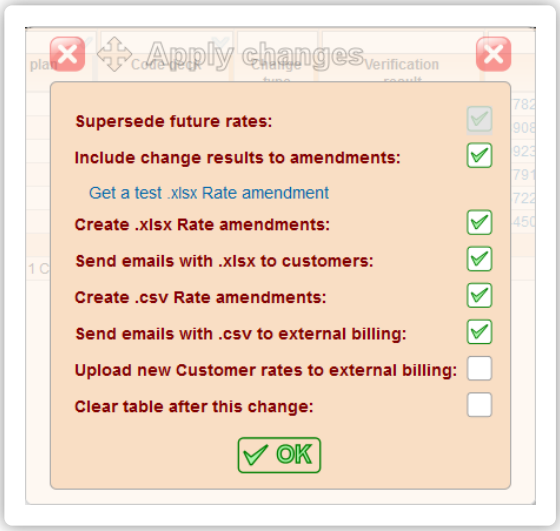
Most fields in the **Verify** table are for viewing only allowing you to confirm the verification results, or discover some mistakes/misenters and fix them on the Change deck step. However some of the columns are editable, so that you don't need to come back to the previous step and easily could correct the changes directly in the verification table, if it is possible:

- **Rate ID active** - main rate table ID of the currently active rate.
- **Rate ID future** - main rate table ID of the rate that will become active in future.
- **Batch active** - import or change batch of the currently active rate.
- **Batch future** - import or change batch of the rate that will become active in future.
- **Change batch** - change batch ID from the Change log assigned after the first attempt to apply changes, if empty - changes were not applied yet.
- **Change deck** - Change deck that was verified: either a user change deck, or one of shared Change decks.
- **Change deck row** - Change deck ID of the row that was converted into this Verify table row.
- **Status (Editable)** - let you easily enable/disable the record.
- **Apply results** - results of applying the changes from the Verify table.
- **Rate plan** - a rate plan which the rate belongs to. It is applicable only if the change type is **Area RATE**.
- **Code deck** - a Code deck which the modified code or area belongs to.
- **Change type** - one of the change types as listed in the Change deck with exception of **Replace**. Such a record is transformed in the Verify table to either a row of the **Code delete** type, or a row of the **Code add** type, or a combination of both types depends on the nature of the code replacement.
- **Verification result** - result of the most recent Code deck change and comparison to current and future rates.
- **Locked active** - lock status of the currently active rate.
- **Locked future** - lock status of the rate that will become active in future.
- **Locked NEW (Editable)** - new lock status of the rate.
- **Codes ADD / DEL** - comma-separeted list of codes. Required only for change types: **Area add**, **Code add**, **Code delete**.
- **Area name in Code Deck** - name of the area in the Code deck for which the changes are made.
- **Area ID** - ID of the area in the Code deck for which the changes are made.
- **Area name NEW** - new area name for the change types: **Area name**, **Area add**.
- **Rate active** - currently active rate.
- **Rate future** - rate that is the latest to become active in future.
- **Rate NEW (Editable)** - new rate that will be added by this change.
- **Rate diff** - rate difference between the active and the NEW rate (if active rate dows not exist - the difference between the future and the NEW rate).
- **Rate diff, %** - rate difference in % between the active and the NEW rate.
- **Increm. active** - billing increment of the currently active rate.
- **Increm. future** - billing increment of the rate that is the latest to become active in future.
- **Increm. NEW** - new billing increment of the rate.
- **Active from active, GMT** - date/time in GMT from which the current rate/code is active.
- **Active from future, GMT** - date/time in GMT from which the latest rate/code is active (may be future).
- **Active from this change, GMT** - date/time in GMT from which this change will be active.
- **Active till active, GMT** - date/time in GMT which the current rate/code will be active till.
- **Active till future, GMT** - date/time in GMT which the latest rate/code will be active till.
- **Active till NEW, GMT** - date/time in GMT which this change will be active till.

- **Policy 5g active** - processing 5g policy assigned to the currently active rate.
- **Policy 5g future** - processing 5g policy assigned to the rate that is the latest to become active in future.
- **Policy 5g NEW (Editable)** - new processing 5g policy assigned to the rate during this change. By default the system sets the 5g policy value for deleted codes and areas to **Block**.
- **Policy ext active** - external billing policy assigned to the currently active rate.
- **Policy ext future** - external billing policy assigned to the rate that is the latest to become active in future.
- **Policy ext NEW (Editable)** - new external billing policy assigned to the rate during this change. By default, if MVTSII is configured as your external billing system, and you delete the codes via the Change deck table (operations **Code delete**, **Code replace**, **Area delete**), then after you make **Verify** there will be the parameter **Policy ext NEW** set to 1, that means **yes** for **Reject calls to this rate**.
- **Custom 1, 2, 3 current** - custom columns of the currently active rate.
- **Custom 1, 2, 3 future** - custom columns of the rate that is the latest to become active in future.
- **Custom 1, 2, 3 NEW (Editable)** - new custom columns of the rate.
- **Change deck edit, User** - displays a user that made the last change in the Change deck table.
- **Verify edit, User** - displays a user that made the last change in the Verify deck table.
- **Latest change, GMT** - displays date/time when the last change was made.

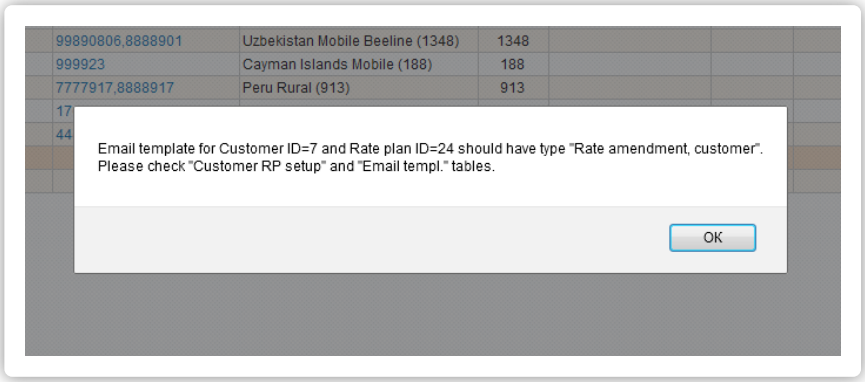
The **Clear table** button allows you to clear data in the table. In this case you have to go back to the Change deck module and verify a change deck once again in order to get data in the Verify table.

When you are done with the verification you can click the **Apply changes + Upload** button in order to change Customer rates massively for all selected Rate plans and upload rates to an external billing. There are the following options available in the opened window:



- **Supersede future rates** - disable all rates from the main table that have same codes as the newly loaded rates and that will become active in future. Always done in the current design.
- **Include change results to amendments** - include results of new to current rates comparison to rate amendments.
- **Get a test .xlsx Rate amendment** - generate one test .xlsx rate amendment file, no other actions are taken.
- **Create .xlsx Rate amendments** - generate .xlsx rate amendment files.
- **Send emails with .xlsx to customers** - send .xlsx rate amendment files to customers.
- **Create .csv Rate amendments** - generate .csv rate amendment files.
- **Send emails with .csv to external billing** - send .csv rate amendment files to your billing system.
- **Upload new Customer rates to external billing** - upload new Customer rates to your billing system (if supported).
- **Clear table after this change** - clear the Verify table applying the changes.

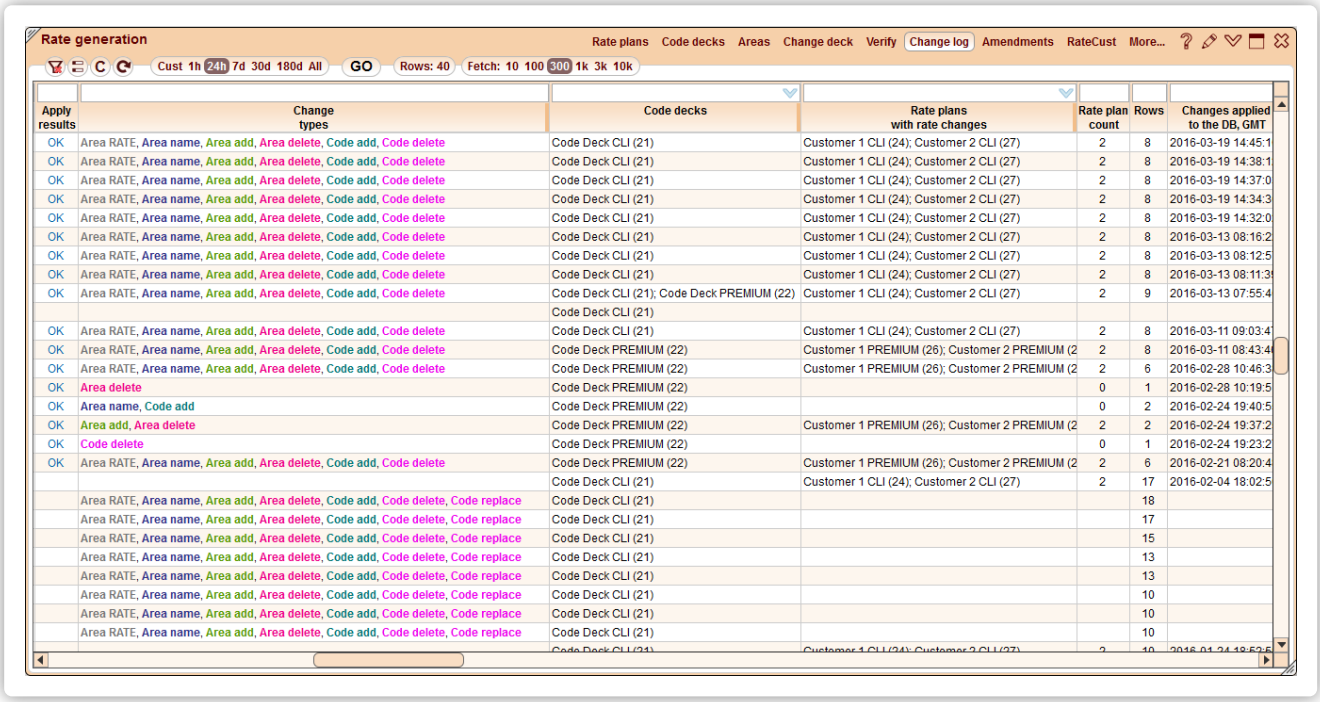
After clicking **OK** the system run the applying and generation process. If the system detects errors and misconfiguration, it will give a warning message with error description and abort the process. For example, if you choose **Send emails with .xlsx to customers**, but the Customer rate plan has a wrong email template configured, you will get the following notification:



When the applying process is completed you will get a confirmation with information concerning the uploaded codes, areas and rates. Finally a new record will be created in the Change log table with history of the made changes.

6.5. Change log

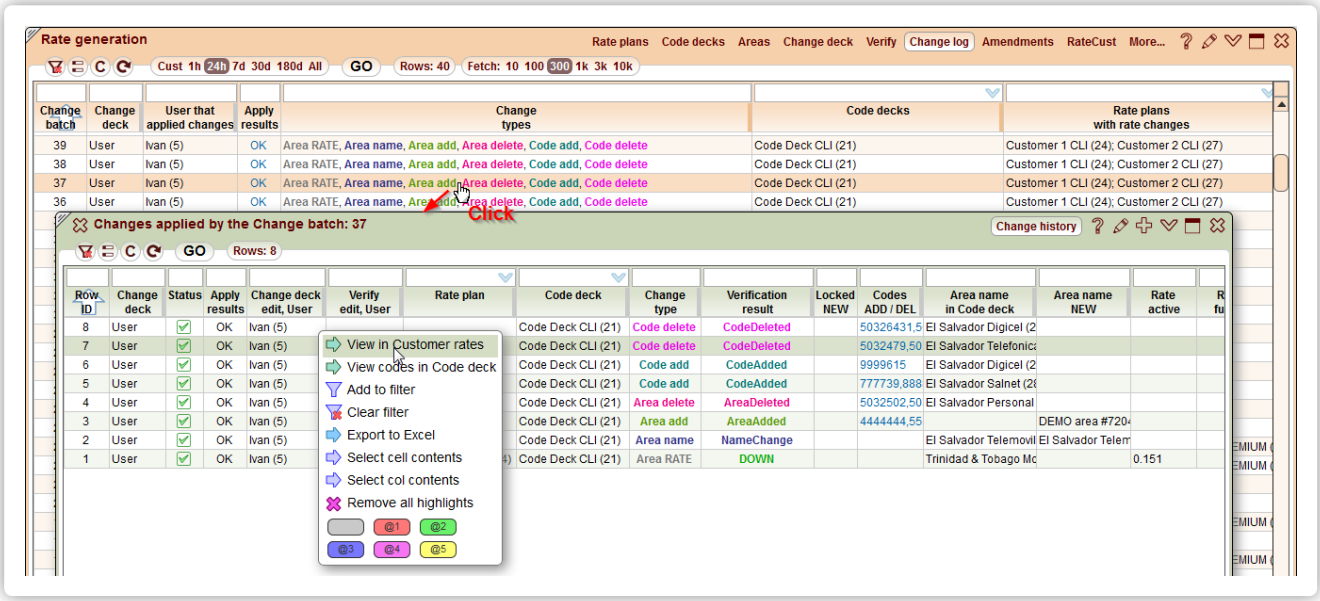
The **Change log** table contains history of Customer rates changes successfully applied to the main table from the Verify module. So all actions with Customer rates are stored in this table and can be reviewed if required.



Apply results	Change types	Code decks	Rate plans with rate changes	Rate plan count	Rows	Changes applied to the DB, GMT
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-19 14:45:1
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-19 14:38:1
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-19 14:37:0
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-19 14:34:3
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-19 14:32:0
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-13 08:16:2
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-13 08:12:5
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-13 08:11:3
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21); Code Deck PREMIUM (22)	Customer 1 CLI (24); Customer 2 CLI (27)	2	9	2016-03-13 07:55:4
		Code Deck CLI (21)				
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	8	2016-03-11 09:03:4
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck PREMIUM (22)	Customer 1 PREMIUM (26); Customer 2 PREMIUM (2	2	8	2016-03-11 08:43:4
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck PREMIUM (22)	Customer 1 PREMIUM (26); Customer 2 PREMIUM (2	2	6	2016-02-28 10:46:3
OK	Area delete	Code Deck PREMIUM (22)		0	1	2016-02-28 10:19:5
OK	Area name, Code add	Code Deck PREMIUM (22)		0	2	2016-02-24 19:40:5
OK	Area add, Area delete	Code Deck PREMIUM (22)	Customer 1 PREMIUM (26); Customer 2 PREMIUM (2	2	2	2016-02-24 19:37:2
OK	Code delete	Code Deck PREMIUM (22)		0	1	2016-02-24 19:23:2
OK	Area RATE, Area name, Area add, Area delete, Code add, Code delete	Code Deck PREMIUM (22)	Customer 1 PREMIUM (26); Customer 2 PREMIUM (2	2	6	2016-02-21 08:20:4
		Code Deck CLI (21)	Customer 1 CLI (24); Customer 2 CLI (27)	2	17	2016-02-04 18:02:5
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			18	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			17	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			15	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			13	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			13	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			10	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			10	
	Area RATE, Area name, Area add, Area delete, Code add, Code delete, Code replace	Code Deck CLI (21)			10	

- **Change batch** - change batch ID assigned after the first attempt to apply changes from the Verify table.
- **Change deck** - Change deck that was applied: either a dedicated User chage deck, or one of the Shared change deck.
- **User that applied changes** - user that applied the changes in this change batch.
- **Apply results** - results of applying the changes from the Verify table.
- **Change type** - displays the list of all the change types that were applied from the Verify table in this change batch.
- **Code decks** - Code decks for which the changes were applied.
- **Rate plans with rate changes** - Rate plans for which the rate changes were applied.
- **Rate plan count** - number of rate plans changed.
- **Rows** - number of rows in the Verify table for this batch.
- **Changes applied to the DB, GMT** - date/time in GMT when the changes were applied to the main Customer rate table in the DB.
- **All .xlsx files generated, GMT** - date/time in GMT when all .xlsx files were generated.
- **All .csv files generated, GMT** - date/time in GMT when all .csv files were generated.
- **All emails to customers sent, GMT** - date/time in GMT when all emails were sent to customers.
- **All emails to billing sent, GMT** - date/time in GMT when all emails were sent to an external billing system.
- **All uploads to billing done, GMT** - date/time in GMT when all uploads were done to an external billing system.

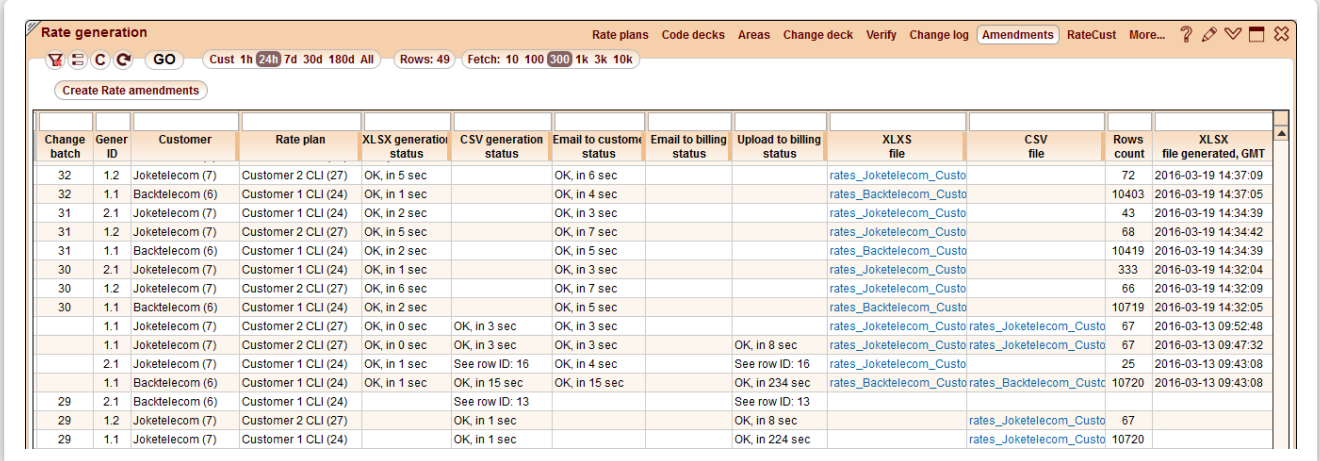
You may view **Change history** of a certain change batch by clicking the result field or by double-clicking the row. The table of the floating window contains fields identical to the Verify table.



Options **View code in Code deck** and **View in Customer rates** of the context menu allow you to easily review, how the changes affected codes and rates accordingly right from the change history.

6.6. Amendments

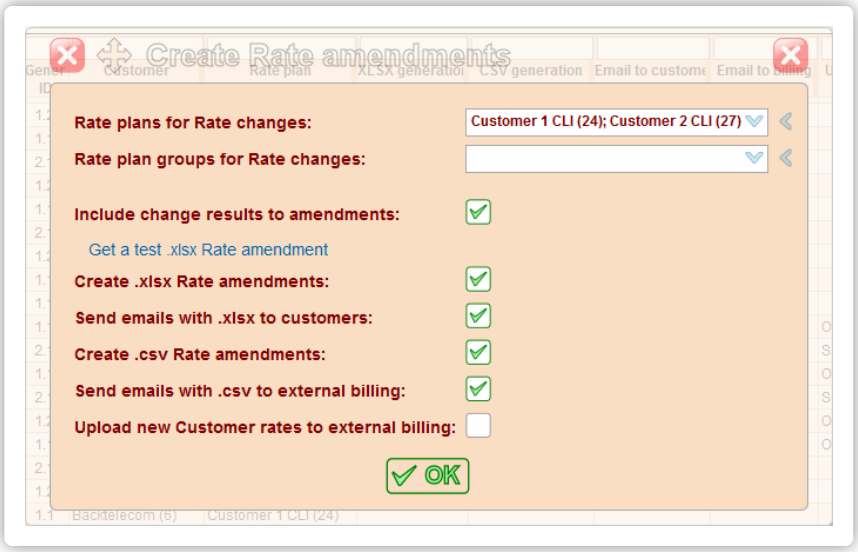
If one of the following options is checked in the floating window of the **Apply changes + Upload** button in the Verify module or in the **Create Rate amendments** button of the current module: **Create .xlsx Rate amendments**, **Send emails with .xlsx to customers**, **Create .csv Rate amendments**, **Send emails with .csv to external billing** or **Upload new Customer rates to external billing**, then the system generates an amendment and creates a new record/records in the **Amendments** table where displays the results and the attendant information concerning the files generation, emails sending and external billing uploading process. A new record created for every combination of a Customer and a Rate plan.



- **Request time, GMT** - date/time when the amendment request was done via **Apply changes + Upload** button of the Verify module.
- **User** - user that initiated the Rate amendment generation.
- **Change batch** - change batch assigned after each verification.
- **Gener ID** - ID of a process plus a generation order within the process.
- **Customer** - Customer for which the amendment was generated.
- **Rate plan** - Rate plan for which the amendment was generated.
- **XLSX generation status** - result of the file generation in XLSX format.
- **CSV generation status** - result of the file generation in CSV format.
- **Email to customer status** - result of the email sending to the customer.
- **Email to billing status** - result of the email sending to the external billing system.
- **Upload to billing status** - result of the uploading to the external billing system.

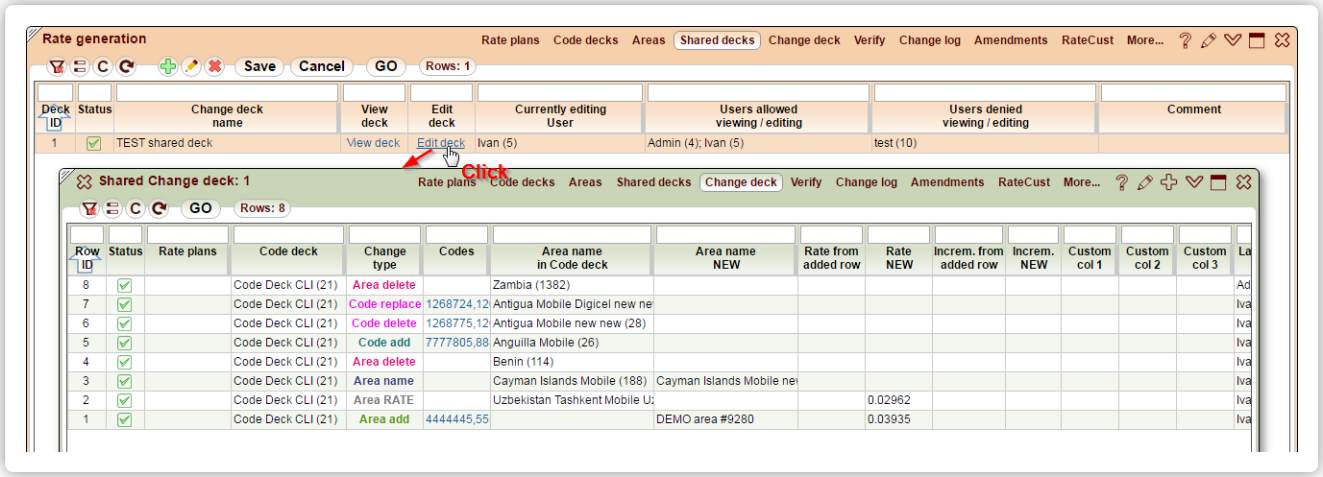
- **XLSX file** - link the generated XLSX file which allows you to download it.
- **CSV file** - link the generated CSV file which allows you to download it.
- **Rows count** - number of rows (codes) in the Rate amendment.
- **Changes applied to the DB, GMT** - date/time in GMT when the changes were applied to the main Customer rate table in the DB.
- **XLSX file generated, GMT** - date/time in GMT when the .xlsx file was generated.
- **CSV file generated, GMT** - date/time in GMT when the .csv file was generated.
- **Email to customers time, GMT** - date/time in GMT when the email was sent to the customer.
- **Email to billing time, GMT** - date/time in GMT when the email was sent to the external billing system.
- **Upload to billing time, GMT** - date/time in GMT when the upload was done to the external billing system.
- **Customer email TO** - contents of the **TO** field of the email sent to the customer.
- **Customer email CC** - contents of the **CC** field of the email sent to the customer.
- **Customer email BCC** - contents of the **BCC** field of the email sent to the customer.
- **Billing email TO** - contents of the **TO** field of the email sent to the external billing system.
- **Billing email CC** - contents of the **CC** field of the email sent to the external billing system.
- **Billing email BCC** - contents of the **BCC** field of the email sent to the external billing system.
- **XLSX generation time, sec** - time of the .xlsx file generation.
- **RAM, Mbyte** - max RAM used for the .xlsx file generation.

Sometimes you need to generate an amendment without performing changes in the Change deck module. For example, if the process of uploading to an external billing system was not completed successfully, and you have to repeat it. In this case the **Create Rate amendments** button is available. It opens a window which allows you to choose certain Rate plans or groups for which to generate amendments with the identical options as in the **Apply changes + Upload** of the Verify module.



6.7. Shared decks

This module provides a feature when different users can work with the same Shared change decks, not at the same time, but one after another. Every user can view a shared deck simultaneously, but editing is only allowed to one user at a time. You are able to add a new deck and assign users that allowed or denied to view/edit it by means of the **Users allowed viewing / editing** and the **Users denied viewing / editing** fields.



If you click on **View deck** or **Edit deck** - this deck will open in a separate window for viewing or editing correspondingly. You may open several decks this way, plus you have your individual deck in the Change deck module and can edit all of them at once if needed. **Currently editing User** displays a user that blocked this change deck for editing currently.

7. Vendor rates

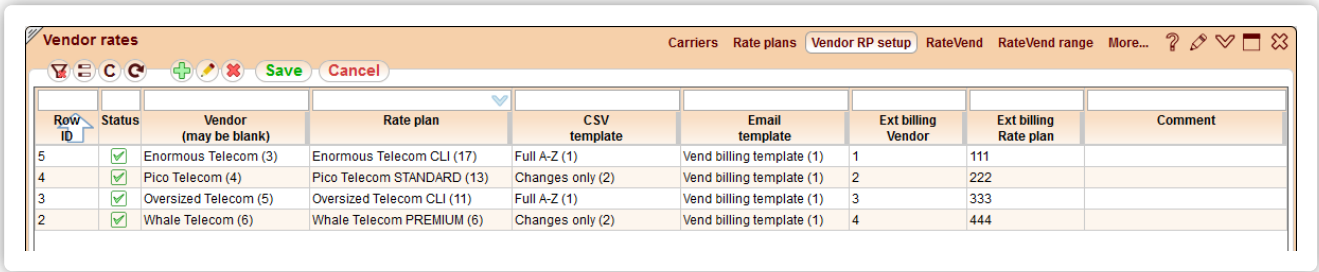
This part contains description about the Main Vendor rates table, historical changes and Vendor rates config.

7.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

7.2. Vendor RP setup

This table is used to configure Vendor rate plans. Every record contains settings for unique pair **Vendor - Rate plan**.

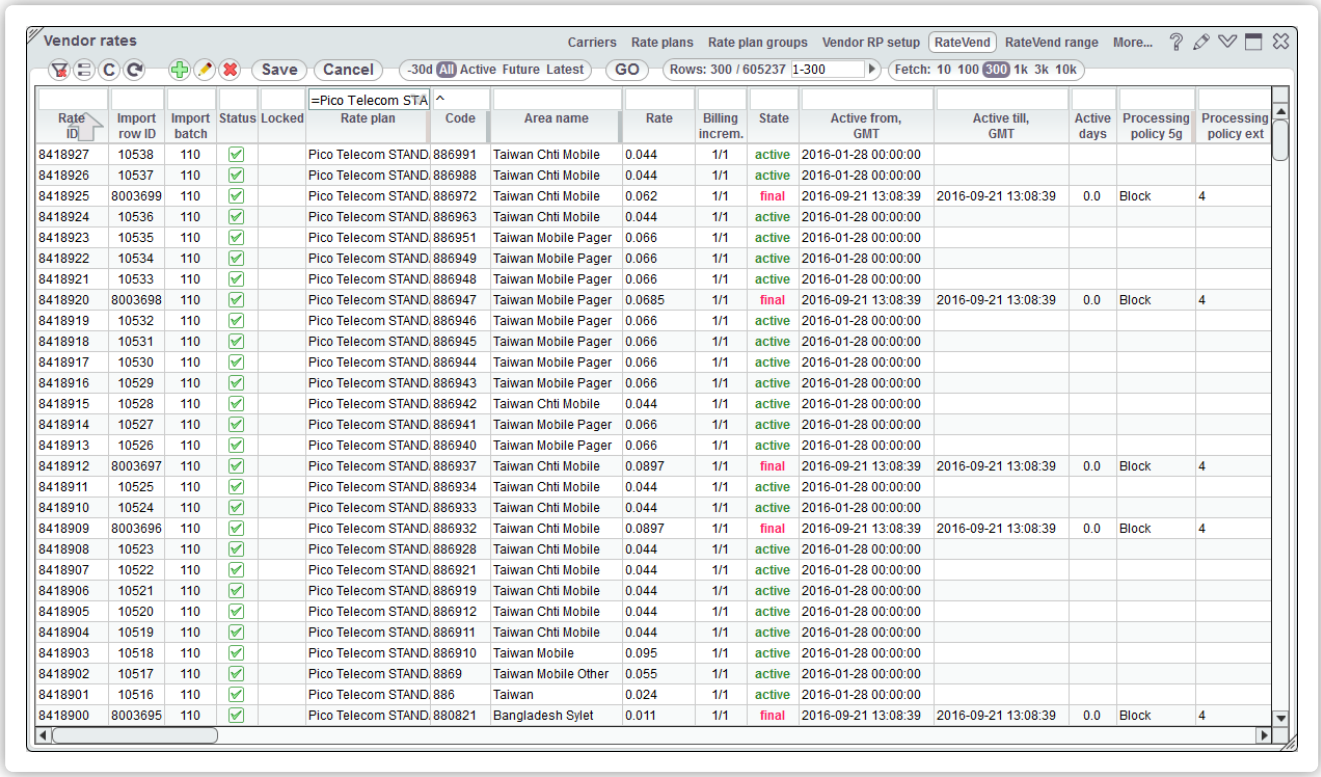


Row ID	Status	Vendor (may be blank)	Rate plan	CSV template	Email template	Ext billing Vendor	Ext billing Rate plan	Comment
5	☑	Enormous Telecom (3)	Enormous Telecom CLI (17)	Full A-Z (1)	Vend billing template (1)	1	111	
4	☑	Pico Telecom (4)	Pico Telecom STANDARD (13)	Changes only (2)	Vend billing template (1)	2	222	
3	☑	Oversized Telecom (5)	Oversized Telecom CLI (11)	Full A-Z (1)	Vend billing template (1)	3	333	
2	☑	Whale Telecom (6)	Whale Telecom PREMIUM (6)	Changes only (2)	Vend billing template (1)	4	444	

- **Status** - lets you easily enable/disable a record.
- **Vendor** - choose a Vendor from the drop-down Carriers table (may be blank).
- **Rate plan** - choose a Rate plan from the drop-down Rate plans table.
- **CSV template** - choose an CSV template from the drop-down table. It is used to generate **CSV** files to upload to an external billing.
- **Ext billing Vendor** - enter or choose from the drop-down table an external billing vendor id for which to upload rates automatically (if supported).
- **Ext billing Rate plan** - enter or choose from the drop-down table an external billing rate plan id for which to upload rates automatically (if supported).
- **Comment** - just a comment.

7.3. RateVend

The **RateVend** table includes all the Vendor rates that were ever imported into the System. It allows you to view all/active/future Vendor rates and manually add/edit/delete them if it is required.

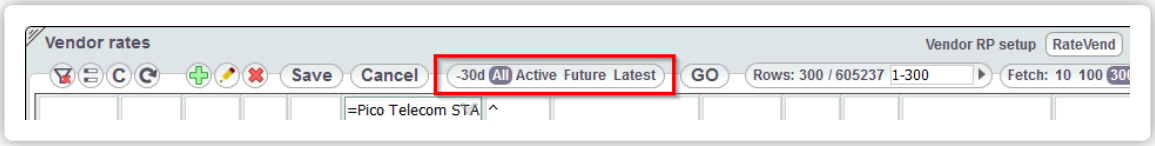


Rate ID	Import row ID	Import batch	Status	Locked	Rate plan	Code	Area name	Rate	Billing increm.	State	Active from, GMT	Active till, GMT	Active days	Processing policy 5g	Processing policy ext
8418927	10538	110	☑		Pico Telecom STAND.	886991	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418926	10537	110	☑		Pico Telecom STAND.	886988	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418925	8003699	110	☑		Pico Telecom STAND.	886972	Taiwan Chti Mobile	0.062	1/1	final	2016-09-21 13:08:39	2016-09-21 13:08:39	0.0	Block	4
8418924	10536	110	☑		Pico Telecom STAND.	886963	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418923	10535	110	☑		Pico Telecom STAND.	886951	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418922	10534	110	☑		Pico Telecom STAND.	886949	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418921	10533	110	☑		Pico Telecom STAND.	886948	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418920	8003698	110	☑		Pico Telecom STAND.	886947	Taiwan Mobile Pager	0.0685	1/1	final	2016-09-21 13:08:39	2016-09-21 13:08:39	0.0	Block	4
8418919	10532	110	☑		Pico Telecom STAND.	886946	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418918	10531	110	☑		Pico Telecom STAND.	886945	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418917	10530	110	☑		Pico Telecom STAND.	886944	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418916	10529	110	☑		Pico Telecom STAND.	886943	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418915	10528	110	☑		Pico Telecom STAND.	886942	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418914	10527	110	☑		Pico Telecom STAND.	886941	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418913	10526	110	☑		Pico Telecom STAND.	886940	Taiwan Mobile Pager	0.066	1/1	active	2016-01-28 00:00:00				
8418912	8003697	110	☑		Pico Telecom STAND.	886937	Taiwan Chti Mobile	0.0897	1/1	final	2016-09-21 13:08:39	2016-09-21 13:08:39	0.0	Block	4
8418911	10525	110	☑		Pico Telecom STAND.	886934	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418910	10524	110	☑		Pico Telecom STAND.	886933	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418909	8003696	110	☑		Pico Telecom STAND.	886932	Taiwan Chti Mobile	0.0897	1/1	final	2016-09-21 13:08:39	2016-09-21 13:08:39	0.0	Block	4
8418908	10523	110	☑		Pico Telecom STAND.	886928	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418907	10522	110	☑		Pico Telecom STAND.	886921	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418906	10521	110	☑		Pico Telecom STAND.	886919	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418905	10520	110	☑		Pico Telecom STAND.	886912	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418904	10519	110	☑		Pico Telecom STAND.	886911	Taiwan Chti Mobile	0.044	1/1	active	2016-01-28 00:00:00				
8418903	10518	110	☑		Pico Telecom STAND.	886910	Taiwan Mobile	0.095	1/1	active	2016-01-28 00:00:00				
8418902	10517	110	☑		Pico Telecom STAND.	8869	Taiwan Mobile Other	0.055	1/1	active	2016-01-28 00:00:00				
8418901	10516	110	☑		Pico Telecom STAND.	886	Taiwan	0.024	1/1	active	2016-01-28 00:00:00				
8418900	8003695	110	☑		Pico Telecom STAND.	880821	Bangladesh Sylet	0.011	1/1	final	2016-09-21 13:08:39	2016-09-21 13:08:39	0.0	Block	4

- **Import row ID** - ID of the rate record in the auto-import table.
- **Import batch** - import batch of the rate, if imported from a file.
- **Status** - let you easily enable/disable the record.
- **Locked** - let you lock/unlock the rate.
- **Rate plan** - rate plan which the rate belongs to.
- **Code** - code of the rate.
- **Area name** - name of an area which the code belongs to.
- **Rate** - rate in Rate plan currency.
- **Billing increm.** - billing scheme **x**/**y**/**z** where **x** denotes the non-chargeable interval of an established connection, **y** stands for the initial period, i.e. chargeable minimum in seconds, **z** is the subsequent bulling increment. The first section is optional. Blank is "0/1/1".
- **State** - state of the rate. It can be:
  - **active** - the rate is currently active.
  - **future** - the Active from date of this rate is in the future.
  - **expired** - the Active till date of this rate is in the past.
  - **void** - the Active till date of this rate is **before** the Active from date. This may happen when a future rate is automatically closed as it is superseded by a newly loaded rate with an earlier Active from date.
  - **off** - the rate is disabled.
- **Active from, GMT** - date/time in GMT the rate active from. If it is more than the current time the system considers the rate as **Future**.
- **Active till, GMT** - date/time in GMT the rate active till. If blank - the record active indefinitely. If it is less than the current time the system considers the code as **Expired**.
- **Active days** - number of days this rate was or will be active for.
- **Processing policy 5g** - displays a 5g policy assigned to this rate.
- **Processing policy ext** - displays a policy used for this rate during export to an external billing system.
- **Custom col 1, 2, 3** - custom columns that can be used for CSV/XLSX files generation.
- **Latest change, User** - displays a user that made the last change.
- **Latest change, GMT** - displays date/time when the last change was made.

You may edit and filter the rates using standard methods.

Another filtering control is located at the top panel.

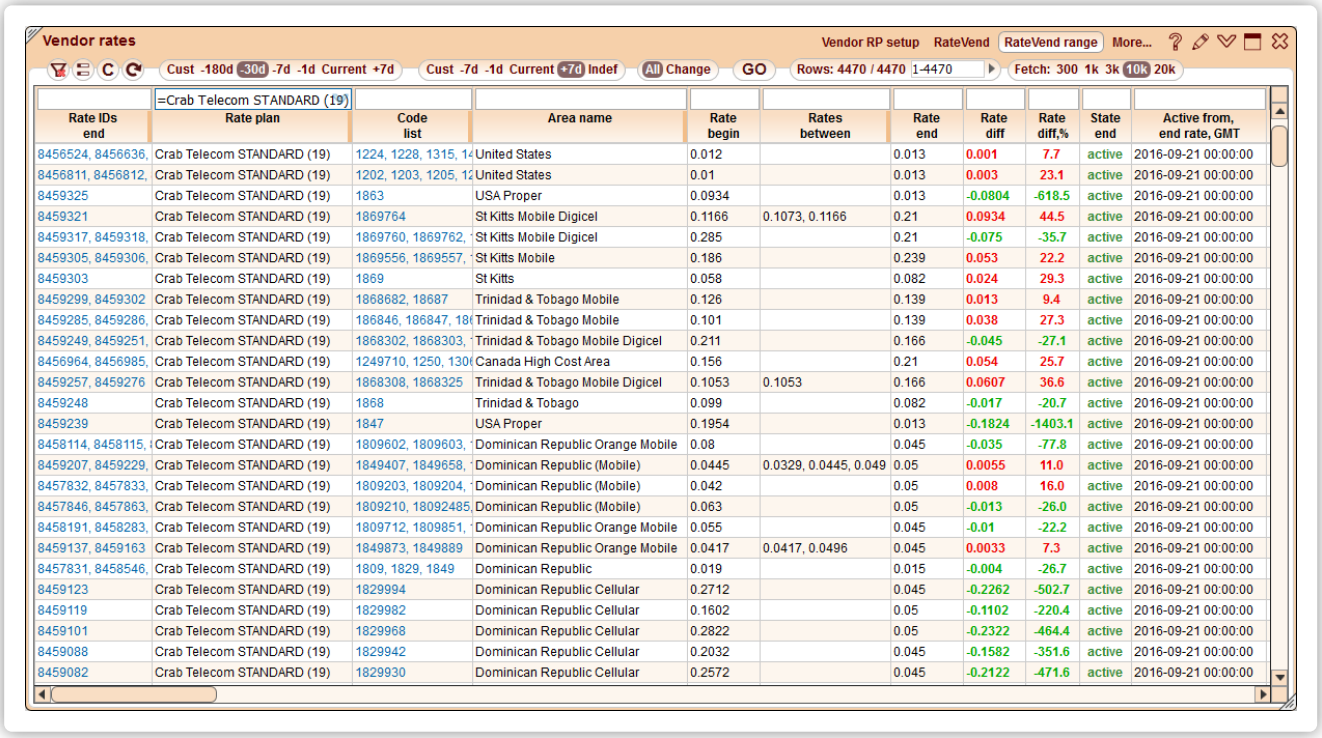


There you may choose:

- **-30d** - show rates/codes active now, in future, and up to 30 days ago (possibly several rate/codes per Rate plan).
- **All** - show all rates/codes.
- **Active** - show only rates/codes active right now (one rate/code per Rate plan).
- **Future** - show all rates/codes active now or in future (possibly several rate/codes per Rate plan).
- **Latest** - show latest rates/codes active now or in future (which the latest Active from date) that are or will be active indefinitely (one rate/code per Rate plan). Records with non-empty Active till are not shown.

7.4. RateVend range

If you need to check how your Vendor rates had been changed for a certain period, the **RateVend range** table is for your convenience. It views only the Vendor rates that were changed over a chosen time range.



Rate IDs end	Rate plan	Code list	Area name	Rate begin	Rates between	Rate end	Rate diff	Rate diff,%	State end	Active from, end rate, GMT
8456524, 8456636,	Crab Telecom STANDARD (19)	1224, 1228, 1315, 14	United States	0.012		0.013	0.001	7.7	active	2016-09-21 00:00:00
8456811, 8456812,	Crab Telecom STANDARD (19)	1202, 1203, 1205, 12	United States	0.01		0.013	0.003	23.1	active	2016-09-21 00:00:00
8459325	Crab Telecom STANDARD (19)	1863	USA Proper	0.0934		0.013	-0.0804	-618.5	active	2016-09-21 00:00:00
8459321	Crab Telecom STANDARD (19)	1869764	St Kitts Mobile Digicel	0.1166	0.1073, 0.1166	0.21	0.0934	44.5	active	2016-09-21 00:00:00
8459317, 8459318,	Crab Telecom STANDARD (19)	1869760, 1869762, 1	St Kitts Mobile Digicel	0.285		0.21	-0.075	-35.7	active	2016-09-21 00:00:00
8459305, 8459306,	Crab Telecom STANDARD (19)	1869556, 1869557, 1	St Kitts Mobile	0.186		0.239	0.053	22.2	active	2016-09-21 00:00:00
8459303	Crab Telecom STANDARD (19)	1869	St Kitts	0.058		0.082	0.024	29.3	active	2016-09-21 00:00:00
8459299, 8459302	Crab Telecom STANDARD (19)	1868682, 18687	Trinidad & Tobago Mobile	0.126		0.139	0.013	9.4	active	2016-09-21 00:00:00
8459285, 8459286,	Crab Telecom STANDARD (19)	186846, 186847, 18	Trinidad & Tobago Mobile	0.101		0.139	0.038	27.3	active	2016-09-21 00:00:00
8459249, 8459251,	Crab Telecom STANDARD (19)	1868302, 1868303, 1	Trinidad & Tobago Mobile Digicel	0.211		0.166	-0.045	-27.1	active	2016-09-21 00:00:00
8456964, 8456985,	Crab Telecom STANDARD (19)	1249710, 1250, 130	Canada High Cost Area	0.156		0.21	0.054	25.7	active	2016-09-21 00:00:00
8459257, 8459276	Crab Telecom STANDARD (19)	1868308, 1868325	Trinidad & Tobago Mobile Digicel	0.1053	0.1053	0.166	0.0607	36.6	active	2016-09-21 00:00:00
8459248	Crab Telecom STANDARD (19)	1868	Trinidad & Tobago	0.099		0.082	-0.017	-20.7	active	2016-09-21 00:00:00
8459239	Crab Telecom STANDARD (19)	1847	USA Proper	0.1954		0.013	-0.1824	-1403.1	active	2016-09-21 00:00:00
8458114, 8458115,	Crab Telecom STANDARD (19)	1809602, 1809603, 1	Dominican Republic Orange Mobile	0.08		0.045	-0.035	-77.8	active	2016-09-21 00:00:00
8459207, 8459229,	Crab Telecom STANDARD (19)	1849407, 1849658, 1	Dominican Republic (Mobile)	0.0445	0.0329, 0.0445, 0.049	0.05	0.0055	11.0	active	2016-09-21 00:00:00
8457832, 8457833,	Crab Telecom STANDARD (19)	1809203, 1809204, 1	Dominican Republic (Mobile)	0.042		0.05	0.008	16.0	active	2016-09-21 00:00:00
8457846, 8457863,	Crab Telecom STANDARD (19)	1809210, 18092485,	Dominican Republic (Mobile)	0.063		0.05	-0.013	-26.0	active	2016-09-21 00:00:00
8458191, 8458283,	Crab Telecom STANDARD (19)	1809712, 1809851, 1	Dominican Republic Orange Mobile	0.055		0.045	-0.01	-22.2	active	2016-09-21 00:00:00
8459137, 8459163	Crab Telecom STANDARD (19)	1849873, 1849889	Dominican Republic Orange Mobile	0.0417	0.0417, 0.0496	0.045	0.0033	7.3	active	2016-09-21 00:00:00
8457831, 8458546,	Crab Telecom STANDARD (19)	1809, 1829, 1849	Dominican Republic	0.019		0.015	-0.004	-26.7	active	2016-09-21 00:00:00
8459123	Crab Telecom STANDARD (19)	1829994	Dominican Republic Cellular	0.2712		0.045	-0.2262	-502.7	active	2016-09-21 00:00:00
8459119	Crab Telecom STANDARD (19)	1829982	Dominican Republic Cellular	0.1602		0.05	-0.1102	-220.4	active	2016-09-21 00:00:00
8459101	Crab Telecom STANDARD (19)	1829968	Dominican Republic Cellular	0.2822		0.05	-0.2322	-464.4	active	2016-09-21 00:00:00
8459088	Crab Telecom STANDARD (19)	1829942	Dominican Republic Cellular	0.2032		0.045	-0.1582	-351.6	active	2016-09-21 00:00:00
8459082	Crab Telecom STANDARD (19)	1829930	Dominican Republic Cellular	0.2572		0.045	-0.2122	-471.6	active	2016-09-21 00:00:00

- **Rate ID begin** - internal ID of the beginning rate.
- **Rate IDs between** - internal IDs of all records for each in-between rate.
- **Rate ID end** - internal ID of the end rate.
- **Rate plan** - a rate plan which the rate belongs to.
- **Code list** - list of all codes with the same beginning, between, and end rates for the chosen interval. May not be a complete list per area if different codes have different rates.
- **Area name** - name of an area the codes belong to.
- **Rate begin** - rate active at the beginning of the chosen interval.
- **Rates between** - rates with Active from/Active till times completely in inside of the chosen interval.
- **Rate end** - rate active at the end of the chosen interval.
- **Rate diff** - rate difference between the beginning and the end rates.
- **Rate diff,%** - rate difference in %.
- **State end** - a state of the rate. The possible values are the same as in **State** of the RateVend.
- **Active from, end rate, GMT** - date/time in GMT the end rate active from.
- **Active till, end rate, GMT** - date/time in GMT the end rate active till. If blank - the record active indefinitely.

- **Active days** - number of days the end rate was or will be active for.

This is a powerful tool to see the history of changes and analyse your Vendor rates. The two **Interval strips** on the top allows you to easily choose the beginning and the end of the interesting interval.

For example, if you want to see rates for the interval, where beginning rates are the rates, that were active 30 days ago, and end rates are the rates that are active right now, you should choose **-30d** and **Current** correspondingly. Besides the given preconfigured values like **-180d**, **Current**, **+7d** and so on, you can use the **Cust** option, which let you choose non-standard intervals. The **All/Change** strip allows you to manage whether to display all rates active at the beginning and end of the time range, or to view only the rates that changed between the interval.

8. Rate analysis

8.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

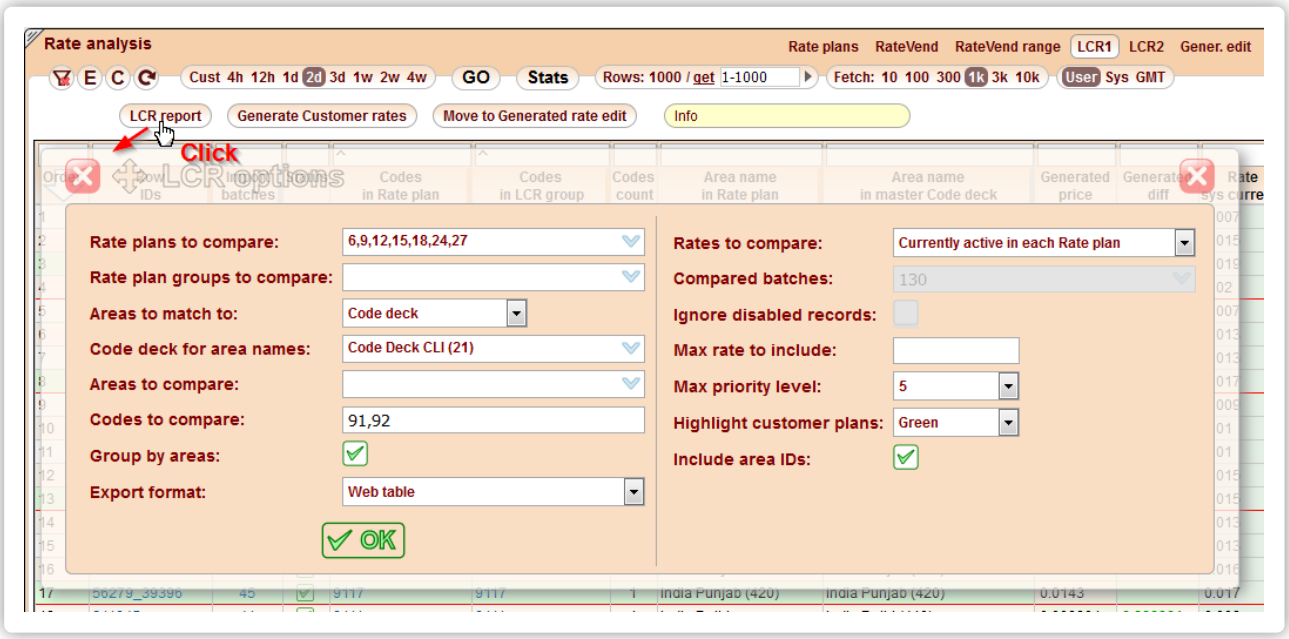
8.2. LCR1

LCR1 is a least cost routing report where the system displays one vendor (or customer) Rate plan per a row. You may use Vendor, as well as Customer Rate plans to see how Customer rates stand against Vendor rates. Rows with Customer Rate plans are highlighted with a configured color at the same time.

Available grouping by areas can make the report much more compact and legible - different LCR groups are separated by red lines. Codes will be grouped only if all rates for all vendors are same for all codes, otherwise you will have several code groups per each area.

The report can be displayed right in the web interface or exported as a .csv, .xlsx file.

In order to create a new LCR report click on the button **LCR report**. This will open the **LCR options** window where you should fill out the following fields:



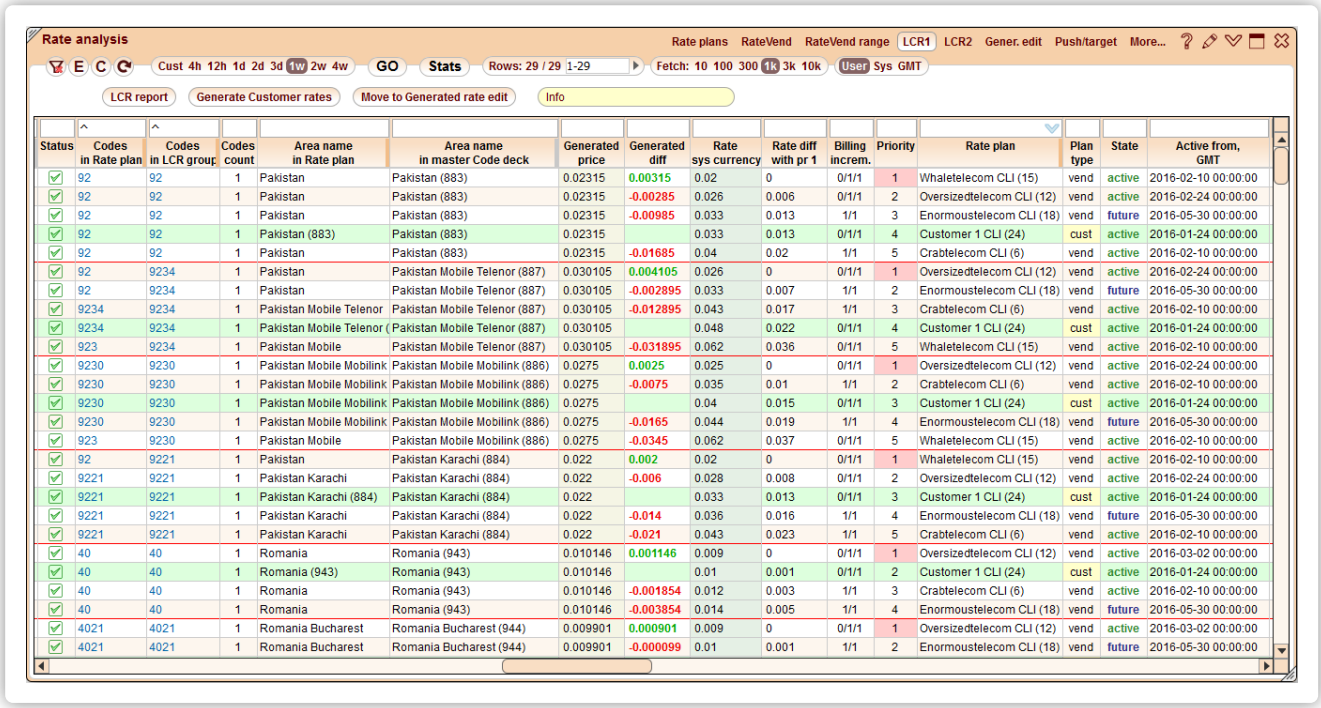
- **Rate plans to compare** - choose Rate plans from the drop-down table. If blank - all enabled Rate plans will be compared.
- **Rate plan slices to compare** - choose Rate plan slices from the drop-down table. If blank - all enabled Rate plans will be compared.
- **Rate plan groups to compare** - choose Rate plan groups from the drop-down table. If blank - all enabled Rate plans will be compared.
- **Areas to match to** - stats area set or Code deck areas to match with areas in LCR.
- **Code deck for area names** - choose a Code deck from which the system will take area names for analysed prefixes. Vendors do have different sets of codes and areas. The chosen Code deck will serve as a master set of area names to show per each code.
- **Areas to compare** - you may choose several areas from the **Code deck for area names**, if empty - all areas will be compared. Areas and codes below are combined.
- **Codes to compare** - comma-separated list of codes to compare (all longer codes are included). If empty - all codes will be compared.
- **Group by areas** - group codes with same rates and other parameters. Most often this will result in grouping by areas, but if codes for the same areas are different in compared Rate plans, one area may have several code groups.
- **Export format** - choose the format of the generated report.
- **Rates to compare** - choose on of the following options:
  - **Currently active in each Rate plan** - compares only currently active rates from the chosen Rate plans.
  - **Latest active or future in each Rate plan** - compares the latest active or future rates from the chosen Rate plans.
  - **All active and future in each Rate plan** - compares all active and future rates from the chosen Rate plans.
  - **Compare batches, not Rate plans** - the system compares only the rates contained in batches set in the next field **Compared**

batches.

- **Compared batches** - enter a comma-separated batches list. Active only if the **Compare batches, not Rate plans** option is chosen in the previous field.
- **Ignore disabled records** - check if you need to ignore disabled records. Active only if the **Compare batches, not Rate plans** option is chosen in the **Rates to compare** field.
- **Max rate to include** - maximum rate in System currency that will be considered for LCR.
- **Max priority level** - maximum number of Rate plans shown per each LCR group.
- **Highlight customer plans** - choose a colour to highlight rows with Customer Rate plans.
- **Include area IDs** - add area IDs to area names for Customer rate plans and Code deck master areas in files.

When you make comparison by areas you should take into account that comparison by codes may provide more accurate results, as codes in the Code deck and in the Vendor rate sheet may not match for the same area.

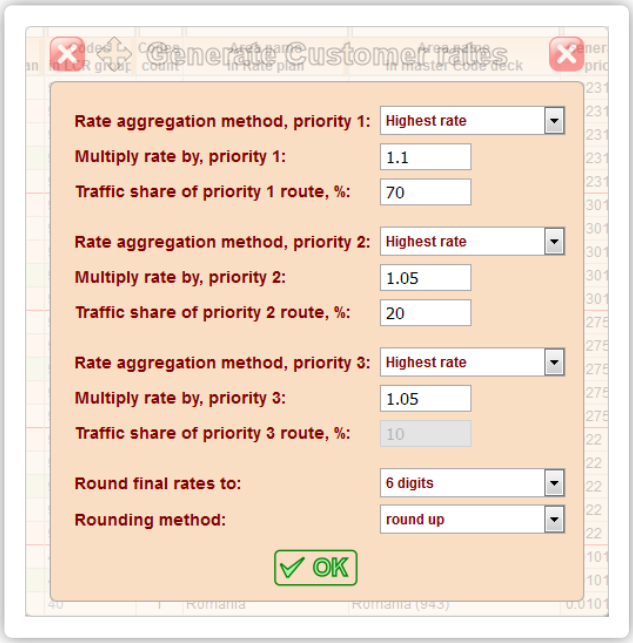
Clicking on the **OK** button start generating the LCR report. If you have chosen the export format as **Web table** then the report will be displayed right in the LCR1 table with the following columns:



Status	Codes in Rate plan	Codes in LCR group	Codes count	Area name in Rate plan	Area name in master Code deck	Generated price	Generated diff	Rate sys currency	Rate diff with pr 1	Billing increm.	Priority	Rate plan	Plan type	State	Active from, GMT
☑	92	92	1	Pakistan	Pakistan (883)	0.02315	0.00315	0.02	0	0/1/1	1	Whaletelecom CLI (15)	vend	active	2016-02-10 00:00:00
☑	92	92	1	Pakistan	Pakistan (883)	0.02315	-0.00285	0.026	0.006	0/1/1	2	Oversizedtelecom CLI (12)	vend	active	2016-02-24 00:00:00
☑	92	92	1	Pakistan	Pakistan (883)	0.02315	-0.00985	0.033	0.013	1/1	3	Enormoustelecom CLI (18)	vend	future	2016-05-30 00:00:00
☑	92	92	1	Pakistan (883)	Pakistan (883)	0.02315		0.033	0.013	0/1/1	4	Customer 1 CLI (24)	cust	active	2016-01-24 00:00:00
☑	92	92	1	Pakistan	Pakistan (883)	0.02315	-0.01685	0.04	0.02	1/1	5	Crabtelecom CLI (6)	vend	active	2016-02-10 00:00:00
☑	92	9234	1	Pakistan	Pakistan Mobile Telenor (887)	0.030105	0.004105	0.026	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active	2016-02-24 00:00:00
☑	92	9234	1	Pakistan	Pakistan Mobile Telenor (887)	0.030105	-0.002895	0.033	0.007	1/1	2	Enormoustelecom CLI (18)	vend	future	2016-05-30 00:00:00
☑	9234	9234	1	Pakistan Mobile Telenor	Pakistan Mobile Telenor (887)	0.030105	-0.012895	0.043	0.017	1/1	3	Crabtelecom CLI (6)	vend	active	2016-02-10 00:00:00
☑	9234	9234	1	Pakistan Mobile Telenor (	Pakistan Mobile Telenor (887)	0.030105		0.048	0.022	0/1/1	4	Customer 1 CLI (24)	cust	active	2016-01-24 00:00:00
☑	923	9234	1	Pakistan Mobile	Pakistan Mobile Telenor (887)	0.030105	-0.031895	0.062	0.036	0/1/1	5	Whaletelecom CLI (15)	vend	active	2016-02-10 00:00:00
☑	9230	9230	1	Pakistan Mobile Mobilink	Pakistan Mobile Mobilink (886)	0.0275	0.0025	0.025	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active	2016-02-24 00:00:00
☑	9230	9230	1	Pakistan Mobile Mobilink	Pakistan Mobile Mobilink (886)	0.0275	-0.0075	0.035	0.01	1/1	2	Crabtelecom CLI (6)	vend	active	2016-02-10 00:00:00
☑	9230	9230	1	Pakistan Mobile Mobilink	Pakistan Mobile Mobilink (886)	0.0275		0.04	0.015	0/1/1	3	Customer 1 CLI (24)	cust	active	2016-01-24 00:00:00
☑	9230	9230	1	Pakistan Mobile Mobilink	Pakistan Mobile Mobilink (886)	0.0275	-0.0165	0.044	0.019	1/1	4	Enormoustelecom CLI (18)	vend	future	2016-05-30 00:00:00
☑	923	9230	1	Pakistan Mobile	Pakistan Mobile Mobilink (886)	0.0275	-0.0345	0.062	0.037	0/1/1	5	Whaletelecom CLI (15)	vend	active	2016-02-10 00:00:00
☑	92	9221	1	Pakistan	Pakistan Karachi (884)	0.022	0.002	0.02	0	0/1/1	1	Whaletelecom CLI (15)	vend	active	2016-02-10 00:00:00
☑	9221	9221	1	Pakistan Karachi	Pakistan Karachi (884)	0.022	-0.006	0.028	0.008	0/1/1	2	Oversizedtelecom CLI (12)	vend	active	2016-02-24 00:00:00
☑	9221	9221	1	Pakistan Karachi (884)	Pakistan Karachi (884)	0.022		0.033	0.013	0/1/1	3	Customer 1 CLI (24)	cust	active	2016-01-24 00:00:00
☑	9221	9221	1	Pakistan Karachi	Pakistan Karachi (884)	0.022	-0.014	0.036	0.016	1/1	4	Enormoustelecom CLI (18)	vend	future	2016-05-30 00:00:00
☑	9221	9221	1	Pakistan Karachi	Pakistan Karachi (884)	0.022	-0.021	0.043	0.023	1/1	5	Crabtelecom CLI (6)	vend	active	2016-02-10 00:00:00
☑	40	40	1	Romania	Romania (943)	0.010146	0.001146	0.009	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active	2016-03-02 00:00:00
☑	40	40	1	Romania (943)	Romania (943)	0.010146		0.01	0.001	0/1/1	2	Customer 1 CLI (24)	cust	active	2016-01-24 00:00:00
☑	40	40	1	Romania	Romania (943)	0.010146	-0.001854	0.012	0.003	1/1	3	Crabtelecom CLI (6)	vend	active	2016-02-10 00:00:00
☑	40	40	1	Romania	Romania (943)	0.010146	-0.003854	0.014	0.005	1/1	4	Enormoustelecom CLI (18)	vend	future	2016-05-30 00:00:00
☑	4021	4021	1	Romania Bucharest	Romania Bucharest (944)	0.009901	0.000901	0.009	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active	2016-03-02 00:00:00
☑	4021	4021	1	Romania Bucharest	Romania Bucharest (944)	0.009901	-0.000099	0.01	0.001	1/1	2	Enormoustelecom CLI (18)	vend	future	2016-05-30 00:00:00

- **Row ID** - internal ID of the rate record.
- **Import batches** - import batch of the rate.
- **Status** - display status of the rate, enabled or disabled.
- **Code in Rate plan** - code from the Rate plan which covers the corresponding **Code LCR group**.
- **Code LCR group** - an LCR group is a set of rates for exactly the same code. If such a code is not found in a Rate plan, the rate for the shorter code is taken.
- **Codes count** - number of codes in the LCR group (may be > 1 if report is grouped by areas).
- **Area name in Rate plan** - area name in the Rate plan for the current row rate.
- **Area name in master Code deck** - area name in the Code deck chosen as a reference for area names.
- **Generated price** - price displayed in the report after Customer rates generating by means of the **Generate Customer rates** button.
- **Generated diff** - difference between the generated price and the current row rate.
- **Rate sys currency** - Vendor (or Customer) Rate plan rate converted to the system currency.
- **Rate diff with pr 1** - rate difference between the priority 1 rate and the current row rate.
- **Billing increm.** - billing increment of the rate.
- **Priority** - priority of the current row rate.
- **Rate plan** - a Rate plan holding the rate.
- **Plan type** - Rate plan type: Customer or Vendor.
- **State** - state of the rate.
- **Active from, GMT** - date/time in GMT the rate active from.
- **Active till, GMT** - date/time in GMT the rate active till.
- **Processing policy 5g** - displays a 5g policy assigned to this rate.
- **Processing policy ext** - displays a policy used for this rate during export to an external billing system.

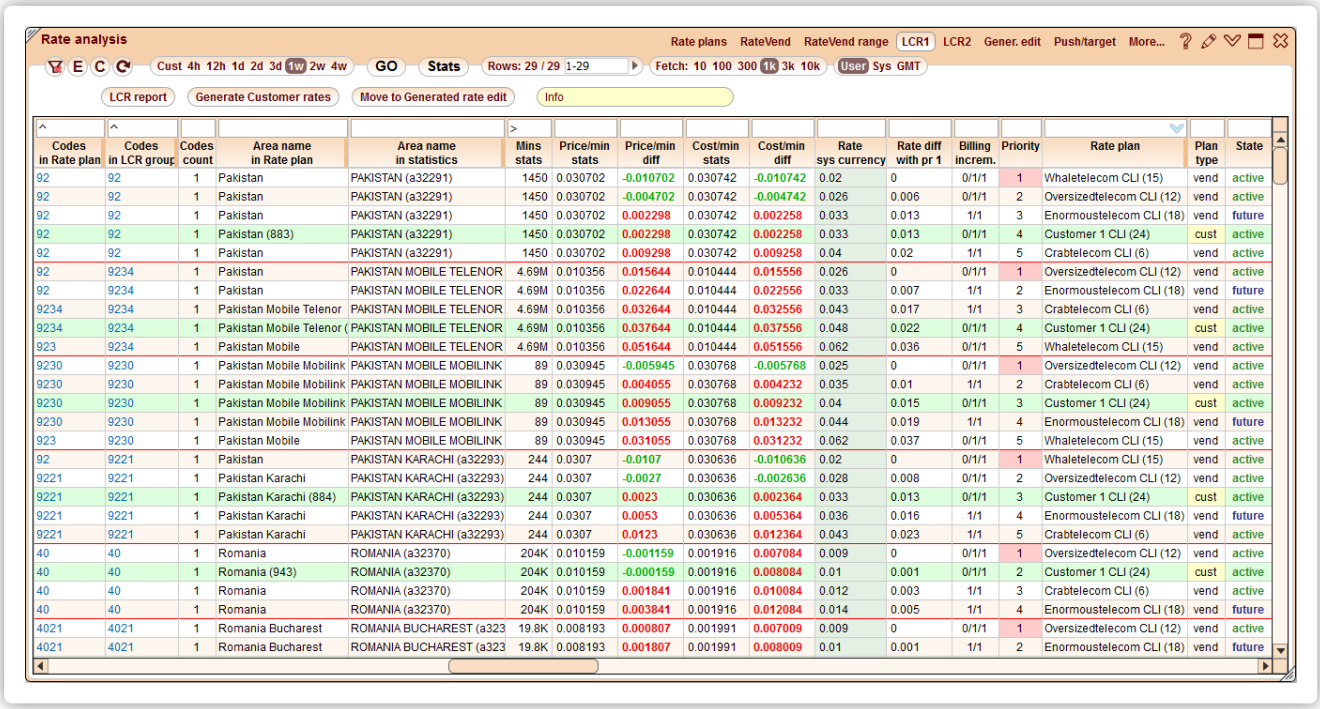
Besides standard functions of LCR report this tool has extended features. It allows you to generate Customer rates on basis of Vendor rates and then edit them in the Generated rate edit module. When you click the **Generate Customer rates** button the floating window opens, where you can setup the parameters of generation:



- **Rate aggregation method, priority 1,2,3** - choose one base vendor rate out of possible several for each Code deck area.
- **Multiply rate by, priority 1,2,3** - multiply the base rate by this coefficient.
- **Traffic share of priority 1,2,3 route, %** - estimated share of traffic to the route with this priority, in %.
- **Round final rates to** - round final rates to this many digits after the dot.
- **Rounding method** - choose one of the available rounding methods.

After clicking **OK** the system fill up the **Generated price** and **Generated diff** columns for each area. Now you can review them right in the LCR report and then move to the Generated rate edit using the **Move to Generated rate edit** button.

One more very helpful additional feature here is possibility to analyse Vendor rates comparing them with your current area statistics. You should use one of the stats area set in the **Areas to match to** option for this purpose. In the Interval strip you can choose the interval for which to display statistics. In order to submit a request for statistical data please click on the **Stats** button of the top menu. In this case the report is extended by additional fields which allows you to analyse the loaded rates:



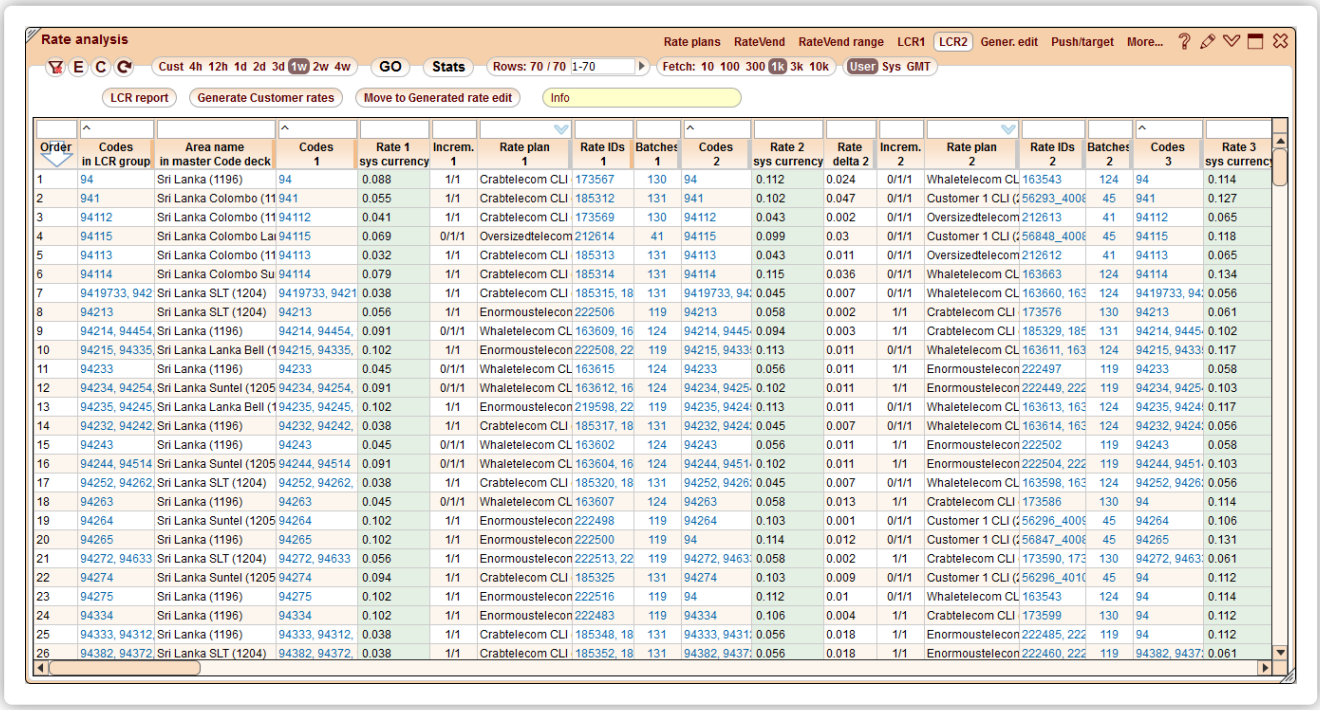
Codes in Rate plan	Codes in LCR group	Codes count	Area name in Rate plan	Area name in statistics	Mins stats	Price/min stats	Price/min diff	Cost/min stats	Cost/min diff	Rate sys currency	Rate diff with pr 1	Billing increm.	Priority	Rate plan	Plan type	State
92	92	1	Pakistan	PAKISTAN (a32291)	1450	0.030702	-0.010702	0.030742	-0.010742	0.02	0	0/1/1	1	Whaletelecom CLI (15)	vend	active
92	92	1	Pakistan	PAKISTAN (a32291)	1450	0.030702	-0.004702	0.030742	-0.004742	0.026	0.006	0/1/1	2	Oversizedtelecom CLI (12)	vend	active
92	92	1	Pakistan	PAKISTAN (a32291)	1450	0.030702	0.002298	0.030742	0.002258	0.033	0.013	1/1	3	Enormoustelecom CLI (18)	vend	future
92	92	1	Pakistan (883)	PAKISTAN (a32291)	1450	0.030702	0.002298	0.030742	0.002258	0.033	0.013	0/1/1	4	Customer 1 CLI (24)	cust	active
92	92	1	Pakistan	PAKISTAN (a32291)	1450	0.030702	0.009298	0.030742	0.009258	0.04	0.02	1/1	5	Crabtelecom CLI (6)	vend	active
92	9234	1	Pakistan	PAKISTAN MOBILE TELENOR	4.69M	0.010356	0.015644	0.010444	0.015556	0.026	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active
92	9234	1	Pakistan	PAKISTAN MOBILE TELENOR	4.69M	0.010356	0.022644	0.010444	0.022556	0.033	0.007	1/1	2	Enormoustelecom CLI (18)	vend	future
9234	9234	1	Pakistan Mobile Telenor	PAKISTAN MOBILE TELENOR	4.69M	0.010356	0.032644	0.010444	0.032556	0.043	0.017	1/1	3	Crabtelecom CLI (6)	vend	active
9234	9234	1	Pakistan Mobile Telenor (	PAKISTAN MOBILE TELENOR	4.69M	0.010356	0.037644	0.010444	0.037556	0.048	0.022	0/1/1	4	Customer 1 CLI (24)	cust	active
923	9234	1	Pakistan Mobile	PAKISTAN MOBILE TELENOR	4.69M	0.010356	0.051644	0.010444	0.051556	0.062	0.036	0/1/1	5	Whaletelecom CLI (15)	vend	active
9230	9230	1	Pakistan Mobile Mobilink	PAKISTAN MOBILE MOBILINK	89	0.030945	-0.005945	0.030768	-0.005768	0.025	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active
9230	9230	1	Pakistan Mobile Mobilink	PAKISTAN MOBILE MOBILINK	89	0.030945	0.004055	0.030768	0.004232	0.035	0.01	1/1	2	Crabtelecom CLI (6)	vend	active
9230	9230	1	Pakistan Mobile Mobilink	PAKISTAN MOBILE MOBILINK	89	0.030945	0.009055	0.030768	0.009232	0.04	0.015	0/1/1	3	Customer 1 CLI (24)	cust	active
9230	9230	1	Pakistan Mobile Mobilink	PAKISTAN MOBILE MOBILINK	89	0.030945	0.013055	0.030768	0.013232	0.044	0.019	1/1	4	Enormoustelecom CLI (18)	vend	future
923	9230	1	Pakistan Mobile	PAKISTAN MOBILE MOBILINK	89	0.030945	0.031055	0.030768	0.031232	0.062	0.037	0/1/1	5	Whaletelecom CLI (15)	vend	active
92	9221	1	Pakistan	PAKISTAN KARACHI (a32293)	244	0.0307	-0.0107	0.030636	-0.010636	0.02	0	0/1/1	1	Whaletelecom CLI (15)	vend	active
9221	9221	1	Pakistan Karachi	PAKISTAN KARACHI (a32293)	244	0.0307	-0.0027	0.030636	-0.002636	0.028	0.008	0/1/1	2	Oversizedtelecom CLI (12)	vend	active
9221	9221	1	Pakistan Karachi (884)	PAKISTAN KARACHI (a32293)	244	0.0307	0.0023	0.030636	0.002364	0.033	0.013	0/1/1	3	Customer 1 CLI (24)	cust	active
9221	9221	1	Pakistan Karachi	PAKISTAN KARACHI (a32293)	244	0.0307	0.0053	0.030636	0.005364	0.036	0.016	1/1	4	Enormoustelecom CLI (18)	vend	future
9221	9221	1	Pakistan Karachi	PAKISTAN KARACHI (a32293)	244	0.0307	0.0123	0.030636	0.012364	0.043	0.023	1/1	5	Crabtelecom CLI (6)	vend	active
40	40	1	Romania	ROMANIA (a32370)	204K	0.010159	-0.001159	0.001916	0.007084	0.009	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active
40	40	1	Romania (943)	ROMANIA (a32370)	204K	0.010159	-0.000159	0.001916	0.008084	0.01	0.001	0/1/1	2	Customer 1 CLI (24)	cust	active
40	40	1	Romania	ROMANIA (a32370)	204K	0.010159	0.001841	0.001916	0.010084	0.012	0.003	1/1	3	Crabtelecom CLI (6)	vend	active
40	40	1	Romania	ROMANIA (a32370)	204K	0.010159	0.003841	0.001916	0.012084	0.014	0.005	1/1	4	Enormoustelecom CLI (18)	vend	future
4021	4021	1	Romania Bucharest	ROMANIA BUCHAREST (a323	19.8K	0.008193	0.000807	0.001991	0.007009	0.009	0	0/1/1	1	Oversizedtelecom CLI (12)	vend	active
4021	4021	1	Romania Bucharest	ROMANIA BUCHAREST (a323	19.8K	0.008193	0.001807	0.001991	0.008009	0.01	0.001	1/1	2	Enormoustelecom CLI (18)	vend	future

- **Area name in statistics** - area name in statistics collected from CDRs. The following stats fields display statistics for this area.

- **Min stats** - total amount of minutes processed for the area.
- **Price/min stats** - average price calculated from the stats for the area.
- **Price/min diff** - difference between the average price and the current row rate.
- **Price/min diff,%** - difference between the average price and the current row rate displayed in %.
- **Cost/min stats** - average cost calculated from the stats for the area.
- **Cost/min diff** - difference between the average cost and the current row rate.
- **Cost min diff,%** - difference between the average cost and the current row rate displayed in %.

8.3. LCR2

The **LCR2** report is similar to the LCR1 but presented in another fashion. It has more compact view where you get top 10 Vendor (or Customer) Rate plans per a row.



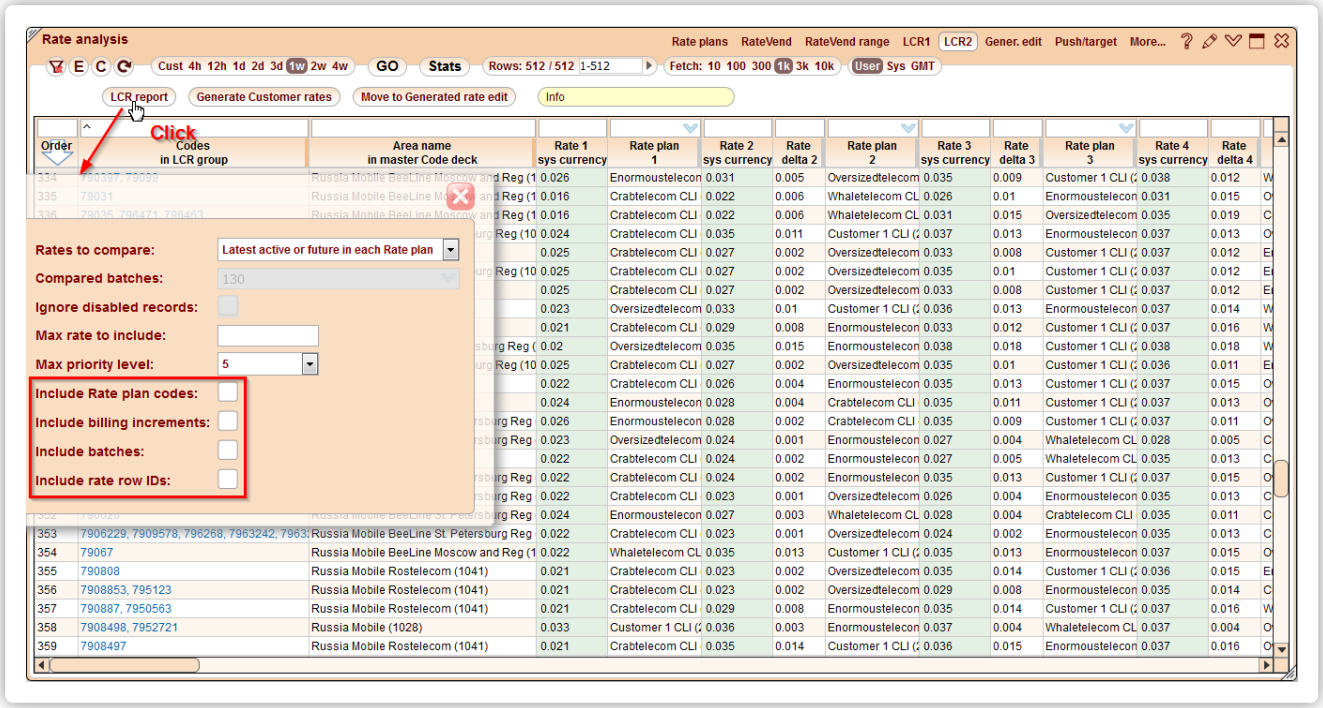
Order	Codes in LCR group	Area name in master Code deck	Codes 1	Rate 1 sys currency	Increm. 1	Rate plan 1	Rate IDs 1	Batches 1	Codes 2	Rate 2 sys currency	Rate delta 2	Increm. 2	Rate plan 2	Rate IDs 2	Batches 2	Codes 3	Rate 3 sys currency
1	94	Sri Lanka (1196)	94	0.088	1/1	Crabtelecom CLI	173567	130	94	0.112	0.024	0/1/1	Whaletelecom CL	163543	124	94	0.114
2	941	Sri Lanka Colombo (11	941	0.055	1/1	Crabtelecom CLI	185312	131	941	0.102	0.047	0/1/1	Customer 1 CLI (2	56293_4008	45	941	0.127
3	94112	Sri Lanka Colombo (11	94112	0.041	1/1	Crabtelecom CLI	173569	130	94112	0.043	0.002	0/1/1	Oversizedtelecom	212613	41	94112	0.065
4	94115	Sri Lanka Colombo Lai	94115	0.069	0/1/1	Oversizedtelecom	212614	41	94115	0.099	0.03	0/1/1	Customer 1 CLI (2	56848_4008	45	94115	0.118
5	94113	Sri Lanka Colombo (11	94113	0.032	1/1	Crabtelecom CLI	185313	131	94113	0.043	0.011	0/1/1	Oversizedtelecom	212612	41	94113	0.065
6	94114	Sri Lanka Colombo Su	94114	0.079	1/1	Crabtelecom CLI	185314	131	94114	0.115	0.036	0/1/1	Whaletelecom CL	163663	124	94114	0.134
7	9419733, 942	Sri Lanka SLT (1204)	9419733, 9421	0.038	1/1	Crabtelecom CLI	185315, 18	131	9419733, 94	0.045	0.007	0/1/1	Whaletelecom CL	163660, 163	124	9419733, 94	0.056
8	94213	Sri Lanka SLT (1204)	94213	0.056	1/1	Enormoustelecon	222506	119	94213	0.058	0.002	1/1	Crabtelecom CLI	173576	130	94213	0.061
9	94214, 94454,	Sri Lanka (1196)	94214, 94454,	0.091	0/1/1	Whaletelecom CL	163609, 16	124	94214, 9445	0.094	0.003	1/1	Crabtelecom CLI	185329, 185	131	94214, 9445	0.102
10	94215, 94335,	Sri Lanka Lanka Bell (1	94215, 94335,	0.102	1/1	Enormoustelecon	222508, 22	119	94215, 9433	0.113	0.011	0/1/1	Whaletelecom CL	163611, 163	124	94215, 9433	0.117
11	94233	Sri Lanka (1196)	94233	0.045	0/1/1	Whaletelecom CL	163615	124	94233	0.056	0.011	1/1	Enormoustelecon	222497	119	94233	0.058
12	94234, 94254,	Sri Lanka Suntel (1205	94234, 94254,	0.091	0/1/1	Whaletelecom CL	163612, 16	124	94234, 9425	0.102	0.011	1/1	Enormoustelecon	222449, 222	119	94234, 9425	0.103
13	94235, 94245,	Sri Lanka Lanka Bell (1	94235, 94245,	0.102	1/1	Enormoustelecon	219598, 22	119	94235, 9424	0.113	0.011	0/1/1	Whaletelecom CL	163613, 163	124	94235, 9424	0.117
14	94232, 94242,	Sri Lanka (1196)	94232, 94242,	0.038	1/1	Crabtelecom CLI	185317, 18	131	94232, 9424	0.045	0.007	0/1/1	Whaletelecom CL	163614, 163	124	94232, 9424	0.056
15	94243	Sri Lanka (1196)	94243	0.045	0/1/1	Whaletelecom CL	163602	124	94243	0.056	0.011	1/1	Enormoustelecon	222502	119	94243	0.058
16	94244, 94514	Sri Lanka Suntel (1205	94244, 94514	0.091	0/1/1	Whaletelecom CL	163604, 16	124	94244, 9451	0.102	0.011	1/1	Enormoustelecon	222504, 222	119	94244, 9451	0.103
17	94252, 94262,	Sri Lanka SLT (1204)	94252, 94262,	0.038	1/1	Crabtelecom CLI	185320, 18	131	94252, 9426	0.045	0.007	0/1/1	Whaletelecom CL	163598, 163	124	94252, 9426	0.056
18	94263	Sri Lanka (1196)	94263	0.045	0/1/1	Whaletelecom CL	163607	124	94263	0.058	0.013	1/1	Crabtelecom CLI	173586	130	94	0.114
19	94264	Sri Lanka Suntel (1205	94264	0.102	1/1	Enormoustelecon	222498	119	94264	0.103	0.001	0/1/1	Customer 1 CLI (2	56296_4009	45	94264	0.106
20	94265	Sri Lanka (1196)	94265	0.102	1/1	Enormoustelecon	222500	119	94	0.114	0.012	0/1/1	Customer 1 CLI (2	56847_4008	45	94265	0.131
21	94272, 94633	Sri Lanka SLT (1204)	94272, 94633	0.056	1/1	Enormoustelecon	222513, 22	119	94272, 9463	0.058	0.002	1/1	Crabtelecom CLI	173590, 173	130	94272, 9463	0.061
22	94274	Sri Lanka Suntel (1205	94274	0.094	1/1	Crabtelecom CLI	185325	131	94274	0.103	0.009	0/1/1	Customer 1 CLI (2	56296_4010	45	94	0.112
23	94275	Sri Lanka (1196)	94275	0.102	1/1	Enormoustelecon	222516	119	94	0.112	0.01	0/1/1	Whaletelecom CL	163543	124	94	0.114
24	94334	Sri Lanka (1196)	94334	0.102	1/1	Enormoustelecon	222483	119	94334	0.106	0.004	1/1	Crabtelecom CLI	173599	130	94	0.112
25	94333, 94312,	Sri Lanka (1196)	94333, 94312,	0.038	1/1	Crabtelecom CLI	185348, 18	131	94333, 9431	0.056	0.018	1/1	Enormoustelecon	222485, 222	119	94	0.112
26	94382, 94372,	Sri Lanka SLT (1204)	94382, 94372,	0.038	1/1	Crabtelecom CLI	185352, 18	131	94382, 9437	0.056	0.018	1/1	Enormoustelecon	222460, 222	119	94382, 9437	0.061

Each row displays rates for a specific **Code in LCR group** or for a certain **Area name in master Code deck** depends on the checked/unchecked flag **Group by areas** in the **LCR report** options window.

By default you can see the following fields for each Rate plan in a report record:

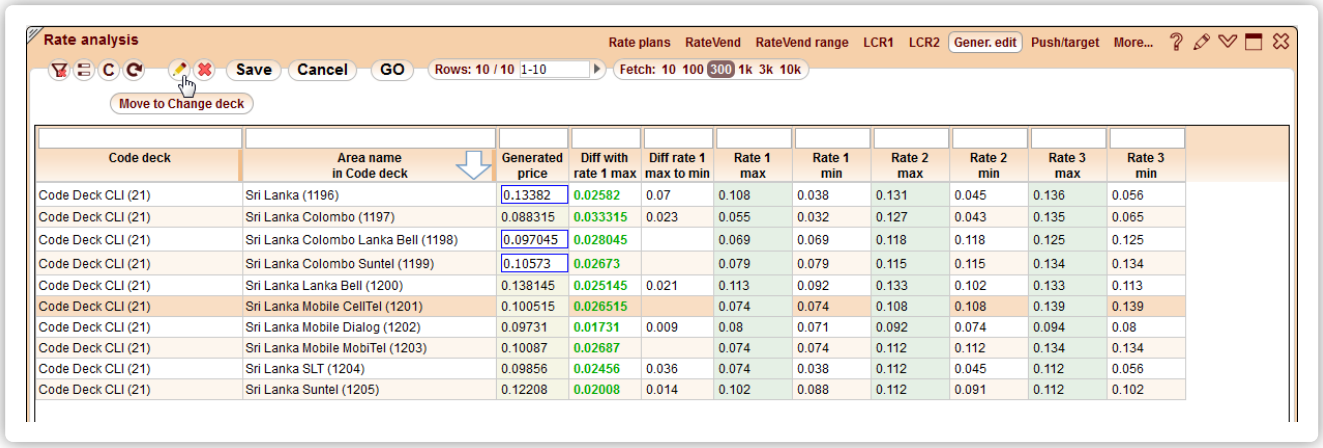
- **Codes X** - area code of a Rate plan with priority **X**.
- **Rate X sys currency** - rate with priority **X** within the LCR group, converted to the system currency.
- **Rate delta X** - delta between the rate with priority **X** and the rate with priority 1.
- **Increm. X** - billing increment of a Rate plan with priority **X**.
- **Rate plan X** - Rate plan with priority **X**.
- **Rate IDs X** - internal rate IDs of the rate record with priority **X**. For Customer rates the code ID from the Code deck is added.
- **Batches X** - import batches (Vendor rates) or change batches (Customer rates) of the rate with priority **X**.

But you can make the report more compact by excluding optional columns using the corresponding options in the **LCR report** window:



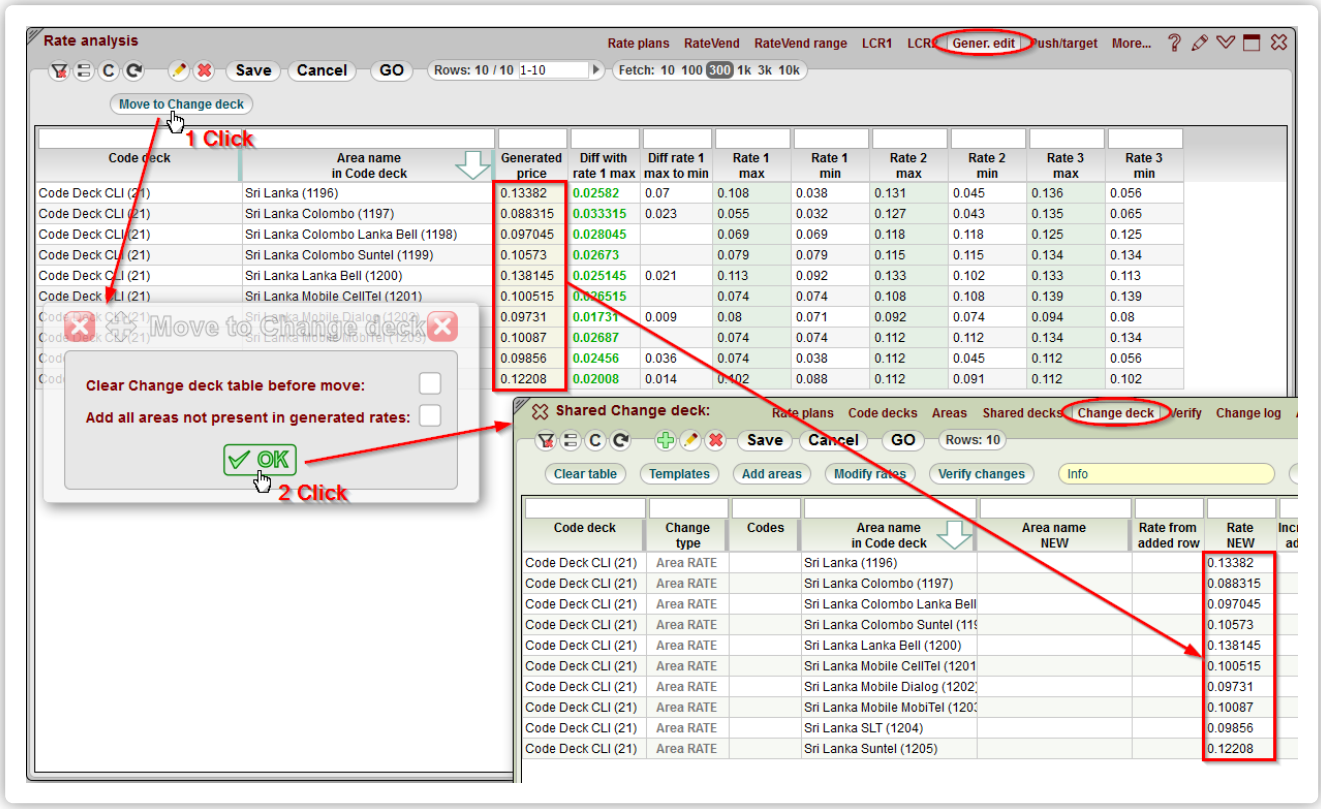
8.4. Generated rate edit

If you generated Customer rates in the LCR1 or LCR2 module and then clicked on the button **Move to Generated rate edit**, you will get the generated Customer rates in this table for price editing.



Code deck	Area name in Code deck	Generated price	Diff with rate 1 max	Diff rate 1 max to min	Rate 1 max	Rate 1 min	Rate 2 max	Rate 2 min	Rate 3 max	Rate 3 min
Code Deck CLI (21)	Sri Lanka (1196)	0.13382	0.02582	0.07	0.108	0.038	0.131	0.045	0.136	0.056
Code Deck CLI (21)	Sri Lanka Colombo (1197)	0.088315	0.033315	0.023	0.055	0.032	0.127	0.043	0.135	0.065
Code Deck CLI (21)	Sri Lanka Colombo Lanka Bell (1198)	0.097045	0.028045		0.069	0.069	0.118	0.118	0.125	0.125
Code Deck CLI (21)	Sri Lanka Colombo Suntel (1199)	0.10573	0.02673		0.079	0.079	0.115	0.115	0.134	0.134
Code Deck CLI (21)	Sri Lanka Lanka Bell (1200)	0.138145	0.025145	0.021	0.113	0.092	0.133	0.102	0.133	0.113
Code Deck CLI (21)	Sri Lanka Mobile CellTel (1201)	0.100515	0.026515		0.074	0.074	0.108	0.108	0.139	0.139
Code Deck CLI (21)	Sri Lanka Mobile Dialog (1202)	0.09731	0.01731	0.009	0.08	0.071	0.092	0.074	0.094	0.08
Code Deck CLI (21)	Sri Lanka Mobile MobiTel (1203)	0.10087	0.02687		0.074	0.074	0.112	0.112	0.134	0.134
Code Deck CLI (21)	Sri Lanka SLT (1204)	0.09856	0.02456	0.036	0.074	0.038	0.112	0.045	0.112	0.056
Code Deck CLI (21)	Sri Lanka Suntel (1205)	0.12208	0.02008	0.014	0.102	0.088	0.112	0.091	0.112	0.102

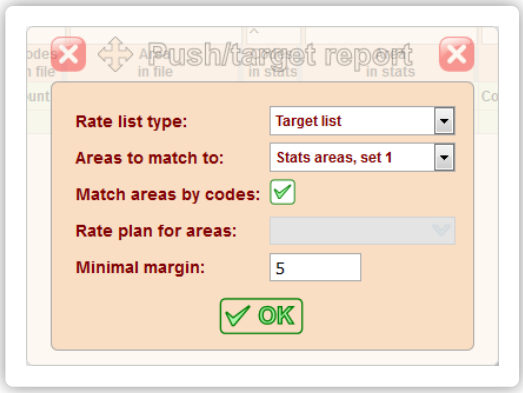
When you are done with adjusting of the **Generated price** you can use the **Move to Change deck** button in order to move all the prepared rates to the Change deck for further editing and importing to the main rate table.



8.5. Push/target

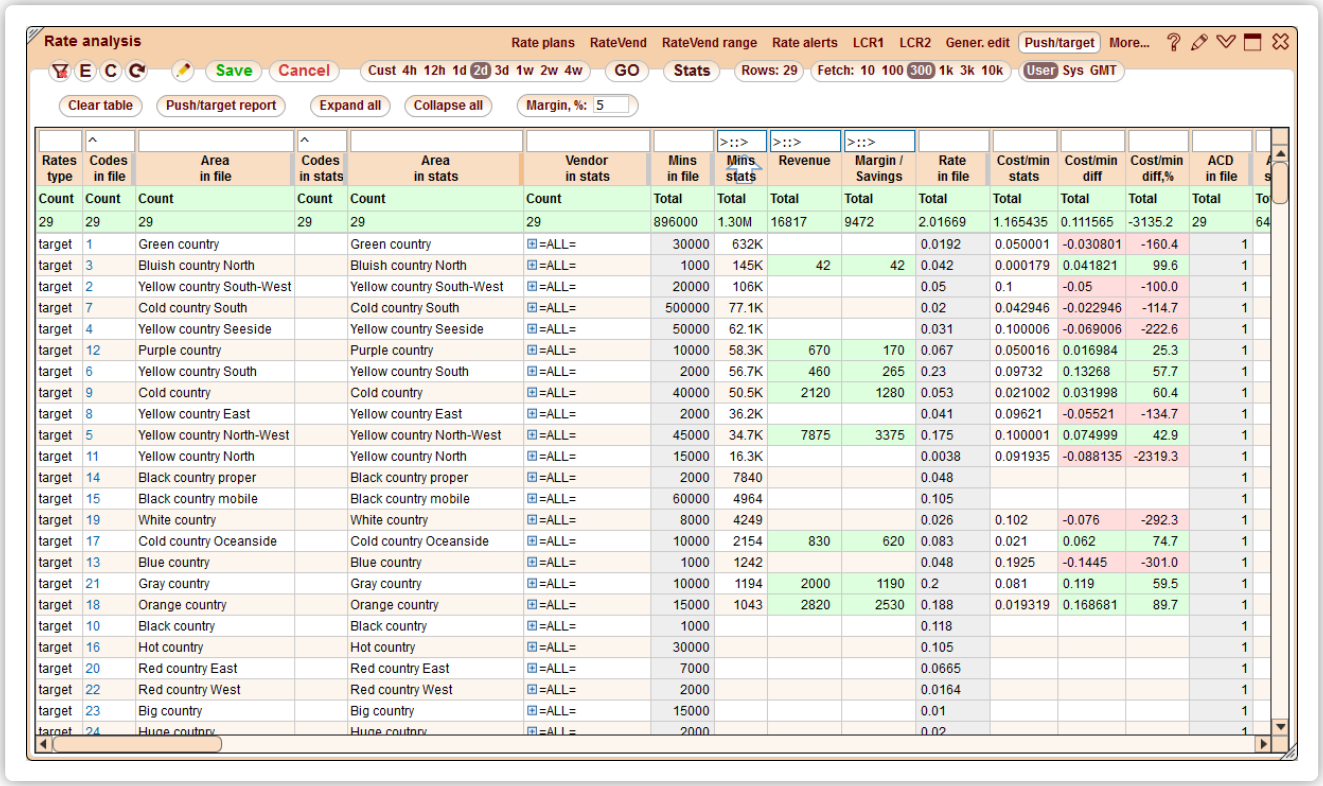
The **Push/target** report allows you to analyse partners push/target lists against your statistics from CDRs.

At first, you should import a push/target list to 5gVision using the Rate import screen. If you have a separate push/target file, you just load it by means of the Import rate file. In the Parsing log you can find a corresponding import batch for a manually loaded file or an automatically parsed email and open it in order to Match columns. When you finish with column matching, you may run **Push/target report** right from the **Parsed rates** window or move the records to the Import edit, where you can manually edit them and only after that run **Push/target report**. A new window will open, where the following options are available:



- **Rate list type** - type of rate list in a file/email (Target or push list).
- **Areas to match to** - stats areas set or Rate plan areas to match with areas in a target/push list. Stats areas sets are taken from the switch of from the config tables of Config-Objects.
- **Match areas by codes** - if your push/target list has area codes, you can match its areas with the areas from stats by the codes, not by matching the area names.
- **Rate plan for areas** - Rate plan which areas to match with areas in this table.
- **Minimal margin** - minimal margin between rates that is considered commercially attractive.

When you click **OK**, the System forms and opens a push/target report.



Rates type	Codes in file	Area in file	Codes in stats	Area in stats	Vendor in stats	Mins in file	Mins stats	Revenue	Margin / Savings	Rate in file	Cost/min stats	Cost/min diff	Cost/min diff,%	ACD in file	A s
Count	Count	Count	Count	Count	Count	Total	Total	Total	Total	Total	Total	Total	Total	Total	To
29	29	29	29	29	29	896000	1.30M	16817	9472	2.01669	1.165435	0.111565	-3135.2	29	64
target	1	Green country		Green country	⊞=ALL=	30000	632K			0.0192	0.050001	-0.030801	-160.4	1	
target	3	Bluish country North		Bluish country North	⊞=ALL=	1000	145K	42	42	0.042	0.000179	0.041821	99.6	1	
target	2	Yellow country South-West		Yellow country South-West	⊞=ALL=	20000	106K			0.05	0.1	-0.05	-100.0	1	
target	7	Cold country South		Cold country South	⊞=ALL=	500000	77.1K			0.02	0.042946	-0.022946	-114.7	1	
target	4	Yellow country Seeside		Yellow country Seeside	⊞=ALL=	50000	62.1K			0.031	0.100006	-0.069006	-222.6	1	
target	12	Purple country		Purple country	⊞=ALL=	10000	58.3K	670	170	0.067	0.050016	0.016984	25.3	1	
target	6	Yellow country South		Yellow country South	⊞=ALL=	2000	56.7K	460	265	0.23	0.09732	0.13268	57.7	1	
target	9	Cold country		Cold country	⊞=ALL=	40000	50.5K	2120	1280	0.053	0.021002	0.031998	60.4	1	
target	8	Yellow country East		Yellow country East	⊞=ALL=	2000	36.2K			0.041	0.09621	-0.05521	-134.7	1	
target	5	Yellow country North-West		Yellow country North-West	⊞=ALL=	45000	34.7K	7875	3375	0.175	0.100001	0.074999	42.9	1	
target	11	Yellow country North		Yellow country North	⊞=ALL=	15000	16.3K			0.0038	0.091935	-0.088135	-2319.3	1	
target	14	Black country proper		Black country proper	⊞=ALL=	2000	7840			0.048				1	
target	15	Black country mobile		Black country mobile	⊞=ALL=	60000	4964			0.105				1	
target	19	White country		White country	⊞=ALL=	8000	4249			0.026	0.102	-0.076	-292.3	1	
target	17	Cold country Oceanside		Cold country Oceanside	⊞=ALL=	10000	2154	830	620	0.083	0.021	0.062	74.7	1	
target	13	Blue country		Blue country	⊞=ALL=	1000	1242			0.048	0.1925	-0.1445	-301.0	1	
target	21	Gray country		Gray country	⊞=ALL=	10000	1194	2000	1190	0.2	0.081	0.119	59.5	1	
target	18	Orange country		Orange country	⊞=ALL=	15000	1043	2820	2530	0.188	0.019319	0.168681	89.7	1	
target	10	Black country		Black country	⊞=ALL=	1000				0.118				1	
target	16	Hot country		Hot country	⊞=ALL=	30000				0.105				1	
target	20	Red country East		Red country East	⊞=ALL=	7000				0.0665				1	
target	22	Red country West		Red country West	⊞=ALL=	2000				0.0164				1	
target	23	Big country		Big country	⊞=ALL=	15000				0.01				1	
target	24	Huge country		Huge country	⊞=ALL=	2000				0.02				1	

The report contains several file parameters in comparison with statistics parameters including area names. They allow you to estimate potential benefits or losses for each area from the offered list. **Revenue** and **Margin / Savings** parameters are applicable for target lists only.

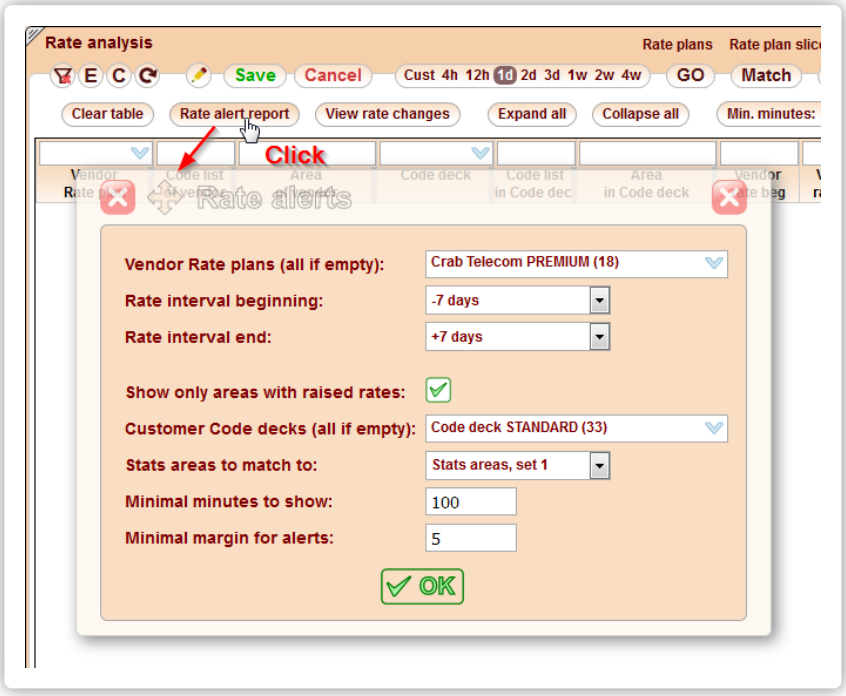
You can always recreate a report with new options using the **Push/target report** button right in the **Push/target** window. The **Stats** button lets you re-fetch statistical data.

8.6. Rate alerts

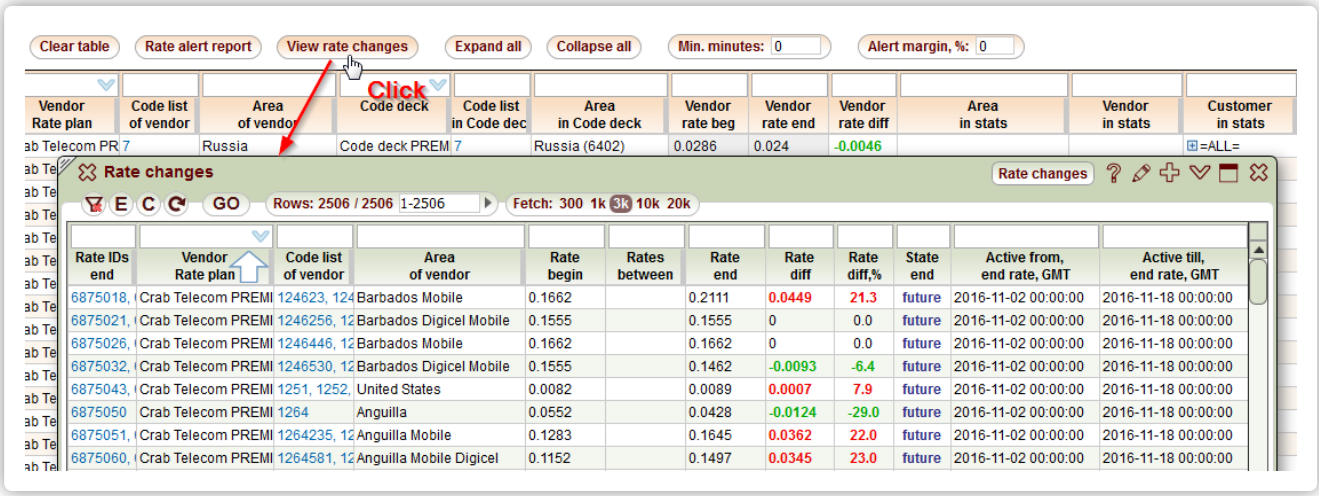
The Rate alerts tool allows you to check and analyse rates increase for destinations you are currently sending traffic to.

There are 3 stages to the report:

1. First, the system just gets all the rates that changed over a given period. The interval and vendor Rate plans are set in the **Rate alert report** floating window:

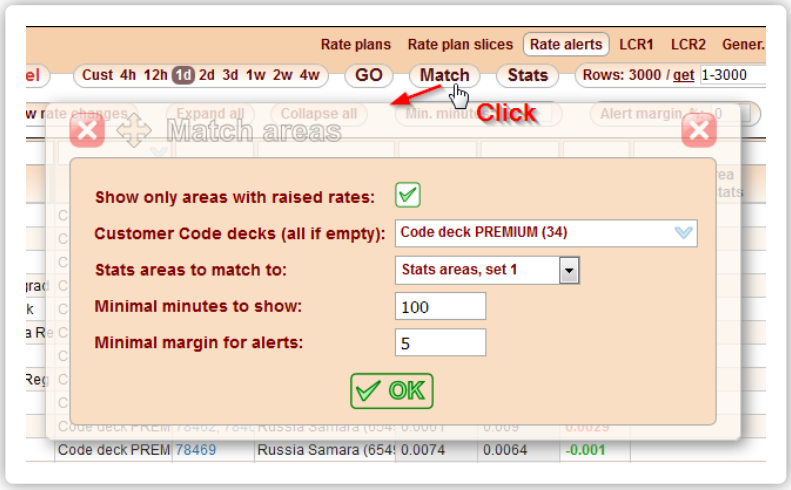


In this window you also set other options which will be used during the 2nd and 3rd stages (see 2. and 3. below). The Rate alert table that is open will give you results after implementing the 2nd stage, but you may view just the pure vendor rates that were changed in the **View rate changes** floating table:



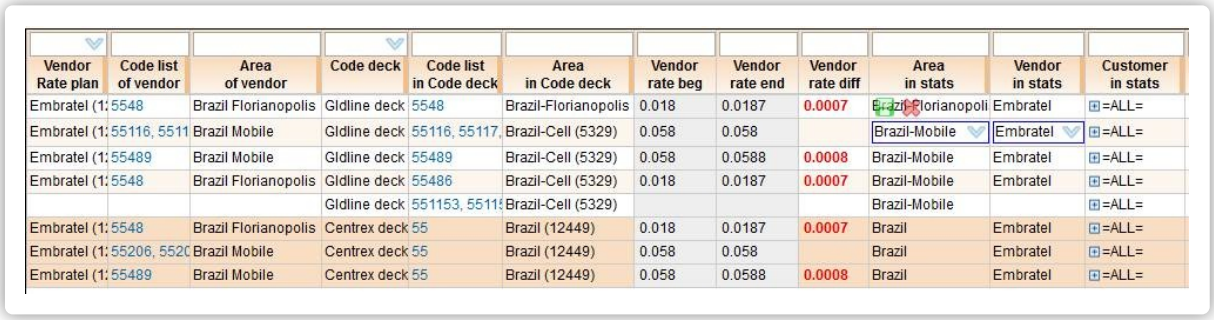
The procedure is 100% same as in the VendRate range table, however, the results are written to a separate tmp table in the DB so that you may use them multiple times later on (getting changed rates may take several minutes for all Rate plans, so we kind of cache the results to reuse them).

2. Second, we match the areas. This is done automatically if you start with stage 1, but you may also change the matching later on using cached rate changes via the **Match button**.



We need to set customer code decks here because codes can be significantly different by code decks, we can only match vendor areas to each area in each code deck separately. Usually, if you know that you have only 2 main code decks, you may just choose them ignoring all others (test decks, etc.).

The table after stage 2 will look like this:

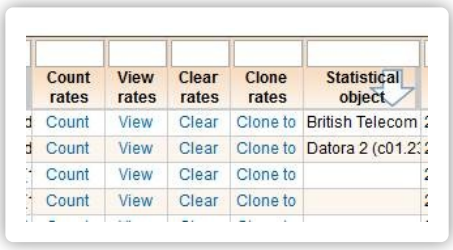


Vendor Rate plan	Code list of vendor	Area of vendor	Code deck	Code list in Code deck	Area in Code deck	Vendor rate beg	Vendor rate end	Vendor rate diff	Area in stats	Vendor in stats	Customer in stats
Embratel (1:	5548	Brazil Florianopolis	Gldline deck	5548	Brazil-Florianopolis	0.018	0.0187	0.0007	Brazil-Florianopoli	Embratel	=ALL=
Embratel (1:	55116, 5511	Brazil Mobile	Gldline deck	55116, 55117,	Brazil-Cell (5329)	0.058	0.058		Brazil-Mobile	Embratel	=ALL=
Embratel (1:	55489	Brazil Mobile	Gldline deck	55489	Brazil-Cell (5329)	0.058	0.0588	0.0008	Brazil-Mobile	Embratel	=ALL=
Embratel (1:	5548	Brazil Florianopolis	Gldline deck	55486	Brazil-Cell (5329)	0.018	0.0187	0.0007	Brazil-Mobile	Embratel	=ALL=
			Gldline deck	551153, 5511	Brazil-Cell (5329)				Brazil-Mobile		=ALL=
Embratel (1:	5548	Brazil Florianopolis	Centrex deck	55	Brazil (12449)	0.018	0.0187	0.0007	Brazil	Embratel	=ALL=
Embratel (1:	55206, 552(	Brazil Mobile	Centrex deck	55	Brazil (12449)	0.058	0.058		Brazil	Embratel	=ALL=
Embratel (1:	55489	Brazil Mobile	Centrex deck	55	Brazil (12449)	0.058	0.0588	0.0008	Brazil	Embratel	=ALL=

The matching is done separately for 2 decks. How come we have so many rows for a Gldline deck? This is due to code mismatch between vendor and customer rates. The line with no vendor area or rate plan is there to show that there are extra codes in Brazil-Cell area that are not matched with changed vendor codes.

We also have stats areas to the right matched by names to code deck areas. If names are same or very close - the matching will be perfect, if not - we try to do our best to match areas by names. If this does not work in some weird cases - you may manually choose a different area.

Another matching here is Vendor Rate plan -> Vendor in stats. This is done either by name (it should match completely), or by choosing a proper stats object in the Rate plan table per each plan.

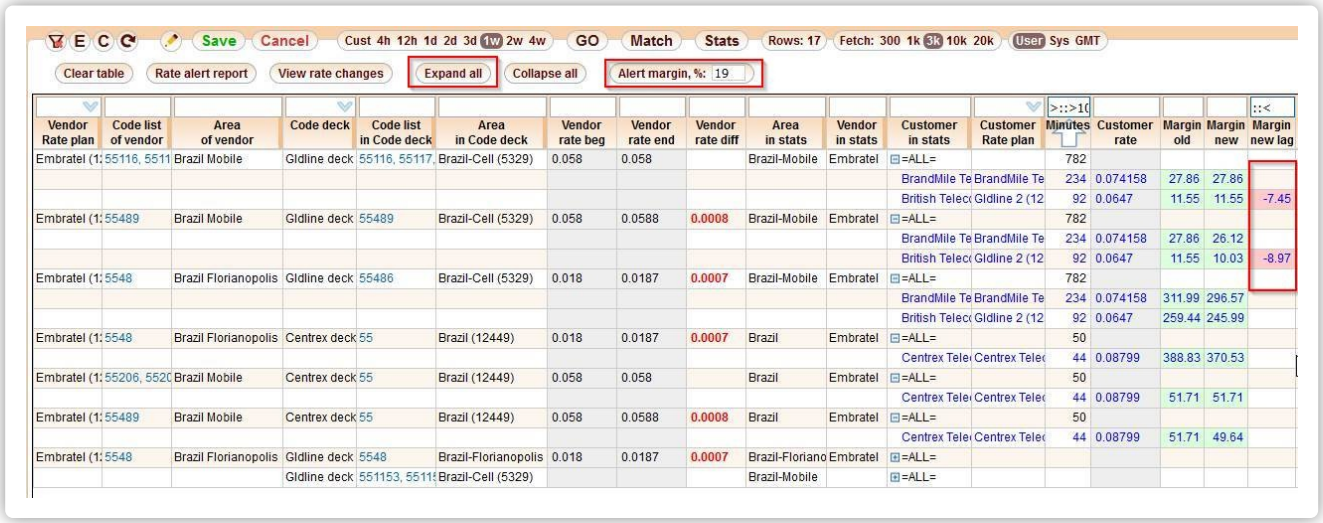


Count rates	View rates	Clear rates	Clone rates	Statistical object
Count	View	Clear	Clone to	British Telecom
Count	View	Clear	Clone to	Datora 2 (c01.23
Count	View	Clear	Clone to	
Count	View	Clear	Clone to	

3. Third, we get the stats. At first, at the Area->Vendor level.

Min. minutes allows you to cut off all the areas with no or very little traffic.

Then you may investigate each area individually, or just press the **Expand all** button to fetch all Customer->Area->Vendor stats.



You may change the **Alert margin,%** on the fly, any rates that will have a lower margin will have a red tag on the right showing how short the actual margin is from the margin you need.

Customers in stats are matched to customer Rate plans in the same way as vendors.

Note that 2 customers are under the Gldline code deck, as their Rate plans belong to this deck, and one customer is under another deck.

The easiest way to investigate large tables with lots of changes would be, probably, by filtering by **Margin alert ::<0** (filter at 2nd level), so you will only have the customers with alerts. You may also export any table as is to excel now, using the export in right-click menu, and then pressing the **Download Excel file**.

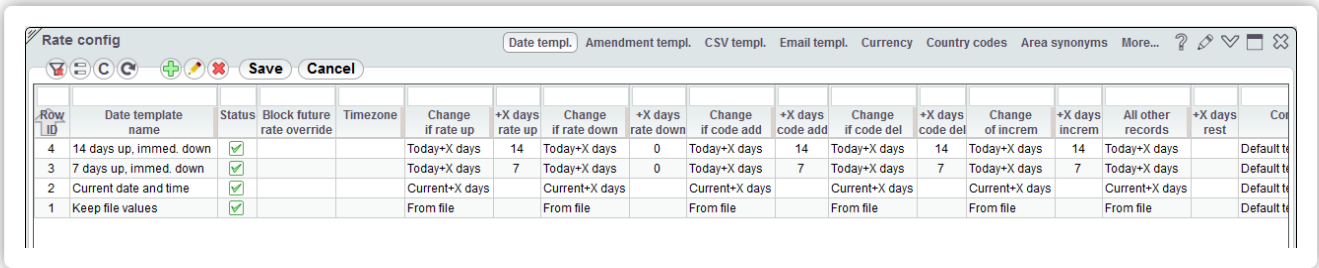
9. Rate config

9.1. Overview

THE MANUAL ON THE RATE MANAGEMENT IS CURRENTLY BEING WRITTEN AND MAY NOT BE COMPLETE OR 100% UP TO DATE YET. PLEASE EXCUSE OUR DUST.

9.2. Date template

The **Date template** allows you to set a rate **Active from** dates depending on the rate increase, decrease, etc.



Row ID	Date template name	Status	Block future rate override	Timezone	Change if rate up	+X days rate up	Change if rate down	+X days rate down	Change if code add	+X days code add	Change if code del	+X days code del	Change of increm	+X days increm	All other records	+X days rest	Co
4	14 days up, immed. down	☑			Today+X days	14	Today+X days	0	Today+X days	14	Today+X days	14	Today+X days	14	Today+X days		Default t
3	7 days up, immed. down	☑			Today+X days	7	Today+X days	0	Today+X days	7	Today+X days	7	Today+X days	7	Today+X days		Default t
2	Current date and time	☑			Current+X days		Current+X days		Current+X days		Current+X days		Current+X days		Current+X days		Default t
1	Keep file values	☑			From file		From file		From file		From file		From file		From file		Default t

Each template consists of several sets of parameters: **when** the template should be applied, **how** the date should be changed, **what variable** should the system take (if the change requires a variable).

There are the following template conditions (represented as table columns) in the system:

- **Change if rate up** - invoke date change if the rate increased.
- **Change if rate down** - invoke date change if the rate decreased.
- **Change if code add** - invoke date change if the rate was added.
- **Change if code del** - invoke date change if the rate was deleted.
- **Change of increm** - invoke date change if the billing increment was changed.
- **All other records** - date change for all other cases.

For each condition, the system may use the following date modification methods (defined as a value for the specific change condition column):

- **From file** - keep file values, replace empty cells with the current time.
- **Current+X days** - current date and time plus X days from the next column.
- **Today+X days** - beginning of today plus X days from the next column.
- **Base+X days** - manually set Base date plus X days from the next column.
- **Future+X days** - date and time of the latest rate/code in future plus X days from the next column.

When the change method requires a variable, the variable is defined in the column next to the condition column (like **+X days rate up**). This variable will substitute the X from the change method (like **Current+X days**).

Block future rate override allows you to block rate changes, if there exist rates for same code/area that will be active in future.

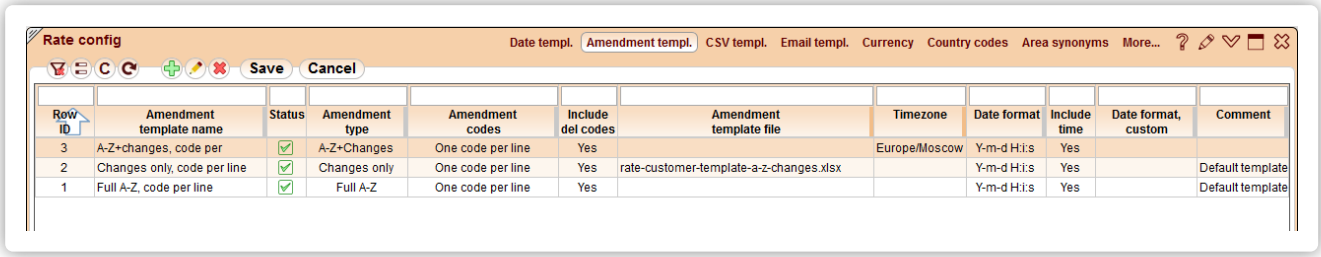
Timezone - choose a timezone from the drop-dwon list for Today (00:00:00) or Base (manually entered) times, UTC if blank.

Configured date templates can be used then:

- in the table module to setup default behaviour with dates of a Rate plan.
- in the Parsing config to be used when importing Vendor rates from a partner.
- to overwrite a RP date template in rates comparison, moving to final check and moving to the main rates table during the Rate importing process (see Import edit, Compare, Final check).
- to overwrite a RP date template in rates verification during Customer rates generation process (see Verify).

9.3. Amendment template

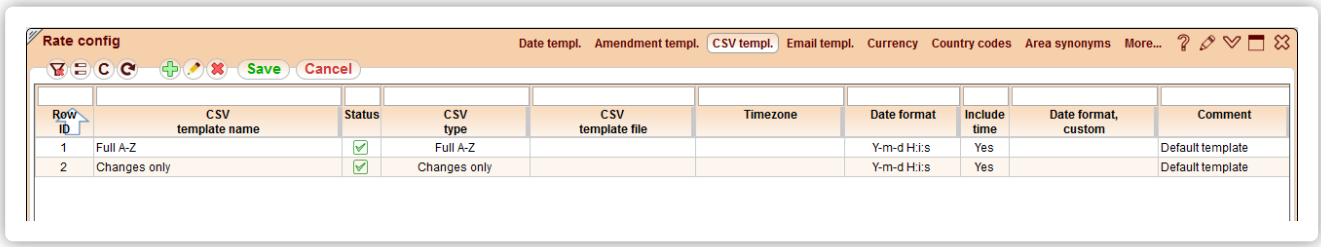
The **Amendment template** defines parameters which are used to format Customer rates amendments sent by the system.



- **Amendment template name** - enter a name of the amendment template.
- **Status** - let you easily enable/disable the record.
- **Amendment type** - choose one of the following types:
  - **Full A-Z** - generates an .xlsx file with a full rate list of a Rate plan.
  - **Changes only** - generates an .xlsx file with rate changes only.
  - **A-Z+Changes** - generates full A-Z and changes in different .xlsx sheets.
- **Amendment codes** - choose an option how to distribute codes in amendment .xlsx files:
  - **One code per line** - generates an .xlsx file with a full rate list of a Rate plan.
  - **All area codes per line** - generates an .xlsx file with with rate changes only.
  - **Code deck sheet** - generates full A-Z and changes in different .xlsx sheets.
- **Include del codes** - choose **Yes** to include deleted codes into amendments.
- **Amendment template file** - .xlsx file name to as a template for amendments (with .xlsx extension). If empty - the default file is used.
- **Timezone** - timezone to convert times to from the internal **Active from** GMT times, UTC if blank.
- **Date format** - choose a date format for .xlsx amendments from the drop-down menu.
- **Include time** - choose **Yes** to include time to the dates in amendments.
- **Date format, custom** - custom date format for .xlsx amendments, for example: **Y.m.d H.i.s**.
- **Comment** - enter a comment.

9.4. CSV template

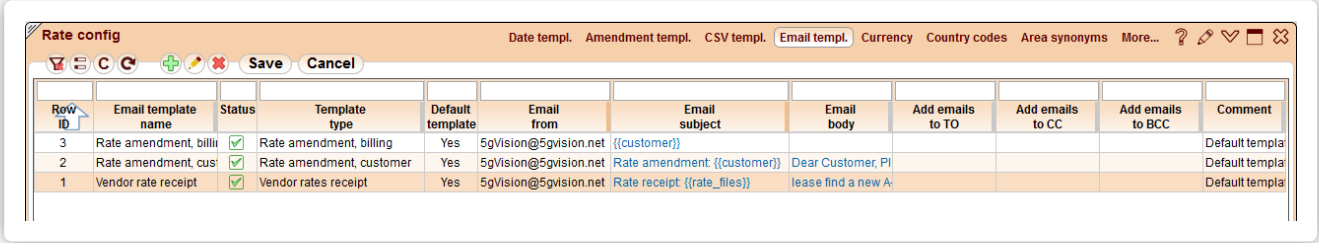
In the **CSV template** you can set the format of .csv files generated by the system.



- **CSV template name** - enter a name of the CSV template.
- **Status** - let you easily enable/disable the record.
- **CSV type** - choose one of the following types:
  - **Full A-Z** - generates a .csv file with a full rate list of a Rate plan.
  - **Changes only** - generates a .csv file with rate changes only.
- **Amendment template file** - .csv file name to as a template for CSV amendments (with .csv extension). If empty - the default file is used.
- **Timezone** - timezone to convert times to from the internal **Active from** GMT times, UTC if blank.
- **Date format** - choose a date format for CSV amendments from the drop-down menu.
- **Include time** - choose **Yes** to include time to the dates in amendments.
- **Date format, custom** - custom date format for CSV amendments, for example: **Y.m.d H.i.s**.
- **Comment** - enter a comment.

9.5. Email template

The **Email template** allows you to set the format and recipients of various emails sent by the system.



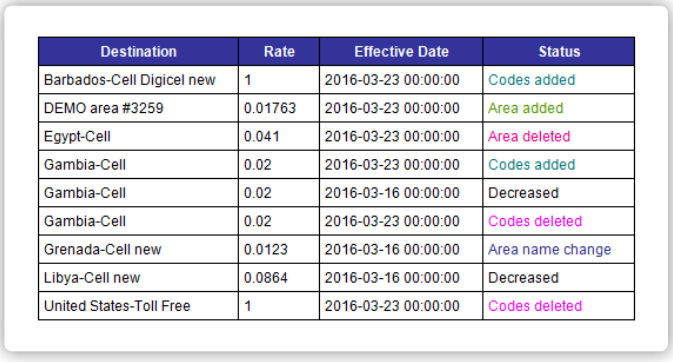
- **Email template name** - enter a name of the email template.
- **Status** - let you easily enable/disable the record.
- **Template type** - choose one of the following types:
  - **Vendor rates receipt** - template for emails sent to Vendors as a confirmation of a rates receipt.
  - **Vendor rates, billing** - template for emails sent to an external billing system to load Vendor rates (.csv file).
  - **Rate amendments, customer** - template for emails with amendments sent to Customers (.xlsx file).
  - **Rate amendments, billing** - template for emails sent to an external billing system to load Customer rates (.csv file).
- **Default template** - if set to Default, this template will be chosen if no template is set in the corresponding configs.
- **Email from** - optional, if not set - the default email_from from the mail server system config is used.
- **Email subject** - enter an email subject. Besides plain text, keywords can be used, which the system will replace with corresponding values.
- **Email body** - enter an email body. Besides plain text, keywords can be used, which the system will replace with corresponding values.
- **Add emails to TO** - comma-separated email recipients that will always be added to **TO** field of an email.
- **Add emails to CC** - comma-separated email recipients that will always be added to **CC** field of an email.
- **Add emails to BCC** - comma-separated email recipients that will always be added to **BCC** field of an email.
- **Comment** - enter a comment.

Depends on the chosen template type you can use different keywords in the **Email subject** and **Email body** fields.

If the template type is **Rate amendments, customer** or **Rate amendments, billing** the following keywords are available in the **Email subject** and **Email body** (all keywords are in double curly brackets):

- **customer** - Customer name.
- **rate_plan** - Rate plan name.
- **amend_type** - amendment type. The values can be **Full A-Z rate sheet**, **Partial rate sheet with changes only** or **Full A-Z and partial rate sheet with changes only**.
- **DATE+N** - date as **Current time + N days** (format Y-m-d H:i:s).
- **DATE0+N** - date as **Current day till midnight + N days** (format Y-m-d 00:00:00).

For **Rate amendments, customer** you can also use **changes_table** in the **Email body** - the system will insert a table with rate changes right in the email body.



Destination	Rate	Effective Date	Status
Barbados-Cell Digicel new	1	2016-03-23 00:00:00	Codes added
DEMO area #3259	0.01763	2016-03-23 00:00:00	Area added
Egypt-Cell	0.041	2016-03-23 00:00:00	Area deleted
Gambia-Cell	0.02	2016-03-23 00:00:00	Codes added
Gambia-Cell	0.02	2016-03-16 00:00:00	Decreased
Gambia-Cell	0.02	2016-03-23 00:00:00	Codes deleted
Grenada-Cell new	0.0123	2016-03-16 00:00:00	Area name change
Libya-Cell new	0.0864	2016-03-16 00:00:00	Decreased
United States-Toll Free	1	2016-03-23 00:00:00	Codes deleted

If the template type is **Vendor rates receipt** you can use the keyword **rate_files** in the **Email subject** - a name of the file containing processed rates. In the **Email body** the following keywords are available:

- **rate_files** - a name of the processed rates file.
- **email_from** - contents of the **From** field of the email with rates received from a Vendor.
- **email_subject** - contents of the **Subject** field of the email with rates received from a Vendor.

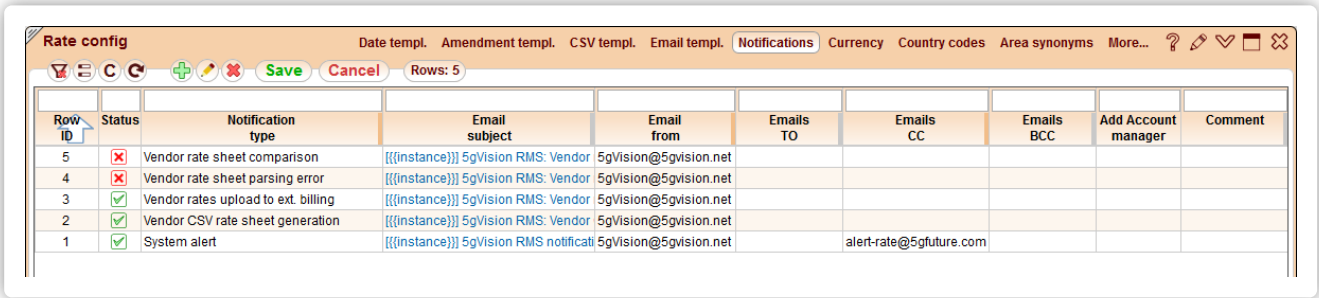
- **rate_processing_date** - date/time when the rates file was processed (format Y-m-d H:i:s).

In case of **Vendor rates, billing** you may use the following keywords:

- **vendor** - Vendor name.
- **rate_plan** - Rate plan name.
- **DATE+N** - date as **Current time + N days** (format Y-m-d H:i:s).
- **DATE0+N** - date as **Current day till midnight + N days** (format Y-m-d 00:00:00).

9.6. Notification template

The system sends email notifications if some events take place during the rate management process. They are configured in the **Notification template** table



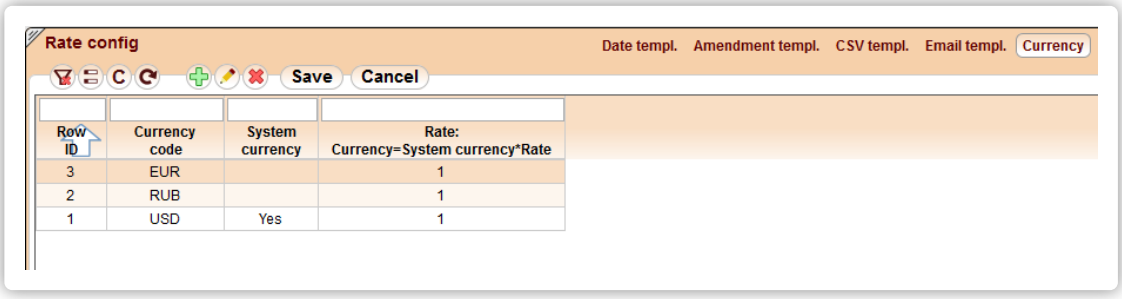
Notification types can be the following:

- **System alert** - notifications for system admin, mostly messages about errors of executed rate management tasks.
- **Vendor CSV rate sheet generation** - notifications about successful CSV file generation with Vendor rates. It's sent only in case of creating a CSV file without uploading to an external billing.
- **Vendor rates upload to ext. billing** - notifications about successful uploading of Vendor rates to an external billing.
- **Customer CSV rate sheet generation** - notifications about successful CSV file generation with Customer rates. It's sent only in case of creating a CSV file without uploading to an external billing.
- **Customer rates upload to ext. billing** - notifications about successful uploading of Customer rates to an external billing.
- **Vendor rate sheet parsing error** - notifications with errors during automatic parsing of Vendor rates emails.
- **Vendor rate sheet comparison** - notifications with results of comparison of a Vendor rate sheet to rates in the Main rates table.

The **Add Account manager** field allows you to send notifications to an account manager email using TO, CC or BCC fields. It is applicable for all notifications types except **System alert**. For that you should add an email for a user in Config-Users which is configured as an account manager for a Customer/Vendor in the Carriers table. The Customer/Vendor should have a record in the config connected with a chosen notification type: Customer RP setup, Vendor RP setup, Parsing config.

9.7. Currency

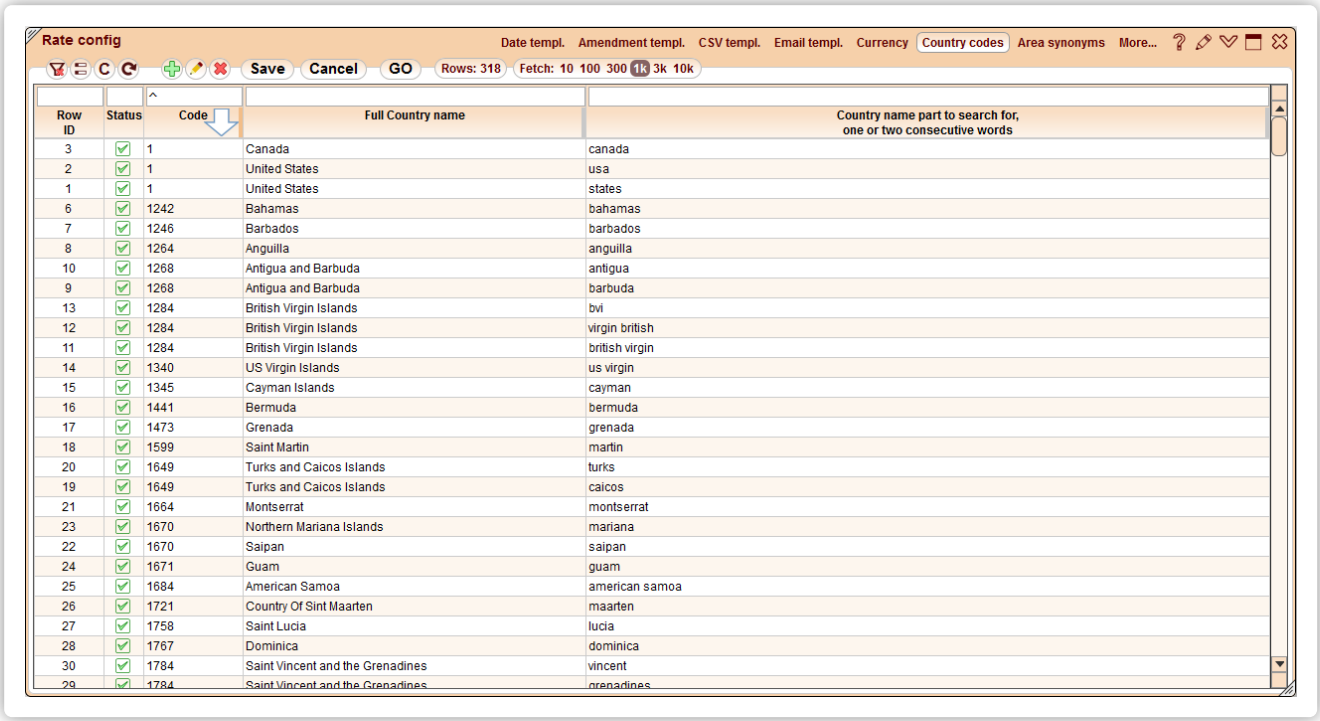
In the **Currency** table you can set the currency exchange rates.



In order to add a new currency just choose a currency code from the drop-down menu and enter a rate for this currency relative to the system currency.

9.8. Country codes

The **Country codes** table defines the associations between country codes and country names.



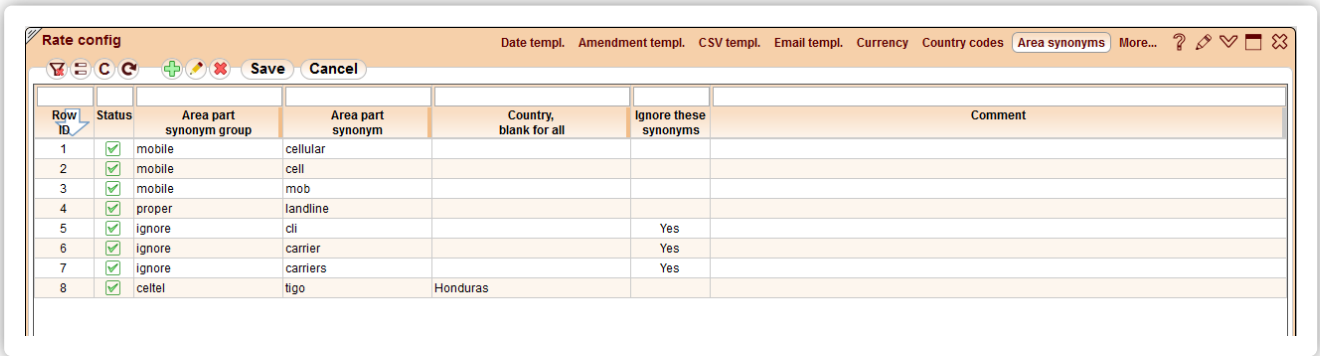
Row ID	Status	Code	Full Country name	Country name part to search for, one or two consecutive words
3	☑	1	Canada	canada
2	☑	1	United States	usa
1	☑	1	United States	states
6	☑	1242	Bahamas	bahamas
7	☑	1246	Barbados	barbados
8	☑	1264	Anguilla	anguilla
10	☑	1268	Antigua and Barbuda	antigua
9	☑	1268	Antigua and Barbuda	barbuda
13	☑	1284	British Virgin Islands	bvi
12	☑	1284	British Virgin Islands	virgin british
11	☑	1284	British Virgin Islands	british virgin
14	☑	1340	US Virgin Islands	us virgin
15	☑	1345	Cayman Islands	cayman
16	☑	1441	Bermuda	bermuda
17	☑	1473	Grenada	grenada
18	☑	1599	Saint Martin	martin
20	☑	1649	Turks and Caicos Islands	turks
19	☑	1649	Turks and Caicos Islands	caicos
21	☑	1664	Montserrat	montserrat
23	☑	1670	Northern Mariana Islands	mariana
22	☑	1670	Saipan	saipan
24	☑	1671	Guam	guam
25	☑	1684	American Samoa	american samoa
26	☑	1721	Country Of Sint Maarten	maarten
27	☑	1758	Saint Lucia	lucia
28	☑	1767	Dominica	dominica
30	☑	1784	Saint Vincent and the Grenadines	vincent
29	☑	1784	Saint Vincent and the Grenadines	grenadines

To add a new association, click the green plus in the toolbar. A new row will be added, where you can specify the following parameters:

- **Code** - the country phone number prefix.
- **Full Country Name** - the full official name of the country.
- **Country name to search for, one or two consecutive names** - the name of the country to search for in processed rate files during the auto import. Once this name is found, the System will try to match it to the corresponding prefix using this table. The searched words must be unique across the table. If the first word of country name is shared among different countries (like "western"), the parameter should contain two words for the match to be unambiguous (e.g. "western sahara" and "western samoa"). If no match was found or the prefix of the country found in the table does not coincide with the prefix in the rate file, 5gVision will signal an error (see Match columns). The System ignores the prefix and country name if this parameter contains the **DONT_TRY_TO_MATCH** value.

9.9. Area synonyms

Here you can define Area parts that mean the same. These settings will be used during auto area matching for Push/target reports.



Row ID	Status	Area part synonym group	Area part synonym	Country, blank for all	Ignore these synonyms	Comment
1	☑	mobile	cellular			
2	☑	mobile	cell			
3	☑	mobile	mob			
4	☑	proper	landline			
5	☑	ignore	cli		Yes	
6	☑	ignore	carrier		Yes	
7	☑	ignore	carriers		Yes	
8	☑	celtel	tigo	Honduras		

The system replaces found hits with configured synonyms or just ignores them if the **Ignore these synonyms** flag is activated. You can also setup a certain country for which to apply the rule.