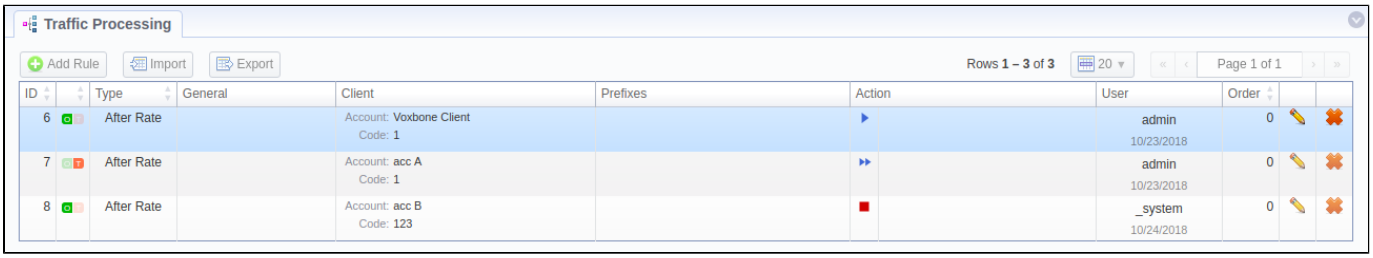
Traffic Processing

In this article

Section overview

This section allows a user to configure and perform number translations. Here, you can add and remove rules for traffic processing. The section is presented in the form of a table of traffic processing rules with the following columns:

Screenshot: *Traffic Processing section*



Column Name	Description
ID	Rules identification number
Type	Type of a rule
General	Depending on rule parameters, a table can display the following scope of details: • Name of **service**, the rule is created for • **Gateway**, specified in a rule • **Tag(s)**, indicated in a rule
Client	Depending on rule parameters, a table can display the following scope of details: • **Client's name**, specified in a rule • **Client's account**, defined in a rule • Indicated **Code**
Prefixes	Depending on rule parameters, a table can display the following scope of details: • **POSIX regular expression** for Src number (Src Match) • **POSIX regular expression** for Dst number (Dst Match) • Src **Prefixes** (Src P Any/Src P Not) • Src **Prefixes Names** (Src PN Any/Src PN Not) • Dst **Prefixes** (Dst P Any/Dst P Not) • Dst **Prefixes Names** (Dst PN Any/Dst PN Not)
Action	Depending on rule parameters, a table can display the following scope of details: • **Replacement** for a matched rule for **Src number** (Src) • **Replacement** for a matched rule for **Dst number** (Dst) • **List of tags** added during traffic processing rule execution
User	User name and time, when a rule was created/edited
Order	Specified order for rule execution

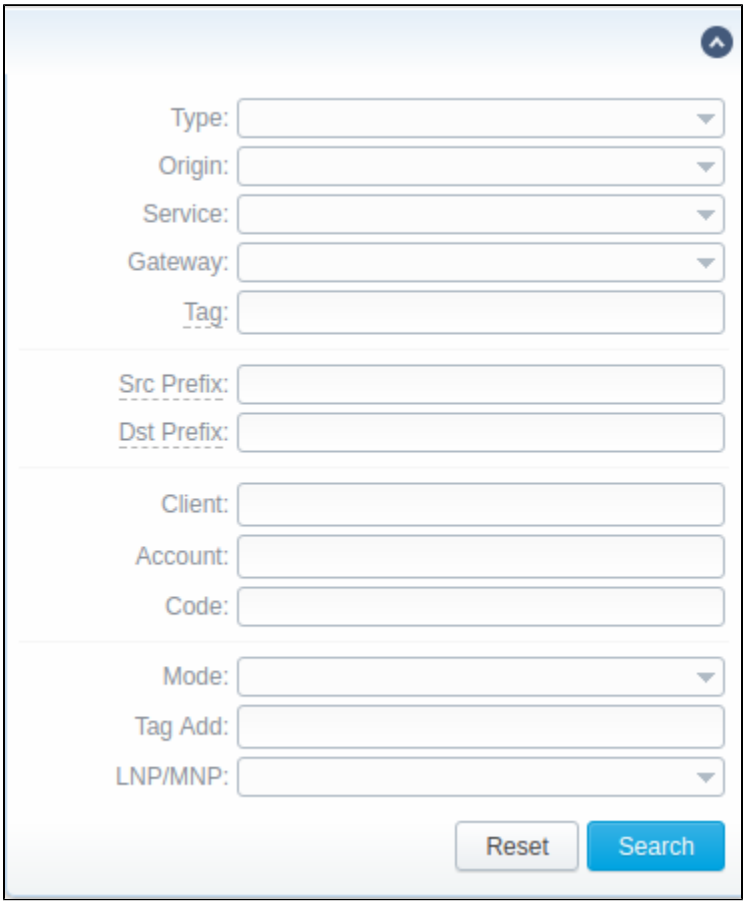
Functional **buttons/icons**, presented in the section, are as follows:

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

Advanced Search

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

Screenshot: Advanced Search drop-down menu

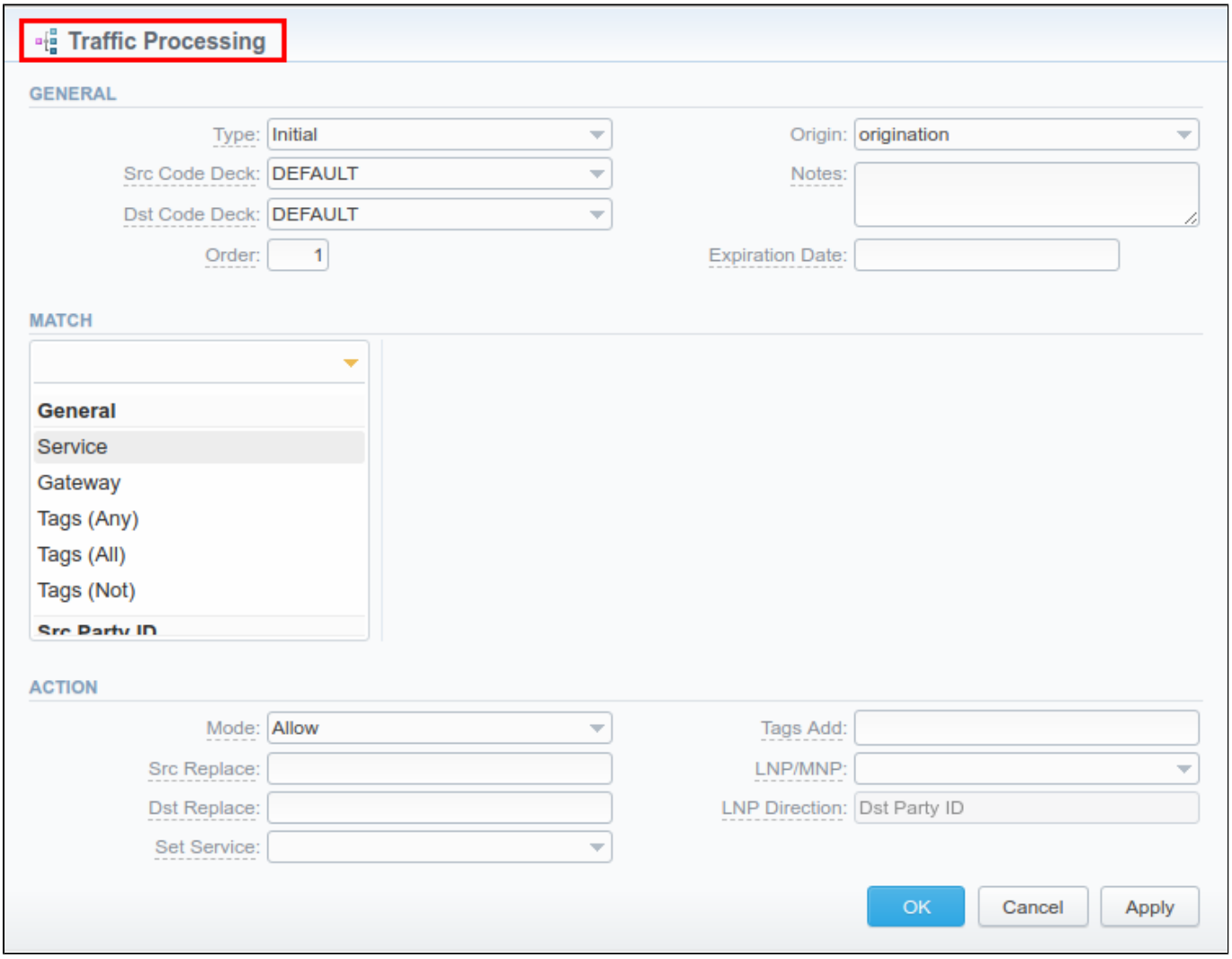


To apply the specified search criteria, click **Search**; to cancel the applied parameters, click **Reset**.

Creating a New Traffic Processing Rule

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

Screenshot: New Traffic Processing rule



Information block	Field	Description
General	***Type***	Specifies, **at what stage** a current translation rule will be applied: • ***Initial*** - execute this rule before a Client is identified • ***After Client*** - execute this rule after client identification but before rate identification • ***After Rate*** - execute this rule after rate identification but before routing • ***After Routing*** - execute this rule after routing
	Src Code Deck	Identify a code deck that will be used for **Src** codes or code names filtering
	Dst Code Deck	Identify a code deck that will be used for **Dst** codes or code names filtering

	Order	Sets rules ordering that works within the same rule **Type**. **Attention** Note that this field indicates the order of rules execution only within a specified type. It means that a rule with the ***Initial*** ty pe and order ***1*** will be executed before any other rule of the same type with order ***2.*** However, such rule will be executed prior to a rule with the ***After Rate*** type and order ***0***, even though the latter has a higher order, due to the fact that ***Initial*** is the **1st** on the types list.
	Origin	Specify the event origin: • ***Origination*** • ***Termination***
	Notes	Specify additional informational about a rule
	Expiration Date	Define a date when this rule will expire and will be removed from the system
Match	On the **Match** menu, select the required parameters for a traffic processing rule. To cancel any filter, click on the delete sign next to its name. You can start a **quick search** by typing filters' names in the field at the top of the **Match** menu. **Tip** If, for instance, the ***Client*** filter is empty, it means that this rule will implicate all clients.	
	General	
	Service	Select a target from the drop-down list of all services, presented in the Services section of your JeraSoft Billing
	Gateway	Select a respective VoIP gateway, for which rule is applied, from the drop-down list
	Tags (Any)	A rule will work if an event has at least one of the tags, specified in this field
	Tags (All)	A rule will work if an event has all tags, specified in this field
	Tags (Not)	A rule will work if an event has no tags, specified in this field
	Scr Party ID	
	Src (Match)	In this field, you may indicate POSIX regular expressions syntax, by which a number will be analyzed. If an expression matches the number, the translation will occur in respective settings in the ***SRC Replace*** field.
	Src Prefixes (Any)	A rule will work if an event has at least one of the Src prefixes (e.g., ***010, 810***), specified in this field
	Src Prefixes (Not)	A rule will work if an event has no Src prefixes (e.g., ***010, 810***), specified in this field
	Src Prefixes Names (Any)	A rule will work if an event has at least one of the Src prefixes names (e.g., ***vodafone***), specified in this field

	Src Prefixes Names (Not)	A rule will work if an event has no Src prefixes names (e.g., ***vodafone***), specified in this field
	Dst Party ID	
	Dst (Match)	In this field, you may indicate POSIX regular expressions syntax (***see best practice example below***), by which a number will be analyzed. If an expression matches the number, the translation will occur in respective settings in the ***Dst Replace*** field.
	Dst Prefixes (Any)	A rule will work if an event has at least one of the Dst prefixes (e.g., ***010, 810***), specified in this field
	Dst Prefixes (Not)	A rule will work if an event has no Dst prefixes (e.g., ***010, 810***), specified in this field
	Dst Prefixes Names (Any)	A rule will work if an event has at least one of the Dst prefixes names (e.g., ***vodafone***), specified in this field
	Dst Prefixes Names (Not)	A rule will work if an event has no Dst prefixes names (e.g., ***vodafone***), specified in this field
	Client	
	Client	Specify a respective client ⚠ **Attention** Please be advised that any traffic processing rule can have either the ***Client*** or ***Account*** field.
	Account	Specify a respective account
	Code	Specify a destination code (use * as a wildcard)
Action	***Mode***	Defines an action that will be executed if a traffic rule matches: • ***Allow*** - allow a current event to proceed. Stop further traffic processing rules within this type of rule; • ***Allow and Continue*** - allow a current event to proceed. Search for the next traffic rule; • ***Deny*** - deny a current event.
	Src Replace	Replacement for a matched rule. For this field to work, the ***Scr Match*** filter must be used in the **Match** information block.
	Dst Replace	Replacement for a matched rule. For this field to work, the ***Dst Match*** filter must be used in the **Match** information block.
	Set Service	Allows to change a specified service to another one while processing them
	Tags Add	Here you can add tags that will be added for events matching this rule

	LNP /MNP	Define a provider for the LNP/MNP service, which will be dipped for translation **Attention** In the VCS 3.17.0, a new feature regarding TJA database has been added. Starting from this version, while creating a new rule, in the ***LNP/MNP*** field, a user can select either ***tja.ee (Routing Number)*** or ***tja.ee (Owner)***. The difference is as follows: • ***tja.ee (Routing Number)*** - if a traffic processing rule executes, ***372+Original Number*** will be substituted by ***372+Routing Number***, specified in the TJA database. • ***tja.ee (Owner)*** - if a traffic processing rule executes, ***372+Original number*** will remain unchanged. Instead, a **Dynamic Tag** indicating an **owner** of the number will be added to the call. Please find more about TJA database here.
	LNP Direction	Define, which **Party ID(s) (Src, Dst, or both)** will be used for LNP dipping. To enable this feature, you need to specify the ***LNP/MNP*** field.

Best Practice Example

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

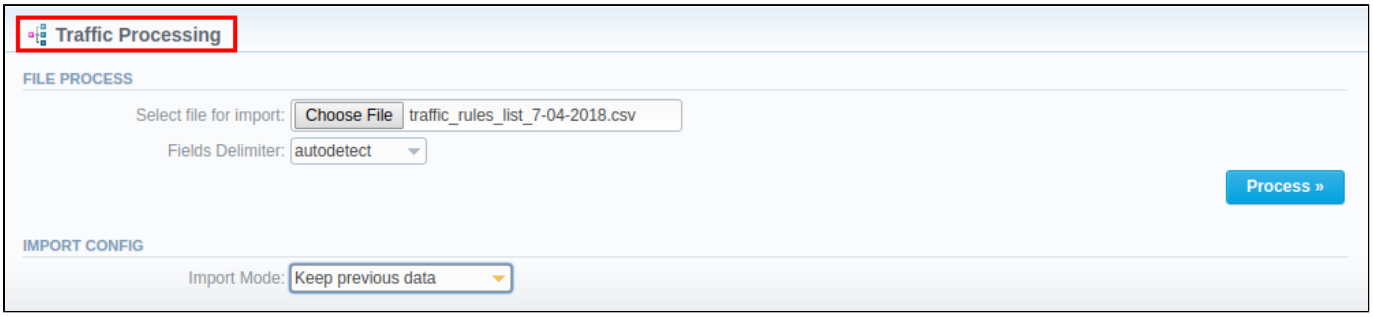
If our Src/Dst number is ***123#456***, the ***Src/Dst Match*** field is ***^123#(.*)$*** and the ***Src/Dst Replace*** field is ***789\1***, the resulting number will be ***789456***. That's because the ***^123#(.*)$*** expression tells the system that from ***123#456*** number it must remember only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

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

Rules Import

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

Screenshot: Traffic processing rule import



Information block	Field	Description
File Process	***Select a file for import***	Select a .csv file to import a traffic processing rule from
	Fields Delimiter	Specify a delimiter symbol here. The possible options are: • ***Autodetect*** • ***,*** • ***;*** • ***Tab*** By default, the **Autodetect** option is selected.

Import Config	***Import Mode***	Specify what to do with the current traffic processing rules: • ***Keep previous data*** - new rules will be added to the old ones • ***Purge all other rules*** - old rules will be deleted and substituted by the new ones. By default, the **Purge all other rules** option is selected.

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

Rules Export

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

Screenshot: Rules export