2024

COMMON INTERFACE CHANGE REQUEST 2020-04-10 (1)

Originator: RNE + CET4Biz (PCS TIL provider)

CI to CI communication

This CR is made for simplification of Route Configuration with Heartbeat check from CI to CI.

This is an extract from the current documentation used internally at RNE for setup of RNE PCS CI connection. We use the screenshots from the current system in order to explain where exactly the changes should be applied.

The Change Request proposes the implementation of the wizard to simplify the "step-by-step" procedure from Remote LI, via Heartbeat to Outbound Routing configuration. It can serve as an idea for all other configuration most frequently applied use cases in CI. The benefit: it would dramatically speed up the process of the configuration, especially for the newcomers. It also would provide a guidance for the user, which will reduce the configuration errors which in the most cases cause major delays in CI-2-CI communication establishing.

For each step we added "**Change Request**" on how should the User Interface act.

1 General

1.1 Introduction

In general, CI-2-CI connection with route configuration is done in 3 steps:

1. Heartbeat (bidirectional communication)

2. RNE CI sends message to the respective agency CI

3. RNE CI receives message (from the respective agency CI)

Please note that the screenshots below is taken from Banverket (Trafikverket, SE) connection to RNE PCS CI case.

2 Establishing Heartbeat – the first part of the wizard

The first step for confirming that the communication in both directions is functioning, is to establish the Heartbeat. This requires following steps:

1. define outbound remote LI for the respective agency

2. define inbound remote LI for the respective agency (NOTE: if we're configuring communication with IM agency, we need to define one remote LI for each RU partner)

3. reload cache

4. check heartbeat connection

Note: In order for this step, and generally the whole setup to work, a network connection has to be possible therefore, we recommend a network check on all sides involved (firewall,...)

Change Request: the steps 1, 2 and 3 should be done in wizard mode in the GUI. The GUI should offer "Routing Configuration with new Remote LI in Wizard mode". If the user choses this option, the wizard mode is entered.

2.1 Outbound Remote LI

Path: Administration -> Remote LI Config -> Edit

Change Request (Wizard step W1): this should be the first step of the wizard.

Configuration

```
Message Direction: Out-bound

CRD: ››unchecked‹‹

Remote LI Name: ››Company Name‹‹_OUT

Hostname / IP Address: ››Your_IP_Address‹‹

Heartbeat Service URL: ››empty‹‹

Instance No: 01

Select Protocol: Https

No of Attempts: 1

Status: Active

Receiver Company: ››Company ID‹‹

Alternate Host: ››leave empty‹‹

Secure LI Name: taftest1.railneteurope.info

Communication Mode: Web Service

Port: 443

Time Interval: 15
```

Example
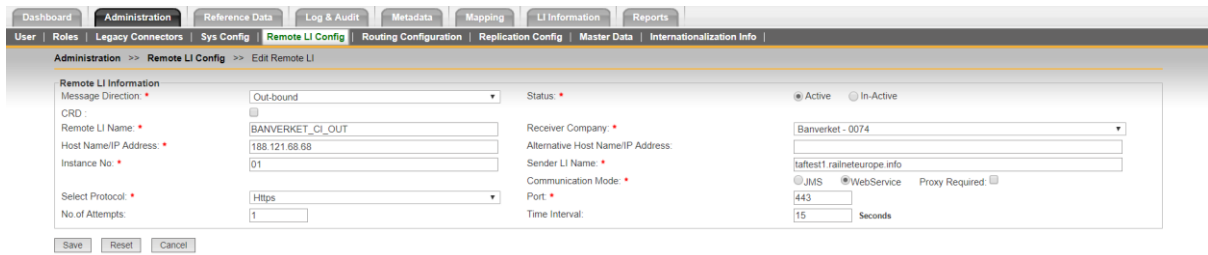
Change Request: the wizard should automatically highlight the button "**next: setup inbound remote LI**" in the lower right corner for the next step, additionally to the buttons provided now (Save, Reset, Cancel).

"Save" action and "next:…" action should reload the cache in background to avoid the manual action which is currently needed.

2.2 Inbound Remote LI

Important: If we are configuring communication with IM agency, we need to define one remote LI for each RU partner.

Path: Administration -> Remote LI Config -> Edit

Change Request (Wizard step W2): after the "**next**:.." button was clicked in previous step **W1**, the GUI should automatically fill the form on the page with the inverse settings of Sender and Receiver as well as corresponding host names and IP addresses.

Configuration

```
Message Direction: In-bound


Remote LI Name: ››Sender Company‹‹_››Receiver Company Initials‹‹_IN


Host Name/IP Address: ››Sender IP Address‹‹


Instance No: 02


Sender Company: ››Sender Company ID‹‹


Select Protocol: Https


Status: Active


Receiver Company: ››Receiver Company ID‹‹
```
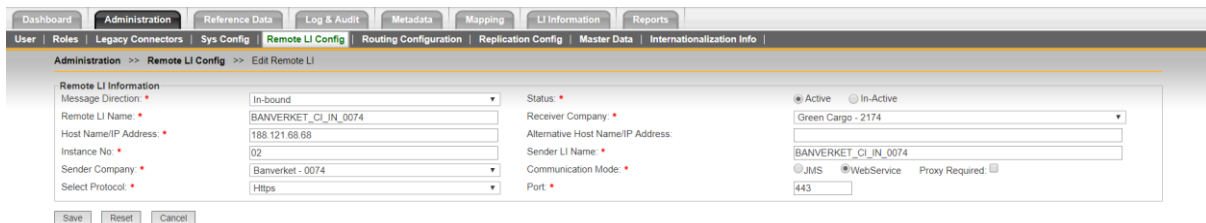
```
Alternative Host Name: ››leave empty‹‹


Sender LI Name: ››Sender Company‹‹_››Receiver Company Initials‹‹_IN


Communication Mode: Web Services


Port: 443
```

Example

Change Request: additionally to the buttons given now (Save, Reset, Cancel), the buttons "**next: heartbeat check**" and "**back**" (to the "outbound" configuration) should be highlighted in the lower right corner. The actions **Save** or **next** should automatically reload cache.

2.3 Reload Cache

Cache reload is needed to be sure that the new settings are being used by the system.

Path: LI Information -> Cache Info -> click on the the icon for All Reload

Change Request: this step should become obsolete in this wizard mode. The cache should be reloaded on each Save/Next action in the wizard mode. The Reload Cache GUI function should remain as a stand alone GUI function, but should not be the part of the wizard mode.

Nice to have: on the lower part of the form, there should be the cache status written in the small letters like: "the last cache reload <timestamp>". With that information, the user can easier decide if the manual cache reload is required.
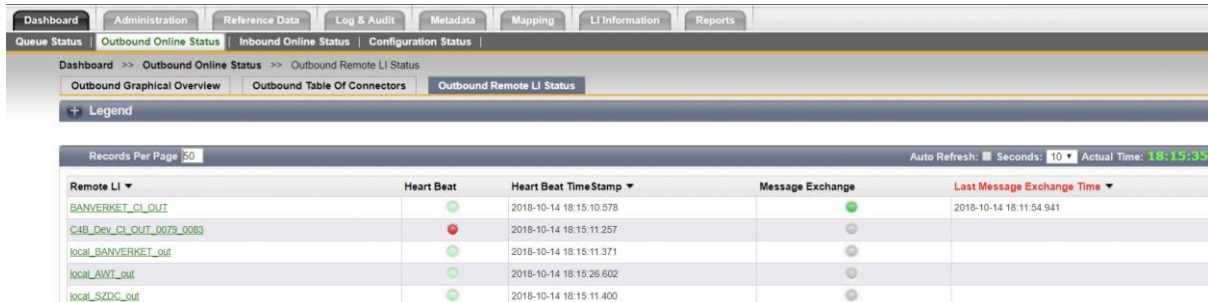

2.4 Check Heartbeat connection

Path: Dashboard -> Outbound Online Status -> Outbound Remote LI Status

WARNING (not the part of the change request – just a recommendation for improvement): sometimes RNE CI doesn't send any heartbeat messages. The only workaround we've found so far is to restart JBoss.

Change Request (Wizard step W3): The heartbeat status for THIS connection should be shown, not all the heartbeats as currently. The heartbeat check GUI as today which shows all the heartbeats, may, of course, remain, but in wizard mode, where the dedicated communication is done, it is obsolete to show all the heartbeats.

Example (current system)

Change Request: The button at the lower right corner should be shown "**next: Routing Config-uration**", "**back**" (to the "inbound" configuration). The next step in wizard mode should be the configuration of Legacy Connector for Outbound Routing.

3 Routing Configuration with Legacy Connectors – the second part of the wizard

Change Request (Wizard step W4): The legacy connector menu containing the list of legacy connector types (ws connector, file system connector etc.) should appear. This is the preparation step for outbound routing configuration.

3.1 Outbound Legacy Connector

Choose the legacy connector which YOUR legacy system uses to send the messages via CI to the partners.

(Example from PCS TIL) Path: Administration -> Legacy Connectors -> FS Connectors -> Add FS Connector

Change Request: the data (Sender ID, Receiver ID) from the wizard step **W1** "Outbound Remote LI" should be automatically filled in the form. UTF-8 should be default setting.

Configuration

```
FS Instance Name: FS_OUT_››RU_Code‹‹_››IM_Code‹‹_››Message_Type‹‹

Directory: /root/usr/local/CommonComponents/FS/messages/out/››message‹‹/››com-
pany_code‹‹

Status: In-Active

Company: ››IM Company ID‹‹

File extension: xml

Message Direction: Out-bound
```

```
Character Encoding: UTF-8

Sender ID: ››RU Company ID‹‹

Message Format: Common-XML-2_2_4

Receiver ID: ››IM Company ID‹‹

Associated Message: ››Message Type‹‹ - 2.2.4

Error Delete: True

Post Delete: True

Work suffix: empty
```
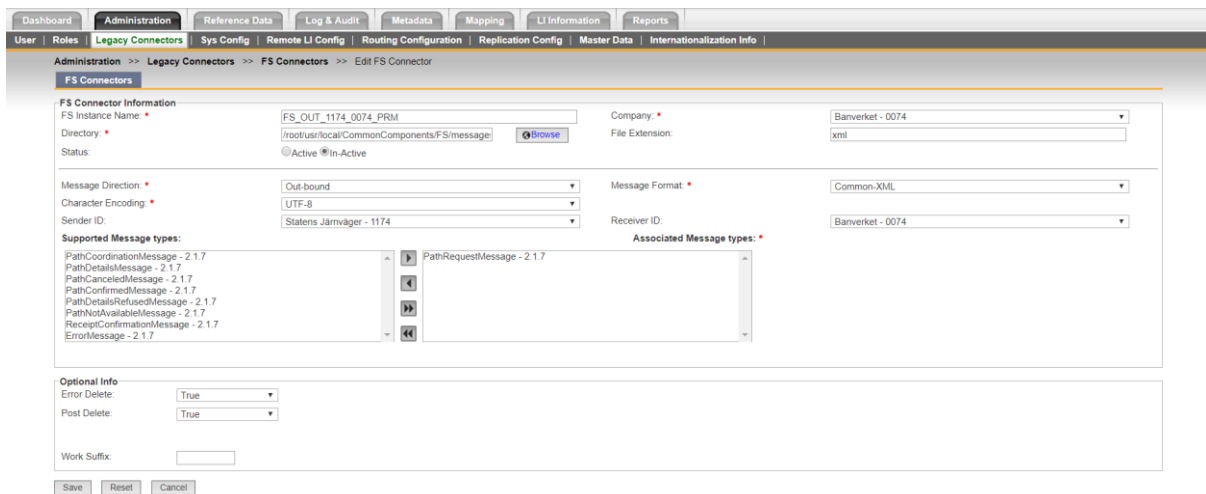
Example

Change Request: additionally to the buttons Save, Reset, Cancel, the additional buttons "**next: outbound routing configuration**" and "**back**" should be added

3.3 Routing Configuration

The next step is to change the routing configuration for the respective message.

Change Request (Wizard step W5): This is an ideal case for wizard. The routing configuration form should be shown. The data from the previous steps should be automatically filled in the form: Receiver company, Message type, Remote LI.

Path: Administration -> Routing Configuration -> Message Routing -> Edit Out-Bound Message Routing

Configuration

```
Routing Name: MR_››Message Type‹‹_Out_››Sender Company Code‹‹_››Receiver Company
Code‹‹

Receiver Company: ››Company ID‹‹

Sign: unchecked

Status: Active

Encrypt: unchecked

Message Type: ››Message Type‹‹ - 2.2.4

Remote LI: ››Receiver Company‹‹_CI_OUT-01

Compress: unchecked

Auto Resend Request: unchecked
```

Example
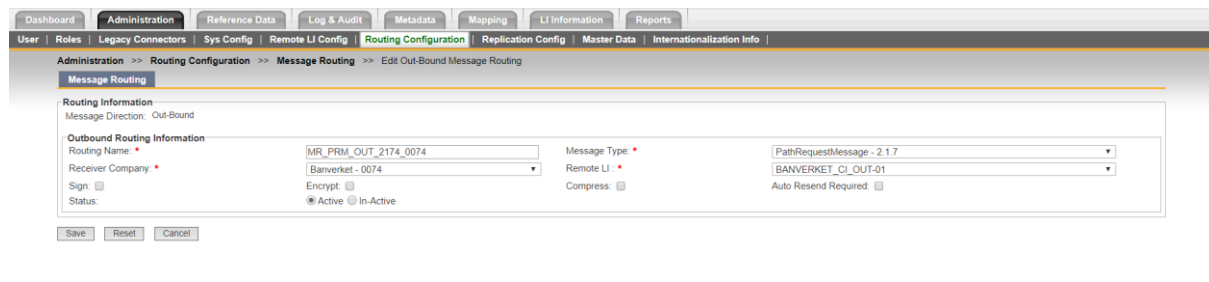
Change Request: Additionally to the buttons Save, Reset and Cancel, the buttons "**check configuration status**" and "**back**" should be shown.

3.4 Configuration Status

The last step in this setup is to check the outbound configuration status, in order to make sure that the right configuration is being used.

Note: Currently, the Filter can be used to find the configuration that is needed. In the wizard mode, the use of filter in this step should become obsolete. The filter possibility, may, of course, remain, but, if the wizard runs well, it should be used only in the rare cases during the wizard mode.

Path: Dashboard -> Configuration Status -> Outbound Configuration

Change Request (Wizard step W6 – the last step): The status of the outbound configuration should be automatically shown, according to the data from the previous steps from the wizard. There should be no need to search / filter, the data should already be pre-checked.

Example
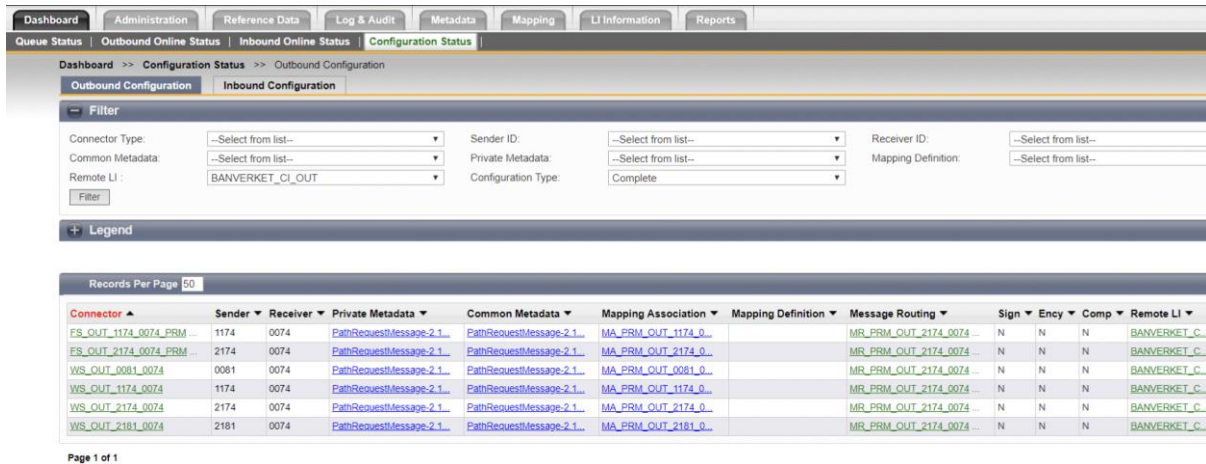
Change Request: The button in the lower right corner should be "**back**" and "**exit wizard mode**"

4 Activities After the Initial Configuration

Change Request: when the user wants to add new messages in one routing configuration with one partner for which the configuration is already existing, the routing and mapping configuration for messages shall run as follows: the user shall be able to select the messages in the appropriate schema from the list he would like to use in the communication with the partner. The system shall automatically prepare the routing and the mapping for all selected messages, because the information is given (as seen above in the wizard). Currently, for any new message configuration, all the steps have to be made to add a message, however, it can be dramatically simplified, as proposed.

Change Request: The user should be able to select the partner (like in our example Banverket/Traafikverket), and then, in one GUI step see all the configuration and connection statuses related to that partner:

- heartbeat sign

- routings

- message list

- message exchange status list

This would save users' time to browse through 5 different functions, apply the same filters every time and browse through the long result lists.