

LLRP Commander User Guide

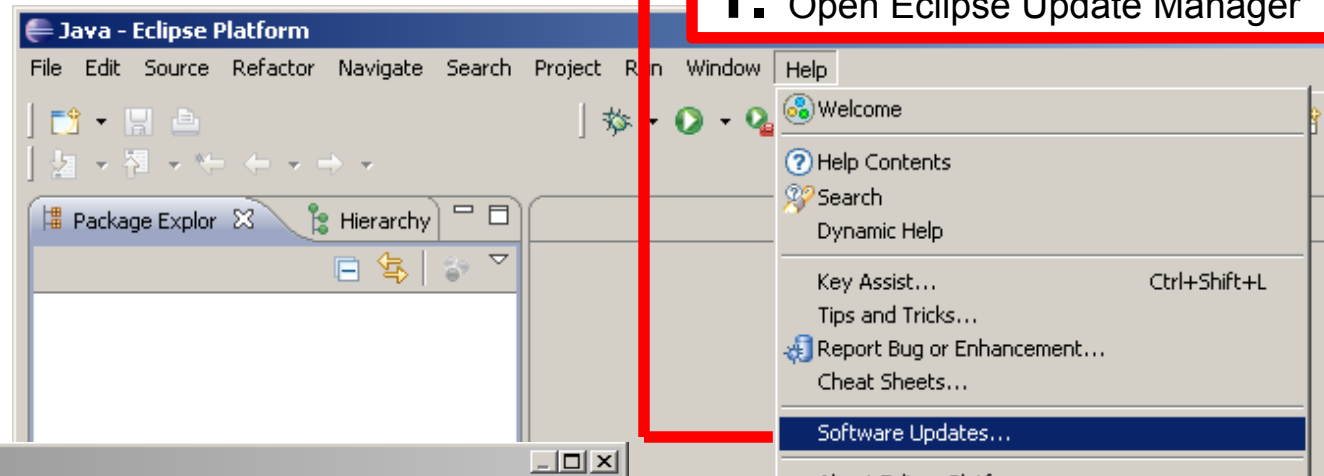
June, 2009

Content

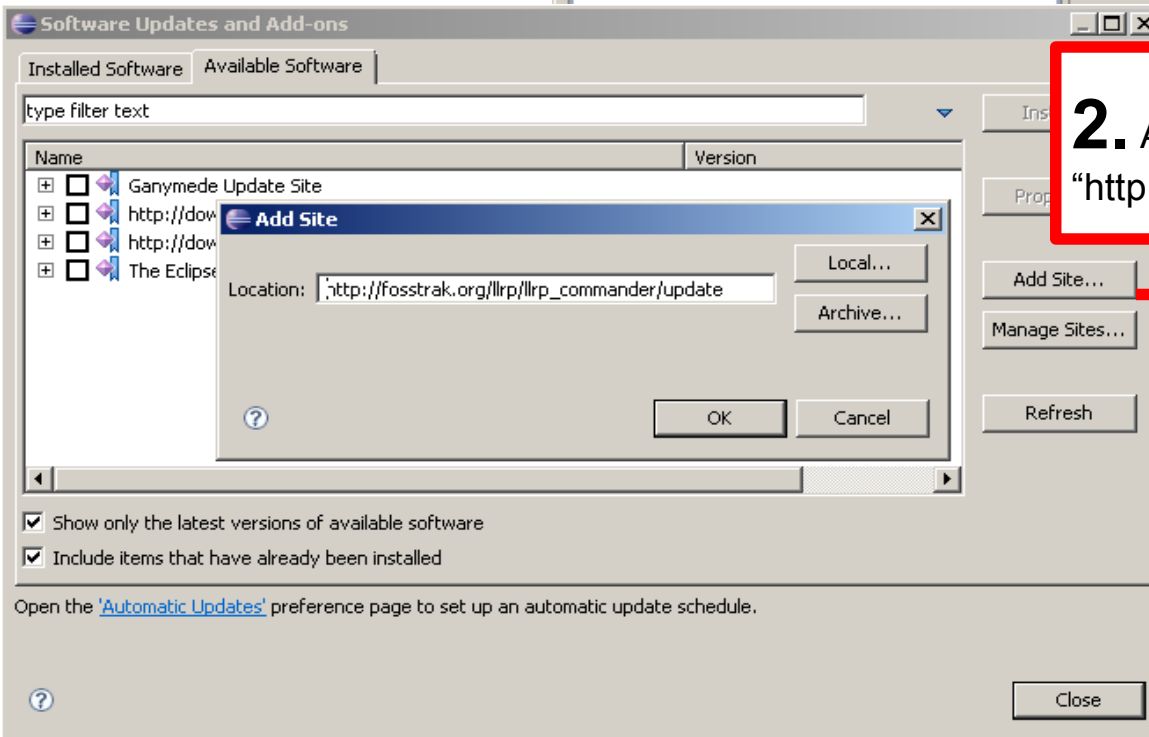
1. Install the Eclipse Plug-In
2. Setup Emulator Environment
3. Manage Reader
4. View Message History
5. Create New Messages with the Message Wizard
6. Assemble Messages in Graphical Editor
7. Edit Messages in XML Editor
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9. Send Messages

Installation via Eclipse Update Manager

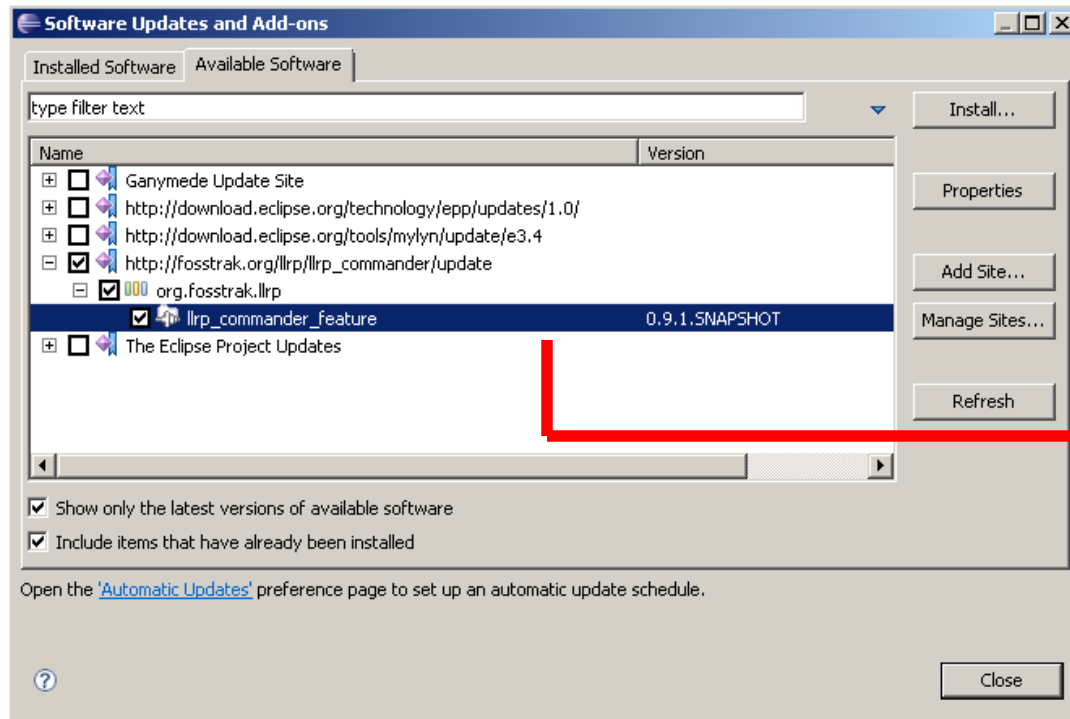
1. Open Eclipse Update Manager



2. Add new Update Site:
"http://fosstrak.org/llrp/llrp_commander/update"



Installation via Eclipse Update Manager (cont'd)



3. Select the LLRP Commander and press "Install"

4. Follow the Installation Instructions.

Please restart Eclipse when the Update Manager proposes to do so.

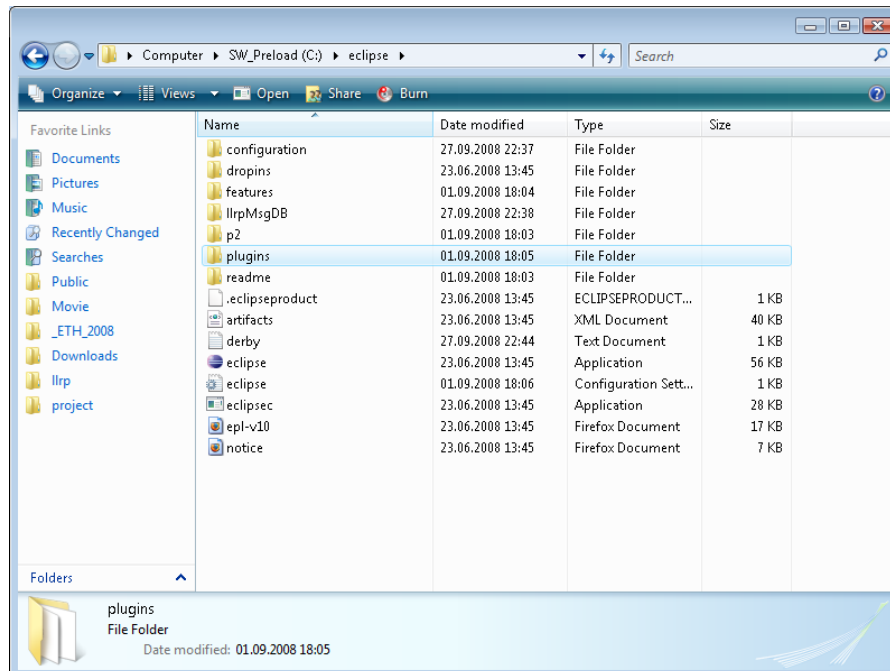
Manual Installation

Prerequisites:

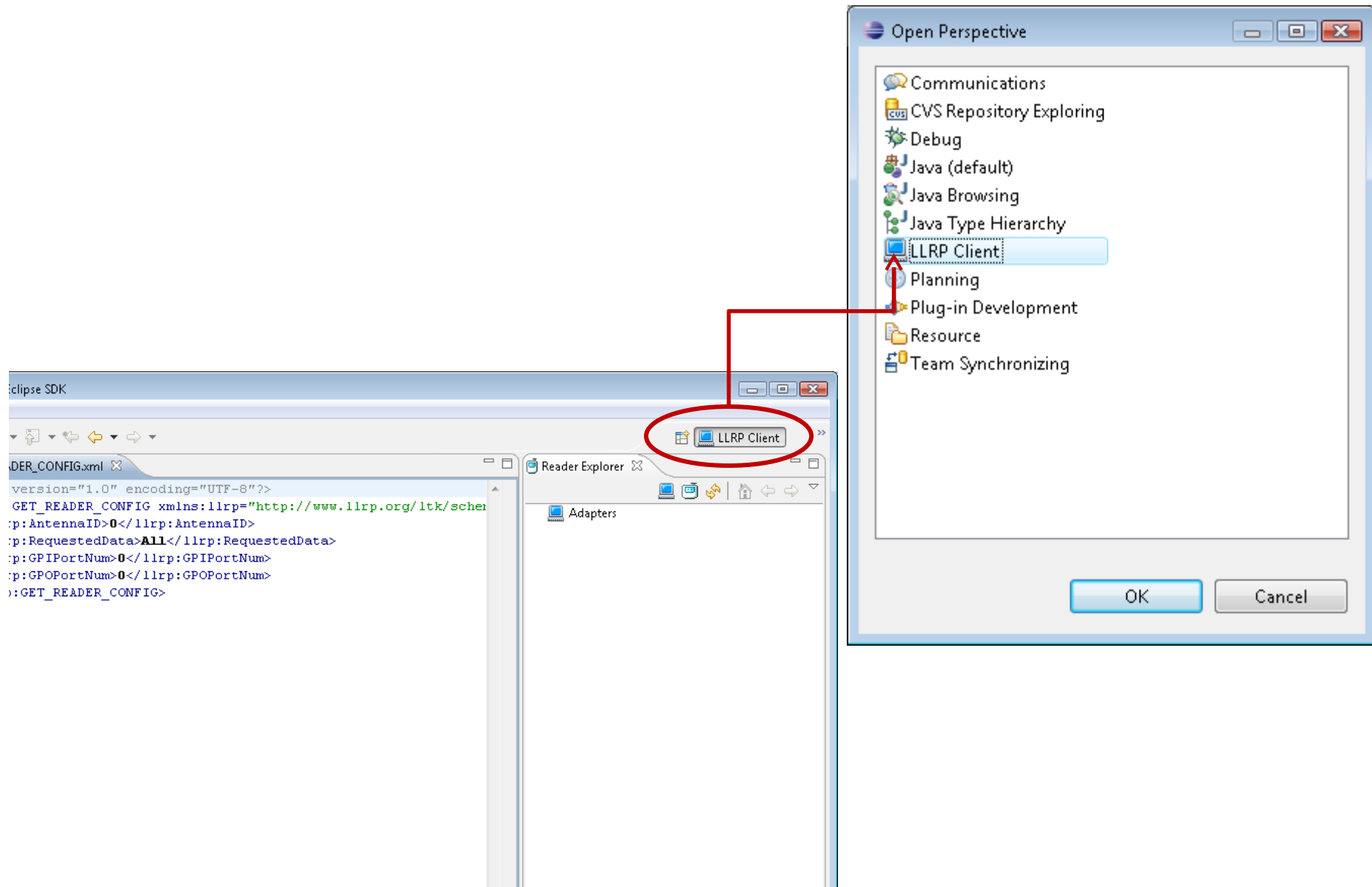
1. Java 1.5
2. Eclipse >= 3.3.0

Installation of the LLRP Commander:

1. Download `llrp_commander_<VERSION>.zip` from <http://maven-repository.fosstrak.org/releases/org/fosstrak/llrp/>
2. Extract the zip file into the subfolder „plugins“ of Eclipse's home directory.



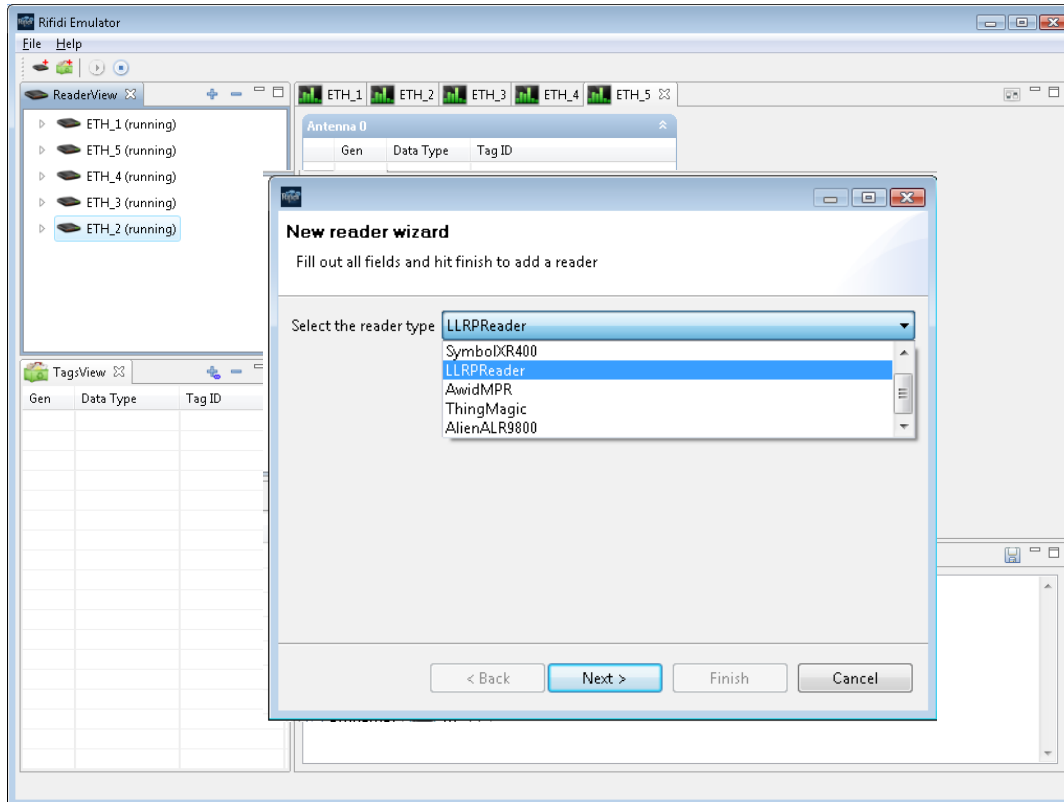
Start Eclipse and open “LLRP Commander” perspective



Setup Rifidi Emulator

If you don't have a Hardware RFID Reader available, you can test the LLRP Commander with the Rifidi Software Reader:

1. Setup the Rifidi Emulator via <http://www.rifidi.org/>
2. Create a reader of type „LLRPReader“ and set it to „running“.



LLRP Commander Perspective

LLRP Client - LLRP_CLIENT/Temporary/2008-Sep-26-17-20-03-761.xml - Eclipse SDK

File Edit Navigate Search Project Run Window Help

LLRP

Navigator

LLRP_CLIENT

- Draft
 - ADD_ACCESSSPEC.xml
 - ADD_ROSPEC.xml
 - ENABLE_ROSPEC.xml
 - GET_READER_CAPABILITIES.xml
 - GET_READER_CONFIG.xml
 - READER_EVENT_NOTIFICATION.xml
 - RO_ACCESS_REPORT.xml
 - SET_READER_CONFIG.xml
 - START_ROSPEC.xml
- Temporary
- .project

GET_READER_CONFIG.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<llrp:GET_READER_CONFIG xmlns:llrp="http://www.llrp.org/ltk/schema/c
<llrp:AntennaID>0</llrp:AntennaID>
<llrp:RequestedData>All</llrp:RequestedData>
<llrp:GPIOPortNum>0</llrp:GPIOPortNum>
<llrp:GPOPortNum>0</llrp:GPOPortNum>
</llrp:GET_READER_CONFIG>
```

2. Multi-Page Editor

Reader Explorer

Adapters

- DEFAULT_ADAPTOR
 - ETH_CAB_1(Connected)

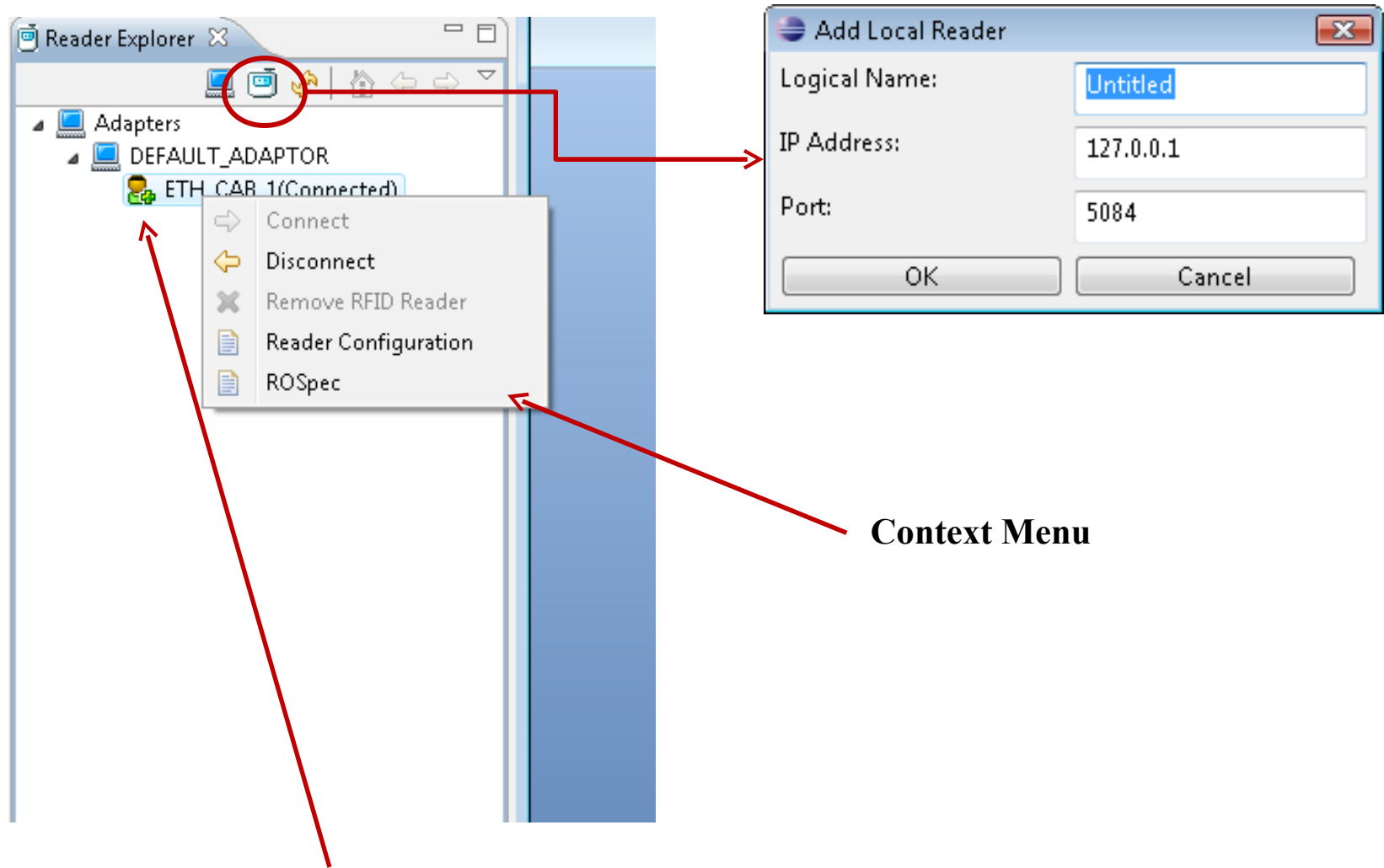
4. Reader Explorer

LLRP Messagebox

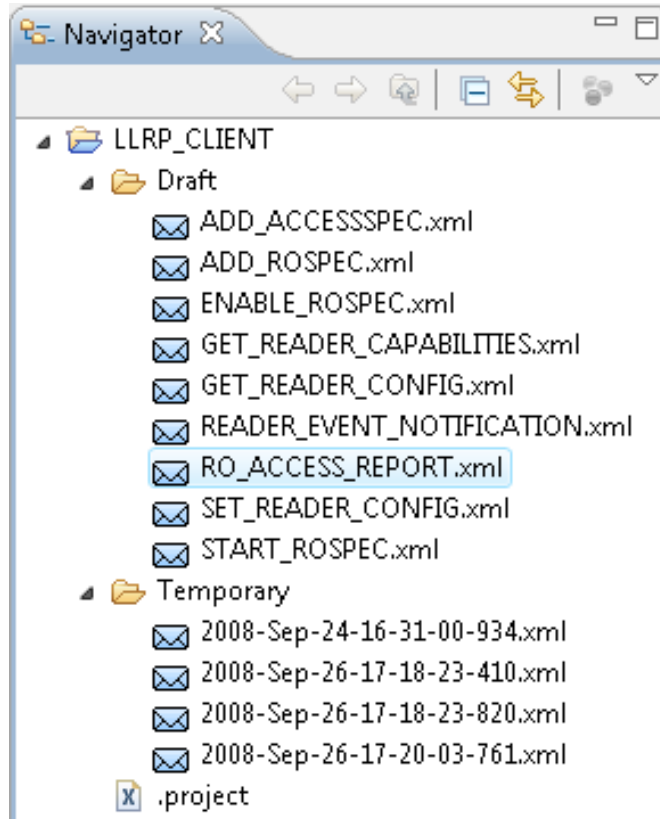
ID	Reader	Message Type	Time	Comment
2008-Sep-26-17-20-03-881	ETH_CAB_1	GET_READER_CONFIG_RESPONSE	2008-Sep...	
2008-Sep-26-17-20-03-761	ETH_CAB_1	FIG	2008-Sep...	
2008-Sep-26-17-18-23-820	ETH_CAB_1	FIG_RESPONSE	2008-Sep...	
2008-Sep-26-17-18-23-410	ETH_CAB_1	READER_EVENT_NOTIFICATION	2008-Sep...	

3. Message Box

Reader Management



Project Navigator



The LLRP commander needs a Eclipse project to store editable messages. You can either define a specific project in the Preference Page, or use the default “LLRP_CMDR” project folder.

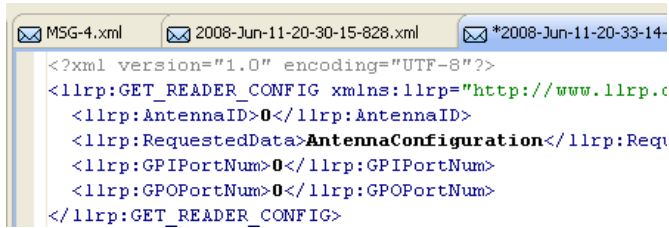
The LLRP commander automatically generates two folders for the project folder:

- 1.Draft:** to hold the pre-built sample LLRP message files;
- 2.Temporary:** to hold the incoming message files when users load them from the repository.

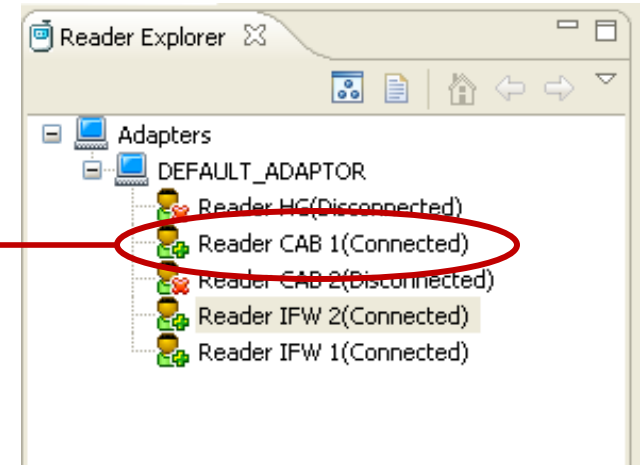
When you modify the files in the “**Temporary**” folder, the changes will not be written to the Repository. In addition, if you purge the JavaDB, the files under “**Temporary**” folder will not be removed.

Every time Eclipse starts up, the “Health Check” can detects whether the project exists or the folder structure is corrupted. If yes, you can easily recover it by the “Auto Fix” function.

View Message History



Double-Click Message Item to load the message to editor.



Click on a specific reader to filter the Message list.

The screenshot shows the 'LLRP Messagebox' window. It contains a table with the following data:

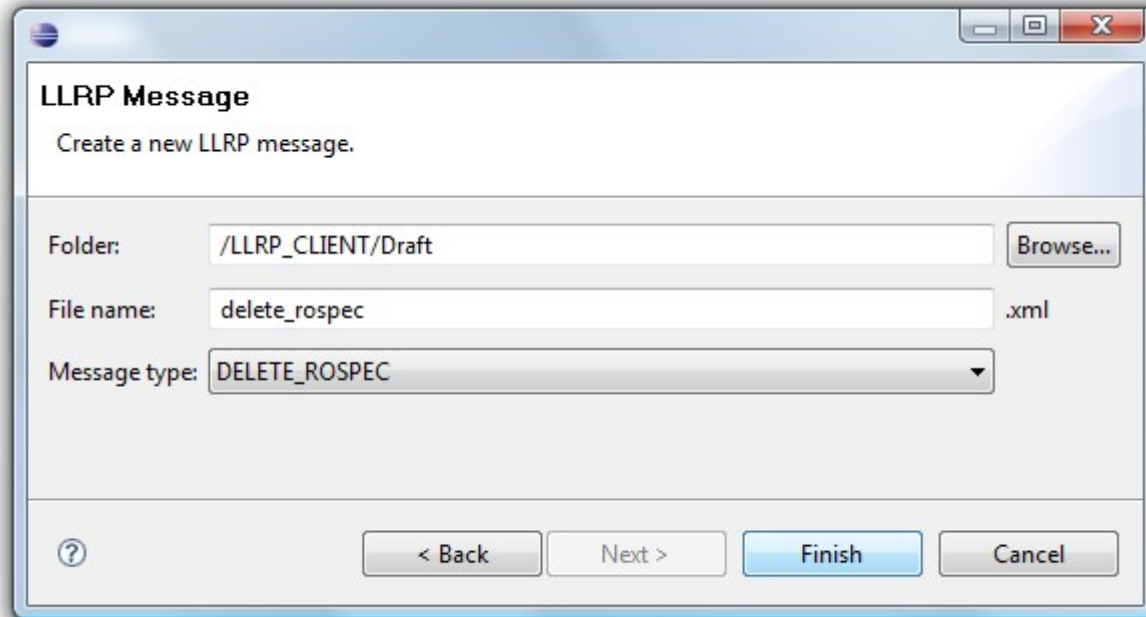
ID	Reader	Message Type	Time	Comment
2008-Jun-12-01-49-22-578	Reader CAB 1	Unknown Type	2008-Jun-12 01:49:22.578	
2008-Jun-12-01-49-22-343	Reader CAB 1	GET_READER_CONFIG	2008-Jun-12 01:49:22.343	Just for testing
2008-Jun-12-01-45-06-218	Reader CAB 1	Unknown Type	2008-Jun-12 01:45:06.218	

A red arrow points to the first message (ID: 2008-Jun-12-01-49-22-578).

Request/Response Indicator

“New LLRP Message” Wizard

The “New LLRP Message” wizard assists you in creating new LLRP messages from scratch. To start the wizard choose *File/New/Other.../LLRP/LLRP Message*.



The screenshot shows a Windows-style dialog box titled "LLRP Message". Below the title bar, it says "Create a new LLRP message." The dialog contains three input fields: "Folder:" with the text "/LLRP_CLIENT/Draft" and a "Browse..." button to its right; "File name:" with the text "delete_rospec" and a ".xml" extension to its right; and "Message type:" with a dropdown menu showing "DELETE_ROSPEC". At the bottom, there is a help icon (question mark in a circle) on the left, and four buttons: "< Back", "Next >", "Finish" (highlighted in blue), and "Cancel".

After pressing “Finish” a new message of the selected type will be created in the specified folder with the given file name. The message will have all fields initialized by default values and all mandatory parameters set. It will be automatically opened in the editor where you can adapt it to your needs.

Graphical Editor

Click on hyperlink to jump to the invalid parameter.

Expand all tree elements.

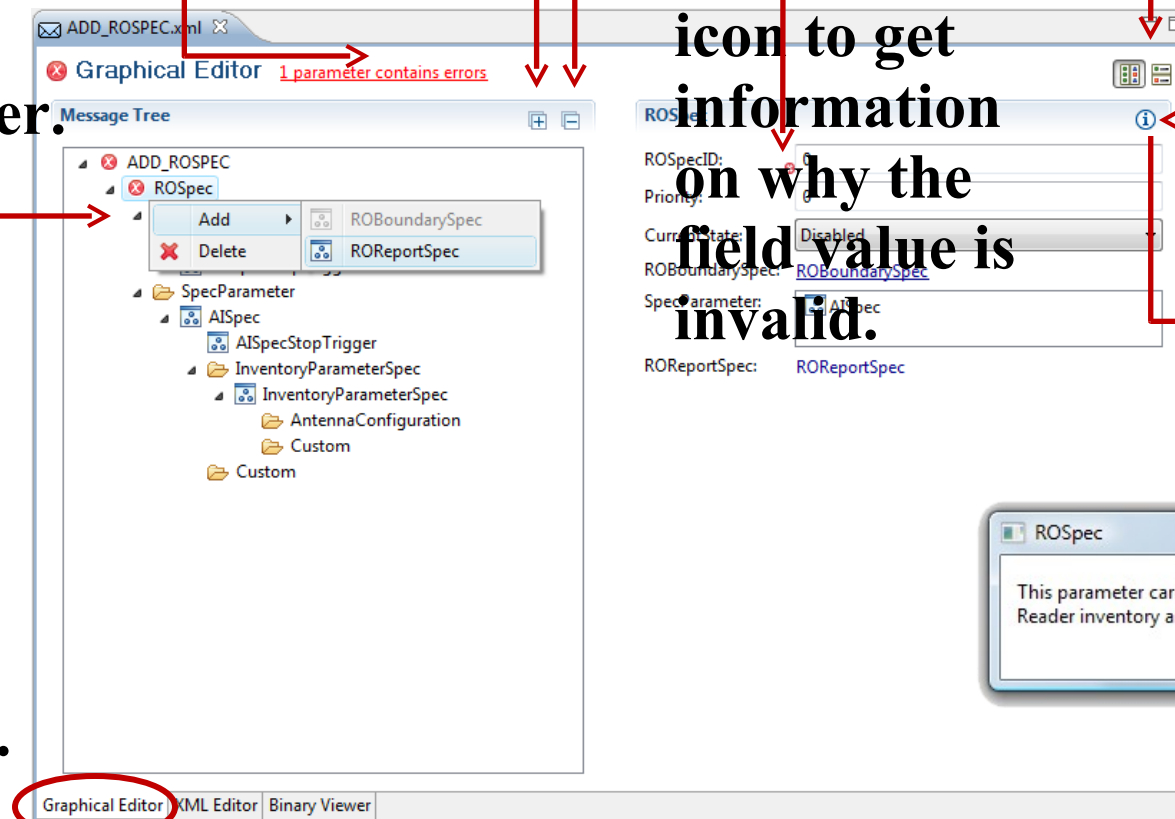
Collapse all tree elements.

Set vertical or horizontal orientation.

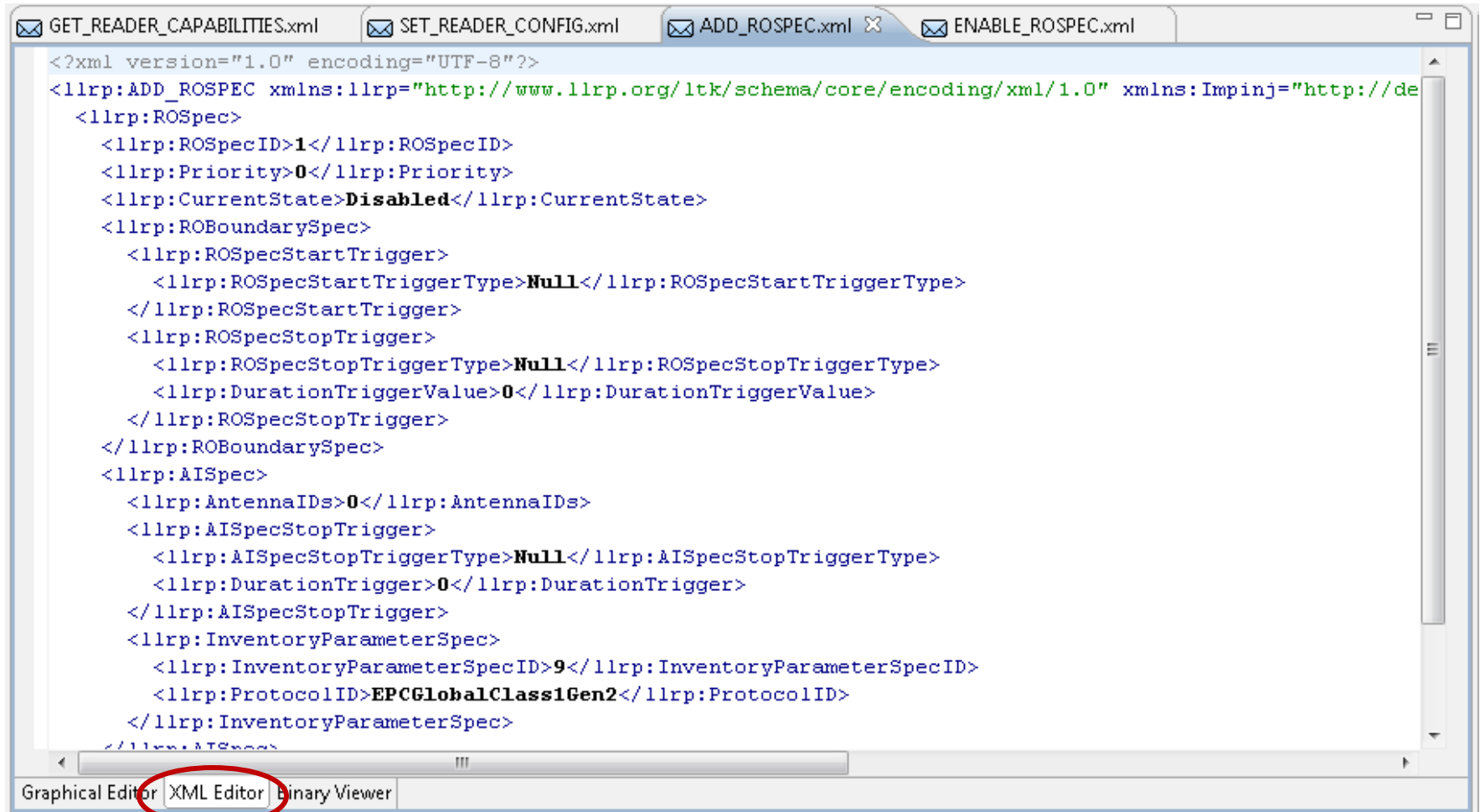
Move mouse over error icon to get information on why the field value is invalid.

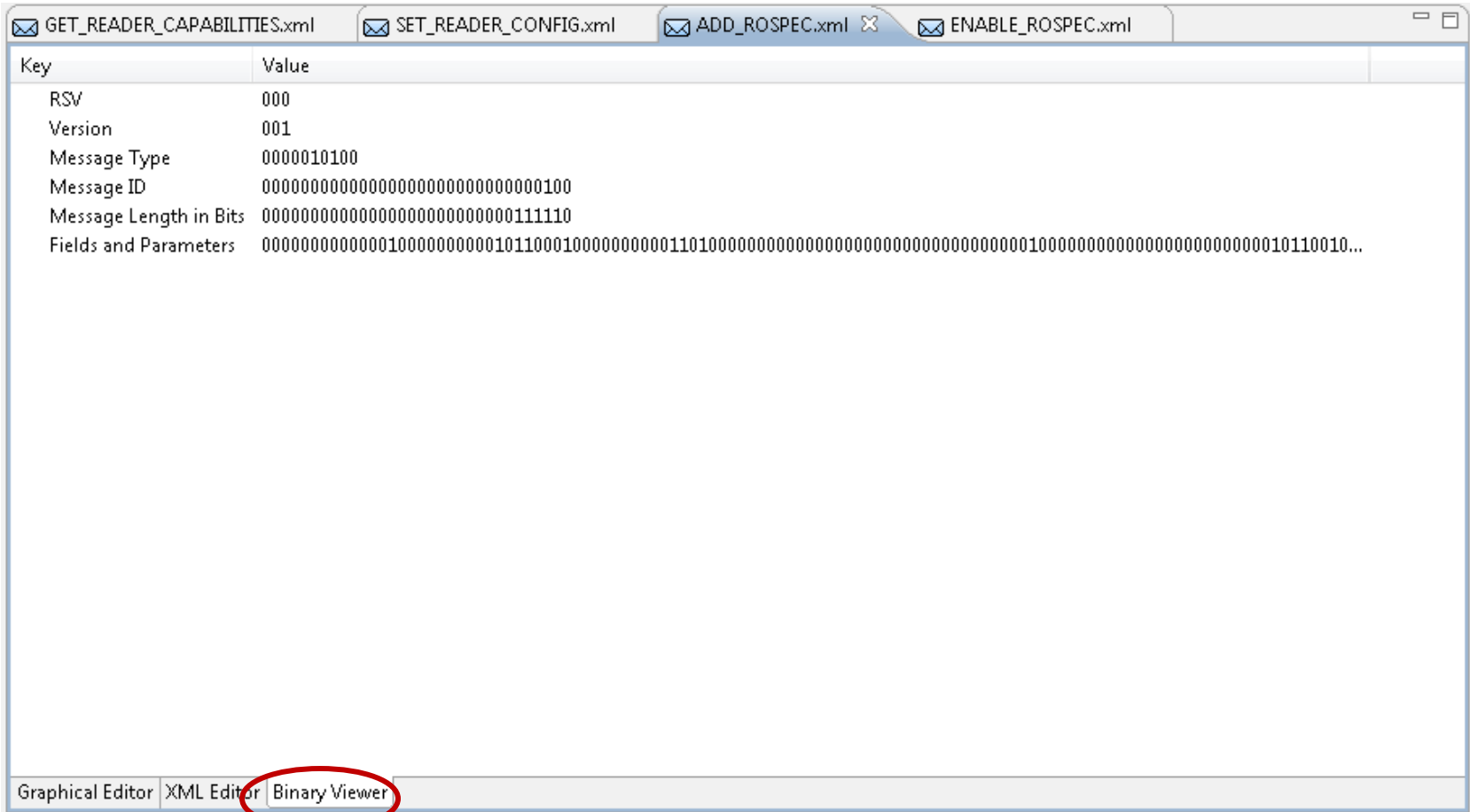
Right-click on a tree element to delete it or to add new sub-parameters.

Show information about the parameter.



XML Message Editor

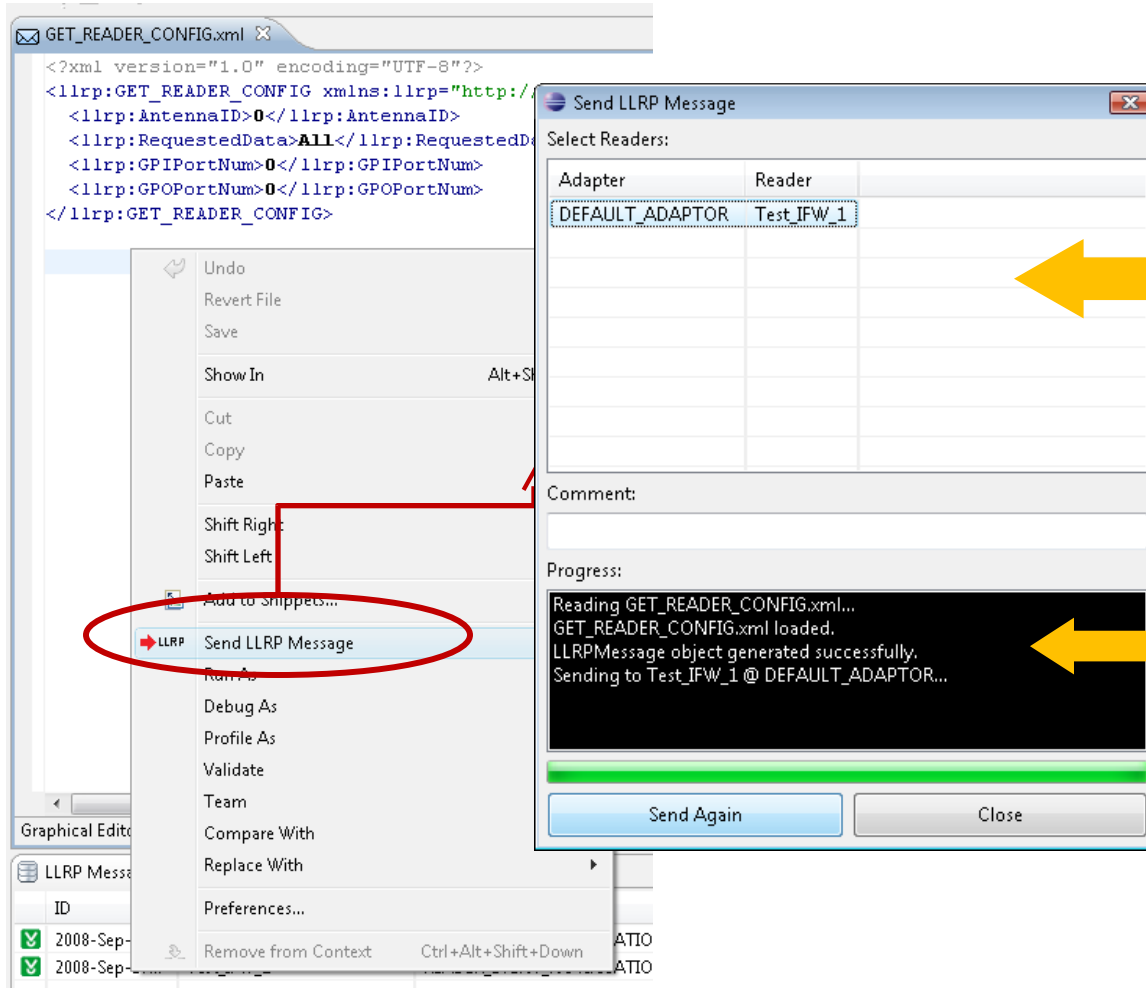




Send Messages

To send a message, proceed as follows:

1. Open the message in the editor.
2. Click on “Send LLRP Message” in the context menu of the xml editor/binary viewer or on the “Send LLRP Message” icon in the toolbar.



All connected readers are listed here. You can select multiple readers to send the message to multiple readers simultaneously.

You can see the sending progress here (Text and Percentage)