

# LLRP Commander User Guide

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November 20th, 2008

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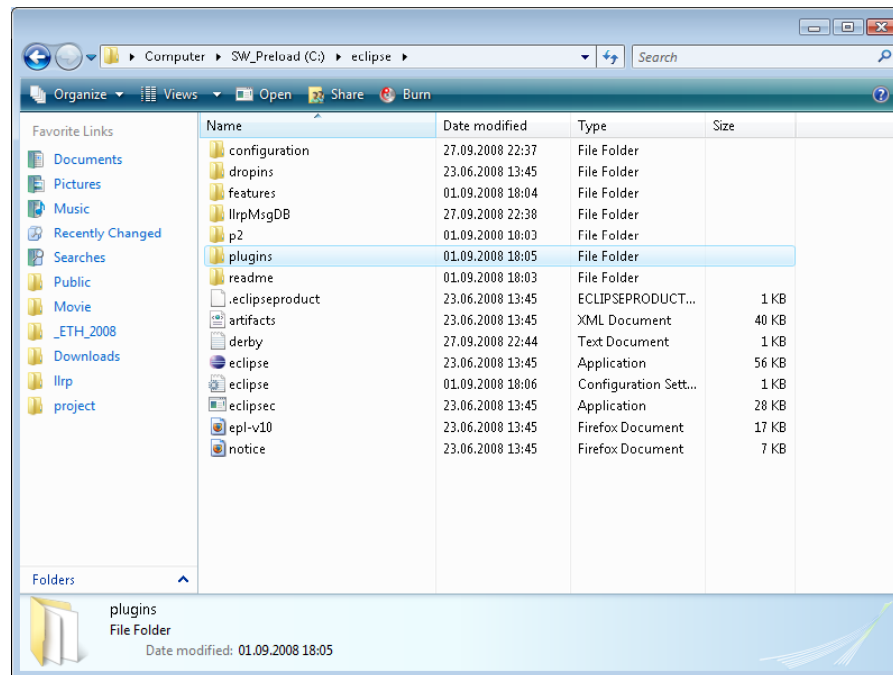
# Installation

## Prerequisites:

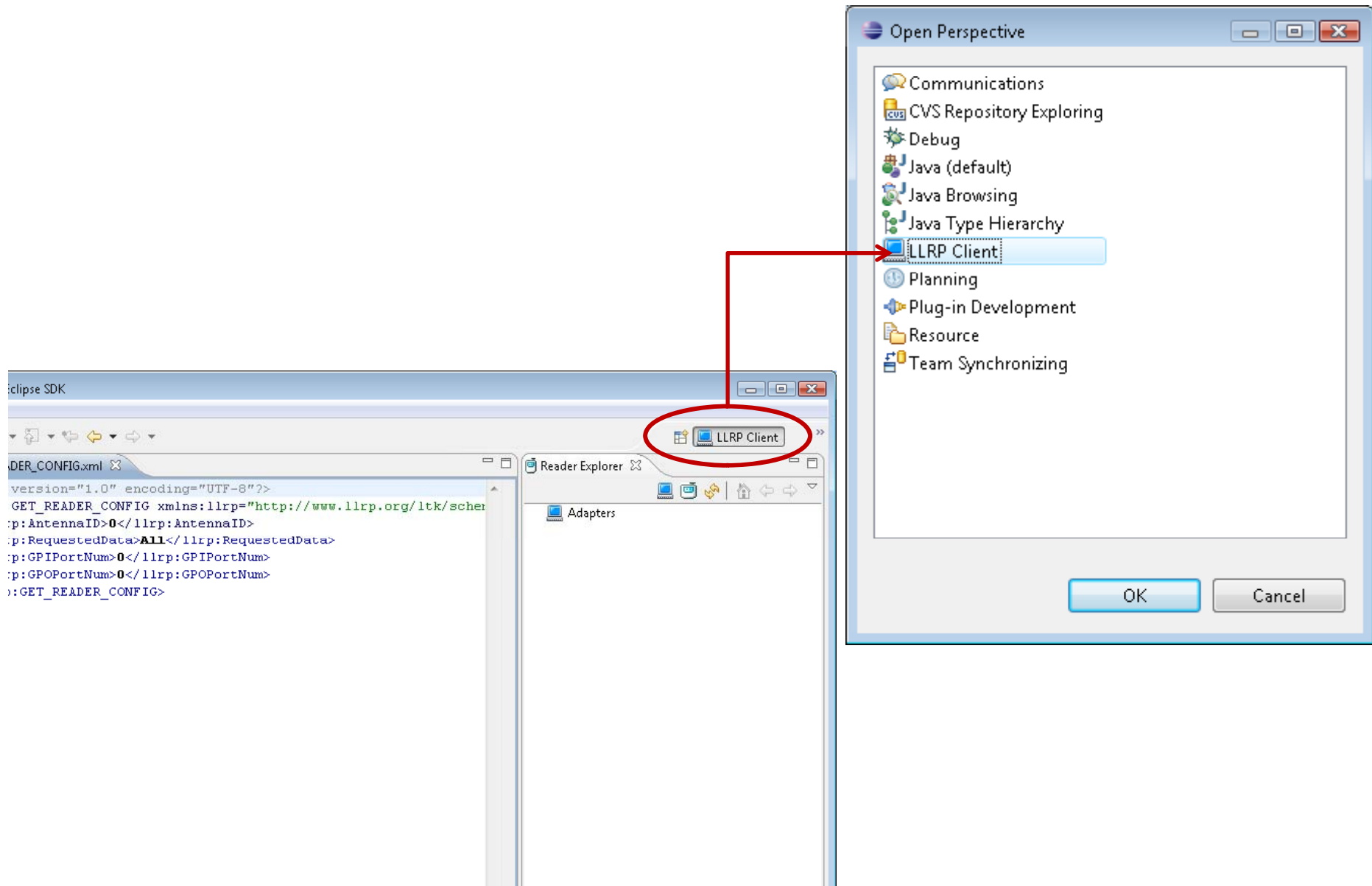
1. Java 1.5
2. Eclipse >= 3.3.0

## Installation of the LLRP Commander:

1. Download **llrp\_commander\_<VERSION>.zip** from [www.fosstrak.org](http://www.fosstrak.org).
2. Extract the zip file into the subfolder „plugins“ of Eclipse's home directory.



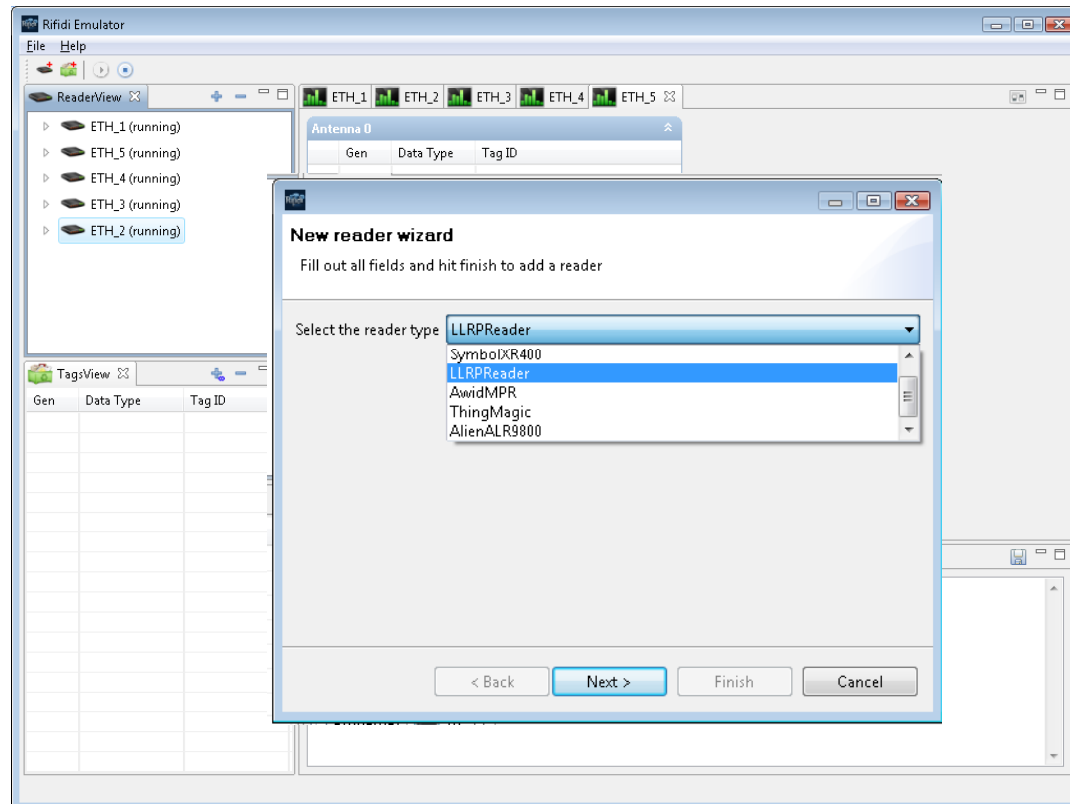
## Start Eclipse and open “LLRP Commander” perspective



# 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

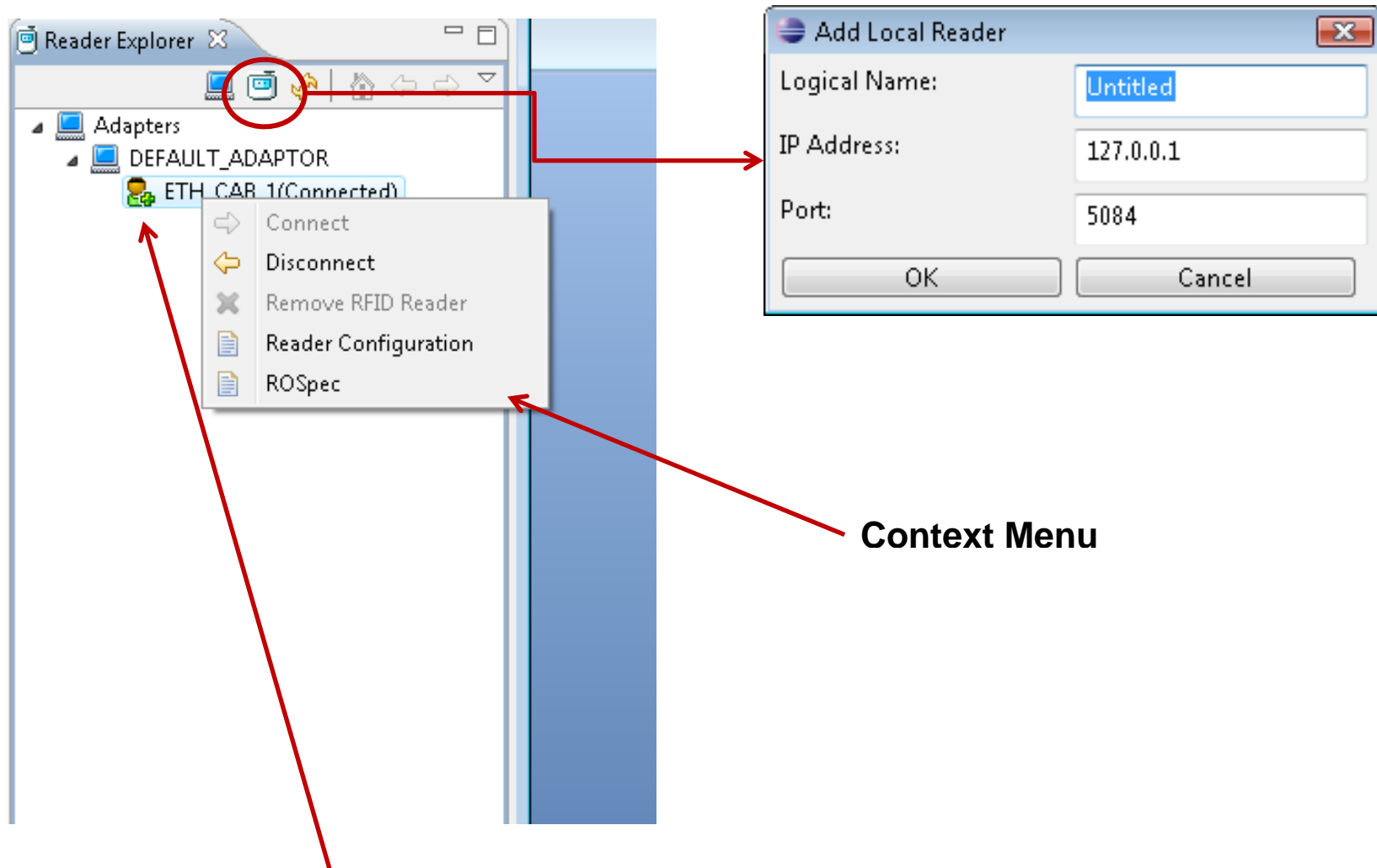
The screenshot displays the LLRP Commander Perspective within the Eclipse IDE. The interface is divided into several panes:

- 1. Project Navigator:** Located on the left, it shows the project structure for LLRP\_CLIENT, including Draft and Temporary folders with various XML files.
- 2. Multi-Page Editor:** The central area displays the content of the selected XML file, GET\_READER\_CONFIG.xml, which contains an XML document for configuring the reader.
- 3. Message Box:** The bottom pane shows a table of LLRP messages, including their IDs, readers, message types, times, and comments.
- 4. Reader Explorer:** Located on the right, it shows the list of adapters connected to the system, including ETH\_CAB\_1(Connected).

The LLRP Client window is also visible in the top right corner, circled in red.

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	IG_RESPONSE	2008-Sep...	
2008-Sep-26-17-18-23-410	ETH_CAB_1	READER_EVENT_NOTIFICATION	2008-Sep...	

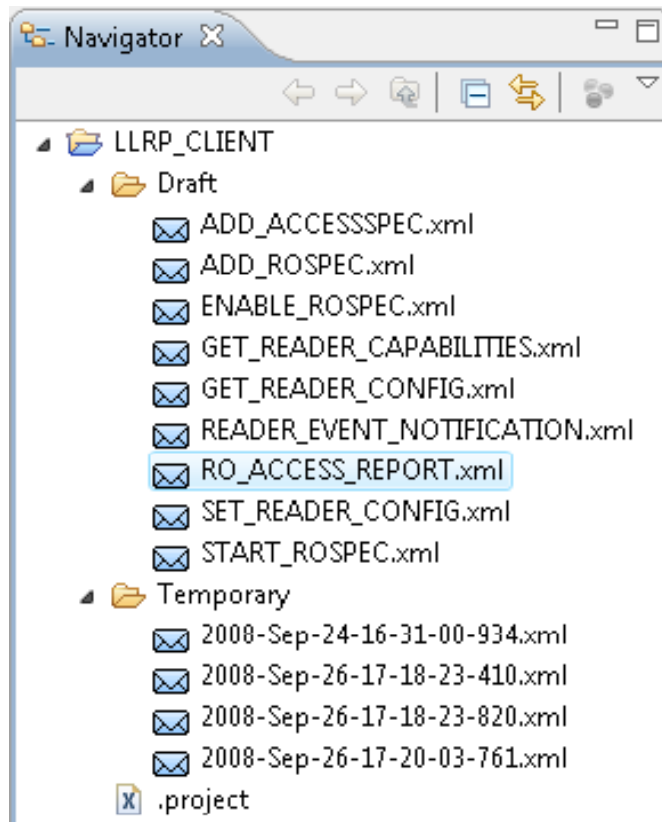
# Reader Management



**Status (Connected/Disconnected) Indicator**

**Context Menu**

# 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:

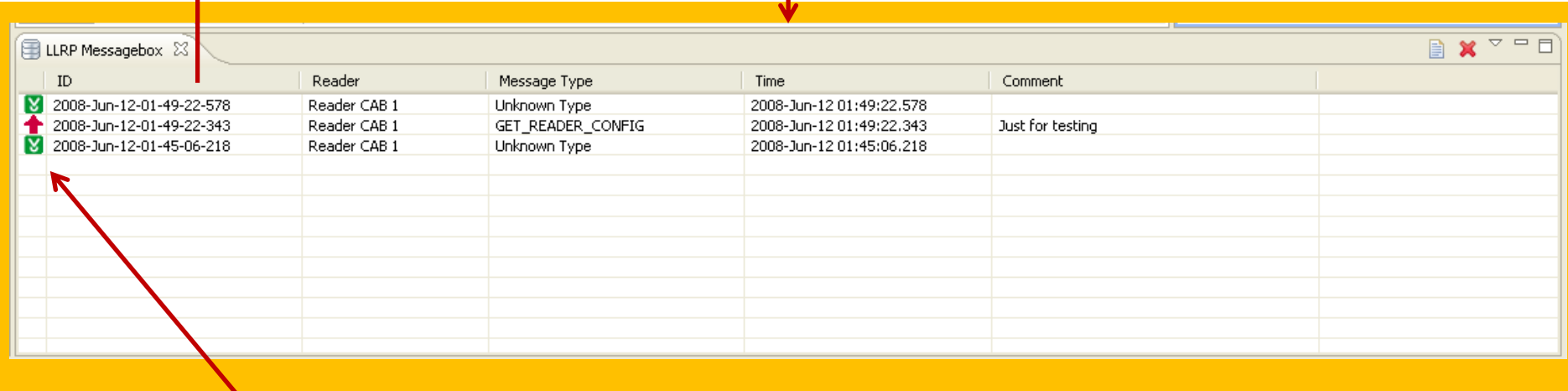
- 1.Draft:** to hold the pre-built sample LLRP message files;
- 2.Temporary:** to hold the incoming message files when users load them from the repository.

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.



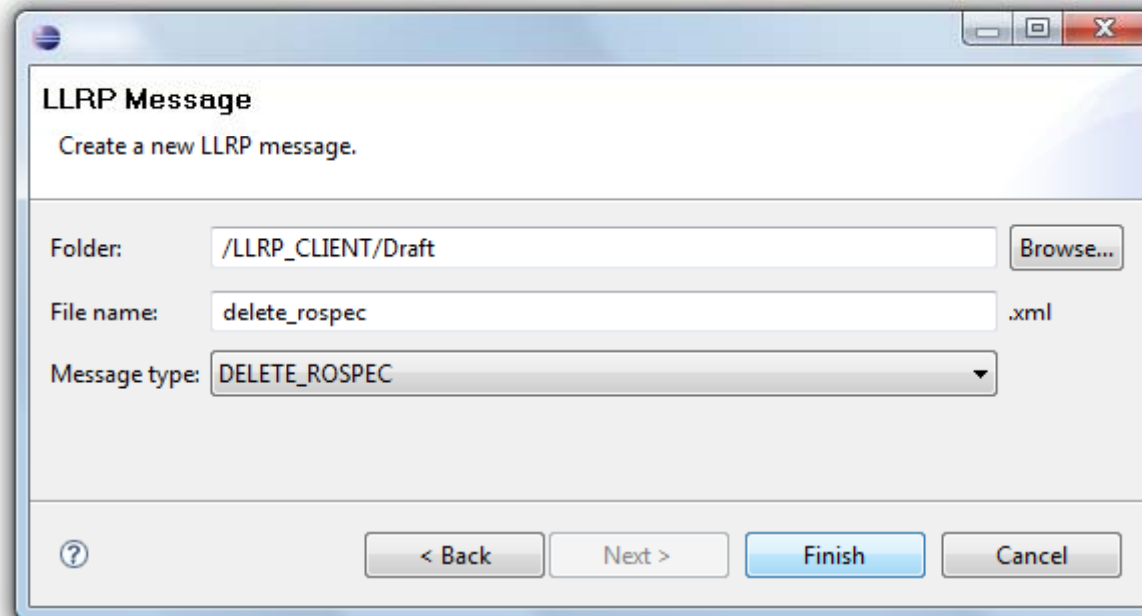
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## Request/Response Indicator

## “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

Expand all tree elements.

Collapse all tree elements.

Click on hyperlink to jump to the invalid parameter.

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

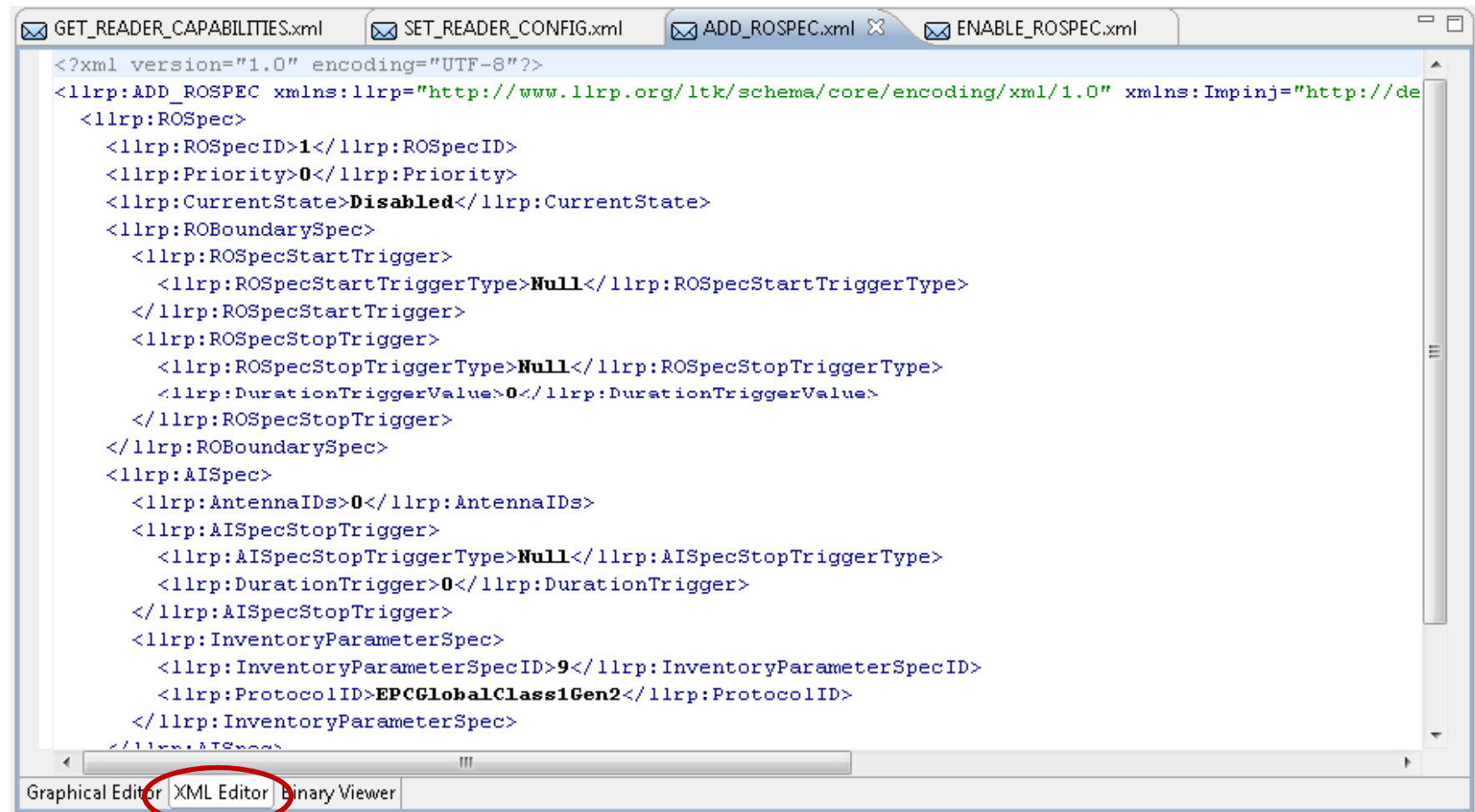
Set vertical or horizontal orientation.

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

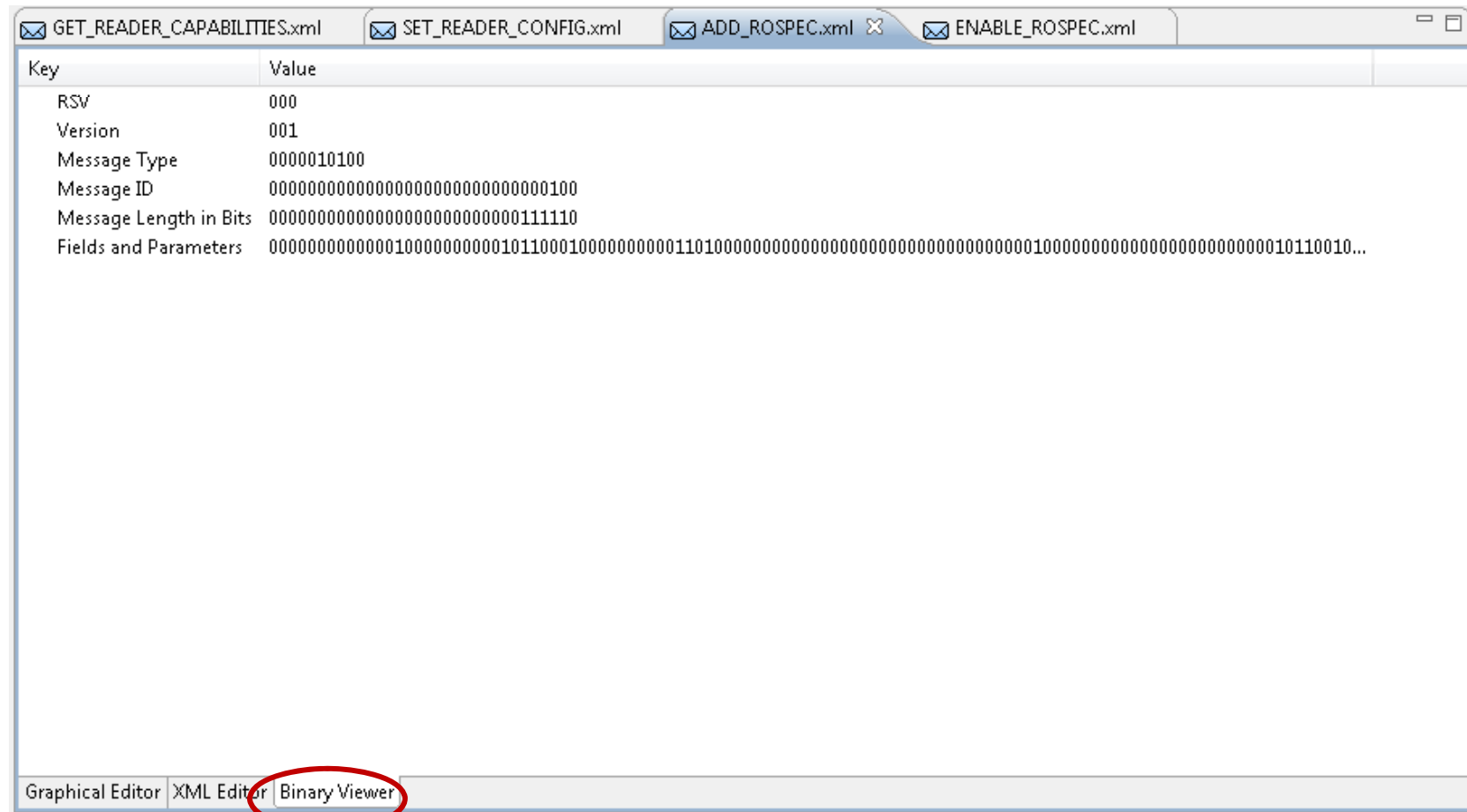
Show information about the parameter.

The screenshot shows the Graphical Editor window with a tab labeled 'ADD\_ROSPEC.xml'. The main window is titled 'Graphical Editor' and has a status bar at the bottom with three tabs: 'Graphical Editor' (which is circled in red), 'XML Editor', and 'Binary Viewer'. The left pane, titled 'Message Tree', shows a tree structure with a red 'x' icon next to 'ADD\_ROSPEC' and 'ROSpec'. A right-click context menu is open over 'ROSpec', showing options: 'Add' (with a right arrow), 'Delete' (with a red 'x'), 'ROBoundarySpec', and 'ROReportSpec'. The tree structure includes 'SpecParameter' (expanded) containing 'AISpec' (expanded), which contains 'AISpecStopTrigger' (expanded) and 'InventoryParameterSpec' (expanded). 'InventoryParameterSpec' contains 'AntennaConfiguration' and 'Custom' (both expanded). The right pane shows the 'ROSpec' configuration with fields: 'ROSpecID' (0), 'Priority' (0), 'CurrentState' (Disabled), 'ROBoundarySpec' (ROBoundarySpec), 'SpecParameter' (AISpec), and 'ROReportSpec' (ROReportSpec). A red error icon is next to the 'ROSpecID' field. A tooltip is visible over the 'ROSpecID' field, stating: 'This parameter carries the information of the Reader inventory and survey operation.' Red arrows point from the annotations to the corresponding UI elements: 'Expand all tree elements.' points to the '+' icon in the Message Tree; 'Collapse all tree elements.' points to the '-' icon; 'Click on hyperlink to jump to the invalid parameter.' points to the 'ROSpecID' field; 'Move mouse over error icon to get information on why the field value is invalid.' points to the red error icon; 'Set vertical or horizontal orientation.' points to the orientation icons in the top right; 'Right-click on a tree element to delete it or to add new sub-parameters.' points to the right-click context menu; and 'Show information about the parameter.' points to the tooltip.

# XML Message Editor



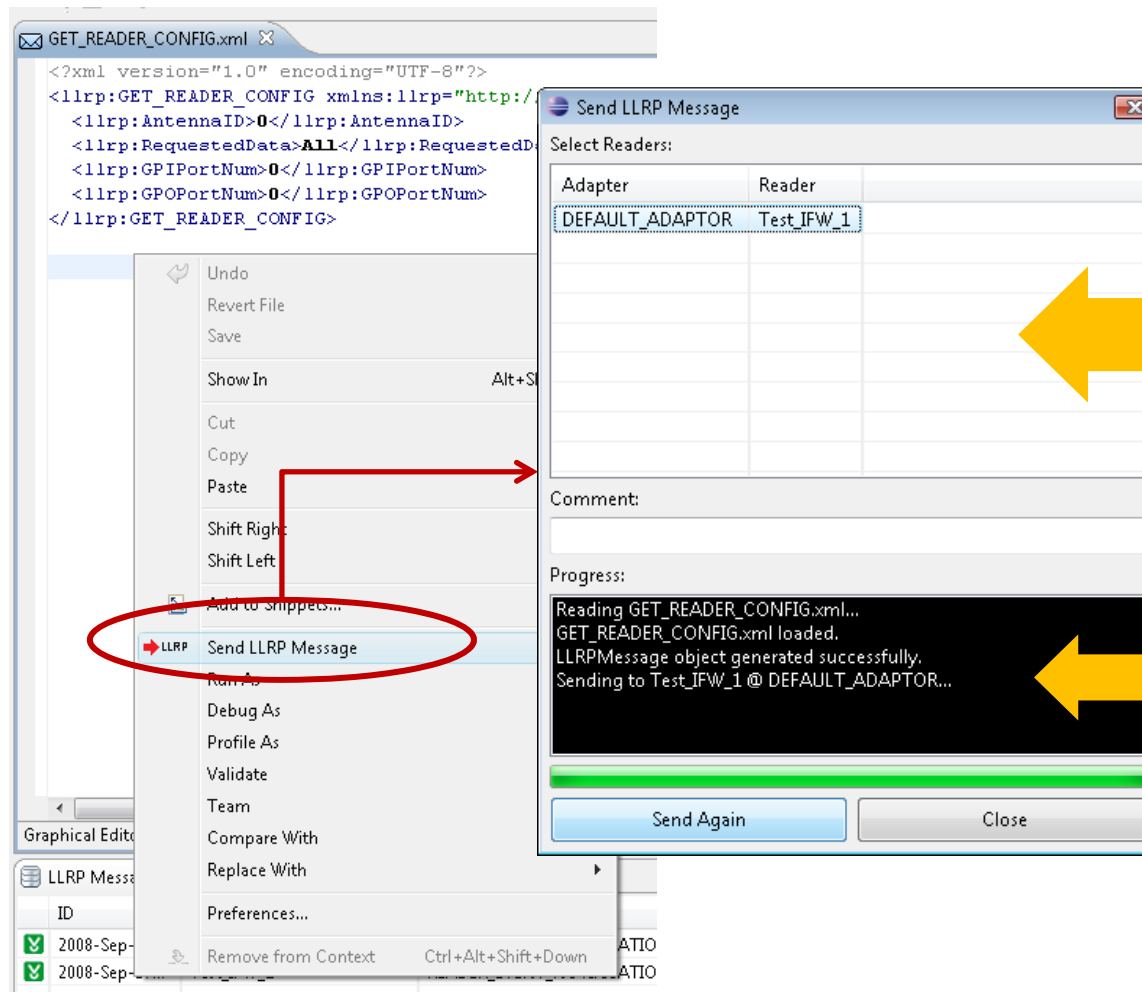
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# Send Messages

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)