

# Technical Note

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## Understanding EUROMAP 63 Driver Device Diagnostics Output

This document describes the format of the ThingWorx® Kepware® Server EUROMAP 63 driver diagnostics output.

### 1. The EUROMAP 63 Standard

The EUROMAP 63 standard describes a file-based data exchange interface that allows applications (such as ThingWorx Kepware Server) to access information from EUROMAP 63-enabled machines. In some cases, the machine itself can communicate using the EUROMAP 63 language. In other cases, the machine vendor provides an application that communicates with the machine using the proprietary protocol, then communicates in EUROMAP 63 language with the ThingWorx Kepware Server EUROMAP 63 driver.

Read and write requests are sent to the machine in the form of ASCII commands within session and presentation request files. Responses from the machine arrive in session, presentation, and application response files. Use recreated response files with the ThingWorx Kepware Server EUROMAP 63 driver.

• For more information on ThingWorx Kepware Server EUROMAP 63 driver, refer to the product manual at [www.ptc.com/](http://www.ptc.com/).

• For more information on EUROMAP 63 Specification, refer to EUROMAP documentation.

### 2. Communication Diagnostics

The diagnostic features of ThingWorx Kepware Server provide real-time information on the communication between the driver and the EUROMAP 63-enabled machine. When enabled, the information that creates read and write operations can be viewed in the Diagnostics Viewer. Additionally, users can track statistics for the TX and RX events in the Diagnostics Viewer or directly in the OPC client application with built-in Diagnostics tags.

🚨 **Caution:** Users should only enable and utilize diagnostics when debugging or troubleshooting, since this may affect performance.

📘 For more information on Communication Diagnostics, refer to the product manual at [www.kepware.com](http://www.kepware.com).

## 2.1 Diagnostics Viewer

The file names and file contents that creates read and write operations can be viewed in TX and RX events via the Diagnostics Viewer.

## 3. Hexadecimal vs. ASCII Notation

The default format of the TX/RX details uses hexadecimal notation. To view the details using ASCII notation, right-click the Diagnostic Window and select **ASCII**.

The following examples show the diagnostic event details using ASCII notation.

### 3.1 What is a TX Event?

TX events are session and presentation request files and their contents, as created by the EUROMAP 63 driver.

For example, to read the ActCntCyc and ActCntCycRej tokens using the IMM1SessionDirectory, the following TX events display in the diagnostics viewer:

Date	Time	Length	Data
10/31/2018	11:58:05.100 PM	36	C:\IMM1SessionDirectory\0000R000.JOB
10/31/2018	11:58:05.100 PM	38	JOB 0000R000 RESPONSE "0000R000.RSP";<LF>
10/31/2018	11:58:05.100 PM	136	REPORT 0000R000 REWRITE "0000R000.DAT"<LF>START IMMEDIATE<LF>STOP NEVER<LF>CYCLIC SHOT 1<LF>SAMPLES 1<LF>SESSIONS 1<LF>PARAMETERS<LF>ActCntCyc,<LF>ActCntCycRej;
10/31/2018	11:58:05.116 PM	36	C:\IMM1SessionDirectory\SESS0000.REQ
10/31/2018	11:58:05.116 PM	18	00000000 CONNECT;<LF>
10/31/2018	11:58:05.116 PM	33	00000001 EXECUTE "0000R000.JOB";<LF>

The presentation request file name and the two commands within the file are part of the first three TX events. The command strings written to the file show the linefeeds within the command as <LF>. Each TX event ends with a non-displayed linefeed.

The session request file name and the two commands with the file are part of the next three TX events.

### 3.2 What is an RX Event?

RX events are session, presentation, and application response files and their contents, as created by the EUROMAP 63-enabled machine.

For example, the response to the command requesting the values of the ActCntCyc and ActCntCycRej tokens using the IMM1SessionDirectory displays the following RX events in the diagnostics viewer:

Date	Time	Length	Data
10/31/2018	11:59:59.234 PM	36	C:\IMM1SessionDirectory\SESS0000.RSP
10/31/2018	11:59:59.234 PM	19	00000000 PROCESSED;
10/31/2018	11:59:59.234 PM	19	00000001 PROCESSED;
10/31/2018	11:59:59.250 PM	36	C:\IMM1SessionDirectory\0000R000.RSP
10/31/2018	11:59:59.250 PM	52	COMMAND 1 PROCESSED "JOB COMMAND" 20181231 23:59:59;
10/31/2018	11:59:59.250 PM	49	COMMAND 2 PROCESSED "0000R000" 20181231 23:59:59;
10/31/2018	11:59:59.266 PM	36	C:\IMM1SessionDirectory\0000R000.DAT
10/31/2018	11:59:59.266 PM	22	ActCntCyc,ActCntCycRej
10/31/2018	11:59:59.266 PM	7	7520,40

The session response file name and the results of the two commands within the file are part of the first three RX events. Each RX event ends with a non-displayed linefeed.

The presentation response file name and the results of the two commands within the file are part of the next three events. Each RX event ends with a non-displayed linefeed.

The application response file name, the comma-separated header and data within the file are part of the final three events. Each RX event ends with a non-displayed linefeed.