



MÄK Gateway 4.1.4 Release Notes

This release note provides release-specific information for MÄK Gateway Release 4.1.4.

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Document ID: GWY-4.1.4-2-050808

System Requirements

This section lists supported platforms and hardware and software requirements.

Platforms Supported

The Gateway Release 4.1.4 supports:

- ♦ Windows 2000/XP
- ♦ Red Hat Linux 8.0/9.0/Enterprise 3.0/Enterprise 4.0/Fedora Core 3.

Software Requirements

The Gateway uses various supporting software packages. Refer to manufacturers' instructions for installation.

- ♦ One of the following RTIs for your operating system:
- ♦ MÄK RTI 2.x
- ♦ DMSO RTI-NG 1.3 v6.

Compiler Compatibility on Windows

MÄK provides versions of product releases that have been compiled with Microsoft Visual C++ 6.0 and 7.1. When you run MÄK products together, for example, the Gateway and the Stealth, we strongly recommend that you run versions compiled with the same compiler. Mixing products compiled with different versions of the compiler can result in program instability.

FLEXlm 9.2

The Gateway requires FLEXlm 9.2. If you have not already updated your FLEXlm directory as part of installing another MÄK product, you must update the license server.



If this is the first time you are installing a MÄK product, just follow the steps for installing license management that are in *MÄK Gateway 4.1.3 Release Notes*.

To update your *flexlm* directory:

1. If the license server is running, shut it down with *lmdown*.
2. Back up the files in the *flexlm* directory on the license server (*C:\flexlm* on Windows, typically */usr/local/flexlm* on UNIX). (For example, to *flexlm.old*.)
3. Copy all of the files in *gateway/flexlm92* to the *flexlm* directory on the license server.

4. Copy your license files (*.lic* or *.dat*) from the backup directory to the *flexlm* directory.
5. Start the license server.
6. Run the Gateway and verify that it is checking out a license.

FLEXlm is backwards compatible, so you do not have to change your license file, and MÄK applications built with earlier versions of FLEXlm will continue to work with FLEXlm 9.2. If you have any problems or questions, contact MÄK support at support@mak.com.

RPR FOM Support

The Gateway 4.1.4 release supports the following versions of the RPR FOM:

- ♦ RPR FOM 0.5 – *VR-Link05.fed*
- ♦ RPR FOM 0.7 – *VR-Link07.fed*
- ♦ RPR FOM 0.8 – *VR-Link08.fed*
- ♦ RPR FOM 1.0 – *VR-Link10.fed*
- ♦ RPR FOM 2.0 draft 6 – *VR-Link20006.fed*
- ♦ RPR FOM 2.0 draft 14 – *VR-Link20014.fed*
- ♦ RPR FOM 2.0 draft 17 – *VR-Link20017.fed*

See Section 3.2.2, “Specifying the FOM Mapper and FED File to Use,” in *MÄK Gateway User’s Guide* for details about how to use different versions of the RPR FOM.

DIS Protocols and RTIs Supported

HLA only

Gateway 4.1.4 was built against VR-Link 3.9.5 and is compliant with:

- ♦ RPR-FOM 1.0 and a subset of 2.0 (draft 6, 14, and 17)
- ♦ MÄK RTI 2.x
- ♦ DMSO RTI NG 6.

Gateway 4.1.4 is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed above.

DIS only

Gateway 4.1.4 supports DIS 2.0.4, IEEE 1278.1, and IEEE 1278.1a, and can therefore interoperate with DIS applications of any of these versions. By default, the Gateway receives all three versions of DIS and sends IEEE 1278.1.

New Features and Updates

This release of MÄK Gateway has the following new features:

- ♦ Ability to parse unknown global IDs
- ♦ Ability to force updates
- ♦ Ability to specify the number of received interactions to display
- ♦ Auto restart
- ♦ Ability to run in the background (no GUI).

Parsing Unknown Global IDs

Some objects and interactions reference another object. For example, an emitter system references the entity to which it is attached. Typically, if the global object ID is unknown (because the entity to which the emitter system is attached has not been published), the Gateway translates the ID as either 0:0:0 (for DIS) or an empty string (for HLA). If the `parseUnknownGlobalIds` option is enabled, the Gateway attempts to parse the unknown ID to construct a meaningful ID in the other protocol. If an unknown ID is passed through the Gateway from DIS, the Gateway constructs an HLA name by appending gw to the DIS ID. For example, the ID 3:4:5 becomes 3:4:5gw. If an unknown ID is passed through the Gateway from HLA, the Gateway can only parse it if it begins with x:y:z, where x, y, and z are integers. If it is parseable, the Gateway constructs a DIS ID by converting the x:y:z string to the DIS ID, x:y:z. For example, the HLA ID 1:2:3-gw becomes DIS ID 1:2:3. If the string cannot be parsed, the ID is translated as 0:0:0. To enable parsing of unknown global IDs, set `parseUnknownGlobalIds` to 1 in *gateway.mtl*.

Forcing Updates

You can now force updates on the sending side. If `forceHlaUpdates` is set to 1, an entire update will be sent on the HLA side for each DIS PDU received by the Gateway, regardless of what fields have been updated, and whether they have exceeded their dead reckoned thresholds.

On the DIS side, if `forceDisUpdates` is set to 1, the Gateway sends a PDU for each HLA update received, whether the dead reckoning thresholds have been exceeded or not.

Specifying the Number of Received Interactions to Display

You can now specify the number of interactions to display in the GUI. As the list of received interactions grows, the Gateway's memory usage increases. By default, the Gateway will now display the last 15 interactions received. You can change this number by changing the `numberOfInteractionsShown` parameter. To display all interactions received, set `numberOfInteractionsShown` to -1.

Auto Restart

You can now specify that the Gateway try to restart translations after an RTI exception stops them. In the case of an RTI exception (for example, if a TCP connection is broken between the Gateway and rtiexec), the Gateway stops translations, and in past versions, you would have to start them again manually. If the **autoRestart** parameter is set to 1, the Gateway will automatically try to restart translations every 10 seconds after the translations are stopped. The default is 0 (do not try to restart translations.)

Running without a GUI (Linux Only)

You can now run the Gateway without the GUI in Linux. If the **showGUI** parameter is set to 0, the Gateway runs without a GUI. Translations will be automatically started, and you can exit the Gateway by entering **q** in the command window. If you run the Gateway without the GUI, the Gateway receives and send updates at the interval specified by **pollInterval**. The default interval is 0.001 seconds.

Documentation Updates

Please note the following correction to the printed version of *MÄK Gateway User's Guide* (the PDF version has the correct information):

- ♦ Section 1.3 in *MÄK Gateway User's Guide* lists the PDUs supported by the Gateway. The Gateway also supports Logger Control and View Control PDUs. Therefore, the MÄK Logger and MÄK Stealth can be controlled via the Gateway.
- ♦ The printed version of *MÄK Gateway User's Guide* states that the MÄK RTI comes with, or is included with, all MÄK products. These statements mean that the MÄK RTI software is on product CDs. It does not mean that purchase of a MÄK product includes a MÄK RTI license. The MÄK RTI is licensed separately from other MÄK products.
- ♦ On page A-2, the last paragraph states that the Gateway loads the *Logger.mtl* file. It should state that the Gateway loads the *gateway.mtl* file.
- ♦ *MÄK Gateway User's Guide* does not list the discovery criteria for the EntityTranslator object. To publish an EntityState PDU, the Gateway must receive a valid EntityIdentifier attribute. An EntityIdentifier is valid if it is not 0:0:0.
- ♦ To specify the RPR FOM version to use, do not use a VLRPRxx keyword. Use the -R startup option, as in:

```
gateway -f VR-Link20014.fed -R 2.0014
```
- ♦ The following section has been added to *MÄK Gateway User's Guide*:

Picking the Ethernet Card to Use

It is common to use the Gateway on a machine with two NIC cards. Typically this configuration is chosen when there is one network for HLA traffic and one network for DIS traffic. Due to the nature of HLA, you must consult your RTI documentation for specifying the HLA network. The DIS network can be configured using *gateway.mtl*. By default the Gateway picks the first network interface it finds for outgoing and incoming DIS traffic. If you want to use a different network, do the following:

- ♦ In *gateway.mtl* set **disDestAddr** to the broadcast address for the DIS Network. For example, if you have a class C network with a subnet mask of 255.255.255.0, and your DIS network card is 158.123.43.54, then set **disDestAddr** to 158.123.43.255.



This is only an example. If you do not know your broadcast address, consult your network administrator.

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- ♦ In *gateway.mtl* set **disMcasDevice** to the IP address for your DIS network card. In the previous example that would be 158.123.43.54. The **disMcasDevice** parameter is used for both multicast traffic and for configuring your network card. If you are unsure of your IP address, consult your network administrator.

Bug Fixes

This section describes problems that have been fixed in this release:

- ♦ The Designator ID field of Designators is now properly translated after a designator is deleted.
- ♦ The Event ID is now properly translated from HLA to DIS when it comes from another Gateway.
- ♦ The protocol IDs for Application Specific Signal Interactions are now being byte-swapped.
- ♦ When the remapping DIS IDs option is set, the Gateway now correctly fills in the host index of embedded systems.
- ♦ The Gateway no longer crashes when long command line arguments are passed into it.