



MÄK Data Logger 4.2.2 Release Notes

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Systems Supported

Table 1 lists the platforms currently supported by MÄK Logger 4.2.2. Application code must be built with the indicated compilers in order to link to Logger libraries.

Table 1: Platforms supported

Platform	Compiler
Red Hat Enterprise Linux Workstation 3.0, 4.0, and 5.0	default compiler
Red Hat Fedora Core 3 and Fedora 7	default compiler
PC with Windows XP	Microsoft Visual C++ 7.1 and 8.0
SGI IRIX 6.5	MipsPro7.3 C++ compiler
Sun Sparcstation with Solaris 10	SPARCompiler C++ 5.8



Red Hat Enterprise Linux Workstation 3.0 and Fedora Core 3 will not be supported in the next feature release.

Logger API

You must have VR-Link 3.11.1 and its required compiler versions to link the Logger libraries, but you do not need it to run the executables. Please see VR-Link documentation for information about required compilers.

You must have a VR-Link developer's license to compile plug-in or applications using the Logger API.

Qt Toolkit Compatibility

The Logger GUI is built using the Qt Toolkit, a cross-platform GUI toolkit. Logger 4.2.2 uses Qt 4.3.0. You do not need Qt to do development that does not affect the GUI.

Compiler Compatibility on Windows

Current and prior releases of MÄK products have been compiled using different versions of the Visual C++ compiler. When you run MÄK products together, for example, the Logger and the Stealth, we strongly recommend that you run versions created with the same compiler. Mixing products compiled with different compilers can result in program instability.

FLEXlm Support

Logger 4.2.2 uses FLEXlm 11.4-2 for Windows, Solaris, and Linux versions. You should update the FLEXlm files on your license server to this version. To update license server files, overwrite the existing files with the files in the `./flexlm11.4-2` directory. You do not need to replace your license files, unless your maintenance agreement has expired. The IRIX version continues to use FLEXlm 9.2.

ODBC Driver Support

The Logger database export feature supports the following ODBC drivers:

- ♦ MySQL ODBC 3.51
- ♦ Microsoft Access.

Patch Required for AMD Dual-processor Windows PCs

VR-Link-based products use a high resolution counter for time calculations on Windows PCs. Customers who are running Windows on PCs with multiple AMD Athlon 64-bit processors may notice clock jitter, which may cause time in MÄK products to run backwards. This occurs when the Windows scheduler changes the CPU the MÄK process is using. If the high resolution counters on each processor are not synchronized, the application may witness a decrease in the high resolution counter value stored in the processor causing an incorrect time calculation. To fix this problem customers, apply the AMD Dual-Core Optimizer patch provided by AMD. You can get the patch at:

http://www.amd.com/us-en/Processors/TechnicalResources/0,,30_182_871_9706,00.html



If you get an error when you try to access this URL, reload the page.

Network Compatibility

HLA only

Logger 4.2.2 was built against VR-Link 3.11.1 and is compliant with:

- ♦ RPR-FOM 1.0 and a subset of 2.0 (draft 6, 14, and 17)
- ♦ MÄK RTI 3.1.2 (please see “Known Problems,” on page 5.)

DIS only

Logger 4.2.2 supports DIS 2.0.4, IEEE 1278.1, 2.1.4, and IEEE 1278.1a, and can therefore interoperate with DIS applications of any of these

RTI Support

We recommend using the latest version of the MÄK RTI. However, the Logger should work with other RTIs that conform to the HLA 1.3 specification or the IEEE 1516 SISO DLC API and are built using the same compiler as your version of the Logger.

When using the MÄK RTI, remember to make sure that the Logger can find your FED file, and optional *rid.mtl*, file by either putting them in the directory from which you are running, or by setting the environment variable the directory that contains them.

FOM Support

Logger 4.2.2 has built-in support for versions 0.5, 0.7, 0.8, 1.0, and 2.0, drafts 6, 14, and 17, of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Logger 4.2.2 uses RPR FOM 1.0.

For information about FOM mapping and selecting the correct FOM Configuring the Logger for HLA in Chapter 2, "Installing and Configuring the Logger", in *MÄK Data Logger User's Guide*.

New Features

Logger 4.2.2 is a maintenance release. It supports additional platforms and has some bug fixes.

Logger 4.2.2 has a new configuration option, which fixes a performance problem on some systems. The **basicGui** option, in *lgrConfig.xml*, enables (true) or disables (false) use of simpler drawing techniques in the Logger GUI. Enabling this option can increase GUI responsiveness on some computers. Default: false.

Bug Fixes

Logger 4.2.2 fixes the following bug:

- ♦ The Logger occasionally crashed when recording to multiple files.
- ♦ The Logger crashed when using the `setConnectionParameters` command from the console or command line.

Known Problems

This section lists known problems with Logger functionality:

- ♦ The HLA 1516 Logger crashes on exit if you use the MÄK RTI 2.4.2 through 3.1.1. This is due to a problem in the RTI.
- ♦ Logger files that include the VR-Forces embarkation feature in DIS exercises, such as *embarkdemoDIS.lgr*, do not reset embarkation status after time jumps. To correct the embarkation state of entities, stop playback and start playing the file from the beginning.
- ♦ Due to a bug in VR-Link 3.11.1, on Fedora 7 and Solaris 10, the Logger might not compile unless you edit `include/vlconfig.h` to remove the following lines:

```
typedef unsigned char byte, *pbyte;  
typedef unsigned long int DWORD, *PDWORD;  
typedef long int LONG, *PLONG;
```
- ♦ If you are running the Logger in HLA 1516 with the MÄK RTI, and the RTI parameter `RTI_enableLrcWebService` is enabled, the Logger might pause when starting or stopping recording. This pause can be 30 seconds or longer and the Logger might not be responsive during this time.

Playing HLA 1.3 Logger Files in HLA 1516 Federations

In general, the Logger uses the same file format for HLA 1.3 and HLA 1516 Logger files. You can record a Logger file from an HLA 1.3 federation, and play it back into an HLA 1516 federation (and vice versa). However, you must use the same FOM representation during record and playback. For example, if you use an HLA-1.3-style FED file during recording, you must use an HLA-1.3 style FED file during playback, even if you are using the IEEE 1516 version of the Logger and an IEEE 1516 RTI. (VR-Link and the MÄK RTI allow you to use HLA-1.3-style FED files with IEEE-1516-based federates, and vice versa).

The main reason that consistency in FOM format is necessary is that IEEE 1516 uses different names for the "Root" classes of the Object class hierarchies. A 1.3-style FED file requires a Root class a 1516-style XML files requires a Root class called *HLAObjectRoot*. The reason this can be a problem is that if the Logger is playing an HLA-1.3-based Logger file into a federation that is using a 1516-based XML file it might come across an instance of a class called, for example, "ObjectRoot.Vehicle". If it tries to register an object of this class, the RTI will complain that no such class exists. There might be a class called *HLAObjectRoot.Vehicle* in the current FOM, but the RTI or Logger does not know that this is actually the same class.

