

Red Hat Enterprise MRG

Release Notes

1.0



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Red Hat Enterprise MRG

These Release Notes contain important information available at the time of release of Red Hat Enterprise MRG 1.0. Known problems, resources, and other issues are discussed here. Read this document before beginning to use the Red Hat Enterprise MRG distributed computing platform.



Red Hat Enterprise MRG: Release Notes

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System Requirements


This section contains information related to installing Red Hat Enterprise MRG, including hardware and platform requirements.

1. Supported Hardware and Platforms

Red Hat Enterprise MRG is highly optimized to run on Red Hat Enterprise Linux 5.1 and later due to its inclusion of MRG Realtime. The MRG Messaging and MRG Grid capabilities can also run on other platforms, but without the full benefits of running on Red Hat Enterprise Linux 5.1 and later.

	x86	x86_64	RHEL 4.6	RHEL 5.1	Windows	Solaris
MRG Messaging Native Linux Broker	X	X	X	X		
MRG Messaging Client - Java *	X	X	X	X	X	X
MRG Messaging Client - JMS *	X	X	X	X	X	X
MRG Messaging Client - C++	X	X	X	X		
MRG Messaging Client - Python	X	X	X	X		
MRG Grid Scheduler (<i>preview</i>)	X	X	X	X		
MRG Grid Execution Platform (<i>preview</i>)	X	X	X	X		
MRG Realtime	X	X		X		

Table 1.1. Supported Hardware and Platforms

 **Note**

* The Java and JMS MRG Messaging Clients are supported for use with Java 1.5 and Java 6 JVMs. For Sun JVMs, it is recommended to use Java 1.5.15 or later or 1.6.06 or later.

2. Installing and Configuring Red Hat Enterprise MRG

In order to download and install Red Hat Enterprise MRG 1.0 on your system, you need to subscribe to the appropriate channels on the Red Hat Network (RHN).

Channel Name	Platform	Architecture
MRG Grid	RHEL-4 AS	32bit, 64bit
MRG Grid	RHEL-5 Server	32bit, 64bit
MRG Grid	RHEL-4 ES	32bit, 64bit
MRG Grid	non-Linux	32bit
MRG Management Console	RHEL-4 AS	32bit, 64bit
MRG Management Console	RHEL-4 ES	32bit, 64bit
MRG Management Console	RHEL-5 Server	32bit, 64bit
MRG Messaging	RHEL-4 AS	32bit, 64bit
MRG Messaging	RHEL-4 ES	32bit, 64bit
MRG Messaging	RHEL-5 Server	32bit, 64bit
MRG Messaging	non-Linux	32bit
MRG Messaging Base	RHEL-4 AS	32bit, 64bit
MRG Messaging Base	RHEL-4 ES	32bit, 64bit
MRG Messaging Base	RHEL-5 Server	32bit, 64bit
MRG Realtime	RHEL-5 Server	32bit, 64bit

Table 1.2. Red Hat Network Channels

2.1. Installing and Configuring MRG Messaging

Installation and configuration information for MRG Messaging is available in the *MRG Messaging Installation Guide*. For information on developing your own programs for MRG Messaging, see the *MRG Messaging Tutorial*.

Red Hat Enterprise MRG documentation is available for download at the [Red Hat Enterprise MRG Documentation Website](#)¹.

2.2. Installing and Configuring MRG Realtime

Installation and configuration information for MRG Realtime is available in the *MRG Realtime Installation Guide*. For information on tuning MRG Realtime, see the *MRG Realtime Tuning Guide*.

MRG Realtime is incompatible with the Xen-based virtualization features in Red Hat Enterprise Linux 5 and is not supported for use with any virtualization technology.

The MRG Realtime kernel may be rebased over the lifetime of a Red Hat Enterprise MRG release, however there are no guarantees of a stable kernel Application Binary Interface (kABI) over the life of Red Hat Enterprise MRG.

Because MRG Realtime provides an updated Linux kernel, it is certified for use on a subset of the hardware systems certified for Red Hat Enterprise Linux. MRG Realtime is certified on x86 and x86_64 architectures only. Furthermore, Red Hat works with hardware vendors to certify systems for use with MRG Realtime based on customer demand. At initial release, the list of certified systems for MRG Realtime includes:

HP

- DL320g5
- DL360g5
- DL380g5

IBM

- LS21 blade
- HS21 blade

For an updated list of certified systems, see the [Red Hat Hardware Catalog](#)².

Red Hat Enterprise MRG documentation is available for download at the [Red Hat Enterprise MRG Documentation Website](#)³.

2.3. Installing and Configuring MRG Grid

MRG Grid is provided as part of the Red Hat Enterprise MRG distributed computing platform as a Technology Preview. Technology Preview features are not currently supported under Red Hat

¹ http://www.redhat.com/docs/en-US/Red_Hat_Enterprise_MRG/

² <https://hardware.redhat.com/>

³ http://www.redhat.com/docs/en-US/Red_Hat_Enterprise_MRG/

Enterprise Linux subscription services, may not be functionally complete, and are generally not suitable for production use. However, these features are included as a customer convenience and to provide the technologies with wider exposure.

Customers may find these features useful in non-production environments, and can provide feedback and functionality suggestions prior to their transition to fully supported status. Erratas will be provided for high-priority security issues.

During its development additional components of a Technology Preview feature may become available to the public for testing. It is the intention of Red Hat to fully support Technology Preview features in a future release.

MRG Grid is intended to be fully supported in an upcoming minor release.

Installation and configuration information for MRG Grid is available in the *MRG Grid Installation Guide*.

Red Hat Enterprise MRG documentation is available for download at the [Red Hat Enterprise MRG Documentation Website](#)⁴.

2.4. Installing and Configuring the MRG Management Console

Installation and configuration information for the MRG Management Console is available in the *MRG Management Console Installation Guide*.

Red Hat Enterprise MRG documentation is available for download at the [Red Hat Enterprise MRG Documentation Website](#)⁵.

⁴ http://www.redhat.com/docs/en-US/Red_Hat_Enterprise_MRG/

⁵ http://www.redhat.com/docs/en-US/Red_Hat_Enterprise_MRG/

Known Issues

The following are some of the most important known issues in Red Hat Enterprise MRG. If applicable, supported workarounds are also described.

1. MRG Messaging Known Issues

Bugzilla Number	Description	Workaround
444742	When a Java Messaging Service client attempts to send messages via a federation link to a queue on a remote broker with reply-to set to a temporary queue on the local broker. A client of the remote broker should be able to send a reply back via a federation link.	Temporary queues can be created directly through the <code>AMQQueue</code> class, allowing a specific name to be assigned to them. The appropriate routes between brokers can then be configured using the <code>qpidd-route</code> tool
449827(a)	The <code>client::Session</code> class in the C++ client API has been modified. The new <code>client::Session</code> class provides synchronous functions corresponding to AMQP commands. The functions block until the command is completed by the broker and return a C++ result object (or void if no result is expected.)	The names and parameter lists of the functions on <code>client::Session</code> are identical, only the return types differ. The functions <code>async()</code> and <code>sync()</code> can be used to convert a <code>Session</code> to an <code>AsyncSession</code> and vice versa.
449827(b)	A new <code>client::AsyncSession</code> class has been added to the C++ client API. The <code>client::AsyncSession</code> class provides asynchronous functions for the AMQP commands. These functions send the command and return immediately. They return a <code>Future</code> object that can be used to wait for the command to complete and retrieve the result.	The names and parameter lists of the functions on <code>client::AsyncSession</code> are identical, only the return types differ. The functions <code>async()</code> and <code>sync()</code> can be used to convert a <code>Session</code> to an <code>AsyncSession</code> and vice versa.

Bugzilla Number	Description	Workaround
450707	<p>When the broker is started with the store module loaded, the store module will open the BDB database in the data directory. It has been observed that if BDB is upgraded, or the store directory from one version of BDB is used by another version, then the broker will fail to start. One of the most commonly observed error messages is:</p> <pre>Database handles still open at environment close Error opening environment (BdbMessageStore.cpp:144): DbEnv::open: Invalid argument</pre>	<p>If recovery is not important (that is, if there are no messages or queues that need to be restored on startup), then simply delete the database and journal (if it exists) in the store directory. The broker will create a new one when it starts. This is most easily done with a command such as</p> <pre>rm -rf /var/lib/qpidd/rhm</pre> <p>where <code>/var/lib/qpidd</code> is the data directory. If recovery is important, then it will be necessary to run the <code>db_recover</code> utility against the database. This requires the <code>db4-utils</code> package. Run</p> <pre># yum install db4-utils</pre> <p>as root to install the package.</p>
450751	<p>Using <code>TCP_NODELAY</code> can significantly improve the performance of Java clients that do synchronous publishing or that use many small transactions.</p>	<p><code>TCP_NODELAY</code> can be enabled by setting the <code>amqj.tcpNoDelay</code> system property to true:</p> <pre>java -Damqj.tcpNoDelay=true</pre>
450840	<p>For performance reasons the Java client library does not throttle producer rate by default. When an application is using a slow network or sending very large messages, messages might be produced faster than they are written. In this situation the client application may eventually</p>	<p>This can be prevented (with a small performance penalty) by using the property</p> <pre>-Dprotectio=true</pre>

Bugzilla Number	Description	Workaround
	run out of memory.	
451018	If the same relative path is specified for <code>data-dir</code> and <code>pid-dir</code> the daemon starts but fails when shutdown (using the <code>--quit</code> option) as the pid file is in an unexpected location.	Always use absolute paths when running the broker as a daemon.
451106	When MRG Messaging is started as a daemon it sends log messages to syslog by default. The <code>--syslog-name</code> and <code>--syslog-facility</code> options allow you to modify the name and facility that is used in syslog messages. When MRG Messaging is started without the <code>--daemon</code> option it sends log messages to <code>stderr</code> by default.	You can change the log destination in either case by setting the <code>--log-output</code> option.
451121	Under a specific failure condition, normal recovery could fail to guarantee full atomicity.	This will be addressed in an erratum. In the meantime, the journal contains a sufficient record to avoid data loss following manual correction by the Red Hat team.
451269	When using the journal, the available file handles for the process needs to be correctly configured for the expected number of queues and the number of files per journal. Currently, two file handles are opened for each active journal file.	
451716	Recent changes have degraded the transactional performance.	This will be optimised in an erratum.

Table 2.1. MRG Messaging Known Issues

2. MRG Realtime Known Issues

Bugzilla Number	Description	Workaround
450220	<p>To run MRG Realtime on Red Hat Enterprise Linux 5.1 you will need to update the following packages from RHEL 5.2:</p> <ul style="list-style-type: none">• systemtap-0:0.6.2-2• systemtap-runtime-0:0.6.2-2• systemtap-debuginfo-0:0.6.2-2• systemtap-testsuite-0:0.6.2-2• oprofile-0:0.9.3-16• oprofile-gui-0:0.9.3-16• oprofile-devel-0:0.9.3-16• oprofile-debuginfo-0:0.9.3-16• crash-0:4.0-5.0.3• crash-devel-0:4.0-5.0.3• crash-debuginfo-0:4.0-5.0.3• kexec-tools-0:1.102pre-21• kexec-tools-debuginfo-0:1.102pre-21	

Table 2.2. MRG Realtime Known Issues

Appendix A. Revision History

Revision History

Revision 1.1	17 June, 2008	Lana Brindley
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Ready for Release

Revision 1.0	6 June, 2008	Lana Brindley
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Document Creation

