

Foglight® 5.9.2

# **System Requirements and Platform Support Guide Revision 1**



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#### Legend

- **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.
- CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.
- i IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO: An information icon indicates supporting information.

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# Hardware requirements and guidelines

This System Requirements and Platform Support Guide Revision 1 contains information on the hardware requirements and supported platforms for this release of Foglight<sup>®</sup>. Please review the information in this guide before installing Foglight.

This guide is intended for Foglight system administrators. The first topic lists the system requirements for the Management Server and database repository for 32-bit and 64-bit platforms. The next topic lists the platforms supported for the Management Server, database repository, and the Agent Manager, as well as validated web browsers and PDF viewer.

- About hardware requirements
- Single-tier hardware requirements
- Multi-tier hardware requirements
- Agent Manager resource requirements

This topic lists the hardware requirements (CPU, RAM, and disk storage) for 32-bit and 64-bit installations of the Foglight Management Server and the database repository.

## **About hardware requirements**

The hardware needed to run Foglight can vary widely depending on several factors, including:

- The number and type of agents that are being used
- The persistence and data-rollup policies
- Agent configuration settings

You should not consider doing a production implementation without conducting a proper scoping and sizing exercise with a qualified Quest Software Inc. representative. You can arrange for a sizing analysis by contacting your Quest Software Inc. Sales Representative. At a minimum, you are required to provide hardware matching the specifications in this topic.

#### Server components and tiers

Each Foglight® Management Server installation consists of two components:

- · The Foglight Management Server
- The Foglight Database Repository

Setting up Foglight to run both of its components on the same machine is known as a *single-tier* installation. Using separate machines for each component is known as a *multi-tier* installation. Whichever configuration you choose, each component requires its own specifically-dedicated resources. To help facilitate sizing, the resources required to support each component are listed separately.

## Single-tier hardware requirements

To install Foglight in a single-tier configuration, you must have hardware capable of running both the Management Server (JVM) and database repository together. The requirements are listed below.

#### Table 1. Server and Database, 32-bit platforms

4-way 2.4 GHz CPUs—one of the following:

#### **CPU**

- 1 quad core
- 2 dual core
- 4 single core

#### 4 GB in total:

#### RAM

2.4 GB for Management Server
 (1.6 GB for Heap, 0.8 GB for Java<sup>TM</sup> Virtual Machine)

- 0.8 GB for database repository
- · 0.8 GB for operating system

If using built-in embedded database repository:

• 120 GB, 10000 RPM hard disk or better

#### Storage

If using external database repository:

- For Management Server: 40 GB, 7200 RPM hard disk or better
- For Database Repository: 80 GB, 10000 RPM hard disk or better
- **IMPORTANT:** Some 32-bit operating systems, such as Windows<sup>®</sup> Server 2003 Standard Edition, have a 4 GB memory limit. This will limit the performance of Foglight particularly in single-tier configurations and should be taken into account when determining your hardware needs.

#### Table 2. Server and database, 64-bit platforms

4-way 2.4 GHz CPUs—one of the following:

#### CPU

- 1 quad core
- 2 dual core
- · 4 single core

#### 12 GB in total:

6 GB for Management Server
 (4 GB for Heap, 2 GB for Java Virtual Machine)

#### RAM

- 4 GB for database repository
- 2 GB for operating system

If using built-in embedded database repository:

120 GB, 10000 RPM hard disk or better

#### **Storage**

If using external database repository:

- For Management Server: 40 GB, 7200 RPM hard disk or better
- For Database Repository: 80 GB, 10000 RPM hard disk or better

## Multi-tier hardware requirements

To install Foglight<sup>®</sup> in a multi-tier configuration, you must have separate hardware for each of the Management Server (JVM) and database repository. The requirements are listed below.

Table 3. Management Server (32-bit and 64-bit platforms)

	32-bit	64-bit
CPU	<ul><li>2-way 2.4 GHz CPUs—one of the following:</li><li>1 dual core</li><li>2 single core</li></ul>	
RAM	<ul> <li>4 GB in total:</li> <li>3 GB for Management Server         (2 GB for Heap, 1 GB for Java<sup>TM</sup> Virtual Machine)     </li> <li>1 GB for operating system</li> </ul>	<ul> <li>8 GB in total:</li> <li>6 GB for Management Server (4 GB for Heap, 2 GB for Java Virtual Machine)</li> <li>2 GB for operating system</li> </ul>
Storag	40 GB, 7200 RPM hard disk or better	

Table 4. Database Repository (32-bit and 64-bit Platforms)

	32-bit	64-bit
CPU	<ul><li>2-way 2.4 GHz CPUs—one of the following:</li><li>1 dual core</li><li>2 single core</li></ul>	
RAM	<ul><li>3 GB in total:</li><li>2 GB for database repository</li><li>1 GB for operating system</li></ul>	<ul><li>6 GB in total:</li><li>4 GB for database repository</li><li>2 GB for operating system</li></ul>
Storag e	80 GB, 10000 RPM hard disk or better	

## **Agent Manager resource requirements**

Foglight<sup>®</sup> Agent Manager uses minimal system resources, whether running on a monitored host or monitoring remotely. The amount used depends on a variety of factors including the number of agents running on the monitored host, the amount of data being collected, and whether the Management Server is running.

CAUTION: This section is intended to provide general information that is applicable to most Foglight installations. You should not consider doing a production implementation without conducting a proper scoping and sizing exercise with a qualified Quest representative.

The following table lists the system resources typically used by the Agent Manager while it is running.

Table 5. Agent Manager: Typical resource requirements

CPU Usage	<ul> <li>Varies greatly by cartridge/agent, the amount of data being collected, and the complexity of the technology being monitored</li> <li>Average is 4.8% CPU utilization</li> </ul>
	<ul> <li>Varies greatly by cartridge/agent, the complexity of the technology being monitored, and Agent Manager configuration</li> </ul>
RAM	<ul> <li>Agent Manager base memory requirement is 256 MB. Additional memory may be required depending on the deployed agent types and instances.</li> </ul>
	Example agent package requirements
	Foglight for Infrastructure — 12 MB on deployment and 4 MB for each agent instance. Foglight for VMware — 2560 MB on deployment.
Storage	May use up to 1 GB of hard disk for installation, operation, and temporary data storage

## Supported platforms

This chapter lists the platforms supported for the Foglight<sup>®</sup> Management Server and database repository, for the Foglight Agent Manager, and for the Operating System cartridge. It also lists the requirements for other software used with Foglight.

- Supported platforms for the Management Server
- Supported external databases
- Supported platforms for the Agent Manager
- Validated web browsers
- · Validated web browsers
- Supported PDF report viewer

## **Supported platforms for the Management Server**

The Foglight<sup>®</sup> Management Server is supported on the platforms listed in the following table. These platforms have passed quality assurance testing with Foglight.

- 32-bit installations are only recommended for monitoring small or infrastructure-only environments. If you
  are planning to monitor large, APM, ERP, Java<sup>TM</sup>, database, or virtualized environments, use a 64-bit
  platform.
- Installing 32-bit versions on a 64-bit operating system is not supported. A 64-bit installation binary should be installed on a 64-bit operating system.
- Foglight is a multi-threaded software application running in a Java Virtual Machine (JVM). It runs on, and takes advantage of, MultiThreading and HyperThreading (also known as Simultaneous MultiThreading) enabled environments.
- Unless you are running the installer in console mode, verify that you have an X Window System<sup>TM</sup> environment prior to installing Foglight on UNIX<sup>®</sup> platforms.

**Table 6. Management Server platforms** 

Operating System	Version	OS Architecture	32-bit 64-bit
CentOS Linux <sup>®</sup>	5.x	x86-64	<b>✓</b> a
	6.x		
	7.x		

**Table 6. Management Server platforms** 

Operating System	Version	OS Architecture	32-bit	64-bit
Microsoft® Windows®	Server 2008	IA-32	<	
		x86-64	<	<
	Server 2008 R2	x86-64		✓
	Server 2012 Server 2012 R2			
	Server 2012 R2 Core			
	7 (Professional or above)	IA-32		
	r (r rorosororiai or abovo)		✓	
		x86-64	✓	✓
	10	x86-64	<	<
	Server 2016	x86-64	✓	
Novell <sup>®</sup> SUSE Linux <sup>®</sup> Enterprise Server	10 <sup>b</sup>	IA-32	✓	
	11	x86-64	✓	<b>✓</b> a
	12			
	12 SP2			
	12 SP3			
Oracle <sup>®</sup> Linux <sup>®</sup>	5.x	IA-32	✓	
	6.x 7.x	x86-64	✓	✓ a
Oracle Solaris <sup>®</sup>	10 (including Zones) <sup>c</sup>	x86-64		✓
		SPARC		✓
	11 (including Zones) <sup>c</sup>	x86-64		<
		SPARC		✓
See Final platform support notice on page 11 for future support.				
Red Hat <sup>®</sup> Enterprise Linux <sup>®</sup>	AP/Server 5.x	IA-32	<	
	6.x	x86-64	<b>✓</b>	✓ a
	7.x		•	
Ubuntu <sup>®</sup> Linux <sup>®</sup>	12.04.x LTS	x86-64		✓
	14.04.x LTS			

a.On 64-bit RPM-based Linux platforms, the 32-bit version of *libgcc\*.rpm* must be installed for the installer and Management Server to run. On 64-bit Ubuntu, the *ia32-libs* package must be installed.

b.Embedded database is not supported on this version.

c.See the Support Policy on Virtualization on our support portal for important information on using Foglight in virtual environments.

## Operating system patch requirements for the JRE

Foglight™ requires a Java Runtime Environment (JRE) to run, both for the Management Server and for the Agent Manager that runs on monitored hosts.

Foglight installs the JREs it needs, but you must ensure that any machine that will run a component of Foglight has its operating system patched to the minimum patch level required to support this JRE. This release of Foglight uses the following Java versions:

- Management Server: Java 8
- Agent Manager: Java 8

Check with your operating system vendor for the latest operating system patches required to run this version of Java on your system. Foglight cannot check this during installation.

### Final platform support notice

The following operating system is not supported in this release:

Microsoft<sup>®</sup> Windows Server<sup>®</sup> 2003

Support for the following operating system will be discontinued in an upcoming Foglight<sup>®</sup> release. This platform is supported in this release. We hope this notice of planned support changes helps you plan your upgrades.

Novell<sup>®</sup> SUSE Linux Enterprise Server 10

## Supported external databases

Foglight<sup>®</sup> Management Server requires a database repository. You have the option of using either the embedded PostgreSQL® database included with Foglight<sup>®</sup>, or an external PostgreSQL, Oracle<sup>®</sup>, SQL Server<sup>®</sup>, or MySQL<sup>TM</sup> database. The embedded database is included with the Management Server and it follows the same lifecycle, it stops and starts with the server. If you use an external database, you are responsible for its procurement, installation, and management. Using an external database may improve the Management Server performance.

Table 7. Supported external databases

Database	Supported Versions	
PostgreSQL <sup>®</sup>	• 9.4.x and 9.5.x	
MySQL <sup>TM</sup>	• 5.1.45 or later on 5.1.x branch	
	• 5.5.20 or later on 5.5.x branch	
	• 5.6.18 or later on 5.6.x branch	
	• 5.7.9 or later on 5.7.x branch	

Table 7. Supported external databases

Database	Supported Versions	
	9i R2 (9.2.x branch)	
	• 10g R2 (10.2.x branch)	
	• 11g R1 (11.1.x branch)	
Oracle <sup>®</sup>	• 11g R2 (11.2.x branch)	
	12c R1 (version 12.1.x branch)	
	12c R2 (version 12.2.x branch)	
	<ul> <li>SQL Server 2005 (version 9.00.1399.06 or later)</li> </ul>	
	<ul> <li>SQL Server 2008 (version 10.0.1600 or later)</li> </ul>	
001 0®	SQL Server 2008 R2	
SQL Server <sup>®</sup>	SQL Server 2012	
	SQL Server 2014	
	SQL Server 2016	

NOTE: For databases that have different editions, only the editions intended or licensed for production use are supported for use with Foglight. "Express" or "Lite" editions may be used to test Foglight, but should not be used in a production deployment.

You can run your external database on any operating system supported by your database vendor, but Quest Software Inc. only provides support for external database issues that can be reproduced on one of the operating systems (32- or 64-bit) listed in the following table.

Table 8. Supported operating system versions

Operating System	Version
HP-UX	11i v3
IBM <sup>®</sup> AIX <sup>®</sup>	5.3
Microsoft® Windows®	Server 2008 R2
	Server 2012
	Server 2012 R2
	Server 2016
	10
Oracle Solaris®	10 (Update 8)
	11
Red Hat <sup>®</sup> Enterprise Linux <sup>®</sup>	6.x
	7.x

## Supported platforms for the Agent Manager

The following table lists the platforms that are supported for the Foglight® Agent Manager (FgIAM).

**Table 9. Supported Agent Manager platforms** 

Operating System	Version	OS Architecture	Valid Installer(s)
CentOS Linux®	5.x	IA-32	fglam- <ver>-linux-ia32.bin</ver>
	6.x	x86-64	fglam- <ver>-linux-ia32.bin<sup>a</sup></ver>
	7.x		fglam- <ver>-linux-x86_64.bin</ver>
HP-UX	11i v2 11i v3	Itanium	fglam- <ver>-hpux-ia64.bin</ver>
IBM <sup>®</sup> AIX <sup>®b</sup>	6.1 7.1	POWER	fglam- <ver>-aix-powerpc.bin<sup>1, c</sup></ver>
Microsoft® Windows®	Vista (SP1 or above)	IA-32	fglam- <ver>-windows-ia32.exe</ver>
	7 (Professional or above)	x86-64	fglam- <ver>-windows-ia32.exe<sup>1</sup></ver>
	8 (Pro, Enterprise) 8.1 10		fglam- <ver>-windows-x86_64.exe</ver>
	Server 2008	IA-32	fglam- <ver>-windows-ia32.exe</ver>
		x86-64	fglam- <ver>-windows-ia32.exe<sup>1</sup> fglam-<ver>-windows-x86_64.exe</ver></ver>
	Server 2008 R2 Server 2012 Server 2012 R2 Server 2012 R2 Core Server 2016	x86-64	fglam- <ver>-windows-x86_64.exe</ver>
Novell <sup>®</sup> SUSE Linux <sup>®</sup>	10	IA-32	fglam- <ver>-linux-ia32.bin</ver>
Enterprise Server	11 12	x86-64	fglam- <ver>-linux-ia32.bin<sup>1</sup> fglam-<ver>-linux-x86_64.bin</ver></ver>
	12 SP1 and SP2		
Oracle <sup>®</sup> Linux <sup>®</sup>	4.x	IA-32	fglam- <ver>-linux-ia32.bin</ver>
	5.x 6.x 7.x	x86-64	fglam- <ver>-linux-ia32.bin<sup>1</sup> fglam-<ver>-linux-x86_64.bin</ver></ver>
Oracle Solaris®	10 (including Zones) <sup>d</sup>	x86-64	fglam- <ver>-solaris-x86_64.bin</ver>
	ro (morading Zonoo)	SPARC	fglam- <ver>-solaris-sparc.bin<sup>1</sup>, <sup>2</sup></ver>
	11 (including Zones) <sup>3</sup>	x86-64	fglam- <ver>-solaris-x86_64.bin</ver>
		SPARC	fglam- <ver>-solaris-sparc.bin<sup>e</sup></ver>
Red Hat <sup>®</sup> Enterprise	AP/Server 5.x	IA-32	fglam- <ver>-linux-ia32.bin</ver>
Linux <sup>®</sup>	6.x	x86-64	fglam- <ver>-linux-ia32.bin<sup>1</sup></ver>
	7.x		fglam- <ver>-linux-x86_64.bin</ver>
Ubuntu <sup>®</sup> Linux	12.04.x LTS 14.04.x LTS	x86-64	fglam- <ver>-linux-x86_64.bin</ver>

a.Installer includes a 32-bit JRE, so the maximum heap size is limited to a 32-bit address space, even on a 64-bit operating system.

b.Before installing or upgrading the Agent Manager, ensure that the latest OS service packs are installed.

c. This platform will switch to a 64-bit JRE when support for 32-bit operating systems is removed (see Final platform support notice on page 14).

d.See the Support Policy on Virtualization on our support portal for important information on using Foglight in virtual environments on these platforms.

e.Installer includes a 32-bit JRE. While Solaris 11 only supports 64-bit SPARC hardware, the maximum heap size is still limited to a 32-bit address space. This platform will switch to a 64-bit JRE in a future release.

## Operating system patch requirements for the JRE

Foglight™ requires a Java Runtime Environment (JRE) to run, both for the Management Server and for the Agent Manager that runs on monitored hosts.

Foglight installs the JREs it needs, but you must ensure that any machine that will run a component of Foglight has its operating system patched to the minimum patch level required to support this JRE. This release of Foglight uses the following Java versions:

Management Server: Java 8
Agent Manager: Java 8

Check with your operating system vendor for the latest operating system patches required to run this version of Java on your system. Foglight cannot check this during installation.

### Final platform support notice

The following operating system is not supported in this release:

Microsoft<sup>®</sup> Windows Server<sup>®</sup> 2003

Support for the following operating systems will be discontinued in an upcoming Foglight<sup>®</sup> release. These platforms are supported in this release. We hope this notice of planned support changes helps you plan your upgrades.

- Oracle<sup>®</sup> Linux<sup>®</sup> 4.x
- Novell<sup>®</sup> SUSE Linux Enterprise Server 10

### Validated web browsers

The Foglight<sup>®</sup> user interface is designed to work with standards-compliant Web browsers. The following table lists the Web browsers that is tested and validated for use with this release of Foglight.

Table 10. Validated web browsers

Browser Type	Version / Patch Level Validated
Internet Explorer <sup>®</sup> 11, Microsoft <sup>®</sup> Edge (desktop and touch environments)	Microsoft Windows <sup>®</sup> 7, 8.1, and 10. Latest patch update available at March 2016.
Firefox <sup>®</sup>	45.0.1, 45.0.1 esr
Safari	9.1
(Mac OS X Mavericks, Yosemite, and El Capitan on IOS® 9.3)	
Chrome <sup>TM</sup>	49.0.2623.87

### **End of support notice**

Support for Microsoft® Internet Explorer® 8, 9, and 10 is discontinued as of this Foglight® release.

Microsoft ended the support for these versions on January 12, 2016. For more information, visit https://support.microsoft.com/en-us/lifecycle?p1=13418.

#### What about other browsers?

The Foglight<sup>®</sup> user interface also works on recent releases of other standards-compliant Web browsers. This cannot be guaranteed because they have not been tested. If you are using a different browser and encounter a rendering or navigation problem, we recommend trying one of the validated browsers to see if that resolves your issue. Quest will only provide support for browser issues that can be reproduced on a validated browser.

The validation testing criteria used by Quest's Quality Assurance team is as follows:

- Browsers are tested on applicable operating systems including Windows<sup>®</sup> Server 2008, Windows Server 2012, Windows Vista, Windows 7, Windows 8, Windows 10, Red Hat<sup>®</sup> Desktop Linux<sup>®</sup>, Novell<sup>®</sup> SuSE Linux Enterprise Desktop, and Mac OS<sup>®</sup> X.
- The latest browser version or patch release available at the time of this Foglight release was used for testing. Newer browser versions will be validated as part of our next release.

## Supported PDF report viewer

To view PDF reports in Foglight, Adobe Acrobat Reader version 7.0.9 (or later) is preferred.

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## **Technical support resources**

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

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- · Engage in community discussions.
- · Chat with support engineers online.
- · View services to assist you with your product.