



# HP Diagnostics

Software Version: 9.24

## Diagnostics System Requirements and Support Matrixes

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# Chapter 1: Introduction

The Diagnostics System Requirements and Support Matrixes guide contains system requirement, support matrix, and software compatibility information for the Diagnostics platform and the various HP components and software that work with Diagnostics.

The information in this document can be used to aid in:

- planning Diagnostics system architecture
- establishing hardware, operating system and other software requirements required to run Diagnostics and its components
- understanding compatibility among the various components of Diagnostics
- planning integrations with other HP products

## **Note:**

- HP does not support server, database, browser, or other software versions that have been declared EOL (end-of-life) or EOS (end-of-support) by their manufacturer.
- While Diagnostics 9.24 servers can work with Collectors and Agents from earlier versions (8.0x, 9.1x, and 9.2x), we recommend that you use the 9.24 versions whenever possible.
- If you are monitoring environments that are not supported by Diagnostics 9.24 (for example, NET Framework 1.1), you can use older versions of Diagnostics Agents, provided that they are still officially supported by HP.

# Chapter 2: System Requirements for Diagnostics Components

Read the information in the chapter to understand the system configurations required for Diagnostics.

This chapter includes:

- ["Diagnostics Platform Support Summary" below](#)
- ["Requirements for the Diagnostics Server Host" on the next page](#)
- ["Scalability Examples for Diagnostic Mediator Servers" on page 10](#)
- ["Requirements for the Diagnostics Enterprise UI" on page 11](#)
- ["Requirements for the Diagnostics Collector Host" on page 13](#)
- ["IPv6 Environments" on page 14](#)

## Diagnostics Platform Support Summary

The table below lists the platforms supported by the various Diagnostics Servers and Collector.

**Note:** To install Diagnostics on 32 bit servers or on Solaris systems, use Diagnostics version 9.23. (For system requirements, refer to the Diagnostics 9.23 System Requirements and Support Matrixes guide.)

Operating System	<p><b>Windows 64-bit:</b></p> <ul style="list-style-type: none"><li>• Microsoft Server 2008</li><li>• Microsoft Server 2008 R2</li><li>• Microsoft Server 2012</li><li>• Microsoft Server 2012 R2</li></ul> <p><b>Linux 64-bit:</b></p> <ul style="list-style-type: none"><li>• SUSE Linux Enterprise Server: 10 SP2 or any later SP, 11</li><li>• Red Hat Enterprise Linux: 5.5 or any later 5.x version, 6.x, 7</li><li>• Oracle Linux (OEL): 6.x</li></ul>
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## Requirements for the Diagnostics Server Host

Some requirements for the host of a Diagnostics server depend on how the server is configured. A server can be configured as follows:

- As a Diagnostics mediator server.
- As a Diagnostics commander server.
- As both a Diagnostics mediator server and Diagnostics commander server. In this case, the server takes the system requirements of a Diagnostics mediator server.

The sections that follow indicate whether the requirements are specific to a Diagnostics mediator server or Diagnostics commander server.

### Note:

- A Diagnostics mediator server with more than 20 probes typically requires additional configuration. See "Configuring the Diagnostics Server for a Large Installation: in the HP Diagnostics Server Installation and Administration Guide.
- A Diagnostics mediator server uses the **archive** sub-directory to store data. This data is managed according to a data retention strategy. The default data retention strategy is appropriate for initial deployments but you need to monitor and adjust this strategy over time. Consider your data retention strategy when configuring a Diagnostics mediator server host. See "Diagnostics Data Management" in the HP Diagnostics Server Installation and Administration Guide.

## Supported Platform Versions for Diagnostics Servers

Diagnostics mediator servers and Diagnostics commander servers have the same requirements regarding platforms (operating systems).

For the list of supported platforms, see "[Diagnostics Platform Support Summary](#)" on the previous page.

## Other Diagnostics Components on the Host

The Server cannot run on a host that also has a Diagnostics Collector installed.

## Diagnostics Commander Server Host Sizing Requirements

The Diagnostics commander server does not have any additional sizing requirements.

## Diagnostics Mediator Server Host Sizing Requirements

The sizing requirements are grouped by type of probe—Java, .NET, or Python. If the Diagnostics mediator server gets data from more than one type of probe, use proportional sizing for each probe type.

The following table lists sizing recommendations for the host of a Diagnostics mediator server receiving data from Java probes or from .NET or Python probes.

Item	Standard Size (Default)		Large Size
<b>Platform</b>	Windows or Linux		Linux
<b>CPU Logical Cores</b>	Minimum 2X 2.8 GHz	Recommended 4X 2.8GHz	4X 2.8 GHz
<b>Memory</b>	Minimum 4 GB	Recommended 8 GB	16 GB
<b>Heap Size</b> See also "Adjusting the Heap Size" in the HP Diagnostics Server Installation and Administration Guide.	2560 MB		8 GB
<b>Disk</b> See also " <a href="#">Additional Disk Requirements for Diagnostics Mediator Servers</a> " on the next page.	2-4 GB per probe		2-4 GB per probe
<b>Maximum Active Entities</b>	450K		800K
<b>Estimated Probes Sizing</b> (See also the Sizing Notes below.)	200		400

### Sizing Notes for Probes:

These recommendations are based on the call profile size and number of unique server requests as follows:

- Call profile (depth of method calls) for each Server Request: 3
- Number of unique Server Requests per probe: 50



- Load testing was not checked on systems running resource consuming features such as data export and Composite Application Discovery (CAM).

As the number of monitored server requests per probe, server request depth (methods in the call profile), number of trended methods, and number of out-bound calls increase, so do the system requirements. The type of server request also affects the requirements. Web services require more resources for example. For information on viewing system capacity, see "System Capacity View Description" in the HP Diagnostics User Guide.

### **Additional Sizing Notes for .NET and Python Probes:**

- We recommend using the Probe Aggregator when working with any significant number of probes from either .NET or Python agents. The Probe Aggregator can improve scalability by reducing network communication between the probe and server, as well as reducing the load of the server itself. Load testing and capacity management were all tested and implemented based on the use of the Probe Aggregator. The probe numbers in the sizing tables refer to .NET and/or Python probes that are only connected using the Probe Aggregator. For details on the Probe Aggregator, refer to the HP Diagnostics .NET Agent Guide.
- When .Net and/or Python agents are connected directly to a Diagnostics Mediator without using Probe Aggregation, no more than 50 probes should be connected.

## **Additional Disk Requirements for Diagnostics Mediator Servers**

The bulk of the data in an installed and operating Diagnostics mediator server is in its archive sub-directory. The archive sub-directory contains the TSDB which is the data collected from the probes. This sub-directory can be mapped to a separate disk or partition to allow easier data management, especially in larger deployments. The disk requirements in this section apply to whichever disk or partition contains the archive sub-directory.

The disk for the Diagnostics mediator server has these requirements:

- If the disk is a SAN storage device, it must have adequate read and write speed comparable to a mid- to high-end drive.

For large deployments, such as those with more than 200 probes reporting to a single Diagnostics mediator server, the disk for the Diagnostics mediator server has the following additional requirements:

- Install onto an empty or a recently defragmented disk or partition dedicated to the Diagnostics mediator server.
- Install onto a high-performance disk or array. The better the raw performance of the disk that you dedicate to the Diagnostics mediator server, the more load it can handle.
- Do not install onto a network file system such as NFS or Samba.

- Disable virus scanning or other intensive background disk processes on the disk or partition. These can cause the Diagnostics mediator server to disconnect from the Diagnostics commander server.

## JRE Included with Diagnostics Servers

Diagnostics mediator servers and Diagnostics commander server each come bundled with the Java SE Java Runtime Environment (JRE) 8 from Oracle. This JRE provides the JVM used by the Diagnostics Server when it is started. This JRE can co-exist with other JREs that you may already have on the same host, however the Diagnostics components can only use the JRE included with them.

## Scalability Examples for Diagnostic Mediator Servers

As mentioned in the previous section, the system requirements for a Diagnostics mediator server depend on the number of probes reporting to the Diagnostics mediator server as well as the volume of data reported by each probe. These two factors affect one another; as one scales up the other scales down.

### Standard Size (Default)

The scalability example below is based on the following reference hardware configuration and was tested and certified by HP. This configuration may be higher than the minimal resources needed to run the system.

<b>Platform:</b>	Windows or Linux
<b>Operating System:</b>	Windows Server 2008 R2
<b>CPU Logical Cores:</b>	Intel Xeon @ 2.60 Ghz (32 Logical Cores)
<b>Memory:</b>	32 GB
<b>Disk I/O:</b>	500 GB 10K rpm SAS 3.0 Gb/s hard drive
<b>Java Heap:</b>	2.5G (-Xmx2560m)
<b>Disk Space:</b>	2-4 GB per probe (overall disk space can be adjusted by changing retention intervals)
<b>Network:</b>	1 Gbps

Diagnostics mediator server scalability example:

<b>Up to 200 Java probes:</b>	50 Server Requests per probe, 3 methods per Call Profile pulled every 45s (default)
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## Large Size

The scalability example below is based on the following reference hardware configuration and was tested and certified by HP. This configuration may be higher than the minimal resources needed to run the system.

<b>Platform:</b>	Linux
<b>Operating System:</b>	Red Hat Enterprise Linux 6.4, 64-bit
<b>CPU Logical Cores:</b>	Intel Xeon @ 2.60 Ghz (32 Logical Cores)
<b>Memory:</b>	32 GB
<b>Disk I/O:</b>	500 GB 10K rpm SAS 3.0 Gb/s hard drive
<b>Java Heap:</b>	8GB (-Xmx8g)
<b>Disk Space:</b>	2-4 GB per probe (overall disk space can be adjusted by changing retention intervals)
<b>Network:</b>	1 Gbps

Diagnostics mediator server scalability example:

<b>Up to 300 Java probes:</b>	75 Server Requests per probe, 3 methods per Call Profile pulled every 45s (default)
<b>Up to 400 Java probes:</b>	50 Server Requests per probe, 3 methods per Call Profile pulled every 45s (default)

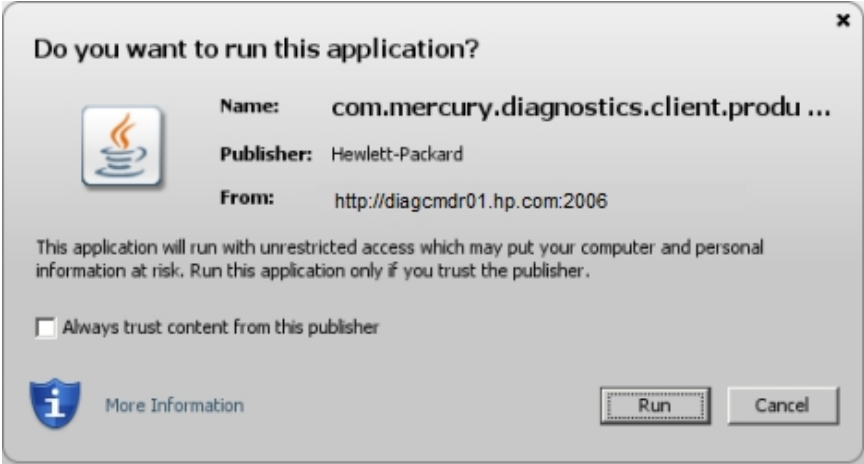
**Note:** A Diagnostics mediator server supporting large numbers of probes require special configurations. See "Configuring the Diagnostics Mediator Server for a Large Deployment" in the HP Diagnostics Server Installation and Administration Guide.

## Requirements for the Diagnostics Enterprise UI

The Diagnostics Enterprise UI is accessed through a web browser. The Diagnostics Enterprise UI has the following client requirements.

Resolution	For optimal display of the details in the graphs and charts of the Diagnostics views, set the screen resolution to a minimum of 1024x768.
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Supported Browsers	<ul style="list-style-type: none"><li>• Microsoft Internet Explorer (IE) 11.0</li><li>• Microsoft Internet Explorer (IE) 10.0</li><li>• Microsoft Internet Explorer (IE) 9.0</li><li>• Microsoft Internet Explorer (IE) 8.0</li><li>• Mozilla Firefox 31 ESR</li></ul> <p>Note:</p> <ul style="list-style-type: none"><li>• If using IE, to achieve optimal viewing and application performance, it is recommended to use IE 10.0.</li><li>• The browser must be set to accept third-party cookies and allow session cookies.</li><li>• The browser must be set to enable JavaScript execution.</li><li>• The browser must allow pop-ups from the Diagnostics application.</li><li>• Internet Explorer users must set browser caching to automatically check for newer versions of stored pages.</li></ul>
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Java Runtime Environment	<p>Version 7 (update 45 or later), Version 8</p> <p>The Java plug-in must be enabled in the web browser to allow the Diagnostics Enterprise UI's applets to be run by the JRE. Typically the browser prompts for the enabling as follows:</p> <div data-bbox="412 407 1271 867"></div> <p><b>Note:</b> You may not be able to view all Diagnostics applets with an earlier version of Java and you will need to download the latest version from the Java download site (<a href="http://www.java.com/en/download/manual.jsp">http://www.java.com/en/download/manual.jsp</a>) and install it. You may also have to disable earlier versions after download.</p> <p>To verify/manage running Java versions in Internet Explorer: Select <b>Tools &gt; Internet Options &gt; Programs &gt; Manage add-ons &gt; Toolbars and Extensions</b>, and locate the <b>Oracle</b> section. After making any changes close and reopen the browser.</p> <p>For details about how to verify the Java version, see <a href="https://www.java.com/en/download/installed.jsp">https://www.java.com/en/download/installed.jsp</a>.</p>
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## Requirements for the Diagnostics Collector Host

The Collector must be installed on a host that can access the host machines of the applications from which it is collecting data: SAP NetWeaver-ABAP, Oracle, SQL Server, IBM WebSphere MQ, TIBCO EMS, Software AG webMethods Broker or VMware.

350MB free disk space is required for the Collector install. More space might be required during runtime due to the creation of logfiles or for large environments.

The Collector can run on a host that also has a Diagnostics Agent installed. However, the Collector cannot run on a host that also has a Diagnostics Server installed.

## Supported Platform Versions for the Collector

For the list of supported platforms, see "[Diagnostics Platform Support Summary](#)" on page 6.

## Supported Applications That the Collector Can Monitor

For the list of supported applications, see "[Systems That Can Be Monitored by Diagnostics](#)" on [page 16](#).

## Library Packages Required on Linux

Diagnostics Servers and Collectors on Linux machines require certain library packages to run. See "Library Packages Required on Linux" in the HP Diagnostics Server Installation and Administration Guide.

## JRE Included with Diagnostics Collectors

The Diagnostics Server and Collector components each come bundled with the Java SE Java Runtime Environment (JRE) 8 from Oracle. This JRE provides the JVM used by the Diagnostics Server and Collector when they are started. This JRE can co-exist with other JREs that you may already have on the same host, however the Diagnostics components can only use the JRE included with them.

## IPv6 Environments

Diagnostics components in an IPv6 environment have the following restrictions:

- Collectors must be running on IPv4 tunneled networks.
- Linux operating systems must be explicitly configured to use the IPv6 network host/IP resolution. On dual hosts, update **/etcnsswitch.conf**.
- Communication between the Diagnostics Enterprise UI and the Diagnostics Commander must be made over IPv4.

# Chapter 3: Monitored Environments and Diagnostics Agents Requirements

Read the information in the chapter to understand the environments monitored by Diagnostics and additional requirements for the Diagnostics Agents.

This chapter includes:

- ["Systems That Can Be Monitored by Diagnostics"](#) on the next page
- ["Requirements for the Diagnostics Java Agent Host"](#) on page 18
- ["Requirements for the Diagnostics Java Profiler UI"](#) on page 21
- ["Requirements for the Diagnostics .NET Agent Host"](#) on page 22
- ["Requirements for the Diagnostics .NET Profiler UI"](#) on page 24
- ["Requirements for the Diagnostics Python Agent Host"](#) on page 24

## Systems That Can Be Monitored by Diagnostics

The table below lists the systems that can be monitored by Diagnostics.

<p>Java JVMs</p> <p><b>Note:</b> Only 64-bit versions of the Java JVMs are supported.</p>	<p><b>On Windows Server (2008, 2008 R2, 2012, and 2012 R2):</b></p> <ul style="list-style-type: none"><li>• Oracle 1.5.x, 1.6.x, 1.7.x, 1.8.x</li><li>• JRockit 1.5.x, 1.6.x,</li><li>• IBM 1.5.x, 1.6.x, 1.7</li></ul> <p><b>On AIX (6.1, 7.1):</b></p> <ul style="list-style-type: none"><li>• IBM 1.5.x, 1.6.x, 1.7.x</li></ul> <p><b>On HPUX (11i v2, 11i v3):</b></p> <ul style="list-style-type: none"><li>• HP 1.5.x, 1.6.x, 1.7.x</li></ul> <p><b>On Z/OS (1.13):</b></p> <ul style="list-style-type: none"><li>• IBM 1.5.x, 1.6.x</li></ul> <p><b>On Linux (RHEL 5.x, 6.x, 7; SUSE Linux Enterprise Server 10, 11; OEL 6):</b></p> <ul style="list-style-type: none"><li>• Oracle 1.5.x, 1.6.x, 1.7.x, 1.8.x</li><li>• JRockit 1.5.x, 1.6.x,</li><li>• IBM 1.5.x, 1.6.x, 1.7x</li><li>• Azul Zing 1.6.x</li><li>• OpenJDK 1.7.x, 1.8.x</li></ul> <p><b>On Solaris (10, 11):</b></p> <ul style="list-style-type: none"><li>• Oracle 1.5.x, 1.6.x, 1.7.x , 1.8.x</li></ul>
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<p>.NET Systems</p>	<ul style="list-style-type: none"> <li>• .Net framework 2.0, 3.0, 3.5, 4.0, 4.5</li> <li>• Microsoft Server 2008 SP1- SP2: 64-bit</li> <li>• Microsoft Server 2008 R2: 64-bit</li> <li>• Microsoft Server 2012: 64-bit</li> <li>• Microsoft Server 2012 R2: 64-bit</li> </ul>
<p>Python Environments</p>	<p><b>On:</b></p> <p><b>Windows 2012, 2012 R2, 2008 64-bit, 2008 R2</b></p> <p><b>Ubuntu 11.10, 12.04</b></p> <p><b>RedHat 6.2</b></p> <p><b>SuSE 12.1</b></p> <ul style="list-style-type: none"> <li>• Python 2.6.5, 2.6.6, 2.6.8, 2.7</li> <li>• OpenStack Diablo, Essex</li> <li>• Django 1.3, 1.4</li> </ul>
<p>Java Application Servers</p>	<p>Tomcat 5.5x, 6.x, 7.x, 8.x</p> <p>WAS 7.0, 8.0, 8.5</p> <p>JBoss AS 4.2x, 4.3x, 5.x, 6.1.x, 7.1.x</p> <p>JBoss EAP 6.1 (JBoss AS 7.2.x)</p> <p>Wildfly 8</p> <p>Oracle Service Bus: 11gR1, 10gR3</p> <p>Oracle Aqualogic Service Bus : 2.6</p> <p>Oracle WebLogic 9.2, 10, 11gR1, 12</p> <p>Oracle Application Server 10gR3</p> <p>SAP NetWeaver 6.4, 7.0</p> <p>WebMethods 7.1, 8.2</p> <p>Tibco BusinessWorks 5.6, 5.7, 5.9</p> <p>Tibco Service Bus 2.x, 2.3.x, 3.1.x</p> <p>GlassFish 3.x, 4.x</p> <p><b>Note:</b> The Diagnostics Java Agent cannot be deployed on servers running J2EE versions earlier than version 1.4.</p>

.NET Platforms	Microsoft Internet Information Services (IIS) 6.x, 7.x, 8.x Microsoft SharePoint 2007, 2010, 2013
Systems That Can Be Monitored by the Diagnostics Collector	<b>MiddleWare:</b> <ul style="list-style-type: none"><li>• WMQ 7.x</li><li>• SAP ABAP 4.7+</li><li>• webMethods Broker 7.x</li><li>• Tibco EMS 6.x, 7.x, 8.x</li></ul> <b>Database:</b> <ul style="list-style-type: none"><li>• Oracle 10g, 11g, 12c</li><li>• Microsoft SQL Server 2008, 2008 R2, 2012, 2014</li></ul> <b>VMware:</b> <ul style="list-style-type: none"><li>• vCenter Server 4.x, 5.1, 5.5</li></ul>

## Requirements for the Diagnostics Java Agent Host

For details of the operating systems on which the Java Agent can run and the systems it can monitor, see the "Java JVMs" section in ["Systems That Can Be Monitored by Diagnostics" on page 16](#).

**Note:** If you are monitoring environments that are not supported by Diagnostics 9.24, you can use older versions of Diagnostics Agents, provided that they are still officially supported by HP. (For example, you can use Diagnostics Java agent 9.21 to monitor Java 1.4 based applications.)

Java Agents can also monitor application servers on the HP aPaaS and Stackato cloud platforms. For more information about Java Agents on Stackato, see the HP Diagnostics Java Agent Guide.

**Note:** The Java Agent requires exclusive use of the URL `http://localhost:port`, where the port is in the default range of 35000-35100. This URL must be available to the Java Agent, but should not be used by any other process.

## Supported Browsers for Client Monitoring

The following web browsers are supported for monitoring by the Java Agent's Client Monitoring feature:

Browser	Navigation Timing API Support	Limitations
BlackBerry, all versions	No	<ul style="list-style-type: none"><li>• First page hit to an instrumented application may only have the "front-end" time measured.</li><li>• Subsequent navigations to an instrumented page will have all timings.</li><li>• Overall, timings are "best-effort" and are based on the available browser's capabilities.</li></ul>
Safari, all versions/all platforms	No	
Internet Explorer 8.0 or later	No	
Android 4.0	Yes	None
Internet Explorer 9.0 or later	Yes	None
Chrome 6.0 or later	Yes	None
Firefox 7.0 or later	Yes	None

For more information about Client Monitoring, see the HP Diagnostics Java Agent Guide.

## Supported JRE for a Java Agent Installation

To enable installation of a Java agent, the host machine must have a valid JRE (version 1.5 and later) with a set **JAVA\_HOME** system variable.

## Memory and Disk Space Requirements for a Java Agent

The following are the recommendations for memory and disk space that support the agent's processing:

<b>Platform</b>	All platforms
<b>Memory</b>	<p>40 MB additional RAM (per probe)</p> <p><b>Adjusting heap size.</b> The additional memory must be allocated to the max heap for the JVM by adding <b>-Xmx&lt;size&gt;m</b> to the Java settings in the application's startup script. See "Adjusting the Heap Size for the Java Agent in the Application Server" in the HP Diagnostics Java Agent Guide.</p> <p><b>Adjusting permgen size.</b> Typically any increase in permgen size as a result of adding the Java Agent is small. However, in some cases the application, without the agent, uses almost all its permgen limit. In such cases you will need to adjust it. For example you could increase it by the existing limit * 1.05 +5MB. To adjust permgen for Hotspot JVM, use <b>-XX:MaxPermSize</b> option, for example: <b>-XX:MaxPermSize=240m</b>.</p>
<b>Disk Space</b>	<p>For installation of the Java Agent, 200MB free hard disk space is required.</p> <p>For each Java probe that is running on the host, more space may be required for logfiles and classmaps. For large applications, it is recommended to have an additional 200MB available per probe for this data.</p>

## System Impact of a Java Probe

The system impact, or overhead, of a Java probe is typically very small. However the machine that you select to host the Diagnostics Java Agent must be able to accommodate the small increase in system resources.

The following table describes estimated changes on a system when configuring a Java application for monitoring by the Java Agent by using the default configuration. The actual impact on the system depends on the load on the monitored application and on the probe configuration. The greater the load and the more metrics collected, the greater the impact.

<b>Platform</b>	All platforms
<b>Latency</b>	+3% while CPU < 50%—once the CPU starts saturating latency overhead increases
<b>CPU</b>	+2% to +5%
<b>Network I/O</b>	+3% to +5% (assuming a normal Java EE application with a JDBC, RMI, or Web-services Backend)
<b>Disk I/O</b>	Impact should be statistically insignificant
<b>Throughput</b>	< 1% reduction while CPU < 50%
<b>RAM utilization</b>	Baseline footprint increase of up to 40MB

**Tip:** Once a Java probe is set up and running, you can view and monitor the CPU utilization of the probe through the Diagnostics Enterprise UI. From the Probe View, select the probe and in the Detail panel see the Overhead Estimate metric.

## Requirements for the Diagnostics Java Profiler UI

The Diagnostics Java Profiler UI is accessed through a web browser. The Diagnostics Java Profiler has the following requirements:

- If the Diagnostics Profiler is to be launched standalone from a remote host, ensure that the web browser is able to access the following Diagnostics Profiler URL:

```
http://<probe_host>:<probeport>/profiler
```

Where <probe\_host> is the IP address or host name of the monitored application host, and <probeport> is the port assigned to the probe. By default, probes are assigned to the first available port beginning at 35000.

For more information about accessing the Java Profiler UI, see "How to Access the Java Diagnostics Profiler" in the HP Diagnostics Java Agent Guide.

- If the Diagnostics Profiler is to be launched from within the Diagnostics Enterprise UI, access to the Diagnostics Profiler UI has no additional requirements.
- Use a web browser that meets the Enterprise UI requirements. See "[Requirements for the Diagnostics Enterprise UI](#)" on page 11.

## Requirements for the Diagnostics .NET Agent Host

The machines that you select to host the Diagnostics .NET Agent must meet the requirements described below.

## Supported Platform Versions for the .NET Agent

For the list of supported Microsoft Windows Servers, see "[Diagnostics Platform Support Summary](#)" on page 6.

## Supported .NET Versions That the .NET Agent Can Monitor

For the list of versions of the .NET framework that are supported for monitoring by the .NET Agent, see "[Systems That Can Be Monitored by Diagnostics](#)" on page 16.

**WCF Requirements and Limitations:** Monitoring .NET Windows Communication Foundation (WCF) services requires .NET Framework 3.0 SP1 or greater. WCF bindings using the following transports are supported:

- HTTP
- TCP

If your application uses a transport that is not supported, the .NET probe only creates a generic server request for each WCF method. It will not be a Web Service and there will be no cross VM correlation.

**Note:** If you are monitoring environments that are not supported by Diagnostics 9.24 (for example, NET Framework 1.1), you can use older versions of Diagnostics Agents, provided that they are still officially supported by HP.

## Memory and Disk Space Recommendations

The following are the recommendations for memory and disk space that support the agent's processing:

<b>Platform</b>	All platforms
<b>Memory</b>	60 MB additional RAM (per probe)
<b>Free Hard Disk Space</b>	200 MB Additional Space

These recommendations assume that the .NET Agent's Probe Aggregator is disabled. When enabled on the .NET Agent machine, Probe Aggregator improves the scalability of the Diagnostics Server as it supports more probes per server and reduces network bandwidth usage but also typically increases the memory and CPU overhead on the .NET Agent system. By default, the Probe Aggregator is disabled. For more information, see "Probe Aggregator Service" in the HP Diagnostics .NET Agent Guide.

## System Impact of a .NET Probe

The system impact, or overhead, of a .NET probe is typically very small. However the machine that you select to host the Diagnostics .NET Agent must be able to accommodate the small increase in system resources.

The following table describes estimated changes on a system when configuring a .NET application for monitoring by the .NET Agent by using the default configuration. The actual impact on the system depends on the load on the monitored application and on the probe configuration. The greater the load and the more metrics collected, the greater the impact.

Item	Minimum
Latency	+3% while CPU < 50%-once the CPU starts saturating, latency overhead increases
CPU	+5%
Network I/O	+3% to +5% (assuming a normal ASP.NET application with a remote database Backend)
Disk I/O	Impact should be statistically insignificant
Throughput	< 1% reduction while CPU < 50%
RAM utilization	Baseline footprint increase of up to 20MB per worker process Note: This is quite difficult to measure accurately.

These recommendations assume that the .NET Agent's Probe Aggregator is disabled. When enabled on the .NET Agent machine, Probe Aggregator improves the scalability of the Diagnostics Server as it supports more probes per server and reduces network bandwidth usage but also typically increases the

memory and CPU overhead on the .NET Agent system. By default, the Probe Aggregator is disabled. For more information, see "Probe Aggregator Service" in the HP Diagnostics .NET Agent Guide.

## Requirements for the Diagnostics .NET Profiler UI

The Diagnostics .NET Profiler UI is accessed through a web browser. The Diagnostics .NET Profiler UI has the following requirements:

- If the Diagnostics Profiler is to be launched standalone from a remote host, ensure that the host is able to access the following Diagnostics Profiler URL on the monitored application host:

```
http://<probe_host>:<probeport>/profiler
```

Where <probe\_host> is the IP address or host name of the monitored application host, and <probeport> is the port assigned to the probe. By default, probes are assigned to the first available port beginning at 35000.

For more information about accessing the .NET Profiler UI, see the HP Diagnostics .NET Agent Guide.

- If the Diagnostics Profiler is to be launched from within the Diagnostics Enterprise UI, access to the Diagnostics Profiler UI has no additional requirements.
- The web browser you use must be Microsoft Internet Explorer 7 or later. The user interface for the .NET Diagnostics Profiler requires special Microsoft extensions that are only supported by Internet Explorer 7 or later.
- Compatibility View for Internet Explorer 7 must be enabled in Internet Explorer.

## Requirements for the Diagnostics Python Agent Host

For details of the operating systems on which the Python Agent can run and the systems it can monitor, see the "Python Environments" section in ["Systems That Can Be Monitored by Diagnostics" on page 16](#)



## Chapter 4: Supported Databases for Data Export

The following table provides details of the supported databases for exporting metrics data from the Diagnostics Server.

Database	Supported Versions
Oracle	10g, 11g, 12c
Microsoft SQL Server	2008, 2008 R2, 2012, 2014

For details on exporting data, see the "Data Export" chapter in the HP Diagnostics Server Installation and Administration Guide.

## Chapter 5: Compatibility Matrix

The following table provides details of other HP products with which Diagnostics 9.24 can be integrated:

Product Name	Supported Versions
Business Service Management	9.23, 9.24 <b>Note:</b> Diagnostics 9.24 is compatible with Business Service Management versions 9.13, 9.21, and 9.22, but with limited functionality. While data, events, and topology can be integrated, due to JRE security hardening made by Oracle, drilling down from the BSM UI to Diagnostics is not possible.  To obtain the maximum monitoring coverage and functionality, use the most current version of each component.
TransactionVision	9.23, 9.24
Business Process Monitor	9.23, 9.24
Real User Monitor	9.24
Service Health Analyzer	9.23, 9.24
LoadRunner	11.52, 12.00, 12.01
Performance Center	11.52, 12.00, 12.01
SiteScope	11.13, 11.23, 11.24

You can find further information about supported Diagnostics integrations in the Integrations tab of the [HP Software Integrations site](http://support.openview.hp.com/sc/solutions/index.jsp#tab=tab3) (<http://support.openview.hp.com/sc/solutions/index.jsp#tab=tab3>).

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**Feedback on Diagnostics System Requirements and Support Matrixes (Diagnostics 9.24)**

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