ivanti

Service and Asset Manager

System Requirements and Compatibility Guide

2019.3.1

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Contents

The *System Requirements and Compatibility Matrix for Service and Asset Manager Version 2019.3.1* is intended for administrators who are going to install Service and Asset Manager. This document contains the following sections:

- [Hardware and Software Requirements](#). Contains the hardware and software requirements.
- [About Third-Party Software](#). Discusses third-party software that is used in Service and Asset Manager.
- [Port Requirements](#). Lists the required ports.
- [Compatibility Matrix](#). Lists the compatibility of Service and Asset Manager Release 2019.3.1 with other software.
- [Troubleshooting](#). Contains solutions to common problems related to system requirements.

How to Contact Us

To contact us about the documentation, or if you have any other questions or issues about Service and Asset Manager, contact Ivanti support services by logging an incident via Self Service at: https://www.ivanti.com/support/ivanti-support.

Hardware and Software Requirements

- [Application Server Requirements](#)
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Application Server Requirements

- [Hardware](#)
- [Software](#)

Hardware

Component	Recommended
CPU	2 core minimum 4 core recommended for heavy transaction rates and workflow/escalation usage
RAM	8 GB minimum, and more depending on transaction rates and workflow/escalation complexity
Hard Disk	20 GB minimum free space (approximately 1.1 GB for Service and Asset Manager files and the remaining space for log files). - Best Practice! We recommend that you install Service and Asset Manager in a location other than on the system drive (typically the C drive).

Software

Item	Supported Version
Operating System	- Microsoft Windows Server 2016 - Microsoft Windows Server 2012 R2 (recommended) - Microsoft Windows Server 2012 - Microsoft Windows Server 2008 R2 x64 SP1 - Microsoft Windows Server 2008 R2 x64 SP2
Microsoft .NET Framework	Microsoft NET. Framework Release 4.6 if FedRAMP feature is not enabled. If FedRAMP feature is enabled, the required Microsoft .NET Framework Release is 4.6.2.

Item	Supported Version
	ⓘ This requires the latest Microsoft Windows update or that you download the following security patch: https://www.microsoft.com/enus/download/details.aspx?id=42327
Web Server	• Microsoft IIS Release 7.5 • Microsoft IIS Release 8.0 • Microsoft IIS Release 8.5 (recommended) • Microsoft IIS Release 10 (Windows 2016)

Web Server Requirements

- Hardware
- Software

ⓘ In multi-server environments, each Service and Asset Manager web server must meet these requirements.

Hardware

Component	Recommended
CPU	• 2 core minimum • 4 core recommended for heavy transaction rates and workflow/escalation usage
RAM	• 8 GB minimum, and more depending on transaction rates and workflow/escalation complexity
Hard Disk	• 20 GB minimum free space (approximately 1.1 GB for Service and Asset Manager files and the remaining space for log files). • Best Practice! We recommend that you install [[[Undefined variable FRS_VARS.ProductName2]]] in a location other than on the system drive (typically the C drive).

Software

Item	Supported Version
Operating System	• Microsoft Windows Server 2016 • Microsoft Windows Server 2012 R2 (recommended) • Microsoft Windows Server 2012 • Microsoft Windows Server 2008 R2 x64 SP1

Item	Supported Version
	• Microsoft Windows Server 2008 R2 x64 SP2
Microsoft .NET Framework	• Microsoft .NET Framework Release 4.6 if FedRAMP feature is not enabled. If FedRAMP feature is enabled, the required Microsoft .NET Framework Release is 4.6.2.
	ℹ This requires the latest Microsoft Windows update or that you download the following security patch: https://www.microsoft.com/en-us/download/details.aspx?id=42327
Web Server	• Microsoft IIS Release 7.5 • Microsoft IIS Release 8.0 • Microsoft IIS Release 8.5 (recommended) • Microsoft IIS Release 10 (Windows 2016)

Database Server Requirements

- Hardware
- Software

Hardware

Component	Recommended
CPU	• 4 core minimum. Your deployment may require more for heavy transaction rate and workflow or escalation usage
RAM	• 16 GB minimum; however, your deployment may require much more RAM depending on transaction rates and workflow or escalation complexity

Hard Disk	• Best Practice! We recommend that you have separate volumes for the database and the transaction logs.
	 • **Database**: 100 GB minimum free space. For proper disk space sizing, use these guidelines:
	
	    • Service and Asset Manager application demo database: 500 MB
	
	    • Average disk space requirement per record (incident, problem, change, configuration): ~200 KB
	
	    • For storing records more than three years old: more than 60 GB
	
	    • Average disk space requirement per record (configuration item): ~500 KB. For example, for 20,000 configuration items, we recommend a minimum of 10 GB.
	
	    • 10 GB minimum free space. This is the minimum.
	 • **Transaction logs**: 60 GB minimum free space.

Software

If your deployment has the reporting feature installed, you must have Microsoft .NET Framework Release 4.6, which requires the latest Microsoft Windows update or that you download the following security patch: https://www.microsoft.com/en-us/download/details.aspx?id=42327.

Item	Supported Version
Operating System	• Microsoft Windows Server 2016 • Microsoft Windows Server 2012 R2 (recommended) • Microsoft Windows Server 2012 • Microsoft Windows Server 2008 R2 x64 SP1 • Microsoft Windows Server 2008 R2 x64 SP2
Database Management Software	• Microsoft SQL Server 2012 including Management Studio and full-text search • Microsoft SQL Server 2012 SP2 including Management Studio and full-text search • Microsoft SQL Server 2014 including full-text search • Microsoft SQL Server 2016 including full-text search

Other Software	• iFilters (required for full-text indexing)
	• An iFilter is a plugin that allows the Microsoft SQL Server to index various file formats so that they become searchable. Download the latest version of the iFilter for the document type (these links are subject to change):
	   • Microsoft Office 2007: https://www.microsoft.com/en-in/download/details.aspx?id=27838
	   • Microsoft Office 2010: https://www.microsoft.com/en-us/download/details.aspx?id=5829
	   • Adobe PDF iFilter 64 Release 11.0.01: http://www.adobe.com/support/downloads/detail.jsp?ftpID=5542

Microsoft SQL Server must have full-text search enabled. If it does not, the Service and Asset Manager demo database will not load properly.

Reporting Feature Requirements

- Hardware
- Software
- Microsoft SSRS Report Designer

Hardware

Component	Recommended
CPU	2 core minimum 4 core recommended for heavy transaction rates and workflow and escalation usage
RAM	8 GB minimum, and more depending on transaction rates and workflow and escalation complexity
Hard Disk	20 GB minimum free space (approximately 1.1 GB for Service and Asset Manager files and the remaining space for log files). - Best Practice! We recommend that you install Service and Asset Manager in a location other than on the system drive (typically the C drive).

Software

Item	Supported Version
Operating System	- Microsoft Windows Server 2016 - Microsoft Windows Server 2012 R2 (recommended) - Microsoft Windows Server 2012 - Microsoft Windows Server 2008 R2 x64 SP1 - Microsoft Windows Server 2008 R2 x64 SP2
Microsoft .NET Framework	Microsoft .NET Framework Release 4.6 if FedRAMP feature is not enabled. If FedRAMP feature is enabled, the required Microsoft .NET Framework Release is 4.6.2. ℹ️ This requires the latest Microsoft Windows update or that you download the following security patch: https://www.microsoft.com/en-us/download/details.aspx?id=42327
Database Management Software	- Microsoft SQL Server 2012 including Management Studio and full-text search - Microsoft SQL Server 2012 SP2 including Management Studio and full-text search - Microsoft SQL Server 2014 including full-text search - Microsoft SQL Server 2016
Other Software	Microsoft SQL Server Reporting Services (SSRS)

Microsoft SSRS Report Designer

Business Intelligence Development Studio (BIDS) is a Microsoft component used in creating reports and report templates for Service and Asset Manager. BIDS comes with Microsoft SQL Express edition. For on-premise users, BIDS comes with Microsft SQL Server license.

Item	Supported Version
Operating System	• Microsoft Windows Server 2016 • Microsoft Windows Server 2012 • Microsoft Windows Server 2008 R2 • Microsoft Windows Server 2008 • Microsoft Windows 7 • Microsoft Windows 8 • Microsoft Windows 10
Hard Disk	• 5 GB minimum free space
RAM	• 512 MB minimum, 2GB is recommended
Processors	• **X86**: Pentium III-compatible processor or faster (processor speed of 1.0 GHz or faster) • **X64**: Minimum: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T support, Intel Pentium IV with EM64T support (processor speed of 1.0 GHz or faster) • **IA64**: Itanium processor or faster (processor speed of 1.0 GHz or faster)

Discovery Requirements

- [Hardware](#)
- [Software](#)

Hardware

Component	Recommended
CPU	• 2 core minimum • 4 core recommended for heavy transaction rates and workflow and escalation usage
RAM	• 8 GB minimum, and more depending on transaction rates and workflow and escalation complexity
Hard Disk	• 20 GB minimum free space (approximately 1.1 GB for Service and Asset Manager files and the remaining space for log files). • Best Practice! We recommend that you install Service and Asset Manager in a location other than on the system drive (typically the C drive).

Software

Item	Supported Version
Operating System	• Microsoft Windows Server 2016 • Microsoft Windows Server 2012 R2 (recommended) • Microsoft Windows Server 2012

Item	Supported Version
	• Microsoft Windows Server 2008 R2 x64 SP1 • Microsoft Windows Server 2008 R2 x64 SP2
Microsoft .NET Framework	• Microsoft .NET Framework Release 4.6 if FedRAMP feature is not enabled. If FedRAMP feature is enabled, the required Microsoft .NET Framework Release is 4.6.2. ⓘ This requires the latest Microsoft Windows update or that you download the following security patch: https://www.microsoft.com/en-us/download/details.aspx?id=42327
Web Server	• Microsoft IIS Release 7.5 • Microsoft IIS Release 8.0 • Microsoft IIS Release 8.5 (recommended) • Microsoft IIS Release 10

Client Computer Requirements

- [Hardware](#)
- [Mobile](#)
- [Software](#)
- [Remote Control Feature](#)
- [Bandwidth and Latency](#)

Hardware

Component	Recommended
CPU	• Single core
RAM	• 4 GB

Mobile

Service and Asset Manager offers native apps for mobile devices for the Android and iOS platforms. The Service and Asset Manager app can be downloaded from their respective platform's app stores.

Software

Browser	Supported Version
Google Chrome	Service and Asset Manager only supports the latest production version (not including beta versions).

Browser	Supported Version
	Download and install the ClickOnce extension at https://chrome.google.com/webstore/detail/meta4-clickonce-launcher/jkncabbipkgbconhaajbapbhokpbgkdc?hl=en to ensure that the Ivanti Service Manager reporting feature works correctly.
Mozilla Firefox	[[[Undefined variable FRS_VARS.ProductName2]]] supports the following combinations: • Firefox 60.0 and above on MAC 10.x and above Download and install the Microsoft .NET Framework assistant extension from https://addons.mozilla.org/en-US/firefox/extensions/ to ensure that the Service and Asset Manager reporting feature works correctly.
Microsoft Internet Explorer	Service and Asset Manager supports Microsoft Internet Explorer versions 9.0 and later. Apply all Microsoft hot fixes. Ensure that Service and Asset Manager runs properly by doing the following: • Go to the **Tools** > **Internet Options** > **Security** > **Custom level** page. • Set the following options to enable: • Run ActiveX controls and plug-ins • File download • Scripting > Active scripting Ensure that Microsoft SSRS can open by saving the website as a trusted site. Do the following: • Go to the **Tools** > **Internet Options** > **Security** page. • Highlight **Trusted sites** and click **Sites**. • Click **Add**. ⓘ There are no deprecated features with this release; however, starting with Service and Asset Manager v2019.3.1 Ivanti will deprecate support for Microsoft Internet Explorer version 10 and earlier.
Microsoft Edge	Service and Asset Manager only supports the latest production version (not including beta versions).
Microsoft .NET Framework	To use the Microsoft SSRS Report Designer, install Microsoft .NET Framework Release 3.5 SP1.

There is a Known Issue during installation of the 2017.2 Discovery Client Agent.

Installation pops up Windows Warning for digital signature requirement from Microsoft.

Windows cannot verify the digital signature for this file. A recent hardware or software change might have installed a file that is signed incorrectly or damaged, or that might be malicious software from an unknown source.

To correct this, digital signature certificates have been updated. However, Ivanti recommends to apply updates to support Code Signing issues in Windows 7 and Windows Server 2008.

For windows 7, please make sure that System has SP1 installed and install KB from https://technet.microsoft.com/en-us/library/security/3033929.

As per MSDN driver signing has changed in Windows 10, version 1607.

Exceptions / Are cross-signed drivers still valid?

- Enforcement only happens on fresh installations, with Secure Boot on, and only applies to new kernel mode drivers:
    - PCs upgrading from a release of Windows prior to Windows 10 Version 1607 will still permit installation of cross-signed drivers.
    - PCs with Secure Boot OFF will still permit installation of cross-signed drivers.
    - Drivers signed with an end-entity certificate issued prior to July 29th, 2015 that chains to a supported cross-signed CA will continue to be allowed.

To prevent systems from failing to boot properly, boot drivers will not be blocked, but they will be removed by the Program Compatibility Assistant. Future versions of Windows will block boot driver.

To summarize, on non-upgraded fresh installations of Windows 10, version 1607 with Secure Boot ON, drivers must be signed by Microsoft or with an end-entity certificate issued prior to July 29th, 2015 that chains to a supported cross-signed CA.

Reference: https://blogs.msdn.microsoft.com/windows_hardware_certification/2016/07/26/driver-signing-changes-in-windows-10-version-1607/.

If the certificate uses SHA-2 or has SHA-2 certificates in its chain of trust and it is being used to sign kernel modules, then please be aware of KB3033929, an update for Windows 7 distributed through Windows Update. On versions of Windows 7 without this update, the kernel will reject signatures made with certificates that use SHA-2, so they cannot be used to get a kernel module to load.

Reference: https://support.comodo.com/index.php?/Knowledgebase/Article/View/1103/0/signing-microsoft-windows-64-bit-kernel-mode-drivers.

Remote Control Feature

For customers using the legacy Remote Control solution, this feature requires that your browsers enable either TLS 1.0 or TLS 1.1 to support the HTTPS connection between the clients and the remote control server.

Bandwidth and Latency

For optimal application performance, we recommend a latency of 110 ms or below with a minimum of 1.5 MB/sec in bandwidth between the Service and Asset Manager application server and the remote location client machines.

About Third-Party Software

- [Third-Party Software Components](#)
- [Third-Party Software Support](#)

Third-Party Software Components

The Service and Asset Manager installation package provides the following required third-party software components:

- Microsoft .NET Framework Release 4.6 and above
- Microsoft SQL Server 2012 Management Object (SMO) (redistributable)
- Microsoft SQL Server 2014 Management Object (SMO)
- Microsoft Access Database Engine 2007 and 2010 (redistributable)
- Microsoft Windows Server Roles and Features

If the installer does not detect these components on the host system, they are installed automatically.

> If you create your own installation packages for remote deployment, include the software components that are listed in the system requirements that follow.

Third-Party Software Support

Ivanti relies on, and integrates with, many different third-party applications.

Ivanti Software regularly performs quality assurance testing in the interactions between Service and Asset Manager and these applications. Our policy is to support any tested version of a third-party application (as certified) and newer versions (as compliant), so long as the third-party vendor claims and maintains backward compatibility.

If Ivanti Software becomes aware that a third-party vendor has not maintained backward compatibility to the most recent certified version, Ivanti Software notes this in the compatibility matrix as an exception.

Service and Asset Manager does not support third-party applications that are older than a certified version. Ivanti Software often certifies more than one version of third-party software when more than one version is in common use; otherwise, the current generally available version is used during each Ivanti Software version quality assurance cycle.

Port Requirements

Ensure that ports are configured correctly so that all Service and Asset Manager components open correctly.

- For All Deployments
- For Deployments with All Components Installed on One Host
- For Deployments with the Web Server Installed on a Different Host
- For Deployments that Include Discovery
- For Deployments with Remote Control

For All Deployments

For all deployments, we recommend that you open the following ports:

Port	Service
53	For Active Directory. Select the UDP (for DNS) or TCP protocol.
139 or 445	For deploying agents to other computers. Select the UDP (for DNS) or TCP protocol.
443	For sending surveys. However, port HTTPS 7075 is supported until further notice.
1433	For the SQL server.
2323	Service and Asset Manager Voice web services port: Set to match the web services port set in the Ivanti Service Manager Voice management portal.
5743	For the Service and Asset Manager Voice server.
5986	For WinRM to receive remote commands.
8097	The default proxy port. Used unless defined in the endpoint address. For example, http://company/users:8113.
7200	For the message queue.
61000	The public TCP port of the Service and Asset Manager Voice message server service.
62000	The public TCP port of the Service and Asset Manager Voice reset password service.

For Deployments With All Components Installed on One Host

Port Configuration shows the port requirements for a deployment where all Service and Asset Manager components are installed on one host.

Fig.1. Port Configuration
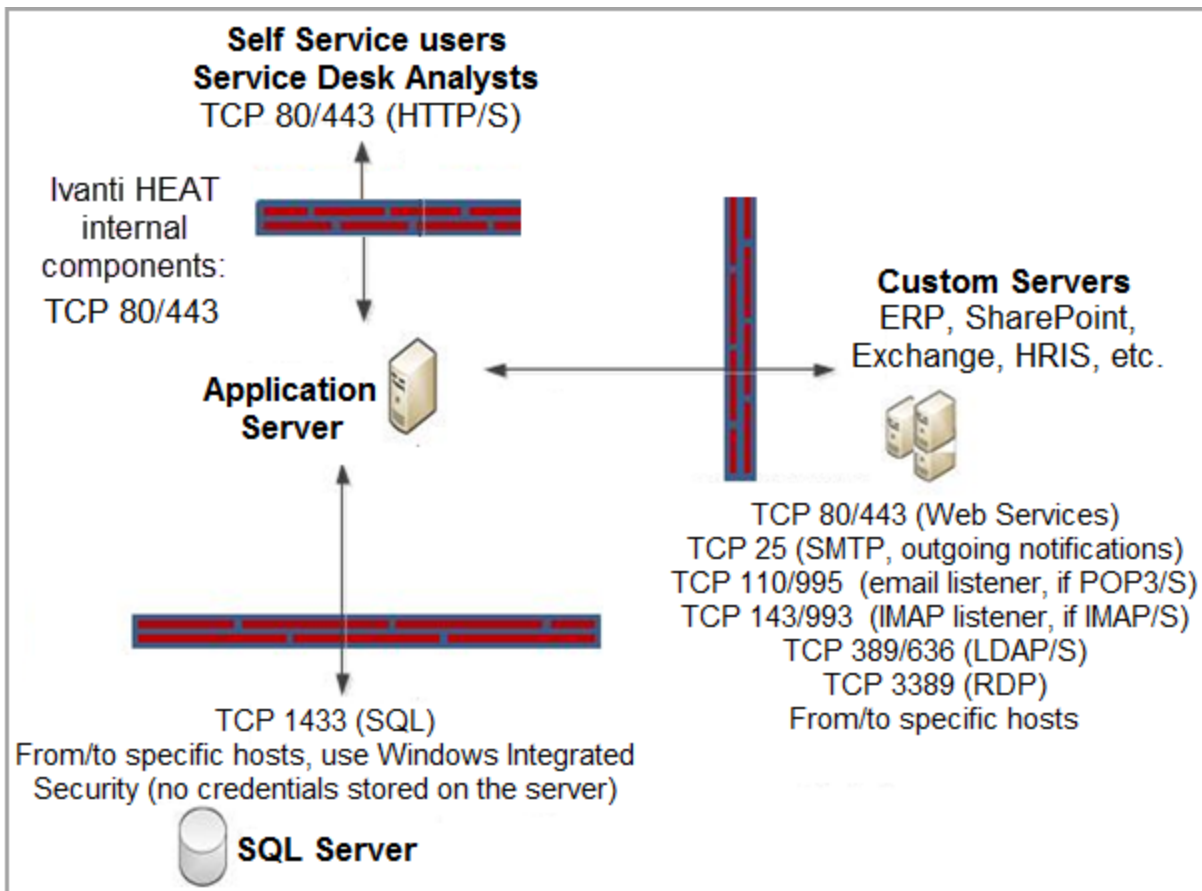
The ports to open are as follows:

- Self Service users and Service Desk Analysts:
    - TCP 80/443 (HTTP/HTTPS)
- Service and Asset Manager application server (Service and Asset Manager internal components):
    - TCP 80/443
- Custom servers (ERP, SharePoint, Exchange, HRIS, and so on):
    - TCP 80/443 (web services)
    - TCP 25 (SMTP, outgoing notifications)
    - TCP 110/995 (Email listener if POP3/S is used)
    - TCP 143/993 (IMAP listener, if IMAP/S is used)
    - TCP 389/636 (LDAP/S)
    - TCP 3389 (RDP)
- Microsoft SQL Server:
    - TCP 1433 (SQL)

To and from specific hosts, use Windows Integrated Security. No credentials are stored on the server.

> ℹ The outbound port may not be the same as the inbound port. The outbound is determined by your environment.

For Deployments with the Web Server Installed on a Different Host

If your deployment has the Service and Asset Manager web server outside of the firewall, ensure that the following ports are also open:

- TCP 80/443
- TCP 25 (SMTP, outgoing notifications)
- TCP 1433 (SQL)
- TCP 54327 (License)
- TCP 389/636 (LDAP/S)

For Deployments that Include Discovery

> ℹ For additional information about the Discovery requirements, see the Service and Asset Manager online help and look for the topic called "Standard Gateway System Prerequisites". See "Related Documentation" for information on accessing the Service and Asset Manager documentation.

- About the Discovery Servers
- Port Information

About the Discovery Servers

The Discovery components reside on two servers: the Discovery web server and the Discovery application server. You can view the components that are deployed to each server from Microsoft IIS.

- The AgentTaskWs and ClientTransportProcessor components reside on the Discovery web server.
- The MessageSender, AssetProcessor, DiscoProcessor, and TaskProcessor components reside on the Discovery application server.

All communication from the gateway or client agent goes to the AgentTaskWs and ClientTransportProcessor components (on the Discovery web server), and those components then relay the messages or requests to the corresponding components on the Discovery application server.

Commands sent to the AgentTaskWs component are relayed to the TaskProcessor component via Net.TCP on port 7100.

Asset and Discovery data sent to the ClientTransportProcessor component is forwarded to the message sender via Net.TCP on port 5000. The message sender component then queues the message on one of the processor queues depending on the message type; you do not need to open a particular port for this.

Port Information

If your deployment includes Discovery, ensure that the following ports are also open for the

Discovery application server:

- TCP 8080
- TCP 5000
- TCP 8382
- TCP 7100

For Deployments with Remote Control

To use the remote control feature without the plugin (using HTML5), port 11438 must be opened. For more information about the remote control feature, see the Service and Asset Manager online help. (See "Related Documentation" for information about accessing the Service and Asset Manager documentation, including the online help.)

Compatibility Matrix

See also About Third-Party-Software.

- Legend
- Server Compatibility
- Microsoft .NET Framework
- Web Servers
- Database Management Software
- Email Servers
- Other Integrations
- Browser Compatibility

Legend

C	Has been fully tested by Quality Assurance (QA) and indicates compatibility (supported).
W	Has not been fully tested by QA for compatibility and/or integration, but works (supported).
N	Has been tested by QA for compatibility and/or integration but is NOT supported due to test results.
NT	Has not been tested by QA; is currently NOT supported due to lack of testing.
--	Not applicable/not available (not supported).

Server Compatibility

Operating System	Service and Asset Manager Release 2019.x
Microsoft Windows 2000 Server	--
Microsoft Windows Server 2003	--
Microsoft Windows 2008 R2/Windows 2012 OS localized versions (such as German and French)	W
Microsoft Windows Server 2008 R2 English	--
Microsoft Windows Server 2008 (includes all patch levels) 64-bit with non US region settings	W
Microsoft Windows Server 2008 R2 x64 SP1/SP2	W

Operating System	Service and Asset Manager Release 2019.x
Microsoft Windows Server 2012 English (64-bit)	C
Microsoft Windows Server 2012 R2 English, including SP1 and SP2	C
Microsoft Windows Server 2016 English	C

Microsoft .NET Framework

	Service and Asset ManagerRelease 2019.x
Microsoft .NET Framework Release 1.1 SP1 - 4.0	--
Microsoft .NET Framework Release 4.5	--
Microsoft .NET Framework Release 4.5.2	--
Microsoft .NET Framework Release 4.6	C

Web Servers

	Service and Asset ManagerRelease 2019.x
Microsoft IIS Release 5.1 - 7.0	--
Microsoft IIS Release 7.5	C
Microsoft IIS Release 8.0	C
Microsoft IIS Release 8.5	C
Microsoft IIS Release 10 (Windows 2016)	W

Database Management Software

	Service and Asset ManagerRelease 2019.x
Microsoft SQL Server 2000 x, 2005 x	--
Microsoft SQL Server 2008 R2 SP2	--
Microsoft SQL Server 2012	C
Microsoft SQL Server 2012 SP1	C
Microsoft SQL Server 2014	C
Microsoft SQL Server 2016*	C
IBM DB2 Version 9.1	--

*Customers using SQL 2016 who are considering migrating to a Cloud deployment of Ivanti Service Manager, may have to downgrade their SQL 2016 database to SQL 2014 prior to migrating.

Email Servers

	Service and Asset Manager Release 2019.x
Lotus Domino	NT
Novell GroupWise	NT
Microsoft Exchange 2007/2010 (supports email server products that support POP3, SMTP, iMAP4)	C
Microsoft Exchange Web Service	C

Other Integrations

	Service and Asset Manager Release 2019.x
Ivanti Voice	C
Ivanti Service Manager DSM Release 2015.2, Ivanti Service Manager DSM Release 2016.x	W
Citrix	NT
VMWare ESX 4	W
Ivanti Service Manager Mobile	C

Browser Compatibility

See "Client Computer Requirements" for more information about browser compatibility.

> ℹ If using Internet Explorer, note that it does not store cookies if there is an underscore in the host name.

	Service and Asset Manager Release 2019.x
Google Chrome Release 61 and above	C
ℹ There is an incompatibility issue with Service and Asset Manager and Chrome. Starting in Google Chrome Release 42, Google has disabled support for the Netscape Plugin Application Programming Interface (NPAPI). Therefore, if you want to use the Remote Control Client or Remote Control Operator Console plugins, you have to download and install their executable files first. For more information about the remote control feature, see the Service and Asset Manager online help. (See "Related Documentation" for information about accessing the Service and Asset Manager documentation, including the online help.) For information about enabling support for the plugins, see https://www.chromium.org/developers/npapi-deprecation?pli=1.	
Mozilla Firefox Release 60 and above	C
Safari 11.0 and above	W
Microsoft Internet Explorer Release 10.0 and above	W

	Service and Asset Manager Release 2019.x
Microsoft Internet Explorer Release 11.0 and above	W
Microsoft Edge Latest	W
Microsoft Edge Chromium based Version 79.0.309.68 on wards	C