System Requirements

ArcGIS 10.7 Prerelease – Subject to change

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ArcGIS Desktop System Requirements

ArcGIS Desktop 10.7 system requirements

Visit Esri Support for information on earlier versions.

Supported platforms

Check your computer's ability to run ArcGIS Desktop

📝 **Note:** Microsoft .NET Framework 4.5.2 or later must be installed prior to installing ArcMap.

💡 **Tip:** ArcGIS Desktop requires Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x86). If the Visual C++ 2017 (update 5 or later) Redistributable is not already installed, running setup.exe will install it before setup.msi is launched. Setup.msi will not install if Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x86) is not already installed.

Supported operating systems *	Latest update or service pack tested
Windows 10 Home, Pro and Enterprise (64 bit [EM64T])	December 11, 2018 update
Windows 8.1 Basic, Pro, and Enterprise (32 bit and 64 bit [EM64T])	December 11, 2018 update
Windows 7 Ultimate, Professional, and Enterprise (32 bit and 64 bit [EM64T])	SP1 with December 11, 2018 update
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	November, 2018 Release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with December 11, 2018 update

📝 **Note:** Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

* See Operating system requirements and limitations for additional requirements and information.

ArcMap is supported in various on-premises and cloud environments.

On-premises virtual desktop infrastructure (VDI)	Notes
Citrix XenDesktop 7.6 CU6	Use the latest Citrix and NVIDIA drivers. Refer to Citrix and NVIDIA GRID website for the most current driver versions.
Citrix XenDesktop 7.11	

Citrix XenDesktop 7.12	
Citrix XenDesktop 7.13	
Citrix XenDesktop 7.14	
Citrix XenDesktop 7.15 CU3	
Citrix XenDesktop 7.16	
Citrix XenDesktop 7.17	
Citrix Virtual Desktop 7.18 08 (Formerly known as XenDesktop)	
Windows Server 2012 R2 Hyper-V	Microsoft VDI certified with RemoteFX vGPU Windows Device Driver Model (WDDM) 1.2
Windows Server 2016 Hyper-V	
VMware vSphere 6.0	Use VMware Horizon View 7.0.3 and later only.
VMware vSphere 6.5	Use the latest VMware and NVIDIA drivers. Refer to VMware and NVIDIA GRID website for the most current driver versions.
VMware vSphere 6.7	
VMware Horizon 7.6	

On-premises application streaming	Notes
Citrix XenApp 7.6 CU6	Hosted OS: • Windows Server 2008 R2 (SP1 or later) • Windows Server 2012 R2 (Nov 13, 2018 update or later)
Citrix XenApp 7.11	Windows Server 2016
Citrix XenApp 7.12	Windows Server 2016
Citrix XenApp 7.13	Windows Server 2016
Citrix XenApp 7.14	Windows Server 2016
Citrix XenApp 7.15 CU3	Windows Server 2016
Citrix XenApp 7.16	Windows Server 2016
Citrix XenApp 7.17	Windows Server 2016
Citrix Virtual Apps 7.18 08 (Formerly known as Citrix XenApp)	Windows Server 2016

Cloud Environments*	Notes
AWS Virtual Machines	ArcGIS works well in Amazon WorkSpaces and Azure instances that have:
Azure Virtual Machines	• Supported operating systems • Adequate number of processing cores for the workload • Adequate amount of memory for the workload.

*ArcGIS Desktop will provide adequate performance and usability in many of the cloud environments. The cloud instance must have adequate CPU, Memory and Disk storage resources to support ArcMap.

⚠ **Caution:** Licensing for ArcGIS Desktop may display instability when running in the cloud. It is recommended to use concurrent use licensing for software authorization, where the ArcGIS License Manager is running on a host that is guaranteed to have an immutable hardware configuration. Download the PDF White Paper ArcGIS Desktop Licensing in Cloud Environments for more information.

Hardware requirements

	Supported and Recommended
CPU speed	2.2 GHz minimum; Hyper-threading (HHT) or Multi-core recommended
Platform	x86 or x64 with SSE2 extensions
Memory/RAM	Minimum: 4 GB Recommended: 8 GB
Display properties	24-bit color depth Also see Video/Graphics adapter requirements below.*
Screen resolution	1024x768 recommended minimum at normal size (96 dpi)
Disk space	Minimum: 4 GB Recommended: 6 GB or higher ArcGlobe creates cache files when used. If using ArcGlobe, additional disk space may be required.
Video/Graphics adapter	64 MB RAM minimum; 256 MB RAM or higher recommended. NVIDIA, ATI, and Intel chipsets supported. 24-bit capable graphics accelerator OpenGL version 2.0 runtime minimum is required, and Shader Model 3.0 or higher is recommended. Be sure to use the latest available drivers.

Software requirements

	Description
Python requirement	ArcGIS requires Python 2.7.15 and Numerical Python 1.9.3 to be installed. If the ArcGIS setup does not find either Python 2.7.15 or Numerical Python (NumPy) 1.9.3 installed on the target computer, Python 2.7.15 and Numerical Python 1.9.3 will be installed during a complete installation of ArcMap. You can choose a Custom installation to unselect the Python feature and avoid installing it. Additionally, if the Python setup is executed during the ArcMap installation, you will be provided with the opportunity to choose its installation location. The Python installation location should not include spaces. ArcGIS requires Python 2.7.15 and Numerical Python (NumPy) 1.9.3 to be installed. If the ArcGIS setup does not find either Python 2.7.15 or Numerical Python (NumPy) 1.9.3 installed on the target computer, Python 2.7.15 and Numerical Python 1.9.3 will be installed during a complete installation.

Microsoft .NET Framework requirement	Microsoft .NET Framework 4.5.2 or higher must be installed prior to installing ArcMap.
Browser requirement	Microsoft Internet Explorer (minimum IE 11) must be installed prior to installing ArcMap.

Printer support

ArcMap supports printing to any Microsoft certified Windows printer using the native driver in ArcGIS. Note that some printer drivers do not support complex maps, and the ArcPress printer driver or additional hardware may be needed for these complex maps.

📒 **Note:** The following configuration is recommended when printing large maps with the ArcPress printer drivers:

- If large complex maps do not print, reboot the computer to ensure the pagefile system is cleared. If the pagefile system is not a dedicated drive or partition, make sure the drive does not need to be defragmented.

- Disk Space: At least 10 GB of free space is required on the drive where %TEMP% is located, as potentially large temporary files will be written there while ArcPress is processing a map for printing.

For more information on supported printers, refer to the following Knowledge Base FAQ: What printers are supported by ArcGIS Desktop?

Software required to connect to a DBMS

Your client machine (for example, the one running ArcMap) will need to have the appropriate client files installed for the RDBMS you are using. These client files are available from their respective RDBMS vendors, but some are also available on My Esri as a convenience. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for ALTIBASE, Dameng, IBM Informix, IBM Netezza, Oracle, SAP HANA, and Teradata are not available on My Esri and must be obtained from the RDBMS vendors. See Database clients for more information.

SDK requirements

SDK	Supported and Recommended IDE(s)	Requirements
ArcObjects SDK		ArcObjects SDK requirements

📒 **Note:** At the ArcGIS Desktop 10.5 release, Microsoft Visual Basic for Applications (VBA) Compatibility is no longer included. The VBA Compatibility setup in prior versions can still be installed, but its usage is not supported and may result in software errors or crashes. It is recommended that existing Microsoft VBA users continue to use ArcGIS Desktop version 10.2.2 or earlier, or migrate VBA customizations to ArcMap add-ins, ArcPy scripts, or ArcGIS Pro add-ins built with the Pro SDK for .NET

Operating system requirements and limitations

All platforms

Windows

10.7 ArcReader system requirements

Visit Esri Support for information on earlier versions.

Supported platforms

Check your computer's ability to run ArcGIS Desktop.

📒 **Note:** Microsoft .NET Framework 4.5.2 or later must be installed prior to installing ArcReader.

💡 **Tip:** ArcReader requires Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x86). If the Visual C++ 2017 (update 5 or later) Redistributable is not already installed, running setup.exe will install it before setup.msi is launched. Setup.msi will not install if Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x86) is not already installed.

Supported operating systems*	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	December 11, 2018 Update
Windows 8.1 Basic, Pro, and Enterprise (32 bit and 64 bit [EM64T])	December 11, 2018 Update
Windows 7 Ultimate, Professional, and Enterprise (32 bit and 64 bit [EM64T])	SP1 with December 11, 2018 Update
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	November, 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 Update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 Update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 Update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with December 11, 2018 Update

📒 **Note:** Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

*See the Operating system requirements and limitations section for additional requirements and information.

ArcReader is supported in various on-premises and cloud environments.

On-premises virtual desktop infrastructure (VDI)	Notes
Citrix XenDesktop 7.6 CU6	Use the latest Citrix and NVIDIA drivers. Refer to Citrix and NVIDIA GRID website for the most current driver versions.
Citrix XenDesktop 7.11	

Citrix XenDesktop 7.12	
Citrix XenDesktop 7.13	
Citrix XenDesktop 7.14	
Citrix XenDesktop 7.15 CU3	
Citrix XenDesktop 7.16	
Citrix XenDesktop 7.17	
Citrix Virtual Desktop 7.18 08 (Formerly known as XenDesktop)	
Windows Server 2012 R2 Hyper-V	Microsoft VDI certified with RemoteFX vGPU Windows Device Driver Model(WDDM) 1.2
Windows Server 2016 Hyper-V	
VMware vSphere 6.0	Use VMware Horizon View 7.0.3 and later only.
VMware vSphere 6.5	Use the latest VMware and NVIDIA drivers. Refer to VMware and NVIDIA GRID website for the most current driver versions.
VMware vSphere 6.7	
VMware Horizon 7.6	

On-premises application streaming	Notes
Citrix XenApp 7.6 CU6	Hosted OS: • Windows Server 2008 R2 (SP1 or later) • Windows Server 2012 R2 (Nov 2018 update or later)
Citrix XenApp 7.11	Windows Server 2016
Citrix XenApp 7.12	Windows Server 2016
Citrix XenApp 7.13	Windows Server 2016
Citrix XenApp 7.14	Windows Server 2016
Citrix XenApp 7.15 CU3	Windows Server 2016
Citrix XenApp 7.16	Windows Server 2016
Citrix XenApp 7.17	Windows Server 2016
Citrix Virtual Apps 7.18 08 (Formerly known as Citrix XenApp)	Windows Server 2016

Cloud Environments**	Notes
AWS Virtual Machines	ArcReader works well in Amazon WorkSpaces and Azure instances that have:
Azure Virtual Machines	• supported operating systems • adequate number of processing cores for the workload • adequate amount of memory for the workload.

** ArcReader will provide adequate performance and usability in many of the cloud environments. The cloud instance must have adequate CPU, Memory and Disk storage resources to support ArcReader.

Hardware requirements

	Supported and Recommended
CPU speed	2.2 GHz minimum; Hyper-threading (HHT) or Multi-core recommended
Platform	x86 or x64 with SSE2 extensions
Memory/RAM	Minimum: 4 GB Recommended: 8 GB
Display properties	24-bit color depth Also see Video/Graphics adapter requirements below.*
Screen resolution	1024x768 recommended minimum at normal size (96 dpi)
Disk space	Minimum: 1.58GB Recommended: 4 GB or higher ArcReader creates cache files when used and additional disk space may be required.
Video/Graphics adapter	64 MB RAM minimum; 256 MB RAM recommended. NVIDIA, ATI, and Intel chipsets supported. 24-bit capable graphics accelerator. OpenGL version 2.0 runtime minimum is required, and Shader Model 3.0 or higher is recommended. Be sure to use the latest available drivers.

Software requirements

	Description
Microsoft .NET Framework requirement	The .NET Extension Support feature requires Microsoft .NET Framework 4.5.2 or later be installed prior to installing ArcReader. If Microsoft .NET Framework 4.5.2 or later is not found, the .NET Extension Support feature will not be available for installation. If your operating system includes Microsoft .NET Framework 4.5.2 or later, make sure it is enabled using Windows Features. If your operating system does not include Microsoft .NET Framework 4.5.2 or later, you will need to install it before installing ArcReader.
Browser requirement	Microsoft Internet Explorer (minimum IE 11) must be installed prior to installing ArcReader.
Printer support	ArcReader supports printing to any Microsoft-certified Windows printer using the native driver in ArcGIS. Note that some printer drivers do not support complex maps, and the ArcPress printer driver or additional hardware may be needed for these complex maps. The following configuration is recommended when printing large maps with the ArcPress printer drivers: • If large complex maps do not print, reboot the computer to ensure the page file system is cleared. If the page file system is not a dedicated drive or partition, make sure the drive does not need to be defragmented. • Disk space: At least 10 GB of free space is required on the drive where %TEMP% is located, as potentially large temporary files will be written there while ArcPress processes a map for printing. For more information on supported printers, refer to the following Esri Support Knowledge Base FAQ: What printers are supported by ArcGIS Desktop?

Operating system requirements and limitations

All platforms

Windows

ArcGIS Enterprise System Requirements

ArcGIS Enterprise Builder 10.7 system requirements

ArcGIS Enterprise, the next evolution of the ArcGIS Server product line, has a flexible deployment model allowing for use completely on-premises, in the cloud, or a combination of the two. The ArcGIS Enterprise Builder product includes the following software components that are designed to work together:

- ArcGIS Server

- Portal for ArcGIS

- ArcGIS Data Store

- ArcGIS Web Adaptor

ArcGIS Image Server, ArcGIS GeoEvent Server, ArcGIS GeoAnalytics Server, and Esri Business Analyst Server are specialized licensing roles for ArcGIS Server. See What is ArcGIS Enterprise in the ArcGIS Server help for more information.

The system and hardware requirements required to run ArcGIS Enterprise Builder are listed below. Linux only: A diagnostics tool runs during the setup to help you determine if your machine meets the minimum system requirements. For information about earlier versions, see Esri Support. If your Portal for ArcGIS organization will use a premium app, such as ArcGIS Pro or Drone2Map for ArcGIS, you will also need ArcGIS License Manager 2018.1 to configure your premium app licenses to specify which members can use the software. See the Portal for ArcGIS Administrator Guide, License Manager Reference Guide, and the License Manager system requirements for more information.

It's recommended that you review the deprecation notice to determine if your hardware and software components are still compatible with version 10.7, and to review all current system requirements of the individual products at ArcGIS Enterprise Installation Guides documentation.

> **Note:** ArcGIS Server requires Microsoft Visual C++ 2017 Redistributables (x86 and x64). If the Visual C++ 2017 Redistributables are not already installed, running setup.exe will install them before setup.msi is launched. Setup.msi will not install if the Microsoft Visual C++ 2017 Redistributables (x86 and x64) are not already installed.

Windows Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64 bit.

Machines with an underscore (_) in their names are not supported. Several widely used Internet host name specifications have designated the underscore character as nonstandard. Although Windows allows you to use the underscore in a machine name, it can still cause problems when you interact with other servers and platforms. For this reason, ArcGIS Enterprise will not install on servers that have an underscore in the host name.

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Windows 10 and 8.1 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Caution: January 2018 security updates from Microsoft have caused geoprocessing services to crash when ArcGIS Server is running on Windows Server 2008 R2 and Windows 7. Esri released a patch for each release of ArcGIS Server 10.2.1 and later to resolve this bug. While these operating systems are still supported, if your ArcGIS Enterprise deployment is running on either of these operating systems, apply the ArcGIS Server Geoprocessing Service Startup Patch, which you can download from Esri Technical Support.

Supported operating systems	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update

Legacy: Windows 8 is no longer supported by Microsoft. Please upgrade to Windows 8.1 or higher.

Linux Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64 bit. ArcGIS Enterprise is only supported on Linux x86_64, on CPUs that adhere to the x86_64 architecture (64 bit), with supported Linux releases.

Machines with an underscore (_) in the name are not supported. The setup will not proceed if an underscore is detected in the machine name.

The software should not be installed on an OS (binary) that has been modified. Esri does not provide support for products installed on a developer's release of an operating system.

You cannot install the software as a root user. If you attempt to do this, the installation will not proceed, and a software diagnostics tool will display an error message indicating that you cannot install as root.

Note: A Java Application Server and the Java Linux Web Adaptor needs to be installed prior to Enterprise Builder in order to complete the setup and configuration.

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux Server 7	Update 5
Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS 18	18.04.1
Ubuntu Server LTS 16	16.04.5
CentOS Linux 7	7.5

CentOS Linux 6	6.10
Scientific Linux 7	7.5
Scientific Linux 6	6.10
Oracle Linux 7	Update 5
Oracle Linux 6	Update 10

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported Red Hat version. As a prerequisite for logging a defect, any software issue on these operating systems will be attempted to be reproduced on Red Hat Enterprise Linux. For Oracle Linux, support is predicated on the use of the Red Hat compatible kernel.

Tip: If you want to install the software, run the ArcGIS Software Authorization Wizard, or run the Check for Updates tool using the operating system graphical user interface (GUI), the X Window System package group is required.

Hardware requirements

Disk space requirements

ArcGIS Enterprise Builder requires 10 GB of free disk space on the system drive (often the C: drive), where setup files are staged and log files are written. Additionally, the builder requires 20 GB of free disk space on the installation drive, which you will specify during setup. This disk space is necessary for completing the initial installation of components and for the storage of data, logs, and configuration files as your base deployment expands. Most users need more than 20 GB of space on their installation drive; a production system should have 50 GB or more of free disk space.

ArcGIS Enterprise Builder requires 25 GB of free disk space. The location you provide as your installation drive during setup must have a minimum of 23 GB of free disk space for installation to proceed. Additionally, 2 GB of space must be available on the system's /tmp folder to allow for extraction of the setup.

Memory Requirements

It is strongly recommended to have at least 16GB of memory to install ArcGIS Enterprise Builder.

Microsoft .NET Framework 4.5.2 support

ArcGIS Web Adaptor requires Microsoft .NET Framework 4.5.2 or later in order to be installed. If your operating system includes Microsoft .NET Framework 4.5.2, make sure it's enabled using Windows Features. If your operating system does not include Microsoft .NET Framework 4.5.2, you can download it from the installation media and enable it using Windows Features.

ArcGIS Server 10.7 system requirements

The system and hardware requirements to run ArcGIS Server are listed below. A diagnostics tool runs during the setup to help you determine if your machine meets the minimum system requirements. For information about earlier versions, see Esri Support.

It's recommended that you review the deprecation notice to determine if your hardware and software components are still compatible with version 10.7.

Windows operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit.

Machines with an underscore (_) in their names are not supported. Several widely used Internet host name specifications have designated the underscore character as nonstandard. Although Microsoft Windows allows you to use the underscore in a machine name, it can cause problems when you interact with other servers and platforms. For this reason, ArcGIS Server will not install on servers that have an underscore in the host name.

ArcGIS Server is not supported on domain controllers. Installing ArcGIS Server on a domain controller may adversely affect functionality.

Note: ArcGIS Server requires Microsoft Visual C++ 2017 (update 5 or later) Redistributables (x86 and x64). If Visual C++ 2017 Redistributables (update 5 or later) are not already installed, running `setup.exe` will install them before setup.msi is launched. Setup.msi will not install if the Microsoft Visual C++ 2017 (update 5 or later) Redistributables (x86 and x64) are not already installed.

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Windows 10, 8.1, and 7 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Supported operating systems	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 7 Ultimate, Professional, and Enterprise (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Operating system requirements and limitations

Windows

Linux operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit. ArcGIS Server is only supported on Linux x86_64, on CPUs that adhere to the x86_64 architecture (64-bit), with supported Linux releases.

Machines with an underscore (_) in the name are not supported. The setup will not proceed if an underscore is detected in the machine name.

You cannot install the software as a root user. If you attempt to do this, the installation will not proceed and a software diagnostics tool will display an error message indicating that you cannot install as root.

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux (RHEL) Server 7	Update 5
Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS 18	18.04.1
Ubuntu Server LTS 16	16.04.5
CentOS Linux 7	7.5
CentOS Linux 6	6.10
Scientific Linux 7	7.5
Scientific Linux 6	6.10
Oracle Linux 7	Update 5
Oracle Linux 6	Update 10

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported RHEL Server version. As a prerequisite for logging a defect, any software issue on these operating systems will be attempted to be reproduced on RHEL Server. For Oracle Linux, support is predicated on the use of the RHEL Server compatible kernel.

Caution: If you want to install the software, run the ArcGIS Software Authorization Wizard, or run the Check for Updates tool using the operating system graphical user interface (GUI), the X Window System package group is required.

The following package groups are required.

Red Hat Enterprise Linux Server requirements

Red Hat Enterprise Linux Server 6 and 7

• gettext

SUSE Linux Enterprise Server

SUSE Linux Enterprise Server 12

• gettext-runtime

Ubuntu Server LTS

Ubuntu Server 16.04 LTS and 18.04 LTS

• gettext-base

Hardware requirements

The minimum RAM requirement for ArcGIS GIS Server, ArcGIS GeoEvent Server, ArcGIS Image Server, or ArcGIS Business Analyst for Server: 8 GB per unique license role.

For a production environment, minimum hardware requirements are not listed because the user and business needs of the software may vary. These requirements must be considered in determining hardware needs to meet performance and scalability expectations.

ArcGIS GeoAnalytics Server: 16 GB

When configuring ArcGIS GeoAnalytics Server, ensure that the drive hosting the user profile has sufficient temporary space available. When determining a sufficient value, consider the input data size, the type of GeoAnalytics task, and the number of nodes in your site.
Example scenario:

Input data size: 100 GB of CSV point features

ArcGIS GeoAnalytics Server nodes: 5

Task: Join Features (self-join, simple Cartesian product of evenly distributed features)

Recommended space on disk: (100 x 100 GB) / 5 = 2 TB/node

Increment space accordingly to accommodate concurrent GeoAnalytics jobs.

Windows: ArcGIS Server requires a minimum of 10 GB of available disk space.

Linux: ArcGIS Server requires a minimum of 10 GB of available disk space to successfully install on the target system. Approximately 1.5 GB of the required disk space is used during the installation of this product. This temporary disk use will be removed at the end of the installation.

Note: You cannot install ArcGIS Server on a shared network directory (NFS mounted folder). The directory must be local on the target system.

Temp space requirements

By default, resources are extracted to the system `/tmp` directory. This directory must have read, write, and execute permissions enabled. If the required space is not available in the `/tmp` directory, the setup program will attempt to extract resources to the user's HOME directory. If the required space is not available in the user's HOME directory, the setup program will report an error indicating this problem. Optionally, you can specify an alternate temp location by setting the `IATEMPDIR` environment variable.

The `/tmp` directory is also used when publishing. When uploading service definition (SD) files through Server Manager, files equal to the size of the SD file are created in the `/tmp` directory. Files are not permanently stored, but deleted every hour. Ensure that the `/tmp` directory has sufficient space for individual SD files to be published in this manner.

Default file permissions

Due to security reasons, all permission types (read, write, and execute) for group and all users are turned off by default.

File handles and processes limits

ArcGIS Server is a data-intensive server product, and many of its data formats consist of hundreds of thousands of files. In heavily used systems, thousands or tens of thousands of files may be in use at any given time. If there are insufficient file handles and processes, requests may start failing randomly, leading to system downtime. The actual number of file handles and processes needed varies based on the data and the number of instances (threads/processes) running. Setting a file handle limit of 65,535 and a process limit of 25,059 will allow you to ensure that the system remains running.

There are soft and hard limits for file handles and processes on Linux. To determine the hard limits, use the `ulimit -Hn -Hu` (or `limit -h descriptors` if you're using csh) command. To determine the soft limits, use the `ulimit -Sn -Su` (or `limit` descriptors if you're using csh) command.

To increase the soft and hard limits, you'll need to edit the `/etc/security/limits.conf` file with superuser access. For example, you can add four lines in the file as follows and change the values for the limits:

```
<ArcGIS Server installation user> soft nofile <file limit>
<ArcGIS Server installation user> hard nofile <file limit>
<ArcGIS Server installation user> soft nproc <process limit>
<ArcGIS Server installation user> hard nproc <process limit>
```

After making this change, you'll need to log out and log back in with the particular user for the new values to take effect. To verify that the limits have been modified appropriately, use the `ulimit -Hn -Hu` and `ulimit -Sn -Su` commands as described above.

Firewall settings

ArcGIS Server communicates on ports 1098, 4000-4004, 6006, 6080, 6099, and 6443. You'll need to open these ports on your firewall before installing the software. For more information, see Ports used by ArcGIS Server.

Domain name service (DNS) and fully qualified domain name (FQDN) recommendations

If you'll be federating your site with an ArcGIS Enterprise portal, it's recommended you configure your organization's domain name service (DNS) to include fully qualified domain name (FQDN) entries for each site you intend to federate with the portal. Portal for ArcGIS will request the FQDN of each site when you federate.

DNS hostname entry

ArcGIS Server must be installed on a machine that has a domain name service (DNS) hostname entry. This may require the system administrators for the site to add an entry to a name server in their network and that this name server be listed in the `/etc/resolv.conf` configuration file on the system.

If you'll be federating your site with an ArcGIS Enterprise portal, it's recommended you configure your organization's DNS to include fully qualified domain name (FQDN) entries for each site you intend to federate with the portal. Portal for ArcGIS will request the FQDN of each site when you federate.

SSL certificates

ArcGIS Server comes preconfigured with a self-signed certificate, which allows the server to be initially tested and to help you quickly verify that your installation was successful. You must request a certificate from a trusted certificate authority (CA) and configure the server to use it. This could be a domain certificate issued by your organization or a CA-signed certificate.

Like ArcGIS Server, Portal for ArcGIS also comes with a preconfigured self-signed certificate. If you'll be federating an ArcGIS Server site with an ArcGIS Enterprise portal, you should request a certificate from a trusted CA and configure the portal to use it.

For more information, see Best practices for configuring a secure environment.

Microsoft .NET Framework requirement for .NET Extension Support feature

The .NET Extension Support feature requires Microsoft .NET Framework 4.5 or higher. If Microsoft .NET Framework 4.5 is not found, the .NET Extension Support feature will not be available for installation.

If your operating system includes Microsoft .NET Framework 4.5, make sure it's enabled using Windows Features. If your operating system does not include Microsoft .NET Framework 4.5, you can download it from the installation media and enable it using Windows Features.

Microsoft Core XML Services (MSXML) 6

ArcGIS Server requires Microsoft Core XML Services (MSXML) 6. The ArcGIS Server installation will not proceed if MSXML 6 is not found on the machine. If the ArcGIS Server installation is performed through the GUI, the installation process automatically installs it for you. If you're installing ArcGIS Server silently or in certain deployment environments, MSXML 6 must be installed separately. The MSXML 6 setup is available at <ArcGIS Server `Installation folder>\Support\ MSXML6\64-bit\msxml6_x64.msi`.

Geoprocessing requirements

Python 2.7.15, Numerical Python 1.9.3, and Matplotlib 1.5.2 are required to support certain core geoprocessing tools. If these are not detected, the setup will install them automatically (recommended).

Page file size requirements

Ensure that a sufficient page file size is configured for the ArcGIS Server machine. You should consult with your IT administrator or follow best practices from Microsoft.

When using ArcGIS GeoAnalytics Server, the Windows page file can use up to 3X available physical RAM when working on memory-intensive tasks. To avoid system failures and depleted disk space, move the page file to a volume with at least 3X physical RAM available space.

Supported web browsers

ArcGIS Server Manager requires one of the following web browsers to be installed:

- Google Chrome

- Mozilla Firefox

- Microsoft Internet Explorer 11

- Microsoft Edge

ArcGIS Enterprise on cloud platforms

You can deploy ArcGIS Enterprise on many cloud platforms. Any cloud platform that provides virtual machines that meet the basic system requirements for operating system and system specifications is supported for use with ArcGIS Enterprise.

In addition to basic support, Esri provides deployment tooling and prebuilt virtual machine images on two cloud platforms: Amazon Web Services (AWS) and Microsoft Azure. When deploying on these two cloud platforms, it's recommended that you use the specialized tooling and images to simplify deployment and technical support.

Esri does not provide technical support for provisioning and configuring cloud infrastructure beyond what ArcGIS Enterprise deployment tooling creates and manages as part of its normal operations. For cloud platforms for which Esri does not provide specialized deployment tooling, support is limited to troubleshooting software-specific issues.

ArcGIS Enterprise also supports native cloud functionality such as storage and databases on several cloud platforms. Examples include Amazon Simple Storage Service (S3) and Microsoft Azure SQL Database. See the documentation for each ArcGIS component for information on the native cloud functionality that's supported.

Supported virtualization environments

All components of ArcGIS Enterprise are fully supported on virtual environments as long as they run on supported platforms. When running third-party applications with ArcGIS Enterprise, such as relational databases, the application must also be supported in a virtual environment. Check the third-party vendor for its virtualization support.

The following virtualization environments are known to perform well with ArcGIS Server:

- VMware vSphere 5.5, 6.0, and 6.5

- Microsoft Hyper-V

- Huawei FusionSphere 5.1 and 6.0

For additional information, see Virtualization and ArcGIS Server.

Supported databases

See the following topics for information on databases supported with ArcGIS Server:

- Altibase database requirements

- Dameng database requirements

- IBM Db2 database requirements

- IBM Informix database requirements

- IBM Netezza Data Warehouse Appliance requirements

- Microsoft Azure SQL Database requirements

- Microsoft SQL Server database requirements

- Oracle database requirements

- PostgreSQL database requirements

- SAP HANA database requirements

- SQLite database requirements

- Teradata Data Warehouse Appliance requirements

ArcGIS Server Workgroup edition, which includes an installation of SQL Server Express, is supported on Windows operating systems only.

Portal for ArcGIS 10.7 system requirements

The system and hardware requirements required to run Portal for ArcGIS are listed below. A Linux diagnostics tool runs during the setup to help you determine if your machine meets the minimum system requirements. For information about earlier versions, see Esri Support. If your Portal for ArcGIS organization will use ArcGIS Pro or Drone2Map for ArcGIS, you will also need ArcGIS License Manager 2018.1 to configure your licenses to specify which members can use these applications. See the Portal for ArcGIS Administrator Guide, License Manager Reference Guide, and the License Manager system requirements for more information.

It's recommended that you review the deprecation notice to determine if your hardware and software components are still compatible with version 10.7.

Windows Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit.

Machines with an underscore (_) in their names are not supported. Several widely used Internet host name specifications have designated the underscore character as nonstandard. Although Windows allows you to use the underscore in a machine name, it can still cause problems when you interact with other servers and platforms. For this reason, Portal for ArcGIS will not proceed with installation on servers that have an underscore in the host name.

Portal for ArcGIS is not supported on domain controllers. Installing Portal for ArcGIS on a domain controller may adversely affect functionality.

Note: Portal for ArcGIS requires Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x64). If the Visual C++ 2017 (update 5 or later) Redistributable is not already installed, running setup.exe will install it before setup.msi is launched. Setup.msi will not install if Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x64).

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Windows 10 and 8.1 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Supported operating systems	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update

Windows 7 Ultimate, Professional, and Enterprise (64 bit [EM64T])	SP1 with Dec 11, 2018 update

📒 **Note:** Windows 8 is no longer supported by Microsoft. Please upgrade to Windows 8.1 or higher.

Linux Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64 bit. Portal for ArcGIS is only supported on Linux x86_64, on CPUs that adhere to the x86_64 architecture (64 bit), with supported Linux releases.

Machines with an underscore (_) in the name are not supported. The setup will not proceed if an underscore is detected in the machine name.

You cannot install the software as a root user. If you attempt to do this, the installation will not proceed and a diagnostics tool will display an error message indicating that you cannot install as root.

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux Server 7	Update 5
Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS 18	18.04.1
Ubuntu Server LTS 16	16.04.5
CentOS Linux 7	7.5
CentOS Linux 6	6.10
Scientific Linux 7	7.5
Scientific Linux 6	6.10
Oracle Linux 7	Update 5
Oracle Linux 6	Update 10

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

📒 **Note:** Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported Red Hat version. As a prerequisite for logging a defect, any software issue on these operating systems will be attempted to be reproduced on Red Hat Enterprise Linux. For Oracle Linux, support is predicated on the use of the Red Hat compatible kernel.

⚠️ **Caution:** If you want to install the software, run the ArcGIS Software Authorization Wizard, or run the Check for Updates tool using the operating system graphical user interface (GUI), the X Window System package group is required.

The following package groups are required.

Red Hat Enterprise Linux Server requirements

Red Hat Enterprise Linux Server 6 and 7

• gettext

SUSE Linux Enterprise Server

SUSE Linux Enterprise Server 12

• gettext-runtime

Ubuntu Server LTS

Ubuntu Server 16.04 LTS and 18.04 LTS

• gettext-base

Hardware requirements

• Processor: 4 cores for 100 concurrent users

• Memory/RAM: 8 GB

• Disk space: 10 GB

All content created by your users will also be stored on disk. Carefully consider how data will be uploaded and created by your users and allocate disk space accordingly. If desired, you can change the location of where the portal stores its content after installing the software.

Temp space requirements

By default, resources are extracted to the system `/tmp` directory. This directory must have read, write, and execute permissions enabled. If the required space is not available in the `/tmp` directory, the setup program will attempt to extract resources to the user's HOME directory. If the required space is not available in the user's HOME directory, the setup program will report an error indicating this problem. Optionally, you can specify an alternate temp location by setting the `IATEMPDIR` environment variable.

File system requirements

On Linux systems, the `ext3` file system limits the number of item subfolders to less than 32,000; this means your portal is limited to having no more than 32,000 items. No new items can be added to Portal for ArcGIS when this limit is reached. It is recommended that you update or move the installation directory to an `ext4` or `xfs` file system that does not have this limitation. The file system must also be supported by the operating system provider.

📒 **Note:** The btrfs file system is supported only if adequate disk space is allocated for the metadata used by btrfs. Run command "btrfs filesystem df /" to confirm.

File handles limits

For the portal to run properly, the file handle limits for the installation user are required to be set to 65,535. An installation diagnostics tool will check to validate whether the limits are set properly in the `/etc/security/limits.conf` file. If the limits are set incorrectly, the diagnostics check will fail.

There are soft and hard limits for file handles on Linux. To determine the limits, use the following commands:

- Soft limit: `ulimit -Sn`

- Hard limit: `ulimit -Hn`

To increase the soft and hard limits, you'll need to edit the `/etc/security/limits.conf` file with superuser access. For example, add two lines in the file like this:

```
<Portal for ArcGIS installation user> soft nofile 65535
<Portal for ArcGIS installation user> hard nofile 65535
```

After making this change, you will need to log out and log back in with the particular user for the new values to take effect. To verify that the limits have been modified appropriately, you can use the `ulimit -Sn` and `ulimit -Hn` commands as described above.

Firewall settings

Portal for ArcGIS communicates on ports 7080, 7443, 7005, 7099, and 7654. You'll need to open these ports on your firewall before installing the software. For more information, see Ports used by Portal for ArcGIS.

Domain name service (DNS) and fully qualified domain name (FQDN) requirements

Your organization's domain name service (DNS) needs to include an entry of the fully qualified domain name (FQDN) of the machine hosting Portal for ArcGIS. Similarly, if you'll be using ArcGIS Server with your portal, it's recommended that you include FQDN entries for each site you intend to federate with Portal for ArcGIS.

📒 **Note:** Portal only supports a single DNS name.

If desired, you can configure your DNS to use a friendly name for the portal (for example, `friendly.domain.com` instead of `portal.domain.com`). When doing this, assign the name to the portal machine before you install the software. Then use the friendly name when setting up the portal. For example, setup activities that require use of the friendly name include the following:

- Configure ArcGIS Web Adaptor with your portal.

- Federate an ArcGIS Server site with your portal.

- Add Portal for ArcGIS to your organization's reverse proxy server. If you're not using a reverse proxy server, it's recommended you assign a friendly name to the machine hosting ArcGIS Web Adaptor.

⚠️ **Caution:** If you configure a friendly DNS name after setting up your portal, existing items in the portal may become unusable, as they will include the non-friendly name. You'll need to manually re-create each item in order to use them again.

SSL certificates

Portal for ArcGIS comes preconfigured with a self-signed server certificate, which allows the portal to be initially tested and to help you quickly verify that your installation was successful. You must request a certificate from a trusted certificate authority (CA) and configure the portal to use it. The certificate can be signed by a corporate (internal) or commercial CA.

You should configure each applicable ArcGIS component in your organization with a certificate from a corporate or commercial CA. Common examples include ArcGIS Web Adaptor and ArcGIS Server. For example, ArcGIS Server also comes with a preconfigured self-signed certificate. If you'll be federating an ArcGIS Server site with your portal, it's very important that you request a CA-signed certificate and configure the server and Web Adaptor to use it.

For more information, see Security best practices.

ArcGIS Web Adaptor

ArcGIS Web Adaptor is a required component of Portal for ArcGIS, which allows you to integrate your portal with your existing web server and your organization's security mechanisms. You cannot deploy Portal for ArcGIS in your organization without the Web Adaptor.

You can only use the Web Adaptor with port 80 or 443. Using different ports is not supported. See ArcGIS Web Adaptor documentation for details.

Supported web browsers

For the best performance in the portal website, use the latest browser versions listed below. Scene Viewer has its own browser and hardware requirements. Some of the common clients of Portal for ArcGIS have different requirements. See their documentation for details.

- Internet Explorer 11. Active scripting must be enabled for the portal website to function correctly.

- Edge

- Firefox

- Chrome

- Safari

- Android Browser

- Chrome for Android

External access

If you'll be using Esri-provided services, such as basemaps and data from ArcGIS Online, the machine hosting Portal for ArcGIS will need access to the Internet. If your portal will not have access to the Internet, you'll need to perform some additional configuration steps to ensure your portal is pointing to local resources. For instructions, see Configuring a disconnected deployment.

Supported virtualization environments

All components of ArcGIS Enterprise are fully supported on virtual environments as long as they run on supported platforms. When running third-party applications with ArcGIS Enterprise, such as relational databases, the application must also be supported in a virtual environment. Check the third-party vendor for its virtualization support.

The following virtualization environments are known to perform well with ArcGIS Enterprise:

- VMware vSphere 5.5, 6.0, and 6.5

- Microsoft Hyper-V

- Huawei FusionSphere 5.1 and 6.0

For additional information, see Virtualization and ArcGIS Server.

ArcGIS Web Adaptor 10.7 system requirements

The system and hardware requirements required to run ArcGIS Web Adaptor are listed below. For information about earlier versions, see Esri Support.

It's recommended that you review the deprecation notice to determine if your hardware and software components are still compatible with version 10.7.

Operating system and application/web server requirements for ArcGIS Web Adaptor (IIS)

The following application/web servers are supported on these operating systems:

- IIS 10

- IIS 8.5

- IIS 8

- IIS 7.5

Future updates on these application/web servers are supported unless otherwise stated.

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])r	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update
Windows 10 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 7 Ultimate, Professional, and Enterprise (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the application/web server provider.

Note: Windows 8.1 and 10 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Application/web server and operating system requirements for ArcGIS Web Adaptor (Java Platform)

The following application/web servers are supported on these operating systems:

- Apache Tomcat 7.0.82, 8.5.23, and 9.0.13

- GlassFish 4.1.1

- IBM WebSphere 8.5.5.9 and 9

- JBoss Enterprise Application Platform 7

- Oracle WebLogic 12c R1 and R2

Future updates on these application/web servers are supported unless otherwise stated.

📋 **Note:** Please verify that the internal JDK used by your Application server where you deploy the Java Web Adaptor is at the minimum of JDK 1.8.

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])r	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the application/web server provider.

Application/web server and operating system requirements

The following application/web servers are supported on these operating systems:

- Apache Tomcat 7.0.92, 8.5.35, and 9.0.13
- GlassFish 4.1.1
- IBM WebSphere 8.5.5.9 and 9
- JBoss Enterprise Application Platform 7
- Oracle WebLogic 12c R1 and R2

Future updates on these application/web servers are supported unless otherwise stated.

📋 **Note:** Please verify that the internal JDK used by your Application Server where you deploy the Java Web Adaptor is at a minimum of JDK 1.8.

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux Server 7	Update 5
Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS 18	18.04.1
Ubuntu Server LTS 16	16.04.5

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system and updates must also be supported by the application/web server provider.

💡 **Tip:** If you want to install the software using the operating system graphical user interface (GUI), the X Window System package group is required.

Note: Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported Red Hat version. As a prerequisite for logging a defect, any software issue on these operating systems will be attempted to be reproduced on Red Hat Enterprise Linux. For Oracle Linux, support is predicated on the use of the Red Hat compatible kernel.

Temp space requirements

By default, resources are extracted to the system `/tmp` directory. If the required space is not available in the `/tmp` directory, the setup program will attempt to extract resources to the user's HOME directory. If the required space is not available in the user's HOME directory, the setup program will report an error indicating this problem. Optionally, you can specify an alternate temp location by setting the `IATEMPDIR` environment variable. The `/tmp` directory must also have execute permissions set for it.

Java support

ArcGIS Web Adaptor supports Java 8.x and 11.x. Java 6.x and 7.x are not supported.

Legacy: In earlier versions, ArcGIS Web Adaptor supported Java 6.x. At ArcGIS 10.4, ArcGIS Web Adaptor supported Java 7.x and 8.x. From ArcGIS 10.5 to 10.6.x, ArcGIS Web Adaptor only supports 8.x.

Maximum installation instances

You can install a maximum of 21 instances of ArcGIS Web Adaptor (IIS) on a single machine. If more instances are required, install them on a separate machine.

If you have earlier versions installed on the machine, you are not required to uninstall them. For example, you can have 5 instances of ArcGIS Web Adaptor 10.4 and 21 instances of ArcGIS Web Adaptor 10.7 installed on the same machine. The maximum value only applies to instances of the same software version.

Microsoft .NET Framework 4.5 support

ArcGIS Web Adaptor (IIS) requires Microsoft .NET Framework 4.5 or later in order to be installed. If your operating system includes Microsoft .NET Framework 4.5, make sure it's enabled using Windows Features. If your operating system does not include Microsoft .NET Framework 4.5, you can download it from the installation media and enable it using Windows Features.

Microsoft IIS required components

ArcGIS Web Adaptor (IIS) supports IIS in Windows 8.1, 10, Server 2008 R2, Server 2012, 2012 R2, 2016 and 2019 Standard/DataCenter. This corresponds to IIS versions 7.5, 8.0, 8.5, and 10. IIS must be enabled along with specific IIS 7.5, 8.0, 8.5, and 10 components. The setup will not proceed if IIS is not detected and specific IIS components enabled.

If you already have IIS 7.5, 8.0, 8.5, or 10 installed but are missing required IIS components, the setup will display the **IIS requirements verification** dialog box. This gives you the option to allow the installation to automatically enable any missing required IIS components. To do this, click **I agree**. To learn more, see Automatically enabling IIS components section.

> **Note:** If you're going to perform a silent installation of ArcGIS Web Adaptor, all required IIS components must be enabled manually. The setup will not automatically enable missing IIS components when you're performing a silent installation.

To learn how to enable IIS on your operating system and optionally enable the missing IIS 7.5, 8.0, 8.5, or 10 components on your own, see the following topics:

- Enabling IIS and required IIS components on Windows Server 2016 (Standard/DataCenter)
- Enabling IIS and required IIS components on Windows Server 2012/2012 R2
- Enabling IIS and required IIS components on Windows Server 2008 R2
- Enabling IIS and required IIS components on Windows 8.1

ArcGIS Data Store 10.7 system requirements

The system and hardware requirements that are required to run ArcGIS Data Store are listed below. ArcGIS Data Store is a component of ArcGIS Enterprise; they both support the same operating systems and browsers. For information about earlier versions, see Esri Support.

It's recommended that you review the deprecation notice to determine if your hardware and software components are still compatible with version 10.7.

Windows Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit.

Machines with an underscore (_) in their names are not supported. Several widely used Internet host name specifications have designated the underscore character as nonstandard. Although Microsoft Windows allows you to use the underscore in a machine name, it can still cause problems when you interact with other servers and platforms. For this reason, ArcGIS Data Store will not proceed with installation on servers that have an underscore in the host name.

ArcGIS Data Store is not supported on domain controllers. Installing ArcGIS Data Store on a domain controller may adversely affect functionality.

Note: ArcGIS Data Store requires Microsoft Visual C++ 2017 Redistributables (x64). If the Visual C++ 2017 Redistributables are not installed, running `setup.exe` will install them. Running `setup.msi` will not install the Microsoft Visual C++ 2017 Redistributables (x64); therefore, you must install Microsoft Visual C++ 2017 Redistributables (x64) before you can run `setup.msi`.

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Windows 10, 8.1, and 7 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Supported operating systems	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 7 Ultimate, Professional, and Enterprise (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Linux Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit. ArcGIS Data Store is only supported on Linux x86_64, on CPUs that adhere to the x86_64 architecture (64-bit), with supported Linux releases.

Machines with an underscore (_) in the name are not supported. The setup will not proceed if an underscore is detected in the machine name.

You cannot install the software as a root user. If you attempt to do this, the installation will not proceed and a diagnostics tool will display an error message indicating that you cannot install as root.

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux (RHEL) Server 7	Update 5
Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS 18	18.04.1
Ubuntu Server LTS 16	16.04.5
CentOS Linux 7	7.5
CentOS Linux 6	6.10
Scientific Linux 7	7.5
Scientific Linux 6	6.10
Oracle Linux 7	Update 5
Oracle Linux 6	Update 10

Updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported RHEL Server version. As a prerequisite for logging a defect, any software issue on these operating systems will be attempted to be reproduced on RHEL Server. For Oracle Linux, support is predicated on the use of the RHEL Server compatible kernel.

Caution: If you want to install the software, run the ArcGIS Software Authorization Wizard, or run the Check for Updates tool using the operating system graphical user interface (GUI), the X Window System package group is required.

The following package groups are required.

Red Hat Enterprise Linux Server requirements

Red Hat Enterprise Linux Server 6 and 7

• gettext

SUSE Linux Enterprise Server

SUSE Linux Enterprise Server 12

• gettext-runtime

Ubuntu Server LTS

Ubuntu Server 16.04 LTS and 18.04 LTS

• gettext-base

Disk space requirements

To install and configure ArcGIS Data Store requires a minimum of 13 GB of available disk space on the system drive. This is the minimum disk space requirement for a machine with one empty data store type; it does not take into account the data you will store in the data store or backup files that might be stored on the machine. Given this requirement, you should plan to install ArcGIS Data Store on machines with large quantities of available disk space.

Note: When a relational or tile cache data store machine contains less than 10 GB of free disk space, ArcGIS Data Store begins logging warnings that you are running out of disk space. When free disk space on spatiotemporal big data store machines reaches 20 percent, ArcGIS Data Store begins logging warnings that you are running out of disk space. Monitor your data store logs so you are aware when a machine begins to run out of disk space. Once the disk drive contains less than 1 GB of free space, relational data stores are placed in read-only mode, and tile cache and spatiotemporal big data stores are shut down.

To determine the amount of disk space needed on a dedicated ArcGIS Data Store machine, you need to take all of the following into consideration:

• Windows: The software installation uses 800 MB of disk space.

• Linux: The software installation uses 900 MB of disk space.

• Each data store uses an additional amount of space when created and still empty:

  ▪ Tile cache data store = 1 MB

  ▪ Spatiotemporal big data store = 200 MB

  ▪ Relational data store = 2.5 GB*

  *An empty relational data store uses up to 2.5 GB of disk space over time, to support high availability and a reliable backup policy. Upon configuration of the relational data store, approximately 200 MB of disk space is used. The amount of disk space used by the empty relational data store will grow by about 200 MB per hour over the course of 11 hours until settling at 2.5 GB at that time. Data stored in the system during use is in addition to this baseline storage requirement.

• You need to estimate the amount of disk space needed for the data stored in the data stores.

• Backup files stored on the data store machine also consume disk space. If you do not configure backups to be written to a shared location, you must plan for this additional use of disk space.

Memory requirements

The minimum memory required to configure a single, empty ArcGIS Data Store on a machine varies by type. Meeting the minimum free memory requirements ensures the data store will start. Once in use, additional memory is required.

The following minimum memory requirements assume you install each type of ArcGIS Data Store on its own machine; no other data store type or ArcGIS Enterprise component is installed on the machine. Amounts listed reflect the amount of free memory that must be available on the machine before installing ArcGIS Data Store and configuring a data store.

- Relational data store = 8 GB
- Spatiotemporal big data store = 16 GB
- Tile cache data store = 8 GB

Temp space requirements

By default, resources are extracted to the system `/tmp` directory. If the required space is not available in the `/tmp` directory, the setup program will attempt to extract resources to the user's `HOME` directory. If the required space is not available in the user's `HOME` directory, the setup program will report an error indicating this problem. Optionally, you can specify an alternate temp location by setting the `IATEMPDIR` environment variable.

File handle and process limits

ArcGIS Data Store is a data-intensive product, and many of its data formats consist of hundreds of thousands of files. In heavily used systems, thousands or tens of thousands of files may be in use at any given time. If there are insufficient file handles and processes, the data store cannot start. Even if there are sufficient processes and file handles to start, requests may start failing randomly once data is loaded and people start accessing services, leading to system downtime. The actual number of file handles and processes needed varies based on the data and the number of instances (threads/processes) running.

There are soft and hard limits for file handles, file sizes, and processes on Linux. To determine the hard limits, use the `ulimit -Hn -Hu` (or `limit -h descriptors` if you're using csh) command. To determine the soft limits, use the `ulimit -Sn -Su` (or `limit` descriptors if you're using csh) command.

The minimum file handle limit is 65,535 for relational and tile cache data stores and 65,536 for spatiotemporal big data stores. The minimum process limit for all data store types is 25,059. These minimum settings only ensure ArcGIS Data Store can start. You should set higher limits to help ensure that the system remains running.

To increase the soft and hard limits, edit the `/etc/security/limits.conf` file with superuser access. Which lines and settings you add to the file vary depending on the type of data store you configure.

See the next section for `/etc/security/limits.conf` file settings for spatiotemporal big data store machines.

The following example is for a tile cache or relational data store machine. Replace limits with numbers appropriate to your uses.

```
<ArcGIS Data Store installation user> soft nofile <file limit>
<ArcGIS Data Store installation user> hard nofile <file limit>
<ArcGIS Data Store installation user> soft nproc <process limit>
<ArcGIS Data Store installation user> hard nproc <process limit>
```

The `<ArcGIS Data Store installation user>` is the name of the login you use to install ArcGIS Data Store.

Log back in with the user you specified for `<ArcGIS Data Store installation user>` for the file handle and process limit values to take effect. To verify that the limits have been modified appropriately, use the `ulimit -Hn -Hu` and `ulimit -Sn -Su` commands as described above.

After changing process and file handle limits, you must restart ArcGIS Data Store.

Environment settings for spatiotemporal big data stores

Spatiotemporal big data stores store and access large amounts of feature data. To accommodate this, additional environment settings are required for these types of data stores.

As mentioned in the previous section, the minimum file handle and process settings for spatiotemporal big data stores are 65,536 and 25,059, respectively. In addition, you must set file size and virtual memory to unlimited.

Set all of these limits in the `/etc/security/limits.conf` file. The following is an example of file limit, file size, process, and virtual memory settings in the `/etc/security/limits.conf` file on spatiotemporal big data store machines:

```
<ArcGIS Data Store installation user> soft nofile <file limit>
<ArcGIS Data Store installation user> hard nofile <file limit>
<ArcGIS Data Store installation user> soft fsize unlimited
<ArcGIS Data Store installation user> hard fsize unlimited
<ArcGIS Data Store installation user> soft nproc <process limit>
<ArcGIS Data Store installation user> hard nproc <process limit>
<ArcGIS Data Store installation user> soft as unlimited
<ArcGIS Data Store installation user> hard as unlimited
```

The `<ArcGIS Data Store installation user>` is the name of the login you use to install ArcGIS Data Store.

Log back in with the user you specified for `<ArcGIS Data Store installation user>` for the file handle and process limit values to take effect. To verify that the limits have been modified appropriately, use the `ulimit -Hn -Hu` and `ulimit -Sn -Su` commands as described above.

Next, change the following system virtual memory settings:

- `vm.max_map_count` must be set to at least 262144. If you do not set this, you may receive out-of-memory exceptions.

- `vm.swappiness` must be set to 1; otherwise, it will negatively affect the performance of the spatiotemporal big data store.

Virtual memory settings apply to the whole system rather than the ArcGIS Data Store installation user. To configure your virtual memory settings, you must update the `/etc/sysctl.conf` file with the following virtual memory values. Replace the map count with a number appropriate for your use.

```
vm.max_map_count = <map count>
vm.swappiness = 1
```

After changing process, file, and virtual memory limits, you must restart ArcGIS Data Store.

Firewall settings

ArcGIS Data Store uses specific ports to communicate with your portal and ArcGIS Server.

- HTTPS port—ArcGIS Data Store is accessed via secured port 2443.

- Data store ports—Relational data stores communicate through port 9876. Tile cache data stores communicate through ports 29080 and 29081. Spatiotemporal big data stores communicate through ports 9220 and 9320.

Supported web browsers

ArcGIS Data Store Administration Resources requires one of the following web browsers to be installed:

- Google Chrome

- Mozilla Firefox

- Microsoft Internet Explorer 11

- Microsoft Edge

ArcGIS Enterprise on cloud platforms

You can deploy ArcGIS Enterprise on many cloud platforms. Any cloud platform that provides virtual machines that meet the basic system requirements for operating system and system specifications is supported for use with ArcGIS Enterprise.

In addition to basic support, Esri provides deployment tooling and prebuilt virtual machine images on two cloud platforms: Amazon Web Services (AWS) and Microsoft Azure. When deploying on these two cloud platforms, it's recommended that you use the specialized tooling and images to simplify deployment and technical support.

Esri does not provide technical support for provisioning and configuring cloud infrastructure beyond what ArcGIS Enterprise deployment tooling creates and manages as part of its normal operations. For cloud platforms for which Esri does not provide specialized deployment tooling, support is limited to troubleshooting software-specific issues.

ArcGIS Enterprise also supports native cloud functionality such as storage and databases on several cloud platforms. Examples include Amazon Simple Storage Service (S3) and Microsoft Azure SQL Database. See the documentation for each ArcGIS component for information on the native cloud functionality that's supported.

Supported virtualization environments

All components of ArcGIS Enterprise are fully supported on virtual environments as long as they run on supported platforms. When running third-party applications with ArcGIS Enterprise, such as relational databases, the application must also be supported in a virtual environment. Check the third-party vendor for its virtualization support.

The following virtualization environments are known to perform well with ArcGIS Enterprise components:

- VMware vSphere 5.5, 6.0, and 6.5

- Microsoft Hyper-V

- Huawei FusionSphere 5.1 and 6.0

For additional information, see the Virtualization section for ArcGIS Enterprise.

ArcGIS Enterprise SDK 10.7 system requirements

The system and hardware requirements to run ArcGIS Enterprise SDK are listed below.

It is recommended that you review the deprecation notice to determine if your hardware and software components are still compatible with version 10.6.1.

Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit.

Supported operating systems	Latest update or service pack tested
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	Nov 2018 release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	Dec 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with Dec 11, 2018 update

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Windows 10 and Windows 8.1 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Supported operating systems	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 8.1 Pro and Enterprise (64 bit [EM64T])	Dec 11, 2018 update
Windows 7 Ultimate, Professional, and Enterprise (32 bit and 64 bit [EM64T])	SP1 with Dec 11, 2018 update

Operating system requirements and limitations

Windows

Operating system requirements

The following 64-bit operating systems satisfy the minimum operating system requirements. Support is not provided for 32-bit operating systems; the setup will only proceed if the operating system is 64-bit.

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux Server 7	Update 5
Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS	18.04.1

Ubuntu Server LTS	16.04.5
CentOS Linux 7	7.5
CentOS Linux 6	6.10
Scientific Linux 7	7.5
Scientific Linux 6	6.10
Oracle Linux 7	Update 5
Oracle Linux 6	Update 10

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Note: Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported Red Hat version. As a prerequisite for logging a defect, any software issue on these operating systems must first be reproduced on Red Hat Enterprise Linux. For Oracle Linux, support is predicated on the use of the Red Hat compatible kernel.

Disk space requirements

Enterprise SDK with all features for .NET on Windows requires approximately 550 MB of disk space.

Enterprise SDK with all features for JAVA requires approximately 250 MB of disk space.

Developer solutions (SDK) requirements

Development platform	Supported and Recommended IDE's	SDK Requirement
.NET	Visual Studio templates (which contains boilerplate code) are provided with Enterprise SDK for the .NET Platform and are supported in the IDEs listed below. • Microsoft Visual Studio 2017 (C#, VB.NET) Community, Professional, Enterprise • Microsoft Visual Studio 2015 (C#, VB.NET) Community, Professional, Premium, Ultimate Edition	ArcGIS Server is required when deploying an SOE and ArcGIS Pro is required when publishing map services. However, ArcGIS Server and ArcGIS Pro do not need to be installed on the same machine where the ArcGIS Enterprise SDK is installed; they can be on remote machines. Microsoft .NET Framework 4.5.2 or higher

| Java | Eclipse IDE plug-ins, which offer an enhanced developer experience through templates, and project wizards, are provided with Enterprise SDK for the Java Platform and are supported in the IDEs listed below.

• Eclipse Photon (4.8) IDE for Java Developers

• Eclipse Photon (4.8) IDE for Java EE Developers

• Eclipse Oxygen (4.7) IDE for Java Developers

• Eclipse Oxygen (4.7) IDE for Java EE Developers | ArcGIS Server is required when deploying an SOE and ArcGIS Pro is required when publishing map services. However, ArcGIS Server and ArcGIS Pro do not need to be installed on the same machine where the ArcGIS Enterprise SDK is installed; they can be on remote machines.

Java Development Kit (JDK) version 8 Update 191 or later is supported. |

Development platform	Supported and Recommended IDE's	SDK Requirement
Java	Eclipse IDE plug-ins, which offer an enhanced developer experience through templates, and project wizards, are provided with Enterprise SDK for the Java Platform and are supported in the IDEs listed below. • Eclipse Photon (4.8) IDE for Java Developers • Eclipse Photon (4.8) IDE for Java EE Developers • Eclipse Oxygen (4.7) IDE for Java Developers • Eclipse Oxygen (4.7) IDE for Java EE Developers	ArcGIS Server is required when deploying an SOE and ArcGIS Pro is required when publishing map services. However, ArcGIS Server and ArcGIS Pro do not need to be installed on the same machine where the ArcGIS Enterprise SDK is installed; they can be on remote machines. Java Development Kit (JDK) version 8 Update 191 or later is supported.

Operating system requirements and limitations

Windows

Linux

Relational Database Management Systems

Altibase database requirements for ArcGIS 10.7

Use of Altibase HDB with ArcGIS is deprecated at this release.

Dameng database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

Dameng v7.1.6.33

Dameng v7.1.5.158

Dameng v7.1.5

Database requirements/limitations

Geodatabase functionality is not supported with Dameng.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

IBM Db2 database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

IBM Db2 Version 10.5 Fix Pack 5

IBM Db2 Version 11.1

IBM Db2 Version 10 for z/OS*

IBM Db2 Version 11 for z/OS*

IBM Db2 for z/OS is not supported with ArcGIS Pro.

Database requirements and limitations

IBM Db2 V10.5 (64 bit)

- Minimum required service packs/patches: Fix Pack 5

- Db2 Spatial Extender is included in the Db2 database product media

- Recommended service packs/patches: n/a

- Branch versioning is supported at Db2 10.5 FP5 and above

IBM Db2 V11.1 (64 bit)

- Minimum required service packs/patches: n/a

- Db2 Spatial Extender is included in the Db2 database product media.

- Recommended service packs/patches: n/a

IBM Db2 V10 for z/OS

- Required service packs/patches: APAR PM49678/UK74734, PM49549/UK73788, UK64134/J2AG210.

- Required add-ons: IBM Spatial Support for Db2 10 for z/OS-Db2 Accessories Suite.

- The following limitations only apply to Db2 z/OS databases that have not been enabled as a geodatabase:
  - Feature services are not supported.
  - Geoprocessing operations that write information to the database are not supported.

IBM Db2 V11 for z/OS

- Required service packs/patches: P15212/UI18434(J2AG310).

- Required add-ons: IBM Spatial Support for Db2 11 for z/OS-Db2 Accessories Suite.

- The following limitations only apply to Db2 z/OS databases that have not been enabled as a geodatabase:
  - Feature services are not supported.

▪ Geoprocessing operations that write information to the database are not supported.

Supported operating systems

- If your database management system is installed on a server where ArcGIS products are installed, the server operating system must meet the ArcGIS product system requirements as well as the operating system requirements for your Db2 version.

- If your database is not installed on the same server as an ArcGIS product, see the IBM documentation for operating system requirements for your Db2 version.

ArcGIS is tested and certified on Db2 Enterprise Server Edition. Other versions of Db2, such as Db2 Workgroup Server Edition and Db2 Personal Edition, share a common code base and are supported as long as they meet the ArcGIS Server requirements. For more information on the distributed editions of Db2, refer to the articles listed below.

- Comparing the distributed Db2 UDB servers

- Db2 system requirements

- IBM Db2 z/OS documentation(v10)

- IBM Spatial Support for z/OS

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

IBM Informix database requirements for ArcGIS 10.7

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Minimum supported database versions

Enterprise edition

IBM Informix Server 64 Bit 11.70.FC4

IBM Informix Server 64 Bit 12.10.FC3

Supported operating systems

- If your database management system is installed on a server where ArcGIS products are installed, the server operating system must meet the ArcGIS product system requirements as well as the operating system requirements for your Informix version.

- If your database is not installed on the same server as an ArcGIS product, see the IBM documentation for operating system requirements for your Informix version.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

IBM Netezza Data Warehouse Appliance requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

Data Warehouse Appliances

IBM Netezza Platform Software (NPS) v7.1 / IBM Netezza Analytics (INZA) v3.0

IBM Netezza Platform Software (NPS) v7.2 / IBM Netezza Analytics (INZA) v3.2

Database requirements/limitations

- See Connect to Netezza from ArcGIS for important information about configuring ODBC for Netezza.

- Geodatabase functionality is not supported with Netezza Data Warehouse Appliance database.

- If using the legacy Netezza Spatial Package, all spatial columns must be named, or aliased, to SHAPE for ArcGIS to recognize it as a spatial column in the table.

- Feature services are not supported with Netezza Data Warehouse Appliance.

- Any geoprocessing operation that writes information to the database requires the generation of unique ObjectID values. Netezza does not generate ObjectIDs; therefore, any tool that writes data to the database is not supported with Netezza.

- ArcGIS direct connect driver will not work with a Netezza Data Warehouse Appliance that is configured with a multiple schema support setting other than the default (enable_schema_dbo_check 0)

- Geospatial capability comes with the IBM Netezza Analytics software package, and there are two types of supported spatial libraries.
  - nzSpatial—The legacy variant of the spatial library.
  - nzSpatial_Esri—The Esri variant of the spatial library.

- *For further information about Netezza, visit http://www-01.ibm.com/software/data/netezza/.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

Microsoft SQL Server database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

Enterprise/Standard/Developer* editions

Microsoft SQL Server 2017 (64-bit)

Microsoft SQL Server 2017 for Linux (64-bit)

Microsoft SQL Server 2016 (64-bit)

Microsoft SQL Server 2014 SP3 (64-bit)

Express editions

Microsoft SQL Server 2017 (64-bit)

Microsoft SQL Server 2016 (64-bit)

Microsoft SQL Server 2014 SP3 (32-bit** & 64-bit)

Microsoft SQL Server 2014 SP3 (64-bit)

📒 **Note:** *Developer edition is only supported in non-production environments.
**Microsoft SQL Server Express (32-bit) is only supported for desktop geodatabases in ArcMap.

Supported operating systems

If your database management system is installed on a server where ArcGIS products are installed, the server operating system must meet the ArcGIS product system requirements as well as the operating system requirements for your SQL Server version.

If your database is not installed on the same server as an ArcGIS product, see the Microsoft documentation for operating system requirements for your SQL Server version.

Database requirements and limitations

Only database authenticated connections are supported when you connect from ArcGIS to SQL Server 2017 for Linux.

Software required to connect to SQL Server

Any client machines that connect directly to SQL Server must have a SQL Server client installed. SQL Server clients for Microsoft Windows and Linux are distributed by Microsoft. SQL Server clients for Windows are also available on My Esri. You must install a client that is the same version or a newer version than the SQL Server database to which you want to connect. If you upgrade SQL Server, upgrade the SQL Server clients at the same time. When a version of SQL Server is no longer supported by ArcGIS, the corresponding SQL Server client library will no longer be supported either.

Supported SQL Server clients are as follows:

- SQL Server 2017
  - Microsoft ODBC Driver 17 for SQL Server

- SQL Server 2016
  - Microsoft ODBC Driver 17 for SQL Server
  - Microsoft ODBC Driver 13 or 13.1 for SQL Server

- SQL Server 2014 SP3
  - Microsoft ODBC Driver 17 for SQL Server
  - Microsoft ODBC Driver 13 or 13.1 for SQL Server
  - Microsoft ODBC Driver 11 for SQL Server

Note: When connecting from ArcGIS Server on Ubuntu to a supported version of SQL Server, you must install the Microsoft `unixodbc-dev` package on all ArcGIS Server machines in addition to the ODBC driver.

Microsoft Azure SQL Database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

Cloud-based database service editions:

Microsoft Azure SQL Database 12

Database requirements/limitations

• ArcGIS connections to Microsoft Azure SQL Database and geodatabases in Azure SQL Database must originate from machines within Microsoft Azure. For best performance, they should originate from machines within the same Azure region.

📑 **Note:** For more information about Microsoft Azure SQL Database, see https://azure.microsoft.com/en-us/services/sql-database/.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

Oracle database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

Standard/Standard One/Enterprise Editions:

Oracle 11g R2 (64 bit) 11.2.0.4

Standard 2 (SE2)/Enterprise (EE) Editions:

Oracle 12c R1 (64 bit) 12.1.0.2

Oracle 12c R2 (64 bit) 12.2.0.1

Oracle 18c (64 bit) 18.3.0.0.0, 18.4.0.0.0

Click here for Oracle Patch Support

Supported operating systems

If your database management system is installed where ArcGIS products are installed, the operating system must meet the ArcGIS product system requirements as well as the operating system requirements for your Oracle version.

If your database is not installed on the same server as an ArcGIS product, see the Oracle documentation for operating system requirements for your Oracle version.

Additional requirements for the ST_Geometry shape library

Esri supports the following four operating systems when you use the ST_Geometry shape library and configure Oracle external procedure (extproc). Minimum operating system versions are listed if the minimum version that Esri supports differs from what Oracle databases support.

- IBM AIX (64 bit)—For Oracle 11.2.0.4, the minimum supported version is IBM AIX 6.1.0.0.

- Linux (64 bit)—For Oracle 11.2.0.4, the minimum supported version is Red Hat Enterprise Linux AS/ES 5 - update 11.

- Solaris (64 bit)—For Oracle 11.2.0.4, the minimum supported version is Solaris 10 SPARC.

- Microsoft Windows (64 bit)

On Windows, you'll need the latest Microsoft Visual C++ Redistributable for Visual Studio 2017 installed on the Oracle database machine. See https://support.microsoft.com/en-us/help/2977003/the-latest-supported-visual-c-downloads for more information.

- Support for Oracle Linux is based on Oracle documentation that Oracle Linux is compatible—both source and binary—with Red Hat Enterprise Linux Server. See Oracle Linux FAQ http://www.oracle.com/us/technologies/027617.pdf.

- Support for the Oracle Exadata Database Machine is based on Oracle guidance that OEM software that supports both Oracle Linux and Oracle RAC is compatible with Oracle Exadata.

- A new option starting with Oracle 12c, called Multitenant Architecture, consisting of a container database that can hold many pluggable databases, is supported at the pluggable database level. ArcGIS supports the same functionality in pluggable databases as is supported for Oracle 11g R2.

Database requirements/limitations

Branch versioning is supported at Oracle 12.1.0.2 and above.

The Oracle Text component must be installed. The Text component is installed by default in Oracle; however, if you did not perform a default installation, the Text component may not have been installed.

Oracle database patch support

Oracle patches on 11.2.0.4, 12.1.0.2, and 12.2.0.1 are supported. This includes Oracle patch set levels and Oracle Interim (One-Off) Patch as per Oracle Corporation's Patch Set Overview and Interim Patch documentation.

See Oracle Support for all Oracle patch set (and Interim Patch) documentation and installation instructions. Esri recommends making a full backup of your Oracle database prior to applying any Oracle patch sets or interim patch. If functionality that was working prior to applying the Oracle patch set or interim patch stops working, return to the previous version of Oracle. Contact Oracle support as needed.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

Note: ArcGIS clients connecting to an Oracle 12.2.0.1 database must use Oracle 11.2.0.4 or newer client.

PostgreSQL database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Minimum supported database versions

The following versions of PostgreSQL and PostGIS are supported with ArcGIS. The specific versions listed are the minimum minor version supported and certified for each supported major release of PostgreSQL. Newer minor versions are supported but are not certified. Pursuant to the PostgreSQL definition, the number in the y position denotes a minor version in a PostgreSQL 9.x.y release. For PostgreSQL 10.x, the number in the x position indicates a minor version.

- PostgreSQL 10.3 (64 bit)
  - PostGIS 2.4
- PostgreSQL 9.6.8 (64 bit)
  - PostGIS 2.3
- PostgreSQL 9.5.12 (64 bit)
  - PostGIS 2.2

Supported operating systems

If you use a geodatabase in PostgreSQL or use the ST_Geometry type in a PostgreSQL database, the following operating systems have been tested and are the minimum supported version. Future updates or service packs on these operating system versions are supported and assumed to work unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Microsoft Windows

For PostgreSQL on Windows, you need the latest Microsoft Visual C++ Redistributable for Visual Studio 2017 installed on the PostgreSQL machine. See The latest supported Visual C++ downloads from Microsoft Support for more information.

Supported operating systems	Latest update or service pack tested
Windows Server 2016 Standard and Datacenter	Nov 13, 2018 update
Windows Server 2012 R2 Standard and Datacenter	Nov 13, 2018 update
Windows Server 2012 Standard and Datacenter	Nov 13, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter	SP1 with Nov 13, 2018 update

Note: Windows 10, 8.1, and 7 are supported for basic testing and application development use only. They are not recommended for deployment in a production environment.

Linux

The following Linux operating systems have been tested:

Supported operating systems	Latest update or service pack tested
Red Hat Enterprise Linux Server 7	Update 5

Red Hat Enterprise Linux Server 6	Update 10
SUSE Linux Enterprise Server 12	Service Pack 3
Ubuntu Server LTS	16.04.4

Note: Esri Technical Support is available for CentOS, Scientific Linux, and Oracle Linux versions that provide full binary compatibility with an equivalent supported Red Hat version. As a prerequisite for logging a defect, any software issue on these operating systems will be attempted to be reproduced on Red Hat Enterprise Linux Server. For Oracle Linux, support is predicated on the use of the Red Hat compatible kernel.

Database requirements and limitations

Use of the PostGIS geography type with ArcGIS requires PostgreSQL 9.6.8 and later.

Software required to connect to a DBMS

Most ArcGIS applications that can connect to a PostgreSQL database include the required PostgreSQL client libraries. These applications include ArcGIS Server, ArcGIS Desktop, and ArcReader.

Esri tests and certifies specific major and minor releases of PostgreSQL installations that are available from `PostgreSQL.org`. For each PostgreSQL release that Esri supports, available PostGIS modules are also tested and certified. No other modules extending PostgreSQL functionality are included in Esri certification.

SAP HANA database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

SAP HANA 1.0 SPS09 - SPS12

SAP HANA 2.0 SPS02

Supported operating systems

Database	Supported Operating Systems
SAP HANA 1.0 SPS09 - SPS12 SAP HANA 2.0 SPS02	SAP HANA is available either in the cloud or as a pre-configured system on Linux. Contact SAP for the available configurations.

Database requirements/limitations

• Branch versioning is supported in SAP HANA 2 SPS02.

• When using SAP HANA 1.0 SPS09 - SPS12, ODBC connections must set parameter SPATIALTYPES=1

• Geodatabase functionality is only supported in SAP HANA 2.0 SPS02.

> **Note:** You cannot create or connect to geodatabases in SAP HANA from ArcMap, ArcCatalog, ArcGlobe, or ArcScene.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

SQLite database requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported database versions

SQLite 3.14.1

SQLite 3.16.2

SQLite 3.19.3

SQLite 3.20.0

SQLite 3.22.0

SQLite 3.24.0

Supported add-ons

GeoPackage 1.1, 1.2, and 1.2.1

Spatialite 4.0

Database requirements/limitations

- SQLite files must have a `.sqlite` extension to be recognized by ArcGIS.

- GeoPackage files must have a `.gpkg` extension to be recognized by ArcGIS.

- You cannot create a geodatabase in SQLite.

- Feature services are not supported with SQLite.

Platform support

- All platforms supported by ArcGIS Desktop

- All platforms supported by Runtime

- All platforms supported by ArcGIS Server

Teradata Data Warehouse Appliance requirements for ArcGIS 10.7 and ArcGIS Pro 2.3

Visit Esri Support for general support information on Esri's Supported Environment Policy.

Supported Data Warehouse Appliance versions

Teradata 16.20 (see note in Software required to connect to a DBMS)

Teradata 16.10

Teradata 15.10

Teradata 15.0

Database requirements/limitations

• ODBC connections must use Teradata session mode and Native Large Object Support.

• Geodatabase functionality is not supported with Teradata.

• All spatial columns must be named, or aliased to, SHAPE for ArcGIS to recognize it as a spatial column in the table.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcGIS Pro or ArcGIS Server) must have the appropriate client files installed for the RDBMS you're using. These client files are available from their respective RDBMS vendors, but some are also available from My Esri. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for all other supported databases must be obtained from the RDBMS vendors. See Database clients for more information.

Note: You must use Teradata ODBC Driver Suite 16.20.08 (part of TTU Suite 16.20.08) or newer version to connect to Teradata 16.20 Data Warehouse Appliance. Please refer to Teradata ODBC driver guide for Smart LOB settings.

ArcGIS Engine/ArcObjects System Requirements

ArcGIS Engine 10.7 system requirements

Visit Esri Support for information on earlier versions.

ArcGIS Engine supported platforms

📄 **Note:** ArcGIS Engine requires Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x86). If the Visual C++ 2017 (update 5 or later) Redistributable is not already installed, running setup.exe will install it before setup.msi is launched. Setup.msi will not install if Microsoft Visual C++ 2017 (update 5 or later) Redistributable (x86) is not already installed.

Check your computer's ability to run ArcGIS, and see the ArcGIS Engine and SDK Quick Start Guide for more information.

Supported operating systems *	Latest update or service pack tested
Windows 10 Pro and Enterprise (64 bit [EM64T])	December 11, 2018 update
Windows 8.1 Basic, Pro, and Enterprise (32 bit and 64 bit [EM64T])	December 11, 2018 update
Windows 7 Ultimate, Professional, and Enterprise (32 bit and 64 bit [EM64T])	SP1 with December 11, 2018 update
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 Release
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with December 11, 2018 update

📄 **Note:**

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

*See the Operating system requirements and limitations section for additional requirements and information.

Hardware requirements

	Supported and Recommended
CPU Speed	2.2 GHz minimum; Hyper-threading (HHT) or Multi-core recommended
Platform	x86 or x64 with SSE2 extensions
Memory/RAM	2 GB minimum

Display properties	24-bit color depth
	Also see Video/Graphics adapter requirements below.*
Screen resolution	1024x768 recommended minimum at normal size (96 dpi)
Disk space (for runtime only)	1.6 GB
	ArcGIS Engine creates cache files when used; additional disk space may be required.
Video/Graphics adapter	64 MB RAM minimum; 256 MB RAM or higher recommended. NVIDIA, ATI, and Intel chipsets supported.
	24-bit capable graphics accelerator
	OpenGL version 2.0 runtime minimum is required, and Shader Model 3.0 or higher is recommended.
	Be sure to use the latest available drivers.

Software requirements

	Description
Python requirement	ArcGIS requires Python 2.7.15 and Numerical Python (NumPy) 1.9.3 to be installed. If the ArcGIS setup does not find either Python 2.7.15 or Numerical Python (NumPy) 1.9.3 installed on the target computer, Python 2.7.15 and Numerical Python 1.9.3 will be installed during a complete installation. You can choose a Custom installation to unselect the Python feature and avoid installing it. Additionally, if the Python setup is executed during the ArcGIS installation, you will be provided with the opportunity to choose its installation location. The Python installation location should not include spaces.
Microsoft .NET Framework	Microsoft .NET Framework 4.5.2 or later must be installed for solutions developed using the Microsoft .NET Framework.
Java	Java Runtime Environment (JRE) version 8 (32 bit) is required for solutions developed using the Java platform; Java 8 update 191 and later are supported.
Browser requirement	Microsoft Internet Explorer (minimum IE 11) must be installed prior to installing ArcGIS Engine.

Software required to connect to a DBMS

Your client machine (for example, the one running ArcMap) will need to have the appropriate client files installed for the RDBMS you are using. These client files are available from their respective RDBMS vendors, but some are also available on My Esri as a convenience. RDBMS client files available from My Esri are IBM Db2 and Microsoft SQL Server. Client files for ALTIBASE, Dameng, IBM Informix, IBM Netezza, Oracle, SAP HANA, and Teradata are not available on My Esri and must be obtained from the RDBMS vendors. See Database clients for more information.

SDK requirements

ArcObjects SDK requirements

Operating system requirements and limitations

All platforms

Windows

ArcObjects SDK 10.7 system requirements

Visit Esri Support for information on earlier versions.

Supported platforms*

Supported operating systems	Latest update or service pack tested	ArcObjects SDK for the Java Platform	ArcObjects SDK for the Microsoft .NET Framework**
Windows 10 Pro and Enterprise (64 bit [EM64T])	December 11, 2018 update	Supported	Supported
Windows 8.1 Basic, Pro, and Enterprise (32 bit and 64 bit [EM64T])	December 11, 2018 update	Supported	Supported
Windows 7 Ultimate, Professional, and Enterprise (32 bit and 64 bit [EM64T])	SP1 with December 11, 2018 update	Supported	Supported
Windows Server 2019 Standard and Datacenter (64 bit [EM64T])	November 2018 Release	Supported	Supported
Windows Server 2016 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update	Supported	Supported
Windows Server 2012 R2 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update	Supported	Supported
Windows Server 2012 Standard and Datacenter (64 bit [EM64T])	December 11, 2018 update	Supported	Supported
Windows Server 2008 R2 Standard, Enterprise, and Datacenter (64 bit [EM64T])	SP1 with December 11, 2018 update	Supported	Supported

Note: Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

*See Operating system requirements and limitations for additional requirements and information.

**Microsoft .NET Framework requires Visual Studio 2015 or Visual Studio 2017. Refer to the following links for Microsoft Visual Studio system requirements:

- Microsoft Visual Studio 2015
- Microsoft Visual Studio 2017

Supported Linux platforms*

Operating System(s)	Latest update or service pack tested*	ArcObjects SDK Java	ArcObjects SDK for the Microsoft .NET Framework
Red Hat Enterprise Linux Server 7 (64bit)	Update 5	Supported	Not Supported
Red Hat Enterprise Linux Server 6 (64bit)	Update 10	Supported	Not Supported

SUSE Linux Enterprise Server 12 (64bit)	SP3	Supported	Not Supported
Ubuntu Server LTS	16.04.5	Supported	Not Supported
Ubuntu Server LTS	18.04.1	Supported	Not Supported

* See Operating system requirements and limitations for additional requirements and information.

Prior and future updates or service packs on these operating systems are supported unless otherwise stated. The operating system version and updates must also be supported by the operating system provider.

Hardware requirements

Disk space requirements

ArcObjects SDK	**Disk Space**
ArcObjects SDK for the Java Platform	775 MB
ArcObjects SDK for the Microsoft .NET Framework	460 MB

Developer Solutions (SDK) requirements

ArcObjects SDK	**Supported and Recommended IDE's**	**SDK Requirements**
ArcObjects SDK for the Java Platform	Developer IDE plug-ins, which offer an enhanced developer experience through templates, code snippets, and project wizards, are provided with ArcObjects SDK for the Java Platform and are supported in the IDEs listed below. (Note: Visual beans users must manually install Visual Editor.) • Eclipse Photon (4.8) IDE for Java Developers • Eclipse Photon (4.8) IDE for Java EE Developers • Eclipse Oxygen (4.7) IDE for Java Developers • Eclipse Oxygen (4.7) IDE for Java EE Developers	ArcGIS Desktop or ArcGIS Server is required to develop with ArcObjects SDK Java. ArcObjects SDK for the Java platform on Linux is only supported with ArcGIS Server Linux. Java Development Kit (JDK) version 8 Update 191 or later is supported.
ArcObjects SDK for the Microsoft .NET Framework	Microsoft Visual Studio 2015 (C++, C#, VB.NET) Community, Professional, Premium, Ultimate Edition Microsoft Visual Studio 2017 (C++, C#, VB.NET) Community, Professional, Enterprise	ArcGIS Desktop, ArcGIS Engine, or ArcGIS Server is required to develop with ArcObjects SDK Microsoft .NET Framework 4.5.2 or higher

Operating system requirements and limitations

All platforms

Windows

Linux

Microsoft .NET Framework 4.5.2 requirement

Before many Esri products can be installed, they require Microsoft .NET Framework 4.5.2 to be installed.

Download Microsoft .NET Framework 4.5.2

The following links direct you to the Microsoft Download page where you can download this requirement.

English

Simplified Chinese

French

German

Japanese

Spanish

Operating system limitations—all platforms

When running in a 64 bit environment, ArcGIS Desktop, ArcGIS Engine, and ArcReader run as 32 bit applications.

Operating system limitations - Windows

- Prior versions of Windows, including Windows 7 and Windows 8.1, have limited support when running on new processors and chipsets from manufacturers like Intel, AMD, NVidia, and Qualcomm. For more information, see the Microsoft Lifecycle FAQ.

- ArcGIS 10.7 requires Microsoft Visual C++ 2017 Redistributable (x86). If the Visual C++ 2017 Redistributable is not already installed, running setup.exe will install it before setup.msi is launched. Setup.msi will not install if Microsoft Visual C++ 2017 Redistributable (x86) is not already installed.

- ArcGIS software is developed and certified to support file system pathnames with a maximum path length of 260 characters, as defined by MAX_PATH. With the Microsoft release of the Windows 10 Anniversary Update, version 1607, it is possible to extend the 260 character limit for New Technology File System (NTFS) paths. While this is an opt-in behavior of Windows 10 Anniversary Update, doing so can result in unexpected behavior in ArcGIS and is not supported or recommended.

- See Knowledge Base Technical Article 45362 on Windows 10 known issues

- ArcGIS Developer Help System on Windows 7 requires Adobe Reader 9.1.2 or later. See Knowledge Base Technical Article 37244 for more details.

Operating system limitations - Linux

Linux requirements

It is a requirement that the OS (binary) not be modified. Esri does not support a developer's release of any operating system.

32 bit installs with 64-bit ArcGIS Enterprise products

The following 32 bit packages are required to run 32 bit setups on 64 bit OS with ArcGIS Server Enterprise products:

Red Hat Enterprise Linux Server 7 Update 5

- libXrender
- libXtst
- gettext

Red Hat Enterprise Linux Server 6 Update 10

- libXrender
- libXtst
- gettext

SuSE Linux Enterprise Server 12 SP3

- libXtst6
- libXi6
- gettext-runtime

SuSE Linux Enterprise Server 11 SP3

- libXtst6
- libXi6
- gettext-runtime

Ubuntu 18.04.1 LTS

- libxtst6
- libxi6
- libxrender1
- libc6-i386
- lib32ncurses5
- lib32z1
- gettext-base

Ubuntu 16.04.5 LTS

- libxtst6

- libxi6

- libxrender1

- libc6-i386

- lib32ncurses5

- lib32z1

- gettext-base

ArcGIS License Manager

Red Hat Enterprise Linux Server 6 and 7

The Red Hat Enterprise Linux Server (32-bit and 64-bit) will be supported as long as it is from Red Hat without any modification to the kernel/glibc version.

The following 32 bit packages are required:

RHEL Server 7

- compat-libstdc++-296.i686

- compat-libstdc++-33.i686

- compat-libf2c-34.i686

- compat-openldap.i686

- cairo.i686

- freeglut.i686

- gmp.i686

- gtk2.i686

- libcanberra.i686

- libgcc.i686

- libgfortran.i686

- libidn.i686

- libstdc++.i686

- libSM.i686

- libX11.i686

- libXau.i686

- libxcb.i686

- libXdamage.i686

- libXext.i686

- libXfixes.i686

- libXrender.i686

- libXp.i686

- libXScrnSaver.i686

- libXtst.i686

- mesa-libGL.i686

- mesa-libGLU.i686

- PackageKit-glib.i686

- PackageKit-gtk3-module.i686

- redhat-lsb.i686

RHEL Server 6

- cairo.i686

- gtk2.i686

- libdrm.i686

- libgcc.i686

- libidn.i686

- libstdc++.i686

- libSM.i686

- libX11.i686

- libXau.i686

- libxcb.i686

- libXdamage.i686

- libXext.i686

- libXfixes.i686

- libXrender.i686

- libXtst.i686

- mesa-libGL.i686

- mesa-libGLU.i686

- redhat-lsb.i686

SuSE Linux Enterprise Server 11

The Linux patches for SuSE Linux Enterprise Server Update 4 minimum (32-bit and 64-bit) will be supported as long as they are from SuSE Linux without modification to the kernel/glibc version.

The following 32-bit packages are required.

- libdrm-32bit

- libstdc++33-32bit

- libstdc++43-32bit

- libgcc43-32bit

- mesa-32bit

- xorg-x11-libX11-32bit

- xorg-x11-libXau-32bit

- xorg-x11-libXext-32bit

- xorg-x11-libXfixes-32bit

- xorg-x11-libXrender-32bit

- xorg-x11-libXt-32bit

Note: • The package versions must be at level stated or higher.

- 32-bit ArcGIS products are only supported on Linux CPUs that adhere to the x86 architecture with supported Linux releases.

- For 64-bit OS support, the 32-bit (i686) versions of the above packages must be installed prior to installing ArcGIS.