



## **System Requirements for Microsoft Dynamics AX 2012**

Microsoft Corporation

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## Microsoft Dynamics AX

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## System requirements

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Before installing Microsoft Dynamics® AX 2012, ensure that the system you are working with meets or exceeds the minimum network, hardware, and software requirements.

### Network requirements

The following table lists the minimum network requirements for the connection between the client and the Application Object Server (AOS) and the connection between the AOS and the database in a Microsoft Dynamics AX system.

Value	Client to AOS:	AOS to database:
Bandwidth (b)	100 megabits per second (Mbps)	100 Mbps
Latency (l)	Less than 5 milliseconds	Less than 5 milliseconds

The total response time for running a task in Microsoft Dynamics AX is expressed by the following formula:

$$(Number\ of\ calls\ to\ and\ from\ the\ server * l) + Number\ of\ bytes\ sent/b$$

We recommend that you consider the following types of connections when planning your system:

- For a system that uses a local area network (LAN), connect directly through a Microsoft Dynamics AX client.
- For a system that uses a wide area network (WAN), connect using Windows Server® Terminal Services or another remote connection product. Windows Server 2008 R2 Remote Desktop Services (Terminal Services) includes TS RemoteApp, TS Easy Print and TS Web Access. For more information about using Terminal Services, see the [Terminal Services site](#) on Microsoft® TechNet.

Microsoft Dynamics AX can operate on networks that use Internet Protocol Version 4 (IPv4) or Internet Protocol Version 6 (IPv6).


### Domain requirements

Consider the following domain requirements when installing Microsoft Dynamics AX:

- Computers running Microsoft Dynamics AX components must belong to an Active Directory® domain, with Active Directory configured in native mode.
- Computers running Microsoft Dynamics AX components must have access to other computers in the same Active Directory domain.
- To support e-mail alerts in Microsoft Dynamics AX, an SMTP (Simple Mail Transfer Protocol) server must be present in the environment.

## Minimum hardware

The minimum hardware required to install and run Microsoft Dynamics AX includes:

Item	Requirement
Processor	Intel Pentium/Celeron family or compatible Pentium III Xeon or higher processor minimum; 1.1 GHz or higher recommended   <b>Important:</b> Microsoft Dynamics AX is not supported on Itanium 64-bit processors.
RAM	4 GB RAM or more recommended for server computers 2 GB RAM or more recommended for client computers
Monitor	Super VGA (1024x768) or higher resolution monitor
Other	DVD drive (required for installation from DVD)

Actual requirements will vary based on your system configuration and the applications and features you choose to install. Choosing appropriate hardware for a Microsoft Dynamics AX installation depends on many factors, including the following:

- Number of transactions per hour
- Number of concurrent users
- Number of concurrent Enterprise Portal users
- Number of remote connections
- Number of locations

## Software requirements for all computers

The following software must be present on a computer before any Microsoft Dynamics AX components can be installed.

- Microsoft .NET Framework  
 Most Microsoft Dynamics AX components require .NET Framework 3.5 with Service Pack 1. For those components that require .NET Framework 4.0, it is listed as an additional requirement in this document.
- Microsoft Windows® Installer 3.1 or Windows Installer 4.0

## Software requirements for server computers

The following Microsoft Dynamics AX components require a server installation:

- Databases
- Application Object Server (AOS)
- Enterprise Portal
- Enterprise Search
- Help server
- Reporting Services extensions
- Analysis Services configuration
- Web services on IIS
- Synchronization proxy for Microsoft Project
- Synchronization service for Microsoft Project
- Management utilities

## Supported server operating systems

The following server operating systems are supported for Microsoft Dynamics AX 2012 components.

Operating system	Notes
Windows Server 2008 R2 Standard Edition, Enterprise Edition, Web Edition, or Datacenter Edition	
Windows Server 2008 Standard Edition, Enterprise Edition, Web Edition, or Datacenter Edition, with Service Pack 2	Only 64-bit versions of Windows Server 2008 are supported.

 **Note:**

Though a server operating system is required for most Microsoft Dynamics AX server components, you can install some server components on supported client operating systems, as well. This type of installation is supported for demonstration or development purposes. However, in a production environment, you must install on a supported server operating system.

## Software requirements for database servers

Servers where you install the Microsoft Dynamics AX databases must meet the software requirements listed in the following table.

Requirement	Notes
Microsoft SQL Server™ 2008, Standard or Enterprise editions -or- Microsoft SQL Server 2008 R2, Standard, Enterprise, or Datacenter editions	<ul style="list-style-type: none"> <li>Only 64-bit versions of SQL Server are supported.</li> <li>Service Pack 1 and Service Pack 2 are supported, but not required.</li> <li>View the minimum hardware requirements for SQL Server at <a href="http://www.microsoft.com/sql/default.mspx">http://www.microsoft.com/sql/default.mspx</a>.</li> </ul>
Collation	Microsoft Dynamics AX supports Unicode collations that are case-insensitive, accent-sensitive, kana-sensitive, and width-insensitive. The collation must match the Microsoft Windows locale of the computers running instances of the AOS. If you are setting up a new installation, we recommend that you choose a Windows collation rather than a SQL collation. For more information about choosing a collation for a SQL Server database, see the <a href="#">SQL Server documentation</a> .

## Software requirements for other Microsoft Dynamics AX server components

Some Microsoft Dynamics AX server components have additional requirements. For more information, see the following table.

Component	Additional requirements	Notes
Application Object Server (AOS)	<ul style="list-style-type: none"> <li>.NET Framework 4.0 with the hotfix from Knowledge Base article number <a href="#">2390372</a></li> <li>Microsoft SQL Server 2008 Native Client</li> </ul>	Install SQL Server Native Client on the AOS server if the AOS server is separate from the database server.

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Component	Additional requirements	Notes
Enterprise Portal	<ul style="list-style-type: none"> <li>• Web server role</li> <li>• Internet Information Services (IIS) 7.0 or IIS 7.5</li> <li>• ASP.NET 2.0</li> <li>• Microsoft SharePoint® Foundation 2010 -or- Microsoft SharePoint Server 2010, Standard Edition or Enterprise Edition (recommended)</li> <li>• SQL Server 2008 Analysis Management Objects (AMO)</li> </ul>	<p>Microsoft SharePoint Server 2010, Standard Edition or Enterprise Edition can support Enterprise Portal and Enterprise Search. If you plan to use Microsoft SharePoint Foundation 2010 for Enterprise Portal, then you also must install one of the search server applications listed for Enterprise Search.</p>
Enterprise Search	<ul style="list-style-type: none"> <li>• Web server role</li> <li>• Internet Information Services (IIS) 7.0 or IIS 7.5</li> <li>• ASP.NET 2.0</li> <li>• Windows PowerShell® 2.0</li> <li>• Microsoft Search Server 2010 -or- Microsoft Search Server Express 2010 -or- Microsoft Fast Search Server 2010 -or- Microsoft SharePoint Server 2010, Standard Edition or Enterprise Edition (recommended)</li> </ul>	
Help server	<ul style="list-style-type: none"> <li>• Web server role</li> <li>• Internet Information Services (IIS) 7.0 or IIS 7.5</li> <li>• ASP.NET 4.0</li> </ul>	



Component	Additional requirements	Notes
Reporting Services extensions	<ul style="list-style-type: none"> <li>• If you are using Microsoft SQL Server 2008 R2, <a href="#">Cumulative Update 3</a> or later is required.</li> <li>• Microsoft SQL Server 2008 Reporting Services</li> <li>• Windows SDK for Windows Server 2008 and .NET Framework 3.5 (.NET Development Tools component)</li> <li>• Microsoft Visual Studio® 2008 shell</li> <li>• <a href="#">Windows PowerShell 2.0</a></li> </ul>	<ul style="list-style-type: none"> <li>• The Reporting Services integration is not supported on a report server that is configured to run in SharePoint integrated mode.</li> <li>• The Reporting Services integration is not supported on computers where instances of Reporting Services 2005 and Reporting Services 2008 are installed side by side.</li> <li>• Windows PowerShell 2.0 is installed by default on Windows Server 2008 R2. On Windows Server 2008 Service Pack 1, PowerShell 2.0 must be installed manually. Before installing version 2.0, make sure that version 1.0 has been removed. For more information, see <a href="#">Uninstall Previous Versions of Windows PowerShell and Windows Remote Management</a>.</li> </ul>
Analysis Services integration	<ul style="list-style-type: none"> <li>• Microsoft SQL Server 2008 Analysis Services</li> <li>• SQL Server Management Studio</li> <li>• SQL Server Business Intelligence Development Studio</li> </ul>	The Analysis Services integration is not supported on computers where instances of Analysis Services 2005 and Analysis Services 2008 are installed side by side.
Web services on IIS	<ul style="list-style-type: none"> <li>• Web server role</li> <li>• .NET Framework 4.0</li> <li>• Internet Information Services (IIS) 7.0 or IIS 7.5</li> <li>• If you use web services to exchange documents with external partners, we recommend installing the <a href="#">Windows SDK</a>.</li> </ul>	The Windows SDK contains tools that make it easier to configure Web services. In particular, the Windows Communication Foundation (WCF) Configuration Editor Tool (SvcConfigEditor.exe) allows you to create and modify configuration settings using a graphical user interface instead of directly editing XML configuration files.

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Component	Additional requirements	Notes
Synchronization proxy for Microsoft Project	The environment must include a computer running the synchronization service and a computer running Microsoft Project Server 2010.	To use the integration with Project Server, the synchronization proxy must be installed on the same computer as the Project Server Interface (PSI) Web service.
Synchronization service for Microsoft Project	Microsoft Message Queuing (MSMQ)	Must be installed on the computer where you are installing the synchronization service.
Management utilities	<a href="#">Windows PowerShell 2.0</a>	Windows PowerShell 2.0 is installed by default on Windows Server 2008 R2. On Windows Server 2008 Service Pack 1, PowerShell 2.0 must be installed manually. Before installing version 2.0, make sure that version 1.0 has been removed. For more information, see <a href="#">Uninstall Previous Versions of Windows PowerShell and Windows Remote Management</a> .

## Virtual server support

Microsoft Dynamics AX is certified on Windows Server 2008 with Hyper-V™ Virtualization, and will support other virtualization solutions participating in the Server Virtualization Validation Program, consistent with the guidelines listed for all Microsoft software as part of Knowledge Base article [897615](#).

To use Hyper-V in a production environment, you must download the update for Windows Server 2008 described in Knowledge Base article [950050](#). The Beta version of Hyper-V, included by default with Windows Server 2008, is not supported.

## Software requirements for client computers

The following Microsoft Dynamics AX components can be installed on a client computer:

- Windows client
- Office Add-ins
- Remote Desktop Services integration
- Debugger
- Visual Studio Tools
- Trace Parser
- .NET Business Connector



**Note:**

These components can also be installed on any of the supported server operating systems.

## Supported client operating systems

The following client operating systems are supported for Microsoft Dynamics AX 2012.

Operating system	Notes
Windows 7 Professional edition, Ultimate Edition, or Enterprise Edition	Both 32-bit and 64-bit versions of Windows 7 are supported.
Windows Vista® Business Edition, Ultimate Edition, or Enterprise Edition, Service Pack 2	Both 32-bit and 64-bit versions of Windows Vista are supported.

## Software requirements for the Microsoft Dynamics AX client

Microsoft Dynamics AX client computers must meet the software requirements listed in the following table.

Requirement	Notes
.NET Framework 4.0	
Internet Explorer® 9.0 –or– Internet Explorer 8.0 –or– Mozilla Firefox 3.5	Required for client computers that access Enterprise Portal.  <b>Note:</b> Web browser clients can run on many operating systems. However, those configurations are supported only for issues that can be reproduced when the browser is running on an operating system that is supported for Microsoft Dynamics AX.

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Requirement	Notes
2007 Office release, Service Pack 2 -or- 2010 Office release	Required for Microsoft Outlook®, Microsoft Word, and Microsoft Excel® integrations with Microsoft Dynamics AX.
SQL Server Analysis Management Objects (AMO)	Required on client computers that are used to administer the OLAP database.

## Software requirements for other client components

Some Microsoft Dynamics AX client components have additional requirements. For more information, see the following table.

Component	Additional requirements	Notes
Office Add-ins	<ul style="list-style-type: none"><li>• Microsoft Word or Microsoft Excel</li><li>• Open XML SDK for Microsoft Office 2.0</li><li>• Microsoft Visual Studio Tools for the Microsoft Office system (VSTO) 4.0</li></ul>	While Microsoft Office is recommended for all client computers, you are required to install Word or Excel to use the Office Add-ins. See “Software requirements for the Microsoft Dynamics AX client” for information about supported versions.
Remote Desktop Services integration	No additional software requirements	
Debugger	No additional software requirements	
Visual Studio tools	<ul style="list-style-type: none"><li>• Windows PowerShell 2.0</li><li>• Visual Studio 2010, Standard Edition or Professional Edition</li></ul>	
Trace Parser	No additional software requirements	
.NET Business Connector	No additional software requirements	

## Virtual client support

The Microsoft Dynamics AX Windows client is certified to work as a virtual application on Microsoft Application Virtualization (App-V) 4.6.

App-V transforms applications into virtual services. When an application is virtual, it is no longer installed on a user’s PC, which means that it does not conflict with other applications. Updates are centrally managed so that users do not experience prompts for updates or reboots.

## 64-bit operating system support

The following table summarizes how Microsoft Dynamics AX components run on 64-bit operating systems.

Component	Runs on a 32-bit operating system	Runs on a 64-bit operating system	Notes
Application Object Server (AOS)	Not recommended	Yes	
Windows client	Yes	Yes	Runs in 32-bit mode on 64-bit operating systems.
Office Add-ins	Yes	Yes	
Remote Desktop Services integration	Yes	Yes	
Enterprise Portal	No	Yes	
Help Server	No	Yes	
Reporting Services extensions	Not recommended	Yes	The 32-bit version of SQL Server Reporting Services can be installed on a 64-bit operating system. However, the Microsoft Dynamics AX Reporting Services extensions are not supported in this scenario.
Synchronization service	Yes	Yes	
Synchronization proxy	No	Yes	
Web services on IIS	Yes	Yes	
.NET Business Connector	Yes	Yes	Both the 32-bit and 64-bit versions of the .NET Business Connector are installed when you are using a 64-bit operating system.
Debugger	Yes	Yes	
Visual Studio Tools	Yes	Yes	