



Microsoft Dynamics AX 2012 System Requirements

Microsoft Corporation

Published: November 2011

Microsoft Dynamics AX

Microsoft Dynamics is a line of integrated, adaptable business management solutions that enables you and your people to make business decisions with greater confidence. Microsoft Dynamics works like and with familiar Microsoft software, automating and streamlining financial, customer relationship and supply chain processes in a way that helps you drive business success.

U.S. and Canada Toll Free 1-888-477-7989

Worldwide +1-701-281-6500

www.microsoft.com/dynamics

This document is provided "as-is". Information and views expressed in this document, including URL and other Internet Web site references, may change without notice. You bear the risk of using it.

Some examples depicted herein are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred.

This document does not provide you with any legal rights to any intellectual property in any Microsoft product. You may copy and use this document for your internal, reference purposes. You may modify this document for your internal, reference purposes.

© 2011 Microsoft Corporation. All rights reserved.

Microsoft, Microsoft Dynamics, Active Directory, Excel, Hyper-V, Internet Explorer, Outlook, SharePoint, SQL Server, Visual Studio, Windows, Windows PowerShell, Windows Server, and Windows Vista are trademarks of the Microsoft group of companies. All other trademarks are property of their respective owners.

Table of Contents

System requirements for Microsoft Dynamics AX 2012	4
Network requirements	4
Network response time	4
Local area network (LAN) environments	4
Wide area network (WAN) environments	4
Domain requirements	5
Minimum hardware	5
Software requirements for all computers	6
Software requirements for server computers	6
Supported server operating systems	6
Software requirements for database servers	7
Software requirements for other Microsoft Dynamics AX server components	7
Virtual server support	10
Software requirements for client computers	11
Supported client operating systems	11
Software requirements for the Microsoft Dynamics AX client	11
Software requirements for other client components	12
Virtual client support	12
64-bit operating system support	13

System requirements for Microsoft Dynamics AX 2012

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

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

Consider the network environment when you plan the system, and use the following guidelines.

Network response time

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

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

$$\text{Response time} = (\text{Number of calls to and from the server} * \text{Latency}) + \text{Number of bytes sent/b}$$

 **Important:**

The higher the latency, the higher the response time. You are responsible for making sure that the response time caused by latency in your network is acceptable for your business.

Local area network (LAN) environments

Connect directly through a Microsoft Dynamics AX Windows client. Windows Server Terminal Services is not required.

Wide area network (WAN) environments

Terminal Services is not required when bandwidth constraints do not exist, and when user interactions on the client require 6 or fewer round trips. With an average of 100 milliseconds latency, we expect a delay of approximately 600 milliseconds. Customizations and data configurations will require optimization to reduce round trips to 6 or fewer round trips per user interaction.

In a WAN environment that uses legacy X++ reporting, connect by using Terminal Services or another remote connection product, regardless of network latency.

In a WAN environment that has greater than 100 milliseconds peak latency, you must use Terminal Services to deploy Microsoft Dynamics AX Windows clients.

 **Notes:**

- Windows Server 2008 R2 Remote Desktop Services (Terminal Services) includes TS RemoteApp, TS Easy Print and TS Web Access. For more information about how to use Terminal Services, see the [Terminal Services site](#) on Microsoft® TechNet.
- Other terminal emulation software within the Microsoft Support policy may be used where Terminal Services is allowed.

Domain requirements

Consider the following domain requirements when you install Microsoft Dynamics AX:

- Computers that are running Microsoft Dynamics AX components must belong to an Active Directory® domain, with Active Directory configured in native mode.
- Computers that are running Microsoft Dynamics AX components must have access to other computers in Active Directory, either in the same domain or in another trusted 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 that is 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 Important 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 the system configuration and the applications and features that you decide 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, including the Setup wizard, 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:**

Although 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. 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, with Service Pack 1 -or- Microsoft SQL Server 2008 R2, Standard, Enterprise, or Datacenter editions	<ul style="list-style-type: none"> Only 64-bit versions of SQL Server are supported. View the minimum hardware requirements for SQL Server at http://www.microsoft.com/sql/default.mspx. In a production environment, we recommend installing the latest Cumulative Update for the version of SQL Server that you are using.
Collation	<p>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 that are running instances of the AOS.</p> <p>If you are setting up a new installation, we recommend that you select a Windows collation instead of a SQL collation. For more information about how to select a collation for a SQL Server database, see the SQL Server documentation.</p>

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"> .NET Framework 4.0 with the hotfix from Knowledge Base article number 2390372. Microsoft SQL Server 2008 Native Client 	Install SQL Server Native Client on the AOS server if the AOS server is separate from the database server.

Microsoft Dynamics AX

Component	Additional requirements	Notes
Enterprise Portal	<ul style="list-style-type: none"> • Web server role • Internet Information Services (IIS) 7.0 or IIS 7.5 • ASP.NET 2.0 • Microsoft SharePoint® Foundation 2010 -or- Microsoft SharePoint Server 2010, Standard Edition or Enterprise Edition (recommended) • SQL Server 2008 R2 Analysis Management Objects (AMO) 	<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, you must also install one of the search server applications listed for Enterprise Search.</p>
Enterprise Search	<ul style="list-style-type: none"> • Web server role • Internet Information Services (IIS) 7.0 or IIS 7.5 • ASP.NET 2.0 • Windows PowerShell® 2.0 • 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) 	
Help Server	<ul style="list-style-type: none"> • Web server role • Internet Information Services (IIS) 7.0 or IIS 7.5 • ASP.NET 4.0 	

Component	Additional requirements	Notes
Reporting Services extensions	<ul style="list-style-type: none"> • If you are using Microsoft SQL Server 2008 R2, Cumulative Update 3 or later is required. • Microsoft SQL Server 2008 Reporting Services • Windows SDK for Windows Server 2008 and .NET Framework 3.5 (.NET Development Tools component) • Microsoft Visual Studio® 2008 shell • Windows PowerShell 2.0 	<ul style="list-style-type: none"> • The Reporting Services integration is not supported on a report server that is configured to run in SharePoint integrated mode. • The Reporting Services integration is not supported on computers where instances of Reporting Services 2005 and Reporting Services 2008 are installed side by side. • 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.
Analysis Services integration	<ul style="list-style-type: none"> • Microsoft SQL Server 2008 Analysis Services • SQL Server Management Studio • SQL Server Business Intelligence Development Studio 	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"> • Web server role • .NET Framework 4.0 • Internet Information Services (IIS) 7.0 or IIS 7.5 • If you use web services to exchange documents with external partners, we recommend installing the Windows SDK. 	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) lets you create and modify configuration settings using a graphical user interface instead of directly editing XML configuration files.
Synchronization proxy for Microsoft Project	The environment must include a computer that is running the synchronization service and a computer that is 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.

Microsoft Dynamics AX

Component	Additional requirements	Notes
Management utilities	Windows PowerShell 2.0	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 .

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, with 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  Note: 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.

Microsoft Dynamics AX

Requirement	Notes
2007 Office release, Service Pack 2 -or- 2010 Office release	Required for Outlook®, Word, and Excel® integrations with Microsoft Dynamics AX
SQL Server 2008 R2 Analysis Management Objects (AMO)	Required on client computers that are used to administer the OLAP database. x86 download: http://go.microsoft.com/fwlink/?LinkID=188447 x64 download: http://go.microsoft.com/fwlink/?LinkID=188448

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">• Microsoft Word or Microsoft Excel• Open XML SDK for Microsoft Office 2.0• Microsoft Visual Studio Tools for the Microsoft Office System (VSTO) 4.0	While Microsoft Office is recommended for all client computers, you must 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">• Windows PowerShell 2.0• Visual Studio 2010, Standard Edition or Professional Edition, with Service Pack 1	
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 computer, 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	A 64 bit operating system is required if you must complete a full Common Intermediate Language (CIL) generation, such as in a development environment.
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	Runs in 32-bit mode on 64-bit operating systems