Microsoft Dynamics 365 system requirements and required technologies

Dynamics CRM 2016

Updated: December 9, 2016

Applies To: Dynamics 365 (on-premises), Dynamics CRM 2016

This Dynamics 365 (on-premises) version requires the following software:

- Microsoft Windows Server
- A Microsoft Windows Server Active Directory infrastructure
- An Internet Information Services (IIS) website
- Claims-based security token service (required for Internet-facing deployments)
- Microsoft SQL Server
- Microsoft SQL Server Reporting Services
- Microsoft Exchange Server or access to a POP3-compliant email server (required for email tracking)
- SharePoint Server (required for document management)
- Supported device, Microsoft Dynamics 365 app, or web browser, such as later versions of Internet Explorer or the latest versions of Apple Safari, Google Chrome and Mozilla Firefox
- Microsoft Office for Microsoft Dynamics 365 for Outlook and other Office integration features

Note

For detailed hardware and software requirements or specific product versions and service pack levels that are supported, see the links in “In this Section” later in this topic.

Important

Typically, Microsoft Dynamics 365 applications support the latest version and service pack (SP) for all required components, such as Windows Server, Microsoft SQL Server, and Microsoft Office. However, to fully support the latest version of a required component, you should apply the latest update for Microsoft Dynamics 365.

Microsoft Dynamics 365 conforms to the support policies of all dependent products and technologies, such as Microsoft Office or Microsoft Exchange Server. For example, mainstream support for Microsoft Office 2010 ended 10/13/2015; therefore
Before you install Microsoft Dynamics 365, review the following topics, which provide detailed information about the products and technologies that are required or optional and supported configurations.

In This Section
- Microsoft Dynamics 365 Server hardware requirements
- Microsoft SQL Server hardware requirements for Microsoft Dynamics 365 Server
- Software requirements for Microsoft Dynamics 365 Server
- Active Directory and network requirements for Microsoft Dynamics 365
- Microsoft Dynamics CRM reporting requirements
- Microsoft Dynamics 365 language support

See Also
- Supported web browsers and mobile devices
- Dynamics 365 for Outlook
- Email Router
- What’s new for administrators and customizers in Microsoft Dynamics 365
- Planning your deployment of Microsoft Dynamics 365

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Microsoft Dynamics 365 Server hardware requirements

Dynamics CRM 2016

Updated: December 9, 2016

Applies To: Dynamics 365 (on-premises), Dynamics CRM 2016

The following table lists the minimum and recommended hardware requirements for this version of Microsoft Dynamics 365 Server running in a Full Server configuration. These requirements assume that additional components such as Microsoft SQL Server, Microsoft SQL Server Reporting Services, Microsoft SharePoint, or Microsoft Exchange Server aren’t installed or running on the system.

<table>
<thead>
<tr>
<th>Component</th>
<th>*Minimum</th>
<th>*Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>x64 architecture or compatible dual-core 1.5 GHz processor</td>
<td>Quad-core x64 architecture 2 GHz CPU or higher such as AMD Opteron or Intel Xeon systems</td>
</tr>
<tr>
<td>Memory</td>
<td>4-GB RAM</td>
<td>8-GB RAM or more</td>
</tr>
<tr>
<td>Hard disk</td>
<td>10 GB of available hard disk space</td>
<td>40 GB or more of available hard disk space</td>
</tr>
</tbody>
</table>

* Actual requirements and product functionality may vary based on your system configuration and operating system.

**Note**

Running Microsoft Dynamics 365 on a computer that has less than the recommended requirements may result in inadequate performance.

Computers with more than 16 GB of RAM will require more disk space for paging, hibernation, and dump files.

The minimum and recommended requirements are based on 320-user load simulation tests.

**See Also**

- Microsoft Dynamics 365 system requirements and required technologies
- Microsoft SQL Server hardware requirements for Microsoft Dynamics 365 Server
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Microsoft SQL Server hardware requirements for Microsoft Dynamics 365 Server

Dynamics CRM 2016

Updated: December 9, 2016

Applies To: Dynamics 365 (on-premises), Dynamics CRM 2016

You need Microsoft SQL Server database engine and Microsoft SQL Server Reporting Services to install and run on-premises versions of Microsoft Dynamics 365 Server. The following table lists the minimum and recommended hardware requirements for Microsoft SQL Server. These requirements assume that additional components such as Microsoft Dynamics 365 Server, Microsoft SQL Server Reporting Services, SharePoint, or Microsoft Exchange Server aren’t installed or running on the system.

<table>
<thead>
<tr>
<th>Component</th>
<th>*Minimum</th>
<th>*Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
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<tr>
<td>Memory</td>
<td>4-GB RAM</td>
<td>16-GB RAM or more</td>
</tr>
<tr>
<td>Hard disk</td>
<td>SAS RAID 5 or RAID 10 hard disk array</td>
<td>SAS RAID 5 or RAID 10 hard disk array</td>
</tr>
</tbody>
</table>

* Actual requirements and product functionality may vary based on your system configuration and operating system.

Maintaining Microsoft Dynamics 365 databases on a computer that has less than the recommended requirements may result in inadequate performance.

The minimum and recommended requirements are based on 320-user load simulation tests.

See Also

Microsoft Dynamics 365 system requirements and required technologies
Microsoft Dynamics 365 Server hardware requirements
Software requirements for Microsoft Dynamics 365 Server

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Active Directory and network requirements for Microsoft Dynamics 365

Updated: December 9, 2016

Applies To: Dynamics 365 (on-premises), Dynamics CRM 2016

Active Directory Domain Services (AD DS) is a feature of the Windows Server operating systems. AD DS provides a directory and security structure for network applications such as Microsoft Dynamics 365.

As with most applications that rely on a directory service, Microsoft Dynamics 365 has dependencies that are important for operation, such as use of AD DS to store user and group information and to create application security.

Microsoft Dynamics 365 Server should only be installed on a Windows Server that is a domain member. The domain where the server is located must be running in one of the Active Directory domain functional levels listed in the Active Directory modes topic.

Federation and claims-based authentication support

When you configure Microsoft Dynamics 365 for Internet-facing access it requires federated services that support claims-based authentication. We recommend Active Directory Federation Services (AD FS) in Microsoft Windows Server.

Active Directory Federation Services

Active Directory Federation Services (AD FS) is a highly secure, highly extensible, and Internet-scalable identity access solution that allows organizations to authenticate users from partner organizations. Using AD FS in Microsoft Windows Server, you can easily and very securely grant external users access to your organization’s domain resources. AD FS can also simplify integration between untrusted resources and domain resources within your own organization.

AD FS is available as a server role in Windows Server.

Digital certificates

Active Directory Federation Services (AD FS) requires two types of digital certificates:

- **Claims encryption.** Claims-based authentication requires identities to provide an encryption certificate for authentication. This certificate should be trusted by the computer where you are installing Microsoft Dynamics 365 Server, so it must be located in the local Personal store where the Configure Claims-Based Authentication Wizard is running.

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Minimum Required Installation Rights
In Enterprise installations, it is not uncommon for CRM specialists to be contracted who do not have access to Active Directory Administrative Rights and therefore need provide guidance to the AD Administrators during installation. All of the AD configuration can be provided in instruction form to AD administrators. Once completed and documented, the documentation can be provided back to the CRM installer to perform the actual installation of the CRM servers. If all the pre-configuration of AD has been performed correctly, CRM can be installed with only local administrator rights on the CRM Server boxes. This type of scenario requires great documentation skills and good collaboration between the CRM installer and the AD administrators. It may also require on-going maintenance for adding users to AD groups which would be automated with greater AD permissions for the installed CRM server.

Jeffrey Loucks
12/25/2015

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Microsoft Dynamics 365 reporting requirements

Dynamics CRM 2016

Updated: December 9, 2016

Applies To: Dynamics 365 (on-premises), Dynamics CRM 2016

Microsoft Dynamics 365 Reporting Extensions are data processing extensions that are installed on the Microsoft SQL Server Reporting Services server. The Microsoft Dynamics 365 Reporting Extensions accept authentication information from Microsoft Dynamics 365 Server and pass it to the Microsoft SQL Server Reporting Services server.

Microsoft Dynamics 365 Reporting Extensions Setup includes two data processing extensions: Fetch data processing extension and SQL data processing extension. By default, these extensions are installed during Microsoft Dynamics 365 Reporting Extensions Setup:

- The Fetch data processing extension is required to create, run, and schedule Fetch-based reports.
- The SQL data processing extension is required to create, run, and schedule the default (out-of-the-box) or SQL-based custom reports in Microsoft Dynamics 365.

You don’t need Microsoft Dynamics 365 Reporting Extensions to run Microsoft Dynamics 365. However, if you want to create, use, or schedule reports in Microsoft Dynamics 365, you need to install Microsoft Dynamics 365 Reporting Extensions. Additionally, you need to install these extensions if you want to create or import an organization, like when you migrate from an earlier version of Microsoft Dynamics 365 using Deployment Manager.

In this topic

SQL Server Reporting Services

Microsoft Dynamics 365 Reporting Extensions requirements

Microsoft Dynamics 365 Reporting Authoring Extension requirements

SQL Server Reporting Services

Microsoft SQL Server Reporting Services is required for reporting features in Microsoft Dynamics 365.

You can use the following Microsoft SQL Server editions for Microsoft Dynamics 365 reporting; you’ll need to install them on a Windows Server 2012 (x64 RTM or R2) 64-bit-based computer, running and available for Microsoft Dynamics 365:

- *Microsoft SQL Server 2016, Enterprise with Cumulative Update 2 (CU2)
Microsoft Dynamics 365 Reporting Extensions requirements

The Microsoft Dynamics 365 Reporting Extensions component has the following requirements:

- You must complete Microsoft Dynamics 365 Server Setup before you run Microsoft Dynamics 365 Reporting Extensions Setup.

- You can install and run Microsoft Dynamics 365 Reporting Extensions on only one instance of Microsoft SQL Server Reporting Services on a computer.

- The identity account running the instance of Microsoft SQL Server Reporting Services where the Microsoft Dynamics 365 Reporting Extensions are running can't be the local system or a virtual account. This is required for Microsoft Dynamics 365 reporting to work because the identity account must be added to the PrivReportingGroup Active Directory security group that is used by Microsoft Dynamics 365.

- Separate deployments of Microsoft Dynamics 365 cannot share one Microsoft SQL Server Reporting Services server. However, a single deployment of Microsoft Dynamics 365 that has multiple organizations can use the same Microsoft SQL Server Reporting Services server.
SQL Server Reporting Services server.

- You must run the Microsoft Dynamics 365 Reporting Extensions Setup on a computer that has a supported version of Microsoft SQL Server Reporting Services installed. More information: SQL Server Reporting Services

- For smaller data sets and fewer users, you can use a single-server deployment or a multi-server deployment. With larger data sets or more users, performance decreases quickly when running complex reports. Use a multi-server deployment with one computer that is running SQL Server for Microsoft Dynamics 365, and another server for Microsoft SQL Server Reporting Services.

Microsoft Dynamics 365 Reporting Authoring Extension requirements

Microsoft Dynamics 365 Report Authoring Extension is required to author Fetch-based reports by using SQL Server Data Tools.

You must install the Microsoft Dynamics 365 Report Authoring Extension on a PC that has the following software.


  Note


- SQL Server Data Tools (SSDT) installed with Microsoft Visual Studio.
  - For Microsoft Visual Studio 2015: SQL Server Data Tools is already included.
  - For Microsoft Visual Studio 2010: Select and install the SQL Server Data Tools (SSDT) feature that is included with Microsoft SQL Server 2012 or Microsoft SQL Server 2012 Express on the computer that is running Visual Studio 2010. Download: Microsoft SQL Server 2012 Express

- If your organization uses Microsoft Office 365, make sure the computer with Microsoft Dynamics 365 Report Authoring Extension installed also has the Microsoft Online Services Sign-in Assistant installed on it. If Microsoft Online Services Sign-in Assistant is already installed, check the registry key SOFTWARE\Microsoft\MSOIdentityCRL and make sure that the TargetDir registry key in MSOIdentityCRL contains msoidcli.dll.

  Note

  Multi-factor authentication with Microsoft Dynamics 365 Report Authoring Extension is supported with December 2016 update for Dynamics 365 (online and on-premises) or later versions.
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Report Authoring Extension Error - Use VS2012 only

The report authoring extension would not install with VS 2013 or 2015 (Win 7 or 10). Kept erroring out with failed Environment Checks. “Some of the required components are missing.” In the end, it only worked with Visual Studio 2012 and SQL Server Data Tools – Business Intelligence for VS2012. I tried a lot of things, so save yourself some time and just use VS 2012 until they release an updated Report Authoring Extension (Dec 2015 is the latest now).

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Microsoft Dynamics 365 language support

Dynamics CRM 2016

Updated: December 9, 2016

Applies To: Dynamics 365 (on-premises), Dynamics CRM 2016

This section describes the supported configurations for different language versions of a Microsoft Dynamics 365 system. It doesn’t include information about Microsoft Dynamics 365 Language Pack support, but instead explains the supported configurations for the base-language versions. For more information about Microsoft Dynamics 365 Language Pack, see Install and enable a Language Pack.

Microsoft Dynamics 365 Server language requirements

The following requirements must be met when you run Microsoft Dynamics 365 Server with applications such as SQL Server. Note that all available Dynamics 365 languages are supported.

<table>
<thead>
<tr>
<th>Microsoft Dynamics 365 product</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Dynamics 365 Server</td>
<td>The base language of Windows Server, SQL Server, Microsoft .NET Framework, MDAC, and MSXML must be either the same language as Microsoft Dynamics 365 Server or English. If an application isn’t available in a certain language, the English version can be used.</td>
</tr>
<tr>
<td>Microsoft Dynamics 365 for Outlook</td>
<td>The base language of Windows Server, Microsoft SQL Server 2008 Express Edition, Internet Explorer, Microsoft Office, Microsoft .NET Framework, MDAC, and MSXML don’t have to be the same language as Dynamics 365 for Outlook. Each client stack in a single deployment can be in a different language.</td>
</tr>
<tr>
<td>Microsoft Dynamics 365 Server and Microsoft Dynamics 365 for Outlook</td>
<td>The base language version of Microsoft Dynamics 365 Server must match that of Dynamics 365 for Outlook. For example, there can’t be some users who run the German version of Dynamics 365 for Outlook while other users run the English version. For this scenario, we recommend provisioning the appropriate Microsoft Dynamics 365 Language Pack.</td>
</tr>
</tbody>
</table>

For example, you could have the following configuration with German as the base language for all programs:

- Microsoft Dynamics 365 Server
- Windows Server
- Microsoft SQL Server
As another example, you could have Microsoft Dynamics 365 Server with Swedish as its base language, and it could be configured with the following applications that have English as their base language:

- Windows Server
- Microsoft SQL Server
- Microsoft Exchange Server
- MSXML
- .NET Framework

See Also

64-bit supported configurations for Microsoft Dynamics 365
Microsoft Dynamics 365 system requirements and required technologies
Support for CRM for phones express

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