

# ACL Analytics Exchange System Requirements

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## ACL Analytics Exchange System Requirements

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## 1. ACL Analytics Exchange client requirements

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### Hardware Requirements

The following table shows the minimum hardware requirements to run ACL Analytics Exchange client applications. The minimum desktop computer configuration is suitable for evaluation and testing purposes.

Component	Minimum	Recommendation
Memory (RAM)	2 GB	64-bit operating systems: 8 GB or higher 32-bit operating systems: 4 GB
Hard disk space	40 GB	80 GB In addition to the minimum disk space requirements to install the client applications, disk space will be required for ACL projects and data files created locally or exported from AX Server by the user.
Other	Network connectivity to the AX Server.	

If the AX Exception and AX Web Client web-based applications are the only ACL Analytics Exchange applications that will be used on the computer, the only hardware requirement is network connectivity and the desktop must meet the requirements to run Internet Explorer 9 or higher.

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## Software Requirements

The following table provides a complete list of the prerequisite software you need to install on each desktop computer before you can install the ACL Analytics Exchange client applications.

Software requirement	Additional information
<p><b>Operating System</b> One of the following:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows 10 64-bit</li> <li>• Microsoft Windows 8.1 64-bit</li> <li>• Microsoft Windows 7 (Service Pack 1) 32-bit or 64-bit</li> </ul>	<p>Apply all critical Windows updates before installing the ACL Analytics Exchange client applications.</p> <p><b>Note</b> The service packs listed are the specific operating system versions that the ACL Analytics Exchange applications have been tested on, so they are the recommended versions. In most cases, service packs a version or two above or below the recommended version can be used if necessary.</p>
<ul style="list-style-type: none"> <li>• Chrome</li> <li>• Firefox</li> <li>• Safari</li> <li>• Internet Explorer 9+</li> </ul>	<p>The latest version of Chrome is the recommended browser for working with AX Web Client.</p> <p><b>Note</b> Internet Explorer version 9 provides limited functionality in some AX Server components.</p>
<p>If you are installing Direct Link you must install SAP GUI version 7.4 patch 2 hotfix 2 or later.</p>	<p>The correct version of the SAP GUI for your SAP ERP system must be installed and configured with at least one connection before you can complete the <i>Direct Link</i> installation.</p>
<p>If you are installing the ACL Add-In, the Microsoft Office Primary Interop Assemblies for your version of Office must be installed.</p>	<p>If you have Microsoft Office 2007 the installer checks for this prerequisite and prompts you to install it if necessary. If you have Microsoft Office 2010 the installer detects if this component is missing, but you must install the Primary Interop Assemblies by re-running the Microsoft Office 2010 installation.</p>

### Additional information

Before running the *Direct Link* installer, you must install a supported version of the SAP GUI, and configure at least one connection to the SAP ERP system. For more information, see the *Direct Link Desktop Installation Guide*.

## 2. AX Server requirements

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### Hardware requirements

The following table shows the minimum hardware requirements for a standalone AX Server installation. Achieving acceptable performance in a production environment will generally dictate greater hardware requirements for your servers. The minimum computer configuration is suitable for evaluation and testing purposes.

Processor, memory, and hard disk requirements for production systems depend on the following factors:

- the number of concurrent users and their usage profiles
- the amount of data that will be uploaded to AX Server
- the desired response time

Component	Minimum	Recommendation
Processor	2.5 gigahertz (GHz)	Quad-core processor (or two Dual-core processors) at 3.5 GHz or higher.
Memory (RAM)	4 gigabytes (GB)	16 GB
Hard disk	100 GB This is the approximate amount of disk space required to download, extract, and install the prerequisites and AX Server is 4.5 GB.	200 - 500 GB Data storage requirements vary by the number of types of audit tests performed and the volume of transactions. Smaller implementations typically require 50GB per year, while larger implementations may require up to 500GB per year. For use in production, high-speed disk access and throughput is recommended.
Other	TCP/IP connectivity. The ability to connect to ACL Launchpad is required during online server activation.	

## Software requirements

The following table provides a complete list of the prerequisite software you need to install on the server before you can complete the AX Server installation.

Software requirement	Minimum	Recommendation
<b>Operating System</b> One of the following: <ul style="list-style-type: none"> <li>• Windows Server 2012 R2</li> <li>• Windows Server 2008 R2 Enterprise Edition (64 bit)</li> </ul>	Windows Server 2008 R2 Enterprise Edition (64 bit)	Windows Server 2012 R2
	<b>Note</b> Apply all critical Windows updates before installing AX Server. Running Windows Server 2012 using the Server Core (no GUI) option is not supported.	
<b>Web browser</b> One of the following: <ul style="list-style-type: none"> <li>• Chrome</li> <li>• Firefox</li> <li>• Internet Explorer</li> </ul>	Internet Explorer version 9 <b>Note</b> Internet Explorer version 9 provides limited functionality in some AX Server components.	Latest version of Chrome

### Additional information

The following prerequisites are automatically installed by the AX Server setup wizard if the required software is not detected:

- Oracle Java SE Development Kit (JDK 7u79)
- Java Cryptography Extension for Java 7
- Microsoft Access Database Engine 2010 SP2

- Oracle Instant Client 12.1 (If Oracle is configured as the ACL Analytics Exchange database)
- Microsoft .NET Framework 4.5.2
- MSXML SDK 2.5

The following prerequisites are required and are included in a default Windows server installation:

- Microsoft Core XML Services (MSXML) 6.0
- Microsoft Data Access Components (MDAC) 2.8
- Microsoft Jet 4.0

To process analytics that include Direct Link for SAP commands, you must install Direct Link on the AX Server after you complete the AX Server installation. For details, see the *ACL Analytics Exchange Server Installation Guide*.

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## Database server requirements

The following table provides information about the requirements for the database server that will host the ACL Analytics Exchange database. Two database platforms, Oracle and PostgreSQL, are supported. If your organization is implementing both AX Server and AX Exception the supported configurations are both application databases using Oracle, or configuring the AX Server to use PostgreSQL as the database and Microsoft SQL Server as the AX Exception database.

Software requirement	Minimum	Recommendation
One of the following Oracle versions if Oracle is selected as the ACL Analytics Exchange database platform: <ul style="list-style-type: none"> <li>• Oracle 12c</li> <li>• Oracle 11gR2</li> </ul>	<ul style="list-style-type: none"> <li>• Oracle 11gR2</li> </ul>	<ul style="list-style-type: none"> <li>• Oracle 12c</li> </ul>
	<p><b>Note</b></p> <p>The server Oracle is installed on must meet the hardware requirements specified by the database vendor.</p>	
PostgreSQL 9.3 If PostgreSQL is selected as the ACL Analytics Exchange database platform.	PostgreSQL 9.3.9	PostgreSQL 9.3.9
	<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• If PostgreSQL is installed on the same server as AX Server, meeting the AX Server hardware requirements is sufficient. If PostgreSQL is installed on a separate server a 64-bit dual CPU, 64-bit operating system, and 2 GB of memory are recommended for production use.</li> <li>• The PostgreSQL version included with the AX Server setup wizard is the only supported version.</li> </ul>	

## 3. AX Engine Node requirements

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### Hardware requirements

The following table shows the minimum hardware requirements for a standalone AX Engine Node installation. Achieving acceptable performance in a production environment will generally dictate greater hardware requirements for your servers. The minimum computer configuration is suitable for evaluation and testing purposes.

Processor, memory, and hard disk requirements for production systems depend on the following factors:

- the number of concurrent analytics being processed
- the size of data files accessed by analytics during processing
- the desired response time

Component	Minimum	Recommendation
Memory (RAM)	4 gigabytes (GB)	8 GB
Hard disk	3.5 gigabytes (GB) This is the approximate amount of disk space required to download, extract, and install the prerequisites and AX Engine Node.	10 GB or more For use in production, high-speed disk access and throughput is recommended.
Other	Network connectivity to AX Server.	

## Software requirements

The following table provides a complete list of the prerequisite software you need to install on the server before you can complete the AX Engine Node installation.

Software requirement	Minimum	Recommendation
<b>Operating System</b> One of the following: <ul style="list-style-type: none"> <li>• Windows Server 2012 R2</li> <li>• Windows Server 2008 Enterprise Edition R2 (64 bit)</li> </ul>	Windows Server 2008 Enterprise Edition R2 (64 bit)	Windows Server 2012 R2
	<b>Note</b> Apply all critical Windows updates before installing AX Engine Node. Running Windows Server 2012 using the Server Core (no GUI) option is not supported.	

### Additional information

The following prerequisites are automatically installed by the AX Engine Node setup wizard if the required software is not detected:

- Oracle Java SE Development Kit (JDK7u9)
- Microsoft Access Database Engine 2010 SP2
- Oracle Instant Client 12.1 (If Oracle is configured as the ACL Analytics Exchange database)

The following prerequisites are required and are included in a default Windows server installation:

- Microsoft Core XML Services (MSXML) 6.0
- Microsoft Data Access Components (MDAC) 2.8
- Microsoft Jet 4.0

To process analytics that include Direct Link for SAP commands, you must install Direct Link on the analytic server after you complete the AX Engine Node installation. For details, see the *ACL Analytics Exchange Server Installation Guide*.

## 4. AX Exception server requirements

### Hardware requirements

The following table shows the minimum hardware requirements for a standalone AX Exception installation. Achieving acceptable performance in a production environment will generally dictate greater hardware requirements for your servers. The minimum computer configuration is suitable for evaluation and testing purposes.

Processor, memory, and hard disk requirements for production systems depend on the following factors:

- the number of concurrent users and their usage profiles
- the number of entities in the system and the number of exceptions processed
- the desired response time

Component	Minimum	Recommendation
Memory (RAM)	4 gigabytes (GB)	8 GB or more
Hard disk	1.5 gigabytes (GB) This is the approximate amount of disk space required to download, extract, and install the prerequisites and AX Exception.	5 GB or more Additional disk space will be required to store database files. See the database entry in the software requirements section for details. For use in production high-speed disk access is recommended.
Other	Network connectivity with AX Server.	

### Software requirements

The following table provides a complete list of the prerequisite software you need to install on the server before you can complete the AX Exception installation.

Software requirement	Minimum	Recommendation
<b>Operating System</b> One of the following: <ul style="list-style-type: none"> <li>• Windows Server 2012 R2</li> <li>• Windows Server 2008 R2 Enterprise Edition (64 bit)</li> </ul>	Windows Server 2008 R2 Enterprise Edition(64 bit)	Windows Server 2012 R2
	<b>Note</b> Apply all critical Windows updates before installing AX Exception. Running Windows Server 2012 using the Server Core (no GUI) option is not supported.	

Software requirement	Minimum	Recommendation
<b>Web browser</b> One of the following: <ul style="list-style-type: none"> <li>• Chrome</li> <li>• Firefox</li> <li>• Internet Explorer</li> </ul>	Internet Explorer version 9 <b>Note</b> Internet Explorer version 9 provides limited functionality in some AX Server components.	Latest version of Chrome

### Additional information

The following prerequisites are automatically installed by the AX Exception setup wizard if the required software is not detected:

- Oracle Java SE Development Kit (JDK 7u79)
- Oracle Instant Client 12.1 (If Oracle is configured as the AX Exception database)

The following prerequisites are required and are included in a default Windows server installation:

- Microsoft Core XML Services (MSXML) 6.0
- Microsoft Data Access Components (MDAC) 2.8
- Microsoft Jet 4.0

In order to use the escalation email functionality, AX Exception requires access to a mail server that supports the Simple Mail Transfer Protocol (SMTP). SMTP is a widely implemented standard supported by most mail servers including Microsoft Exchange. The SMTPs extension to the standard is not supported.

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## Database server requirements

The following table provides information about the requirements for the database server that will host the AX Exception database.

Software requirement	Minimum	Recommendation
One of the following database servers: <ul style="list-style-type: none"> <li>• Microsoft SQL Server 2014 Standard or Enterprise Edition</li> <li>• Microsoft SQL Server 2012 Standard or Enterprise Edition</li> <li>• Microsoft SQL Server 2008 Standard or Enterprise Edition</li> <li>• Oracle 12c</li> <li>• Oracle 11gR2</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft SQL Server 2008</li> <li>• Oracle 11gR2</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft SQL Server 2012 Enterprise Edition, or</li> <li>• Oracle 12c</li> </ul>
	<b>Note</b> <ul style="list-style-type: none"> <li>• The server Microsoft SQL Server or Oracle is installed on must meet the hardware requirements specified by the database vendor.</li> <li>• The supported configurations for AX Exception and AX Server are both applications using Oracle as the database platform, or AX Server using PostgreSQL and AX Exception using Microsoft SQL Server.</li> <li>• Database storage requirements are impacted by the number and types of continuous audit tests published, the volume of transactions, and the data schema. The smallest implementations will require up to 10GB per year, whereas the largest implementations will require up to 100GB per year. Volume of exception data typically ranges between 10 and 100 records for most continuous audits.</li> </ul>	