

ACL Analytics Exchange System Requirements

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1. ACL Analytics Exchange client requirements

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
Computer and processor	1.8 gigahertz (GHz) processor	2.2 GHz multi-core processor or higher
Memory (RAM)	4 GB	16 GB or higher
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.

Component	Minimum	Recommendation
Drive	DVD drive	DVD drive, or the setup files downloaded and copied to a local or network accessible drive.
Display	1024 x 768	1024 x 768 or higher resolution monitor
Other	TCP/IP connectivity	

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 requirements are 1024x768 display resolution, TCP/IP connectivity, and the desktop must meet the requirements to run Internet Explorer 9 or higher.

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>Operating System</p> <p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft Windows 7 (Service Pack 1) 32-bit or 64-bit • Microsoft Windows 8.1 64-bit 	<p>Apply all critical Windows updates before installing the ACL Analytics Exchange client applications.</p> <p>Note: 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"> • Chrome • Internet Explorer 9+ • Firefox • Safari 	<p>Chrome is the recommended browser for working with AX Web Client.</p>
<p>If you are installing Direct Link you must install SAP GUI version 7.20, patch level 0 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

If any of the following prerequisites are not detected by the ACL Analytics setup wizard you will be prompted to install them using the included ACL Requirements Update setup wizard and then re-run the ACL Analytics setup wizard:

- Microsoft Data Access Components (MDAC) 2.8 SP1

- Microsoft Jet 4.0 SP3
- Microsoft Core XML Services (MSXML) 4.0 SP1

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 7 Desktop Installation Guide*.

2. AX Server requirements

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.
Drive	DVD drive	DVD drive, or the setup files downloaded and copied to a local or network accessible drive.
Display	1024 x 768	1024 x 768 or higher resolution monitor
Other	TCP/IP connectivity	

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
Operating System One of the following: <ul style="list-style-type: none"> • Windows Server 2012 • Windows Server 2008 R2 Enterprise Edition • Windows Server 2008 Enterprise Edition(32 bit) 	Windows Server 2008 Enterprise Edition(32 bit)	Windows Server 2012
	Note Apply all critical Windows updates before installing AX Server. Running Windows Server 2012 using the Server Core (no GUI) option is not supported.	
Web browser Internet Explorer	Internet Explorer version 9	Internet Explorer version 9 Internet Explorer is the only web server supported for working with the AX Server Configuration web application.

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) 7
- Microsoft Visual C++ 2005, 2008, and 2010 redistributable packages
- Microsoft Access Database Engine 2007 and 2010
- Compatibility pack for the Office 2007 system
- Oracle Instant Client 11.1 (If Oracle is configured as the ACL Analytics Exchange database)
- Microsoft Data Access Components (MDAC) 2.8 SP1
- Microsoft Jet 4.0 SP3
- Microsoft Core XML Services (MSXML) 4.0 SP3
- Open XML SDK 2.5 for Microsoft Office
- Microsoft .NET Framework 4.5

To process analytics that include the *ACLScript* Crystal Reports command (DO REPORT CRYSTAL), you must run the ACL Components XI setup wizard after you complete the AX Server installation.

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

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"> Oracle 11g Oracle 10g 	<ul style="list-style-type: none"> Oracle 10g 	<ul style="list-style-type: none"> Oracle 11gR2
	Note: The server Oracle is installed on must meet the hardware requirements specified by the database vendor.	
PostgreSQL 9.1 If PostgreSQL is selected as the ACL Analytics Exchange database platform.	PostgreSQL 9.1.6	PostgreSQL 9.1.6
	Notes <ul style="list-style-type: none"> 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. The PostgreSQL version included with the AX Server setup wizard is the only supported version. 	

3. AX Engine Node requirements

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
Processor	2.5 gigahertz (GHz)	Quad-core processor (or two Dual-core processors) at 2.5 GHz or higher.
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.

Component	Minimum	Recommendation
Drive	DVD drive	DVD drive, or the setup files downloaded and copied to a local or network accessible drive.
Display	1024 x 768	1024 x 768 or higher resolution monitor
Other	TCP/IP connectivity	

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
Operating System One of the following: <ul style="list-style-type: none"> • Windows Server 2012 • Windows Server 2008 R2 Enterprise Edition • Windows Server 2008 Enterprise Edition(32 bit) 	Windows Server 2008 Enterprise Edition(32 bit)	Windows Server 2012
	Note Apply all critical Windows updates before installing AX Engine Node. Running Windows Server 2012 using the Server Core (no GUI) option is not supported.	
Web browser Internet Explorer	Internet Explorer version 9	Internet Explorer version 9

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 (JDK) 7
- Microsoft Visual C++ 2005, 2008, and 2010 redistributable packages
- Microsoft Access Database Engine 2007
- Oracle Instant Client 11.1 (If Oracle is configured as the ACL Analytics Exchange database)
- Microsoft Data Access Components (MDAC) 2.8 SP1
- Microsoft Jet 4.0 SP3
- Microsoft Core XML Services (MSXML) 4.0 SP3

To process analytics that include the *ACLScript* Crystal Reports command (DO REPORT CRYSTAL), you must run the ACL Components XI setup wizard after you complete the AX Engine Node installation.

To process analytics that include Direct Link for SAP commands, you must install AX 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
Processor	2.5 gigahertz (GHz)	Dual-core processor (or two processors) at 2.5 GHz or higher.
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.
Drive	DVD drive	DVD drive, or the setup files downloaded and copied to a local or network accessible drive.
Display	1024 x 768	1024 x 768 or higher resolution monitor
Other	TCP/IP connectivity	

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
Operating System One of the following: <ul style="list-style-type: none"> • Windows Server 2012 • Windows Server 2008 R2 Enterprise 	Windows Server 2008 Enterprise Edition(32 bit)	Windows Server 2012

Software requirement	Minimum	Recommendation
Edition <ul style="list-style-type: none"> Windows Server 2008 Enterprise Edition(32 bit) 	Note Apply all critical Windows updates before installing AX Exception. Running Windows Server 2012 using the Server Core (no GUI) option is not supported.	
Web browser Internet Explorer	Internet Explorer version 9	Internet Explorer version 9+ Internet Explorer is the only web browser supported for working with the AX Exception Administration web application.

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) 7
- Oracle Instant Client 11.1 (If Oracle is configured as the AX Exception database)
- Microsoft Data Access Components (MDAC) 2.8 SP1
- Microsoft Jet 4.0 SP3
- Microsoft Core XML Services (MSXML) 4.0 SP3

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.

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"> • Microsoft SQL Server 2008 Standard or Enterprise Edition • Microsoft SQL Server 2012 Standard or Enterprise Edition • Oracle 11g • Oracle 10g 	<ul style="list-style-type: none"> • Microsoft SQL Server 2008 Standard Edition, or • Oracle 10g 	<ul style="list-style-type: none"> • Microsoft SQL Server 2008 Enterprise Edition, or • Oracle 11g

Software requirement	Minimum	Recommendation
	<p data-bbox="505 176 591 205">Notes</p> <ul data-bbox="553 226 1398 695" style="list-style-type: none"><li data-bbox="553 226 1398 317">• The server Microsoft SQL Server or Oracle is installed on must meet the hardware requirements specified by the database vendor.<li data-bbox="553 338 1398 457">• 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 data-bbox="553 478 1398 695">• 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.	