

## MSEA

## ADX, ADS and ADS-Lite

## Application and Data Server

The Application and Data Server (ADS) and Extended Application and Data Server (ADX) are optional components of the Metasys® system that manage the collection and presentation of large amounts of trend data, event messages, operator transactions, and system configuration data. The ADS is an entry level server that runs on personal computer platform and supports up to 5 users. The ADX is a large scale system that runs on a server operating system to provide extended historical archiving and reporting capabilities. The ADX is offered in several models to support 10, 25, or 50 users. As Site Director, the ADS/ADX provides secure communication to a network of Network Automation Engines (NAEs), Network Control Engines (NCEs), and Network Integration Engines (NIEs). The Site Management Portal User Interface (UI) of the ADS/ADX operates in a Web browser to provide flexible system navigation, user graphics, comprehensive alarm management, trend analysis and summary reporting capabilities. With the Site Management Portal UI, you can efficiently manage occupant comfort and energy usage, quickly respond to critical events, and optimize control strategies. The ADS/ADX includes an Open Database Connectivity (ODBC) compliant database package for secure storage of historical and configuration data. An optional user interface called the Ready Access Portal provides an intuitive, task-based user experience designed for building tenants and other specialized users. The Ready Access Portal is available on a computer or handheld platform and requires only a Web browser. For the ADX, the Metasys Advanced Reporting System and Energy Essentials report on system configuration performance, energy usage, demand, and cost. In this document, the term engine refers to NAEs, NCEs and NIEs, unless otherwise noted.

## Features

- Support of IT Standards and Internet Technologies
- Secure User Access
- Flexible System Navigation and Dynamic User Graphics
- Alarm and Event Management
- Long-Term Trend Data Storage
- Optional Metasys Advanced Reporting System and Energy Essentials



## Applications

An ADS-Lite is used when:

- The number of engines becomes larger than a single engine can handle efficiently as Site Director
- Long-term historical data storage needs exceed the capacity of a typical engine
- The number of simultaneous users logging on exceeds the capacity of a single engine. The ADS supports up to 5 simultaneous users.

An ADS is used when:

- More than five engines are installed
- Nx55 or Nx85 are included on the project

An ADX is used when:

- The Metasys Advanced Reporting System, Energy Essentials, or the Metasys for Validated Environments (MVE), Extended Architecture application is required
- You need to support more than 5 simultaneous users. The ADX supports 10, 25, or 50 users.
- Any one of your data storage or access requirements is not met by an ADS

Ordering Codes	Description
MS-ADSLE5U-0	ADS-Lite-E new project software for up to 5 concurrent users. The ADS-Lite-E is available for purchase and use in Europe and Africa.
MS-ADS05U-0	ADS new project software for up to 5 concurrent users
MS-ADX10U-0	ADX new project software for up to 10 users
MS-ADX10SQL-0	ADX new project software for up to 10 users Includes Microsoft® SQL Server™ 2008 software with a Processor License for unlimited users/devices.
MS-ADXSUO-0	ADX new project software for up to 25 users
MS-ADXSUOSQL-0	ADX new project software for up to 25 users Includes Microsoft SQL Server 2008 software with a Processor License for unlimited users/devices.
MS-ADX50U-0	ADX new project software for up to 50 users
MS-ADX50SQL-0	ADX new project software for up to 50 users Includes Microsoft SQL Server 2008 software with a Processor License for unlimited users/devices.

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### ADX, ADS and ADS-Lite

#### ADS and ADS-Lite - Technical Specifications

<b>Recommended Computer <sup>1</sup> Platform</b>	2.8 GHz Intel® Core™ 2 Duo processor 2 x 320 GB hard disk (RAID 1) <sup>2</sup> with 40 GB free space after installation of all prerequisite software and before installation of ADS software. Configure RAID 1 (mirroring) with disk write-caching turned on. DVD drive <b>Note:</b> Prerequisite software includes the supported operating system, database software, .NET Framework, and any other software or service packs required for your ADS configuration. Graphics card (1 GB RAM, ATI® Technologies or NVIDIA® Corporation, 64-bit compatible [for 64-bit operating systems], Small Form Factor [SFF] if required) <sup>3</sup> .
<b>Recommended Memory <sup>4</sup></b>	2 GB RAM minimum
<b>Supported Operating Systems <sup>5</sup> and Database Software</b>	<p><b>Windows 7 Professional, Enterprise, and Ultimate Editions with SP1 (32-bit)</b> SQL 2008 R2 Express SP2, 32-bit SQL 2008 Express SP3, 32-bit</p> <p><b>Windows 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit)</b> SQL 2012 Express SP1, 64-bit SQL 2008 R2 Express SP2, 64-bit SQL 2008 Express SP3, 64-bit</p> <p><b>Windows 8 and Windows 8 Pro (64-bit)</b> SQL 2012 Express SP1, 64-bit SQL 2008 R2 Express SP2, 64-bit SQL 2008 Express SP3, 64-bit</p> <p><b>Windows® 8.1 and Windows 8.1 Pro (64-bit)</b> SQL 2008 R2 Express SP2, 64-bit SQL 2012 Express SP1, 64-bit</p>
<b>Required Web Browser Software for Metasys Client Computers</b>	<p><b>Windows Internet Explorer® version 8, 9, 10 or 11</b> <b>Note:</b> In Internet Explorer 11, select the option to Display all websites in Compatibility View, found under Tools &gt; Compatibility View Settings, to ensure websites appear and function correctly. (Other browsers, such as Google® Chrome and Mozilla Firefox, may also be used but are not fully supported.) <b>Note:</b> You use the web browser to download the Launcher application. After you install the Launcher application, you use the Launcher, not the web browser, to log in to the Metasys UI.</p>
<b>Network Communication</b>	Ethernet network interface card (100 or 1000 Mbps) <b>Note:</b> The ADS supports only one network interface card.
<b>Additional Software Included with the ADS-Lite</b>	
<i>CCT software</i>	Launcher software
<i>Export Utility software</i>	Microsoft SQL Server 2012 Express software with SP1 (64-bits)
<i>Metasys Database Manager software</i>	Microsoft SQL Server 2008 R2 Express software with SP2 (32-bit and 64-bit)
<i>Ready Access Portal software</i>	Microsoft .NET Framework Version 3.5 SP1
<i>SCT software</i>	SCT Manager software
<b>Optional Hardware</b>	Any network or local printer supported by the qualified Windows operating system
<b>Optional Software</b>	Graphic Generation Tool

#### Notes

- <sup>1</sup> Our computer platform and memory recommendations are not meant to imply that older or slower machines are not usable. Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for more information regarding computer/server recommendations.
- <sup>2</sup> For best performance, use Serial Attached SCSI (SAS) hard drives, not Small Computer System Interface (SCSI) hard drives.
- <sup>3</sup> For improved performance in configurations where ADS and Ready Access Portal share the same computer.
- <sup>4</sup> For best performance, use the maximum amount of memory that the computer allows.
- <sup>5</sup> Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-1201279) for specific Microsoft Windows operating system settings that may be required for your Metasys system configuration.

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### ADX, ADS and ADS-Lite

#### Unified ADX - Technical Specifications

<b>Recommended Server Platform</b> <sup>1</sup>	4 GHz Intel Xeon® single processor 2 x 600 GB hard disk (RAID 1) <sup>2</sup> with 40 GB free space after installation of all prerequisite software and before installation of ADS software. Configure RAID 1 (mirroring) with disk write-caching turned on. DVD drive <b>Note:</b> ADX prerequisite software includes the Windows operating system, SQL Server software, Windows .NET Framework, and any other software or SPs required by your ADX configuration.
<b>Recommended Memory</b> <sup>3</sup>	16 GB RAM (10 or 25 user ADX)
<b>Supported Operating Systems</b> <sup>4</sup> <b>and Database Software</b>	<b>Windows Server® 2012 R2 Standard and Enterprise Editions (64-bit)</b> <sup>5</sup> Supports Microsoft SQL Server™ 2012 Standard or Enterprise with SP1 (64-bit) or Microsoft SQL Server 2008 R2 Standard with SP2 (64-bit) <b>Windows Server 2012 Standard and Enterprise (64-bit)</b> <sup>5</sup> Supports Microsoft SQL Server 2012 Standard or Enterprise with SP1 (64-bit) or Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (64-bit) <b>Windows Server 2008 R2 Standard and Enterprise Editions with SP1 (b4-bit)</b> <sup>6</sup> Supports Microsoft SQL Server 2012 Standard or Enterprise with SP1 (64-bit), Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (64-bit), or Microsoft SQL Server 2008 Standard or Enterprise with SP3 (64-bit) <b>Windows Server 2008 Standard and Enterprise Editions with SP2 (32-bit)</b> <sup>6</sup> Supports Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (32-bit) or Microsoft SQL Server 2008 Standard or Enterprise with SP3 (32-bit) <b>Note:</b> A 32-bit operating system only supports a maximum of 4 GB memory. For best performance, use a 64-bit operating system.
<b>Required Web Browser Software for Metasys Client Computers</b>	Windows Internet Explorer® version 8, 9, 10, or 11. <b>Note:</b> In Internet Explorer 11, select the option to Display all websites in Compatibility View, found under Tools > Compatibility View Settings, to ensure websites appear and function correctly. (Other browsers, such as Google Chrome and Mozilla Firefox, may also be used but are not fully supported.) <b>Note:</b> You use the web browser to download the Launcher application. After you install the Launcher application, you use the Launcher, not the web browser, to log in to the Metasys UI.
<b>Network Communication</b>	Ethernet network interface card (100 or 1000 Mbps) <b>Note:</b> The ADX supports only one network Interface card.
<b>Additional Software Included with the ADX</b>	
<i>CCT software</i>	Launcher software
<i>Export Utility software</i>	Microsoft SQL Server 2012 software with SP1 (64-bit)
<i>Metasys Database Manager software</i>	
<i>Ready Access Portal software</i>	Microsoft .NET Framework Version 3.5 SP1
<i>SCT software</i>	SCT Manager software <b>Note:</b> The Metasys Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.
<b>Optional Hardware</b>	Any network or local printer supported by the qualified Windows operating system
<b>Optional Software</b>	Energy Essentials Graphic Generation Tool

#### Notes

- Our computer platform and memory recommendations are not meant to imply that older or slower machines are not usable. Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for more information regarding computer/server recommendations.
- For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write caching enabled.
- For best performance, use the maximum amount of memory. An ADX with 16 GB RAM has much greater performance than an ADX with only 4 GB RAM. A 32-bit operating system does not support more than 4 GB of RAM.
- Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for specific Microsoft Windows operating system settings that may be required for your Metasys system configuration.
- For SQL Server 2012 software, you must purchase a SQL Server software license for each individual processor core (with a minimum of four core licenses). For example, if you have a single processor with dual cores, purchase four core licenses (the minimum) for SQL Server 2012 software.
- For SQL Server 2008 R2 or SQL Server 2008 software, you must purchase a SQL Server software license for each individual processor you have. You do not need to purchase multiple licenses if you have a single processor divided into multiple cores. For example, if you have a single processor with dual cores, purchase one license for SQL Server software.

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### ADX, ADS and ADS-Lite

#### Split ADX - Technical Specifications

<b>Recommended Server Platform</b> <sup>1</sup>	<p><b>Web/Application Server</b> 2.4 GHz Intel Xeon® single processor 2 x 600 GB hard disk (RAID 1) <sup>2</sup> with 40 GB free space after installation of all prerequisite software <sup>4</sup> and before installation of ADS software. Configure RAID 1 (mirroring) with disk write-caching turned on. DVD drive</p> <p><b>Database Server</b> 2.4 GHz Intel Xeon® single processor 2 x 600 GB hard disk (RAID 1) with 40 GB free space after installation of all prerequisite software <sup>4</sup> and before installation of ADS software. Configure RAID 1 (mirroring) with disk write-caching turned on. DVD drive</p> <p><b>SCT Computer</b> In a split configuration, you cannot install SCT software on either the web/application server computer or the database server computer. Refer to the System Configuration Tool Catalog Page (LIT-1900198) for current SCT computer requirements.</p>
<b>Recommended Memory</b> <sup>3</sup>	16 GB RAM (web/application server and database server for 10 or 25 user ADX)
<b>Supported Operating Systems</b> <sup>5, 6</sup> <b>with Supported Database Software</b>	<p><b>Windows Server® 2012 R2 Standard and Enterprise Editions (64-bit)</b> <sup>7</sup> Supports Microsoft SQL Server™ 2012 Standard or Enterprise with SP1 (64-bit) or Microsoft SQL Server 2008 R2 Standard software with SP2 (64-bit)</p> <p><b>Windows Server 2012 Standard and Enterprise Editions (64-bit)</b> <sup>7</sup> Supports Microsoft SQL Server 2012 Standard or Enterprise with SP1 (64-bit) or Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (64-bit)</p> <p><b>Windows Server 2008 Standard and Enterprise Editions with SP2 (32-bit)</b> <sup>8</sup> Supports Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (32-bit) or SQL Server 2008 Standard or Enterprise software with SP3 (32-bit)</p> <p><b>Note:</b> A 32-bit operating system only supports a maximum of 4 GB memory. For best performance, use a 64-bit operating system.</p>
<b>Required Web Browser Software for Metasys Client Computers</b>	<p>Microsoft Internet Explorer® version 8, 9, 10, or 11 <b>Note:</b> In Internet Explorer 11, select the option to Display all websites in Compatibility View, found under Tools &gt; Compatibility View Settings, to ensure websites appear and function correctly. (Other browsers, such as Google Chrome and Mozilla Firefox, may also be used but are not fully supported.) <b>Note:</b> You use the web browser to download the Launcher application. After you install the Launcher application, you use the Launcher, not the web browser, to log in to the Metasys UI.</p>
<b>Network Communication</b>	<p>Ethernet network interface card (100 or 1000 Mbps) <b>Note:</b> The ADX supports only one network interface card.</p>
<b>Additional Software Included with the ADX</b>	<p><b>CCT software</b> Launcher software</p> <p><b>Export Utility software</b> Microsoft SQL Server 2012 software with SP1 (64-bit)</p> <p><b>Metasys Database Manager software</b></p> <p><b>Ready Access Portal software</b> Microsoft .NET Framework Version 3.5 SP1</p> <p><b>SCT software</b> <b>Note:</b> The Metasys Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.</p>
<b>Optional Hardware</b>	Any network or local printer supported by the qualified Windows operating system
<b>Optional Software</b>	<p>Energy Essentials</p> <p>Graphic Generation Tool</p>

#### Notes

- Our computer platform and memory recommendations are not meant to imply that older or slower machines are not usable. Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for more information regarding computer/server recommendations.
- For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write caching enabled.
- For best performance, use the maximum amount of memory. An ADX with 16 GB RAM has much greater performance than an ADX with only 4 GB RAM. Also, a 32-bit operating system only supports a maximum of 4 GB of RAM.
- ADX prerequisite software includes the Windows operating system and SQL Server software, Windows .NET Framework, and any other software or service packs required for your ADX configuration.
- The web/application and database servers must have the same operating system installed.
- Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for specific Microsoft Windows operating system settings that may be required for your Metasys system configuration.
- For SQL Server 2012 software, you must purchase a SQL Server software license for each individual processor core (with a minimum of four core licenses). For example, if you have a single processor with dual cores, purchase four core licenses (the minimum) for SQL Server 2012 software.
- For SQL Server 2008 R2 or SQL Server 2008 software, you must purchase a SQL Server software license for each individual processor you have. You do not need to purchase multiple licenses if you have a single processor divided into multiple cores. For example, if you have a single processor with dual cores, purchase one license for SQL Server software.

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### ADX, ADS and ADS-Lite

#### Extended Application and Data Server System Requirements (Unified ADX Systems 50 Users)

<b>Recommended Server Platform</b> <sup>1</sup>	<p><b>2.2 GHz Intel Xeon® dual processors</b> 6 x 300 GB hard disk (RAID 5) 2 with 50 GB free space after installation of all prerequisite software and before installation of ADS software. Configure RAID 5 with disk write-caching turned on. DVD drive</p> <p><b>Note:</b> ADX prerequisite software includes the Windows operating system, SQL Server software, Windows .NET Framework, and any other soft</p>
<b>Recommended Memory</b>	32 GB RAM
<b>Supported Operating Systems</b> <sup>3</sup> with Supported Database Software	<p><b>Windows Server® 2012 R2 Standard and Enterprise Editions (64-bit)</b> <sup>4</sup> Supports Microsoft SQL Server™ 2012 Standard or Enterprise with SP1 (64-bit) or Microsoft SQL Server 2008 R2 Standard with SP2 (64-bit)</p> <p><b>Windows Server 2012 Standard and Enterprise Editions (64-bit)</b> <sup>4</sup> Supports Microsoft SQL Server 2012 Standard or Enterprise with SP1 (64-bit) or Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (64-bit)</p> <p><b>Windows Server 2008 R2 Standard and Enterprise with SP1 (64-bit)</b> <sup>5</sup> Supports Microsoft SQL Server 2012 Standard or Enterprise with SP1 (64-bit), Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (64-bit), or Microsoft SQL Server 2008 Standard or Enterprise with SP3 (64-bit)</p> <p><b>Windows Server 2008 Standard and Enterprise Editions with SP2 (32-bit)</b> <sup>5</sup> Supports Microsoft SQL Server 2008 R2 Standard or Enterprise with SP2 (32-bit) or SQL Server 2008 Standard or Enterprise with SP3 (32-bit)</p> <p><b>Note:</b> A 32-bit operating system only supports a maximum of 4 GB memory. For best performance, use a 64-bit operating system.</p>
<b>Required Web Browser Software for Metasys Client Computers</b>	<p>Microsoft Internet Explorer® version 8, 9, 10, or 11</p> <p><b>Note:</b> In Internet Explorer 11, select the option to Display all websites in Compatibility View, found under Tools &gt; Compatibility View Settings, to ensure websites appear and function correctly. (Other browsers, such as Google Chrome and Mozilla Firefox, may also be used but are not fully supported.)</p> <p><b>Note:</b> You use the web browser to download the Launcher application. After you install the Launcher application, you use the Launcher, not the web browser, to log in to the Metasys UI.</p>
<b>Network Communication</b>	<p>Ethernet network interface card (1000 Mbps)</p> <p><b>Note:</b> The ADX supports only one network interface card.</p>
<b>Additional Software Included with the ADX</b>	
<i>CCT software</i>	Launcher software
<i>Export Utility software</i>	Microsoft SQL Server 2012 software with SP1 (64-bit)
<i>Metasys Database Manager software</i>	SQL Server 2012 Express S1 (64-bit) SQL Server 2012 SP1 (64-bit)
<i>Ready Access Portal software</i>	Microsoft .NET Framework Version 3.5 SP1
<i>SCT software</i>	<b>Note:</b> The Metasys Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.
<b>Optional Hardware</b>	Any network or local printer supported by the qualified Windows operating system
<b>Optional Software</b>	Energy Essentials Graphic Generation Tool

#### Notes

- Our computer platform and memory recommendations are not meant to imply that older or slower machines are not usable. Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for more information regarding computer/server recommendations.
- For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write caching enabled.
- Refer to the Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279) for specific Microsoft Windows operating system settings that may be required for your Metasys system configuration.
- For SQL Server 2012 software, you must purchase a SQL Server software license for each individual processor core (with a minimum of four core licenses). For example, if you have a single processor with dual cores, purchase four core licenses (the minimum) for SQL Server 2012 software.
- For SQL Server 2008 R2 or SQL Server 2008 software, you must purchase a SQL Server software license for each individual processor you have. You do not need to purchase multiple licenses if you have a single processor divided into multiple cores. For example, if you have a single processor with dual cores, purchase one license for SQL Server software.