Background

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 computers and supports up to five concurrent users. The ADX is a larger 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 up to 10, 25, 50, or 100 concurrent users. As Site Director, the ADS/ADX provides secure communication to a network of NAE, NIE, NCE, SNE and SNC series engines.

The ADS/ADX supports robust features that continue to position the *Metasys* system as the leading building automation system in the industry, including:

- Building Network tree allows for faster delivery of the *Metasys* User Interface (UI) by enabling its deployment prior to the spaces and equipment configuration process. It also provides a familiar navigation experience for *Metasys* operators who have previous experience using the All Items tree of the Site Management Portal.

- Advanced Search and Reporting in the *Metasys* UI allows *Metasys* operators to find and report on operational data and make bulk commands to restore order more quickly. The Advanced Search and Reporting feature provides *Metasys* users the ability to quickly search *Metasys* objects by Building Network, equipment, equipment type, or space.

- Custom Dashboards for the *Metasys* User Interface. Custom dashboards enable *Metasys* UI designers to create dashboards that provide the most relevant and critical information to *Metasys* operators for enhanced productivity and creates an experience that mimics users operational styles for ease of use.

- Graphics Custom Behaviors provide *Metasys* UI designers the flexibility to use custom symbols that are required for their individual building or campus needs or their local standards.

- Trend widget updates allow users to identify patterns including outliers, using an intuitive candlestick chart that displays min, max, and averages.

- Cyber Health Dashboard provides a *Metasys* administrator with a centralized view of potential security-related issues or system issues which are detectable by an ADS/ADXOAS, but which may not surface as part of general system alarms.

- User Management facilitates the creation and management of users and their roles, category-based permissions, and privileges directly in *Metasys* UI Online, without the need to install software on client machines.

- Historical data management, including an ODBC-compliant database package for storage of trend data, event messages, operator transactions, and system configuration data.

The Site Management Portal UI of the ADS/ADX provides a flexible system to change the online configuration of the *Metasys* system, optimize control strategies, and perform administrative tasks. The ADS/ADX includes an Open Database Connectivity (ODBC) compliant database package for secure storage of historical and configuration data.

The ADS and ADX support virtual environments, including VMware® and Microsoft® Hyper-V™. Refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)* for more information.
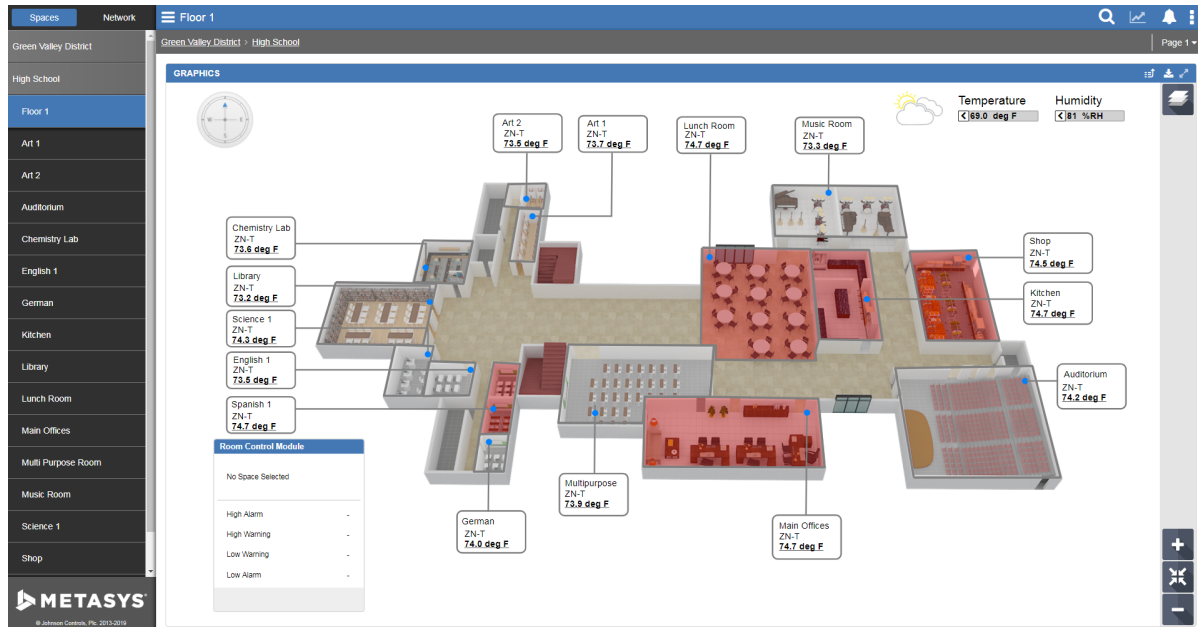
The *Metasys* system can communicate with cloud-based applications easily and securely. To make this connection, the *Metasys* system requires minor programming and setup by Johnson Controls. When you are connected, you can access multiple cloud-based applications and features. To learn more, please visit the Building Management page located on the Johnson Controls® website.

Figure 1: Site Management UI

Figure 2: *Metasys* UI

For the ADX, the *Metasys* Advanced Reporting System and Energy Essentials report on system configuration performance, energy usage, demand, and cost.

Applications

Use an ADS when:

- the number of network engines becomes larger than a single network engine can handle efficiently as Site Director

- long-term historical data storage needs exceed the capacity of a typical network engine

- the number of simultaneous users logging in exceeds the capacity of a single network engine. The ADS supports up to 5 simultaneous users, and up to 10 to 14 NxE engines. Refer to the *Metasys System Configuration Guide (LIT-12011832)*.

Use an ADX 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 up to 10, 25, 50, or 100 users, and up to 1,000 NxE engines. Refer to the *Metasys System Configuration Guide (LIT-12011832)*.

- any one of your data storage or access requirements is not met by an ADS

To further help you decide whether an ADS or ADX is right for your facility, consider their respective data storage and data access capabilities.

Ordering Information

For complete ordering information, refer to the *Metasys System Software Purchase Options Product Bulletin (LIT-12011703)*.

Table 1: ADS/ADX Ordering Information for New or Upgrade Software

Base Product Code	Product Descriptions	New Software Product Code Number	Upgrade Software Product Code Number	Migration Software Product Code Number
MS-ADS05U	Application and Data Server	MS-ADS05U-0	MS-ADS05U-6	MS-ADS05U-8
MS-ADX10U	Extended Application and Data Server	MS-ADX10U-0	MS-ADX10U-6	MS-ADX10U-8
MS-ADX10SQL	Extended Application and Data Server Includes Microsoft SQL Server 2014 software with core license	MS-ADX10SQL-0	MS-ADX10SQL-6	MS-ADX10SQL-8
MS-ADXS25U	Extended Application and Data Server	MS-ADXS25U-0	MS-ADXS25U-6	MS-ADXS25U-8
MS-ADX25SQL	Extended Application and Data Server Includes Microsoft SQL Server 2014 software with core license	MS-ADX25SQL-0	MS-ADX25SQL-6	MS-ADX25SQL-8
MS-ADX50U	Extended Application and Data Server	MS-ADX50U-0	MS-ADX50U-6	MS-ADX50U-8
MS-ADX50SQL2	Extended Application and Data Server For use on server with dual processors or 8 cores[1] Includes Microsoft SQL Server 2014 software with core license	MS-ADX50SQL2-0	MS-ADX50SQL2-6	MS-ADX50SQL2-8

Table 1: ADS/ADX Ordering Information for New or Upgrade Software

Base Product Code	Product Descriptions	New Software Product Code Number	Upgrade Software Product Code Number	Migration Software Product Code Number
MS-ADX50SQL	Extended Application and Data Server For use on server with single processor or 4 cores Includes Microsoft SQL Server 2014 software with core license	MS-ADX50SQL-0	MS-ADX50SQL-6	MS-ADS50SQL-8
MS-ADX100U	Extended Application and Data Server	MS-ADX100U-0	MS-ADX100U-6	MS-ADX100U-8
MS-ADX100SQL2	Extended Application and Data Server For use on server with dual processors or 8 cores[1] Includes Microsoft SQL Server 2014 software with core license	MS-ADX100SQL2-0	MS-ADX100SQL2-6	MS-ADX100SQL2-8

1   Servers with dual processors or 8 cores are **recommended** for ADX 50 user and 100 user software.

ADS concurrent users

The following table shows examples of the total number of supported users who can be simultaneously logged in to the SMP and *Metasys* UI.

Table 2: Examples of ADS/ADX/ADS-Lite concurrent users

ADS/ADX type	Examples of ADS/ADX concurrent users	
	SMP UI	*Metasys* UI
5-user ADS/ADS-Lite	0	5
	2	3
	5	0

Table 2: Examples of ADS/ADX/ADS-Lite concurrent users

ADS/ADX type	Examples of ADS/ADX concurrent users	
	SMP UI	*Metasys* UI
10-user ADX	0	25
	5	20
	8	17
	10	15
25-user ADX	0	25
	10	15
	20	5
	25	0
50-user ADX	0	50
	10	40
	25	25
	50	0
100-user ADX	5	50
	10	50
	25	50
	50	50
	75	25
	100	0

For example, with a 5-user ADS or ADS-Lite, 5 *Metasys* UI users are supported if no SMP users are logged in, or 3 *Metasys* UI users are supported if 2 SMP users are logged in. Similarly, with a 50-user ADX, 50 *Metasys* UI users are supported if no SMP users are logged in, or 10 *Metasys* UI users are supported if 40 SMP users are logged in. The only *Metasys* UI user restriction applies to a 50-user or 100-user ADX: no more than 50 *Metasys* UI users are supported, regardless of the number of SMP users.

Application and Data Server (ADS) System Requirements

Table 3: Application and Data Server (ADS) System Requirements (5 Users)

Recommended Computer Platform[1]	Intel i7 processor latest version with at least four cores or better
	2 x 500 GB hard disk (RAID 1)[2] 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.
	ⓘ **Note:** 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, Small Form Factor [SFF] if required)
Required Minimum Memory[3]	16 GB RAM

Table 3: Application and Data Server (ADS) System Requirements (5 Users)

Supported Operating Systems[4] and Database Software	Windows® 10 Pro and Windows 10 Enterprise Editions (version 1809 or later) (64-bit) Supports: • SQL Server® 2017 Express (64-bit) • SQL Server® 2016 Express with SP2 (64-bit) • SQL Server® 2014 Express with SP3 (64-bit) • SQL Server® 2012 Express with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/kb/2979597.
	Windows® 8.1 Pro and Windows 8.1 Enterprise Editions with Update (KB2919355) (64-bit) Supports: • SQL Server® 2017 Express (64-bit) • SQL Server® 2016 Express with SP2 (64-bit) • SQL Server® 2014 Express with SP3 (64-bit) • SQL Server® 2012 Express with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/kb/2979597.
	Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Supports: • SQL Server® 2014 Express with SP3 (64-bit) • SQL Server® 2012 Express with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
Supported Operating Systems for *Metasys* **Site Management Portal Client Computer**	Windows® 10 Pro and Windows 10 Enterprise Editions (version 1809 or later) (64-bit) Windows® 8.1 Pro and Windows 8.1 Enterprise Editions with Update (KB2919355) (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Apple® OS X® 10.13 High Sierra Apple® OS X® 10.12 Sierra Apple® OS X® 10.11 El Capitan

Table 3: Application and Data Server (ADS) System Requirements (5 Users)

Supported Web Browser Software for *Metasys* Site Management Portal Client Computers	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later ⓘ **Note:** In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly. Apple® Safari® 11 or later ⓘ **Notes:** • In OS X, you cannot view Graphics+ graphics in the Site Management Portal UI. • 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 Site Management Portal (SMP) UI.
Supported Web Browser Software for *Metasys* UI Client Devices	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later ⓘ **Notes:** • The *Metasys* UI does not support Internet Explorer 11 on Windows 10 operating systems. • In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly. • *Metasys* UI does not support InPrivate Browsing. To exit InPrivate Browsing, close the browser window and open a new browser window. Microsoft® Edge® version 44 or later Google® Chrome™ version 72.0.3626.121 or later ⓘ **Note:** *Metasys* UI does not support incognito mode. To exit incognito mode, click or tap the **X** icon of the browser window or tab and then open a new browser window or tab. For more information on incognito mode in Google Chrome, click here. Apple® Safari® 11 or later ⓘ **Note:** *Metasys* UI does not support private browsing. To exit private browsing, click or tap **Private** in the browser window. Other web browsers, such as Mozilla® Firefox®, are not officially supported by the UI. However, the *Metasys* UI may appear and function appropriately in these web browsers.
Supported Virtual Environments	Microsoft Hyper-V™ VMware®

Table 3: Application and Data Server (ADS) System Requirements (5 Users)

Supported User Interfaces	Site Management Portal (SMP) *Metasys* UI
Additional Software Included with the ADS Software Download	Launcher software, Network Engine images, Summary Definition Examples, Microsoft .NET Framework (multiple versions), SQL Server Management Studio, *Metasys* Database Manager, Toggletunnel, SNMP Management Information Base example files (MIBs), Report Viewer 2010 and Report Viewer 2012.
Optional Hardware	Any network or local printer supported by the qualified Windows operating system
Optional Software	Graphic Generation Tool CCT software SCT software *Metasys* Export Utility software

1   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 Technical Bulletin (LIT-12011279)* for more information regarding computer/ server recommendations.
2   For best performance, use Serial Attached SCSI (SAS) hard drives, not Small Computer System Interface (SCSI) hard drives.
3   For best performance, use the maximum amount of memory that the computer allows.
4   Refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)* for specific Microsoft Windows operating system settings that may be required for your *Metasys* system configuration.

Extended Application and Data Server System Requirements (Unified 10 or 25 User ADX)

Table 4: Extended Application and Data Server System Requirements (Unified ADX Systems, 10 or 25 Users)

Recommended Server Platform[1]	2.4 GHz Intel Xeon® 6 core single processor or better 2 x 600 GB hard disk (RAID 1)[2] 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. ⓘ **Note:** 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.
Required Minimum Memory[3]	16 to 32 GB RAM

Table 4: Extended Application and Data Server System Requirements (Unified ADX Systems, 10 or 25 Users)

Supported Operating Systems[4] and Database Software	Windows® Server® 2016 with Update (KB4489890) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 R2 with Update (KB2919355) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 with Update (KB3172614) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.

Table 4: Extended Application and Data Server System Requirements (Unified ADX Systems, 10 or 25 Users)

Supported Operating Systems for *Metasys* Site Management Portal Client Computer	Windows® 10 Pro and Windows 10 Enterprise Editions (version 1809 or later) (64-bit) Windows® 8.1 Pro and Windows 8.1 Enterprise Editions with Update (KB2919355) (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Apple® OS X® 10.11 El Capitan Apple® OS X® 10.12 Sierra Apple® OS X® 10.13 High Sierra

Supported Web Browser Software for *Metasys* Site Management Portal Client Computers	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later
	
	ⓘ **Notes:**
	
	• In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly.
	
	• *Metasys* Advanced Reporting System and Energy Essentials support Internet Explorer 11 on all computer platforms except on Windows 10. On Windows 10 computers, both Internet Explorer 11 and Microsoft® Edge® version 44 or later.
	Apple® Safari® 11 or later
	
	ⓘ **Notes:**
	
	  • In OS X, you cannot view Graphics+ graphics in the Site Management Portal UI.
	
	  • 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 Site Management Portal (SMP) UI.

Table 4: Extended Application and Data Server System Requirements (Unified ADX Systems, 10 or 25 Users)

Supported Web Browser Software for *Metasys* UI Client Devices	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later
	
	ⓘ **Notes:**
	    • The *Metasys* UI does not support Internet Explorer 11 on Windows 10 operating systems.
	    • In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly.
	    • *Metasys* UI does not support InPrivate Browsing. To exit InPrivate Browsing, close the browser window and open a new browser window.
	
	Microsoft® Edge® version 44 or later
	
	Google® Chrome™ version 72.0.3626.121 or later
	
	ⓘ **Note:** *Metasys* UI does not support incognito mode. To exit incognito mode, click or tap the **X** icon of the browser window or tab and then open a new browser window or tab. For more information on incognito mode in Google Chrome, click here.
	
	Apple® Safari® 11 or later
	
	ⓘ **Note:** *Metasys* UI does not support private browsing. To exit private browsing, click or tap **Private** in the browser window. Other web browsers, such as Mozilla® Firefox®, are not officially supported by the UI. However, the *Metasys* UI may appear and function appropriately in these web browsers.

Supported Virtual Environments	Microsoft Hyper-V™ VMware®
Supported User Interfaces	Site Management Portal (SMP) *Metasys* UI
Additional Software Included with the ADX Software Download	Microsoft SQL Server 2014 Standard SP2 and SP3 Microsoft .NET Framework Version 4.6.1 Launcher Software *Metasys* Database Manager software *Metasys* Advanced Reporting System software ⓘ **Note:** The *Metasys* Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.
Optional Hardware	Any network or local printer supported by the qualified Windows operating system

Table 4: Extended Application and Data Server System Requirements (Unified ADX Systems, 10 or 25 Users)

Optional Software	Energy Essentials[5]
	Graphic Generation Tool
	CCT Software
	SCT Software
	Metasys Export Utility

1   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 Technical Bulletin (LIT-12011279)* for more information regarding computer/ server recommendations.
2   For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write-caching enabled.
3   For best performance, use the maximum amount of memory. An ADX with 32 GB RAM has much greater performance than an ADX with only 16 GB RAM.
4   Refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)* for specific Microsoft Windows operating system settings that may be required for your *Metasys* system configuration.
5   SQL Server 2017 and SQL Server 2016 are not compatible with Energy Essentials. If the customer plans to install Energy Essentials, use SQL Server 2012 or SQL Server 2014.

For SQL Server software, you must purchase SQL Server software licenses per the guidelines listed here: SQL Server 2017, SQL Server 2016, SQL Server 2014, and SQL Server 2012.

Extended Application and Data Server System Requirements (Unified 50 or 100 User ADX)

Table 5: Extended Application and Data Server System Requirements (Unified ADX Systems, 50 or 100 Users)

Recommended Server Platform[1]	**Two processors:** 2.4 GHz Intel Xeon® Dual Processors with a minimum of 8 cores each or better
	6 x 300 GB 15,000 RPM 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.
	RAID Controller-PERC H710 with 1 GB Cache
	ⓘ **Note:** 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.
Required Minimum Memory[3]	32 GB RAM

Table 5: Extended Application and Data Server System Requirements (Unified ADX Systems, 50 or 100 Users)

Supported Operating Systems[4] and Database Software	Windows® Server® 2016 with Update (KB4489890) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 R2 with Update (KB2919355) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 with Update (KB3172614) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.

Table 5: Extended Application and Data Server System Requirements (Unified ADX Systems, 50 or 100 Users)

Supported Operating Systems for *Metasys* Site Management Portal Client Computer	Windows® 10 Pro and Windows 10 Enterprise Editions (version 1809 or later) (64-bit)
	Windows® 8.1 Pro and Windows 8.1 Enterprise Editions with Update (KB2919355) (64-bit)
	Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit)
	Apple® OS X® 10.11 El Capitan
	Apple® OS X® 10.12 Sierra
	Apple® OS X® 10.13 High Sierra
Supported Web Browser Software for *Metasys* Site Management Portal Client Computers	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later
	ⓘ **Notes:**
	• In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly.
	• *Metasys* Advanced Reporting System and Energy Essentials support Internet Explorer 11 on all computer platforms except on Windows 10. On Windows 10 computers, both Internet Explorer 11 and Microsoft® Edge® version 44 or later.
	Apple® Safari® 11 or later
	ⓘ **Notes:**
	• In OS X, you cannot view Graphics+ graphics in the Site Management Portal UI.
	• 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 Site Management Portal (SMP) UI.

Table 5: Extended Application and Data Server System Requirements (Unified ADX Systems, 50 or 100 Users)

Supported Web Browser Software for *Metasys* UI Client Devices	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later ⓘ **Notes:** • The *Metasys* UI does not support Internet Explorer 11 on Windows 10 operating systems. • In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly. • *Metasys* UI does not support InPrivate Browsing. To exit InPrivate Browsing, close the browser window and open a new browser window. Microsoft® Edge® version 44 or later Google® Chrome™ version 72.0.3626.121 or later ⓘ **Note:** *Metasys* UI does not support incognito mode. To exit incognito mode, click or tap the **X** icon of the browser window or tab and then open a new browser window or tab. For more information on incognito mode in Google Chrome, click here. Apple® Safari® 11 or later ⓘ **Note:** *Metasys* UI does not support private browsing. To exit private browsing, click or tap **Private** in the browser window. Other web browsers, such as Mozilla® Firefox®, are not officially supported by the UI. However, the *Metasys* UI may appear and function appropriately in these web browsers.
Supported Virtual Environments	Microsoft Hyper-V™ VMware®
Supported User Interfaces	Site Management Portal (SMP) *Metasys* UI
Additional Software Included with the ADX Software Download	Microsoft SQL Server 2014 Standard SP2 and SP3 Microsoft .NET Framework Version 4.6.1 Launcher Software *Metasys* Database Manager software *Metasys* Advanced Reporting System software ⓘ **Note:** The *Metasys* Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.

Table 5: Extended Application and Data Server System Requirements (Unified ADX Systems, 50 or 100 Users)

Optional Hardware	Any network or local printer supported by the qualified Windows operating system
Optional Software	Energy Essentials[5] Graphic Generation Tool CCT Software SCT Software *Metasys* Export Utility

1   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 Technical Bulletin (LIT-12011279)* for more information regarding computer/ server recommendations.
2   For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write caching enabled.
3   For best performance, use the maximum amount of memory. An ADX with 64 GB RAM has much greater performance than an ADX with only 32 GB RAM.
4   Refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)* for specific Microsoft Windows operating system settings that may be required for your *Metasys* system configuration.
5   SQL Server 2017 and SQL Server 2016 are not compatible with Energy Essentials. If the customer plans to install Energy Essentials, use SQL Server 2012 or SQL Server 2014.

For SQL Server software, you must purchase SQL Server software licenses per the guidelines listed here: SQL Server 2017, SQL Server 2016, SQL Server 2014, and SQL Server 2012.

Extended Application and Data Server System Requirements (Split 10 or 25 User ADX)

Table 6: Extended Application and Data Server System Requirements (Split ADX Systems, 10 or 25 Users)

Recommended Server Platform[1]	**Web/Application Server** 2.4 GHz Intel Xeon® 6 core single processor or better. 2 x 600 GB hard disk (RAID 1)[2] with 40 GB free space after installation of all prerequisite software[3] and before installation of ADS software. Configure RAID 1 (mirroring) with disk write-caching turned on. ⓘ **Notes:** • *Metasys* Advanced Reporting System and Energy Essentials must reside on the ADX web/application server. • *Metasys* UI must reside on the ADX web/application server.
	Database Server 2.4 GHz Intel Xeon® 6 core single processor or better. 2 x 600 GB hard disk (RAID 1) with 40 GB free space after installation of all prerequisite software[3] and before installation of ADS software. Configure RAID 1 (mirroring) with disk write-caching turned on.
	SCT Computer In a split configuration, you cannot install SCT on either the ADX web/application server computer or the ADX database server computer. Refer to the *System Configuration Tool Catalog Page (LIT-1900198)* for current SCT computer requirements.
Required Minimum Memory[4]	16 GB RAM (web/application server and database server for 10 or 25 user ADX)

Table 6: Extended Application and Data Server System Requirements (Split ADX Systems, 10 or 25 Users)

Supported Operating Systems[5,6] with Supported Database Software	Windows® Server® 2016 with Update (KB4489890) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 R2 with Update (KB2919355) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 with Update (KB3172614) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.

Table 6: Extended Application and Data Server System Requirements (Split ADX Systems, 10 or 25 Users)

Supported Operating Systems for *Metasys* Site Management Portal Client Computer	Windows® 10 Pro and Windows 10 Enterprise Editions (version 1809 or later) (64-bit) Windows® 8.1 Pro and Windows 8.1 Enterprise Editions with Update (KB2919355) (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Apple® OS X® 10.13 High Sierra Apple® OS X® 10.12 Sierra Apple® OS X® 10.11 El Capitan

Supported Web Browser Software for *Metasys* Site Management Portal Client Computers	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later
	
	ⓘ **Notes:**
	
	• In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly.
	
	• *Metasys* Advanced Reporting System and Energy Essentials support Internet Explorer 11 on all computer platforms except on Windows 10. On Windows 10 computers, both Internet Explorer 11 and Microsoft® Edge® version 44 or later.
	
	Apple® Safari® 11 or later
	
	ⓘ **Notes:**
	
	    • In OS X, you cannot view Graphics+ graphics in the Site Management Portal UI.
	
	    • 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 Site Management Portal (SMP) UI.

Table 6: Extended Application and Data Server System Requirements (Split ADX Systems, 10 or 25 Users)

Supported Web Browser Software for *Metasys* UI Client Devices	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later ⓘ **Notes:** - The *Metasys* UI does not support Internet Explorer 11 on Windows 10 operating systems. - In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly. *Metasys* UI does not support InPrivate Browsing. To exit InPrivate Browsing, close the browser window and open a new browser window. Microsoft® Edge® version 44 or later Google® Chrome™ version 72.0.3626.121 or later ⓘ **Note:** *Metasys* UI does not support incognito mode. To exit incognito mode, click or tap the **X** icon of the browser window or tab and then open a new browser window or tab. For more information on incognito mode in Google Chrome, click here. Apple® Safari® 11 or later ⓘ **Note:** *Metasys* UI does not support private browsing. To exit private browsing, click or tap **Private** in the browser window. Other web browsers, such as Mozilla® Firefox®, are not officially supported by the UI. However, the *Metasys* UI may appear and function appropriately in these web browsers.
Supported Virtual Environments	Microsoft Hyper-V™ VMware®
Supported User Interfaces	Site Management Portal (SMP) *Metasys* UI
Additional Software Included with the ADX Software Download	Microsoft SQL Server 2014 Standard SP2 and SP3 Microsoft .NET Framework Version 4.6.1 Launcher Software *Metasys* Database Manager software *Metasys* Advanced Reporting System software ⓘ **Note:** The *Metasys* Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.
Optional Hardware	Any network or local printer supported by the qualified Windows operating system

Table 6: Extended Application and Data Server System Requirements (Split ADX Systems, 10 or 25 Users)

Optional Software	Energy Essentials[7]
	Graphic Generation Tool
	CCT Software
	SCT Software
	Metasys Export Utility

1   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 Technical Bulletin (LIT-12011279)* for more information regarding computer/ server recommendations.
2   For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write caching enabled.
3   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.
4   For best performance, use the maximum amount of memory. An ADX with 32 GB RAM has much greater performance than an ADX with only 16 GB RAM.
5   The web/application and database servers must have the same operating system installed.
6   Refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)* for specific Microsoft Windows operating system settings that may be required for your *Metasys* system configuration.
7   SQL Server 2017 and SQL Server 2016 are not compatible with Energy Essentials. If the customer plans to install Energy Essentials, use SQL Server 2012 or SQL Server 2014.

For SQL Server software, you must purchase SQL Server software licenses per the guidelines listed here: SQL Server 2017, SQL Server 2016, SQL Server 2014, and SQL Server 2012.

Extended Application and Data Server System Requirements (Split 50 or 100 User ADX)

Table 7: Extended Application and Data Server System Requirements (Split ADX System, 50 or 100 Users)

Recommended Server Platform[1]	**Web/Application Server**
	
	Two processors: 2.4 GHz Intel Xeon® Dual Processors with a minimum of 8 cores each or better
	
	6 x 300 GB 15,000 RPM hard disk (RAID 5)[2] with 50 GB free space after installation of all prerequisite software[3] and before installation of ADS software. Configure RAID 5 with disk write-caching turned on.
	
	RAID Controller-PERC H710 with 1 GB cache
	
	ⓘ **Notes:**
	  • *Metasys* Advanced Reporting System and Energy Essentials must reside on the ADX web/application server.
	  • *Metasys* UI must reside on the ADX web/application server.

	Database Server **Two processors**: 2.4 GHz Intel Xeon® Dual Processors with a minimum of 8 cores each or better 6 x 300 GB 15,000 RPM hard disk (RAID 5) with 50 GB free space after installation of all prerequisite software[3] and before installation of ADS software. Configure RAID 5 with disk write-caching turned on. RAID Controller-PERC H710 with 512 NV Cache
	SCT Computer In a split configuration, you cannot install SCT on either the ADX web/application server computer or the ADX database server computer. Refer to the *System Configuration Tool Catalog Page (LIT-1900198)* for current SCT computer requirements.
Required Minimum Memory[4]	32 GB RAM

Table 7: Extended Application and Data Server System Requirements (Split ADX System, 50 or 100 Users)

Supported Operating Systems and Database Software[5,6]	Windows® Server® 2016 with Update (KB4489890) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 R2 with Update (KB2919355) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.
	Windows® Server® 2012 with Update (KB3172614) (64-bit) Supports: • SQL Server® 2017 (64-bit) • SQL Server® 2016 with SP2 (64-bit) • SQL Server® 2014 with SP3 (64-bit) • SQL Server® 2012 with SP4 (64-bit) ⓘ **Note:** SQL Server 2012 with SP3 is not an automatic Windows update. For more information, refer to https://support.microsoft.com/en-us/help/3072779/sql-server-2012-service-pack-3-release-information.

Table 7: Extended Application and Data Server System Requirements (Split ADX System, 50 or 100 Users)

Supported Operating Systems for *Metasys* Site Management Portal Client Computer	Windows® 10 Pro and Windows 10 Enterprise Editions (version 1809 or later) (64-bit) Windows® 8.1 Pro and Windows 8.1 Enterprise Editions with Update (KB2919355) (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Apple® OS X® 10.13 High Sierra Apple® OS X® 10.12 Sierra Apple® OS X® 10.11 El Capitan

Supported Web Browser Software for *Metasys* Site Management Portal Client Computers	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later
	
	ⓘ **Notes:**
	
	• In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly.
	
	• *Metasys* Advanced Reporting System and Energy Essentials support Internet Explorer 11 on all computer platforms except on Windows 10. On Windows 10 computers, both Internet Explorer 11 and Microsoft® Edge® version 44 or later.
	
	Apple® Safari® 11 or later
	
	ⓘ **Notes:**
	
	    • In OS X, you cannot view Graphics+ graphics in the Site Management Portal UI.
	
	    • 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 Site Management Portal (SMP) UI.

Table 7: Extended Application and Data Server System Requirements (Split ADX System, 50 or 100 Users)

Supported Web Browser Software for *Metasys* UI Client Devices	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later
	ⓘ **Notes:**
	• The *Metasys* UI does not support Internet Explorer 11 on Windows 10 operating systems.
	• In Internet Explorer 11, select the **Use Microsoft compatibility lists** option, found under **Tools > Compatibility View Settings**, to ensure that websites appear and function correctly.
	• *Metasys* UI does not support InPrivate Browsing. To exit InPrivate Browsing, close the browser window and open a new browser window.
	Microsoft® Edge® version 44 or later
	Google® Chrome™ version 72.0.3626.121 or later
	ⓘ **Note:** *Metasys* UI does not support incognito mode. To exit incognito mode, click or tap the **X** icon of the browser window or tab and then open a new browser window or tab. For more information on incognito mode in Google Chrome, click here.
	Apple® Safari® 11 or later
	ⓘ **Note:** *Metasys* UI does not support private browsing. To exit private browsing, click or tap **Private** in the browser window. Other web browsers, such as Mozilla® Firefox®, are not officially supported by the UI. However, the *Metasys* UI may appear and function appropriately in these web browsers.
Supported Virtual Environments	Microsoft Hyper-V™
	VMware®
Supported User Interfaces	Site Management Portal (SMP)
	Metasys UI
Additional Software Included with the ADX Software Download	Microsoft SQL Server 2014 Standard SP2 and SP3
	Microsoft .NET Framework Version 4.6.1
	Launcher Software
	Metasys Database Manager software
	Metasys Advanced Reporting System software
	ⓘ **Note:** The *Metasys* Advanced Reporting System requires an ADX. The SCT computer must be online and accessible to the ADX at all times.

Table 7: Extended Application and Data Server System Requirements (Split ADX System, 50 or 100 Users)

Optional Hardware	Any network or local printer supported by the qualified Windows operating system
Optional Software	Energy Essentials[7] Graphic Generation Tool CCT Software SCT Software *Metasys* Export Utility

1   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 Technical Bulletin (LIT-12011279)* for more information regarding computer/ server recommendations.
2   For best performance, use SAS hard drives (not SATA hard drives) that use RAID controllers with write caching enabled.
3   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.
4   For best performance, use the maximum amount of memory. An ADX with 64 GB RAM has much greater performance than an ADX with only 32 GB RAM.
5   The web/application and database servers must have the same operating system installed.
6   Refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)* for specific Microsoft Windows operating system settings that may be required for your *Metasys* system configuration.
7   SQL Server 2017 and SQL Server 2016 are not compatible with Energy Essentials. If the customer plans to install Energy Essentials, use SQL Server 2012 or SQL Server 2014.

For SQL Server software, you must purchase SQL Server software licenses per the guidelines listed here: SQL Server 2017, SQL Server 2016, SQL Server 2014, and SQL Server 2012.

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Software terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable terms set forth at www.johnsoncontrols.com/techterms. Your use of this product constitutes an agreement to such terms.

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