

What's New for *Metasys*® Release 8.1

Code No. LIT-12012401
Software Release 8.1
January 2017

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Introduction

This document lists the *Metasys*® system features and enhancements introduced at Release 8.1 and the *Metasys* User Interface enhancements at Release 2.1. For more information, refer to the *Metasys* system technical documentation and software Help systems.

Features and Benefits

Metasys User Interface

Metasys® Release 8.1 includes Release 2.1 of the *Metasys* user interface, the device-friendly UI that runs on smartphones, tablets, and computers without the need to install any additional software. *Metasys* UI helps customers be even more productive with the industry's easiest-to-use interfaces that is completely optimized for mobility. The following tables outline enhancements to *Metasys* UI at Release 2.1.

Table 1: *Metasys* UI Release 2.1 - New Graphics Package

Feature	Description	Benefit
New Graphics Package	The new Graphics Package enables <i>Metasys</i> UI graphic designers to efficiently create dashboards for operators who prefer graphical representations of equipment, equipment status, building layout, and command interfaces.	Provides <i>Metasys</i> operators with easy system navigation, and the ability to view status and to take action—from any device.
Graphics Manager in <i>Metasys</i> UI and <i>Metasys</i> UI Offline	The Graphics Manager is a single entry point to the Graphics Editor for working on graphics, including assigning graphics associations (to a space, equipment, or Equipment Definition [Aliased graphic]).	Enables <i>Metasys</i> UI designers to efficiently create graphical dashboards within the interface, with immediate validation, without requiring any additional software.
New Templates and Symbols Library	The <i>Metasys</i> UI includes a full library of symbols and templates that provide photo-realistic images of equipment, systems, and floor plans.	Provide a great starting point for users who do not have the time or expertise to create graphics from scratch. Graphic designers can easily use a template that closely matches the customer's equipment. The new graphics work seamlessly with the equipment and space framework that was introduced with the initial release of <i>Metasys</i> UI, preserving current investments.
Graphics Creation Productivity Features	Specific features include auto-binding, single-source master layer editing, and symbol show and hide based on equipment configuration.	Enable <i>Metasys</i> UI designers to easily and efficiently create and manage graphics that result in a consistent experience for the operator.

Table 2: *Metasys* UI Release 2.1 - General Enhancements

Feature	Description	Benefit
Annotation when Commanding	Operators can add comments when commanding equipment. They can view these comments in the Equipment Activity widget.	Provides a useful record of why the system adjustment or change was made for the benefit of <i>Metasys</i> operators.
Trend and Custom Trend Viewer Update	An enhanced date picker enables the selection from predefined time range options (last day, last 7 days, last 30 days, last 12 months) or a custom date range.	Creates an easy and straightforward method of viewing trend data for various date ranges.
Custom Trend Viewer Update	On computer client platforms, up to 10 points can be displayed on the Custom Trend Viewer.	Assists <i>Metasys</i> operators with troubleshooting and comparing historical data from various building systems.

Table 2: Metasys UI Release 2.1 - General Enhancements

Feature	Description	Benefit
Exporting Equipment Data	On personal computer platforms, <i>Metasys</i> operators can export PDFs of the data displayed in the Equipment Data widget and the Equipment Summary widget.	Provides <i>Metasys</i> operators with a quick and simple method for printing out useful reports about the current state of equipment.
Alarm Details Update	The Alarm Manager and Alarm Panel (available on phones only) display the analog alarm limits in the details of the alarm.	Helps <i>Metasys</i> operators better understand the context of a point in alarm by also seeing its acceptable range of value.
Session Inactivity and Never Terminate Settings	These settings determine if and when the operator is automatically logged out of the <i>Metasys</i> UI.	Provides <i>Metasys</i> system administrators with more flexibility in configuring the behavior of user logouts.
Alphabetical Schedule Listing	Schedules are now listed in alphabetical order in the Schedule widget.	Helps <i>Metasys</i> operators find specific schedules quickly.
Updated Browser Support	<i>Metasys</i> UI and <i>Metasys</i> UI Offline now support Google® Chrome™ version 49 or higher.	Keeps <i>Metasys</i> UI current with the latest in web browser technology.

Configuration and Programming Productivity Enhancements

The new configuration and commissioning features for the *Metasys* Site Management Portal (SMP) and System Configuration Tool (SCT) dramatically improve the efficiency with which users can create underlying system-wide logic and commission Network Engines and Field Equipment Controllers. These features also reduce the amount of time required to configure the *Metasys* UI. The following table outlines enhancements to the SMP UI.

Table 3: SMP Enhancements

Feature	Description	Benefit
Encrypted and Trusted Communication	Web communication between the <i>Metasys</i> server and network engines is now encrypted. Communication between a client and the <i>Metasys</i> SMP or <i>Metasys</i> UI is trusted.	Ensures the <i>Metasys</i> system is secure from threats and intrusions.
Launcher 1.6	The newest version of Launcher supports secure http (https) with the addition of a security protocol check box under the Options screen that forces connections to be https only. Also, Launcher now notifies <i>Metasys</i> operators if a newer version is available and provides a website link to download the install file.	Improves the interaction between Launcher and the <i>Metasys</i> SMP.

The following table outlines enhancements to SCT.

Table 4: SCT Enhancements

Feature	Description	Benefit
Metasys UI Offline Auto-Installed	The new SCT installer includes the installation of the <i>Metasys</i> UI Offline software. Also, the installer adds the required software prerequisites, such as Internet Information Services (IIS), SQL Server® 2014 Express software (if no SQL Server present), and Microsoft® .NET Framework 4.6.1. System technicians start SCT installation with one click of the mouse.	Provides a much faster and more convenient method for installing SCT software.
Certificate Management	A new built-in certificate management option regulates trusted certificates for network engines from SCT. Note: Trusted certificates for the <i>Metasys</i> server are managed by the Windows® operating system.	Provides an easy and convenient method for <i>Metasys</i> system administrators to request and manage trusted certificates for network engines without the need of another tool.

Security Updates

This release includes updates to secure authentication to match the industry-standard best practices. *Metasys* 8.1 provides ease of mind by preventing unauthorized access with secure http (https) and security certificates for secure encrypted communication. These improvements apply to the Application and Data Server (ADS), Extended Application and Data Server (ADX), Open Data Server (ODS), and network engines. See the following table.

Table 5: Security Enhancements

Feature	Description	Benefit
Secure TLS 1.2 Connections	Encrypted communication using Transport Layer Security (TLS 1.2) eliminates all clear text communications between the: <ul style="list-style-type: none"> client SMP and ADS/ADX or ODS client SMP and network engines ADS/ADX or ODS and network engines 	Ensures greater system security by preventing unauthorized access to, and snooping on, the <i>Metasys</i> system network.
Clear Indication of Security Level	Three security shield icons indicate the secure level of the connection: green, orange, or red. These shield icons appear on the SMP login screen, the SCT Certificate Management screens, the UI screen, and ActionQ.	Indicates clearly to the operator what level of security is currently active: trusted, encrypted, or unencrypted/unknown/expired.

The following table outlines which *Metasys* applications communicate over http and which over https.

Table 6: Types of Communication for *Metasys* Applications

Applications Using HTTPS Communication	Applications Using HTTP Communication
<i>Metasys</i> Servers 8.1 (ADS/ADX/ADS-Lite/ODS)	Ready Access Portal
Network Engines 8.1	NAE/NIE Update Tool
Launcher 1.6	Advanced Graphics Application (AGA)

Table 6: Types of Communication for Metasys Applications

Applications Using HTTPS Communication	Applications Using HTTP Communication
Metasys UI 2.1	Graphic Generation Tool (GGT)
Site Management Portal 8.1	Controller Configuration Tool (CCT)
Metasys Advanced Reporting and Energy Essentials 8.1	Metasys System Secure Data Access DLL (MSSDA)
SCT 11.1	

BACnet® and Network Engine Enhancements

The latest release of the Metasys Open Data Server (ODS) is expanded to comply with the **BACnet Protocol Revision (PR) 12 BTL Listing**. This new capability improves interoperability between Metasys and third-party BACnet devices, resulting in an even more open offering, including regional compliance in Europe.

Table 7: BACnet Enhancements

Feature	Description	Benefit
ODS Compliant to BACnet PR 12	BACnet Protocol Revision 12 certification is now extended to the ODS product.	Meets owners requirements for an open and interoperable system.
ODS Supports New BACnet Objects	Support for three new BACnet objects is added: Integer Value, Positive Integer Value, and Character String Value. Nine additional mapper objects ¹ are added.	Increases the number of BACnet objects that can interface to the Metasys system.
Network Engines Compliant to AMEV-B	The Network Engine family has been expanded to support AMEV-B in Germany (MS-NCE2510, MS-NCE2560-0, and MS-NCE2566-0 only). AMEV profiles A and B present the recommended minimum feature set of BACnet devices regarding object types and services. These profiles are defined by the German study group of public and municipal administrations for machines and electrical facilities in buildings.	Satisfies the recommended minimum feature set of BACnet devices as dictated by the German study group of public and municipal administrations.
Enhanced Trend, Event Enrollment, Notification, and Loop Objects	Create and delete object support is added to the Notification, Event Enrollment, and Trend objects. Support for off-box references (object properties located outside the controller such as third-party devices) is added to the Trend and Event Enrollment objects. The BACnet Loop object is expanded to accept control parameter changes from a BACnet workstation.	Improves BACnet interoperability with third-party BACnet devices.

¹ Bit string value, date pattern value, date time pattern value, date time value, date value, large analog value, octet string value, time pattern value, and time value.

New and Revised Documentation

Metasys Release 8.1 and *Metasys* UI Release 2.1 includes numerous documentation updates.

Table 8: Primary List of Revised Documentation for *Metasys* Release 8.1

Document	Overview of Update
<i>Metasys</i> Server Installation and Upgrade Instructions Wizard (LIT-12012162)	Updated. Covers the steps for installing the new release of the ADS or ADX software, <i>Metasys</i> UI software, and some other <i>Metasys</i> applications. New steps for creating trusted server certificates is included.
<i>Metasys</i> Server Lite Installation and Upgrade Instructions Wizard (LIT-12012258)	Updated. Covers the steps for installing the new release of the ADS-Lite Europe or ADS-Lite Asia software, <i>Metasys</i> UI software, and some other <i>Metasys</i> applications. New steps for creating trusted server certificates is included.
<i>Metasys</i> SMP Help (LIT-1201793)	Updated for new <i>Metasys</i> features, enhancements, and capabilities of the SMP and SCT, including certificate management operations.
<i>Metasys</i> SCT Help (LIT-12011964)	
<i>Metasys</i> System Product Bulletin (LIT-1201526)	Updated for features of this release.
<i>Network Engines</i> Product Bulletin (LIT-12012138)	Updated with the features and benefits of all network engines.
<i>SCT</i> Installation and Upgrade Instructions (LIT-12012067)	Updated for the new SCT 11.1 software. No new operating systems or SQL Server software versions were added.
<i>Metasys</i> Database Manager Help (LIT-12011202)	Updated to include detail about the Rename Assistant.
<i>Metasys</i> System Product Bulletin (LIT-1201526)	Updated for new <i>Metasys</i> features, enhancements, and capabilities.
<i>ODS</i> Installation and Upgrade Instructions Wizard (LIT-12011945)	Updated for the new ODS software installation and upgrade. No new operating systems or SQL Server software versions were added.
<i>SQL Server</i> Installation and Upgrade Instructions (LIT-12012240)	Updated. No new SQL Server software versions or service packs were added.
<i>Security Administrator</i> Technical Bulletin (LIT-1201528)	Updated for any <i>Metasys</i> security changes.
<i>Database Tools</i> Commissioning Guide (LIT-12012254)	Updated. Describes how to use the <i>Metasys</i> Post Install (MPI) Database tool after installing the <i>Metasys</i> Server or ODS software if the installation notifies the <i>Metasys</i> installer that the database conversion failed. This document is intended for use by Johnson Controls® technical staff only.
<i>Network and IT Guidance for the IT Professional</i> Technical Bulletin (LIT-1201578)	Retired. All content has been transferred to <i>Network and IT Guidance Technical Bulletin (LIT-12011279)</i> .
<i>Network and IT Guidance for the BAS Professional</i> Technical Bulletin (LIT-12011279)	Renamed to <i>Network and IT Guidance Technical Bulletin (LIT-12011279)</i> , and updated for new <i>Metasys</i> security certificate information. Updated to contain all content from <i>Network and IT Guidance for the IT Professional Technical Bulletin (LIT-1201578)</i> .

Table 9: Revised Documentation for *Metasys* UI Release 2.1

Document	Overview of Update
<i>Metasys</i> UI Help (LIT-12011953)	Updated for new <i>Metasys</i> UI content.
<i>Metasys</i> UI Offline Help (LIT-12012116)	Updated for new <i>Metasys</i> UI Offline content.
<i>Metasys</i> UI Offline Mode Installation Instructions (LIT-12011952)	Retired. The <i>Metasys</i> UI Offline product is installed with SCT 11.1 installation.
<i>Metasys</i> UI Technical Bulletin (LIT-12012115)	Updated for new <i>Metasys</i> UI content.

Applications That Did Not Change

The following applications **did not** functionally change from Release 8.0 to 8.1:

- Advanced Graphics Application (AGA)
- Ready Access Portal
- *Metasys* Export Utility
- *Metasys* Advanced Reporting
- Energy Essentials
- Graphic Generation Tool (GGT)
- *Metasys* Database Manager



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