GE VERNOVA

DIGITAL

PROFICY CIMPLICITY HMI/SCADA

Important Product Information

GE VERNOVA

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Chapter 1. Important Product Information 2023

System Requirements and Compatibility

The following are the hardware and software requirements for CIMPLICITY.

Hardware Requirements

CIMPLICITY v2023 requires, at a minimum, the following hardware specifications. GE Digital recommends testing your particular system to determine if your performance needs require hardware beyond the base system recommendations.

Hardware	Requirements
Microprocessor	Intel Core 2 Duo 3.0 GHz
RAM	4 GB
Hard disk	40 GB
Ports	• USB port, if using a USB M4 or M5 license or a green key. • Serial port for some touch screens, pointing devices, and I/O drivers • Additional ports for I/O hardware
Monitor	• Color graphics monitor, SVGA or better • 24-bit graphics card capable of 800 x 600 resolution

Supported Operating Systems and Versions

CIMPLICITY v2023 runs on any of the following operating systems, provided that specified revisions and service packs are included.

- Microsoft Windows 11 (64-bit)

> **Note:**
> The command line utilities will work well only in the V22621 or 22H2 version of Windows 11.

- Microsoft Windows 10 (64-bit)
- Microsoft Windows Server 2022
- Microsoft Windows Server 2022 Cluster
- Microsoft Windows Server 2019
- Microsoft Windows Server 2019 Cluster
- Microsoft Windows 10 IoT Enterprise (LTSB) (Only full blown IoT version is supported. Not the core & mobile versions)

Supported External Software Versions

CIMPLICITY v2023 is compatible with the following external software.

External Software	Supported Version
Microsoft Office	2019
Microsoft SQL Server	2022 and 2019 **Note:** CIMPLICITY has been validated to work with Database configurations using SQL 2016 AlwaysOn with the exception of the Tracker Attribute Database (TADB) functionality.
SQL Express	2022 and 2019
Oracle	18c and 19c **Note:** Both the client and server should be running same version of Oracle.
Microsoft Visual Studio	2017
Flexera Software - Install Shield	2018
Dream Report	2023
Azure	NA

Supported GE Software Versions

CIMPLICITY v2023 is compatible with the following GE software.

GE Software	Supported Version	Install Before or After CIMPLICITY
Common Licensing	Latest version (20.00005)	With CIMPLICITY
Driver Server	Latest version	Either
Global Discovery Server	2.2	After
Historian (full version)	2023, 2022, 9.1, 9.0 and 8.1 Note: Logging array points to Historian is supported from version 7.0 onwards.	Either
IGS OPC Server	Latest version	Either
Plant Apps	2023 and 2022	Either
Proficy Driver Server (PDS) *	Latest version	After
Operations Hub	2023.1 and 2023	Either
Proficy Authentication	2023.1	Either
Configuration Hub	2023.1	Either
Webspace	6.2	Either

Starting CIMPLICITY 11.1, the Proficy Driver Server will not be installed with CIMPLICITY installation.

To install Proficy Driver Server, navigate to the CIMPLICITY Install Media located at **Setup\Proficy Driver Toolkit\setup.exe**. Before you install Proficy Driver Server, you must install .NET Framework 3.5 through your Windows options.

Note:

- If you are already using the Proficy Driver Server in your CIMPLICITY projects, it will continue to work as expected. Existing PDS is not uninstalled when you uninstall CIMPLICITY and upgrade to 11.1 or higher.
- The Driver Server protocol may be enabled in Project Properties even when Proficy Driver Server is not installed.

Compatibility Requirements

Note the following as they apply to your installation:

Element	Requirement
Network Communication I/O	Allen-Bradley Ethernet Driver Note the following: • RSLINX OEM 3.80.00 is required. • Rockwell requires a Factory Talk activation for RSLINX OEM. If RSLINX OEM is not activated, the Allen-Bradley Ethernet device communication interface will not run. Allen-Bradley Internet is supported on the following operating systems: ◦ Microsoft Windows 11 (64-bit) ◦ Microsoft Windows 10 (64-bit) ◦ Microsoft Windows Server 2022 ◦ Microsoft Windows Server 2022 Cluster ◦ Microsoft Windows Server 2019 ◦ Microsoft Windows Server 2019 Cluster ◦ Microsoft Windows 10 IoT Enterprise (LTSB) (Only full blown IoT version is supported. Not the core & mobile versions) **Note:** Depending on the OS, some RSLINX OEM features may not be supported. Refer to the RSLINX documentation for further information.

Element	Requirement
Genius PCI	If you are using Genius PCI communications you need: • One full height PCI slot for each port (up to four) • One Genius PCI card (IC660ELB931) **Note:** Genius PCI is only supported on 32-bit Windows 7 and Windows 10 systems.
Reflective Memory	If you are using reflective memory, the card requirements are: • PCPCIE-5565PIORC requires a low profile PCI Express Slot for each card • PCI-5565PIORC requires a 64-bit PCI slot for each card • PCIE-5565RC requires a PCI Express Slot. **Note:** You can install up to two reflective memory cards, but not all computers support two cards due to hardware or BIOS-specific limitations. The Reflective Memory driver is only supported on Windows 7 and is no longer packaged with CIMPLICITY. However, the package is available from Abaco, who is also the vendor for the reflective memory cards. You must install the following package: RFM2G Windows 7/XP/Vista/Server 2008/Server 2003/32/64-bit PCIE/PCI/PMC Driver for X86 R08.01.
DDE Communications	The DDE communications interface runs in the service session only. The DDE server must be able to run from the service session.
Browsers	The following browsers are supported for Webspace with CIMPLICITY and SCADA Web Configuration. • Google Chrome 92 or Greater • Microsoft Edge 92.x

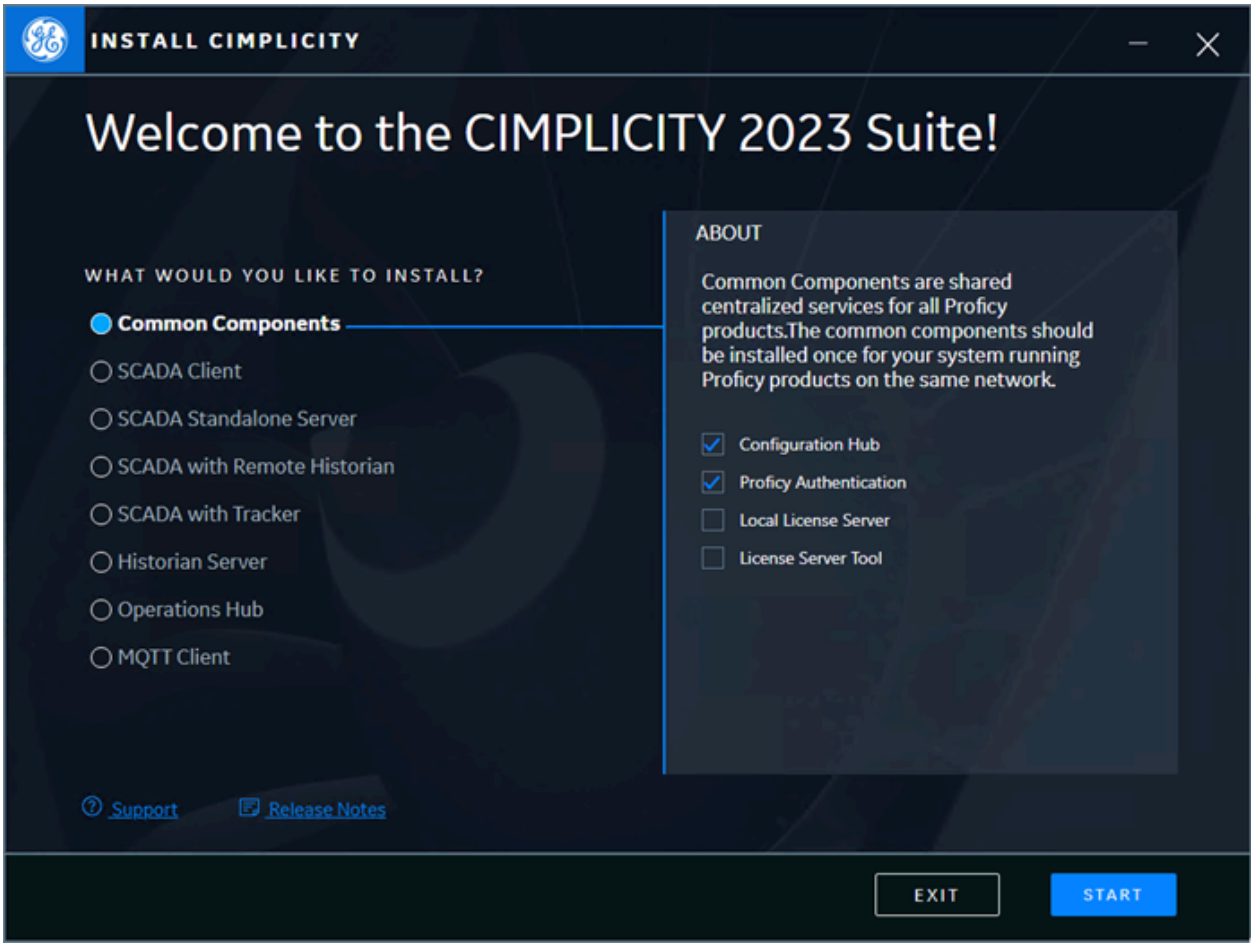
Element	Requirement
	• Firefox 90.x • Safari 14 or Greater **Note:** Ensure that you use the browsers supported by CIMPLICITY, as the support for TLSv1 and TLSv1.1 HTTPS protocols is deprecated. You must use TLS libraries for the rest calls that support TLS 1.2 or higher.

What's New in CIMPLICITY 2023

The HMI/SCADA CIMPLICITY v2023 release includes the following new features and enhancements.

Note:
The on-premise version of Help is current as of the release date of CIMPLICITY 2023, for the most up-to-date Important Product Information, refer to the Online version, https://www.ge.com/digital/documentation/cimplicity/version2023/oxy_ex-2/ipi/topics/c_cimplicity_whats_new.html.

Proficy Integrated Installer



What is it?

CIMPLICITY ships as a comprehensive ISO with an updated install interface that combines all the CIMPLICITY offerings along with the common Proficy portfolio products in one install package. This new installer front end provides out-of-the box installation combinations for different CIMPLICITY installations, from Viewer to Historian setups with the ability to install multiple products together.

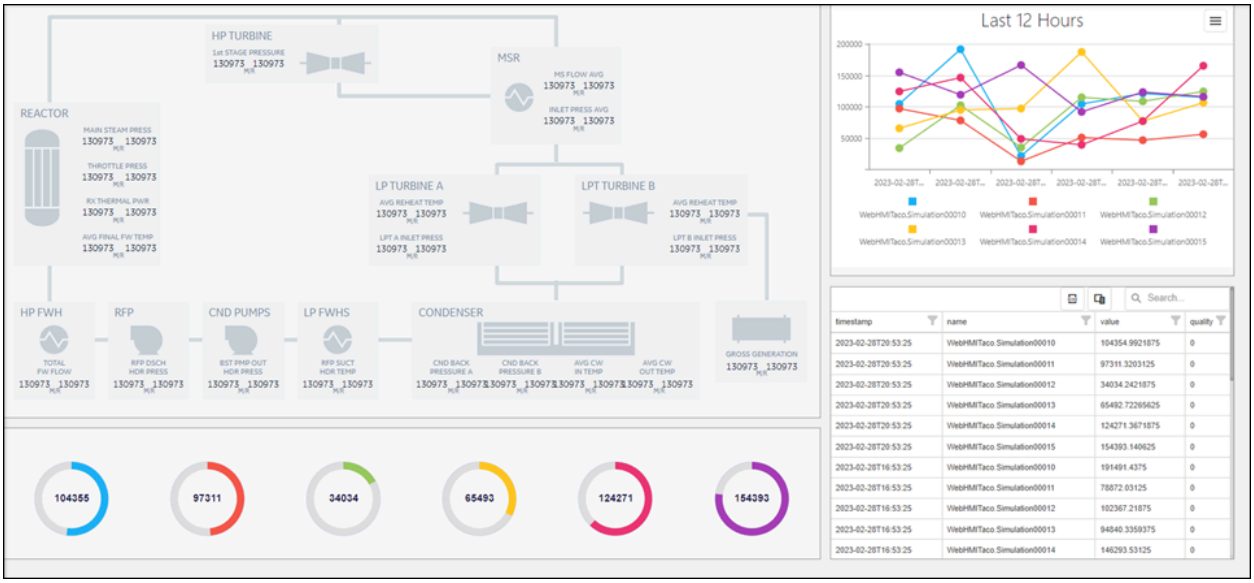
Why use it?

By consolidating the Proficy suite along with CIMPLICITY in this comprehensive ISO, you only need to download the installer once to get all the products you need to support your CIMPLICITY projects. The modern user interface for selecting combinations of products to install ensures all the details of installation order and coordination between the products for you. Additionally, all the Proficy common components for our next-generation SCADA/HMI experience including Configuration Hub, Proficy Authentication and Operations Hub are available.

Resources

Topic: CIMPLICITY Installation

Operations Hub HMI



What is it?

Operations Hub now ships on the CIMPLICITY installer and features a brand new designer within the Configuration Hub environment that allows you to build HMI screens with CIMPLICITY data using rich Web Graphics. New layouts allow you to build your screens as needed and a new SVG editor allows you to build or import custom graphics that can be animated.

Why use it?

Building HMI's in Operations Hub has many advantages over traditional HMI's including centralized management vs distributing screens to every Viewer, a thin client approach with rich HTML5/JS/CSS responsive web graphics, and the ability to bring data and alarms into your screens without scripting from multiple data sources including Historian, SQL, REST, SCADA etc.

Resources

Topic: About HMI Graphics.

Alarms

- **Custom Alarm Attributes**

What is it?

You can add up to 10 additional attributes of extra information to your CIMPLICITY point alarms to provide an enriched context and enhanced filtering experience for your alarm viewer, including set operations.

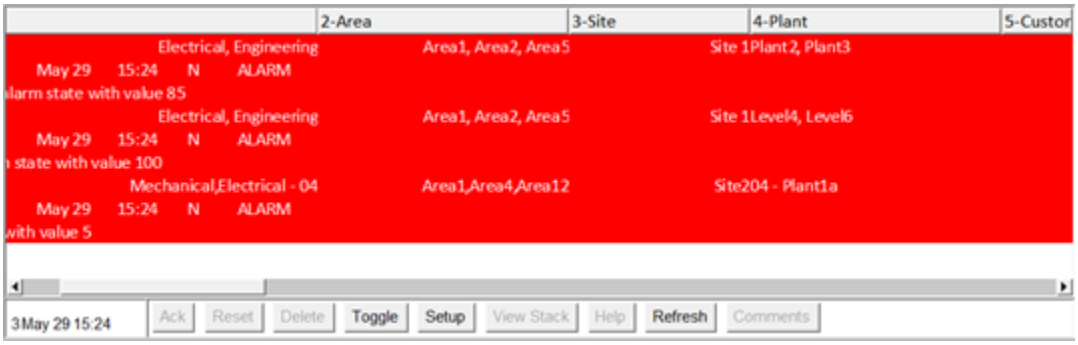
Why use it?

You can customize the information your operator can see when an alarm occurs, allowing them to make better decisions and address the root cause of the alarm more quickly and easily. Along with the new attributes, a powerful new filtering capability for the Alarm Setups is added. You can use comma-separated sets in your attributes and use “All in Set” and “Any in Set” filtering capabilities, allowing you to easily filter by different plant areas or lines.

Resources

Topics: Set Alarm Custom Attributes | Modify Alarm Viewer Setup Custom Attributes

- **Alarm Viewer: Right to Left Languages**



What is it?

A new check box **Enable right-to-left text** is added to the Field Properties in Alarm Viewer which

Why use it?

This enables you to display text in one of the Right-to-Left Languages and Scripts. It renders the right-to-left languages correctly and also right-aligns the text. This option is disabled by default.

Resources

Topic: Specify Field Properties

- **Alarm Viewer: Horizontal Scroll Bar**

What is it?

A horizontal scroll bar is added to the Runtime Alarm Viewer Application that enables you to scroll horizontally to view all the enabled fields of the Alarm Viewer without having to resize the window.

Why use it?

This feature enables you to show more alarm data per alarm even if it is longer than the width of the alarm viewer in your screen. It also enables the operator to scroll over as needed to see the extra details. This, along with the existing ability to place alarm fields on multiple lines allows you to set up your alarm notifications in the way that makes the most sense for your operations.

Note:
The horizontal scroll bar and the window are auto-resized based on the number of fields and the length of the fields. You can use both mouse and keyboard controls to move the scroll bar.

Resources

Topic: CIMPLICITY AMV Control Overview

- **Alarm Message Length**

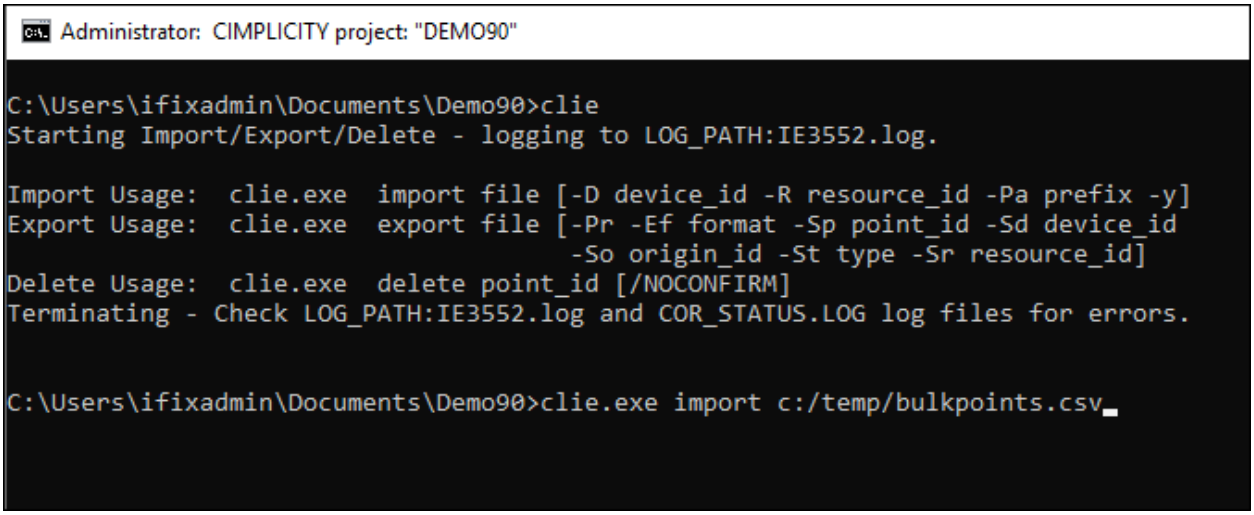
  What is it?

  The maximum alarm message length has been increased to 512 characters.

  Why use it?

  This enables you to enter more descriptive alarm messages.

Import/Delete Configuration Performance Improvements



What is it?

There are several improvements made for Import/Delete functionality.

- Performance of importing points in dynamic mode is optimized with batching between processes. You can configure the batch sizes using the CLIE_DYNCFG_BATCH_SIZE global parameter.
- Logging has been enhanced to provide information on the start and end of each stage, including timing details.
- Delete has been optimized for filtered deletes along with more detailed feedback.

Why use it?

The CIMPLICITY utility "clie.exe" has been enhanced to provide better performance. This improvement allows you to work more efficiently and quickly with a larger number of CIMPLICITY points in bulk.

Resources

Topics: Dynamic Mode Imports | Wildcard characters specified for Delete | Configuration Data Delete | Import/Export log files

Proficy Authentication

What is it?

Proficy Authentication (UAA) provides identity-based security for Proficy-based applications and APIs. It supports open standards for authentication and authorization, including Oauth2.

Why use it?

Proficy Authentication support can be layered into your existing CIMPLICITY projects while still fully supporting its existing native authentication and authorization capabilities. CIMPLICITY integrates its Roles and Resources into a new identity called "Security Groups" which then synchronize with Proficy Authentication Groups to provide appropriate permissions to users.

CIMPLICITY 2023 integrates with Proficy Authentication allowing you to configure your users and groups in one place. It can be used across the entire Proficy Product Suite. It provides the ability to connect to your existing Authentication systems (LDAP and SAML) easily and securely. Connecting using SAML

identity providers opens the possibility of adding Multi-factor Authentication (MFA) support to your CIMPLICITY application.

Note:
If you are going to use the previous version of CIMPLICITY Viewer to connect to the CIMPLICITY 2023 server, you must set the ONLY_ACCEPT_ENCRYPTED_PWD global parameter to N until you upgrade your Viewer.

Resources

Topics: Proficy Authentication | Security Groups

Configuration Hub Support

What is it?

Configuration Hub is a web-based configuration tool used by all Proficy products. In this release, CIMPLICITY has moved its OPC UA browse and create capability to be part of the Configuration Hub interface. Configuration Hub is included in the Integrated installer ISO along with Proficy Authentication.

Note:
Proficy Authentication is required to use the Configuration Hub.

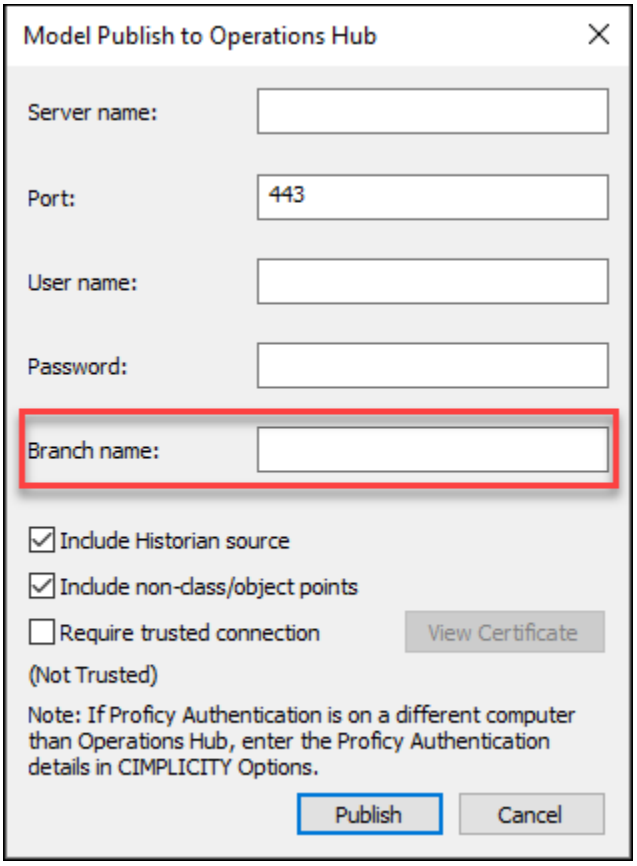
Why use it?

Configuration Hub will become the primary configuration utility for CIMPLICITY in the future. New powerful centralized management features like Proficy Authentication configuration, Software Deployment, License and Certificate Management, and more will be added here. Eventually, all CIMPLICITY project configuration will happen through this interface. Additionally, configuration of Proficy Authentication, MQTT, Webspace widgets for Operations Hub, Operations Hub applications and many more capabilities are managed in Configuration Hub.

Resources

Topic: CIMPLCITY Plug-in

Model Publish to Branch



What is it?

When publishing a CIMPLICITY Model to Operations Hub, you now have the option to publish it to a specific branch of the model instead of replacing or merging it with the Root node.

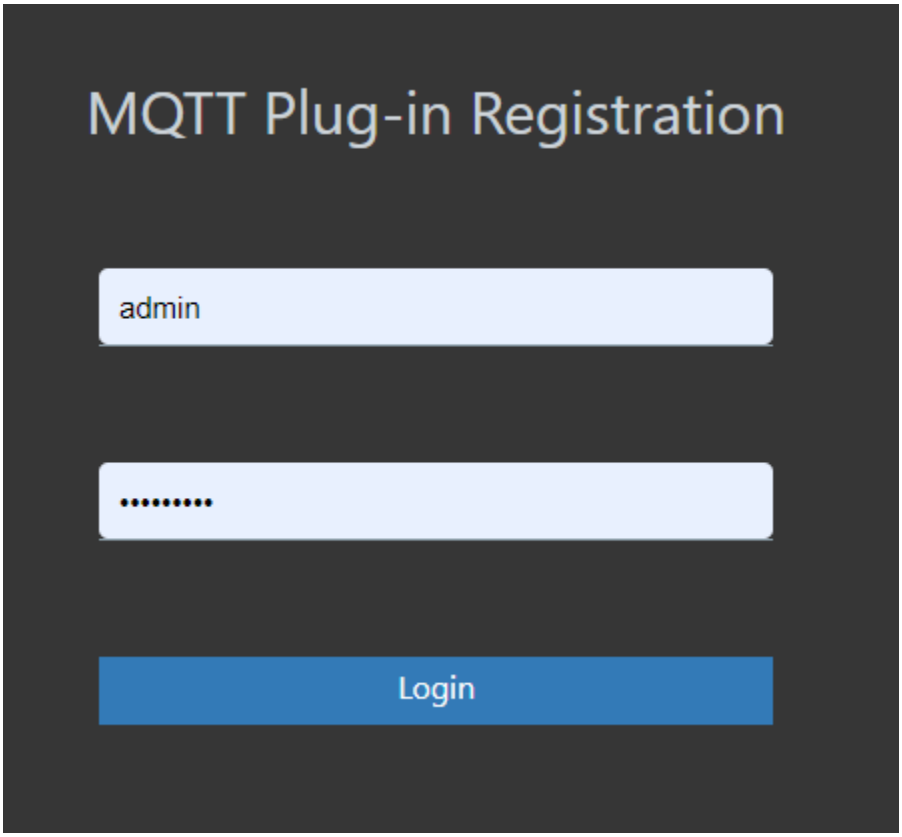
Why use it?

Publishing to a branch provides the opportunity to represent multiple CIMPLICITY Projects within the same namespace in Operations Hub. This enables the creation of Operations Hub applications that look across your plant or organization in context.

Resources

Topic: Publish Model to Operations Hub from CIMPLICITY

MQTT Client and OPC UA Connection



What is it?

MQTT (Message Queuing Telemetry Transport) is a lightweight, low-bandwidth, low-overhead open messaging protocol that leverages publish and subscribe communications. The Proficy Portfolio and the Integrated installer now include an MQTT client with the ability to connect to multiple MQTT brokers and expose data using the OPC UA namespace and Server connection.

Why use it?

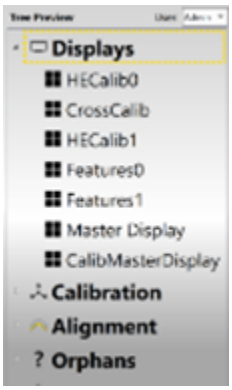
MQTT provides secure, fast, efficient, and reliable message delivery of any type of data payload. MQTT is ideal for low-power devices and normalizes communications from OT to IT, IT to the cloud, and OT to the cloud. By exposing the MQTT client as an OPC UA server, all Proficy products can connect to and use this data using their OPC UA client communications.

Resources

Topics: MQTT Client | Select and Browse Tags from an MQTT Device

CimView/CimEdit

- **Enhanced Navigation Tree**



What is it?

The navigation tree is built into CimView with the following capabilities:

  - Expand and collapse tree nodes.
  - Programmatically open and close the tree as an overlay at any specified location on your screen.

Why use it?

The Navigation Tree view in CIMPLICITY allows you to structure your project's navigation of CimView screens in a flexible and hierarchical way. The new enhancements make it easier to represent larger sets of screens in a more readable way and to show them on demand and save space.

Resources

Topics: GefScreen.NavBarFloatingTreeViewVisible | GefScreen.NavBarSetFloatingTreeViewLocation

- **Screen Signing**

What is it?

You can protect your CimView screens and associated files from being tampered in a production environment. A new tool allows you to securely sign your final screens, scripts, and libraries and configure CimView to only open signed, untampered files.

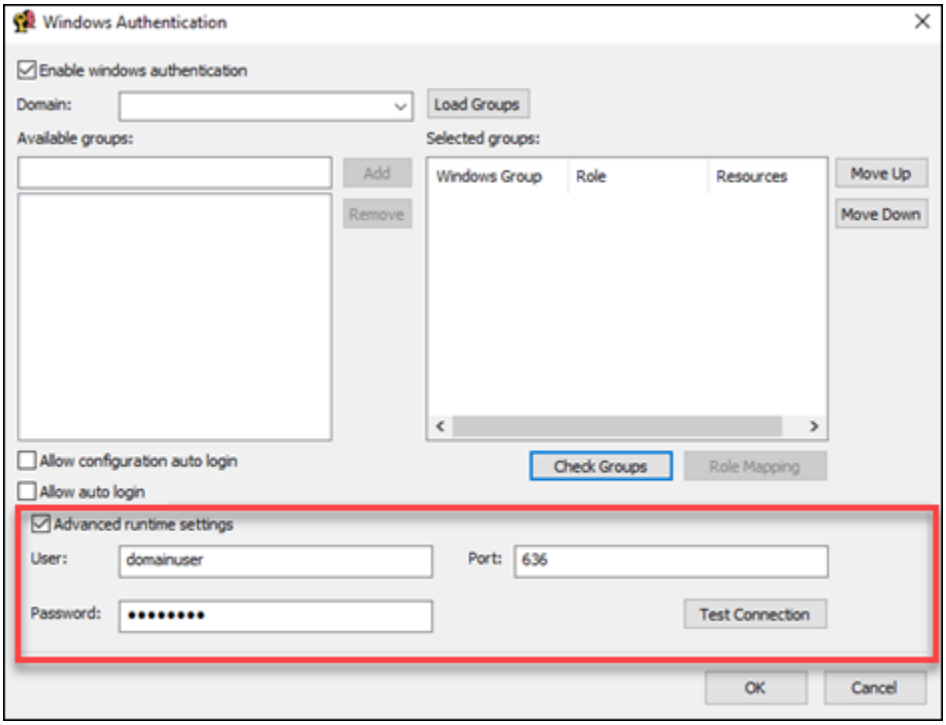
Why use it?

If you have concerns about your production system being tampered post-deployment and/or have industry and regulatory security requirements, this feature offers a secure way to lock them down and prevent unauthorized users from interfering with your running systems with malicious scripts and code.

Resources

Topic: About Screen Security

Advanced Domain Controller Connection Support



What is it?

CIMPLICITY's native support for Windows authentication now supports using Domain credentials for cross-domain and forest support.

Why use it?

This provides the ability to specify a domain's administrator credentials, allowing CIMPLICITY to easily connect to and use domains from other forests or domains that are different than the domain your CIMPLICITY project may be running on, allowing you to integrate domain controllers across IT and OT domains.

Resources

Topic: Enable Automatic Log Ins

Advanced Viewer OPC UA Support

```
<?xml version="1.0" encoding="UTF-8"?>
<config>
        <uaprojects>
        </uaprojects>

        <projects>
        </projects>
```

What is it?

The CIMPLICITY Advanced Viewer is added OPC UA client data capabilities, allowing you to directly interact with variable values that it collects from OPC UA Servers in CimView screens and the Point Control Panel without a running CIMPLICITY project.

Why use it?

The CIMPLICITY advanced viewer provides an easy way to directly bring OPC UA Server data into a CimView screen without configuring drivers and points using direct or aliased addressing. OPC UA support provides the ability to protect the data connection to your HMI with security encryption policies and user authentication.

Resources

Topic: OPC UA Configurations

Pre delete Class Script

What is it?

CIMPLICITY classes enable you to run scripts at different points in the creation and deletion of their object instances. CIMPLICITY 2023 adds an additional event entry point, allowing you to run a script before an object is deleted.

Why use it?

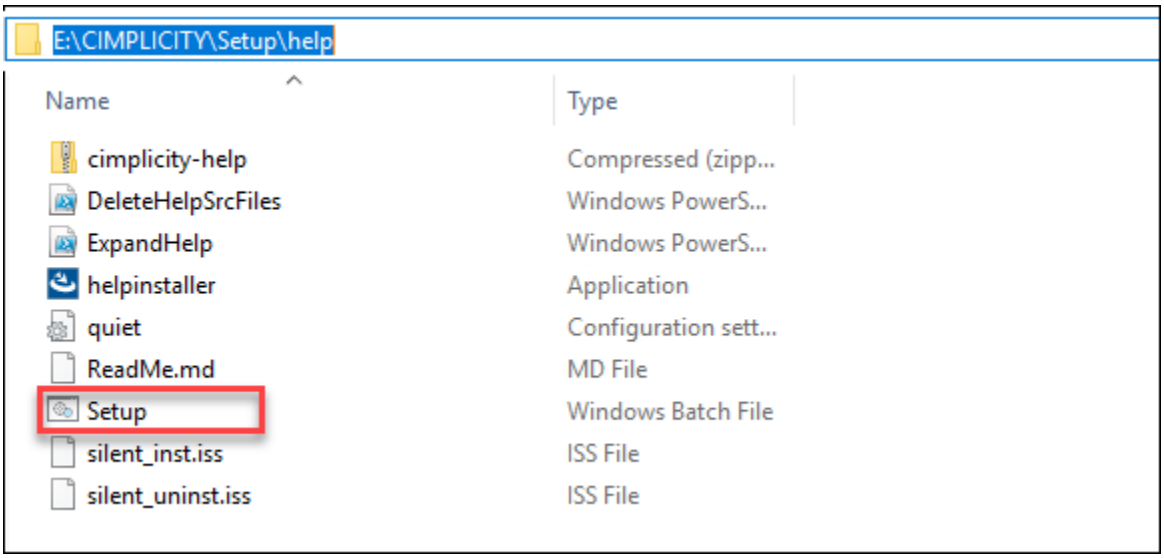
Running a script at this point in the object lifecycle can be useful to clean up resources at a point when all the details of the object are still available before it is deleted and cleaned up. For example, if, during the

creation of an Object Instance, you created or modified database table entries based on the items in your class, you would be able to iterate through those same items and clean them up in the database versus the post-delete script when you no longer have access to the items.

Resources

Topic: Pre delete script

Install Local Help



What is it?

When you install CIMPLICITY using the integrated installer, by default, the online help mode is selected and pointed to the online help on the GE documentation server.

Why use it?

If you want to install the help locally, you can do it.

Note:
However, it is recommended to use the online help, as it is always updated with the latest changes.

Resources

Topic: Install Local Help

Fixed Defects in CIMPLICITY 2023

The following issues have been fixed in CIMPLICITY v2023.

DE138491

SF-00880269

Issue: Previously, if a screen was referenced in two locations, the screen path of the second screen was not displayed correctly in the navigation bar.

Resolution: This issue is now resolved. Now, when a screen is referenced in two locations, the screen paths are displayed correctly in the navigation bar.

DE170818

SF-00985172

Issue: The CIMPLICITY Viewer attempts to look for some random DLL files while it tries to access screens that were shared over network.

Resolution: The issue is now resolved.

DE174856

SF-00999898

Issue: Writing .NET script to send Alarm message in Hebrew generates "?" strings.

Resolution: This issue is now resolved. .NET script to send Alarm message in Hebrew works correctly.

DE180340

SF-01005583

Issue: The DataMerger.exe still uses MASTER and SLAVE instead of PRIMARY and SECONDARY to be executed.

Resolution: The documentation is updated to refer PRIMARY and SECONDARY as MASTER and SLAVE.

DE179942

SF-01015402

Issue: Point Control Panel shows string values of Tag ID in value field for real (float) data types.

Resolution: The issue is now resolved. The Point Control panel shows the correct values of Tag ID.

DE187033

SF-01035675

Issue: OPC UA Client does not show the password when the "Show" check box is selected.

Resolution: The issue is now resolved. The OPC UA Client shows the password when the "Show" checkbox is selected.

DE197052

SF-01063897

Issue: Inconsistent Variable Behavior When Accessing Objects with Spaces in Names

Resolution: The issue is now resolved. Proper notification will be displayed if the Object name contains space.

Known Issues in CIMPLICITY 2023

The following issues have been identified in CIMPLICITY v2023.

DE196262

Issue: After installation of the common components by selecting a custom path, the Local License Server and License Server Tool components are not installed in the custom path; instead, they are installed in the default path.

DE197046

SF-01058207

Limitation: .NET components do not get represented properly in broadcast screens.

Workaround: You can use Webspace as an alternative to display .NET components.

CIMPLICITY 2023 DGR Limitation

Limitation: There is a limitation when using CIMPLICITY 2023 DGR to work with Historian data on Historian Server older than version 2023.

Workaround: For CIMPLICITY 2023 DGR to work with Historian data on a remote Historian Server older than version 2023, you need to install Historian Client Tools version 2023 on the CIMPLICITY 2023 Server machine. However, if you intend to use the CIMPLICITY 2023 DGR on a system where both the Historian Server and CIMPLICITY 2023 Server are on the same node, you must upgrade the Historian Server and Collectors to version 2023.

See the below examples for a better understanding:

Supported setup

Node 1: Historian Server 9.1

Node 2: CIMPLICITY 2023; Historian Collectors 9.1; Historian Client Tools 2023.

-OR-

Node 1: CIMPLICITY 2023; Historian Server 2023; Historian Collectors 2023; Historian Client Tools 2023.

Unsupported setup

Node1: Historian Server 9.1, CIMPLICITY 2023; Historian Collectors 9.1; Historian Client Tools 2023