PAC Productivity Suite

INSTALLATION, OPERATION & MAINTENANCE MANUAL

Version 11.0.73

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

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Caution Notes as Used in this Publication

⚠ CAUTION

Caution notices are used where equipment might be damaged if care is not taken.

Notes: Notes merely call attention to information that is especially significant to understanding and operating the equipment.

These instructions do not purport to cover all details or variations in equipment, nor to provide for every possible contingency that may arise during installation, operation, and maintenance. The information is supplied for informational purposes only, and Emerson makes no warranty as to the accuracy of the information included herein. Changes, modifications, and/or improvements to equipment and specifications are reflected herein. It is understood that Emerson may make changes, modifications, or improvements to the equipment referenced herein or to the document itself at any time. This document is intended for trained personnel familiar with the Emerson products referenced herein.

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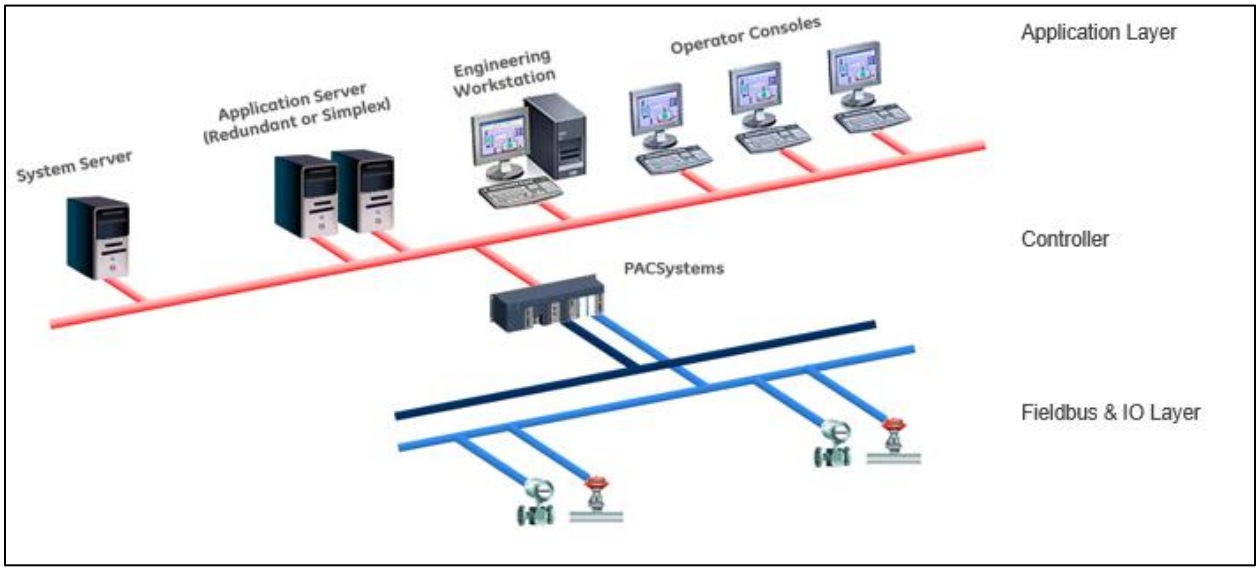
Section 1: PAC Productivity Suite

Congratulations on your purchase of PAC Productivity Suite. PAC Productivity Suite is a complete, tightly integrated, seamless process control system with PACSystems Controllers, PAC HMI/SCADA, and PAC change management software to provide control, optimization, and performance management to manage and monitor batch, discrete, or continuous manufacturing. It delivers the tools required to design, implement, document, and maintain an automated process. These tools are:

- Engineering Workstations
- Operator Consoles
- Application Servers
- System Server

Figure 1: Example of PACSystems Setup



1.1 Engineering Workstation

Engineering Workstation installation includes:

- Logic Developer
- An HMI/SCADA product

PAC HMI/SCADA CIMPLICITY (without SQL Express) Development Server

OR

PAC HMI/SCADA CIMPLICITY (with SQL Express) Development Server

Note: *Installing SQL Express with CIMPLICITY may take a significant amount of time.*

- EGD Configuration Server
- EGD Management tool (EMT)
- EGD Management Edition OPC Server

For more information about working with the Engineering Workstation, see Section 2: Engineering Workstation.

1.2 Operator consoles

An operator console installation includes:

- PAC HMI/SCADA CIMPLICITY Development Viewer

For more information, see Section 4: Operator Console.

1.3 System Server

A system server installation includes:

- EGD Configuration Server
- EGD Management tool (EMT)
- EGD Management Edition OPC Server
- Change Management (Optional)

1.4 Application Servers

An Application Server installation includes:

- PAC HMI/SCADA CIMPLICITY Development Server
- EGD Management tool (EMT)
- EGD Management Edition OPC Server

For more information, see Section 5: Application Server.

1.5 Important Product Information

For last-minute information, release notes, and supported hardware for PAC Productivity Suite products, see the Important Product Information (IPI) document on the DVD. There are several ways to view this document:

- When installing PAC Productivity Suite, select Important Product Information on the initial Launcher screen.
- Browse the root folder of the DVD and double-click IPI_PPS.chm. On the PAC Productivity Suite Engineering Workstation Help menu, choose Important Product Information.
- When running PAC Productivity Suite Engineering Workstation, click the InfoView tab in the Navigator, expand the PAC Productivity Suite library, and then double-click the Important Product Information page.
- When running PAC Productivity Suite Engineering Workstation, click Home on the InfoViewer toolbar, then to the left, under Get Started, click What's New.

1.6 Installation

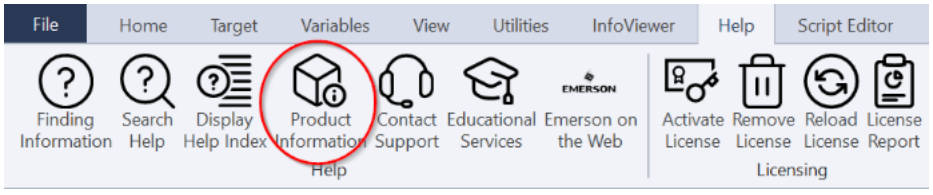
Starting with PPS 10.2 or later, the installer automatically removes older PPS versions. If your computer has PPS 3.x through 10.1 installed, install PPS 11.0 without uninstalling the previous version. During installation, PPS 11.0 will prompt you to remove any components that must be upgraded. If you are running a version before PPS 3.0, you must uninstall it before installing the latest release. Your existing projects, settings, and authorizations are preserved when uninstalling older versions.

For information regarding supported operating systems and hardware system requirements, see the GFK-3245 PAC System Requirements.

For the latest information and release notes for Machine Edition products, see the Important Product Information (IPI) document on the disk image. There are several ways to view this document:

- When running Machine Edition, the IPI is accessed by clicking the **Product Information** button located in the Help menu.

Figure 1: Important Product Information (IPI)



- Alternatively, IPIs can be downloaded from our KnowledgeBase. Links are provided at the end of this document.

1.6.1 Pre-Requisites

- **Verify system requirements.** Refer to *GFK-3245 - PAC Machine Edition, Change Management, and Productivity Suite System Requirements* for supported operating systems, hardware specifications, and virtual machine requirements.
- **Confirm administrative privileges.** Installation must be performed using an account with full Administrator rights to ensure all components are installed correctly.
- **Download the PAC Productivity Suite ISO.** Access the PACSystems/Movicon Customer Center and download the PAC Productivity Suite. Website: pacsystems.co/customercenter
- **Close all Emerson and other automation software** before beginning the installation.
- **Temporarily disable antivirus software** if it is known to interfere with MSI-based installers (optional but sometimes necessary in industrial environments).
- **Ensure no Windows updates are pending a restart.**
  If updates are pending, restart the system and allow Windows to complete the update process.
  CAUTION: Installing with pending Windows updates will cause the Microsoft Visual C++ Redistributable installation to fail, preventing the upgrade from completing.

1.6.2 Upgrade Requirements

When upgrading PME versions before 3.0, you must **fully uninstall** the existing PME installation before installing the new version. From **3x through 10.1** to **11.0,** no uninstall is required.

For detailed removal instructions, refer to **KBA "000083998"** in the PACSystems/Movicon Customer Center. Website: pacsystems.co/customercenter

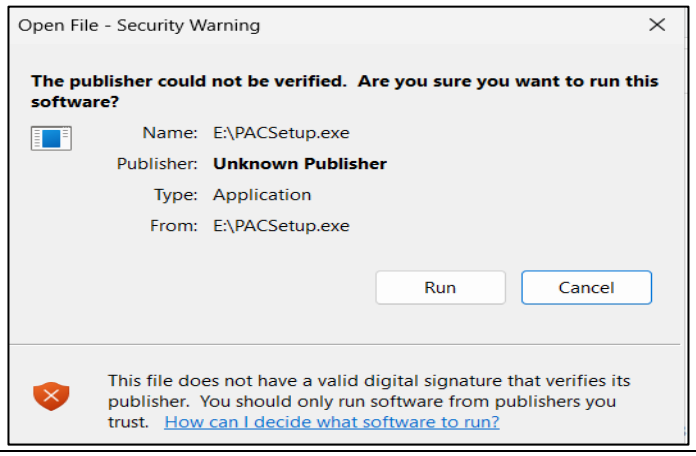
From the Customer Center Knowledge page, search for 000083998.

After the software has been completely uninstalled, continue with the procedure in **Section 1.6.3 – Fresh Install of Logic Developer – PLC**.

1.6.3 Upgrade/Install Instructions

1. Mount the ISO. Right-click on the ISO file and select mount.
2. Right-click PACSetup.exe and choose **Run as Administrator**.

Figure 2: Run

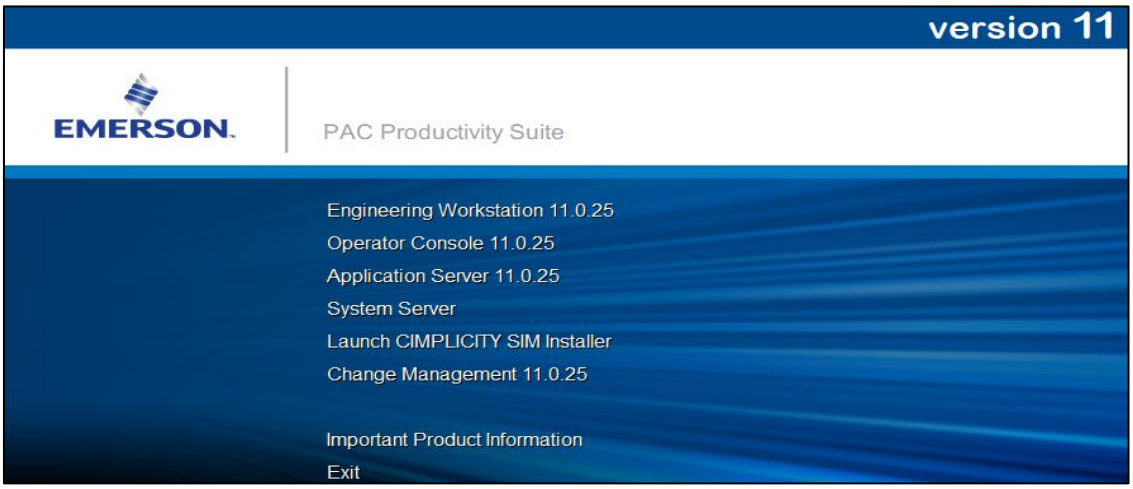


3. Accept **User Account Control**. When prompted, click **Yes**.

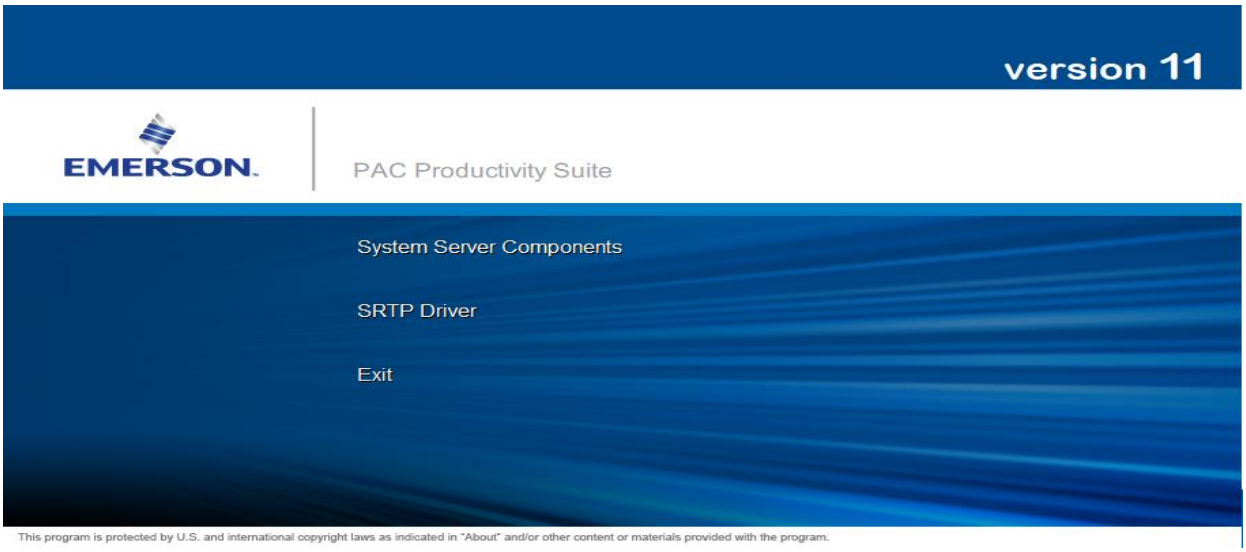
Figure 3: User Account Control

4. Select the Engineering workstation, operator console, application server, or system server from the PAC Productivity Suite list for upgrade or a new install.

Figure 4: Engineering Workstation



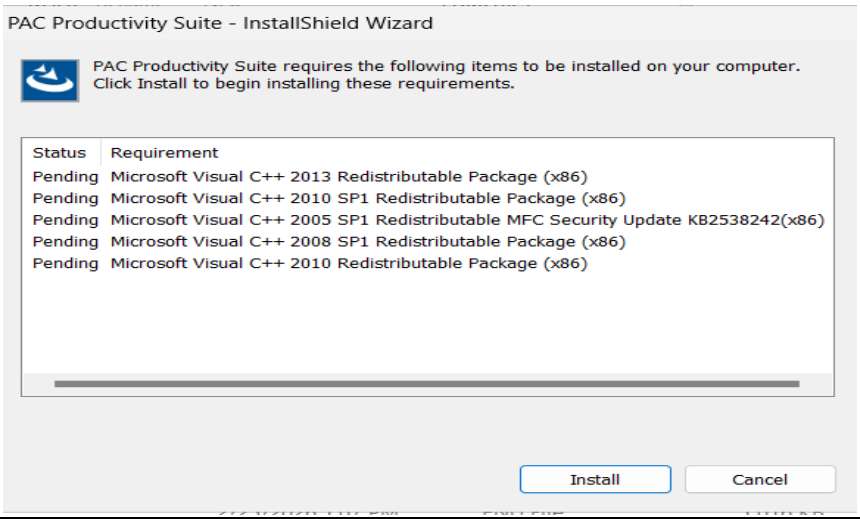
For the system server, an additional screen will be displayed with options to choose from



5. If prompted, permit the installer to install the required Microsoft Visual C++ Redistributable packages. Click **Install**.

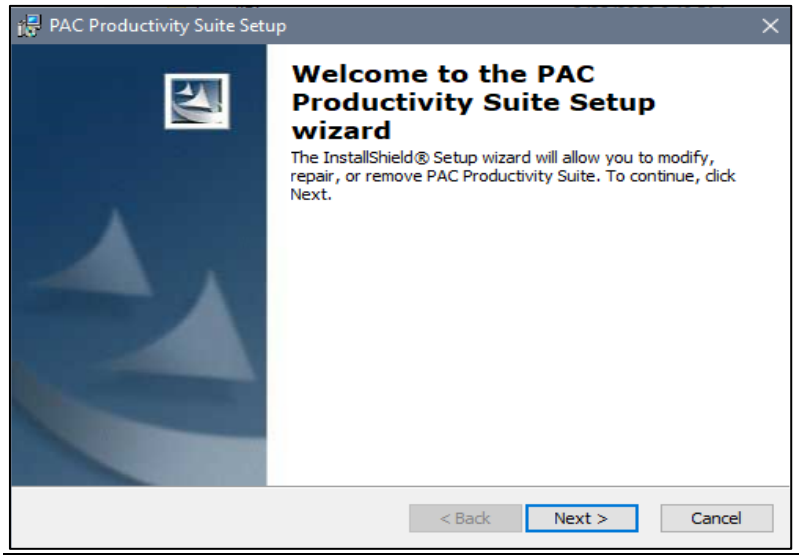
Note: Some Microsoft Visual C++ Redistributable installations may require a system restart. After restarting, begin the installation process again, starting from Step 1

Figure 5: Install Wizard



6. **PAC Productivity Suite Wizard**. Click **Next** to continue.

Figure 6: Wizard



Upgrade of PAC Productivity Suite from PPS 3.x – 10.1 to PPS 11.0

Upgrading PAC Productivity Suite from version 3.x through 10.1 to 11.0 replaces an existing installation with a newer, more capable release while preserving your data, configuration, and environment. Unlike a fresh install, an upgrade builds on what is already present, carrying forward supported settings and components while introducing the enhancements, security updates, and architectural changes included in the 11.0 series. This section outlines the recommended process for performing a smooth, reliable upgrade so that your system transitions cleanly to the latest version without disrupting your workflow.

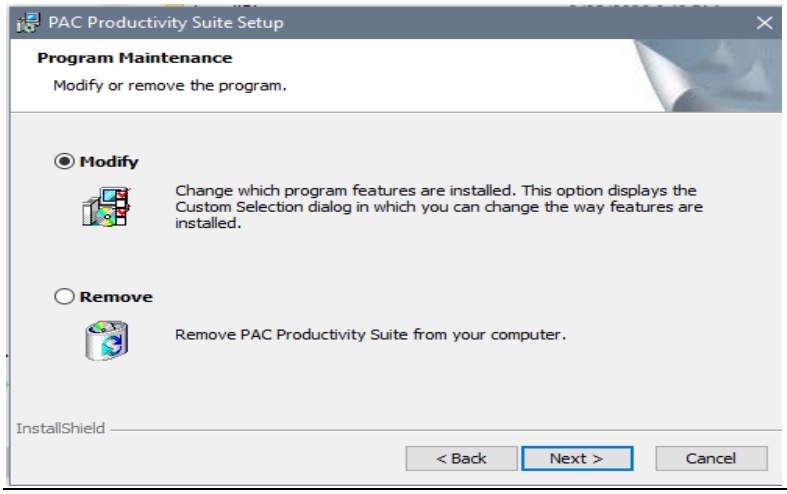
Upgrade of PAC Productivity Suite from PPS 10.2 or later to PPS 11.0

Upgrading PAC Productivity Suite from version 10.2 to 11.0 replaces an existing installation with a newer, more capable release while preserving your data, configuration, and environment. Unlike a fresh install, an upgrade builds on what is already present, carrying forward supported settings and components while introducing the enhancements, security updates, and architectural changes included in the 11.0 series. This section outlines the recommended process for performing a smooth, reliable upgrade so that your system transitions cleanly to the latest version without disrupting your workflow.

Upgrading the Engineering Workstation

1. Under Program Maintenance, select Modify and click **Next** to continue.

Figure 7: PAC Productivity

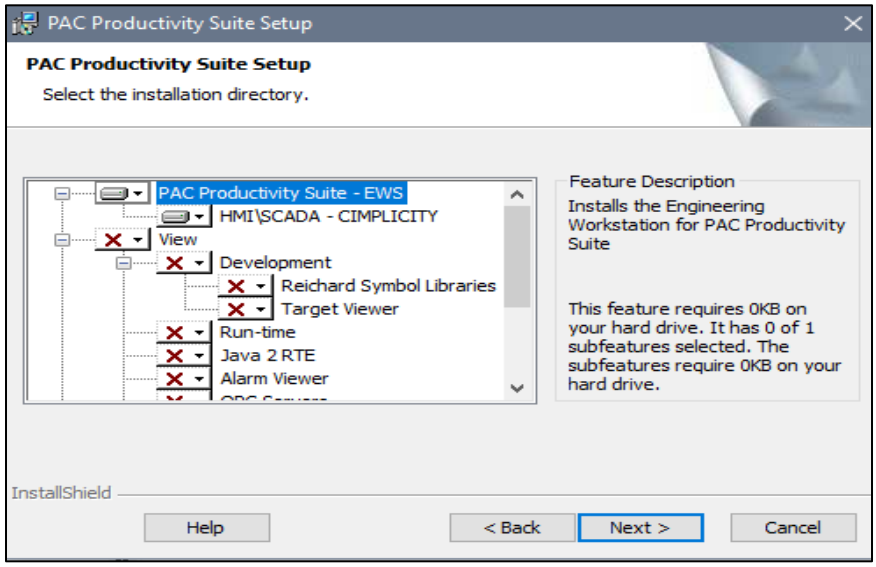


PAC Productivity Suite Setup

2. Confirm the features to be upgraded.
3. Select the installation directory (default recommended).
4. If default is not selected, do not use directories with OneDrive or network paths.

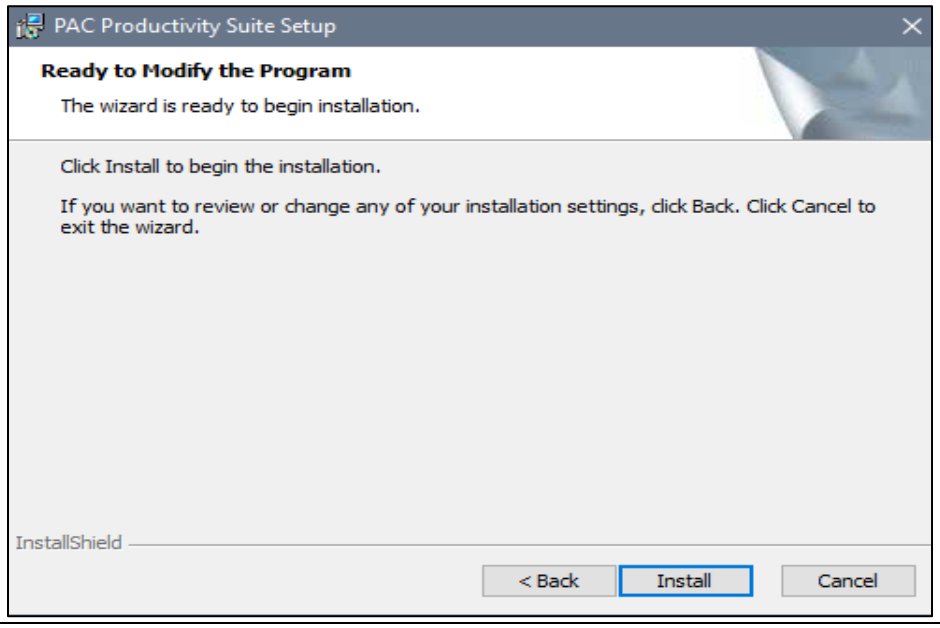
6. Click **Next** to continue.

Figure 8: PAC Productivity Suite Setup



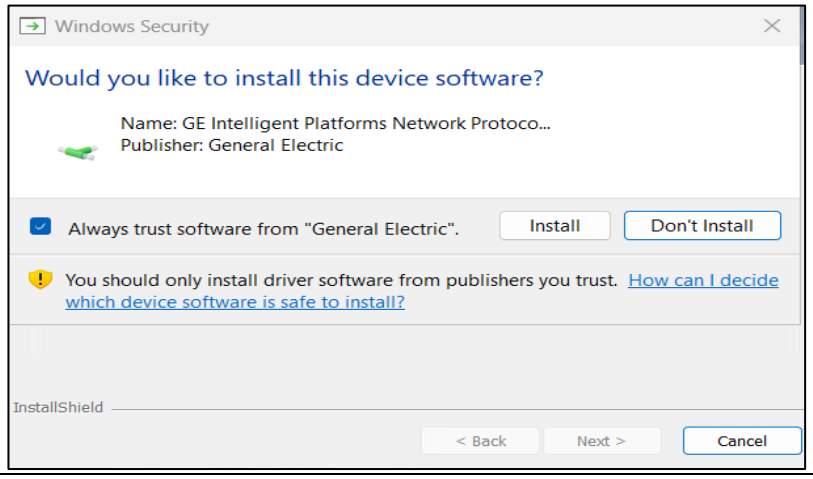
7. Ready to modify the Program. Click **Install** to begin installation.

Figure 9: Modify



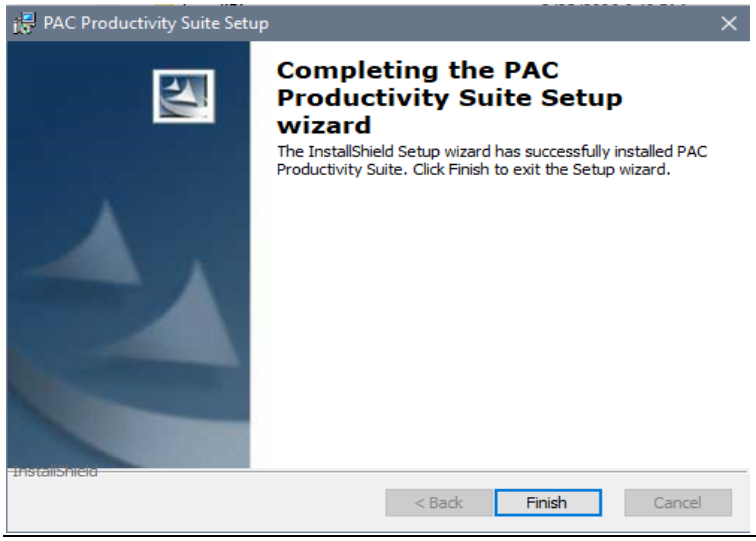
8. Allow the upgrade to progress (may take 20+ minutes).
9. Install the GE Intelligent Platforms Network Protocol Driver when prompted.
10. Choose whether to always trust software from **General Electric**.
11. Click **Install** to begin installation.

Figure 10: GE Intelligent Platforms Network Protocol



12. When prompted, click Finish to complete the installation.

Figure 11: Complete Setup

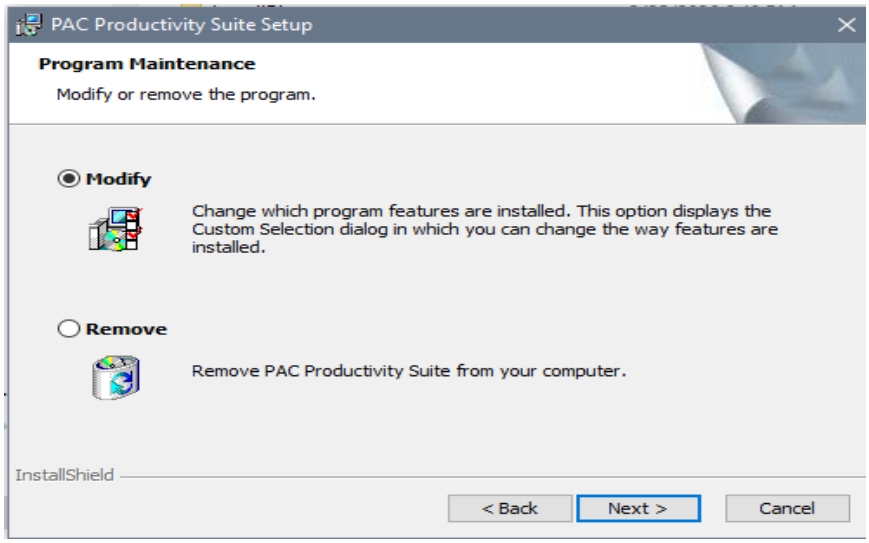


13. Reboot the workstation if requested.
14. The Engineering Workstation is ready to be used. If the installer does not request a restart, this is normal—the Engineering Workstation is still fully installed and ready for authorization.

Upgrading Operator Console

1. Under Program Maintenance, select **Modify** and click **Next** to continue.

Figure 12: Program Maintenance

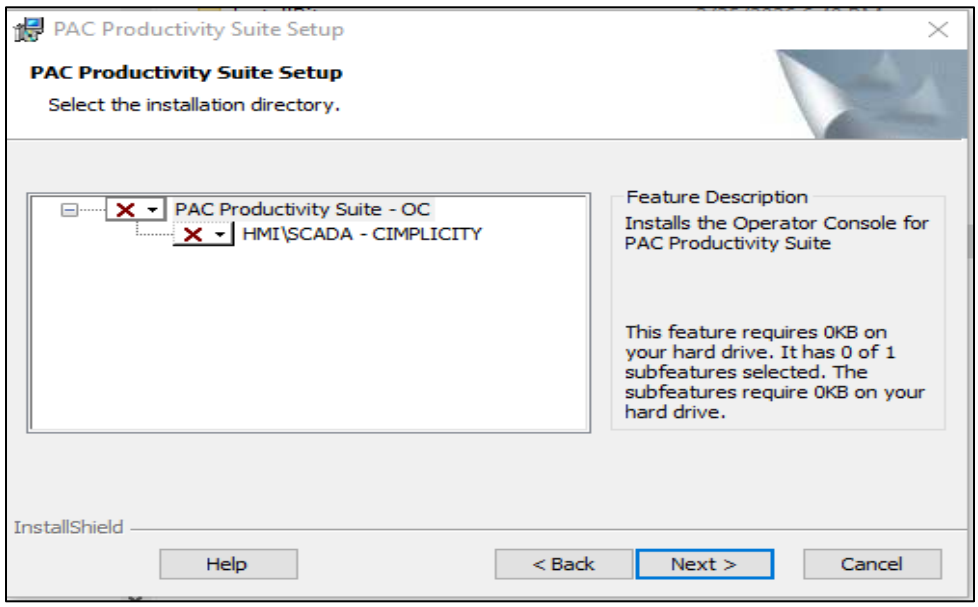


PAC Productivity Suite Setup

11. Confirm the features to be upgraded.
12. Select the installation directory (default recommended).
13. If default is not selected, do not use directories with OneDrive or network paths.

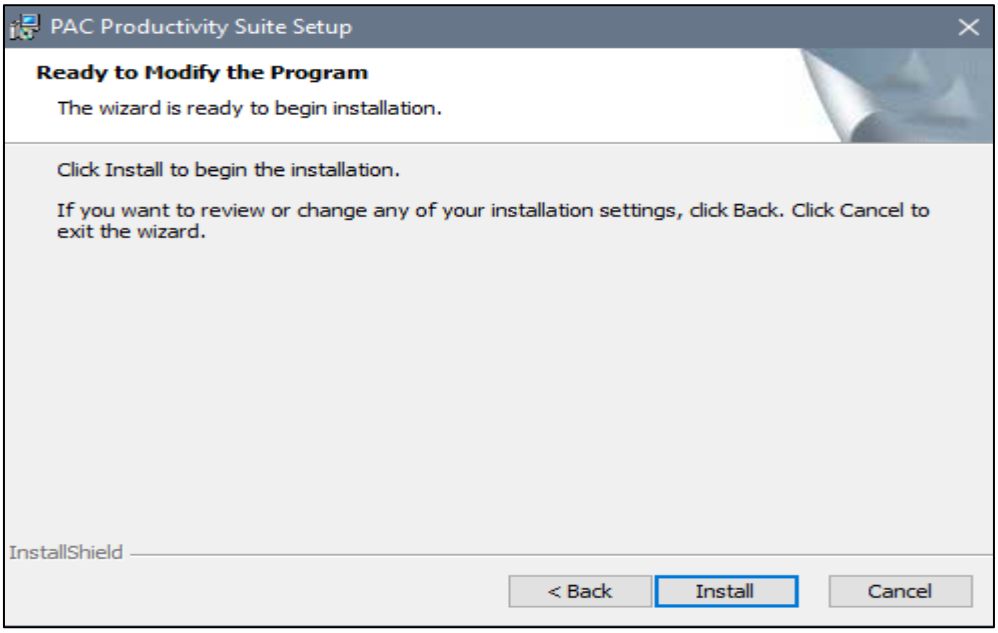
14. Click **Next** to continue.

Figure 13: Continue



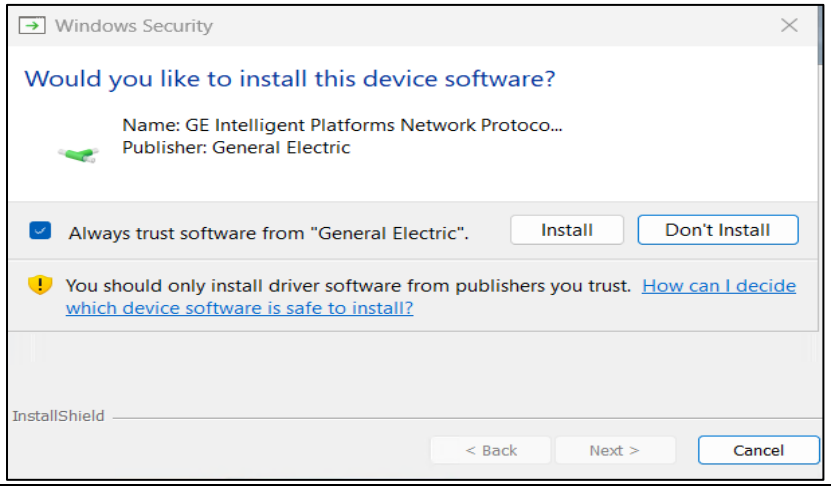
15. Ready to modify the Program. Click **Install** to begin installation.

Figure 14: PAC Productivity Suite Setup



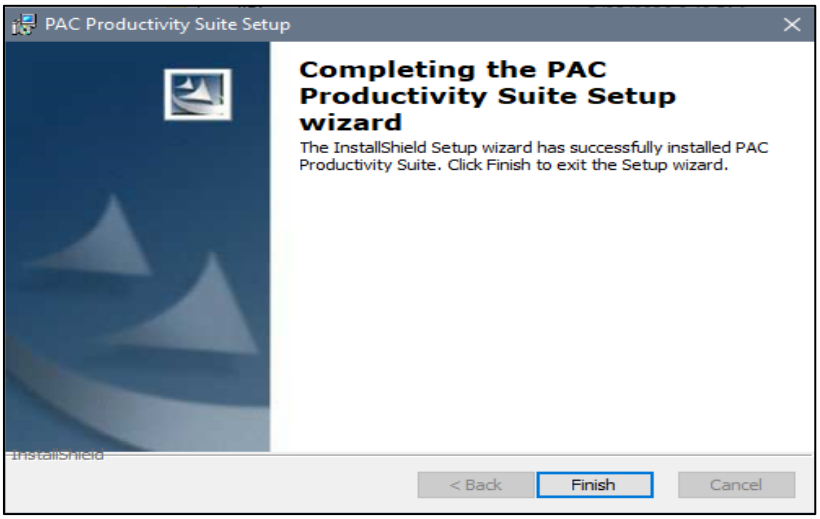
16. Allow the upgrade to progress (may take 2+ minutes).
17. Install **GE Intelligent Platforms Network Protocol Driver**. When prompted, choose whether to always trust software from **General Electric**.
    a. Click **Install** to begin installation.

Figure 15: Windows Security



18. When prompted, click Finish to complete the installation.

Figure 16: Completing Setup

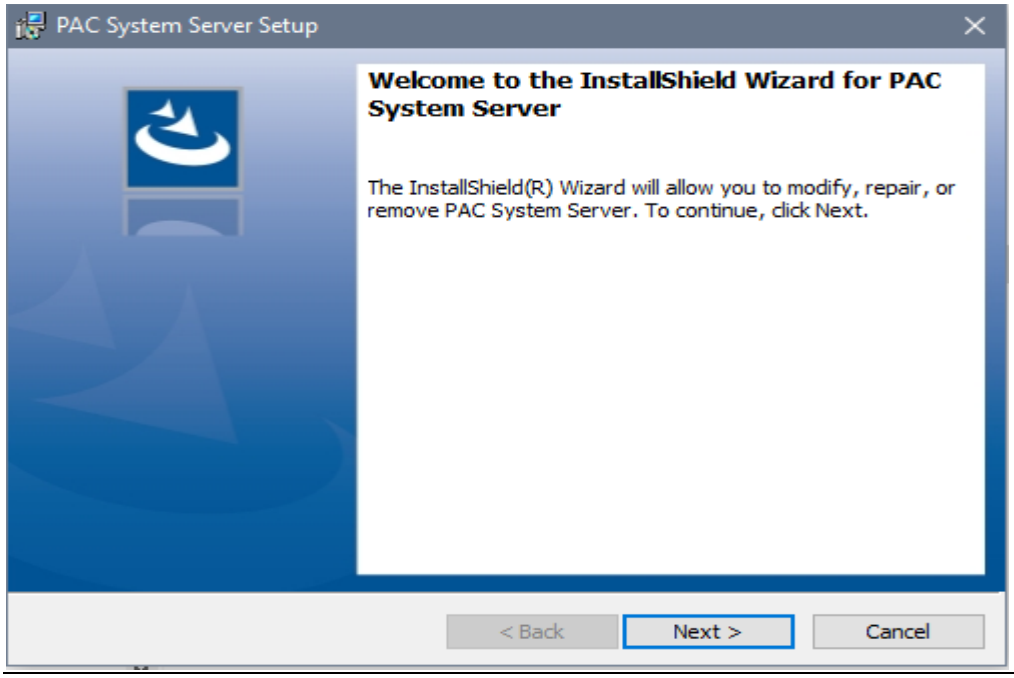


19. Reboot the workstation if requested.
20. The operation console is ready to be used. If the installer does not request a restart, this is normal—the operation console is still fully installed and ready for authorization.

Upgrading System Server

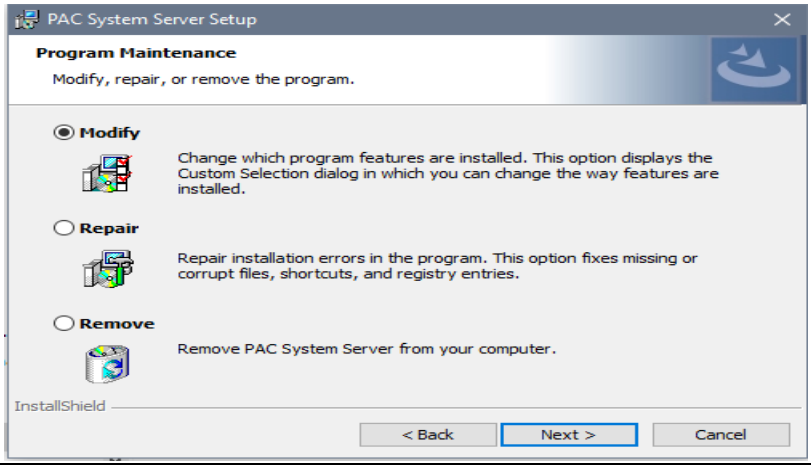
1. PACSystem Server Wizard. Click **Next** to continue.

Figure 17: PACSystem Server Wizard



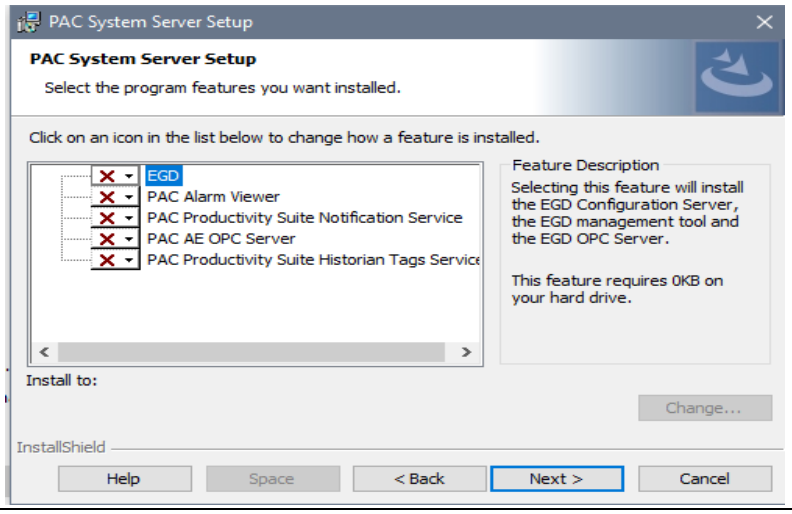
2. Under Program Maintenance, select **Modify** and click **Next** to continue.

Figure 18: Program Maintenance



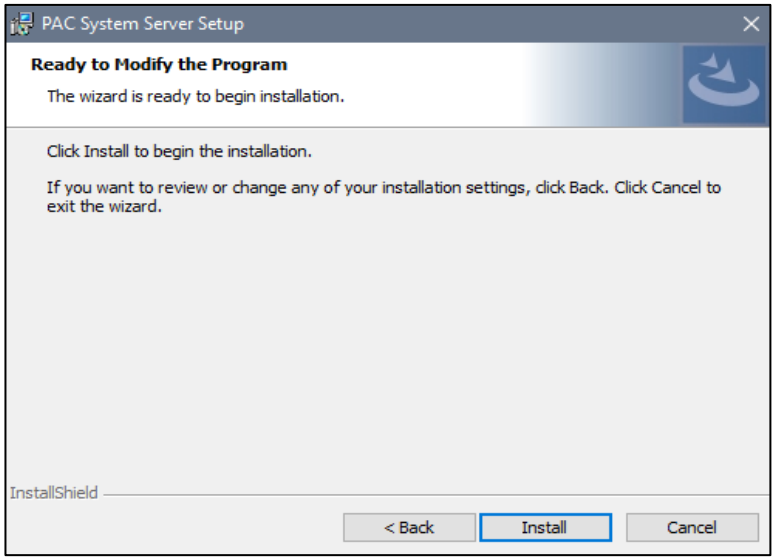
3. PAC System Server Setup.
   a. Confirm the features to be upgraded.
   b. Select the installation directory (default recommended).
      i. If default is not selected, do not use directories with OneDrive or network paths.
   c. Click **Next** to continue.

Figure 19: Continue



4. Ready to modify the Program. Click **Install** to begin installation.

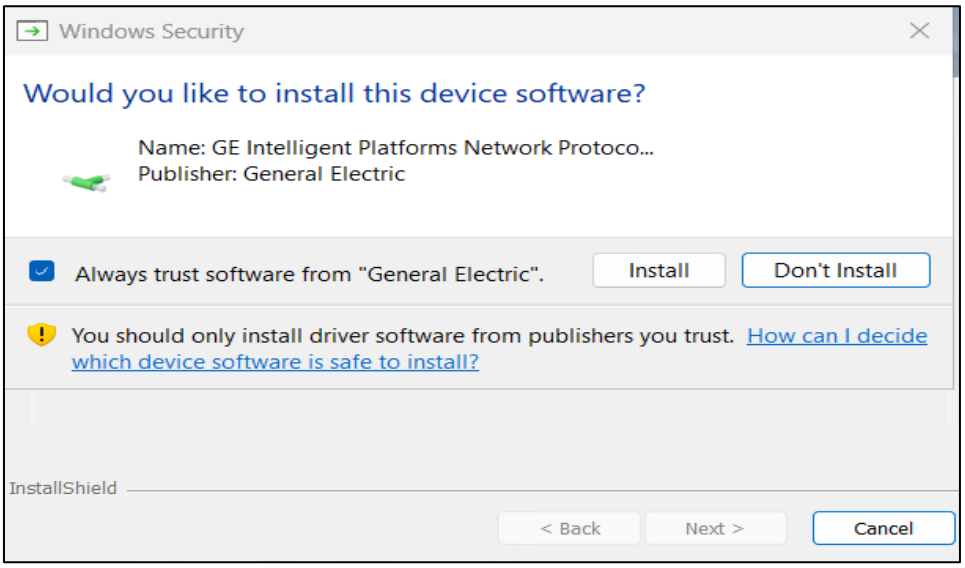
Figure 20: Modify the Program



5. Allow the upgrade to progress (may take 2+ minutes).

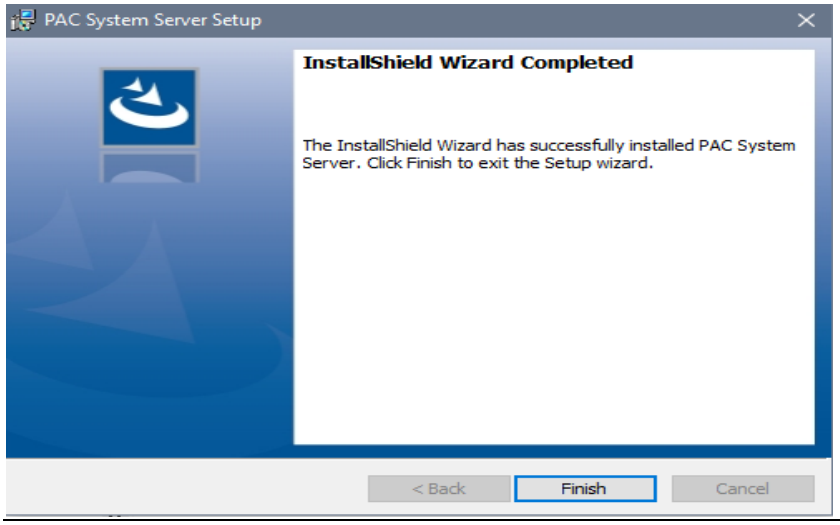
6. Install the **GE Intelligent Platforms Network Protocol Driver** when prompted.
   a. Choose whether to always trust software from **General Electric**.
   b. Click **Install** to begin installation.

Figure 21: Install Device



7. When prompted, click Finish to complete the installation.

Figure 22: Install Wizard

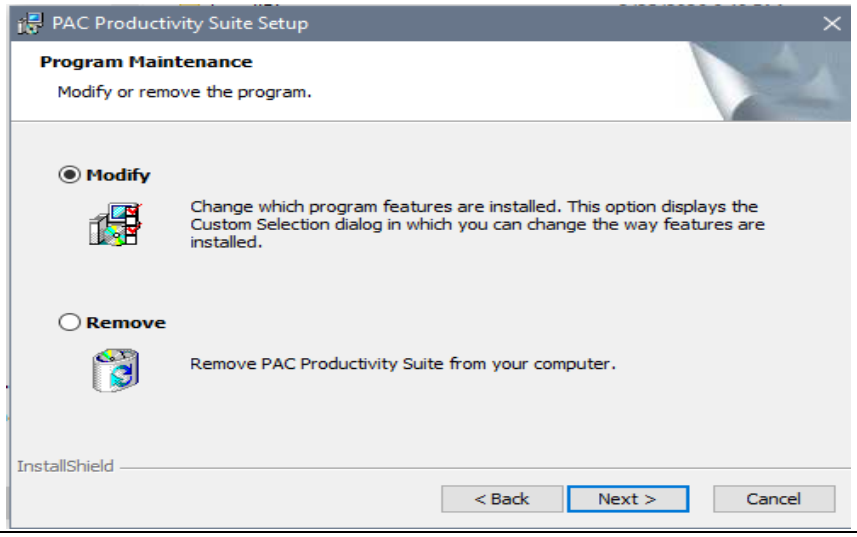


8. Reboot the workstation if requested.
9. The system server is ready to be used. If the installer does not request a restart, this is normal—the system server is still fully installed and ready for authorization.

Upgrading Application Server

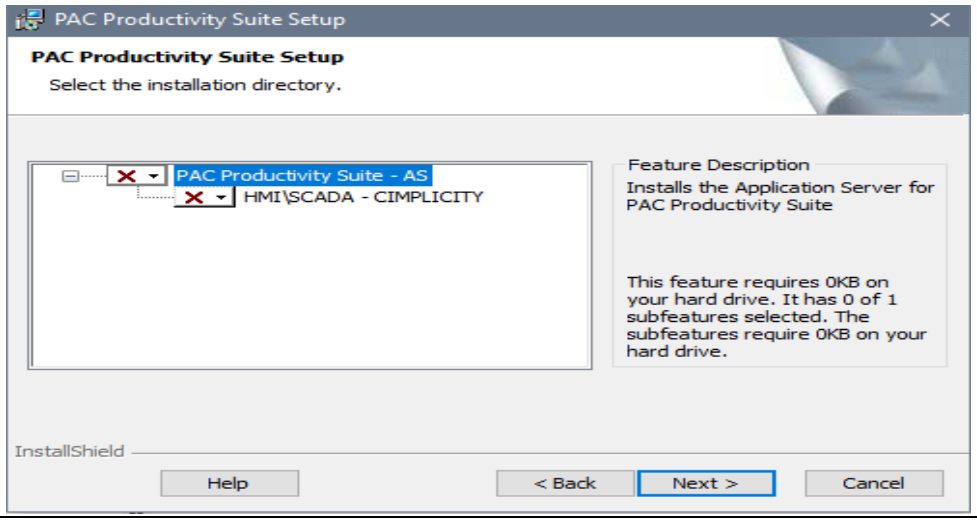
1. Under Program Maintenance, select **Modify** and click **Next** to continue.

Figure 23: Program Maintenance



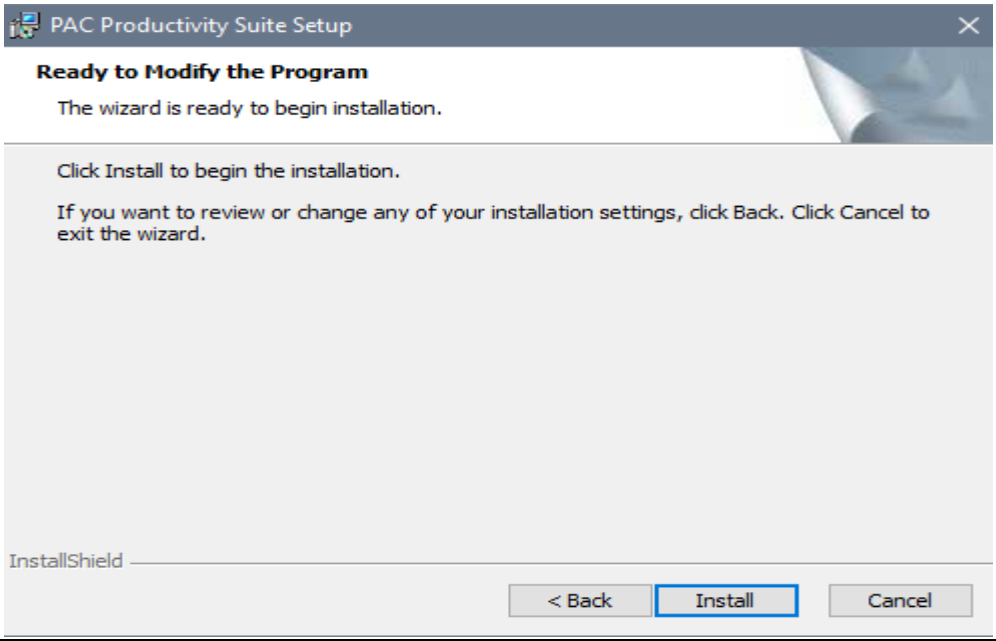
2. PAC Productivity Suite Setup.
   a. Confirm the features to be upgraded.
   b. Select the installation directory (default recommended).
      i. If default is not selected, do not use directories with OneDrive or network paths.
   c. Click **Next** to continue.

Figure 24: PAC Productivity Suite Setup



3. Ready to modify the Program. Click **Install** to begin installation.

Figure 25: Wizard Installation

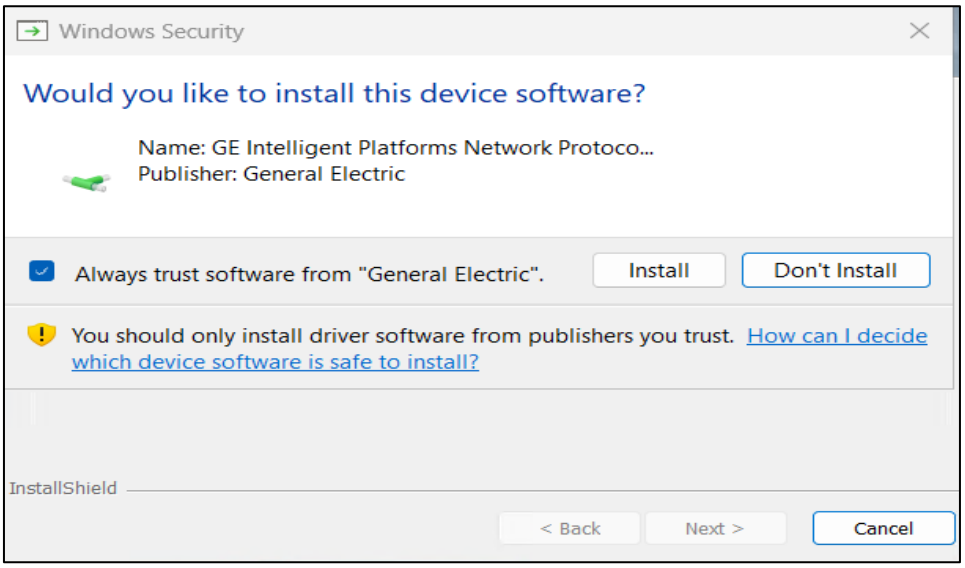


4. Allow the upgrade to progress (may take 2+ minutes).

5. Install the **GE Intelligent Platforms Network Protocol Driver** when prompted.

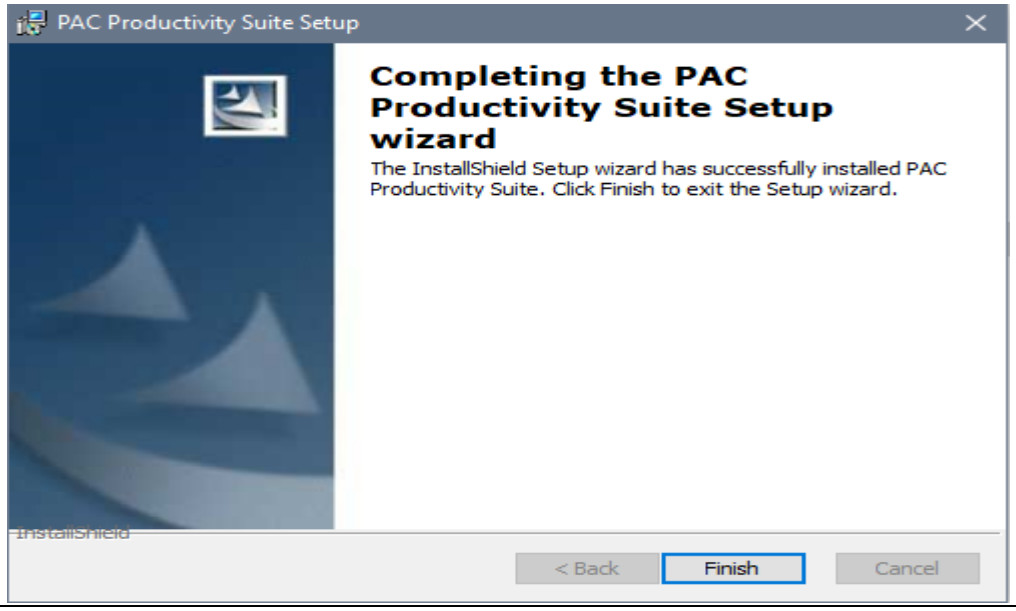
a. Choose whether to always trust software from **General Electric.**
b. Click **Install** to begin installation.

Figure 26: Windows Security



6. When prompted, click Finish to complete the installation.

Figure 27: Productivity Suite Setup



7. Reboot the workstation if requested.
8. The application server is ready to be used. If the installer does not request a restart, this is normal—the application server is still fully installed and ready for authorization.

Fresh Install of PAC Productivity Suite 11.0

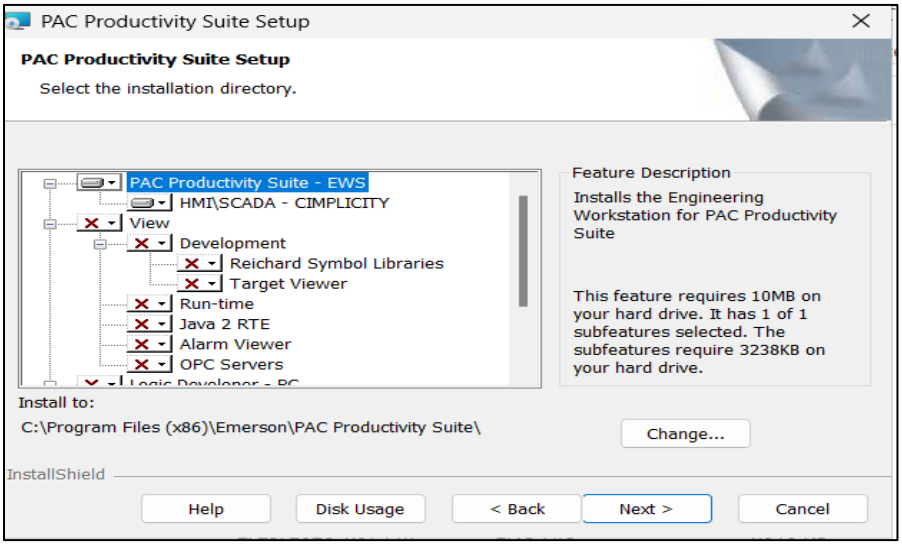
A fresh install of PAC Productivity Suite sets up the software on a system that does not already have a previous version of the suite installed. In other words, it's a clean installation performed on a new workstation or on a machine where older PAC components have been fully removed. This section introduces the steps required to complete that process smoothly, ensuring that all prerequisites are in place and that the suite is installed in a stable, fully supported configuration.

Installing Engineering Workstation

PAC Productivity Suite Setup

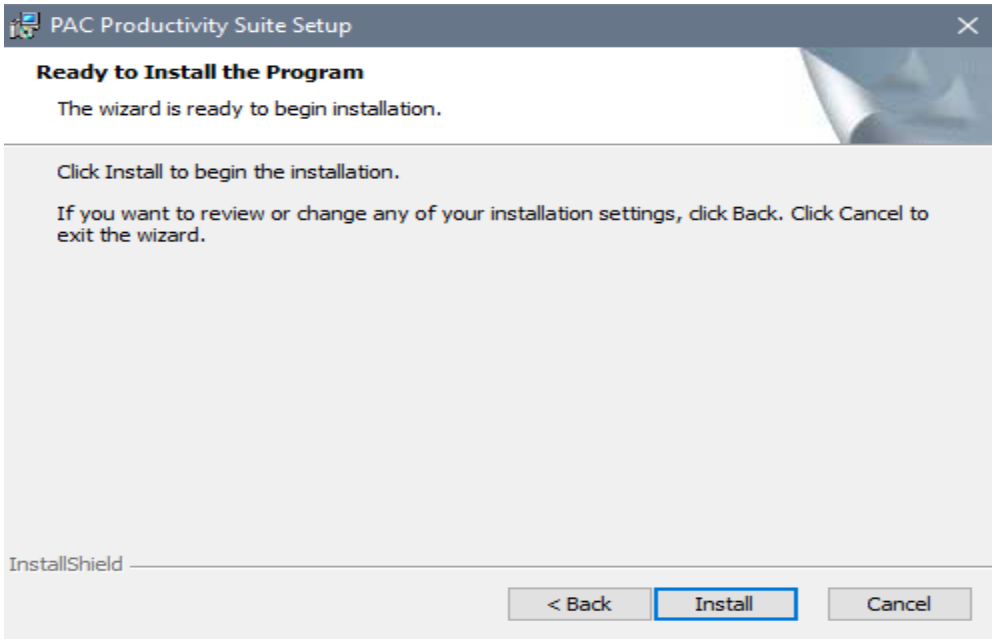
1. Confirm the features to be installed.
2. Select the installation directory (default recommended).
3. If default is not selected, do not use directories with OneDrive or network paths.
4. Click **Next** to continue.

Figure 28: PAC Productivity Suite Setup



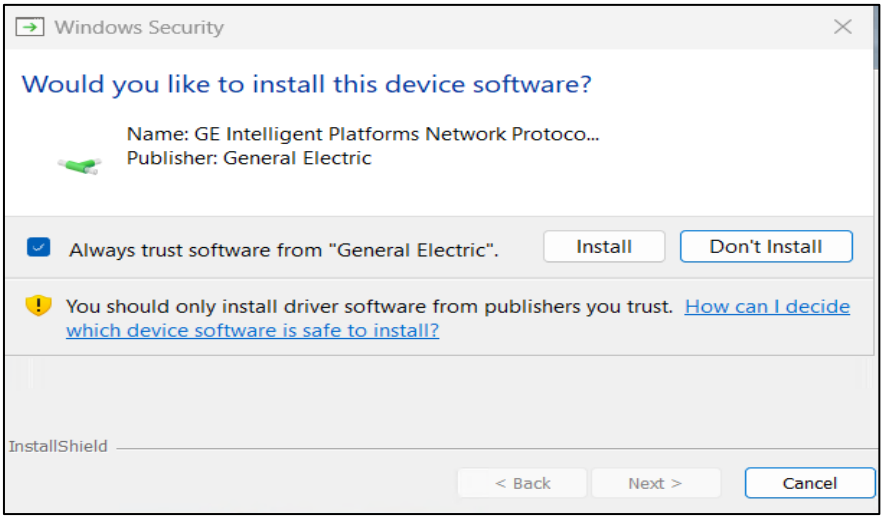
6. Ready to Install the Program. Click **Install** to begin installation.

Figure 29: InstallShield



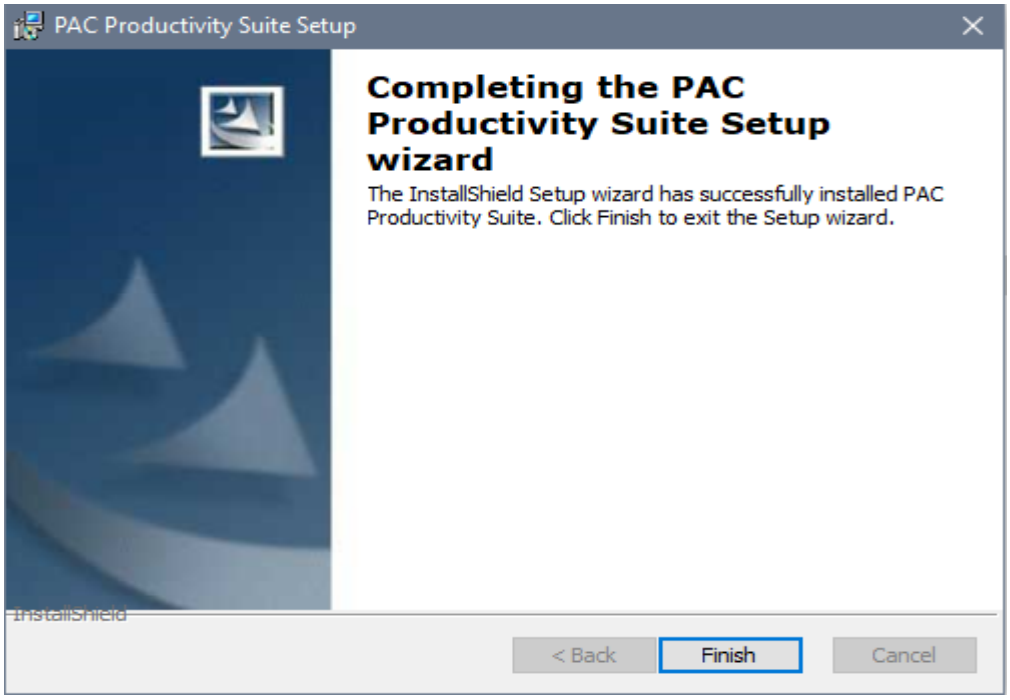
7. Allow the installation to progress (may take 20+ minutes).
8. Install **GE Intelligent Platforms Network Protocol Drive**r.
   a. Choose whether to always trust software from **General Electric**.
   b. Click **Install** to begin installation.

Figure 30: Install Device Software



9. When prompted, click **Finish** to complete the installation.

Figure 31: Complete Setup



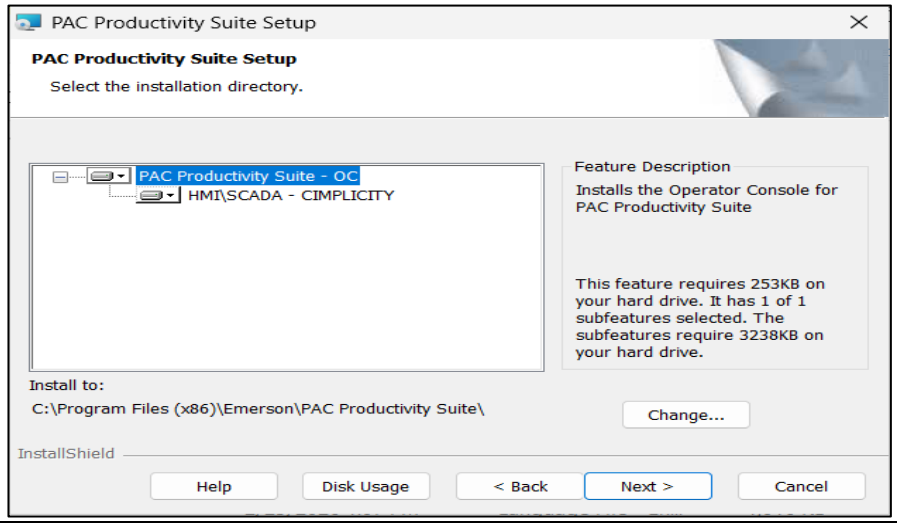
10. Reboot the workstation if requested.
11. The Engineering Workstation is ready to be used. If the installer does not request a restart, this is normal—the Engineering Workstation is still fully installed and ready for authorization.

Installing Operator Console

PAC Productivity Suite Setup.

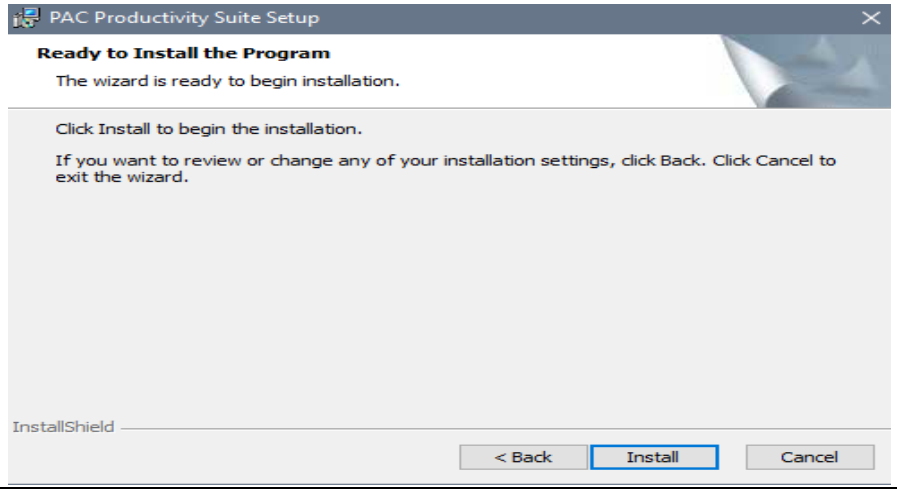
1. Confirm the features to be installed.
2. Select the installation directory (default recommended).
    a. If default is not selected, do not use directories with OneDrive or network paths.
    b. Default installation directory: C:\Program Files (x86)\Emerson\PAC Productivity Suite\
3. Click **Next** to continue.

Figure 32: PAC Productivity Suite Setup



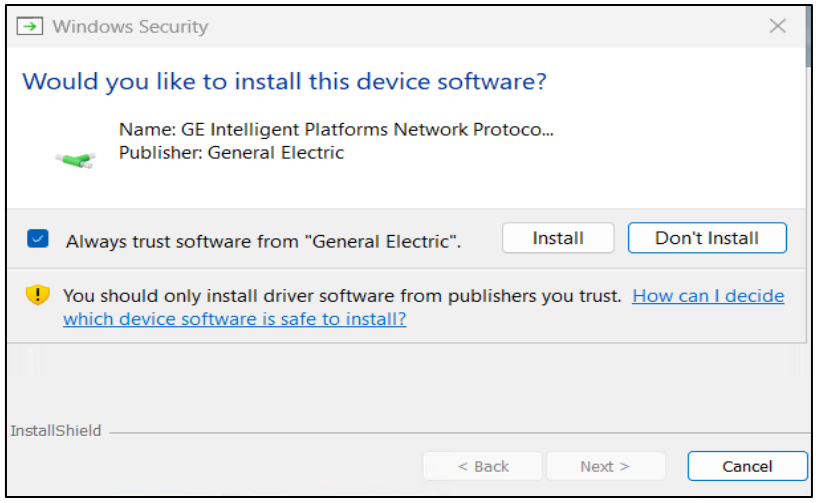
4. Ready to Install the Program. Click **Install**.

Figure 33: Install

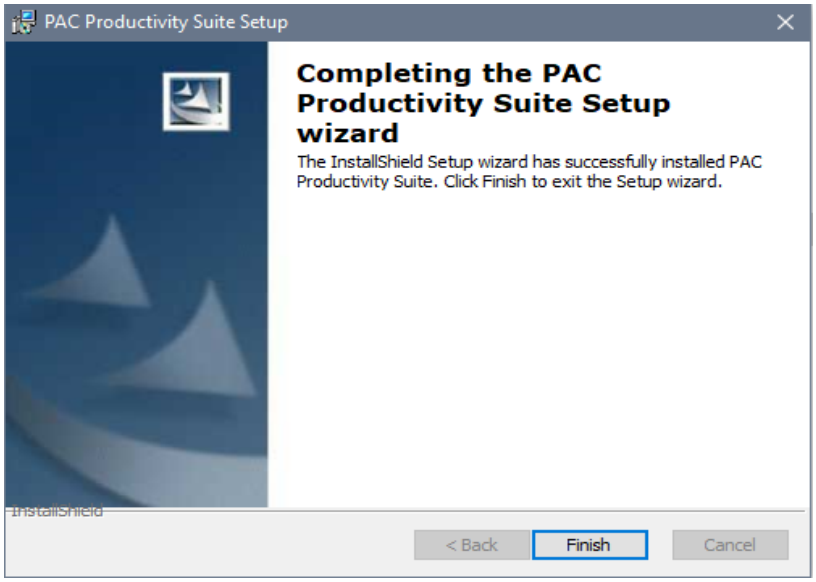


5. Allow the installation to progress (may take 20+ minutes).
6. Install **GE Intelligent Platforms Network Protocol Driver.**
7. Choose whether to always trust software from **General Electric.**
8. Click **Install** to begin installation.

Figure 34: Install Device Software



9. When prompted, click Finish to complete the installation.



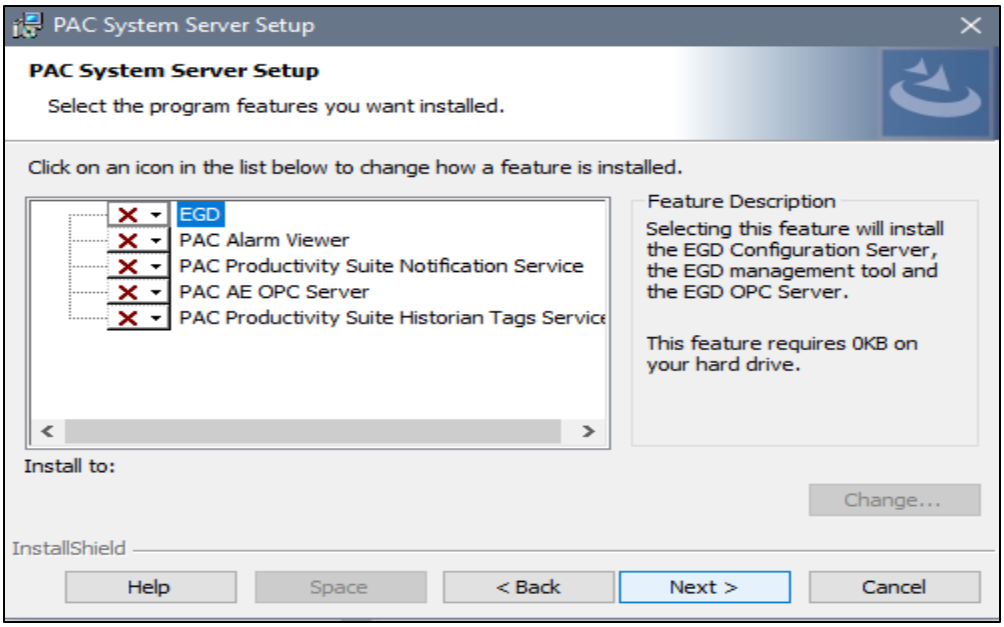
10. Reboot the workstation if requested.
11. Operator Console is ready to use. If the installer does not request a restart, this is normal—Operator Console is still fully installed.

Installing System Server

PAC Productivity Suite Setup.

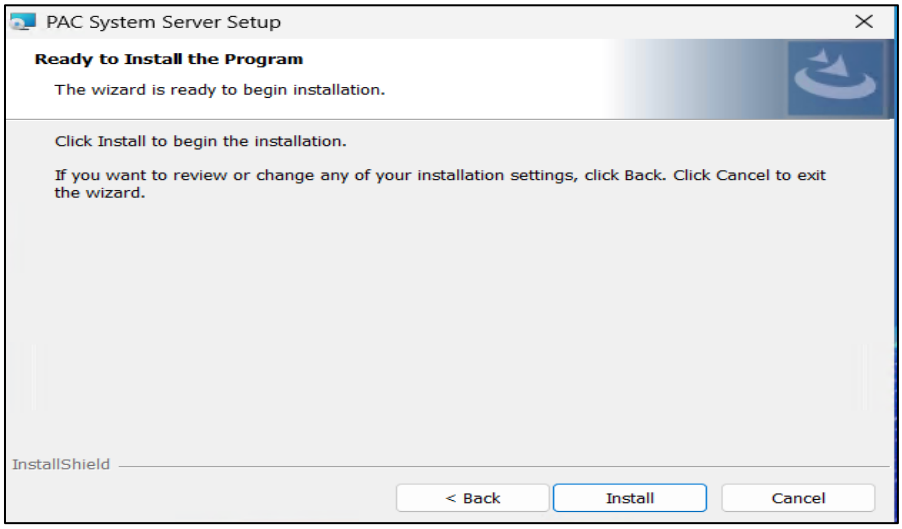
1. Confirm the features to be installed:
2. Select the installation directory (default recommended).
    a. If default is not selected, do not use directories with OneDrive or network paths.
3. Click Next.

Figure 35: PACSystem Server Setup



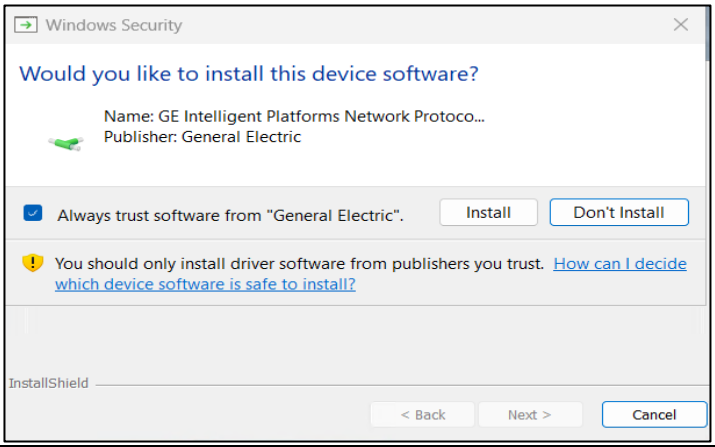
4. Ready to Install the Program. Click Install to start the installation.

Figure 36:



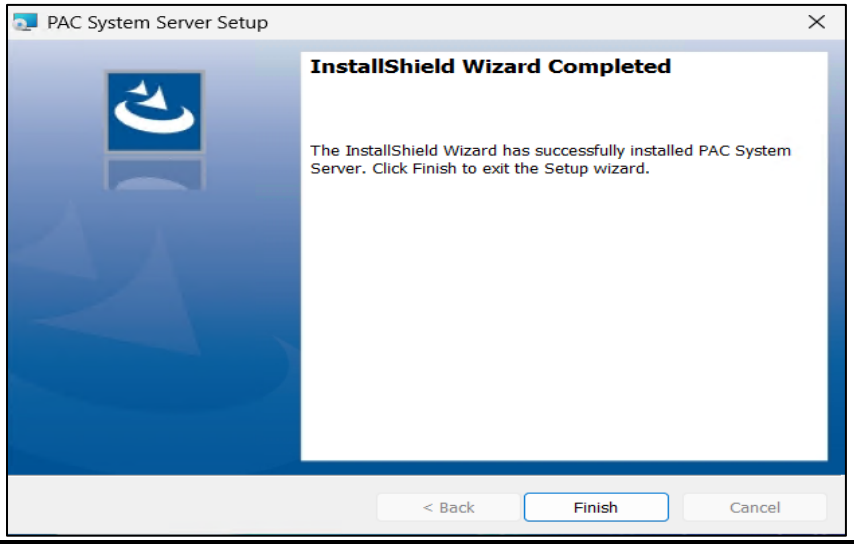
5. Allow the installation to progress (may take 20+ minutes).
6. Install the **GE Intelligent Platforms Network Protocol Driver** when prompted.
    a. Choose whether to always trust software from **General Electric.**
    b. Click **Install** to begin installation.

Figure 37: Install Device Software



7. When prompted, click Finish to complete the installation.

Figure 38: Install Wizard



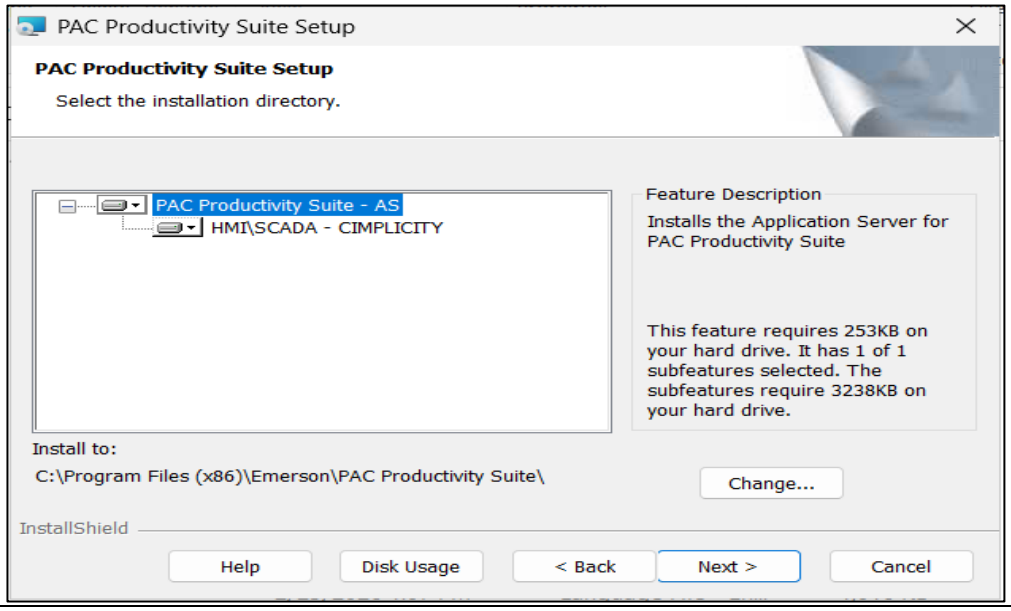
8. Reboot the workstation if requested.
9. The system server is ready to use. If the installer does not request a restart, this is normal—the system server is still fully installed.

Installing Application Server

PAC Productivity Suite Setup.

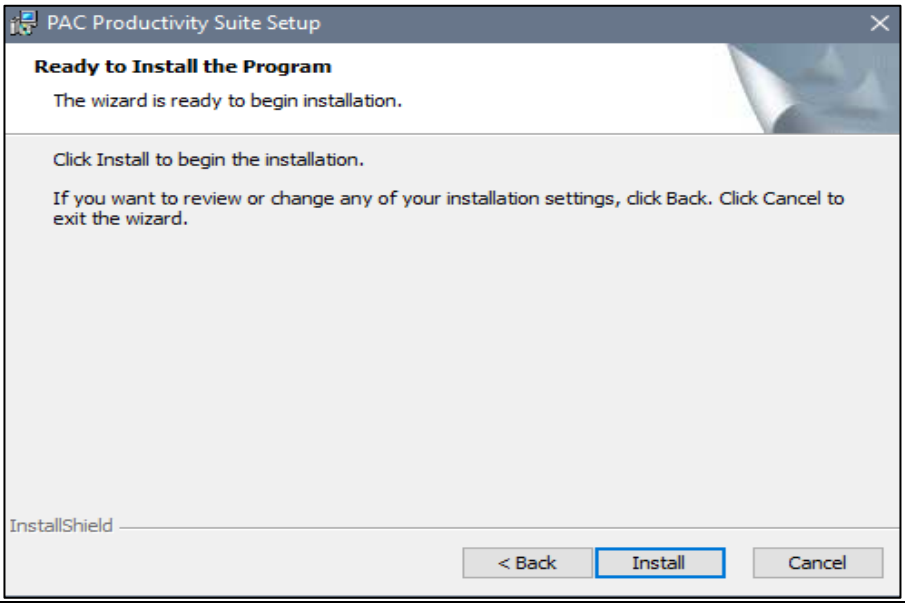
1. Confirm the features to be installed:
2. Select the installation directory (default recommended).
3. If default is not selected, do not use directories with OneDrive or network paths.
4. Click **Next** to continue.

Figure 39: PAC Productivity Suite



5. Ready to Install the Program. Click **Install** to start the installation.

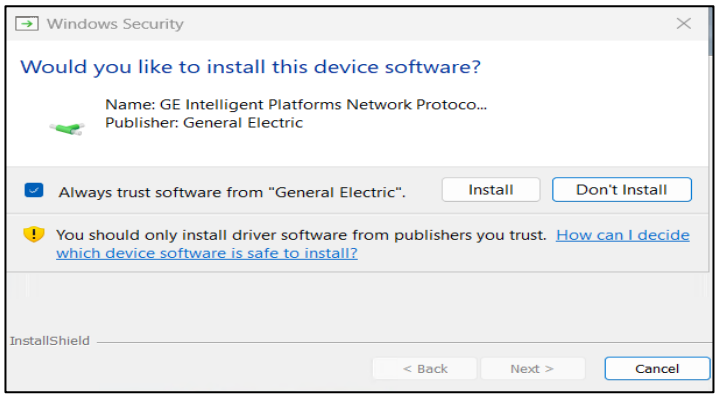
Figure 40: Install the Program



6. Allow the installation to progress (may take 20+ minutes).

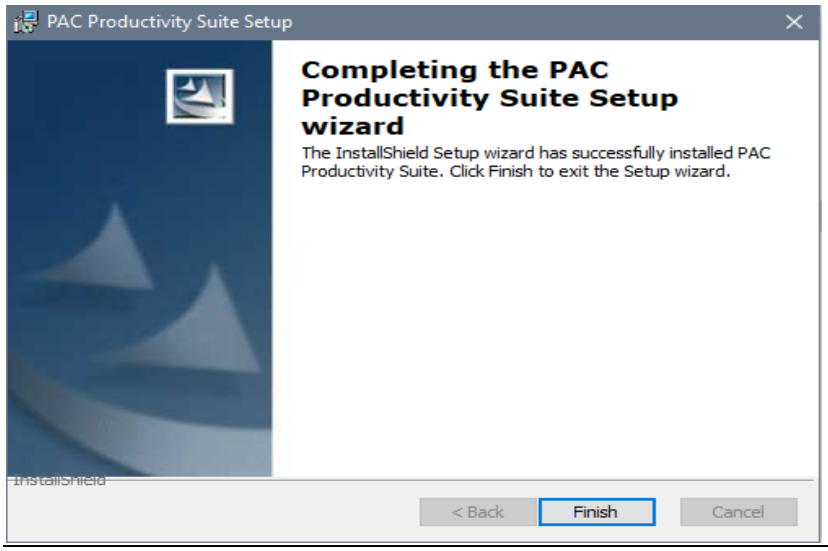
7. Install the **GE Intelligent Platforms Network Protocol Driver** when prompted.
8. Choose whether to always trust software from **General Electric.**
9. Click **Install** to begin installation.

Figure 41: Install



10. When prompted, click Finish to complete the installation.

Figure 42: Complete Setup



11. Reboot the workstation if requested.
12. The application server is ready to be used. If the installer does not request a restart, this is normal—the application server is still fully installed.

1.7 Product Authorization

A new installation of Logic Developer - PLC comes with a 4-day trial period with full access to all Logic Developer - PLC features. This trial period can be overwritten by installing a license, but it will resume if the added license is revoked or expires during the 4-day trial period.

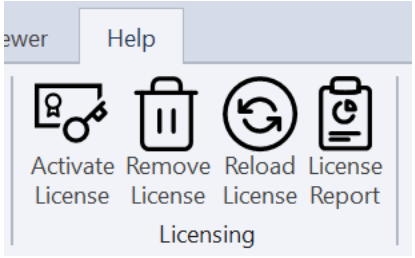
1.7.1 Automatic License Activation

Customers can license their copy of Logic Developer – PLC using Emerson's Entitlement and License Manager software. There are two methods to initiate the activation wizard: from within the application (PPS) or from the Entitlement and License Manager itself.

During or following the trial period of PAC Machine Edition, customers can select the **Activate a License** button (located under the Help menu).Figure 43) to initialize the License Activation screen from the Entitlement and License Manager and follow the activation wizard's prompts. This section will demonstrate how to license PPS from within the application.

Alternatively, customers can open Entitlement and License Manager directly and activate their copy of PAC Machine Edition. For more information on using Entitlement and License Manager, please refer to the Entitlement and License Manager User Manual (GFK-3104).

Figure 43: Activate a License Button



Activate License: Launches the License and Entitlement Manager. (If not installed, the software will prompt users to install the manager.)

Remove License: Launches the License and Entitlement Manager. (If not installed, the software will prompt users to install the manager.)

Reload License: Reloads a license from the license manager service running on the machine. If you update your license with the License and Entitlement Manager, then reloading will retrieve the latest license changes that were made to your license.

License Report: Displays a License Report for the local machine. (Instructions are in the next section.)

1.7.2 License Report

PPS has a built-in license feature reporting system. To see which PAC software features are licensed on the local machine, complete the following steps.

Navigate to the **Help** menu.

1. Select **License Report**.

The following license report will display the software status on the local machine.

Figure 44: License Report

License Report

License:	[redacted]

PME Features	Status
PACSystems RX3i and RX7i	Licensed
PACSystems RSTi-EP	Licensed
Series 90-30 and Series 90-70	Licensed
VersaMax and Series-90 Remote I/O	Licensed
VersaMax	Licensed
QuickPanel Development	Licensed
View Development	Licensed
View Runtime	Licensed
View OPC Driver	Licensed
PC Control Development	Licensed
PC Control Runtime	Licensed
Points	Licensed (8000)

PCM Features	Status
Change Management Server	Licensed
Scheduler	Licensed
Electronic Signatures	Licensed

Section 2: Engineering Workstation

PAC Productivity Suite Engineering Workstation enables you to develop and configure your process system. An Engineering Workstation installation includes the following:

- Logic Developer
- HMI/SCADA CIMPLICITY (with or without SQL Server)
- EGD Tools

When you install an HMI product with Engineering Workstation, you are installing an operator console. This enables you to monitor and control the process. For more information, see “Operator Console” on page 35.

2.1 Logic Developer

PAC Logic Developer is a next-generation software for programming Emerson Controllers. Logic Developer provides all the tools to create powerful process applications. You can configure your controller hardware, create and edit logic, upload and download projects, and monitor and debug process program execution.

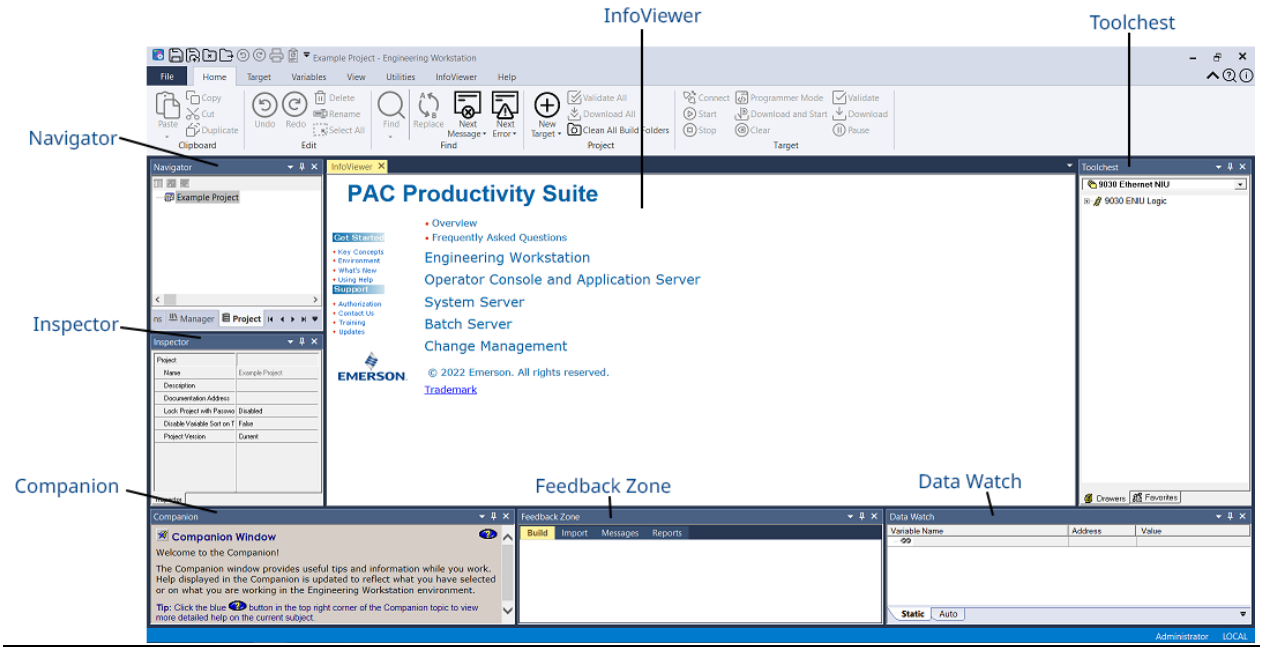
Features:

- Function Block Diagram (FBD) editor
- Hardware Configuration
- Ladder Diagram (LD) editor
- Structured Text (ST) editor

Logic Developer is a complete solution for automation application development in one package. Logic Developer has an integrated development environment and tools. You spend more time building applications; less time learning the software.

The following illustrates a Logic Developer project:

Figure 45: PPS Interface



2.1.1 Projects

Before creating a Logic Developer project, consider:

The primary components your project will contain.

The Emerson Controller your project will run on.

With Logic Developer, you can build multiple projects for your requirements.

Want to know more? *See the Projects section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "projects" and choose "Projects: an Overview".*

2.1.2 Tools

Project development is supported by various tools, each of which is opened with a button on the Tools toolbar.

Tool descriptions:

Navigator: A docking tool window with a set of tabs displaying information about your development system in a hierarchical tree structure, similar to Windows Explorer.

Feedback Zone: A docking window displays several types of output information generated by Logic Developer.

Inspector: Lists properties and current settings for a selected object or element.

Data Watch: A run-time debugging tool to monitor and edit variable values.

Toolchest: A powerful storehouse of objects you can add to your project. You can drag most items directly from the Toolchest into Logic Developer editors.

Companion: Provides useful tips and information while you work.

InfoViewer: An embedded Web browser that displays online help, reports, and documentation associated with a project or target.

Want to know more? *See the Tools section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "tools" and choose "Tools Toolbar".*

2.1.3 Variables

The Variables tab of the Navigator contain variables. A variable is a named data storage space. A variable name represents a memory location in the target Controller with the variable's Ref Address property value.

Want to know more? *See the Variables section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "variables" and choose "Variables: an Overview".*

2.1.4 Options

The Options tab of the Navigator contains option and preference settings. Options are organized into folders and pages.

Want to know more? *See the Options section in the PAC Logic Developer: GettingStarted manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up"options" and choose "Options tab (Navigator)".*

2.1.5 Targets

A target represents a run-time destination of the program(s) developed with Logic Developer. Each target contains all components for that target. PAC Productivity Suite Logic Developer supports the following Emerson families of Controllers:

- PACSystems RX7i
- PACSystems RX3i Rack-Based Controller with a peripheral Ethernet module (IC695ETM001)

Note: *PACSystems RX3i rack-based require a peripheral Ethernet module (IC695ETM001) be present in the rack. PAC Productivity Suite is not supported on RX3i embedded Ethernet interfaces.*

A target is present in a project when you use a template to create the project. A project can contain multiple targets.

One target is required for each Controller in your project, except with CPU redundancy. In this case, one target contains a Primary Hardware Configuration and a Secondary Hardware Configuration, which correspond to the primary Controller and secondary Controller.

Want to know more? *See the Targets section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "targets" and choose "Targets: an Overview".*

Communications with a PACSystems is required for storing and loading programs or monitoring data values and Controller Status. Connect to a Controller from Logic Developer over a serial, Ethernet, or modem connection, depending on the Controller's capabilities.

Target Controller:

- Validates your targets
- Works offline or online with a Controller.
- Uploads from or downloads to a Controller.
- Sets a Controller to Run or Stop mode while online in programmer mode.

Want to know more? *See the Interacting with a Controller section in the PAC Logic: Developer Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "interacting" and choose "Working with Targets".*

2.1.6 Hardware Configuration

Logic Developer supports PACSystems Controllers with their respective CPUs, racks, and modules. The Logic Developer Hardware Configuration (HWC) enables you to configure target equipment.

Want to know more? *See the Hardware Configuration section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "Hardware Configuration: an Overview".*

2.1.7 Engineering Workstation Help

Engineering Workstation includes detailed online help to access specific help topics while working. Use the InfoViewer or Companion to access help.

Want to know more? *See the Engineering Workstation Help section in the PAC Logic Developer Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "help" and choose "Finding information in the Help".*

2.2 CIMPLICITYTM

- Windows-based HMI/SCADA component of General Electric®'s family of software automation products.
- Scalable from a Human Machine Interface (HMI) to a fully networked.
- Supervisory Control and Data Acquisition (SCADA) system.
- The networking capabilities achieves integration levels that virtually eliminate redundant configuration in a network.
- Based on a client–server architecture with Servers and Viewers.
- Flexibility to build a larger system with multiple smaller nodes without having to purchase expensive server hardware.

2.2.1 Servers

- Collect, distribute data

2.2.2 Viewers

- Connect to Servers
- Full access to collected data to view and control actions

Section 3: EGD

Ethernet Global Data (EGD) is the primary Ethernet-based peer-to-peer communications protocol for data and command exchanges for Emerson IP Controllers. EGD enables repeated transmission of data exchanges from a Controller (producer) to other devices such as HMIs (consumers). A producer supports several exchanges, and any of these can be configured to be sent to a specific consumer (unicast), to multiple consumers in a group (multicast), or to all consumers on a network (broadcast).

The primary advantages of EGD are in distributed control applications that consist of multiple Controllers with a supervisory layer consisting of HMI/SCADA nodes sharing a common Ethernet network. Controllers produce data that interested consumers (like an HMI) collect in configurable sets of transmitted data packets.

PAC Productivity Suite has three EGD tools to communicate between

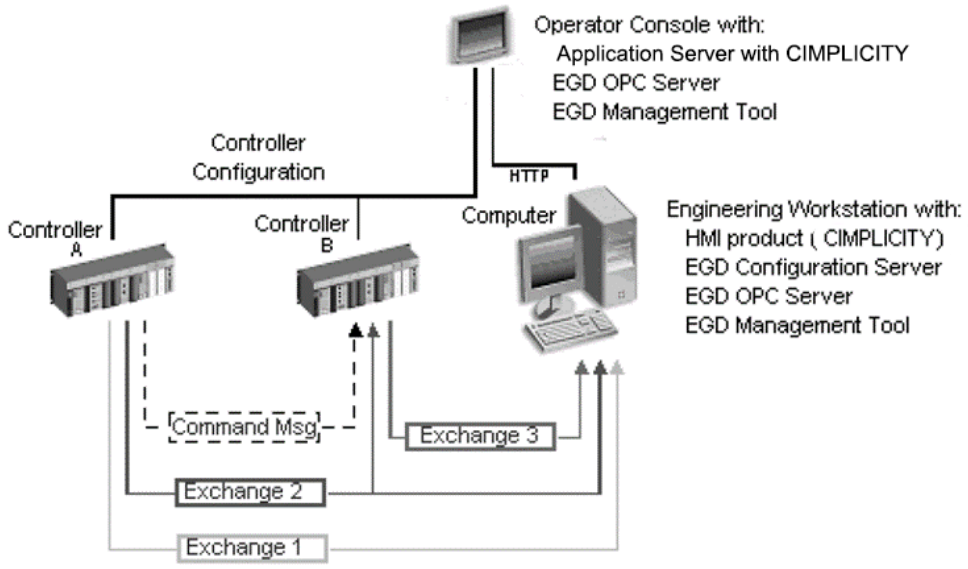
Engineering Workstation and your HMI products:

- EGD Configuration Server
- EGD Management Tool
- EGD Management Edition OPC Server

Distributed Control

The following diagram demonstrates how EGD works. There are four devices in the Ethernet Global Data exchange: two PACSystems Controllers, a computer running Engineering Workstation, and an Application Server with CIMPLICITY..

Figure 46: Distributed Control System



Controller A produces Exchanges 1 and 2 and consumes none. Controller A's logic triggers an event to generate a Command message to Controller B.

Controller B produces Exchange 3 and consumes Exchange 2.

The computer produces no exchanges and consumes Exchanges 1 through 3. Exchange 1 is unicast. Exchange 2 multicast, where a single produced

exchange is subscribed to by more than one consumer.

The configuration of each device is available in the Configuration Server on the computer (can be located on any computer on the network). The EGD Management tool generates EGD status and communication statistics.

Note: *PAC Productivity Suite supports redundant supervisory networks and Run Mode Store (RMS). Redundant supervisory networks enable a redundancy connection between operator console(s) and Logic Developer. RMS automatically synchronizes all EGD exchanges in the EGD Configuration Server*

Want to know more? *In the EGD Management Edition OPC Server online help, search for "Supporting Redundant Supervisory Networks for PAC Productivity Suite". In the Engineering Workstation online help index, look up "Run Mode Store (RMS)".*

3.1 EGD CONFIGURATION SERVER

Central repository for all EGD nodes on a network to expose their producer and consumer configuration files.

Enables each device configuration tool to store EGD configuration information, which can be shared with other information-requesting tools. Configuration

information is shared in a file repository with an XML schema, representing EGD configuration.

Can be installed on the same computer with configuration tools or different computer.

3.1.1 Device Configuration tool

Configures entire device and EGD

Transfers EGD configuration information to or from the Configuration Server following its workflow, but adhering to the EGD configuration style

Validates the device configuration and EGD Reports inconsistencies

Note: *If EGD Configuration Server is removed or is no longer accessed by the EGD Management Edition OPC server, all configuration to run the EGD OPC server can be saved as a binary file (.EGD extension), or a .CSV file, regardless of whether the configuration source is manual or extracted from ProducedData.xml files. In both file types, structure variable information is also saved.*

For more information, refer to the EGD Management Edition OPC Server online help.

Want to know more? *See the Ethernet Global Data (EGD) section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "EGD Configuration Server: Integration with Logic Developer".*

3.2 EGD MANAGEMENT TOOL

The EGD Management tool (EMT) is optional and has these features:

Presents graphical view of the hierarchical and topological view of the EGD network with animation for data flow, and health monitoring exceptions Provides offline reporting of configuration conflicts and statistics to analyze the EGD network

Monitors online transmission errors health

Launches device configuration tool to edit device EGD configuration Provides online mode for EGD health overview. In this mode, EGD command messages gather statistics and health information from each capable EGD device.

Want to know more? See the Ethernet Global Data (EGD) section in the PAC Logic Developer: Getting Started manual (GFK-2485Q) or, in the Engineering Workstation online help index, look up "EGD Management tool".

3.2.1 EGD MANAGEMENT EDITION OPC SERVER

Also named EGD OPC Server v7.40 or greater

Provides interface and communications protocol between the EGD service and your process control software

Enables HMI products to collaborate with other EGD-enabled products

Exposes EGD data to third-party OPC clients

Acts as an EGD data consumer: it can receive, process, and make use of all EGD samples sent to the host computer with unicast, multicast, or broadcast Automates its configuration with information stored on the common EGD

Configuration Server. For more information, see “EGD Configuration Server” on page 33.

The EGD Configuration PowerTool configures how the OPC Server consumes data from the target producers. The EGD Management tool can be accessed from the PowerTool. For more information, see “EGD Management Tool” on page 34.

For more information about the EGD OPC Server, see the EGD Management Edition OPC Server online help.

Section 4: Operator Console

PAC Productivity Suite operator consoles monitor and control a process at run time. Operator consoles includes a CIMPLICITY development viewer.

Want to know more? *See the HMI/SCADA CIMPLICITY online Help.*

4.1 RUNNING AND ONLINE SYSTEM MONITORING

Enable and test PAC Productivity Suite Engineering Workstation.

On a PAC Productivity Suite operator console, enable and test your system as follows:

a. Start the HMI run time to monitor the overall process control system:

b. Start the Alarm Viewer for alarm monitoring.

c. Verify the validity of the HMI faceplates and graphics.

d. Verify that alarms are being reported to the Alarm Viewer and that alarm acknowledgments are being received by the Controllers.

e. Test the validity of the Controller, network, and I/O bus redundancy.

Want to know more? *In the Engineering Workstation online help index, look up "Engineering Workstation". See the HMI/SCADA (CIMPLICITY) online Help.*

Section 5: Application Server

The PAC Productivity Suite Application Server provides a client/server architecture. PAC Productivity Suite HMI/SCADA CIMPLICITY enables your process system to integrate with a CIMPLICITY application.

5.1 CIMPLICITY

A PAC Productivity Suite Application Server with HMI/SCADA CIMPLICITY includes:

- HMI/SCADA CIMPLICITY with faceplates
- EGD Management Edition OPC Server
- EGD Management tool (EMT)

Want to know more? *See the HMI/SCADA (CIMPLICITY) online Help. Also, in the Engineering Workstation online help index, look up "EGD Management Edition OPC Server connection" and "EGD Management tool."*

Section 6: Change Management

PAC Change Management is a powerful, flexible automation system management tool to protect and coordinate all your projects throughout your system's life cycle. Version control, centralized storage, security, automatic backups and more are all included.

PAC Change Management provides:

- **Centralized Storage & Version Control:** Tracks projects and safely stores previous versions. This ensures that everyone uses the correct files and databases, and virtually eliminates work loss.
- **Access Control:** Allows only users with approved security to access, modify projects
- **Audit Trailing:** Tracks who did what, when, and why
- **Scheduler:** Enables automatic completion of repetitive tasks such as backups and compares
- **PAC Software support:** Integrated with other PAC software to provide a complete solution with Logic Developer, CIMPLICITY,.
- **Third-party project support:** Configured for variety of popular automation products from Rockwell, Siemens, Schneider, Modicon ProWORX, and Fanuc CNC
- **Reporting Tools:** Generate detailed audit trail reports
- **Electronic Signatures:** For regulated companies. Provides an extra level of control by requiring signatures for changes made to projects.

6.1 USING PAC CHANGE MANAGEMENT FOR THE FIRST TIME

When using PAC Change Management for the first time, the administrator must set up users and assign passwords to enable them to access the PAC Change Management database on the server.

For detailed information, see sections To install the PAC Change Management Server and To install the PAC Change Management Client.

Using PAC Productivity Suite with Change Management

1. Launch **PAC Productivity Suite**. The Change Management Log On dialog appears.

1. Log on as “Administrator”.

Leave the password blank. For Domain, select the network domain of the PAC Change Management Server, if required. For Server, enter the PAC Change Management Server computer name.

Not sure where server is located? Click **Browse Network** to see available computers or click **Scan for Servers** to scan the network (may take several minutes).

Click **OK**.

2. If asked to select a Theme, choose **Change Management**, then click OK.

Themes are pre-configured sets of tools, toolbars, and other options for a specific product or type of user.

3. Check out the Access Control folder.

In the Manager tab of the Navigator, right-click the Access Control folder, and choose **Check Out Access Control**. Check out this folder to edit and configure users, groups, permissions.

4. Set up a password for the Administrator user.

Create a unique password for the Administrator user in the Access Control folder. This user always has full access to PAC Change Management and databases.

If you do not create a password for this user, anyone can log in as an Administrator.

For details on configuring Access Control, see Chapter 4 in PAC Change Management for PAC Productivity Suite Getting Started (GFK-2486Q), or look up “Access Control: an Overview” in the PAC Change Management online help.

5. Recommended: Add users.

Add users to the Access Control folder and assign them unique names and passwords. The users you configure are associated with the Server you are logged on to.

6. Recommended: Set up groups for your users.

After creating groups, configure their access permissions, then assign users to groups.

7. Perform Product and Site-specific Modifications.

Depending on installed custom project modules, you may need to perform site- specific modifications. See the Release Notes tab for the Change Management product in Important Product Information document (IPI), PME_IPI_for_PPS.chm. A link to this document is in the root folder of the installation CD.

Important:

After performing site-specific modifications, check in all changed setting files under the "Custom Project Settings" folder in the Navigator. Do this only once; other Change Management Clients automatically acquire updated product type settings when connecting to the Change Management Server.

8. Check in the Access Control folder.
9. Exit PAC Change Management.

Users added to the Change Management Server can log in from any client. When site-specific modifications are complete, check in all changed setting files under "Custom Project Settings" folder in Manager tab of the Navigator. You can do this from only one PAC Change Management client.

6.2 CENTRALIZED STORAGE & VERSION CONTROL

Version control is PAC Change Management's most important feature. With version control, all project and PAC Change Management data is stored in a central location. You can:

- Ensure that only one user makes changes to an item or project at a time. Track who is currently working on an item or project.
- Safely store previous project versions.
- Roll back a project to a previous version.

6.3 ACCESS CONTROL

Access Control is PAC Change Management's security tool. You can: Organize groups of users.

- Allow or disallow group access to projects stored on the PAC Change.
- Management Server.

- Allow or disallow group Toolchest drawer access.
- Allow or disallow groups from performing operations in PAC Change.
- Management.

6.4 AUDIT TRAILING

Audit trailing enables you to:

- Track actions performed in your process system.
- Add a record to audit trail database when specific actions occur. Generate audit trail reports for history of changes, actions.
- View audit trail database in a compatible database application.

6.5 CUSTOM PROJECT SUPPORT

PAC Change Management supports Waltz*, Process Window*, native PAC Productivity Suite applications, and other applications. To manage other applications, add them as custom products.

Predesigned custom product modules are available with PAC Change Management. You can select individual modules in the “Support Product Modules” item under the “Manager Client” item when installing PAC Change Management. Otherwise, create a basic support module for a new third-party application with the Add Custom Product Type Wizard.

6.6 Additional Support

For support and information, visit Emerson’s support link located at the end of this document. The files for this manual and other related documentation are available there. Additional region- and language-specific websites and telephone numbers are found there as well.

Contact Information and Support

Questions? We are here to help.

Before starting a case or making a call, try searching our Knowledge Base website – it might have the answer you need right away.

If you have a question, try the following:

Search our Knowledge Base	Open a Support Ticket	Register for a Customer Account
pacsystems.co/knowledge	pacsystems.co/support	pacsystems.co/signup

Other Helpful Links

Customer Center Home Page	Commercial Website	Contact Information
pacsystems.co/customercenter	pacsystems.co/commercial	pacsystems.co/contactus

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