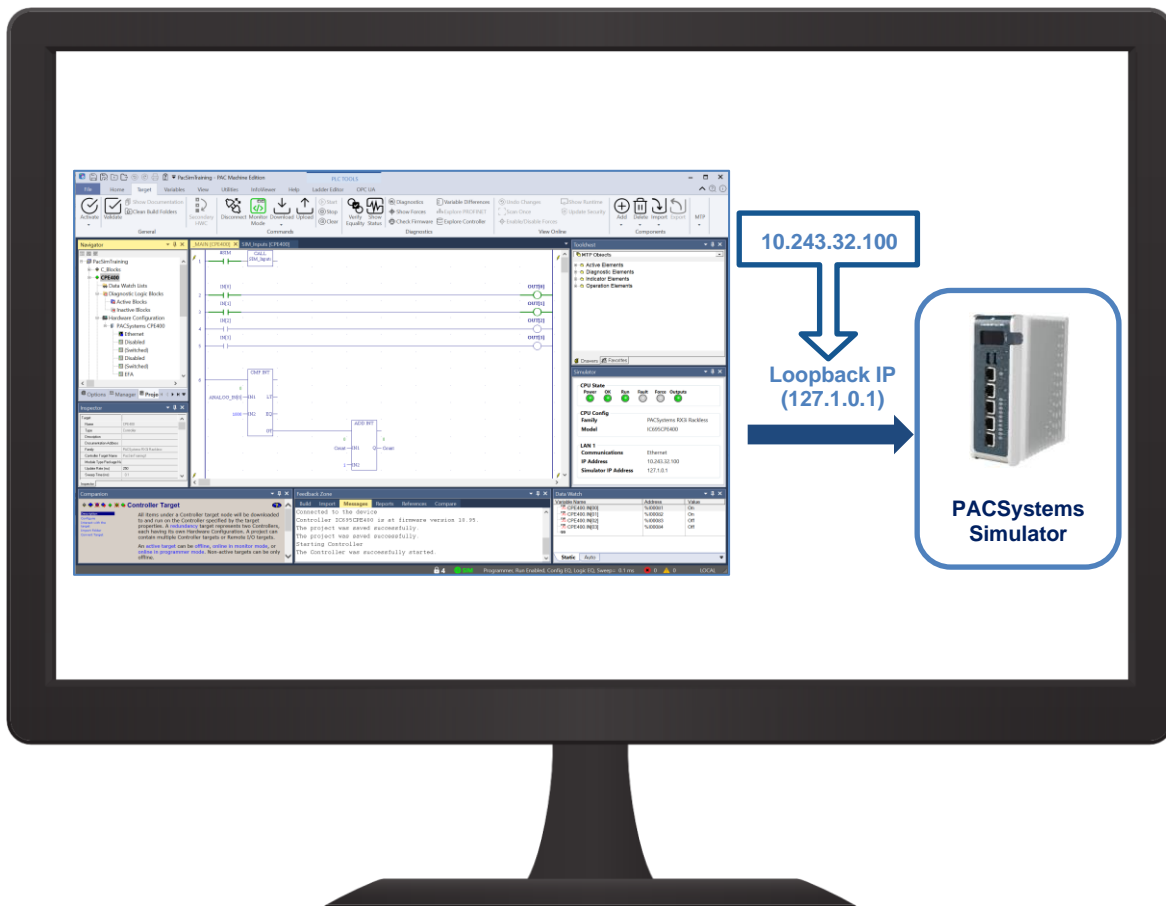# PACSystems™
Simulator
Version 1.0

Overview

The PACSystems Simulator provides end users with the ability to modify, validate, and test logic for a PACSystems CPU without requiring controller hardware. The PACSystems Simulator supports the following models:

- RX3i IC695CPE302/305/310/330
- RX3i Rackless IC695CPE400/CPL410
- RSTi-EP EPXCPE205/210/215/220/240

The PACSystems Simulator is included with PAC Machine Edition 10.6 or later. PAC Machine Edition Professional license is a requirement to support PACSystems Simulator.

Current Release Information

Component		Version Number	Date	Comments
PACSystems Simulator	Software	1.0	Nov 2024	Initial Release
PACSystems Simulator	Simulated Firmware	11.0		
PAC Machine Edition	Software	10.6		
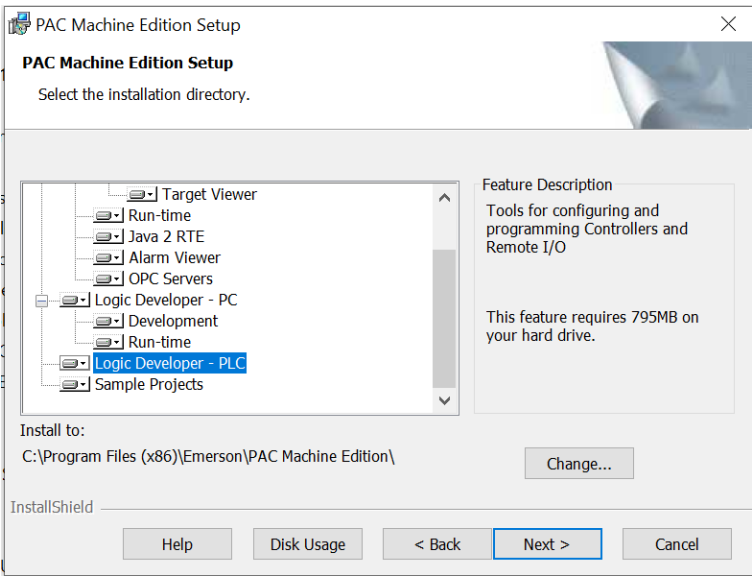
Release History
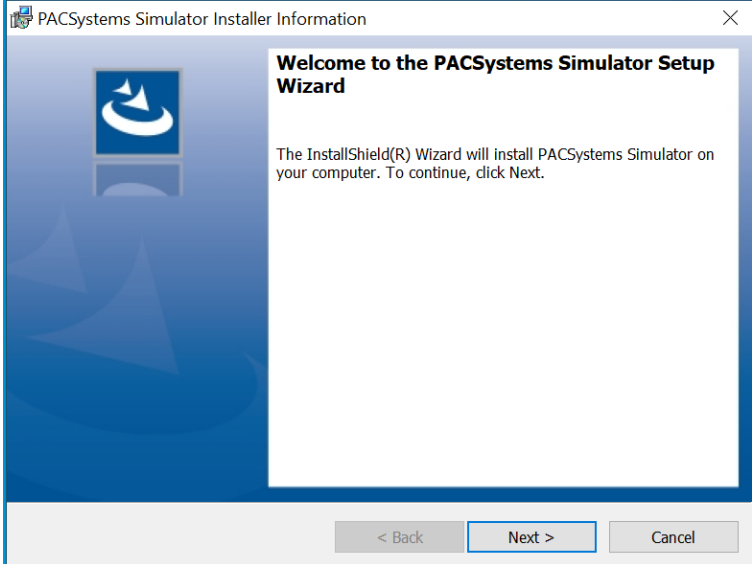
Product(s)	Date	Comments
PACSystems Simulator	Nov 2024	Initial Release

Functional Compatibility

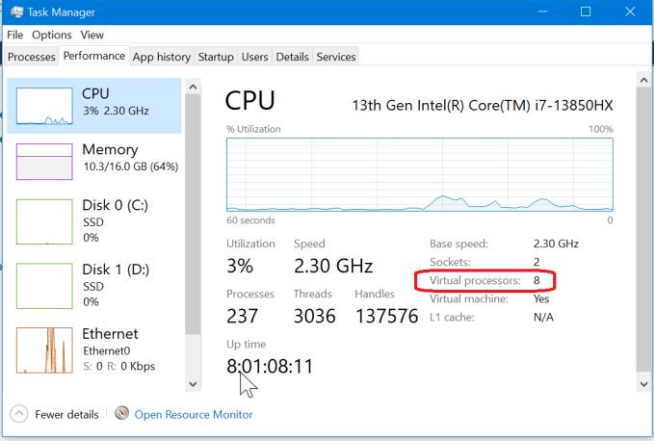| Subject	Description
Programmer Version Requirements	PACSystems Simulator is supported on PAC Machine Edition Logic Developer PLC 10.6 or later.
Supported Operating Systems	• Microsoft Windows 10 • Microsoft Windows 10 IoT Enterprise • Microsoft Windows 11 • Microsoft Windows Server 2019 • Microsoft Windows Server 2022

Getting Started

Subject	Description

Installing	PACSystems Simulator can be installed with **PAC Machine Edition (PME)** or with a **separate installer** from SFDC.
	
	Installed with PME:
	1. Run **PACSetup.exe** on PME Install ISO (as Admin).
	2. Choose **Install Machine Edition 10.6**
	3. Go through the usual PME Installer screens
	    a. Enable installation of **Logic Developer – PLC**
	4. Click the **Install** button
	    a. PACSystems Simulator will be installed (or upgraded) without additional prompts

Separate Installer:
1. Download the **PACSystems Simulator 1.0** installer from Salesforce
2. Run that installer (as Admin)
3. Agree to the EULA
4. Click the **Install** button
   a. PACSystems Simulator will be installed (or upgraded)

Note: Both installation methods will upgrade PACSystems Simulator but **not** downgrade.

PC/VM Requirements

Subject	Description
Minimum Hardware	Using the PACSystems Simulator software in conjunction with PAC Machine Edition requires significantly more CPU resources than just running PAC Machine Edition by itself. The **minimum** PC/VM resources for using PACSystems Simulator are: Small to Medium-sized project, running one instance of PME and one simulator: • CPU with at least 2 logical processors/cores • 8 GB of RAM Large-sized project, running one instance of PME and one simulator: • CPU with at least 4 logical processors/cores • 16 GB of RAM The **recommended** PC/VM resources for using PACSystems Simulator are: • CPU with at least 4 logic processors/cores
VM Manager	PACSystems Simulator is supported on VMs managed by the following VMWare products: • VMWare Workstation Pro • VMWare ESXi • VMWare Player

	Locating the VM on a solid-state drive is strongly recommended. VMWare Player is generally **not** recommended since it is often not possible to configure a VM running Microsoft Windows such that Windows will use more than 2 logical processors (and 4 is recommended). This can be checked using the **Performance** tab of the Windows **Task Manager** in the VM. For example:
.NET Framework	**Microsoft .NET Framework 4.7.2 Full, 64-bit** is required. If it is not yet installed, it will be automatically included during the installation of PACSystems Simulator. This may take upwards of 15 minutes on some Windows versions, with no additional progress updates while it is being installed, and a reboot may be required to complete its installation.

Problems Resolved by this Release

Subject	ID code	Description
N/A	N/A	Initial Release of the PACSystems Simulator

Operational Notes

Subject	Description
N/A	Not applicable for the Initial Release of the PACSystems Simulator.

Restrictions and Open Issues

Subject	ID code	Description
Multiple Simulators		This release supports only one simulator at a time. Running multiple simulators simultaneously may lead to degraded performance and potential disconnections for all instances.
Reset Window Position	DE12113	The "Reset Window Position" feature does not return the "Simulator" window to its default settings. While the window's functionality remains intact and can be moved to a preferred location, it will not revert to its original size and position as it was when PME was first installed on a clean PC.

Subject	ID code	Description
CPE2xx C Blocks Calling strerror_r() Not Functional	DE11962	The strerror_r() C function does not work on the simulated CPE2xx series. Library parameters within the C toolkit cause the strerror_r() function to be a different version than is supported by the CPE2xx simulator. It has been verified that even though the function compiles, there is no operation.

Product Documentation

PAC Machine Edition Logic Developer – PLC Getting Started Guide   GFK-1918

PACSystems™ RX3i and RSTi-EP CPU Reference Manual   GFK-2222

PACSystems™ RX3i and RSTi-EP TCP/IP Ethernet Communications User Manual   GFK-2224

PACSystems™ TCP/IP Ethernet Communications Station Manager User Manual   GFK-2225

PACSystems™ C - Programmer's Toolkit User Manual   GFK-2259

PACSystems™ CPU Programmer's Reference Manual   GFK-2950

User manuals, product updates and other information sources are available on the support site.

Contact Information and Support Guide

Questions? We are here to help.

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

If you have a question, try the following steps:

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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