

▶ LabVIEW[™] NXG Roadmap

Next Release Includes:

Core Editor Enhancements

- Debug using conditional breakpoints on the most common wire datatypes
- Customize the Class G-type wire pattern
- Create abstract messages in Actor Framework applications

Interoperability

- Call Python scripts
- Enter data into Microsoft Word templates

User Interfaces

- Dynamically display images on your front panel
- Utilize additional user-interface properties and events

Hardware Support

- Gain initial support to deploy to CompactRIO with NI-DAQmx and PXI systems running NI Linux Real-Time OS
- Quickly retarget code and resources to different Real-Time and FPGA-based hardware models

Real-Time Programming

- Implement deterministic applications on a subset of NI hardware with LabVIEW NXG Real-Time
- Acquire NI-DAQmx measurements on CompactRIO

FPGA Programming

- Acquire FPGA measurements on CompactRIO with most common C Series module families (analog input, analog output, digital I/O)
- Receive edit-time notification of whether or not palette items are supported within Clock-Driven Logic (CDL)

- Support multiple measurement channels with FPGA I/O nodes
- Program easier with I/O module property configuration and portability
- Support programming outside the CDL with FPGA resources (FIFOs, memory)

Software Engineering

- Document and generate class-based architectures with the VI Technologies UML Class Editor
- Add File menu, Help menu, and Tools Launcher plug-ins
- Optimize project command line interface (CLI) operations, including mass save and creating caches

Web Technology

- Efficiently deploy web applications to the NI Web Server
- Integrate third-party HTML-based controls on the panel
- Enjoy improved JavaScript language integration on the diagram
- Take advantage of additional string-parsing nodes on the diagram
- Secure LabVIEW Web services more easily with encryption using secure HTTP

Distributed Applications

- Debug remote executables
- Build packages for LabVIEW NXG example and template projects using NI Package Builder

Near Future Release:

Core Editor Enhancements

- Create dynamic plug-in architectures using additional VI Execution Control functionality
- Probe elements within classes and clusters for improved debugging

Interoperability

- Call .NET assemblies saved outside the Global Assembly Cache

User Interfaces

- Customize tree behavior using additional events and properties
- Specify numeric representation with additional formatting options

Hardware Support

- Access dynamic signal acquisition C Series modules from CompactRIO FPGA

Real-Time Programming

- Quickly get started with I/O using NI-DAQmx soft front panels
- Set up and configure NI real-time hardware on SystemDesigner

FPGA Programming

- Utilize a new task-based I/O API on FPGA, such as NI-DAQmx, for configuring I/O tasks on CompactRIO
- Take advantage of simpler FPGA resource (FIFOs, memory) configuration and portability

Future Release Features:

Core Editor Enhancements

- Abstract LabVIEW Real-Time Module code with object-oriented programming
- Discover add-ons within the IDE
- Perform advanced signal processing with time frequency, time series, and wavelet analysis
- Access advanced technical data management solution functionality, such as asynchronous write operations

Interoperability

- Support creating OPC Unified Architecture (UA) clients and servers in LabVIEW with the LabVIEW OPC UA Toolkit
- Interface with MATLAB[®] software code on real-time targets

User Interfaces

- Create resizable UIs through a configuration-based workflow
- Integrate web technology into your desktop UI

Hardware Support

- Use RF instrumentation
- Take advantage of complete FlexRIO support
- Utilize PCI/PXI reconfigurable I/O FPGA support

Real-Time Programming

- Perform object-oriented programming using the LabVIEW Real-Time Module
- Implement additional network communication APIs
- Utilize a tag-based, deterministic-communication API

FPGA Programming

- Obtain new tools for FPGA hardware debugging
- Define socketed component-level intellectual property
- Receive task-based I/O API support for R Series, FlexRIO, and USRP (Universal Software Radio Peripheral) hardware

Software Engineering

- Choose from additional CLI options
- Run static code-analysis tools

Web Technology

- Debug WebVIs in IDE
- Create RESTful Web Services in LabVIEW NXG

Distributed Applications

- Define and manage exact package dependency versions used by the project
- Build LabVIEW applications into DLLs
- Publish packages directly to SystemLink[™] software feeds