




LabVIEW Connectivity

The LabVIEW Connectivity course teaches you to identify the components of integrated systems and implement networking technologies for your applications. You learn how to extend your application functionality and reduce development time by leveraging the capabilities of other applications using connectivity technologies such as DLLs, ActiveX, databases, and the Internet.

 Classroom: 2 days

 On-Site: 2 days

 Virtual: four 4-hour sessions

 Online: self-paced

Coursework Goals

- Identify the components, benefits, and use cases of different network communication options
- Design applications using different networking technologies and architectures
- Programmatically control LabVIEW VIs and applications using the VI Server
- Share data between LabVIEW and other applications over a network
- Create and deploy web services using LabVIEW
- Use the LabVIEW Database Connectivity Toolkit to communicate with databases
- Use LabVIEW with ActiveX and .NET
- Use DLLs with LabVIEW
- Use UDP and TCP/IP VIs to communicate with other applications locally and over a network

Prerequisites

- LabVIEW Core 2 or equivalent experience

NI Products Used

- LabVIEW Professional Development System Version 2010 or later
- LabVIEW Database Connectivity Toolkit

Coursework Topics

Calling shared Libraries in LabVIEW

Learn how to use LabVIEW to call code written in other languages. Also learn how to use the Call Library Function Node to call DLLs on Windows. Topics include shared library overview, calling shared libraries, and using the import shared library wizard.

Using the VI server

The VI Server is an object-oriented, platform-independent technology that provides programmatic access to LabVIEW VIs. Discover how to access the VI Server through block diagrams, ActiveX technology, and the TCP protocol to communicate with VIs and other application instances so you can programmatically control VIs and LabVIEW.

Using ActiveX and .NET Objects in LabVIEW

Learn how to extend your application functionality by accessing other Windows applications using .NET and ActiveX technologies and event programming. Topics include using ActiveX controls, servers, and documents in LabVIEW and calling the LabVIEW ActiveX server from other languages

Connecting to Databases

Explore database terminology and demonstrate database programming in LabVIEW with topics that include complying with database standards, connecting to a database, and performing standard database operations.

Broadcasting Data and serving Data to a Client

Explore how to use the User Datagram Protocol (UDP) as a means for communicating short packets of data to one or more recipients on a network and implementing the broadcast model in LabVIEW. Additionally, this lesson describes how to use TCP/IP to communicate and share data over single and interconnected networks. Learn to create diverse systems that share information using the client/server model of networked applications.

Using LabVIEW Web services

Get an introduction to LabVIEW web services and discover how to use LabVIEW to provide a standard web-based interface for communication with a LabVIEW application. Learn how to use LabVIEW as both a client and server for your web service.

Suggested Next Courses:

- LabVIEW Core 3
- LabVIEW Performance
- Object-Oriented Design and Programming in LabVIEW

Validate Your Expertise With an NI Certification

CLD | Certified LabVIEW Developer Certification

Prerequisite: CLAD

Format: Application development


Duration: 4 hours


Location: NI branch office, training center, or on-site at your location


Recertification Process

Recertification Interval: 3 years

About Haliotech

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