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GPIB-1014

LabVIEW™ Release Notes

Version 7.0

These release notes contain installation and uninstallation instructions for LabVIEW, system requirements for the LabVIEW software, and known issues with LabVIEW 7.0.

If you are a new user, complete the exercises in the *Getting Started with LabVIEW* manual to familiarize yourself with the LabVIEW environment.

If you are upgrading from a previous version of LabVIEW, read the *LabVIEW Upgrade Notes* included with the upgrade package before you continue with this installation. You must consider several issues before you convert VIs for use in LabVIEW 7.0.

Read the *Required System Configuration* section of this document before you install LabVIEW and then follow the instructions in the *Installation* section. After you install LabVIEW, read the *Where to Go from Here* section for information about getting started with LabVIEW.

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Required System Configuration

Table 1 describes the system requirements you need to run LabVIEW 7.0.

Table 1. System Requirements for LabVIEW 7.0

Platform	Media and System Requirements	Important Notes
All platforms	<p>LabVIEW requires a minimum of 128 MB of RAM and a screen resolution of 800 × 600 pixels, but National Instruments recommends 256 MB of RAM and a screen resolution of 1,024 × 768 pixels. (UNIX) LabVIEW requires a minimum of 64 MB of RAM, but National Instruments recommends 256 MB of RAM.</p> <p>When you deploy an application you build, the LabVIEW Run-Time Engine requires a minimum of 64 MB of RAM and a screen resolution of 800 × 600 pixels for applications that require a screen, but National Instruments recommends 256 MB of RAM and a screen resolution of 1,024 × 768 pixels.</p>	<p>LabVIEW and the <i>LabVIEW Help</i> contain 16-bit color graphics.</p> <p>LabVIEW requires a minimum color palette setting of 256 colors, but National Instruments recommends 16-bit color or higher.</p> <p>The <i>LabVIEW Help</i> requires a minimum color palette setting of 256 colors with a screen resolution of 800 × 600 pixels, but National Instruments recommends 16-bit color or higher.</p> <p>You must have Adobe Acrobat Reader with Search and Accessibility 5.0.5 or later installed to view and search the PDF versions of all the LabVIEW manuals and Application Notes. (Mac OS) PDF links in the <i>LabVIEW Help</i> do not work with the Apple Preview viewer.</p> <p>LabVIEW uses a directory for storing temporary files. Some temporary files are large, so National Instruments recommends that you have several megabytes of disk space available for this temporary directory. You can view or change the temporary directory by selecting Tools»Options and selecting Paths from the top pull-down menu.</p> <p>(Windows) The default temporary directory is the system temporary directory, such as <code>C:\Documents and Setting\User\Local Settings\Temp</code>.</p> <p>(Mac OS) The default temporary directory is <code>/tmp/501/Temporary Items</code>, where <code>501</code> is a unique number for each login.</p> <p>(UNIX) The default temporary directory is <code>/tmp</code>.</p> <p>If LabVIEW aborts unexpectedly, it might leave files in the temporary directory. Remove old files from the temporary directory to free disk space.</p>

Table 1. System Requirements for LabVIEW 7.0 (Continued)

Platform	Media and System Requirements	Important Notes
<p>Windows 2000/NT 4.0 Service Pack 6 or later/ XP/Me/98</p>	<p>LabVIEW requires a minimum of a Pentium III or Celeron 600 MHz or equivalent processor, but National Instruments recommends a Pentium 4 or equivalent processor. National Instruments recommends that you have at least 130 MB of disk space for the minimum LabVIEW installation or 550 MB of disk space for the complete LabVIEW installation, which includes default drivers from the National Instruments Device Drivers CD.</p> <p>When you deploy an application you build, the LabVIEW Run-Time Engine requires a minimum of a Pentium 200 MHz or equivalent processor, but National Instruments recommends a Pentium III or Celeron 600 MHz or equivalent processor. The LabVIEW Run-Time Engine requires at least 25 MB of disk space, but National Instruments recommends 155 MB of disk space if you install the default drivers from the National Instruments Device Drivers CD.</p>	<p>LabVIEW does not support Windows 95.</p> <p>National Instruments recommends using Windows 2000/XP or later for developing applications and for deploying applications you build.</p> <p>You might need more memory than the recommended minimum amount of 128 MB of RAM depending on the size of the application you design in LabVIEW and the amount of data that the application manipulates.</p> <p>To use the <i>LabVIEW Help</i>, Measurement & Automation Explorer (MAX) interactive help system, and the NI Example Finder, you must have Microsoft Internet Explorer 5.0 or later.</p> <p>To view and control a front panel remotely using a Web browser, National Instruments recommends that you have Internet Explorer 5.5 Service Pack 2 or later.</p>

Table 1. System Requirements for LabVIEW 7.0 (Continued)

Platform	Media and System Requirements	Important Notes
Mac OS X	<p>LabVIEW requires System 10.2 or later.</p> <p>LabVIEW requires a minimum of a G3 processor, but National Instruments recommends a G4 or greater processor. National Instruments recommends that you have at least 280 MB of disk space for the minimum LabVIEW installation or 350 MB disk space for the complete LabVIEW installation.</p>	<p>You need to use the LabVIEW Real-Time Module to perform DAQ I/O on Mac OS X. Refer to the <i>LabVIEW Real-Time Module for Mac OS X User Manual Addendum</i> for more information about performing I/O on Mac OS X.</p> <p>You might need more memory than the recommended minimum amount of 128 MB of RAM depending on the size of the application you design in LabVIEW and the amount of data that the application manipulates. National Instruments recommends that you have at least 256 MB of RAM.</p> <p>National Instruments recommends that you use Netscape 6.0 or later or Internet Explorer 5.0 or later to view the <i>LabVIEW Help</i>.</p>

Table 1. System Requirements for LabVIEW 7.0 (Continued)

Platform	Media and System Requirements	Important Notes
<p>Mac OS 9.x or earlier</p>	<p>LabVIEW requires System 8.1 or later.</p> <p>LabVIEW requires a minimum of a G3 processor, but National Instruments recommends a G4 or greater processor. National Instruments recommends that you have at least 380 MB of disk space for the minimum LabVIEW installation or 500 MB disk space for the complete LabVIEW installation.</p>	<p>You might need more memory than the recommended minimum amount of 64 MB of RAM depending on the size of the application you design in LabVIEW and the amount of data that the application manipulates. National Instruments recommends that you have 128 MB of RAM.</p> <p>For more accurate timing, use the Apple QuickTime extension. When you use QuickTime, timing accuracy should increase from 16.6 ms resolution to approximately 1 ms resolution. System response varies depending on background applications, other extensions, networking activity, and disk caching.</p> <p>To use the LabVIEW browser plug-in to view or control front panels remotely, you need to increase the amount of memory the browser requires. Internet Explorer should have at least 15 or 20 MB of memory, depending on whether virtual memory is enabled. Netscape should have at least 40 MB.</p> <p>National Instruments recommends that you use Netscape 6.0 or later or Internet Explorer 5.0 or later to view the <i>LabVIEW Help</i>.</p>
<p>All UNIX versions</p>	<p>LabVIEW requires an X Window System server, such as OpenWindows, CDE, or X11R6.</p> <p>National Instruments recommends that you have at least 200 MB of disk space for the minimum LabVIEW installation or 300 MB disk space for the complete LabVIEW installation.</p>	<p>You might need more memory than the recommended minimum amount of 128 MB of RAM depending on the size of the application you design in LabVIEW and the amount of data that the application manipulates. National Instruments recommends at least 256 MB of RAM.</p> <p>LabVIEW does not require a specific graphical user interface (GUI) such as Motif or OpenLook because LabVIEW uses <code>xlib</code> to create its own GUI.</p> <p>National Instruments recommends that you use Netscape 6.0 or later to view the <i>LabVIEW Help</i>.</p>

Table 1. System Requirements for LabVIEW 7.0 (Continued)

Platform	Media and System Requirements	Important Notes
Sun	<p>LabVIEW runs on SPARCstations with Solaris 2.5.1 or later.</p> <p>LabVIEW requires a 500 MHz processor, but National Instruments recommends a 650 MHz or greater processor.</p>	—
Linux	<p>LabVIEW runs on Linux for Intel x86 processors with kernel version 2.0.x, 2.2x, or 2.4x. LabVIEW requires a minimum of a Pentium III or Celeron 600 MHz or equivalent processor, but National Instruments recommends a Pentium 4 or equivalent processor.</p> <p>LabVIEW runs on most major Linux distributions, such as Red Hat Linux 7.0 or later, Mandrake Linux 8.0 or later, SuSE Linux 7.1 or later, or Debian Linux 3.0 or later.</p>	<p>LabVIEW requires GNU C Library Version 2.1.92 or later (<code>glibc2</code>, also known as <code>libc.so.6</code>). You can obtain an updated <code>glibc rpm</code> for most Linux distributions on the Web or through FTP without upgrading the entire system.</p> <p>The LabVIEW Netscape plug-in for Linux, which you use to view or control front panels remotely, requires Netscape 6.x or Mozilla 1.0 or later. Netscape 4.x is not supported because it is a single-threaded application and is incompatible with the multithreaded LabVIEW Run-Time Engine.</p>

Installation

Refer to the KnowledgeBase at ni.com if you encounter errors during installation.

Windows



Note Some virus detection programs interfere with the installer. Disable any automatic virus detection programs before you install. After installation, check your hard disk for viruses and enable any virus detection programs you disabled.

(Windows 2000/NT/XP) Complete the following steps to install LabVIEW for Windows.

1. Log on as an administrator or as a user with administrator privileges.
2. Insert the LabVIEW 7.0 installation CD and follow the instructions that appear on the screen.

(Windows 98) Insert the LabVIEW 7.0 installation CD and follow the instructions that appear on the screen.



Note To modify the current LabVIEW installation or to uninstall LabVIEW 7.0, select **NI Software** in the Add/Remove Programs applet in the Control Panel. When you modify the installation, a list of National Instruments software appears. Select a product in the list to add or remove individual components or to uninstall the product. You also can remove multiple products by pressing the <Shift> or <Ctrl> key and clicking the **Uninstall** button to remove all the products you selected.

Mac OS

Complete the following steps to install LabVIEW for Mac OS.



Note Some virus detection programs interfere with the installer. Disable any automatic virus detection programs before you install. After installation, check your hard disk for viruses and enable any virus detection programs you disabled.

1. Insert the LabVIEW installation CD.
2. Run the appropriate installer program.
3. Follow the instructions that appear on the screen.

UNIX

This section describes how to install LabVIEW for Solaris 2 or Linux.

Solaris 2

Complete the following steps to install LabVIEW for Solaris 2.

1. To enable superuser privileges, enter `su root` and enter the root password.
2. Insert the LabVIEW installation CD. On Solaris, the CD automatically mounts when you insert the CD. If this feature is disabled on the workstation, you must mount the CD by entering the following command:

```
mount -o ro -F hsfs /dev/dsk/c0t6d0s2 /cdrom
```

3. If the CD was mounted automatically, enter the following command:

```
cd /cdrom/cdrom0/solaris
```

or

If you used the mount command in step 2, enter the following command:

```
cd /cdrom/solaris
```

4. Enter the following command:

```
./INSTALL
```



Note Refer to the README document in `/cdrom/cdrom0/solaris` or `/cdrom/solaris2` for custom installation instructions and other information.

5. Follow the instructions that appear on the screen.

Refer to the [Common LabVIEW Launch Errors on UNIX](#) section of this document if you encounter errors when you launch LabVIEW after installation.

Linux

Complete the following steps to install LabVIEW for Linux.

1. Log into the system as `root`.
2. Use `mount /mnt/cdrom` to mount the CD. On some systems, the CD is mounted automatically.
3. To change the current directory to the mounted CD, enter the following command:

```
cd /mnt/cdrom
```

4. To run the installation script, enter the following command:

```
./INSTALL
```

The `INSTALL` script prompts you to enter the directory where you want to install LabVIEW, which is typically `/usr/local`. The script uses `rpm` to

install on systems that support the `.rpm` format or extracts the `rpm` archives directly on other systems. You also can install the files by hand by using `rpm` (or `glint`, `gnorpm`, `kpackage`, and so on) on Red Hat or other `rpm`-based systems or by using the utilities in the `bin` directory on the LabVIEW installation CD on systems without `rpm`.

If you installed Netscape or Mozilla in the default location, the LabVIEW installer automatically installs the browser plug-in. Otherwise, to manually install the LabVIEW Netscape plug-in, install the LabVIEW Run-Time Engine, then copy `/usr/local/lib/LabVIEW-7.0/LV7NPlugin.so` to the Netscape plug-in directory.



Note Refer to the README document in `/mnt/cdrom/linux` for custom installation instructions and other information.

Refer to the [Common LabVIEW Launch Errors on UNIX](#) section of this document if you encounter errors when you launch LabVIEW after installation.

Installing LabVIEW on a Network

LabVIEW supports multi-seat licenses. Refer to [ni.com/license](#) for more information about multi-seat licenses.

If you have a license for each LabVIEW client, complete the following steps to install LabVIEW on a network.

1. Install the LabVIEW Full or Professional Development System on the server.
2. Each local computer should use its own file for LabVIEW preferences. If the file does not already exist on a local computer, you can create this text document using a text editor such as Notepad.

(Windows) The first line of `labview.ini` must be `[labview]`.

Modify the command line option of the LabVIEW icon as follows:

```
W:\labview\labview.exe -pref C:\lvwork\labview.ini
```

where `W:\labview` is the path to `labview.exe` and `C:\lvwork\` is the path to `labview.ini`.

(Mac OS X) The preference file is `LabVIEW.app Preferences` and is stored in each user home directory in the `Library:Preferences` directory.

(Mac OS 9.x or earlier) The preference file is `LabVIEW 7.0 Preferences`. Place the preference file in the `System:Preferences` folder.

(UNIX) The preference file is `.labviewrc` and is stored in each user home directory. You can specify a common preference file with the following command-line option:

```
labview -pref /path/to/labviewrc
```



Note `pref` must be lowercase. Additionally, each local computer must have its own LabVIEW temporary directory. You can specify this directory in LabVIEW by selecting **Tools»Options** and selecting **Paths** from the top pull-down menu.

3. On each computer that has National Instruments hardware, you must install the driver(s) for that device. Refer to the *Hardware Installation and Configuration* section of this document for more information about driver versions.

Hardware Installation and Configuration

All National Instruments devices include the drivers and other software you need to use the device. The National Instruments Device Drivers CD includes the drivers and other software you need to use National Instruments hardware. The drivers packaged with LabVIEW and those packaged with the devices might be different versions. Always use the latest available drivers that support the devices in your system. If you are using NI-DAQ 7.0, refer to the *DAQ Quick Start Guide for NI-DAQ 7.0* for more information about which driver version to use with the devices in your system.



Note National Instruments periodically updates device drivers. You can download the latest drivers from the National Instruments Web site at ni.com.

(Windows) Use MAX or the Add/Remove Programs applet in the Control Panel to find the version number of an installed driver.

(Mac OS 9.x or earlier) Run the Get DAQ Device Information VI to find the version number of NI-DAQ.

You should configure National Instruments hardware before you use LabVIEW.

Windows

Use MAX to confirm that the device is recognized, to configure accessories and device settings, and to run test panels to test device functionality, such as the ability to acquire and generate signals. Launch MAX by selecting **Start»Programs»National Instruments»Measurement & Automation** or by double-clicking the **Measurement & Automation** icon on the

desktop. Refer to the *DAQ Quick Start Guide for NI-DAQ 7.0* for information about using MAX to configure DAQ devices.

The way you configure virtual channels is different, depending on if you are using Traditional NI-DAQ or NI-DAQmx. Refer to Chapter 5, *Creating a Typical Measurement Application*, of the *LabVIEW Measurements Manual* or to the *DAQ Quick Start Guide for NI-DAQ 7.0* for information about configuring channels and tasks for Traditional NI-DAQ or NI-DAQmx.

Mac OS X

You need to use the LabVIEW Real-Time Module to perform DAQ I/O on Mac OS X. Refer to the *LabVIEW Real-Time Module for Mac OS X User Manual Addendum* for more information about performing I/O on Mac OS X.

Mac OS 9.x or Earlier

Use the NI-DAQ Configuration Utility to configure DAQ hardware.
Use the DAQ Channel Wizard to configure channels on devices.

Sun

The LabVIEW installer prompts you to choose the NI-488.2 driver for the GPIB hardware you are using. The installer then installs that driver automatically.



Note LabVIEW does not support the GPIB-1014 series (VME) devices or the original GPIB-SCSI box. LabVIEW does support the GPIB-SCSI-A box.

The VXI device drivers for Solaris are included with the VXI controller hardware. National Instruments recommends using NI-VISA for configuring, programming, and troubleshooting instrumentation systems consisting of VXI hardware.

Where to Go from Here

Refer to the *Getting Started with LabVIEW* manual, the *LabVIEW User Manual*, and the *LabVIEW Help* for more information about LabVIEW 7.0 features. Refer to the *LabVIEW Documentation Resources* section of Chapter 1, *Introduction to LabVIEW*, in the *LabVIEW User Manual* for more information about the LabVIEW documentation resources available from National Instruments.

Access a PDF version of the *LabVIEW User Manual* and all other LabVIEW manuals by selecting **Help»Search the LabVIEW Bookshelf**. Use the *LabVIEW Bookshelf* to search PDF versions of all the LabVIEW manuals and Application Notes.

Common LabVIEW Launch Errors on UNIX

The following table lists common errors that might occur when you launch LabVIEW for UNIX.

Error Message/Description	Possible Cause/Solution
Xlib: connection to :0.0 refused by server	<p>Possible Cause—You are trying to run LabVIEW as a user who does not have permission to open a window on the display server. You typically see these errors after you run the <code>su</code> command to temporarily become a different user, such as <code>root</code> (superuser).</p> <p>Solution—Exit the <code>su</code> command and launch LabVIEW as the login user or use the <code>xhost</code> or <code>xauth</code> commands to grant permission to open a window on the display server.</p>
client is not authorized to connect to server	
internal error during connection authorization check	

Configuring LabVIEW with the Motif Window Manager

If you use the Motif Window Manager (`mwm`), you can change environment settings so that `mwm` interacts better with LabVIEW. By default, `mwm` does not incorporate the window position requests of an application. This behavior causes LabVIEW windows, such as the **Front Panel**, **Block Diagram**, and **Context Help** windows, to appear in inconsistent locations on the screen. To change the `mwm` behavior, use the `xrdb` command to set the following `mwm` settings:

```
mwm.clientAutoPlace: False
mwm.positionIsFrame: False
```

To add the two entries, you also can edit the following file manually:

```
$HOME/.Xdefaults
```

Known Issues with LabVIEW 7.0

Refer to the `README.txt` file on the LabVIEW installation CD for information about known issues with LabVIEW 7.0 and for clarifications and additions to the LabVIEW documentation.