

# LabVIEW™ Release Notes

## Version 7.1

These release notes contain installation and uninstallation instructions for LabVIEW, system requirements for the LabVIEW software, and known issues with LabVIEW 7.1.

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 7.1.

Read the [Required System Configuration](#) section of this document before you install LabVIEW and then follow the instructions in the [Installing LabVIEW 7.1](#) 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 7.1.

**Table 1.** System Requirements for LabVIEW 7.1

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.</p> <p><b>(UNIX)</b> 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 Reader 5.0.5 or later with search and accessibility plug-ins to view and use the PDFs. <b>(Mac OS)</b> You must use Adobe Reader 6.x with search and accessibility plug-ins to view and use the PDFs.</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 <b>Tools&gt;Options</b> and selecting <b>Paths</b> from the top pull-down menu.</p> <p><b>(Windows)</b> The default temporary directory is the system temporary directory, such as C:\Documents and Settings\User\Local Settings\Temp.</p> <p><b>(Mac OS)</b> The default temporary directory is \tmp\501\Temporary Items, where 501 is a unique number for each login.</p> <p><b>(UNIX)</b> The default temporary directory is /tmp.</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 7.1 (Continued)

<b>Platform</b>	<b>Media and System Requirements</b>	<b>Important Notes</b>
<p>Windows 2000/NT 4.0 Service Pack 6 or later/XP</p>	<p>LabVIEW requires a minimum of a Pentium III or later 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 greater 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 Me/98/95.</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>, the Measurement &amp; 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 7.1 (Continued)

<b>Platform</b>	<b>Media and System Requirements</b>	<b>Important Notes</b>
Mac OS	<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 must use the LabVIEW Real-Time Module to perform data acquisition on Mac OS. Refer to the <i>LabVIEW Real-Time Module for Mac OS X User Manual Addendum</i> for more information about performing data acquisition on Mac OS.</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 Safari 1.0 or later to view the <i>LabVIEW Help</i>.</p>
All UNIX versions	<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 that you have 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 or Mozilla 1.2 or later to view the <i>LabVIEW Help</i>.</p>

**Table 1.** System Requirements for LabVIEW 7.1 (Continued)

<b>Platform</b>	<b>Media and System Requirements</b>	<b>Important Notes</b>
Sun	LabVIEW runs on SPARCstations with Solaris 7 or later.  LabVIEW requires a 500 MHz processor, but National Instruments recommends a 650 MHz or greater processor.	—
Linux	LabVIEW runs on Linux for Intel x86 processors with kernel version 2.0.x, 2.2.x, or 2.4.x. 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.  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.	LabVIEW requires GNU C Library Version 2.1.92 or later ( <code>glibc2</code> , also known as <code>libc.so.6</code> ). Most Linux vendors offer an updated <code>glibc rpm</code> for most Linux distributions on their Web sites or through FTP so you do not have to upgrade the entire system.  To view or control a front panel remotely or using Netscape, you must have Netscape 6.x or Mozilla 1.0 or later. LabVIEW does not support Netscape 4.x because it is a single-threaded application and is incompatible with the multithreaded LabVIEW Run-Time Engine.

## Installing LabVIEW 7.1

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Refer to the KnowledgeBase at [ni.com](http://ni.com) if you encounter errors during installation.

### Windows

Complete the following steps to install LabVIEW for Windows.

1. Disable any automatic virus detection programs before you install. Some virus detection programs interfere with the installation program.
2. Log on as an administrator or as a user with administrator privileges.

3. Insert the LabVIEW 7.1 installation CD and follow the instructions that appear on the screen.
4. After installation, check your hard disk for viruses and enable any virus detection programs you disabled.



**Note** To modify the current LabVIEW installation or to uninstall LabVIEW 7.1, select **National Instruments 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. Select multiple products to remove by pressing the <Shift> or <Ctrl> key while you select them and clicking the **Uninstall** button to remove all the products you selected.

## Mac OS

Complete the following steps to install LabVIEW for Mac OS.

1. Disable any automatic virus detection programs before you install. Some virus detection programs interfere with the installation program.
2. Insert the LabVIEW 7.1 installation CD.
3. Run the appropriate installation program.
4. Follow the instructions that appear on the screen.
5. After installation, check your hard disk for viruses and enable any virus detection programs you disabled.

You cannot install LabVIEW into a non-default location, but you can move the `labview` directory after you install. If you move the `labview` directory to a non-default location, LabVIEW does not uninstall and remove the directory unless you move the `labview` directory back to the default location.

## UNIX

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

### Solaris

Complete the following steps to install LabVIEW for Solaris.

1. Enter `su root` and enter the root password to enable superuser privileges.
2. Insert the LabVIEW 7.1 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 mounted automatically, enter the following command:

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

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

```
cd /cdrom/solaris
```

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

```
./INSTALL
```



**Note** Refer to the `readme.html` document in `/cdrom/cdrom0/solaris` 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. Insert the LabVIEW 7.1 installation CD. Use `mount /mnt/cdrom` to mount the CD. On some systems, the CD mounts 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 manually by using `rpm`—or `glint`, `gnorpm`, `kpackage`, and so on—on Red Hat or other `rpm`-based systems or on systems without `rpm`, by using the utilities in the `bin` directory on the LabVIEW installation CD.

If you installed Netscape or Mozilla in the default location, the LabVIEW installation program automatically installs the browser plug-in so you can view and control front panels remotely using a Web browser. Otherwise,

you can install the browser plug-in manually by installing the LabVIEW Run-Time Engine, then copying `/usr/local/lib/LabVIEW-7.1/LV7NPlugin.so` to the browser plug-in directory.



**Note** Refer to the `readme.html` 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 the National Instruments Web site at [ni.com/license](http://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)** Create a text file and save it as `labview.ini`. 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)** Create a text file and save it as `LabVIEW.app Preferences` in each user home directory in the `Library:Preferences` directory.

**(UNIX)** Create a text file and save it as `.labviewrc` 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. Also, 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 [Installing and](#)



*Configuring Hardware* section of this document for more information about driver versions.

## Installing LabVIEW Toolkits

You can purchase several add-on software toolkits for developing specialized applications. All the toolkits integrate seamlessly in LabVIEW. Refer to the LabVIEW Companion Products CD included with LabVIEW and to the National Instruments Web site at [ni.com/toolkits](http://ni.com/toolkits) for more information about these toolkits.

## Installing and Configuring Hardware

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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 all 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 or later, refer to the *DAQ Quick Start Guide for NI-DAQ 7.x* for more information about which driver version to use with the devices in your system.



**Note** National Instruments periodically updates device drivers. Refer to the National Instruments Web site at [ni.com/info](http://ni.com/info) and enter the info code `ex3m8p` to download the latest drivers.

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

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.x* for information about using MAX to configure DAQ devices.

The way you configure virtual channels depends on whether 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.x* for information about configuring channels and tasks for Traditional NI-DAQ or NI-DAQmx.

## Mac OS

You must use the LabVIEW Real-Time Module to perform data acquisition on Mac OS. Refer to the *LabVIEW Real-Time Module for Mac OS X User Manual Addendum* for more information about performing data acquisition on Mac OS.

## UNIX

The LabVIEW installation program prompts you to choose the NI-488.2 driver for the GPIB interface you are using. The installation program 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.

**(Sun)** The VXI controller hardware includes the VXI device drivers for Solaris. National Instruments recommends that you use NI-VISA to configure, program, and troubleshoot instrumentation systems that consist of VXI hardware.

## Where to Go from Here

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Refer to the *LabVIEW Bookshelf* for a list of the LabVIEW documentation resources available from National Instruments and to search PDF versions of all the LabVIEW manuals and Application Notes. Access the *LabVIEW Bookshelf* by selecting **Help»Search the LabVIEW Bookshelf**.

Refer to the *LabVIEW Help* for reference information about LabVIEW palettes, menus, tools, VIs, and functions and for step-by-step instructions for using LabVIEW features. Access the *LabVIEW Help* by selecting **Help»VI, Function, & How-To Help**.



**Note** Refer to the *LabVIEW Upgrade Notes* for conceptual information about new features in LabVIEW 7.1.

# Common LabVIEW Launch Errors on UNIX

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The following table lists common errors that might occur when you launch LabVIEW for Solaris or Linux.

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

Refer to the National Instruments Web site at [ni.com/support](http://ni.com/support) for information about other errors that might occur when you launch LabVIEW for Solaris or Linux.

## Known Issues with LabVIEW 7.1

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If you have VI Logger 1.1 or earlier installed and you install LabVIEW 7.1, LabVIEW might crash when you use VI Logger VIs. After you install LabVIEW and restart your computer, a dialog box appears with instructions for installing VI Logger 1.1.1 from the LabVIEW 7.1 installation CD to avoid a crash.

Refer to the `readme.html` file on the LabVIEW 7.1 installation CD for more information about known issues with LabVIEW 7.1 and for clarifications and additions to the LabVIEW documentation.