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# LabVIEW®
# Test Executive
# Run-Time System
# Release Notes
# Version 4.0
**Part Number 321023B-01**

# LabVIEW Test Executive Run-Time System

The LabVIEW Test Executive Run-Time System (Run-Time System) lets you run the LabVIEW Test Executive, or a test executive you create in LabVIEW, in a test stand on the production floor. The Run-Time System works without the LabVIEW Full Development System (FDS).

These release notes contain installation instructions, and describe how to use the LabVIEW Test Executive Run-Time System along with VIs from the LabVIEW Test Executive to create a functioning Test Executive for your test stand.

# Contents

# Overview

To be complete, a Test Executive must include an engine, an *operator interface VI*, and a set of *callback VIs* (LabVIEW VIs designed for specific interface and data-logging operations). The engine of the Run-Time System is a stand-alone application that lets the Test Executive create, edit, load, save, and execute test sequences. The engine interacts with the operator interface VI and the callback VIs to handle tasks such as the operator interface commands, user logins, report generation, and datalogging. The following illustration shows the relationship between the Test Executive engine, the operator interface VI, and the callback VIs.
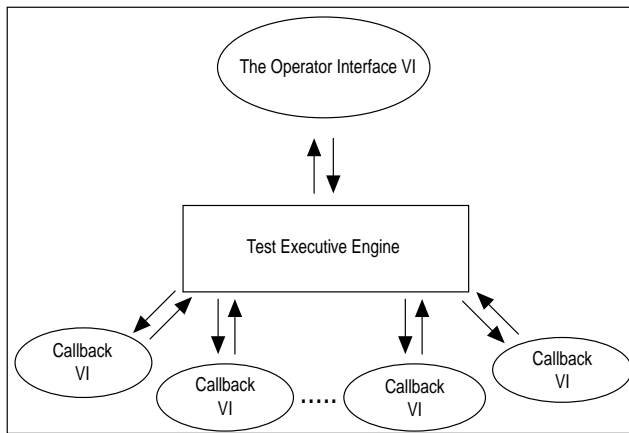


Architecture of the Test Executive in a Test Stand

The LabVIEW Test Executive Run-Time System contains only the Test Executive engine and the system launcher. You must supply the operator interface VI and the callback VIs to make a complete Test Executive. You can create such VIs in LabVIEW, or take advantage of VIs already designed and developed for the LabVIEW Test Executive, a separate product. For more information on the LabVIEW Test Executive, refer to the *LabVIEW Test Executive Reference Manual*.

In general, the Run-Time System has the same required system configuration as the LabVIEW Test Executive. (For details, see the *LabVIEW Test Executive Release Notes, Version 4.0*.) The Run-Time System can operate with less RAM, but performance may suffer.

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**Note:**    *For the Macintosh, you need 12 MB of RAM available to launch the Run-Time System. You may need to increase the memory for large test sequences in the Finder.*

# Installing a Test Executive on Your Test Stand

To use the LabVIEW Test Executive and LabVIEW Test Executive Run-Time System to install a functioning Test Executive on your test stand, perform the following setup tasks.

1. Install the LabVIEW Test Executive Run-Time System on the test stand.

2. Place a system configuration file in the same directory as the LabVIEW Test Executive Run–Time System. To do this, copy the system configuration file that comes with the LabVIEW Test Executive development version (`testexec.cfg`) to the test stand.

3. Make sure that the system configuration file correctly identifies the names and locations of the operator interface VI and the callback VIs for the test stand.

The following sections describe in detail the three setup tasks.

## Setup Task 1: Install the LabVIEW Test Executive Run-Time System

Follow the steps in the subsection that correspond to your platform: Windows, Sun SPARCstation, or Macintosh. The LabVIEW Test Executive Run-Time System comes on floppy disks, and when installed and decompressed requires approximately 9 MB of hard disk space.

Some virus detection programs may interfere with installation. To maintain virus protection, you should check the distribution disks for viruses before you begin installation. Then, turn off any automatic virus checkers and run the installer. After installation, check your hard disk for viruses and activate your virus checker again.

### Windows

You can install the LabVIEW Test Executive Run-Time System from the DOS prompt, the Windows File Manager, or with the **Run...** command from the **File** menu of the Program Manager or the File Manager, as described in this section.

1. Insert the first Test Executive Run-Time System disk into a 3.5-inch disk drive and run the `SETUP.EXE` program using one of the following three methods.

   • From the DOS prompt, type `X:\SETUP` (where `X` is the drive where the installation disk is located).

- Under Windows, launch the File Manager. Click on the drive icon that contains the installation disk. Find SETUP.EXE in the list of files on that disk and double-click on it.

- Under Windows, select **File»Run...** from the Program Manager or the File Manager. A dialog box appears. Type X:\SETUP (where X is the drive where the installation disk is located).

2. Follow the instructions that appear on your screen.

## Sun SPARCstation

Perform the following steps to install the Test Executive Run-Time System. You do not need root privileges to install the Test Executive, but you must be able to write to the directory where you want to install the system.

1. Insert the first disk into the 3.5-inch disk drive.

2. For Solaris 1, type the following UNIX command.

```
tar xvf /dev/rfd0c INSTALL
```

For Solaris 2, type the following UNIX commands.

```
volcheck
tar xvf /vol/dev/aliases/floppy0 INSTALL
```

3. Run the installation program by typing the following command.

```
./INSTALL
```

4. Follow the instructions on the screen. The Test Executive prompts you to insert the subsequent floppy disks, and tells you when the installation is complete.

## Macintosh

1. Insert the first Test Executive Run-Time System disk into the 3.5-inch disk drive and double–click on the LabVIEW Test Executive Installer icon.

2. Click on the Install button. The Test Executive then prompts you to select a destination folder. Select your LabVIEW folder.

3. Follow the instructions on the screen.

**The LabVIEW Test Executive Run-Time System Files**

The directory in which you install the LabVIEW Test Executive Run-Time System will also contain the following items.

- `LVTERT40` (LabVIEW Test Executive Run-Time System executable file)

- `DAQDRV` (Windows and Windows NT only)

- `LVDEVICE.DLL` (Windows only)

- `SERPDRV` (Windows, Windows NT, and Sun only)

- Shared Libraries (Power Macintosh only)

`LVTERT40` is a stand-alone application that contains the Test Executive engine and the Test Executive launcher. The Test Executive engine uses the other files for its test sequence operations.

# Setup Task 2: Create the System Configuration File, testexec.cfg

The system configuration file, `testexec.cfg`, is an ASCII file that must contain the names and locations of the Test Executive operator interface VI and callback VIs. For more information on the operator interface VI and callback VIs, refer to the *LabVIEW Test Executive Reference Manual*.

When you run `LVTERT40`, the Test Executive launcher loads the Test Executive engine into memory, then looks for the `testexec.cfg` file for the names and locations of the appropriate operator interface and callback VIs, and loads them. The Test Executive development system install program creates a `testexec.cfg` file containing paths to the default operator interface VI and default callback VIs in the `LVEXEC4` directory. Copy this file to the same directory as `LVTERT40` and edit it to contain the correct paths to the callback and operator interface VIs. If the launcher does not find `testexec.cfg` in this directory, a file dialog box appears, prompting you to locate the file. If you locate the file, launching proceeds. Otherwise, the Test Executive launcher displays an error message and quits.

The `testexec.cfg` file entries have the following format.

$$VI\_id : "VI\_path"$$

`VI_id` specifies one of the Test Executive callback VIs or the operator interface VI. The system configuration file must have an entry for each of the following `VI_id` string values.

- Login
- Select_Sequence
- Open_Sequence

- Save_Sequence
- Close_Sequence
- Exit
- Sequence_Report
- Default_PreUUT_Loop
- Default_PreUUT
- Default_PostUUT_Loop
- Default_PostUUT
- Default_Test_Report
- Default_Post_Run-Loop_Test
- Default_Test_Failure
- Default_Edit_Test_VI
- Operator_Interface

`VI_path` specifies the absolute file path to either the callback VI or the operator interface VI. You must enclose `VI_path` in double quotation marks and make sure that it contains no extra leading or trailing spaces. The following text shows sample entries in `testexec.cfg` for the Login callback VI.

    Login : "C:\LV31\TESTEXEC\CALLBACK.LLB\Login Callback.vi"***(Windows)***

    Login : "/usr/labview/testexec/callback.llb/Login Callback.vi"***(Sun)***

    Login : "Mac HD:LabVIEW:TestExec:callback.llb:Login Callback.vi"***(Macintosh)***

If you want the Test Executive to use a different operator interface VI or callback VI, you must put the absolute path to that VI in the `VI_path` of the appropriate configuration file entry. The default operator interface and callback VIs are contained in the `OPERATOR.LLB` and `CALLBACK.LLB` VI libraries.

## Setup Task 3: Give the Test Stand Access to the Operator Interface VI and Callback VIs

The LabVIEW Test Executive Run-Time System in your test stand must be able to access and load the operator interface VI and the callback VIs. The Test Executive operator can only open and run a test sequence on the test stand when the test sequence file and its associated test VIs, pre- and post-run VIs, and sequence callback VIs are accessible from the test stand. To ensure access, you can place these VIs on a file server and make them available to all the test stands through a network link. Otherwise, you must store copies of the operator interface VI and callback VIs on the hard drive of your test stand.

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