RELEASE AND UPGRADE NOTES

LabVIEW™ Datalogging and Supervisory Control Module

Version 2012

This document describes the system requirements and the process of installing the LabVIEW 2012 Datalogging and Supervisory Control (DSC) Module and the DSC Module Run-Time System. This document also describes the new features available with version 2012 and compatibility and upgrade issues you might encounter when you use version 2012.

Contents

System Requirements

To use the DSC Module, the computer must meet the following minimum system requirements:

- 800 MB free disk space.
- 512 MB of RAM. National Instruments recommends 1 GB of RAM.
- LabVIEW 2012 Base, Full, or Professional Development System (32-bit). Refer to the *LabVIEW Help* for information about the LabVIEW development system.
- Internet Explorer 6 Service Pack 1 or later.

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Supported Operating Systems

The DSC Module supports the following operating systems:

- Windows 7 (32-bit and 64-bit)
- Windows Vista (32-bit and 64-bit)
- Windows XP Service Pack 3 or later
- Windows Server 2003 R2 (32-bit)
- Windows Server 2008 R2 (64-bit)

The DSC Module does not support Windows NT/Me/2000/98/95 or the Windows Server non-R2 editions.

Note Support for Windows Server 2003 R2 may require disabling physical address extensions (PAE). To learn how this might affect your use of Windows Server 2003 and what actions you might have to take, visit `ni.com/info` and enter the Info Code `PAESupport`.

Installing the DSC Module

This section includes information about installing the DSC Module on a development computer.

Complete the following steps to install the DSC Module.

1. Log in to the computer as an administrator or as a user with administrative privileges.
2. Disable any automatic virus detection programs before you install. Some virus detection programs interfere with installation.
3. Insert the LabVIEW Platform DVD Disc 1.

Tip You also can double-click `setup.exe` from the media to launch the installer.

4. Follow the instructions for installing software.
5. When the **Product List** page appears, select **Datalogging and Supervisory Control Module** in the **Industrial Monitoring** folder.
6. Select **Install** to minimize user interaction. Selecting **Custom install** opens additional dialog boxes that require your input.
7. Follow the instructions to finish installing and activating the DSC Module.
8. After installation, enable any virus detection programs you disabled.
9. Refer to the *Where to Go from Here* section of this document for more information about getting started with and using the DSC Module.

Note By default, the NI Keyboard Filter Driver is not installed. The NI Keyboard Filter Driver activates special security features, including the ability to restrict users from switching between applications by pressing the <Alt-Tab> keys. This driver does not work on laptop computers or on computers with hibernation enabled.

Activating the DSC Module

The DSC Module relies on licensing activation. You have a temporary license for a 7-day evaluation period. When the evaluation period expires, you must activate a valid DSC Module license to continue using the DSC Module.

The NI OPC Servers application installed with the DSC Module provides a temporary license for a two-hour evaluation period. You must activate a valid license to continue using the NI OPC Servers application after the evaluation period expires.

You can use the NI License Manager, available by selecting **Start»All Programs»National Instruments»NI License Manager**, to activate National Instruments products. Refer to the *National Instruments License Manager Help*, available by selecting **Help»Contents** in the NI License Manager, for information about activating NI products.

Refer to ni.com/support if you encounter errors during installation.

DSC Module 2012 Features and Changes

The following sections describe the new features and changes in the DSC Module.

OPC UA VIs

Use the OPC UA VIs to create OPC UA server and client applications and to exchange data between OPC UA servers and clients. The Functions palette includes the new OPC UA palette with the following new VIs.

- Create Certificate
- Node Name Array To Node Path
- Node Path To Node Name Array

The OPC UA palette includes the new OPC UA Client palette with the following new VIs.

- Add Monitored Nodes
- Browse
- Connect
- Create Subscription
- Delete Monitored Nodes
- Delete Subscriptions
- Disconnect
- Get Node Attribute
- Read
- Write

The OPC UA palette includes the new OPC UA Server palette with the following new VIs.

- Add Folder
- Add Item

- Add Property
- Add Trusted Clients
- Clear All Trusted Clients
- Close
- Create
- Delete Node
- Read
- Start
- Stop
- Write

Refer to the OPC Foundation website at www.opcfoundation.org to learn more about OPC UA.

Variable Web Service

LabVIEW Web services allow HTTP-capable clients to interact with VIs to exchange data. You use URLs and HTTP methods to transmit data to the Web service. LabVIEW includes a built-in Web service that enables you to access shared variables. The variable Web service, nivariable, uses the Open Data Protocol (OData). Refer to the OData website at www.odata.org for information about OData. You can use the variable Web service to interact with and monitor shared variables that you create using LabVIEW and the DSC Module. Refer to the *LabVIEW Help* for more information about the variable Web service.

Improved Examples

Refer to the **Toolkits and Modules»Datalogging and Supervisory Control** folder on the **Browse** tab of the NI Example Finder to view descriptions for and launch new and improved examples for the DSC Module. Examples, including examples prior to the current version of the DSC Module, also are in the `labview\examples\lvdsc` directory.

Upgrade and Compatibility Issues

Refer to the following section for upgrade and compatibility issues specific to different versions of the DSC Module.

Upgrading from the DSC Module 8.2

If you open a VI saved in the DSC Module 8.2 or earlier, the VI might be broken if the VI contains an indicator, constant, or control created from the **shared variable value change notification** output of the following VIs.

- Cancel Value Change Notifications
- Enable Value Change Notifications
- Request Value Change Notifications

To fix the broken VI, delete the indicator, constant, or control. Then create a new indicator, constant, or control from the **shared variable value change notification** output and wire it to the appropriate parameter.

Upgrading from the DSC Module 7.*x*

If you are upgrading from the DSC Module 7.*x* or earlier, refer to the *Upgrading from the LabVIEW DSC Module 7.x* section of the *LabVIEW 8.2 Datalogging and Supervisory Control Module Release and Upgrade Notes* for important upgrade information. Refer to the National Instruments website at `ni.com/info` and enter the Info Code `dsc820` to access the *LabVIEW 8.2 Datalogging and Supervisory Control Module Release and Upgrade Notes*.

DSC Module Run-Time System

To run applications built with LabVIEW, the DSC Module, and the LabVIEW Application Builder on a computer without the DSC Module installed, you must install the DSC Module Run-Time System on that computer. The DSC Module Run-Time System contains components that enable the DSC Module features in the built applications. Refer to the National Instruments website at `ni.com/info` and enter the Info Code `dscrts` for information about the DSC Module Run-Time System.

To use the DSC Module Run-Time System, the computer must meet the following minimum system requirements:

- Depending on the components you choose to install, the computer must have the following amount of free disk space:
  - 1.0 GB free disk space if you install all components of the DSC Module Run-Time System except the **Shared Variable Logging Support** component
  - 1.3 GB free disk space if you install all components of the DSC Module Run-Time System
- 512 MB of RAM

The DSC Module Run-Time System supports the same operating systems as the DSC Module. Refer to the *Supported Operating Systems* section of this document for information about operating systems that the DSC Module Run-Time System supports.

Installing the DSC Module Run-Time System

Complete the following steps to install the DSC Module Run-Time System.

1. Log in to the computer as an administrator or as a user with administrative privileges.
2. Install the DSC Module Run-Time System from the LabVIEW 2012 DSC Module Run-Time System installation media.
3. Follow the instructions that appear on the screen.

Note If you install the DSC Module Run-Time System on a Touch Panel computer, National Instruments recommends that you do not install the **Shared Variable Logging Support** component unless you need to log data to the Touch Panel

computer. Logging data consumes resources, such as memory and disk space, that you may want to reserve for other uses. If you do not install the **Shared Variable Logging Support** component, you still can use the Touch Panel computer to view logged data on other computers.

4. Restart the computer.

Configuring the Microsoft SQL Server

The DSC Module requires the Microsoft SQL Server 2005 Express Edition (SQL Express). This component is installed by default when you install the DSC Module. During the installation process, the DSC Module installer creates an instance of SQL Express named `CITADEL`. To prevent unauthorized access to SQL Express, the installer also generates a password for the default SQL Express administrator `sa`. The default password is the computer ID.

Complete the following steps to find the computer ID using the NI License Manager.

1. Launch the NI License Manager by selecting **Start»All Programs»National Instruments» NI License Manager**.
2. Click the **Display Computer Information** button on the toolbar.

The DSC Module installer enables a mixed security mode on existing SQL Servers. If the target computer does not have an SQL Server installed, the DSC Module installer installs SQL Express in the mixed security mode.

Use the following command line prompt to change the default password for the `sa` user:

```
Sqlcmd -S"localhost\CITADEL" -U"sa" -P"COMPUTER_ID" -Q"sp_password
'COMPUTER_ID', 'NEW_PASSWORD', 'sa'"
```

If the mixed security mode is not acceptable, change both the SQL Express and Citadel login modes. You must set the registry `DWORD` values `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\LoginMode` and `HKEY_LOCAL_MACHINE\SOFTWARE\National Instruments\Citadel\5.0\IntegratedSecurity` to `1`.

National Instruments recommends that you change the login mode immediately after you install the DSC Module. Otherwise, you must relink all existing Citadel databases. Restart the SQL Express and Citadel services in order for changes to take effect. If you use integrated NT security, you might need to configure the server machine and all clients explicitly.

Note The DSC Module 8.2 uses Microsoft SQL Server 2000 Desktop Engine (MSDE 2000), not SQL Express. If you are upgrading from the DSC Module 8.2, any existing databases continue to use MSDE 2000 for alarm logging, but new databases you create use SQL Express. If you detach an existing database from the DSC Module and then reattach the database, the DSC Module migrates the database to SQL Express.

You might want to uninstall MSDE 2000 after installing the DSC Module 2012. Complete the following steps to uninstall MSDE 2000.

1. Stop all running processes in the NI Distributed System Manager.
2. Open Measurement & Automation Explorer (MAX) and select **My System»Historical Data»Citadel 5 Universe** from the **Configuration** tree.
3. On the **Databases** page, detach all databases from the local computer.
4. Open the Windows **Control Panel** and uninstall MSDE 2000.
5. Restart the computer.
6. Open MAX and reattach all databases.

Where to Go from Here

National Instruments provides many resources to help you succeed with your NI products. Use the following resources as you start exploring the DSC Module.

- *Getting Started with the LabVIEW Datalogging and Supervisory Control Module*—Use this manual, located in the `labview\manuals` directory, to familiarize yourself with some of the features that the DSC Module adds to LabVIEW.
- DSC Module Examples—Refer to the DSC Module examples, located in the `labview\examples\lvdsc` directory, for examples that demonstrate common tasks using the DSC Module. You also can access these examples in the NI Example Finder by selecting **Help»Find Examples** from LabVIEW and browsing or searching for the DSC Module examples.
- *LabVIEW Help*—Available by selecting **Help»LabVIEW Help** in LabVIEW. Browse the **DSC Module** book on the **Contents** tab for an overview of the DSC Module.
- Visit `ni.com/dsc` for the latest NI Developer Zone articles, examples, and support information for the DSC Module.
- DSC Module Training—Refer to `ni.com/info` and enter the Info Code `dsctrn` to access online training for the DSC Module.

Known Issues

You can access the software and documentation known issues list online. Refer to the National Instruments website at `ni.com/info` and enter the Info Code `LVDSC2012KI` for an up-to-date list of known issues in the DSC Module and the DSC Module Run-Time System.

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