

LabVIEW™ Datalogging and Supervisory Control Module Run-Time System Release Notes

Version 7.1

This document describes installation, new features, upgrade steps, and known issues for version 7.1. For recent information not included in these release notes, refer to the `dscrts_readme.html` file in the LabVIEW DSC Run-Time System directory.

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System Requirements

The DSC Module Run-Time System runs on any system with the following minimum specifications:

- Windows 2000/NT 4.0 or later/XP. The DSC Module Run-Time System requires that Windows NT include service pack 6a and the 6a Security Rollup Package, which are part of the July 26, 2001 security update available at www.windowsupdate.com. LabVIEW 7.1 does not support Windows Me/9x.
- 128 MB of RAM minimum, 256 MB recommended.
- 200 MHz or higher processor speed, 500 MHz recommended.
- 400 MB of disk space to install the DSC Module Run-Time System and have swap space available. Increasing computer resources has a significant effect on performance of DSC Module applications.
- 800 × 600 or better monitor display.

Protecting Against Power Failure

Power failure is a potential threat to system stability. If a computer loses power suddenly, data kept in memory is lost and files might be corrupted. The only effective protection against power failure is an Uninterruptible Power Supply (UPS). A UPS is a device that keeps the computer running for at least a short time when the primary power source is lost. It provides complete isolation between the AC power source and the computer and has backup battery power in case of power outages. If you do not need battery backup, you can use a quality surge protector to protect a computer from most electrical surges and spikes.

Citadel Database Compatibility

The DSC Module Run-Time System version 7.0 introduced Citadel 5, a new version of the historical database. The current DSC Module Run-Time System logs to and retrieves from Citadel 5 databases only. You must convert Citadel 3.8 or Citadel 4.x databases to Citadel 5 if you want to use them with version 7.1 of the DSC Module Run-Time System. Refer to the [Converting Citadel 4.x Databases](#) section of this document for information about converting databases.

Installation

Before You Install

Review the following list of issues before you install the DSC Module Run-Time System:

- Make sure that you meet the system requirements listed in the [System Requirements](#) section of this document.
- If you have a previous version of the DSC Module Run-Time System installed, either uninstall that older version or install version 7.1 in a different directory. Due to a change in Citadel, you must install a patch for version 7.0 if you want to run both version 7.0 and 7.1 on the same computer. The patch for version 7.0 is located on the installation CD in the `Simultaneous Operation Patch` folder.
- If you want to preserve custom settings from a previous version of the DSC Module Run-Time System, save all `.ini` and `.cfg` files in the LabVIEW DSC Run-Time System directory to a backup location and then copy them to the appropriate location after installing version 7.1.
- If you have Microsoft SQL Server version 6.5 or earlier on the computer, you must upgrade to Microsoft SQL Server version 7.0 or later before installing the DSC Module Run-Time System.

Installing the DSC Module Run-Time System

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

1. Log on as an administrator or as a user with administrator privileges.
2. Insert the DSC Module Run-Time System installation CD and follow the instructions that appear on the screen.
3. Restart the computer and log on as an administrator or as a user with administrator privileges. When you restart, you might have to wait for the MSDE setup to complete.

Additional Installations

Install any necessary drivers or data servers as described in the application software documentation.

Install the Application Software

Install the application software as described in its documentation. After installing the files, make a note of the location of the `.scf` and `.ccdb` files.

Update Preference Files

Set up any necessary preference files as described in the application software documentation. These files contain non-default settings for DSC Module utilities. You can edit these files with a simple text editor such as Notepad.

Finish Server Setup

If you are using National Instruments IAS/IAK device servers, you might need to resolve the paths to the servers stored in the `.ccdb` file using Server Explorer. Server Explorer is installed when you install the DSC Module Run-Time System. In Server Explorer, select **File»Open**, locate the `.ccdb` file for the application software, and select **File»Set this file as Active CCDB**.

VI-based servers (if used by the application) provide their own Server Registration VIs.

Configure LabVIEW Startup VIs



You might want to configure one or more startup VIs as the user interface panels that appear when you launch the DSC Module Run-Time System. Click the **Configure Startup VIs** button, shown at left, or select **Tools»DSC Module»Advanced»Startup VIs** in the DSC Module Run-Time System. In the **Configure Startup VIs** dialog box, select the appropriate startup VIs.

If an application launches the Tag Engine when it runs and the servers are not registered properly, you receive error messages identifying the servers that did not start. Refer to the documentation for your application to determine which servers are required and how to register them.

Uninstalling the DSC Module Run-Time System

To uninstall version 7.1 of the DSC Module Run-Time System, select **Start»Settings»Control Panel»Add/Remove Programs**. Select **National Instruments Software** and remove **NI LabVIEW DSC Run-Time System 7.1**.

New Feature for Version 7.1

Version 7.1 of the DSC Module Run-Time System includes an enhancement to DataSocket. If a DataSocket client loses a connection to the DataSocket Server or cannot establish a connection to the DataSocket Server, the DataSocket Proxy attempts to reconnect every 60 seconds by default. The DataSocket Proxy can reconnect to the DataSocket Server automatically, and the Tag Engine does not need to be restarted. To use a reconnection interval other than 60 seconds, create a file named `DataSocket.ini` in the `vi.lib\lvdsc\servers\DataSocket Proxy` directory. Create the following keys in the `DataSocket.ini` file:

```
ReadReconnection=x  
WriteReconnection=x
```

where `x` is the reconnection interval in seconds.

New Features for Version 7.0

The following sections describe changes to existing features and new features added in version 7.0 of the DSC Module Run-Time System.

Citadel 5 Database

The DSC Module Run-Time System versions 7.0 and 7.1 include Citadel 5, a new version of the Citadel historical database. Citadel 5 introduces data access from ActiveX Data Objects (ADO) clients and improved Open Database Connectivity (ODBC) support.

Database Names

Citadel 4.x identified databases exclusively by their path. Citadel 5 uses database names. Because of the new Citadel 5 format, the Tag Configuration Editor uses a new `.scf` file format, the ODBC data source setup has changed, and the Historical Data Viewer has been updated.

Conversion to Citadel 5 Format

The DSC Module Run-Time System versions 7.0 and 7.1 log to and retrieve from Citadel 5 databases only. You must convert Citadel 3.8 or 4.x databases to Citadel 5 if you want to use them with the current DSC Module Run-Time System. Refer to the [Converting Citadel 4.x Databases](#) section of this document for information about converting databases.

Citadel 5 ODBC Data Source

As with Citadel 4.x, you must have an ODBC data source for Citadel 5 as described in the *LabVIEW Datalogging and Supervisory Control Module Run-Time System Help*. However, the following changes have been made to the **National Instruments Citadel ODBC Setup** dialog box.

- ODBC setup asks for a **Database URL** instead of a database path. **Database URL** is the computer and database name where data for the source are stored—for example, `\\computer_name\my_database`. Use a **Database URL** that matches the existing local or remote database you intend to access.
- Use the ... button to browse local and remote databases.
- Use the **Test Connection** button to test the connection you are setting up.

Expanded Access to Citadel 5 Data

The Citadel 5 ODBC driver is compliant with SQL 92 and ODBC 2.5 standards. All clients that follow these standards can retrieve data from a Citadel 5 database. ADO clients can access the Citadel 5 database using the ODBC driver through the Microsoft OLE DB Provider for ODBC Drivers. You can use a Microsoft Query Wizard to build queries.

Creating a Data Link for the ODBC Data Source

If you want to access Citadel data from an ADO client, you need a data link to ODBC. You might be able to create the data link from within an ADO client, but you might be required to create it multiple times. Alternatively, complete the following steps to create a data link once that you can store on a system or network.

1. Create a Citadel 5 ODBC data source, if you have not already done so.
2. Create a new text (.txt) document.
3. Right-click the new text document and rename it to have a .udl extension—for example, `data_link.udl`. A warning might appear, explaining that changing file extensions might cause files to become unusable. Disregard this warning.

4. Right-click the .udl file and select **Properties**. In the dialog box that appears, click the **Provider** tab and select **Microsoft OLE DB Provider for ODBC Drivers**.
5. Click the **Connection** tab and select the Citadel 5 ODBC data source name.
6. Click the **OK** button.

Citadel 5 Tables

Citadel 5 tables are different than Citadel 4.x tables. For more information about Citadel 5 tables, refer to the [Updating Citadel 4.x SQL Queries](#) section of this document.

Storage and Security for Alarms and Events

Citadel 5 uses Microsoft SQL Server or MSDE 2000 (Microsoft SQL Server Desktop Engine 2000) to store alarms and events. MSDE 2000 is a light version of Microsoft SQL Server. The major restriction of MSDE 2000 is that the size of one database is limited to 2 GB, so you must upgrade to the full version of SQL Server 2000 if an application exceeds this 2 GB limit.

To connect to and access a remote SQL Server database, local and network clients can use one of two security modes: Windows Authentication Mode or Mixed Mode. Windows Authentication Mode security uses the built-in Windows security system and takes advantage of Windows NT domains. All clients that need to access SQL Server remotely must be properly configured on the same domain to access data stored on remote SQL Server computers. Clients must connect through the Windows security system on the server.

Mixed Mode security allows clients to connect to a server using either Windows Authentication or SQL Server Authentication. With SQL Server Authentication, all user accounts are stored within the SQL Server, and clients do not need to go through the built-in Windows NT security system. Mixed Mode security is simple to set up because clients need not be on the same domain. They only need to have the correct user name and password to access the SQL Server. However, SQL Server Authentication is more vulnerable than Windows Authentication Mode.

Citadel 5 uses SQL Server Authentication by default, so network clients do not need to be explicitly configured. The DSC Module installer enables Mixed Mode security on existing SQL Servers or installs MSDE 2000 with Mixed Mode security if the target computer does not have SQL Server installed.

The default password for the SQL Server administrator `sa` is left blank. NI recommends that you assign a strong password to the `sa` user. Use the following command line utility to set the SQL Server administrator password:

```
osql -U"sa" -P"" -Q"sp_password NULL, 'new_password', 'sa'"
```

Use the following command to change an existing password:

```
osql -U"sa" -P"old_password" -Q"sp_password 'old_password', 'new_password', 'sa'"
```

If Mixed Mode security is not acceptable, change both the SQL Server and Citadel login modes by setting 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. This forces the use of Windows Authentication mode.

NI recommends changing the login mode immediately after installing the DSC Module. If you change the login mode after you have logged data, you must reattach all existing Citadel databases. Restart the SQL Server and Citadel services to implement the changes. If you use Windows Authentication Mode, remember that you might need to explicitly configure the server computer and all clients.

New Version of Historical Data Viewer

With the Historical Data Viewer that comes with versions 7.0 and 7.1 of the DSC Module Run-Time System, you can view both Citadel 4.x and Citadel 5 databases in Measurement & Automation Explorer (MAX). You also can convert Citadel 4.x databases to Citadel 5 format. In addition, navigation tools have been added for simpler viewing of data sets.

Revised Historical/Event Logging Configuration

Citadel 5 databases are identified by names instead of paths. For Citadel databases that have not been converted to Citadel 5 format, the DSC Module Run-Time System creates a name for the database using its path and underscore characters.

You must give each Citadel 5 database a unique name/path pair. For example, you can have a database named `Db1` on multiple computers, but you cannot have two databases named `Db1` on the same computer. Database name/path pairs are checked for conflicts when you configure historical or event logging and when the Tag Engine launches.

When you open a .scf file that was created in version 6.x of the DSC Module, you are prompted to convert the file and its associated databases to the current format. For more information about converting databases, refer to the [Converting Citadel 4.x Databases](#) section of this document.

Tag Monitor Enhancements

The Tag Monitor that comes with versions 7.0 and 7.1 of the DSC Module Run-Time System has the following additional features:

- New display columns for **Tag Name** and **Read/Write Attributes**
- New **Type Mismatch Checking**, **XX for Bad Quality**, **Hex for Raw Data**, **Set Decimal Places**, and **Select Columns** selections available in the **Options** menu

Change in Bad Quality Status

The error status for application-defined quality is now a warning instead of an error. For example, a thermocouple out-of-range state from FieldPoint now is a warning and not a bad-quality error.

Changes to NI Services

Version 7.0 of the DSC Module Run-Time System introduced a new version of the Citadel service, which appears as **National Instruments Citadel** in Windows **Services** and `nicitd15.exe` in the Task Manager. To start and stop this or other NI services, use Windows **Services**, available in the **Control Panel**.

Change to Default Source of Time Stamps

By default in versions 7.0 and 7.1 of the DSC Module Run-Time System, time stamps logged to Citadel come from the system clock of the computer running the Tag Engine instead of from the server. To have time stamps come from the server, change the `DSCEngine.ini` setting `Use Server Timestamps` to `TRUE`. Because changing this setting can result in larger Citadel databases, NI recommends keeping the default value.

Upgrading DSC Module 6.x Applications to 7.1

After installing version 7.1 of the DSC Module Run-Time System, follow the instructions in this section to convert existing DSC Module applications.

Recompiling VIs

To run an application created in a previous version of the DSC Module or BridgeVIEW, you must recompile the application VIs in order to upgrade them to version 7.1. You must have development versions of both LabVIEW 7.1 and the DSC Module 7.1 to recompile VIs.

Converting Version 6.x .scf Files

When you use the Tag Configuration Editor to open a .scf file created in version 6.x of the DSC Module, a conversion wizard launches and leads you through the process of converting the .scf file. The wizard also gives you the option of converting existing Citadel 3.8 or 4.x databases that are associated with that .scf file. If the Tag Engine attempts to access a .scf file that you have not converted yet, an error message appears.

The conversion wizard saves a renamed backup of the original .scf file to the same location as the new, converted .scf file.

Converting Citadel 4.x Databases

The DSC Module Run-Time System versions 7.0 and 7.1 log to and retrieve from Citadel 5 databases only. You must convert older databases to Citadel 5 if you want to use them with the current DSC Module Run-Time System.

Databases Associated with a .scf File

When you open a .scf file created in version 6.x of the DSC Module, a conversion wizard launches. After converting the .scf file, the wizard gives you the option of converting databases that are associated with that .scf file.



Caution NI recommends using the default conversion options. If you must save the converted database to a location other than the default path due to a shortage of hard drive space, for example, the application might not work.

To log new data to an existing database, do not log data until you convert the database to Citadel 5. If you log data from a converted application before converting the database, the DSC Module Run-Time System creates a new, empty Citadel 5 database in the same location as the older Citadel database and logs data to that new database. To get all the logged data back into one database after that happens, you must use the Historical Data Viewer to convert the older Citadel database and then merge it with the new Citadel 5 database.

Databases Not Associated with a .scf File



If you choose not to convert a Citadel database when the wizard asks you, or if you have an existing database that is not associated with a converted .scf file, you can convert the database using the Historical Data Viewer in MAX. Click the **View Historical Data** button, shown at left, in the DSC Module Run-Time System window. In the window that opens, right-click the **Historical Data** category, select **Create New** from the shortcut menu, and choose the appropriate conversion in the dialog box that appears. If you cannot locate the database you want to convert, you might need to create a Citadel 4.x version of it in Historical Data Viewer before choosing to convert it to Citadel 5.

Remote Databases

You cannot convert a database remotely. You must convert it on the computer where it exists.

Converted Alarms

Alarm priorities logged by version 6.x of the DSC Module Run-Time System ranged from 0–10, and those values are retained when converted to Citadel 5 format. Alarm priorities logged to Citadel 5 range from 0–15.

Redirecting NI HyperTrend and HTV to Citadel 5 Data

If you convert a Citadel database and an application that uses the NI HyperTrend control, right-click the control on the front panel and select the tags to display so that data is retrieved from the converted Citadel 5 database instead of the old Citadel database.

If you convert a Citadel database and an application that uses Historical Trend Viewer (HTV), launch HTV and select the tags to display so that data is retrieved from the converted Citadel 5 database instead of the old Citadel database.

Creating a New ODBC Data Source

For information about creating an ODBC data source for Citadel 5, refer to the [Citadel 5 ODBC Data Source](#) section of this document.

Updating Citadel 4.x SQL Queries

If you have existing SQL queries for retrieving Citadel 4.x data, you must convert them for use with Citadel 5. Refer to Table 1 and Table 2, which detail the differences in Citadel 4.x and Citadel 5 queries.

Table 1. Changes in Citadel Tables

Citadel 5 ODBC Driver	Citadel 4.x ODBC Driver	Description
Aliases	N/A	Aliases table is used to map alias names to actual tag names.
RawData	Points	RawData table is used to retrieve the actual values logged for a tag and times they were logged. You can query only one tag at a time.
IntData	Traces	IntData table is used to retrieve interpolated values. You can query more than one tag at a time.
DS_RawData_dataset_name	N/A	DS_RawData_dataset_name table is used to retrieve the actual values logged for a tag, times, and particular data set where logged. You can query only one tag at a time.
DS_IntData_dataset_name	N/A	DS_IntData_dataset_name table is used to retrieve the interpolated values for a particular data set. You can query more than one tag at a time.

For more information about each Citadel 5 database table, refer to Appendix A, *Using SQL to Access Historical Data in a Citadel Database*, of the *LabVIEW Datalogging and Supervisory Control Module Run-Time System Manual*.

Citadel 5 Transform Functions

Transform functions have changed with Citadel 5, as shown in Table 2.

Table 2. Changes in Transform Functions

Citadel 5 ODBC Driver	Citadel 4.x ODBC Driver	Description
MATH_MIN(tag TO_DISCRETE(tag) TO_CONTINUOUS(tag))	MIN(tag)	Returns the minimum for tag across the interval.
MATH_MAX(tag TO_DISCRETE(tag) TO_CONTINUOUS(tag))	MAX(tag)	Returns the maximum for tag across the interval.
MATH_AVG(tag TO_DISCRETE(tag) TO_CONTINUOUS(tag))	AVG(tag)	Returns the average for tag across the interval.

Table 2. Changes in Transform Functions (Continued)

Citadel 5 ODBC Driver	Citadel 4.x ODBC Driver	Description
MATH_STDEV(<i>tag</i> TO_DISCRETE(<i>tag</i>) TO_CONTINUOUS(<i>tag</i>))	STDEV(<i>tag</i>)	Returns the standard deviation for <i>tag</i> across the interval.
MATH_STARTS(<i>tag</i> TO_DISCRETE(<i>tag</i>) TO_CONTINUOUS(<i>tag</i>))	STARTS(<i>tag</i>)	Returns the number of starts (that is, the number of transitions from OFF to ON) for <i>tag</i> across the interval. For numeric points, 0.0 is interpreted as OFF, and all other numbers are treated as ON.
MATH_STOPS(<i>tag</i> TO_DISCRETE(<i>tag</i>) TO_CONTINUOUS(<i>tag</i>))	STOPS(<i>tag</i>)	Returns the number of stops (that is, the number of transitions from ON to OFF) for <i>tag</i> across the interval.
MATH_ETM(<i>tag</i> TO_DISCRETE(<i>tag</i>) TO_CONTINUOUS(<i>tag</i>))	ETM(<i>tag</i>)	Returns the amount of time <i>tag</i> was in the ON state across the interval.
MATH_QUAL(<i>tag</i> TO_DISCRETE(<i>tag</i>) TO_CONTINUOUS(<i>tag</i>))	QUAL(<i>tag</i>)	There might be gaps in the historical data traces in Citadel because of a computer shutdown, Tag Engine shutdown, or similar occurrence. MATH_QUAL returns the ratio of time for which valid data exist for <i>tag</i> across the interval to the length of the interval itself. If valid data exist for only one-half of the interval, MATH_QUAL returns 0.5.
TO_DISCRETE(<i>tag</i>)	N/A	Casts current <i>tag</i> type to discrete (that is, the <i>tag</i> is treated as discrete).
TO_CONTINUOUS(<i>tag</i>)	N/A	Casts current <i>tag</i> type to continuous (that is, the <i>tag</i> is treated as continuous).

Standard set functions (MIN, MAX, AVG, COUNT) are supported and you can use them on any Citadel 5 table. It is important to distinguish between set functions MIN, MAX, and AVG, and Citadel 5 transform functions MATH_MIN, MATH_MAX, and MATH_AVG. Set functions perform calculations on query results. Transform functions perform calculations on interpolation intervals.

Tag names are forced into an accepted format by replacing characters within the names with the characters in Table 3.

Table 3. Special Access SQL Characters

Special Character	Converted Character
period (.)	at sign (@)
forward slash (/)	backslash (\)

Long Tag Names and Aliases

Database tables and column names can be only up to 126 characters long and cannot contain some special characters. Some ODBC clients support names only up to 62 characters long. The database URL is not included in a tag or data set name. The Citadel 5 driver automatically generates alias names for tags or data sets whose names are longer than the **Maximum Column Name Length** value specified in the ODBC configuration dialog box. *Alias* names consist of a prefix and original tag or data set name substring, so the total length of the alias string is equal to the **Maximum Column Name Length** value. An alias prefix has the format ~XXXXXXXXXXXXXXXXXX_ where XXXXXXXXXXXXXXXXXXXX is a 64-bit tag or data set ID.

Reimporting FieldPoint Configuration

If you communicate with FieldPoint modules in a DSC Module application using the FieldPoint IAK server, sometimes referred to as the FieldPoint LabVIEW DSC Server or the FieldPoint VI-Based Server, complete the following steps after upgrading from version 6.x of the DSC Module Run-Time System.

1. Uninstall FieldPoint Explorer if you are using a version earlier than 3.0.1.
2. Download and install a more recent version of FieldPoint Explorer.
 - If you install FieldPoint version 3.0.1 or 3.0.2, mass compile the FieldPoint IAK server (the contents of the <LABVIEW>_servers\FieldPoint folder), and export the configuration to the DSC Module Run-Time System by selecting **BridgeVIEW»Export to BridgeVIEW** from FieldPoint Explorer.
 - If you install FieldPoint version 4.0, save a backup of the .scf file and then revise it to use the FieldPoint OPC Server in one of two ways:
 - Use the Tag Configuration Wizard to generate a new set of tags using the **National Instruments.OPCFieldPoint** server.
 - Edit the configuration of each FieldPoint tag. On the **Connection** tab, change the **Server Name** to **National**

Instruments.OPCFieldPoint. Add the tag to an **I/O Group** and select the appropriate **Item**.

Known Issues

For recent known issues not included in these release notes, refer to the `dscrts_readme.html` file. Version 7.1 of the DSC Module Run-Time System has the following known issues.

Installation

- If you install the DSC Module Run-Time System on a non-English version of Windows, the following error message appears:

(Error 1931. The windows installer service cannot update the system file <system path>\mscpxl32.dll...)

This error appears because the DSC Module installs Microsoft Data Access Components (MDAC) version 2.7, but installing on a non-English version of Windows requires MDAC 2.7 service pack 1, available at the following location:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=9ad00f2-cae7-493d-b0f3-ae36c570ade8&DisplayLang=en>

- Due to a change in Citadel, you must install a patch for version 7.0 of the DSC Module if you want to run both version 7.0 and 7.1 on the same computer. The patch for version 7.0 is located on the installation CD in the `Simultaneous Operation Patch` folder.
- `cwui.ocx` cannot be registered on a Windows XP computer that has Crystal Reports 8 installed. Complete the following steps to work around the problem by granting the user full access to the `cwui.ocx` type library registry key and its subkeys.
 1. Open the registry editor and select the `cwui.ocx` key, `HKEY_LOCAL_MACHINE\SOFTWARE\Classes\TypeLib\{D940E4E4-6079-11CE-88CB-0020AF6845F6}`.
 2. Select **Edit>Permissions** and select the appropriate user.
 3. Click the **Advanced** button, click the **Edit** button, grant full control, and click the **OK** button.
 4. Enable the **Replace permission entries on all child object switch entries shown here that apply to child objects** option and click the **OK** button.
 5. From a command prompt, run `regsvr32 cwui.ocx` to manually register `cwui.ocx`.

Data Logging and Retrieval

- NI cannot guarantee that all data is preserved after a computer crashes or the power fails. NI recommends that you use NTFS (NT File System) and uninterruptible power supplies for computers that are acquiring or logging data.
- If you quit the Tag Engine using the Task Manager, the Citadel database can be corrupted.
- Database names cannot contain certain characters. They must contain only characters A–Z, a–z, 0–9, and the underscore character (_).
- Periodically, you might see CPU usage at 100% due to Citadel and SQL services, even when no clients are present.
- Converting a large (2 GB or more) Citadel 4.x database to Citadel 5 is slow.
- In Historical Data Viewer, A&E Views might not work after a destructive database archive.
- When changing an NI HyperTrend y-axis **Minimum** and **Maximum**, the **Apply** button does not work. Click the **OK** button to apply the change. When changing an NI HyperTrend x-axis **Width**, you must right-click the NI HyperTrend and select **Restore X Axis Width** from the shortcut menu to apply the change.
- If a remote database connection is lost while a client computer is in hibernation mode, an NI HyperTrend display on the client computer might hang.
- If you try to configure data sets when the Tag Engine is running, you can select tags only from the `.scf` file being used by the Tag Engine.
- If the network connection is lost during an archive operation to a remote computer, the operation times out and aborts instead of waiting for reestablished communication.

OPC

- The DSC Module OPC server does not support non-Western character sets.
- In Server Explorer or Server Browser, browsing to remote OPC servers might not work for certain operating systems.
- Even when an OPC server has items off scan, the Tag Engine can connect to the items and the `.scf` file sets initial values for the items.
- The OPC Demo server might not correctly unload when the Tag Engine stops. Exit LabVIEW to unload the server.

- In Server Explorer, you might receive error 0x80080005 when trying to launch the OPC LabVIEW server.
- The Tag Engine might not shut down as expected after OPC clients are disconnected. If you lose a connection to the OPC Server and you try to shut down the Tag Engine on the client computer, the Tag Engine might appear to hang. However, the Tag Engine is not hanging in this case. It is waiting for the timeout period, which is about three minutes.

Communication and Dialog Boxes

- If data is being written to the Tag Engine while an application is reading a trend with a large number of samples (100,000 or more) in a tight loop, the read might fail.
- When you attempt to start or stop the Tag Engine from the Engine Manager window, certain error messages might be placed under the Engine Manager window where you cannot see them.
- The DSC Module Run-Time System might not correctly report bad status for disconnected or unavailable FP-1600 modules.
- Tag control values might reset to 0 instead of the LabVIEW default value, last value held, or last value logged.

Tag Monitor

In Tag Monitor, denying read privileges causes a quality of access denied for write-only tags. The read/write column values also might not be accurate.

ICU License-ICU 1.8.1 and Later

The DSC Module Run-Time System uses code from the International Components for Unicode (ICU) libraries, for which the following license applies. Refer to oss.software.ibm.com/icu for more information about the ICU libraries.

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More Information and Updates

For information on DSC Module Run-Time System updates and changes in the future, visit ni.com/labviewdsc.

To download the newest NI patches and other updates, visit ni.com/downloads.