PC-DMIS 2018 R2

- Release Notes -

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Contents

Release Notes

PC-DMIS 2018 R2 is a significant development release of the software. For detailed information and video tutorials about this release, visit hexagonmi.com/products/software.

Happy to Report
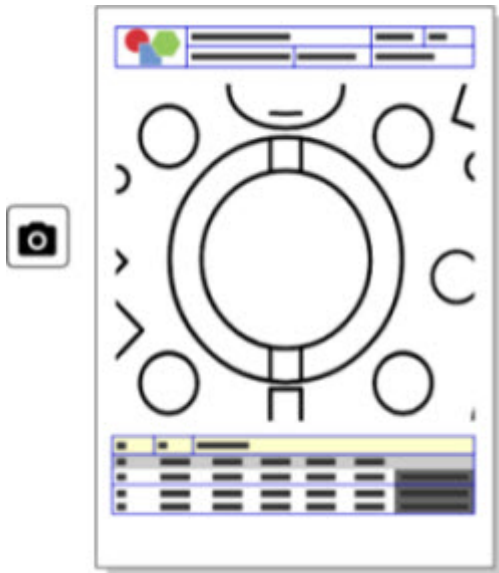
You can customize your report. No programming degree is required. Now build reports with drag and drop right in the report window. See PCD-121508.

Don't Walk - Run!
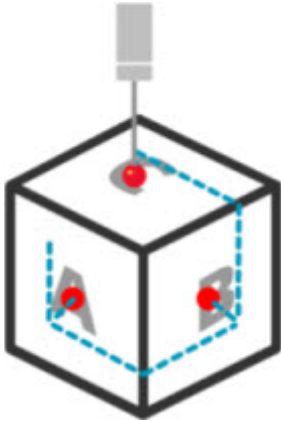
With QuickPath, creating an efficient measurement path is now as simple as A-B-C.

To create an efficient measurement path, use the **Quick Path** button ( ) on the **Path** toolbar on the **QuickMeasure** toolbar. For complete details, see the "CMM QuickMeasure Toolbar" help topic in the PC-DMIS CMM documentation. See PCD-134180.

Follow the Trend

View qs-STAT run charts inside PC-DMIS. PC-DMIS can pull and display run charts from qs-STAT in the Report window. See PCD-134686.

Laser Guided

New laser field-of-view visualization and offline simulation are available. We now offer the visualization of the working area (trapeze) for laser-line scanners in the Graphic Display window. To use this feature, select the **Draw Laser Working Area** check box on the **Laser Sensor** tab in the **Setup Options** dialog box (**Edit | Preferences | Setup**). See PCD-135744.

Bringing Order to Your Probes
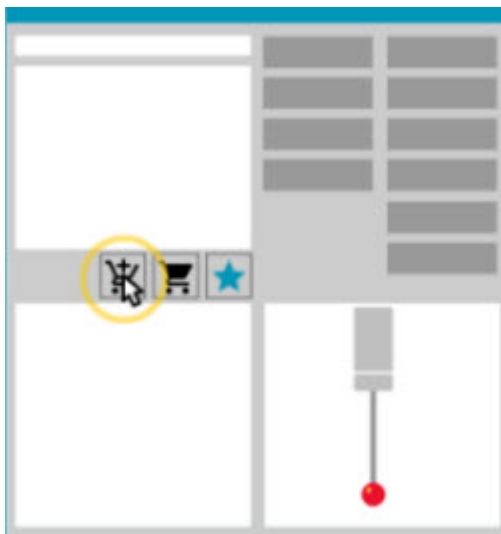
Mark your favorites. Click on your CAD part to create required tip angles. Buy replacements with our Shopping Cart tools.

You can shop for probe components from the **Probe Utilities** dialog box (**Insert | Hardware Definition | Probe**). Probe items that Hexagon manufactures are available for you to select and add to your shopping cart. You can edit and view your shopping cart and modify the quantity as well as add your "requester" information. You can also download a Purchase Request form. This feature

provides a more convenient way for you to order the probing items that you need to measure parts. See PCD-138135.

2D Radius Gage

The 2D Radius Gage is a quick-check tool that you can use to measure the radii on a pointcloud or mesh cross section. When you hold down the Shift key, you can create a 2D Radius Gage graphically on a cross section in the 2D Slide Show view. The display widget shows the nominal, measured, and deviation values.

By default, the 2D Radius Gage uses a Least Square Best Fit algorithm to calculate the 2D Radius. The color of the radius gage graphic corresponds to its deviation on the dimension color scale.

- The 2D Radius initially uses the active tolerances that are set on the dimension color scale.
- You can change the tolerances, label, and report options through the Edit window. You can also use F9-Edit to display the **2D Radius Gage** dialog box.
- You can create a graphical snapshot of the cross section with measured gages.

See PCD-63393 and PCD-130865.

Auto Features (Laser)
- Directly-Measured Laser Auto Features for a CMM can now be simulated offline. When you select the Laser Auto Feature **Show/Hide Stripes** button in the **Auto Feature** dialog box (**Insert | Feature | Auto**), the scanned stripes appear while the dialog box is open. Only the laser features that can be scanned with one single pass are simulated. See PCD-119684.

Auto Features (Tactile)

- We enhanced the **Auto Wrist** dialog box. (This dialog box is available through the **Auto Wrist Toggle** icon on the **Auto Feature** toggle bar.) With this dialog box open, you can now also access the Graphic Display window. The dialog box only appears when the currently-active tip cannot measure the selected feature. See PCD-121636.

Automation

- A new Automation property, ShowFormViewsInPopUpWindowWhileExecuting, controls whether PC-DMIS Forms appear in the topmost view even if PC-DMIS is not visible. See PCD-116867.

CAD

- We added CAD system mouse and gesture support. See PCD-121724.
- We added support for NX 12 via its Direct CAD Translator (DCT). See PCD-133971.
- CATIA v5 Direct CAD Interface (DCI) now supports R27. See PCD-137701.
- CATIA v5 DCT now supports R27. See PCD-137700.

Calibration (Tactile)

- The new Check Calibration Limits command checks for the calibration limits that you set for Calibration Validity, Calibration Interval, Standard Deviation, and Tip Diameter deviations in the **Probe Setup** dialog box (**Insert | Hardware Definition | Probe | Setup** button). The developer of a measurement routine can use the On Error command to catch the calibration limit error and decide whether to stop the execution of the measurement routine. This command helps implement the organization's calibration policy. See PCD-137342.

CMM - I++

- We added dual-arm support for I++ client implementation of Zeiss Eagle Eye 2. See PCD-136860.

DCI

- We added support for NX 12 via its DCI. See PCD-129818.

GD&T - Dimensions

- The **XactMeasure GD&T** dialog box is smaller and resizable. The **Advanced** tab was replaced with the **Reporting** and **Nominals** tabs, and we added new **+** icons for adding and defining datums and adding a single-segment/composite Feature Control Frame (FCF). See PCD-141802.

Graphics

In the Graphic Display window, we removed the ability to zoom in and out with a right-click above or below an imaginary center line. This functionality was needed many years ago when computers came with mouse devices with only two buttons. Now that mouse devices come with a wheel button, this is no longer needed. In addition, this change helped us to improve the right-click menu coverage in that window.

You can still zoom in and out by rotating the mouse wheel button.

See PCD-133136.

Laser (CMM)

- Integrated two new Hexagon laser-line scanners: HP-L-5.8 Proto (60 Hz) and HP-L-5.8 Fumo (33 Hz). See PCD-109463.

Measurement Strategy Editor

- We improved Measurement Strategy Editor (MSE) parameter sets. See PCD-121633.

Path Optimization

- Path optimization now supports dual-arm machines. With this addition, the legacy path optimization tool is obsolete. See PCD-108705.

Planner

- Vero SMIRT integration. See PCD-134325.

Point Clouds

- When you create a 2D Radius Gage for a pointcloud or mesh cross section, you can hold the Shift key down and hover the mouse pointer over the desired radius. A widget appears and initially shows the nominal, actual, and deviation values for the radius. When you click on the radius, the widget expands and enables you to change the gage ID and other settings. See PCD-130775.
- The offline laser pointcloud simulation for CMM now works faster and more efficiently. To control the speed of the simulated laser scan, use the **Scan animate every NPts** option on the **Animation** tab in the **Setup Options** dialog box (**Edit | Preferences | Setup**). See PCD-129253.

Portable

- PC-DMIS supports the MoveInspect XR8 interface for probing. When connected to the machine with MoveInspect Pilot, PC-DMIS automatically recognizes and loads the correct probe tip. You can use the buttons on the MI.Probe to take and acknowledge measurements. This interface requires the MoveInspect license. See PCD-127770.

- A new **MoveInspect** toolbar is now available for the MoveInspect XR8 machine interface. Although these functions can be done directly from the MI.Probe, the toolbar has buttons that enable you to take a hit, delete a hit, and end the feature. You can also turn Live mode on and off from the toolbar. When Live mode is active, the probe is shown as "live" (real-time) in the Graphic Display window, and the Probe Readouts window is updated. This corresponds to the MoveInspect Pilot Trigger continuous mode. See PCD-130200.

Probes (Tactile)

- We simplified probe and tip creation. We added the "Favorite" concept to the **Probe Utilities** dialog box (**Insert | Hardware Definition | Probe**). You can mark the probing hardware that you own as a Favorite item. You can click the **Favorite** button in the **Probe description** area in the dialog box to filter the list of probe components by only the components that you own. This feature helps you find the component and create probe files more easily. See PCD-138090.

- You can use QuickFeature gestures in the **Probe Utilities** dialog box (**Insert | Hardware Definition | Probe**) to add tip angles to the probe file. With this ability, you can click on CAD objects to get a recommended angle, as well as an alternate angle, to measure a feature. There is no more guessing and hard work to determine tip angle requirements; just click on the CAD. PC-DMIS displays the recommended tip angle in the Graphic Display window and adds it to the list of angles. See PCD-140491.

Q-DAS

- The Q-DAS Data Editor facilitates to make changes to the QdasData.xml file from within PC-DMIS. If you want to customize your Q-DAS output, you can make changes to the characteristic K-field values from within the PC-DMIS environment. See PCD-125492.

- PC-DMIS Q-DAS Configurator has the additional ability to update an open QdasData.xml file with the associated DFQ file. This function is useful if you want to migrate your measurement routine and use integrated PC-DMIS Q-DAS functionality. See PCD-134558.
- PC-DMIS creates a folder named **Results** in this location: C:\Users\Public\Documents\Hexagon\PC-DMIS\2018 R2\Q-DAS\Results. The ASCII result files (DFQ or DFX+DFD) for Q-DAS are stored in this folder by default. The names of the result files include the name of the part and a date/time stamp. See PCD-137955.

QuickFeatures

- When you use the QuickFeatures functionality to create a pattern of features, such as a bolt-hole pattern, PC-DMIS orders the features in a more optimum sequence to help minimize the machine's run time. See PCD-131900.

Quick Fixturing

- We enhanced the Quick Fixture Snap to Grid feature. It now allows more precise graphical positioning of fixture items. See PCD-77598.

Tracker

- We added the **T-probe Configuration** tab to the **Machine Options** dialog box for the AT960 Tracker (**Edit | Preferences | Machine Interface Setup**).Use this dialog box to set the function of each button on the T-probe. The options are Stationary, Scanning, Done, and None. If desired, you can save the buttons' functions as the default settings. The settings correspond to these registry entries in PC-DMIS Settings Editor: `ButtonForStationary`, `ButtonForScanning`, and `ButtonForDone`. See PCD-134172.

User Interface

- For ease of use, the Graphic Mode buttons were added to the **QuickMeasure** toolbar. See PCD-131005.
- We updated the PC-DMIS document icons to match the new product icon. See PCD-137762.
- We updated the icons on the Tracker and Vision status bars. Tracker icons are now unified with the next version of Tracker Pilot. See PCD-121367.

Information about this Release

We at Hexagon Manufacturing Intelligence are proud to bring you PC-DMIS 2018 R2. This platform brings together new aspects of the software for the development of a complete manufacturing process control solution. Available in this release are variations of the software designed to assist with every aspect of the fabrication and quality control process. The newly-created packages include the established PC-DMIS Laser, PC-DMIS NC, PC-DMIS Vision, PC-DMIS Pro, PC-DMIS CAD, and PC-DMIS CAD++ platforms.

The testing of this version has been significant. We'd like to take a moment to discuss this process and also make you aware of the various components of testing.

Testing consists of two parts. These can be described as functional testing and integration testing.

- The vast majority of testing effort goes on in the functional area. This is the testing that determines that specific functions that are core to the software, regardless of what type of machine is used, are working correctly.
- The integration testing is essentially a testing of the interface with a particular type of machine.

In the ideal scenario, Hexagon Manufacturing Intelligence would have access to at least one of every piece of hardware running the software that is operating in the field. However, in practical terms, this is impossible. This integration test plan is then performed on as many types of machines as we have available.

Should you experience problems with your system after you install PC-DMIS 2018 R2, it could possibly be an integration problem. If it is a problem of this nature, it will probably be evident immediately upon first use of the possibly untested configuration. To report any integration problems, see "Contact Hexagon Manufacturing Intelligence". Should such a problem materialize on a commercial release, you will be given the highest priority for correcting these problems.

For existing users of the software who currently have earlier versions of the software installed, it is advised that you install PC-DMIS 2018 R2 into a new directory. In this way, you can be assured of continuous use of the existing version should problems arise with this newer version.

Installing the Software

To install the software, follow these steps:

Step 1: Check System and Hardware Requirements

Before you attempt to install a new version, ensure that you meet the system and hardware requirements discussed above in "Recommended System Requirements". You must also have a USB portlock or valid LMS license for the installation to work. Your IT specialist can help you with this information.

- To get your computer's properties, highlight the **This PC** icon, right-click on it, and select **Properties**.
- To check the display properties for the graphics card, go to **Start** and type **Control Panel**, and then select **Display and Settings**.

Step 2: Log on as an Administrator

To install and run your new version for the first time, you must be logged on as a user with administrator privileges.

Step 3: Back Up Existing Settings

Back up your settings from your previous version. By default, PC-DMIS 2018 R2 attempts to migrate existing settings from previous installs on the same computer, even from very old versions of the software where settings were stored in the pcdlrn.ini file.

- If your current version uses the pcdlrn.ini file for its settings, back up your pcdlrn.ini file. This file is in the Windows system directory. Save a copy of the file in a safe place.
- If your current version uses the PC-DMIS Settings Editor, back up your PC-DMIS Settings Editor data. To do this:

1. Start the Settings Editor.
2. Click the **Backup** button (or **Export**). The **Backup** dialog box appears:
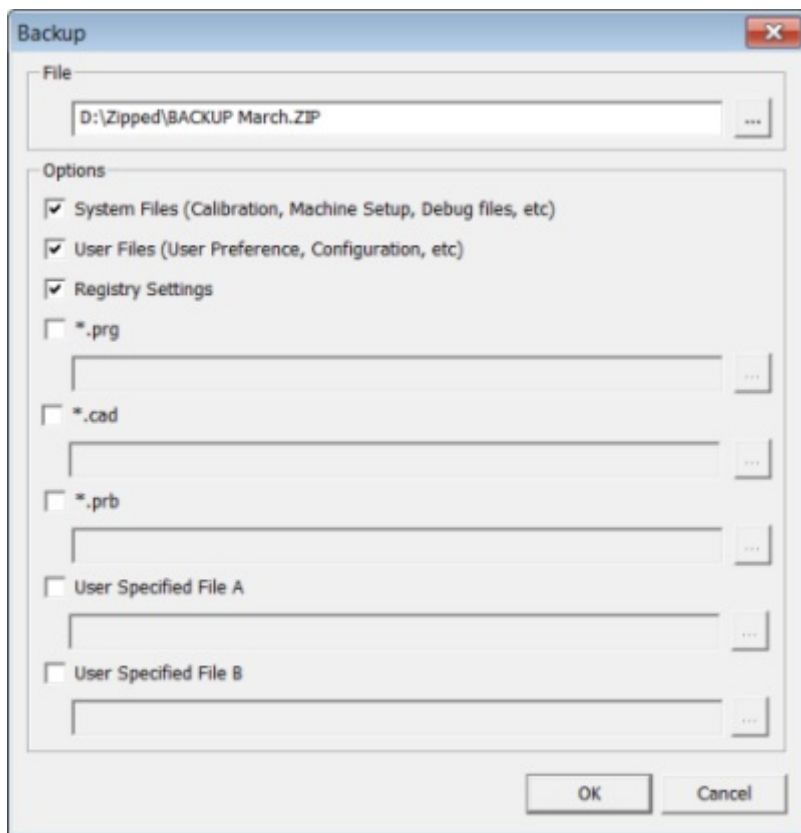
Backup dialog box

3. In the **File** box, define a safe location to save the backed-up files, and give the file a .zip extension.
4. Select the first three check boxes, and click **OK**.

If you replace your computer or transfer settings that reside on another computer, you can use the Settings Editor's **Backup** and **Restore** buttons:
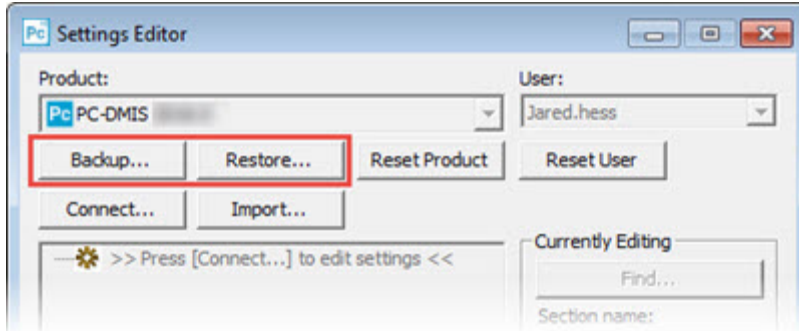
Backup and Restore buttons

For more information on the backup and restore functionality, refer to the Settings Editor documentation.

Backing Up Machine Files for an Xcel CMM or a Sharpe Controller

If you are using a Brown and Sharpe Xcel CMM or a CMM that uses a Sharpe controller, and you are going to install PC-DMIS 2018 R2 on a new computer, save copies of the following CMM machine files from your previous version to a safe place:

- comp.dat

    Starting with PC-DMIS 2013 MR1, the comp.dat file moved to:

    C:\ProgramData\WAI\PC-DMIS*version*

- downl.oad

The files are located in the installation (root) directory for all software versions prior to 2013 MR1, regardless of the operating system.

The location of the installation (root) directory is:

    C:\Program Files\WAI\PC-DMIS *version*

For versions of PC-DMIS up to and including 3.7 MR3, the location of the installation (root) directory is:

C:\PCDMISW

Backing Up Machine Files for a CMM with a DEA Controller

If you are using a DEA or other CMM with a DEA machine controller, and you are going to install PC-DMIS 2018 R2 on a new computer, save copies of the following CMM machine files from your previous version to a safe place (the files vary according to the type of CMM):

- cosdat1.bin
- compens.dat

  Starting with PC-DMIS 2013 MR1, the compens.dat file moved to:

  C:\ProgramData\WAI\PC-DMIS*version*

- Fzyfile.txt
- Rcxfile.txt
- Rmxfile.txt
- Any file with your machine's serial number in its name

The files are located in the installation (root) directory for all software versions prior to PC-DMIS 2013 MR1, regardless of the operating system.

The location of the installation (root) directory is:

C:\Program Files\WAI\PC-DMIS *version*

For software versions up to and including 3.7 MR3, the location of the installation (root) directory is:

C:\PCDMISW

Step 4: Install the Software

The following steps run you through a typical installation. Your installation screens may differ if you are running a different version of PC-DMIS 2018 R2 or if you are installing a custom build with additional options. In addition, your license may be configured with different options.

1. Locate the installation file on your installation media; or, if you downloaded it, open the directory that contains the downloaded file. The name of the installation file is:

   Pcdmis2018_R2_release_##.#.###.#_x64.exe

   The # symbols represent the version and build numbers.

2. Double-click this executable file to open the installation program.
3. If a security warning appears, click **Run**.
4. From the initial license screen, read the license agreement, and select the **I agree with the License terms and conditions** check box.
5. In the box at the bottom, you can define the installation folder. By default, the file installs to:

   C:\Program Files\Hexagon\PC-DMIS 2018 R2 64-bit

   To change the folder, either click the browse button () and choose a folder, or in the box, type a new path.

6. Once you accept the license agreement and choose the installation folder, click **Next** to open the licensing screen.

7. From the licensing screen, choose your license type:

   - **LMS (Software) License** - If you have a software license (called an Entitlement ID), select this option. Complete the boxes beneath this option.
   - **LMS License Server** - If you have a license server to connect to, select this option and then type the server address.
   - **HASP** - If you have a portlock (a physical USB device with the licensed options), ensure that it is connected to your computer, and then select this option.

   For help on how to set up an LMS license, see "LMS License Setup".

8. Click **Next**.

9. Choose to install additional software. If you chose a custom installation path, the additional software still installs to your default measurement routine directory (usually C:\Program Files\Hexagon\).

   - **Inspect** - This is version 3.2 of the Inspect operator interface to PC-DMIS 2018 R2. You can open PC-DMIS 2018 R2 from within Inspect to generate reports and execute measurement routines. You can execute measurement routines from the local directory or HxGN SMART Quality.
   - **PDF Converter 5.0** - This third-party tool converts PC-DMIS 2018 R2 reports to PDF outputs.
   - **NOTIFICATION CENTER** - This application sends notifications from a client application, such as PC-DMIS 2018 R2, to your computer or measurement device. It does this during certain events, such as when the machine has an error.

Join the Hexagon Customer Experience Improvement Program - To help improve the product and send usage data to Hexagon Manufacturing Intelligence, select this check box. To opt out of sending usage data, clear the check box. For more information about this program, visit the Hexagon Customer Experience Improvement Program web site.

You can also choose to send usage data to Hexagon Manufacturing Intelligence after you install the software. For more information, see "Updating the Software".

10. Click **Install** to start the installation. A progress bar shows the overall progress.

11. When the installation finishes, a screen shows any warnings or errors. It also contains these options:

- **Launch PC-DMIS** - To launch PC-DMIS 2018 R2 now, select this check box. If this is your first time installing this version on this computer, you should do this to initialize registry entries. For more information, see "Administrator Privileges Explained".

- **Show Release Notes** - To display a Readme.pdf file that shows what is new or has changed in this release once you click **Close**, select this check box.

12. Click **Close** to close the installation program.

LMS License Setup

This topic provides information if you need to:

- Set up your LMS (software) license
- Connect to an LMS license server
- Update your LMS license
- Provide licensing information to the installer from the command line

LMS (Software) License

If you chose **LMS (Software) License** on the [licensing screen](#), and the installation cannot find a valid license on your system, you need to complete these options:

LMS (Software) License option

1. Complete the options:
   - **Entitlement ID** - If you have an Entitlement ID, type or paste the ID you were issued in the box. If you have supplied this value in a previous installation, the installer pulls in that value from the registry.
   - **URL to FNO Services** - This points to the URL that verifies your license. Ensure that it has this URL:

     https://licensing.wilcoxassoc.com/flexnet/services

- Proxy information - If your computer is on a network where you need a proxy server to reach the Internet, contact your IT specialist to get this information. Enter the server host, user name, and password.

2. If you do not have an Entitlement ID and you need to activate your license offline, use the CLM Admin application. From the CLM Admin application, choose **Activate new licenses**, and follow the on-screen instructions.

> For information on how to use the CLM Admin application, consult the Hexagon Client License Manager (CLM) Software documentation (pcdmisclm.chm). You can find this in the sub-folder for your language (such as the **en** directory for English).

3. Click **Next**. The installation software connects to the Internet and activates your license. It then installs the FLEXnet Licensing Service required to use LMS licenses.

LMS License Server
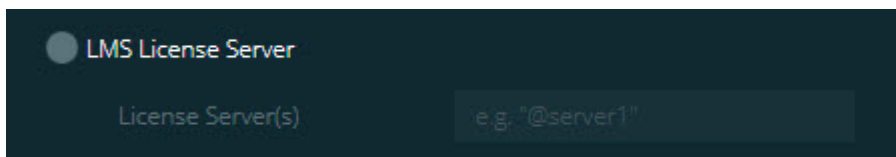
LMS License Server option

If you use a license server, select this item, and then type your license server name in the **License Server(s)** box. The format of this line of text is *port number@server name*, where *port number* is the TCP port number for the licenser server, and *server name* is the name of the server.

The default TCP port number is 27000. If you don't identify a specific port, the license server uses the default. For example, these mean the same thing:

@server1

27000@server1

> If you use this option, place the "@" symbol in front of the server address. If the "@" symbol is left off, the installation process attempts to look locally for the license. This may result in an error.

You can also specify multiple license servers. You can separate them with semicolons. For example, suppose that you have three license servers called licenseserver1, licenseserver2, and licenseserver3, and all of them use the default TCP port. You can specify all of them in a single line of text, like this:

@licenseserver1;@licenseserver2;@licenseserver3

Updating Your LMS License

Once you finish with the license setup and install PC-DMIS 2018 R2, it checks for license updates when it starts and after every eight hours of running. If a license update is available, this notification appears:

PC-DMIS

Updates are available for your PC-DMIS license. Applying them now will require PC-DMIS to restart. Would you like to apply the updates now?

To apply the update, click **Yes**. If you click **No**, PC-DMIS 2018 R2 displays the message every eight hours of running or the next time it runs.

- If an option or a feature is added, you are given the choice to apply the changes. A pop-up message displays in the system tray if you apply the changes.
- If an option or feature is removed, a message that requests you to restart PC-DMIS 2018 R2 appears. A pop-up message also appears in the system tray to inform you of this.
- If an option or feature is obsolete, it is automatically removed.

> After you apply an update, restart PC-DMIS to ensure that it functions properly.

Providing LMS Licensing Information to the Installer from the Command Line

You can send LMS licensing information to the installer through command line parameters. For more information, see "Providing LMS Licensing Information to the Installer from the Command Line" in Appendix A.

Administrator Privileges Explained

Software versions earlier than version 2012 require that you run the software as an administrator because some system settings (such as the last probe used, wrist angles, and other items) were shared among all users on that computer. This required that these settings were placed in the LOCAL_MACHINE section of the Windows registry instead of in the CURRENT_USER section (for user-specific settings). Making changes to settings in the LOCAL_MACHINE section requires administrator privileges.

In PC-DMIS version 2012 and later, the settings mechanism used by PC-DMIS changed to only require administrator access the very first time it runs at the end of the installation. From that point forward, standard user access is sufficient.

The PC-DMIS installer has a flag that is built into the setup executable file (Pcdmis2018_R2_release_##.#.###.#_x64.exe) that requires the setup process to run with administrator privileges. If the current user has lesser privileges, the setup program displays a prompt to provide a user name and password of an account with administrator privileges.

Once the installation finishes, the first time you run PC-DMIS 2018 R2, you must launch it with administrator privileges. If you mark the **Launch PC-DMIS after the install finishes** check box when the installation finishes, PC-DMIS 2018 R2 does this automatically by passing the original privilege level of the installer onto PC-DMIS.

Note, however, that if you do not mark this check box, you will need to explicitly right-click on the shortcut and select **Run as administrator** as described in step 6.

For more information on the file system and registry rights that PC-DMIS 2018 R2 requires, see "Required User Access Rights" in Appendix B.

Step 5: Copy Files after Installation

If these files are available, copy them from your old PC-DMIS installation directory to the directory where you installed the newer version:

- Sysparam.dat
- Downl.oad
- Fzyfile.txt
- Rcxfile.txt
- Rmxfile.txt

Starting with PC-DMIS 2010 MR2, PC-DMIS automatically copies common system files to the program data files directory when you install a newer version of PC-DMIS.

The comp.dat, compgrid.at, comp.enc, and compens.dat volcomp files used with volcomp methods 13 (ASI) and 14 (BNS) must be in the program data files directory. When you install a newer version of PC-DMIS, these files automatically copy to the program data files directory for the new version. For the default path location of this directory, see "Understanding File Locations" in Appendix B.

For additional information on volumetric compensation files and setup, see the Machine Interface Installation Manual (MIIM).

Copying Machine Files for an Xcel CMM or a Sharpe Controller

If you are using a Brown and Sharpe Xcel CMM or a CMM that uses a Sharpe controller, and you installed PC-DMIS 2018 R2 on a new computer, copy the backed-up CMM machine files to the following location on the new computer:

C:\Program Files\Hexagon\PC-DMIS *version*

For more information about these files, see "Backing Up Machine Files for an Xcel CMM or a Sharpe Controller".

## Copying Machine Files for a DEA CMM with a DEA Controller

If you are using a DEA CMM with a DEA machine controller, and you installed PC-DMIS 2018 R2 on a new computer, copy the backed-up CMM machine files to the following location on the new computer:

C:\Program Files\Hexagon\PC-DMIS *version*

For more information about these files, see "Backing Up Machine Files for a DEA CMM with a DEA Controller".

Step 6: Launch the Software for the First Time

1. When you run PC-DMIS 2018 R2 for the first time, go to **Start** and type **PC-DMIS 2018 R2 64-bit**.
2. From the list of shortcuts in the **Start** menu, right-click on either the **Online** or **Offline** icon, and then select the **Run as administrator** option (required only if the **Launch PC-DMIS** check box wasn't checked at the end of the installation).
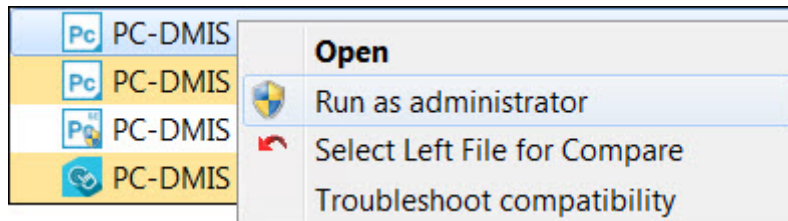
Run as administrator option

The **Run as administrator** option allows the program to write the needed machine-specific settings.

3. You can import settings from a previous version.

   If your previous version used the pcdlrn.ini file, PC-DMIS 2018 R2 asks if the settings in your PCDLRN.INI file should be used as your registry settings. Click **Yes** at the prompt. Otherwise, PC-DMIS 2018 R2 loads in the factory defaults.

   If your previous version used the Settings Editor, do the following to use your previous software settings:

   a. Close PC-DMIS 2018 R2.
   b. Launch the PC-DMIS Settings Editor from the **Start** menu.

c. Once it opens, click **Import**, and open the PCDRegFile.dat file you backed up in the "Step 3: Back Up Existing Settings" section of this document. PC-DMIS 2018 R2 imports your settings.

d. Close the PC-DMIS Settings Editor.

4. When you launch PC-DMIS 2018 R2, the **What's New** information appears in your default web browser. You can also choose to display the **What's New** information after you launch PC-DMIS 2018 R2. To do this, click **Help | What's New**.

Subsequent Startups

For subsequent startups, you can launch PC-DMIS 2018 R2 normally by clicking the usual **Offline** or **Online** shortcut:

PC-DMIS 2018 R2 shortcuts

Once PC-DMIS 2018 R2 starts, the **Software License** screen displays the current license agreement. Read the agreement carefully and then at the bottom, click **I agree with the License terms and conditions** to proceed:

Software License screen

Once PC-DMIS 2018 R2 runs, an icon displays in your system tray. If your portlock or LMS license is programmed correctly, the icon displays a green check mark as shown below:
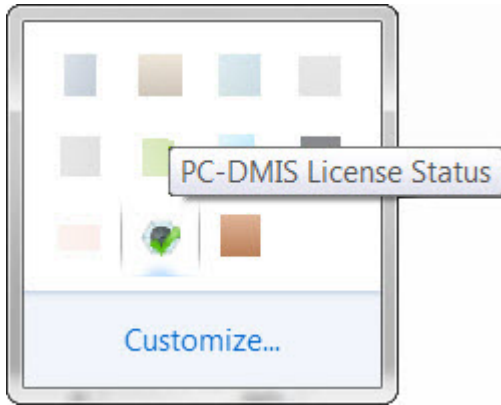
Message for valid PC-DMIS license

If your portlock is not connected or is not programmed correctly, or if you are using an LMS license and your software has not been properly licensed, the icon appears with a red exclamation point overlay. A pop-up message says that the license is disconnected:

Message for disconnected PC-DMIS license

If the license is disconnected, PC-DMIS 2018 R2 functions normally, but after 5 minutes, it automatically closes. Be sure to save your data immediately before this occurs.

Note About CMMs Using RS-232 Communications

By default, PC-DMIS 2018 R2 communicates through the COM1 communications port. You need to change this port number to the number that Windows automatically created if a serial-to-USB adapter cable or serial adapter card was installed for communicating with an older RS-232 CMM.

To change the COM port number:

1. In Windows Device Manager, note the number that Windows assigned to the communications port on your computer. For help, refer to Windows Help.
2. Open PC-DMIS in online mode, and then open or create a measurement routine.
3. Select **Edit | Preferences | Machine Interface Setup**.
4. In the **Comm port** box, enter the port number from Windows Device Manager.

Updating the Software

By default, PC-DMIS automatically checks for software updates if your computer is connected to the Internet. If PC-DMIS detects that an update is available, the HEXAGON UPDATES application opens to inform you of the update. You can then download and install these updates.

You can also manually check for updates. To do this, select **Help | Check for Updates** and then select the desired options in the HEXAGON UPDATES updater application.

The HEXAGON UPDATES updater application contains the **Settings** dialog box. You can use the **I would like to participate** option in the dialog box to choose whether or not to join the Hexagon Customer Experience Improvement Program and send usage data to Hexagon Manufacturing Intelligence. Hexagon Manufacturing Intelligence uses this data to improve the user experience. For more information about this program, visit the Hexagon Customer Experience Improvement Program web site.

For more information on the updater application, see "Updating the Software" in the "Getting Started" chapter in the PC-DMIS Core documentation.

Repairing or Removing an Installation

You can also repair or remove an installation once you install it. To do this, double-click the Pcdmis2018_R2_release_##.#.###.#_x64.exe file as if you were beginning the installation process. The setup displays a screen with these options:
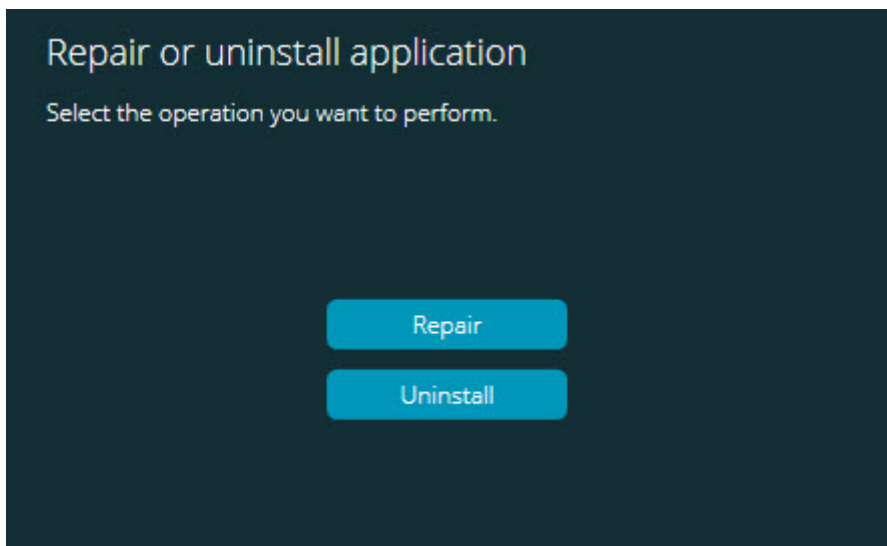
"Repair or uninstall application" dialog box

- **Repair** - This option reinstalls all of the product files as they were originally installed. This option may help resolve issues where an installation didn't properly install all of the files.
- **Uninstall** - This option removes the application from where you installed it. You can also use the **Apps and features** screen or the **Programs and Features** control panel item in Control Panel to uninstall the application.

Running the Software in Another Language

The initial installation setup file for PC-DMIS 2018 R2 contains the user-interface files for all of the supported languages. When you install PC-DMIS 2018 R2, it installs the language files based on your operating system's language.

To run PC-DMIS 2018 R2 in a language other than the operating system's language, select **File | Language**, and then click the desired language. PC-DMIS shows a message that says the application will be shut down and restarted. Click **Yes** to continue. PC-DMIS 2018 R2 immediately closes and then reopens in the selected language.

To get the help content available in a non-English language, see "Installing Non-English Help Files from Language Packs".

Installing Non-English Help Files from Language Packs

Even though you may have a non-English operating system, the English help files are the only help files included in the main installation package. They are installed regardless of the installation language. However, non-English help files are not included in the main installation file.

This means that if you install a non-English language, or if you switch to a non-English language, in order to see any help content at all, you *must* also install a language pack for that language. Otherwise, if you try to access the help file, PC-DMIS 2018 R2 displays an error message indicating that it cannot find the help file.

A language pack contains all of the help content for that language. To install a language pack, do the following:

1. Locate the desired language pack (and .exe file) on your installation media or download it from the Internet here:

    ftp://ftp.wilcoxassoc.com/PC-DMIS-Versions/Release/2018_R2/Release/x64/Lang/

2. Run the .exe file and follow the setup instructions. You do not need to have administrator access to do this step.

This procedure installs the help content into the appropriate language sub-folder (for most languages, this is a two-letter folder) where you have PC-DMIS 2018 R2 installed. You can then switch to that language in the software and access the help content.

Troubleshooting

This topic provides information for you to troubleshoot installation, startup, and software update problems.

Startup is Slow

Problem: You use a computer with at least the recommended system requirements as detailed in the "Recommended System Requirements" topic, and it takes longer than 30 seconds to launch the software.

Description: This happens if you try to run PC-DMIS 2018 R2 on a Windows 7 computer, but you didn't mark **Run as administrator** on the installation wizard. This results in a problem loading the HASP driver. Note that this problem only occurs when you install with a HASP license type, as discussed in "Step 4: Install the Software".

Solution: Uninstall PC-DMIS 2018 R2 and then reinstall it by right-clicking on the installation file and choosing **Run as administrator**.

Updating the Software Results in a "(407) Proxy Authentication Required" Message

Problem: You use the **Help | Check for Updates** menu option to update the software, and when the HEXAGON UPDATES updater application opens, it shows: "The remote server returned an error: (407) Proxy Authentication Required."

Description: A firewall on your computer may be blocking the updater application from connecting to the server.

Solution: Check your firewall's settings and ensure that the following address is not blocked: **http://www.wilcoxassoc.com/WebUpdater**

Setting Up the Network to Send Crash Reports

Problem: PC-DMIS 2018 R2 cannot automatically send crash reports to Hexagon Manufacturing Intelligence even when your software configuration does not use the **/nocrashdump** switch. (This switch disables crash reports in PC-DMIS 2018 R2.)

Description: A firewall on your computer may be blocking the HEXAGON UPDATES updater application from connecting to the server. If PC-DMIS 2018 R2 crashes, it uses a PHP script over HTTP to send the crash report. If this fails, it then tries to send the report to crashreport@wilcoxassoc.com. It tries using the standard SMTP email protocol. If that fails, it tries to send the email through MAPI.

Solution: The crash report system needs to be able to use port 80 to get out to the server, **http://www.wilcoxassoc.com**/.

Installing on top of an Existing Version Results in Unexpected Behavior

Problem: You installed on top of an existing version of the software, and now the software does not behave normally. Potential symptoms include:

- After you start up the software, you get a "Procedure Entry Point" error.
- When you select **Help | About**, it does not show the new build number.
- Reported bug fixes do not seem to be fixed, and PCDLRN.EXE does not have a newer date and time than the original release.

Description: Something did not install properly on top of the existing version.

Solution: Use **Apps & Features** or Control Panel to completely uninstall the existing version and then reinstall the version you're trying to install.

Running the Legacy DPUPDATE.EXE Does Not Work

Problem: The legacy DPUPDATE.EXE does not run.

Description: If you run PC-DMIS 2018 R2 without administrator privileges, DPUPDATE.EXE does not work.

Solution: Run PC-DMIS 2018 R2 with administrator privileges.

Contact Hexagon Manufacturing Intelligence

If you are participating in the *technical preview* of PC-DMIS 2018 R2, please post your feedback in the appropriate technical preview forum located at www.pcdmisforum.com/forum.php. Please <u>do not</u> contact Hexagon Technical Support for technical previews.

If you are using the *commercially-released version* of PC-DMIS 2018 R2 and would like further information or technical support, please contact hexagonmi.com/contact-us or visit hexagonmi.com/products/software. You can also reach Hexagon Technical Support at support.hexagonmi.com or by calling (1) (800) 343-7933.

Appendix A

Recommended System Requirements

Operating System

PC-DMIS 2018 R2 operates under 64-bit Windows 10, Windows 8.1, Windows 8, Windows 7, and Windows Vista. No other operating systems are supported.

> ◉ When you use third-party drivers, you should contact your local Hexagon Manufacturing Intelligence representative to ensure operating system compatibility.
>
> Running PC-DMIS inside a Virtual Machine (VM) is supported only if the VM supports OpenGL 3 or higher.

> ⓘ PC-DMIS Vision machines do not support 64-bit Windows 8.
>
> The Matrox Framegrabber PC-DMIS Vision hardware component does not support a 64-bit operating system.

Microsoft .NET Framework

Microsoft .NET Framework 4.6.1 for Windows. If you do not have Microsoft .NET Framework 4.6.1, the PC-DMIS installer will install it for you.

RAM
- 4 GB of RAM or higher

    The size of the CAD data file and the tessellation multiplier value used affect the amount of memory needed. These both affect the amount of tessellated facets needed to display the model. The smaller the tessellation multiplier value used, the more memory needed for the facets. For large CAD models, this could cause an "Out Of Memory" error. If this occurs, the current PC-DMIS session will be left in an unstable state and should be terminated.

    The default tessellation multiplier value is 1.0. Setting a tessellation multiplier of 0.1 will result in a 10 to 20 percent increase in the memory required over the default value of 1.0. Decreasing the tessellation multiplier further to 0.01 will result in an additional 50 to 65 percent increase of memory required.

- 1 GB of video RAM

CPU
2 GHZ or higher quad core processor

Graphics
- For desktops: NVIDIA Quadro K620 graphics card
- For laptops: NVIDIA Quadro K1100M graphics card
- For laptops running PC-DMIS with an RS4 laser sensor: NVIDIA Quadro M3000M graphics card with 4 GB of memory

The graphics driver must support OpenGL 3.0 or higher. A warning message appears on PC-DMIS startup if the driver does not support OpenGL 3.0 or if your graphics driver is more than three years old.

Hard Drive

- 2 GB of free hard drive space plus allocated virtual memory of eight times the largest CAD file used
- SSD drive, HDD 10K, or two disks in RAID 0 mode (high-performance hard disk drive)

Display

Screen resolution of 1280 x 1024 or higher

Connectivity

- Two Ethernet ports. This may be required for specific installations in consideration of local needs, including but not limited to CMM systems where one port is required for controller communications and another for intranet/Internet communications.
- Two USB ports
- DVD drive
- A properly-configured LMS license or portlock

> A HASP key does not act as general-purpose data storage; therefore, you cannot use a HASP key to store (download) arbitrary data from a computer. Similarly, you cannot use a HASP key to put (upload) arbitrary data on a computer. Also, only Hexagon Manufacturing Intelligence applications can read or write to a HASP key; other applications do not have this capability. As a result, you cannot use a HASP key to load and unload data to and from a computer.

Browser

Internet Explorer 10 or later

Anti-Virus Software

Hexagon Manufacturing Intelligence used the Sophos anti-virus tool to test PC-DMIS 2018 R2. You will need to confirm the performance of any other anti-virus tool.

http://sophos.com/products/enterprise/endpoint/security-and-control/

Solutions for CMMs Using RS-232 Communications

If you are installing PC-DMIS 2018 R2 on a new or existing computer, but you have an older CMM model that uses RS-232 communications, then you will need to install one of these solutions on your computer:

- An external RS-232 serial-to-USB adapter cable plus the serial-to-USB adapter cable driver
- An internal serial adapter card with serial ports

Providing LMS Licensing Information to the Installer from the Command Line

You can send LMS licensing information to the installer by using the command line:

- If the installer is running in silent mode (**-q**) or basic silent mode (**-passive**), and the correct information is provided, everything runs without user interaction. The command switch **-q** displays the progress bar and handles installer errors. The **-passive** switch hides the user interface.
- If the installer is not running in silent mode, the information provided is used to populate the LMS activation form and skip the license screen.
- You can provide the **-?** to review additional command line arguments.

Descriptions of the parameters follow, along with examples.

Descriptions

USELMSLICENSING=1 - This flag is useful only if the system already has an LMS license that the user is using. It allows silent mode to work without having to prompt the user for a license choice. If the installer is not running in silent mode, it still allows the install process to skip the license type selection dialog (thus saving some time).

LMSENTITLEMENTID=*entitlement id* - This parameter and value are useful on a new system where no LMS license was previously installed. It indicates that you want LMS licensing and provides an Entitlement ID to try and activate. When this value is specified, there is no need to specify **USELMSLICENSING**.

LMSLICENSESERVERS="*server1,server2...*" - This parameter is used on systems that communicate with a license server. It also allows the license type selection dialog box to be skipped and the installation to be done silently.

LMSPROXYHOST="*proxyhostaddress*" - This optional parameter gives the address of a proxy host. In silent mode, it is used directly in activation. In non-silent mode, it populates the activation form with this value.

LMSPROXYUSERNAME="*user name*" - This parameter is another optional parameter for the proxy user name. It behaves in the same manner as **LMSPROXYHOST**.

LMSPROXYPASSWORD="*unencrypted password*" - This parameter is another optional parameter for the proxy password. It behaves in the same manner as **LMSPROXYHOST**.

LMSURLTOFNOSERVICES=*URL to FNO server* - This parameter is mostly for internal development. The default URL is to the production server. The new value can be used to override the default value and point to the development server.

Examples

On a brand-new system with a node-locked Entitlement ID, the following line installs PC-DMIS 2018 R2 in silent mode:

-q LMSENTITLEMENTID=99999-88888-77777-66666-55555

On a system that already has a license, the following line installs PC-DMIS 2018 R2 in silent mode:

-passive USELMSLICENSING=1

On a brand-new system using license servers, the following line installs PC-DMIS 2018 R2 in silent mode:

-passive LMSLICENSESERVERS="123.12.134.42"

On a brand-new system with no license, the following line skips the license type selection dialog box and populates the activation form:

LMSENTITLEMENTID=99999-88888-77777-66666-55555
LMSPROXYHOST="123.123.123.123" LMSPROXYUSERNAME="bob"
LMSPROXYPASSWORD="marley"

Appendix B

Understanding File Locations

These are the default file locations (path locations) for various user-specific settings and other files for PC-DMIS 2018 R2. These files are stored in the following locations, based on each file's role.

Public Documents
Measurement routine, CAD, probe, and other files:

> C:\Users\Public\Public Documents\Hexagon\PC-DMIS\2018 R2

Demo CAD files:

> C:\Users\Public\Public Documents\Hexagon\PC-DMIS\2018 R2\CAD

Public Documents (Reporting Directory)
Report template, label template, rule definition, and color definition files:

> C:\Users\Public\Public Documents\Hexagon\PC-DMIS\2018 R2\Reporting

Fixturing Files
> C:\Program Files\Hexagon\PC-DMIS 2018 R2 64-bit\Models\QuickFix

Program Data Files [Hidden]
Calibration files (such as comp.dat and compens.dat), setup files (such as tool.dat, toolc.dat, and usrprobe.dat), and other files:

> C:\ProgramData\Hexagon\PC-DMIS\2018 R2

User Data Files

Files for toolbar and menu layout, lighting and materials, and settings:

C:\Users*user name*\AppData\Local\Hexagon\PC-DMIS\2018 R2

Where *user name* is your window's logon user name.

For more specific information on data files, see "Understanding Data Files" in the "Setting Your Preferences" chapter in the PC-DMIS Core documentation.

> In addition, you can use the Settings Editor application to back up, restore, or clear user-specific files and settings. Rather than manually deleting or restoring individual files on your own, we recommend that you use the tools provided in Settings Editor instead. For more information, refer to the Settings Editor help file.

Required User Access Rights

PC-DMIS 2018 R2 requires read, write, and create access to the locations defined below in the file system and registry.

File System

Windows 10, Windows 8, Windows 7, and Windows Vista:

- C:\ProgramData\Hexagon\PC-DMIS\2018 R2
- C:\Users\Public\Documents\Hexagon\PC-DMIS\2018 R2
- C:\Users\UserName\AppData\Local\Hexagon\PC-DMIS\2018 R2
- Any user-specified folder locations for storing measurement routines, probes, subroutines, and so on

Registry

All of these versions have their own registry settings, which are stored in a version-specific registry key. The items shown below are for version 2018 R2.

- HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Hexagon\PC-DMIS\2018 R2 Key and all sub keys
- HKEY_CURRENT_USER\Software\Hexagon\PC-DMIS\2018 R2 and all sub keys
- HKEY_USERS\.DEFAULT\Software\Hexagon\PC-DMIS\2018 R2 and all sub keys

Notes

The first time you run a new version, PC-DMIS automatically copies the settings from the most recent version of PC-DMIS that is installed. For this to work, PC-DMIS needs to run with administrator privileges the first time you run it. During the installation, if you select the **Launch PC-DMIS** check box in the setup wizard, it runs PC-DMIS as an administrator and completes this first step.

This initial migration automatically sets read, write, and create permissions on the registry for the relevant keys.

If you are using fixturing or laser sensors, the following registry keys are stored back one level:

- HKEY_LOCAL_MACHINE\SOFTWARE\Hexagon\FxtServer
- HKEY_LOCAL_MACHINE\SOFTWARE\Hexagon\PC-DMIS\NCSENSORSETTINGS

It may be easier to just apply create/read/write privileges to the HKEY_LOCAL_MACHINE\SOFTWARE\Hexagon\ key and all sub keys to cover these also.

Appendix C

First-Time Installation with Flexible Fixturing

To be compliant with the permission rules for PC-DMIS products, files associated with fixturing are now located in this folder:

C:\Program Files\Hexagon\PC-DMIS 2018 R2 64-bit\Models\QuickFix

This allows access to the files without needing administrator privileges on the computer running PC-DMIS. To accomplish this, the following steps are required when you install PC-DMIS for the first time:

1. The first time you install PC-DMIS and FxtServerInterface, run the FxtServerInterface installation program for the first time with administrator privileges (as is required for the PC-DMIS installation).
2. When you run FxtServerInterface, a message states that the system will migrate all of your data files to the "FIVEUNIQUE" Documents folder described above.

   - If you choose **Yes**, the files are moved, and the original folder is deleted.
   - If you choose **No**, the files are copied, but the original folder is kept.

   Once this is done, the files are moved (or copied), and you are able to run FxtServerInterface.exe without administrator privileges.