Installation Manual

Data+ and Data+ Lite

Data Management Tool

METTLER TOLEDO

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1 Preparation

1.1. Checking Requirements

For a successful installation, ensure that the hardware meets the requirements detailed in the table below. The installation program will check whether the necessary .NET version and SQL server are installed and install any missing component.

	Data+ Lite	Data+
OS	Windows 10 (Pro, Enterprise)	Windows 10 (Pro, Enterprise)
RAM	min: 2 GB, recommend 4 GB	min: 2 GB, recommend 4 GB
CPU	2 Cores	min: 2 Cores, recommend: 4 Cores
Hard Disk	150MB free	min: 2GB free
Display	recommend min: 1280 x 720	recommend min: 1280 x 720
SQL Express Server	N/A	2014 Express included Full installation
.NET	Included with installation package	Included with installation package
MS Excel	Optional, for .csv file edit	Optional, for .csv file edit
Ethernet	Recommend minimum – 100MB Ethernet wired or 802.11n WiFi	
Serial Ports	Max 5x RS232 on local PC	

1.2. Installation

To start, log in to the local PC using an ADMIN account. Alternatively, select **Run as Administrator** option when executing each installation file.

NOTICE
IT IS ESSENTIAL THAT THE PROCESSES OF INSTALLATION AND CONNECTING TO THE DATABASE FOR THE FIRST TIME ARE CARRIED OUT WITH LOCAL ADMINISTRATOR RIGHTS.

1. Go to the downloaded setup files.
2. For a new installation of the Lite version, use **DataPlusLite.exe**, refer to Chapter 2.
3. For a new installation of the full version, use **DataPlusPre-RequisiteInstaller.exe** and **DataPlusSetup.exe**, refer to Chapter 3.
4. For an upgrade of either version, refer to Chapter 4.
5. To activate the full version's license, refer to Chapter 5.

NOTICE
DO NOT INSTALL BOTH DATA+ AND DATA+LITE IN THE SAME PC TOGETHER. UNINSTALL ONE BEFORE INSTALLING THE OTHER.
DO NOT INSTALL AN OLDER VERSION OF DATA+ USING THE DB FROM A NEWER VERSION (EX V1.2 W/DB FROM V1.3). REMOVE THE OLD DB FROM THE SQL SERVER THEN INSTALL THE OLDER VERSION OF DATA+ CREATING A NEW EMPTY DB.

1.3. Network Communication Configuration

During installation, PC firewall inbound and outbound exceptions are added for the following communication ports. These ports must also be allowed across the customer network infrastructure for communication between the Data+ PC and client terminals.

- Application server port: 56678
- Port for the Host data base article table: 4302
- Default terminal connection ports: 4305, 1701, 1702, 21

During installation, Data+ is granted write permission to following directories as the installation locations:

- C:\Program Files\Microsoft SQL Server
- C:\Users\Public\Mettler Toledo
- C:\Program Files (x86)\Mettler Toledo
- Drivers & DriverPackages
- Licensing
- Logging

1.4. Third-party components

Data+ depends on the following third-party components:

1. .NET Framework is a software framework developed by Microsoft that runs primarily on Microsoft Windows. Minimum version included in Pre-Requisite installation.
2. MS SQL Server is a database management system developed by Microsoft.
    a. MSSQL 2014 Express is included in Pre-requisite installation if another compatible instance is not available.
    b. Installed with the credentials of the Network Service Account. The x64 version is deployed on 64bit Windows operating systems. Alternatively, an existing Standard or Enterprise edition of the SQL Server can host the Data+ database.
    c. The database collation for Data+ is Latin1_General_CI_AS. This configuration is not part of the installation program.

3. PDF Reader is required to access installation documents and view Data+ reports.

1.5. Installation Package

1. Data+ Pre-requisite check and installation file with third-party components
2. Data+ installation file including upgrade
3. Data+ Lite installation file including upgrade
4. Installation Manual in 7 languages
5. User Manual in 7 languages

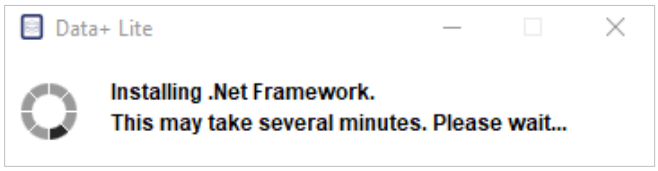
2 Data+ Lite Installation

NOTICE
IT IS ESSENTIAL THAT THIS PROCEDURE IS CARRIED OUT BY A USER WITH LOCAL ADMINISTRATOR RIGHTS.
DO NOT INSTALL AN EARLIER VERSION OF DATA+ ON A PC WHERE A NEWER VERSION IS ALREADY INSTALLED. OTHERWISE, THE DOWNGRADE INSTALLATION WILL CORRUPT THE SYSTEM AND PREVENT ANY VERSION OF DATA+ FROM RUNNING

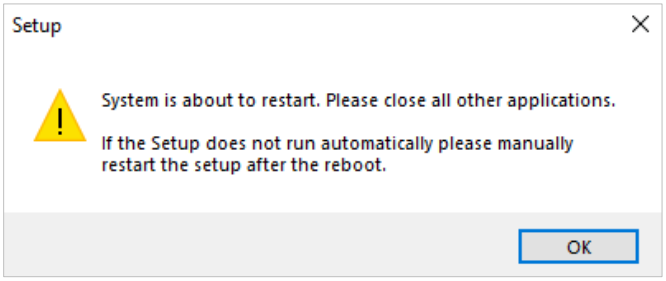
2.1. Installation Process

1. Double-click the **DataPlusLiteSetup.exe** file. The setup file will begin to extract.

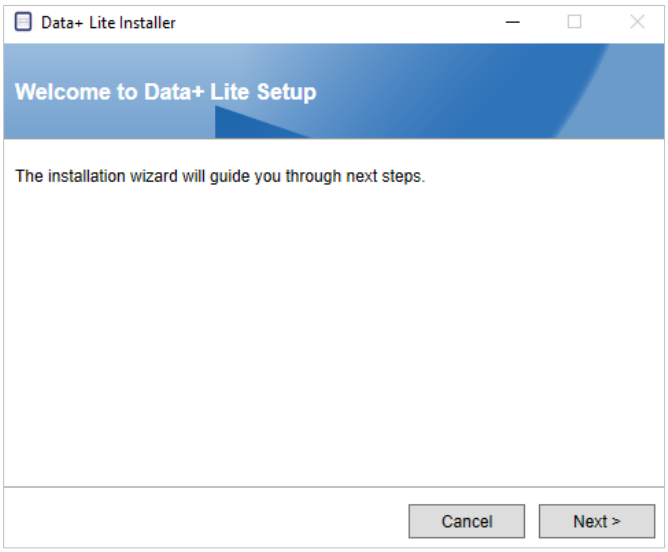
2. If .Net Framework is not found on the PC, it will be installed otherwise skip to step 4



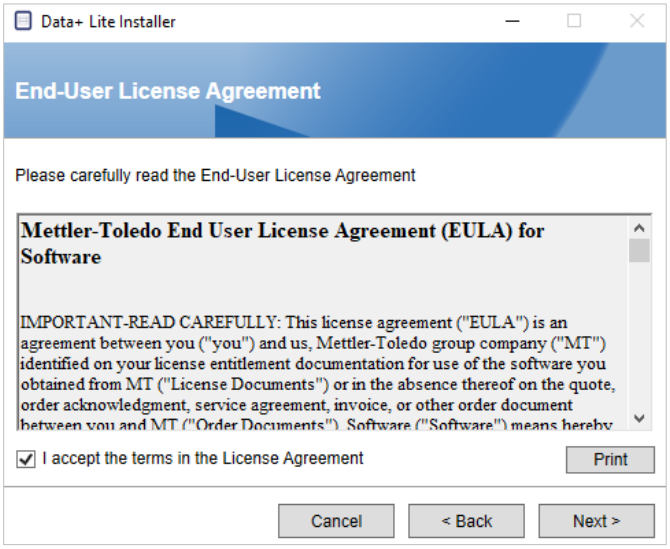
3. Continue the installation at step 4 after the PC reboots.



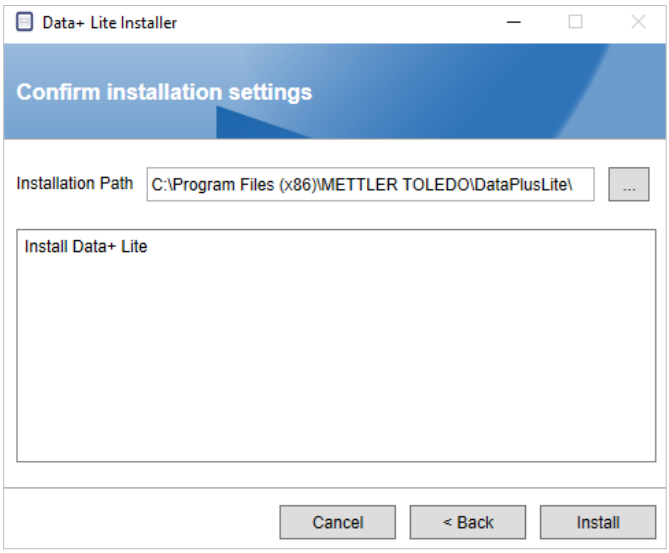
4. The installation dialog will appear. Click **Next>** to continue.



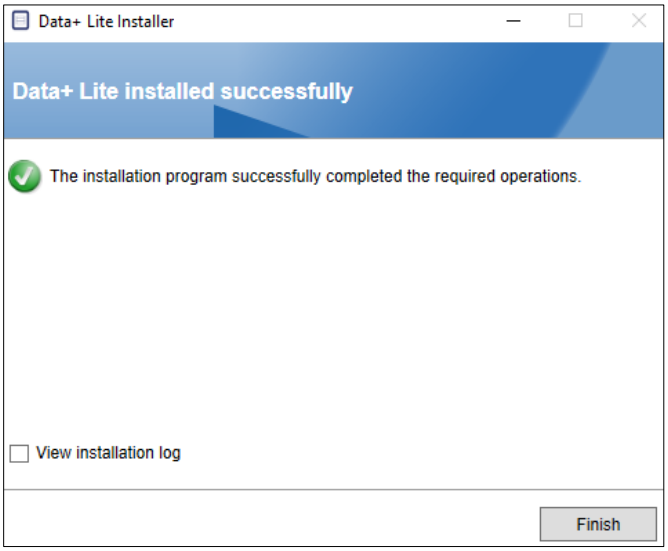
5. Accept the License Agreement.



6. Confirm the settings and click **Install** to begin installation.



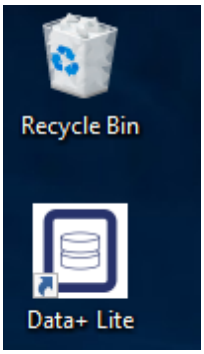
7. Once installation is complete, a confirmation message will appear.



8. Finally, if desired, view the installation log by checking the appropriate box, and click **Finish** to complete the installation.

2.2. Program Access

A **Data+ Lite** icon will appear on the desktop and in the Start menu.



- Note that a license is **not** required to run this installation.

3 Data+ Installation

NOTICE
IT IS ESSENTIAL THAT THIS PROCEDURE IS CARRIED OUT BY A USER WITH LOCAL ADMINISTRATOR RIGHTS.
DATA+ AND DATA+LITE SHOULD NOT BE INSTALLED ON THE SAME COMPUTER.
DO NOT INSTALL AN EARLIER VERSION OF DATA+ ON A PC WHERE A NEWER VERSION IS ALREADY INSTALLED. OTHERWISE, THE DOWNGRADE INSTALLATION WILL CORRUPT THE SYSTEM AND PREVENT ANY VERSION OF DATA+ FROM RUNNING

3.1. Installation Process - Prerequisite Installer

1. Start by running the **DataPlusPrerequisiteInstaller.exe.**
2. Authorize DataPlus installation to make changes to your device.

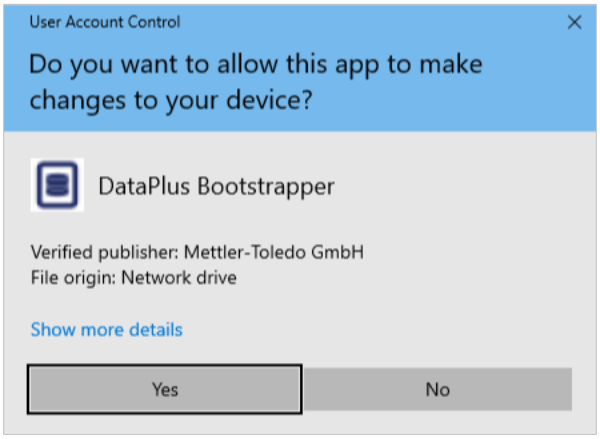


Figure 3-1: Change Authorization Dialog

3. **DataPlusPrerequisiteInstaller.exe** will extract to a temporary folder.
4. The prerequisite installer then indicates whether any of the required components are missing to successfully run Data+.

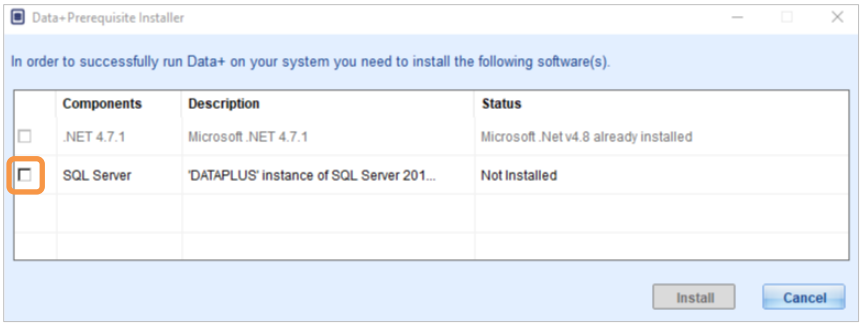


Figure 3-2: Selecting Components to Install

5. Us the checkboxes at left to select any component with the status **Not Installed**.

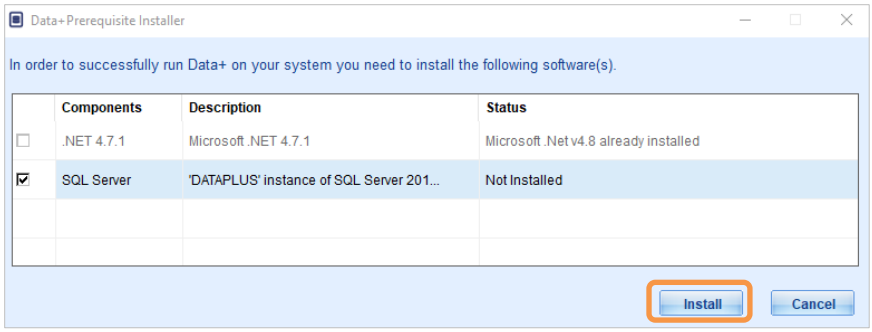


Figure 3-3: Uninstalled Component Selected

6. When all required components are selected, click **Install**.

- Note: The required components may already be installed (ex. Collect+ SQLx). If the status of all components is **already installed**, click the **Cancel** and continue to section 3.2, **Installation Process - Data+ Installer** . Alternatively, to install the Data+ default SQL server in addition to an existing instance, select its checkbox and click **Install**.

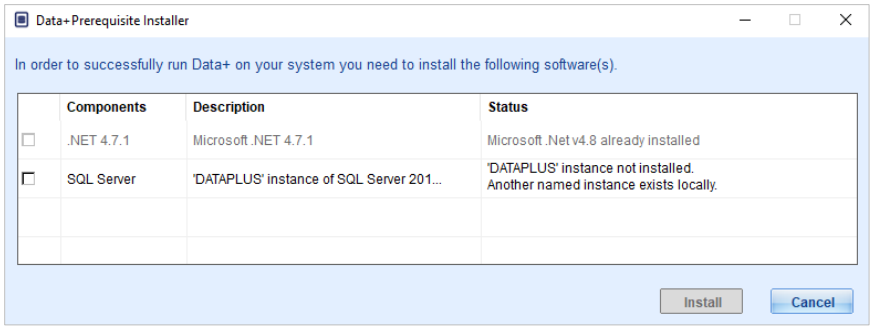


Figure 3-4: Previous SWL Instance Indicated

7. SQL Express will now be installed and a progress display will appear.

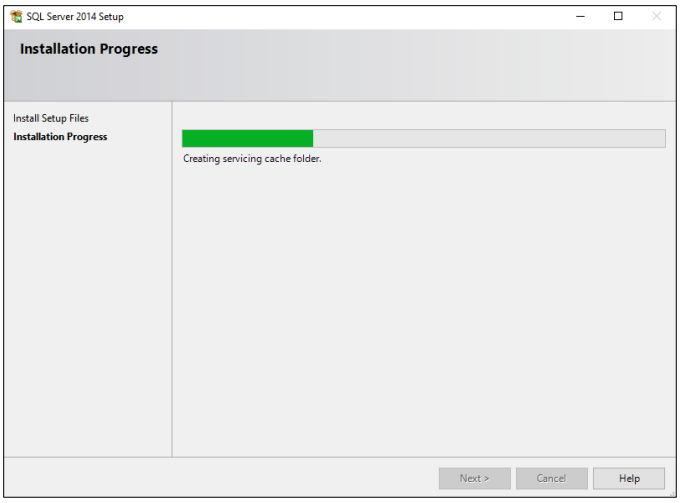


Figure 3-5: Installation Progress Display

8. Once the installation is complete, Data+ may display a prompt indicating that it will restart the PC.

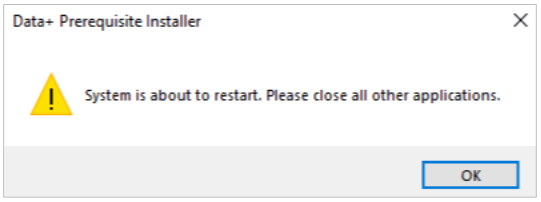


Figure 3-6: Data+ PC Restart Prompt

9. Once the computer has restarted, the installer will display the component list with updated statuses.

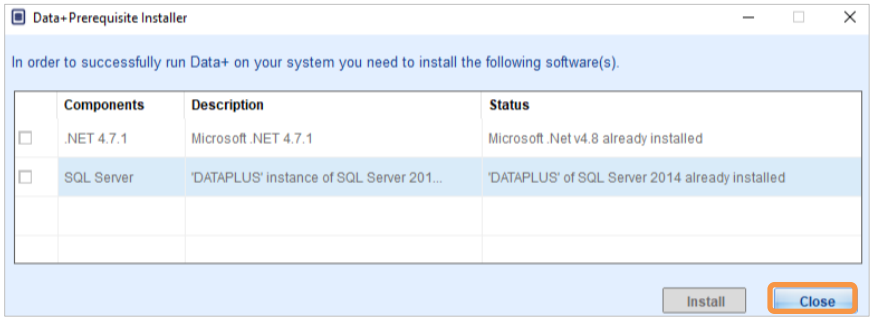


Figure 3-7: Updated Component List

10. Click **Close** and proceed to the Data+ Installation.

3.2. Installation Process - Data+ Installer

- To repair or add, remove, or modify components in Data+, refer to section 3.3.

1. Double-click the **DataPlusSetup.exe** file. The setup file will ask permission and then begin to extract to a temporary folder.

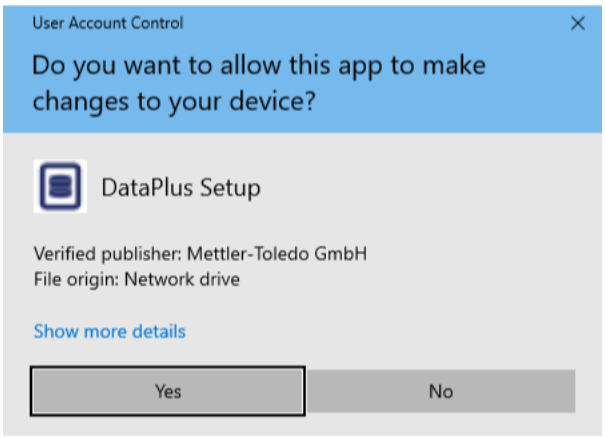


Figure 3-8: Change Permission Dialog

Figure 3-9: File Extraction Progress Display

2. When the installation dialog appears, click **Next>**.

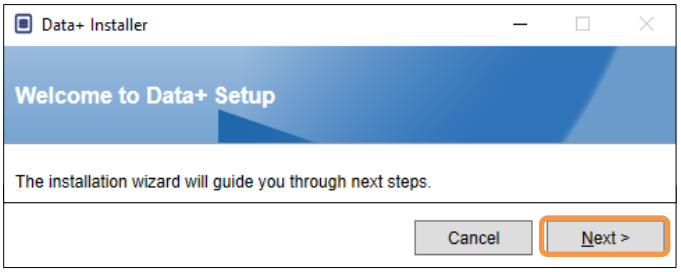


Figure 3-10: Data+ Installation Wizard Dialog

3. Accept the License Agreement.

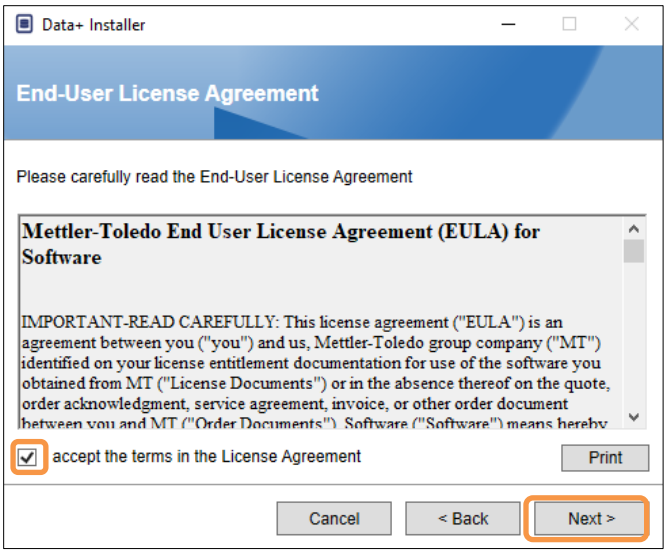


Figure 3-11: Data+ EULA Confirmation Dialog

4. Select the SQL server Instance to refresh from the Instance drop down list: the default DATAPLUS instance, alternate Local SQL (ex.CollectPlus), or remote SQL server. Click **Test connection** to authenticate SQL server communication. Click to the right of the instance to refresh the available server list.

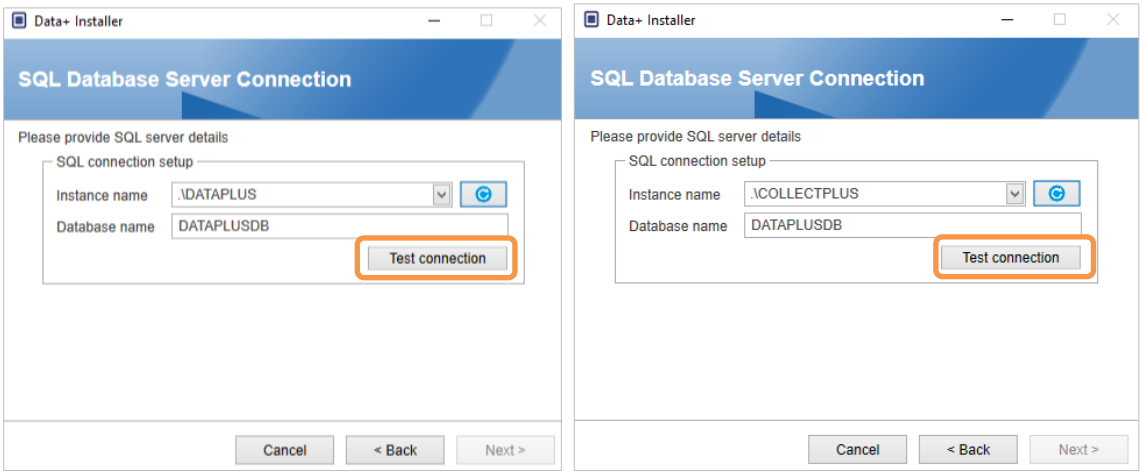


Figure 3-12: Data+ and Collect+ Database Connection Tests

5. Once the connection test reports success, click **Next>** to continue with the Data+ installation.

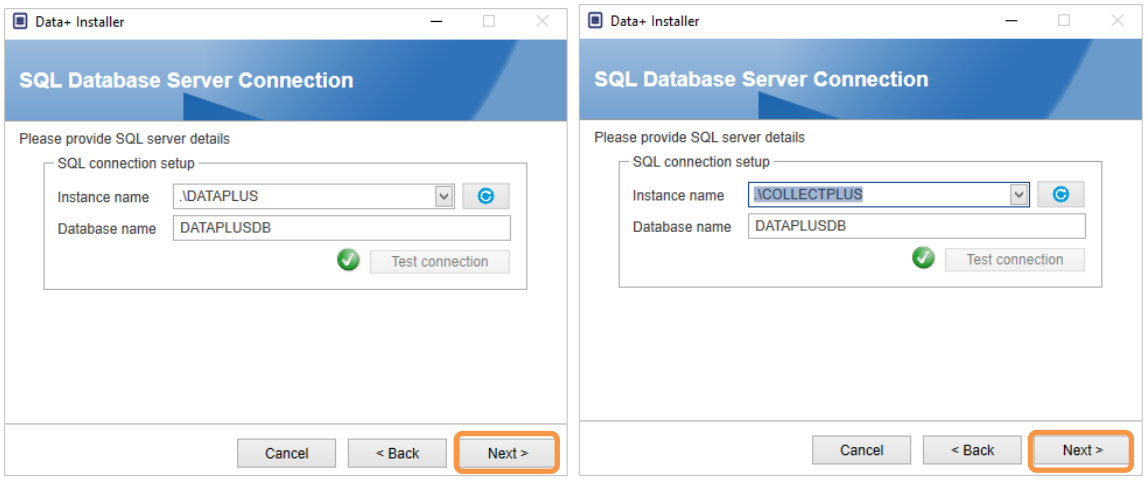


Figure 3-13: Data+ and Collect+ Database Connection Confirmations

6. Confirm the installation settings and click **Install**.

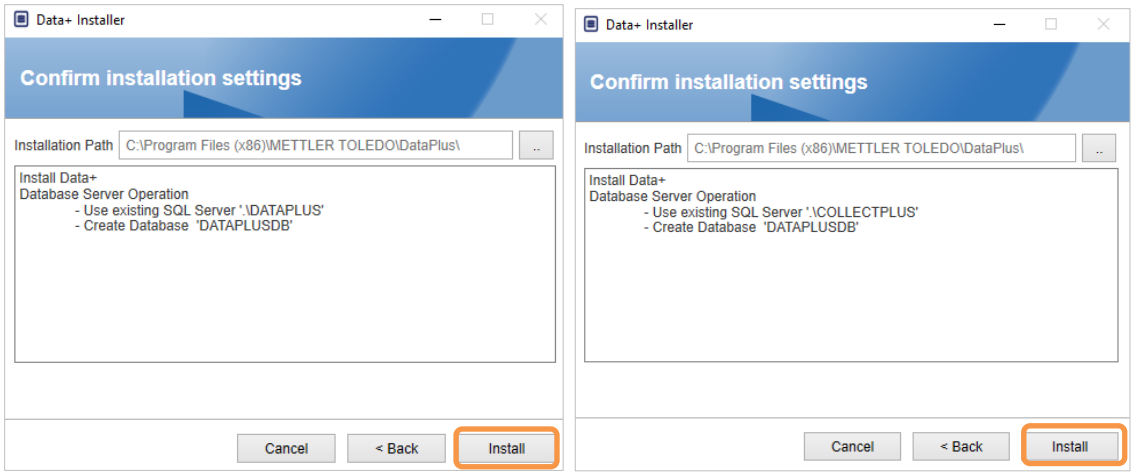


Figure 3-14: Data+ and Collect+ Ready to Install

7. If necessary, the setup application will prompt for a PC restart in order to complete the installation. Optionally, view the installation log by checking the box at lower left. To start using Data+ immediately, select **Yes, restart PC…** and click **Finish**. Alternatively, select **No, restart PC later** and click **Finish**.

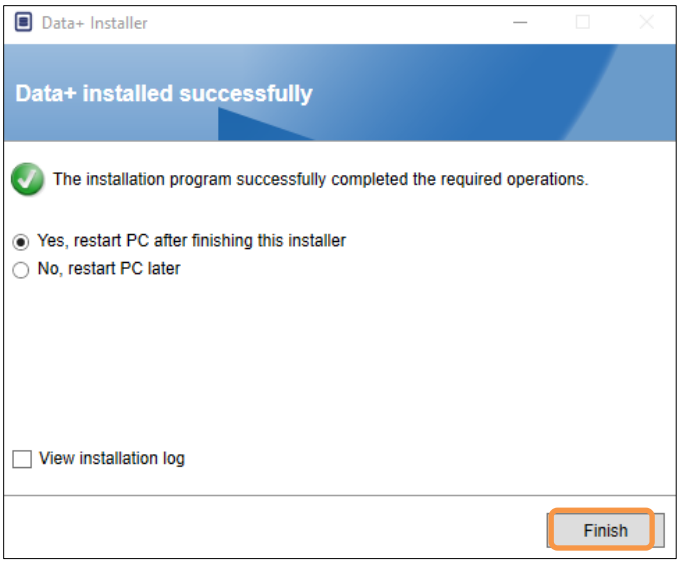


Figure 3-15: Confirmation of Successful Installation

3.3. Data+ Repair, Modification, Removal

To maintain or remove a Data+ installation:

1. Double-click the **DataPlusSetup.exe** file. Be sure to run with local PC administrator permission.

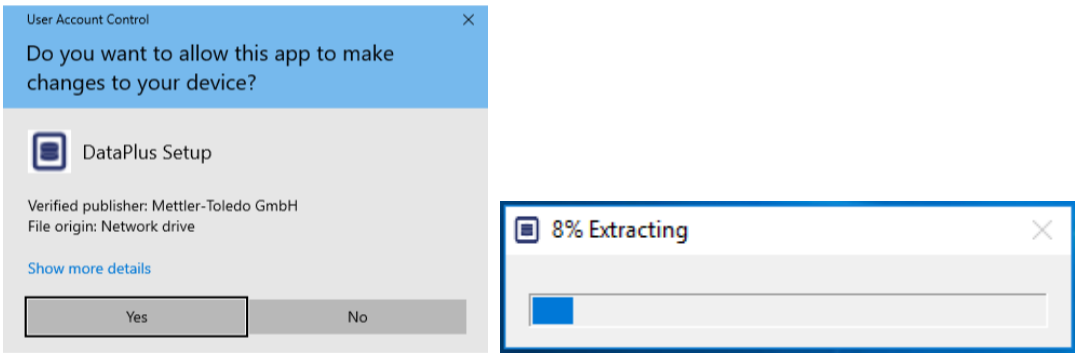


Figure 3-16: Running the Data+ Setup File

2. When the installation dialog appears, select the desired option:
   - **Modify**: Change SQL server, select a different or create a new Database – proceed to section 3.3.1.
   - **Repair**: Reinstall files that may have been corrupted or deleted – skip to section 3.3.2.
   - **Remove:** Remove the Data+ application from this PC – skip to section 3.3.3.

   With the correct option selected, click **Next>**.

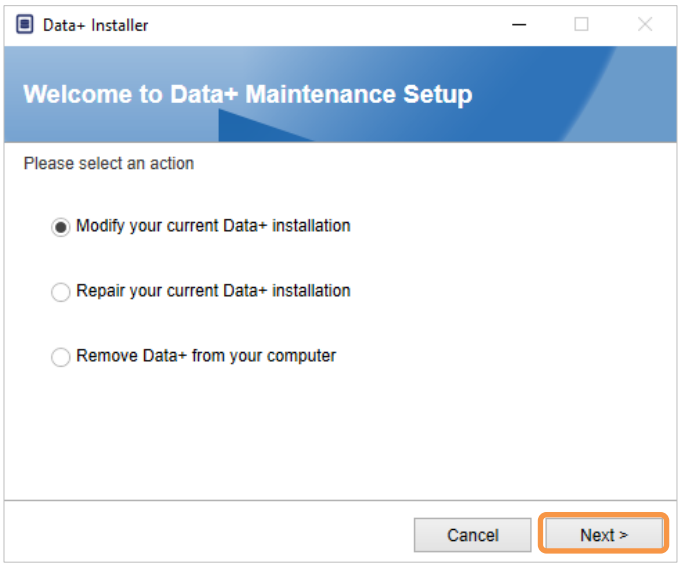


Figure 3-17: Data+ Maintenance Options

3.3.1. Modifying a Current Data+ Installation

1. Select the SQL server from the Instance drop down server list. It is recommended that the default database name be used, but a different database name can be entered. Select the default DATAPLUS instance, an alternate Local SQL (e.g. CollectPlus), or a remote SQL server. Click **Test connection** to authenticate SQL server communication. Click ⟳ to the right of the instance to refresh the available server list.

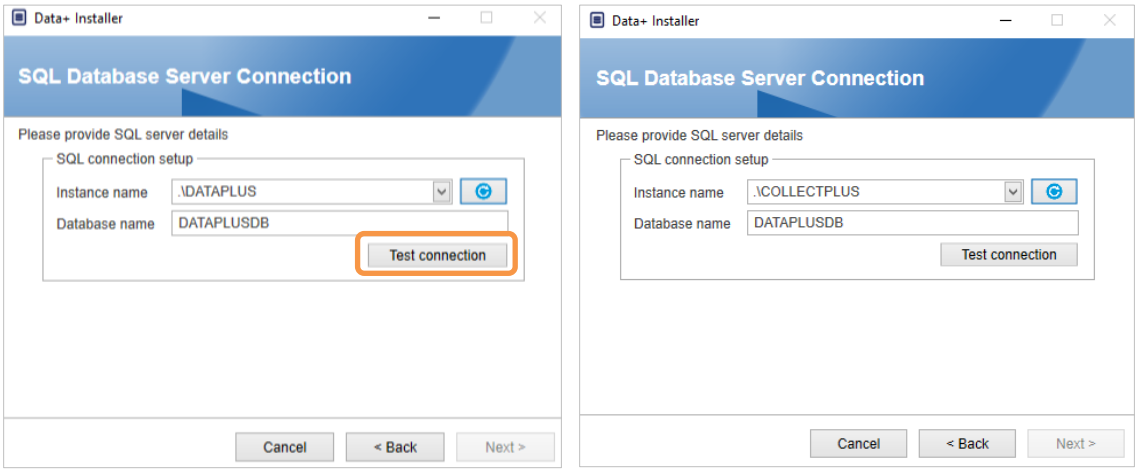


Figure 3-18: Data+ and Collect+ Database Connection Tests

2. Once the connection has been made, click **Next>** to continue with the Data+ installation.

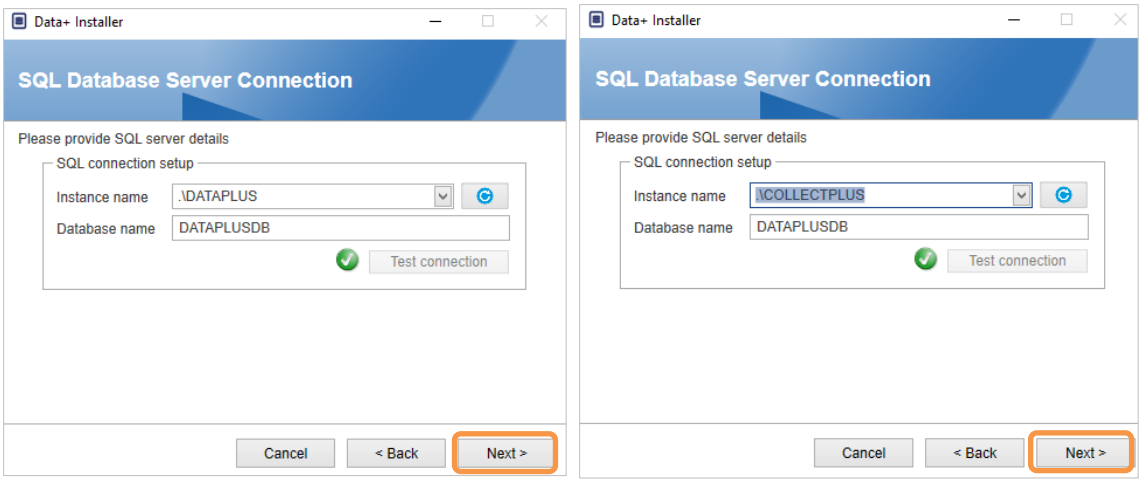


Figure 3-19: Data+ and Collect+ Database Connection Confirmations

3. Confirm the installation settings and click **Install**.

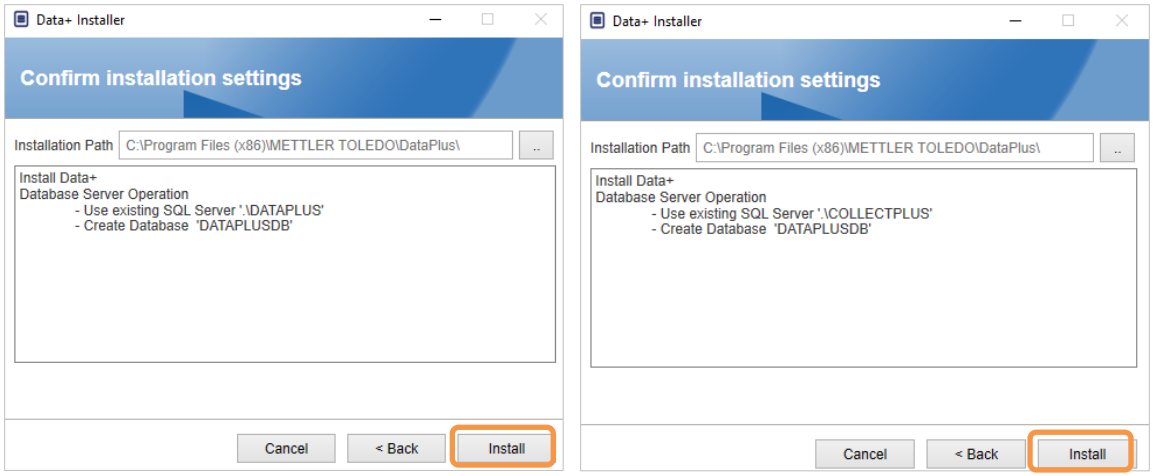


Figure 3-20: Data+ and Collect+ Ready to Install

3.3.2. Repairing a Current Data+ Installation

Click **Repair** to begin the repair procedure.

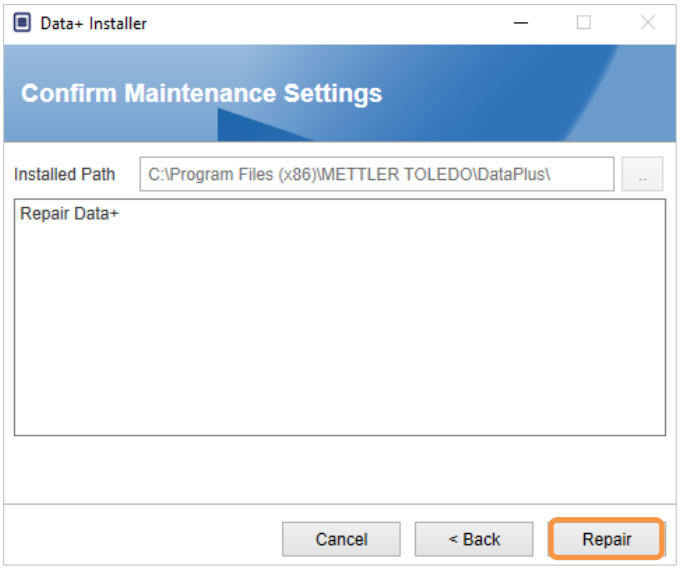


Figure 3-21: Data+ Repair Confirmation Dialog

3.3.3. Removing Data+ from a Computer

1. Click **Remove** to continue

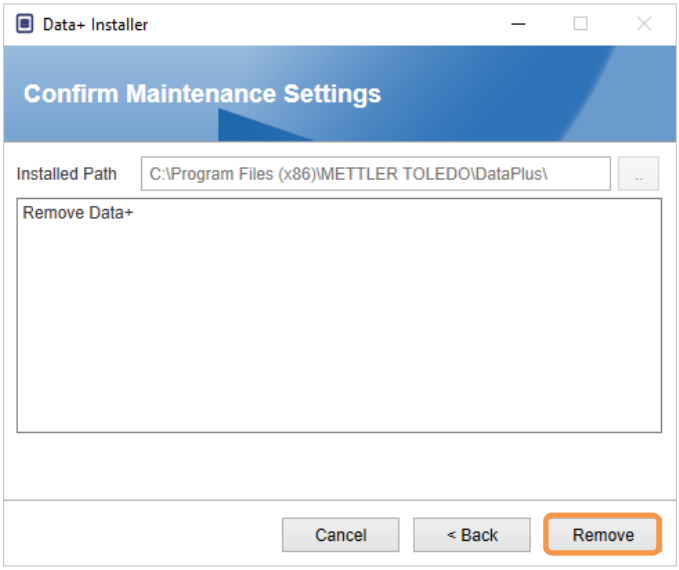


Figure 3-22: Data+ Removal – Confirmation Dialog

3.3.4. Completing the Maintenance or Removal Procedure

If necessary, the setup application will prompt for a PC restart in order to complete the installation. Optionally, view the installation log by checking the box at lower left. To start using Data+ immediately, select **Yes, restart PC…** and click **Finish**. Alternatively, select **No, restart PC later** and click **Finish**.

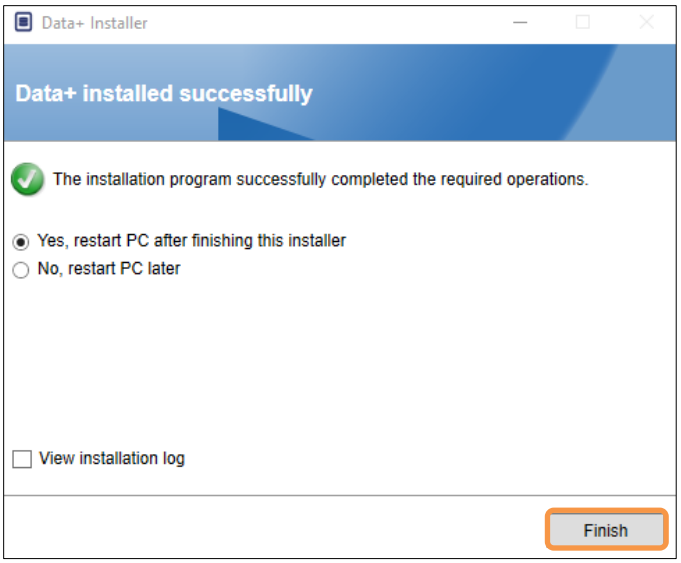


Figure 3-23: Data+ Successful Installation Dialog

3.4. Program Access

A **Data+** icon will appear on the desktop and in the Start menu.

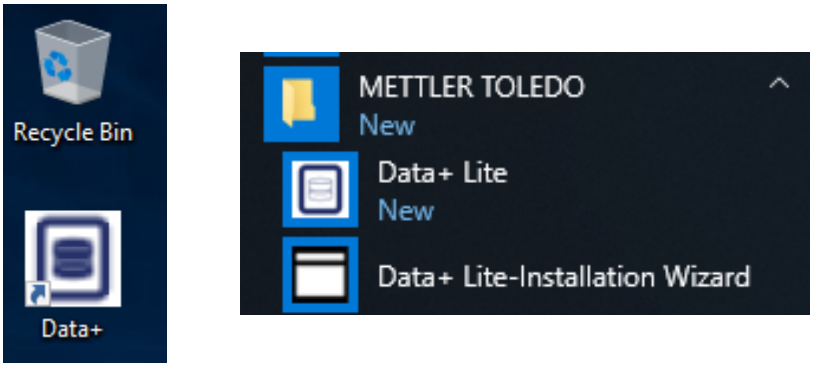


Figure 3-24: Desktop (left) and Start Menu (right) Data+ Icons

4 Data+ and Data+ Lite Version Upgrade

NOTICE
IT IS ESSENTIAL THAT THIS PROCEDURE IS CARRIED OUT BY A USER WITH LOCAL ADMINISTRATOR RIGHTS.

This procedure is similar for both Data+ Lite (section 4.1) and Data+ (section 4.2) versions. In either case, when the **setup.exe** file is run, the installer will detect the current installation and install the appropriate upgrade.

4.1. Upgrade Existing Data+ Lite

1. Log in to the PC with a local admin user or 'run as administrator' to execute the Installation program.
2. The Data+ Lite installer will prompt to upgrade the current version in place. Click **Upgrade** to continue

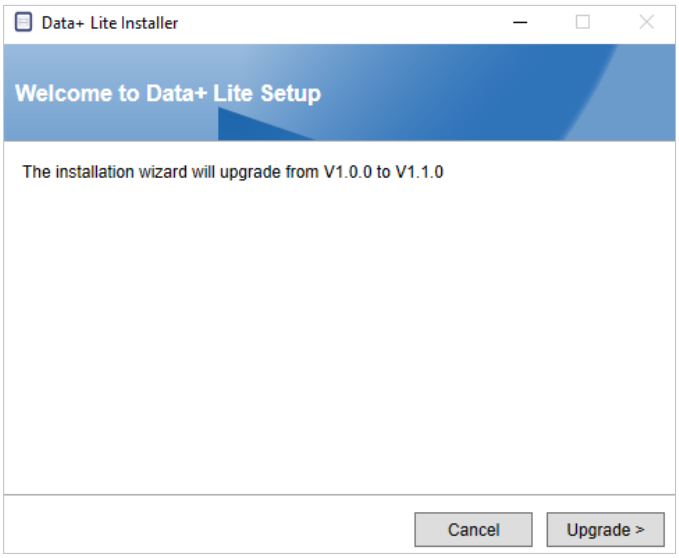


Figure 4-1: Data+ Lite Setup Wizard

3. The installer continues the upgrade process, displaying a progress bar.

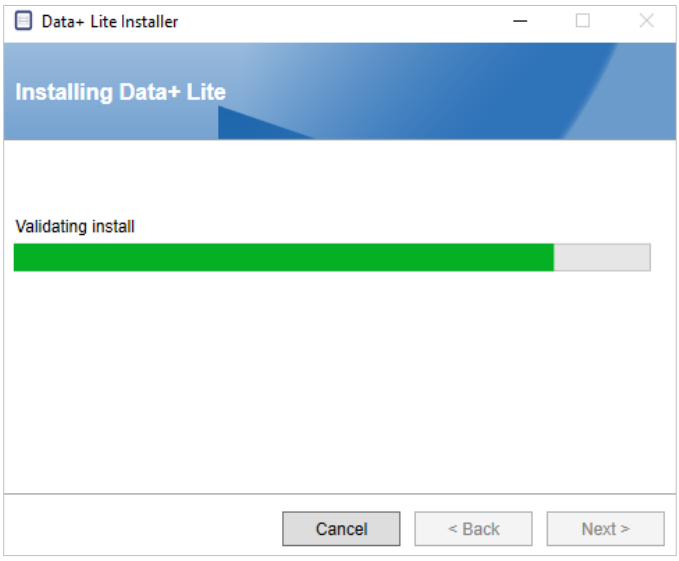


Figure 4-2: Performing the Installation

4. A confirmation dialog will indicate that the installation is complete. Click **Finish** to close.

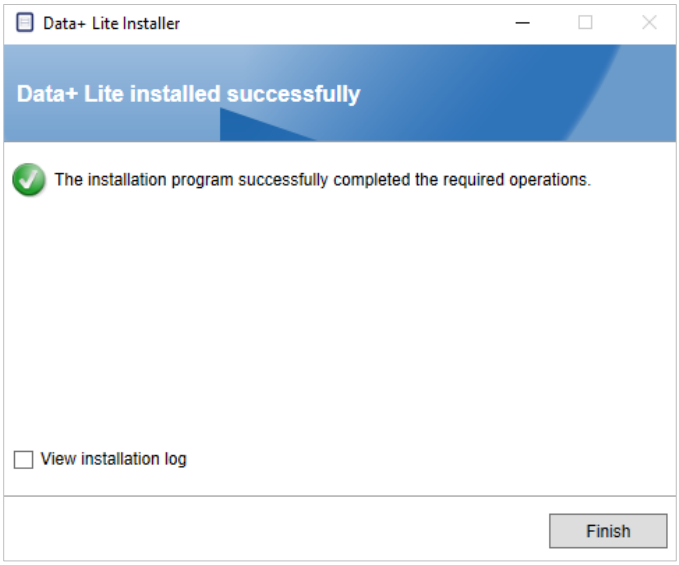


Figure 4-3: Installation Success Dialog

5. If prompted to do so, reboot the PC.

- The Data+ Lite upgrade retains configured devices.
- Data+ Lite files and folders are not deleted and available for use after version upgrade.

4.2. Upgrade Existing Data+ Version

1. Log in to the PC with a local admin user or 'run as administrator' to execute the Installation program.
2. The Data+ installer will prompt to upgrade the current version in place. Click **Upgrade>** to continue.

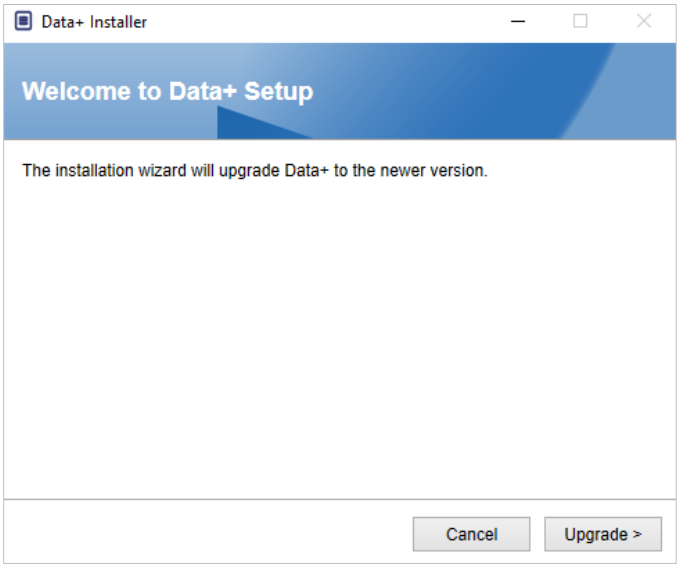


Figure 4-4: Data+ Setup Wizard

3. The installer continues the upgrade process, displaying a progress bar.

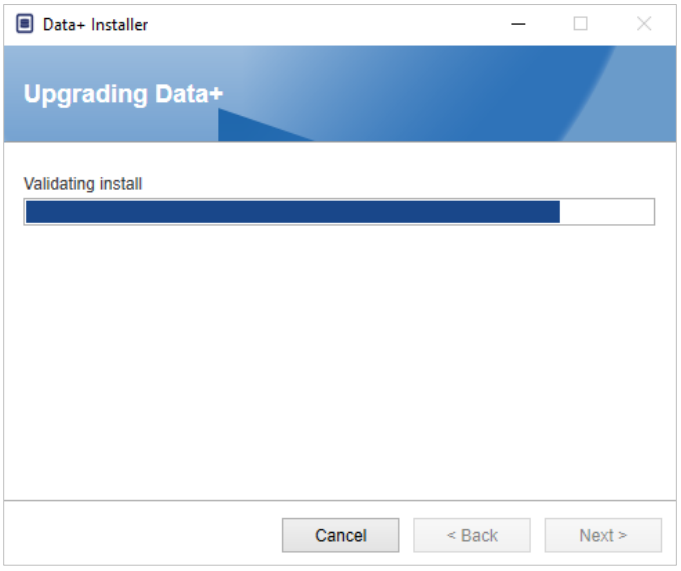


Figure 4-5: Performing the Installation

4. A confirmation dialog will indicate that the installation is complete. Click **Finish** to close the dialog.
5. Reboot the PC if prompted.

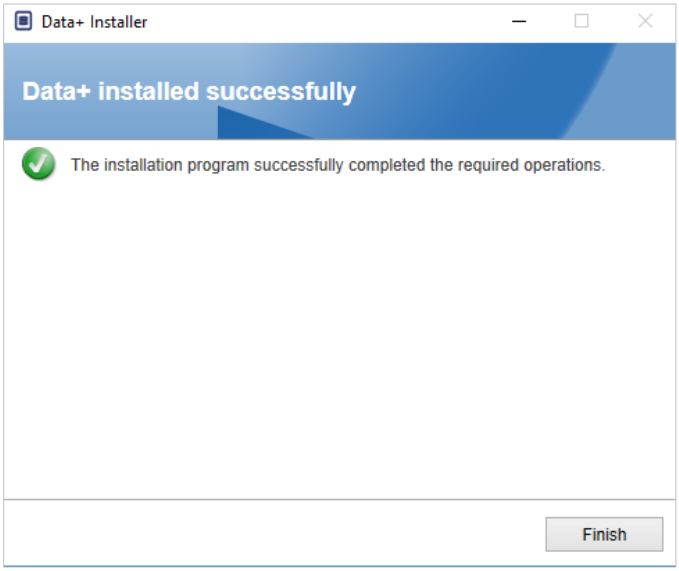


Figure 4-6: Installation Success Dialog

- An upgrade installation of the full Data+ program will use the existing SQL Database. The Data+ version upgrade will adjust the existing database as necessary. All table data and configured devices are maintained.
- Data+ Export and Config directories are not deleted and available for use after version upgrade.

5 Data+ License Activation

NOTICE
THE DATA+ APPLICATION WILL REMAIN FULLY FUNCTIONAL FOR 45 DAYS. IF THE PRODUCT IS NOT ACTIVATED BEFORE THE 45 DAYS EXPIRE, WHEN THE PROGRAM IS RUN IT WILL STOP AT THE REGISTER POP-UP WINDOW. NO TABLE DATA OR CONFIGURED DEVICES ARE DELETED OR CHANGED – THIS DATA WILL BE AVAILABLE AFTER THE PRODUCT IS REGISTERED.

5.1. Activation Requirements

To activate the license for a full Data+ installation, the following are required:

- License Key (provided with purchased product).
- License Registration Information (LRI), displayed by the software.
- Activation Code generated once the Key and LRI are entered at the activation site.

5.2. Activation Procedure

1. When Data+ is started, a pop-up window will indicate how many days are left in the 45 day trial period. Figure 5-1 shows a pop-up for a non-activated product; this pop-up will no longer appear after activation.

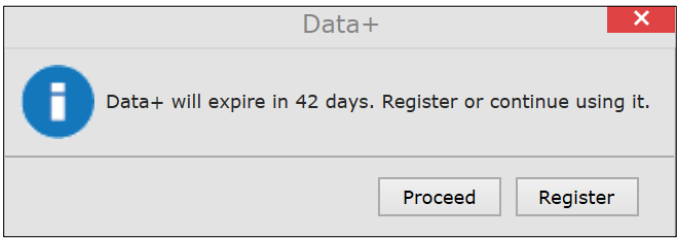


Figure 5-1: Registration Reminder Dialog

2. During the trial period, click **Proceed** to run the application and work with all features active. After the end of the trial period, only the **Register** button will be available.

3. Press the **Register** button to activate the application.

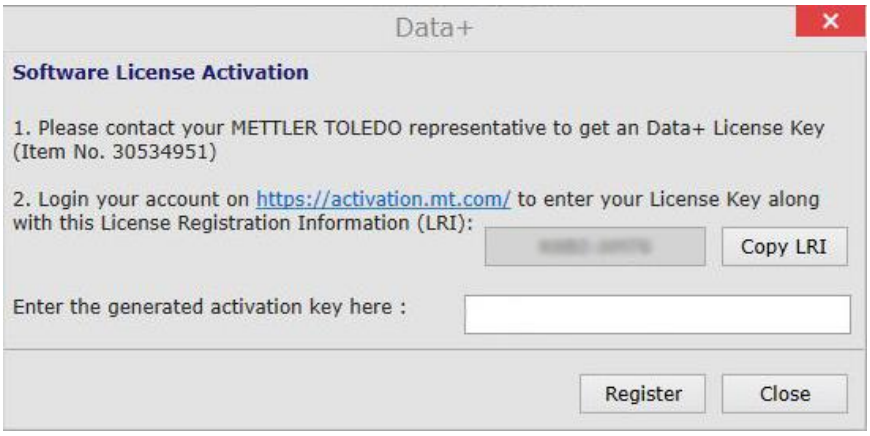


Figure 5-2: Software License Activation Pop-Up

   a. If the PC has internet access, click the URL to open the activation portal in your web browser.

   b. If the PC does not have Internet, copy the LRI code and URL to use on a PC with internet access.

   - The LRI is unique for each Data+ PC installation, and will require its own purchased license key.

4. Click on URL or type in browser address bar to open Activation portal - https://activation.mt.com.

5. Sign in or register a new account, following the portal instructions

Figure 5-3: Software Portal Access

- Please save the login credentials for future use – for example, when Data+ is moved to another PC, or when activating another product such as Collect+. If necessary, recovery information will be sent to the email address used during registration.

6. Click the Activation tab in the portal's top menu.

Figure 5-4: Activation Tab in Software Portal

7. About halfway down the page, in the **Add license key** section, type the license code from the postcard and then click **submit**.

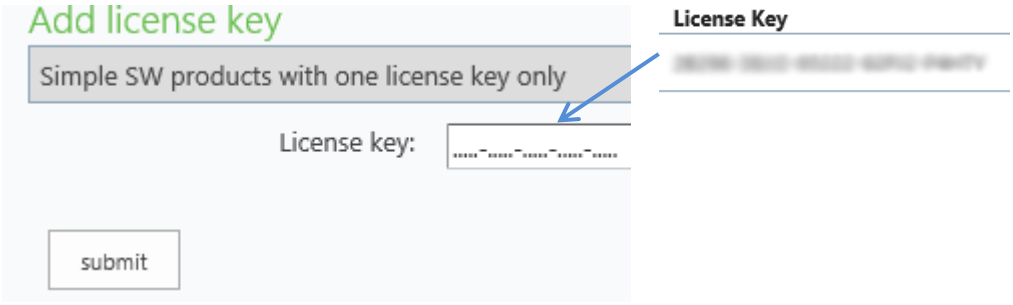


Figure 5-5: License Key Entry

8. When prompted, enter the LRI from Data+ (shown in Figure 5-2) at the bottom of the **Non-activated products** tab, then click **Activate**.

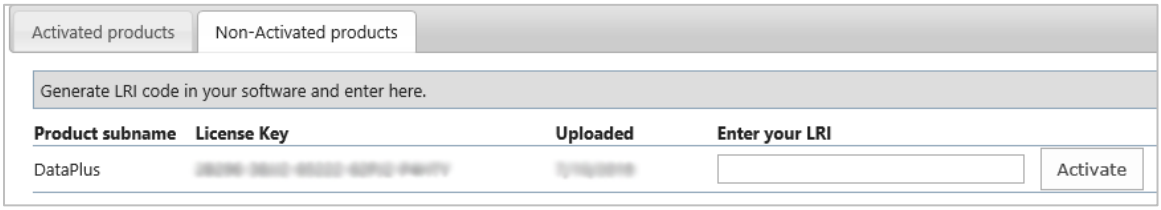


Figure 5-6: Non-Activated Products List

9. In the pop-up window type in the **System Name**, **Server Name** and **Server location** to provide a unique identification for this licensed Data+ PC. Click **OK**.

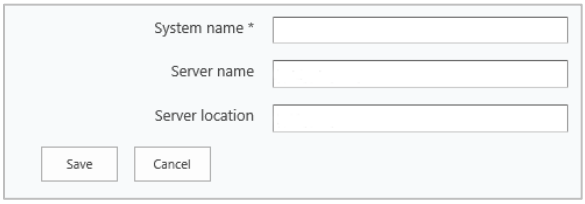


Figure 5-7: Entering Unique Identifiers

10. The licensed Data+ PC will now appear in the **Activated products** tab list for this user account.

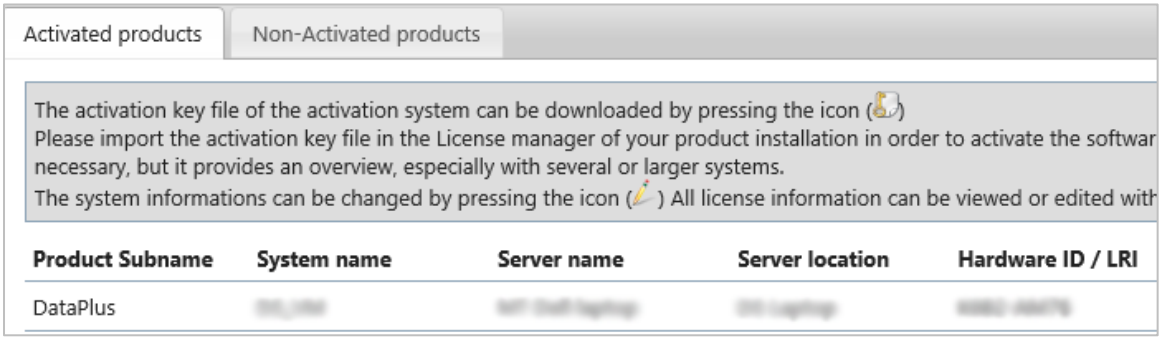


Figure 5-8: Activated Products List

11. Copy the Activation Key displayed in the screen shown in Figure 5-9. The activation portal displays the activation code in a browser pop-up window. Copy/paste or type the number into the Data+ **generated activation key** field, then click **Register**.

Figure 5-9: Short Activation Code Notification

12. The Data+ application is now unlocked for unlimited use on this specific hardware platform.

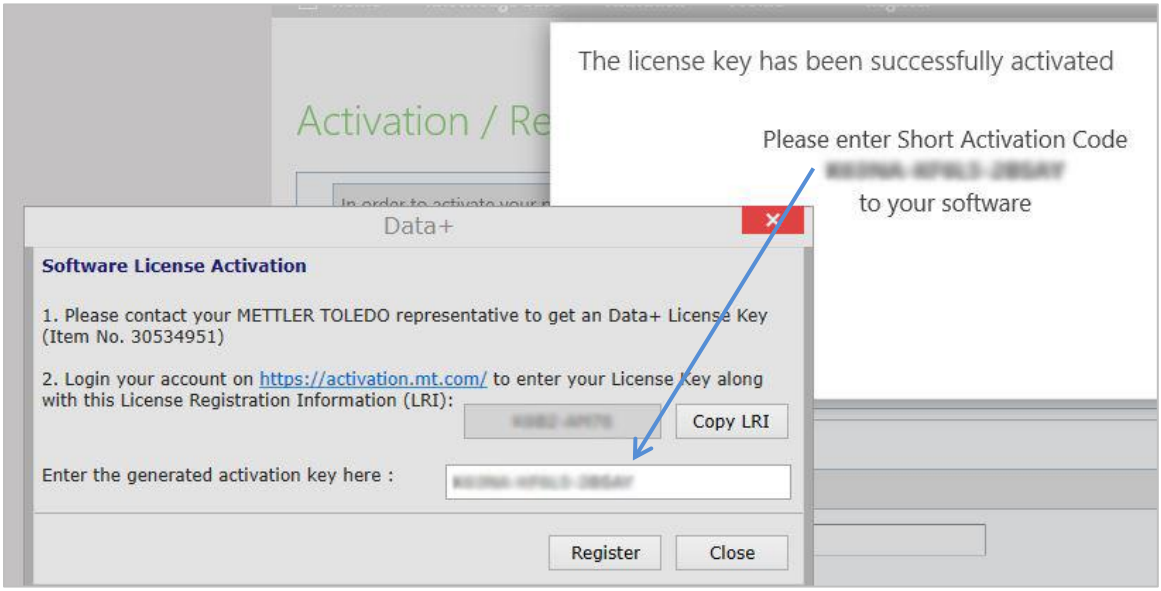


Figure 5-10: Pasting the Activation Code into Data+

6 Troubleshooting

6.1. SQL Installation Failure

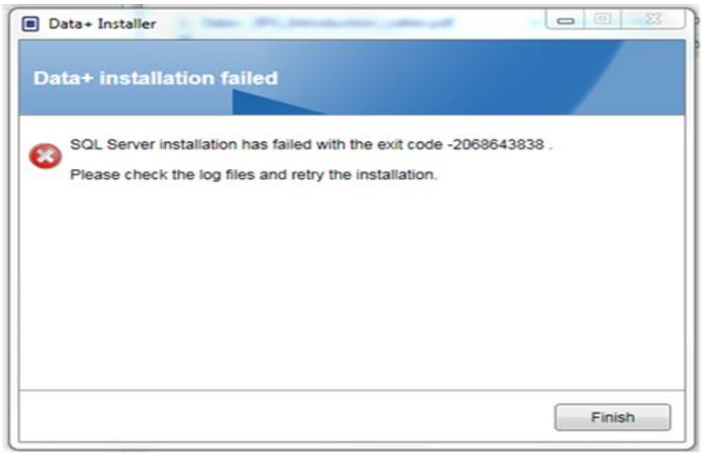


Figure 6-1: SQL Failure Code example

If SQL installation fails:

1. Ensure that the PC login is for a User in the local ADMIN group.
2. If the failure persists, send the Log file **C:\Program Files\Microsoft SQL Server\120\Setup Bootstrap\Log\Summary.txt** to IND Support to open a Help Desk case

6.2. Data+ Installation Failure

If Data+ installation fails, send the Log files found in **C:\Users\Public\Mettler Toledo\DataPlus\Logging** to IND support to open a Help Desk case.

6.3. Blank Data+ User Interface

The Data+ user interface will be blank when the Data+ service is stopped, as shown in Figure 6-2

Figure 6-2: Blank Data+ User Interface

To resolve this issue:

1. Close the Data+ window.
2. Restart the Data+ service.
3. Confirm the service is set to Automatic:

Data+	Data+ Service	Running	Automatic	Network Service

4. If the service regularly fails to start, try **Automatic Delayed Start**.
5. Open the Data+ application.

- Note: The Windows service is called 'Data+' for full version and 'Data+Lite' for the free version

6.4. Spinning Icon on Data+ Start

If trying to start the Data+ application results in a spinning mouse icon, it is possible the DataPlusConfiguration.xml is corrupt. This could happen if Data+ was closed unexpectedly, or forced to close. Delete **DataPlusConfiguration.xml** in the **C:\Users\Public\Mettler Toledo\DataPlusLite\Config** folder.

6.5. Device Detection Problems

If serial automatic device detection does not succeed, or never times out, there may be a driver issue with the USB-to-Serial virtual COM port:

1. In Windows device manager, un-install the virtual COM device and driver.

2. Re-install the driver and plug in the USB serial adapter.

6.6. Data+ Service not Available after Installation

1. From Control Panel, start the SQL uninstallation, and look for the DATAPLUS dB instance in the SQL setup screen (see **Figure 6-3**).
2. Complete the SQL server 2014 uninstallation to remove the DATAPLUS instance.
3. Reboot the PC.
4. Verify that the logged in PC user is in the local admin group, and run Data+ setup again.

- NOTE: If a DATAPLUS instance is present in the SQL installer (**Figure 6-3**) but not as a windows service: task manager -> services-> the SQL server (DATAPLUS) services (**Figure 6-4**), this may indicate that the installation has failed because it was interrupted, or the user did not have local PC administrative permission.

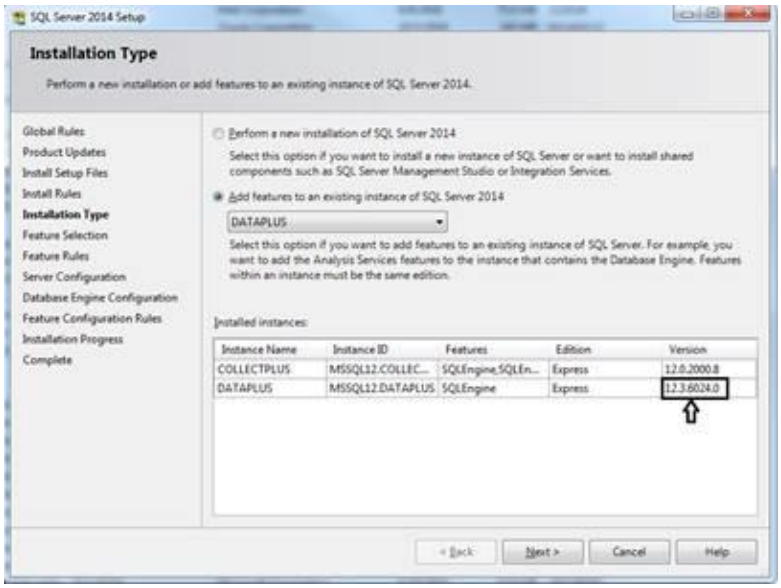


Figure 6-3: Data+ Instance Displayed

After a successful installation the service will appear in the Windows task manager, as shown in **Figure 6-4**.

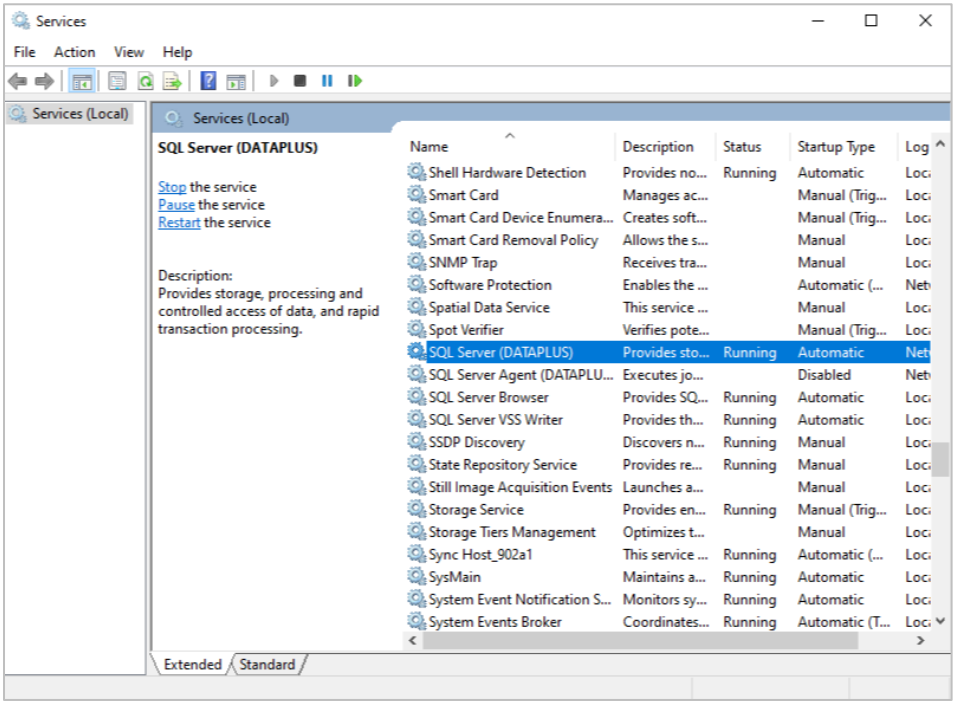


Figure 6-4: Data+ Service Showing in Windows Task Manager

- During Data+ installation, do not click the exe multiple times when the installation process has already started. Doing so will cause the installer to display an error prompt indicating **A serious error occurred during installation.**

6.7. File Overwrite Error

If a serious error occurs during installation, a prompt like the one shown in Figure 6-5 could appear.

1. Wait for the operation to complete.
2. Cancel the installation when possible.
3. Restart the PC.
4. Restart the installation.

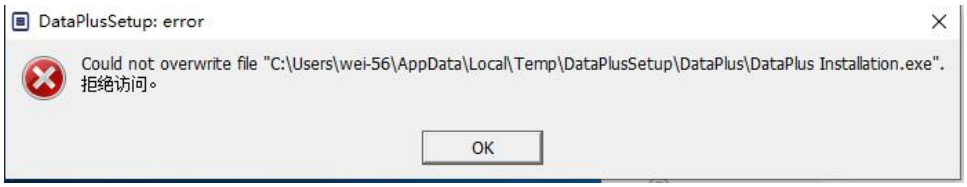


Figure 6-5: Data+ Setup Error

6.8. Windows Licensing Error After Installation

After completing an installation, it is possible that the following error will be displayed:

Figure 6-6: Licensing Error Dialog

This is a standard authentication and security check for Windows 10. The most probable cause is a difference between the time zone of the PC's current location and the time zone for which it is set. The error should clear automatically after 12 or 24 hours, or once the PC is returned to its normal location.

6.9. Installing an Older Version of Data+

NOTICE
IF AN OLDER VERSION OF DATA+ IS INSTALLED IN ADDITION TO A CURRENT VERSION, THE OLDER VERSION MUST POINT TO A NEW SET OF DATABASE TABLES, NOT THE EXISTING DATABASE.

If a user wishes to downgrade their Data+ installation (e.g. uninstall version 1.3 and install 1.2 instead) and the downgraded installation attempts to use **the existing Data+ database**, the operation will fail and corrupt the system, causing the SQLx service to stop and preventing any version of Data+ from running.

It is time-consuming and complex to remove of all traces of a previous Data+ installation and SQLx database from the PC, and requires local PC administrator account credentials.

In general, the procedure is as follows:

5. Install the MS SQL Server Management Studio, for tools to remove the Data+ SQLx instance and database.
   - An alternative tool is the open source **dbforgesql56exp**.
6. Reboot the PC.
7. Remove the remnants of the Data+ installation, by:
   a. Using the Registry Editor, **Regedit**, to remove several key values associated with the application, and to remove Data+ from the Windows Add/Remove Apps list.
   b. Deleting files in specific folders on the PC's C: drive.
   c. Removing the service reference.

METTLER TOLEDO technical support can assist with this complex procedure.

6.10. ICS68_ External dB article recall failure

Confirm firewall exceptions in PC for required ports and anti-virus protection is not blocking Data+ application from receiving remote terminal communication requests.

In general, the procedure is as follows:

1. Start button: Type '**Firewall**' and select '**Windows Defender Firewall with Advanced Security**'
2. Select 'Inbound rules' TCP from any address, remote port, any interface, any user, all LAN profiles
    a. DataplusServicve_IN on local port 56678
    b. HostMode_IN on local port 4302
3. Select 'Outbound rules' TCP to any address, local port, any interface, any user, all LAN profiles
    a. DataplusServicve_OUT on remote port 56678
    b. HostMode_OU on remote port 4302

An open source tool like **Wireshark** is useful to capture actual network packets to/from a terminal.

- Filter results based on terminal IP address: **ip.addr ==** xxx.xxx.xxx.xxx
- All communication sessions should start by opening a socket: **Syn**, **Syn Ack** sequence
- Application command/response are in **PSH Ack** packets over the open socket
- Communication sessions should end with **FIN ACK** to close the socket

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For more information

Mettler-Toledo, LLC
1900 Polaris Parkway
Columbus, OH 43240

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