RealStream Lift Station

Corrective action for the loss of logic issue

Contents

1 EXECUTIVE SUMMARY

Schneider Electric Systems Canada (SE) – SCADA & Telemetry Line of Business has received reports from our customers that they have experienced the RealStream Lift Station unexpectedly and permanently stopping the control of the pumps in their wet wells. Upon investigation it was determined that the logic in the RealStream Lift Station RTU was no longer present. A fix for this issue has since been developed and tested and is available for RealStream Lift Station users. Apply the solution detailed in this document as soon as possible.

⚠WARNING

EQUIPMENT OPERATION HAZARD

RealStream Lift Station may unexpectedly and permanently stop controlling the pumps of wet wells.

Apply the solution detailed in this document.

Failure to follow these instructions can result in death or serious injury.

2 BACKGROUND

Investigation results identified the issue was in the firmware released with the RealStream RTU.

3 SCOPE

Customers who have received a RealStream Lift Station kit prior to January 2020 are affected.

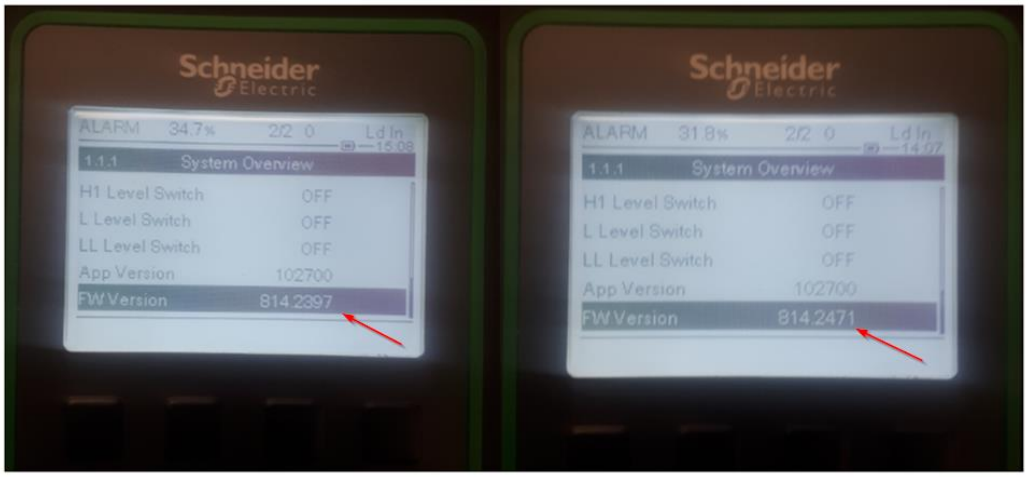
TBUW334-101N-100AU TBUW334-101N-110AU	RealStream Lift Station

4 IDENTIFYING AFFECTED REALSTREAM PRODUCTS

To determine if you have one of the affected products listed above:

1. On the RealStream Lift Station Graphic Display Terminal (GDT), navigate to page 1.1.1 System Overview.
2. Scroll to the bottom of the page to see the Firmware version (FW Version).

   If the Firmware Version is earlier than 814.2471, then the product is affected.



Affected Version Not Affected Version

5 INSTRUCTIONS FOR UPDATING THE REALSTREAM LIFT STATION RTU

5.1 INSTALLING SCADAPACK E CONFIGURATOR

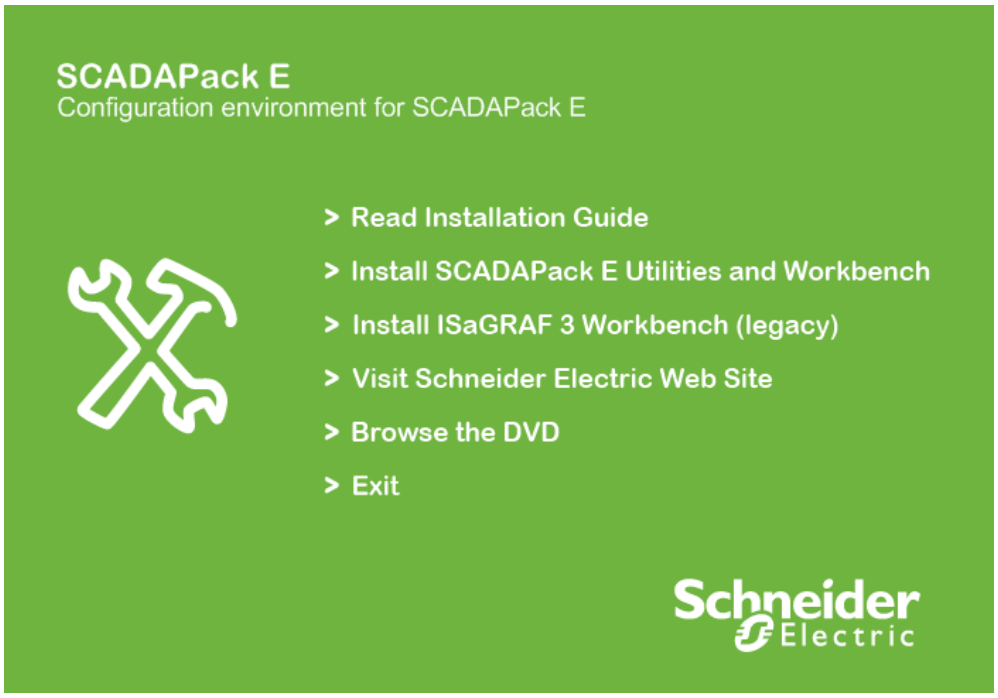
To update the RealStream RTU, you need to install SCADAPack E Configurator.

The procedure below includes just a few of the screens shown during the installation.

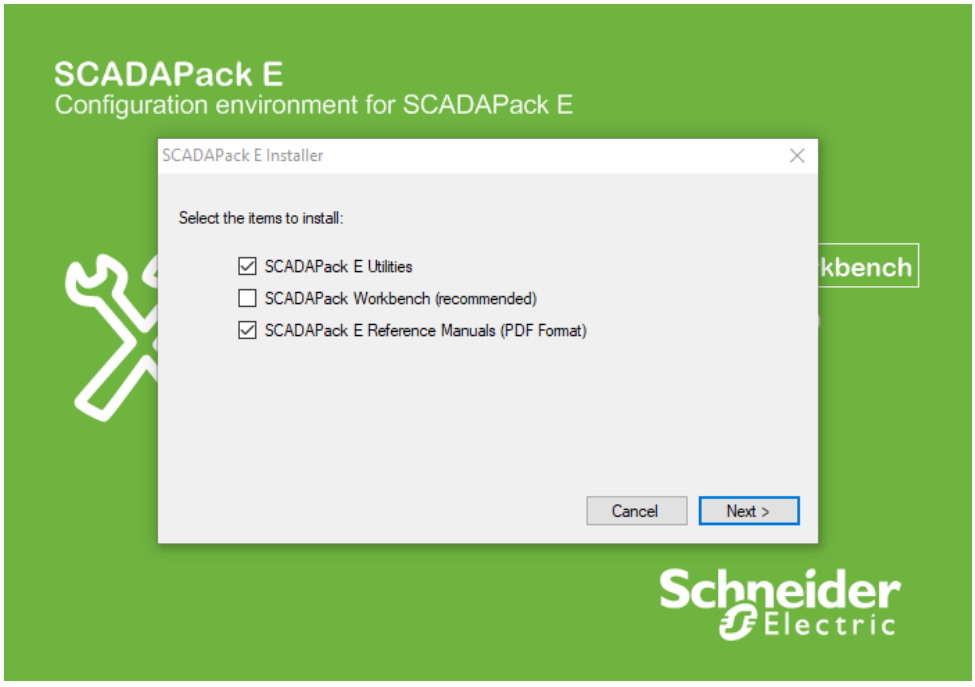
To install SCADAPack E Configurator

1. Using the DVD, navigate to the directory that contains the SCADAPack E DVD contents.
2. Double-click **setup.exe**.

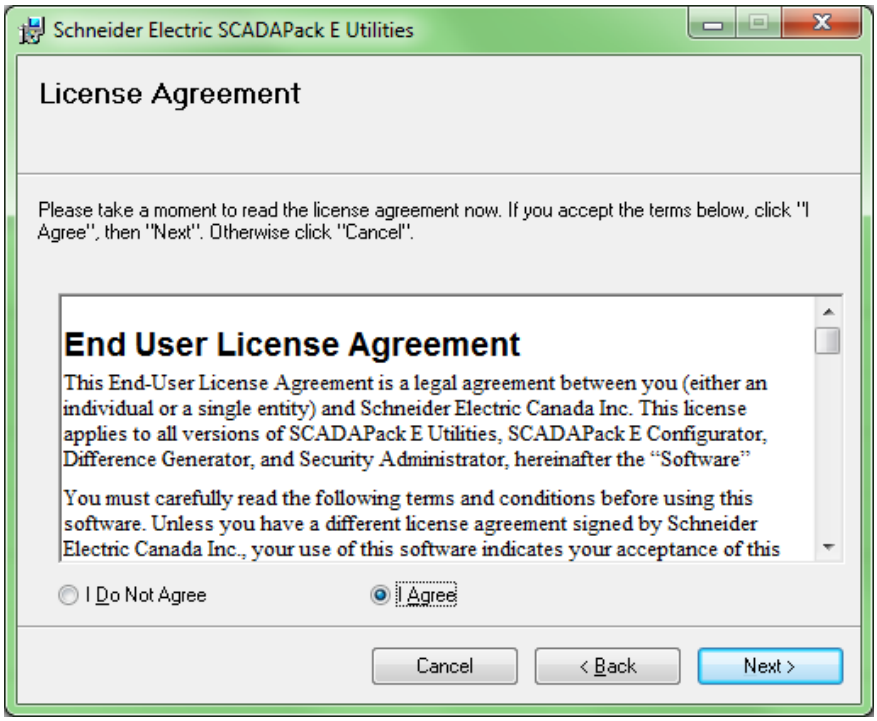
   The installation menu is displayed, as shown below.



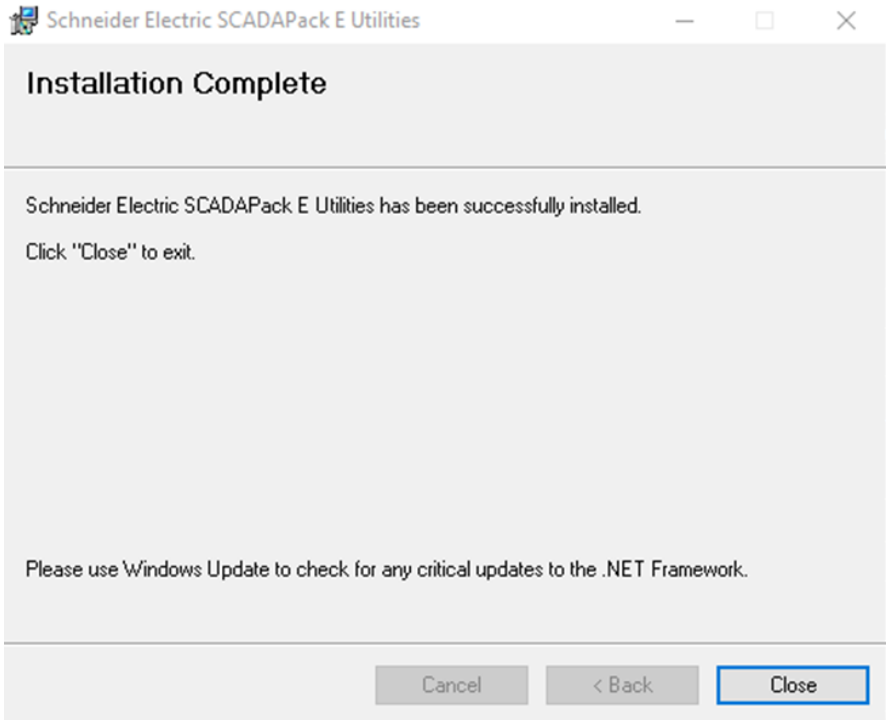
3. Select **Install SCADAPack E Utilities and Workbench**.
4. In the SCADAPack E Installer window, select **SCADAPack E Utilities** and **SCADAPack E Reference Manuals (PDF Format)**.



5. Click **Next** and follow the prompts in the installation wizard, until you reach the **End User License Agreement**.



6. Read the agreement, if you agree with the contents of the agreement, select **I Agree**, then click **Next** to proceed with the installation.
7. To complete the SCADAPack E Utilities installation, click Close.



SCADAPack E Configurator is now installed.

5.2 UPDATING THE REALSTREAM APPLICATION AND FIRMWARE

Note: Schneider Electric believes cybersecurity is critical in today's connected world. Improved cybersecurity mechanisms are now included in products and updated tools are required to apply the new device configurations. Before installing the new hardware, install the latest version of the configuration software. Old versions of software will not be able to configure products equipped with these enhanced cybersecurity features.

The steps required to update the RealStream RTU application and firmware are as follows:

1. Verify that you have the files required to perform the upgrade
2. Launch and establish communication with SCADAPack E Configurator
3. Record information
4. Clear the application
5. Write the RTU configuration file to the RealStream RTU
6. Update the system firmware (if required)
7. Write GDT files to the RealStream RTU
8. Write the RealStreamStn.I5P file to the RTU
9. Confirm that the update was successful
10. Perform commissioning tests

⚠CAUTION

LOSS OF CONFIGURATION CONTROL

The update application process can take up to several minutes, during which time the RTU will not automatically or manually control the level of the wet well. The RTU will also restart and will be unavailable until it returns to a running state.

We recommend that the RTU be connected to a backup battery supply capable of providing at least 30 minutes of power, and that the communication link be stable before attempting a remote update. It is also recommended that a qualified operator be able to go on site if a situation arises that needs manual control of the station.

Failure to follow these instructions can result in minor or moderate injury.

5.2.1 Verify that you have the files required to perform the upgrade

The following files need to be available on your PC and accessible to perform the upgrade. Contact Technical Support for an updated application or firmware.

- Firmware (if required): nnnns33xE.biz (where n are numbers. ex. 8148s33xE.biz).
- RealStreamStn.I5P
- GDTPagesImperial.CSV
- GDTPagesMetric.CSV
- RealStreamLiftStn.rtu

5.2.2 Launch and establish communication with SCADAPack E Configurator

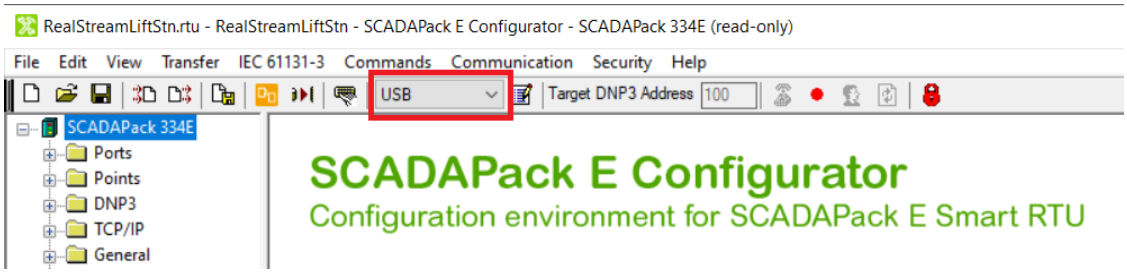
To install SCADAPack E Configurator, see Installing E Configurator.

1. Connect a USB cable from your local PC to the USB port on the RealStream RTU.

2. On your PC, navigate to the stored RealStreamLftStn.rtu file and double-click on it.

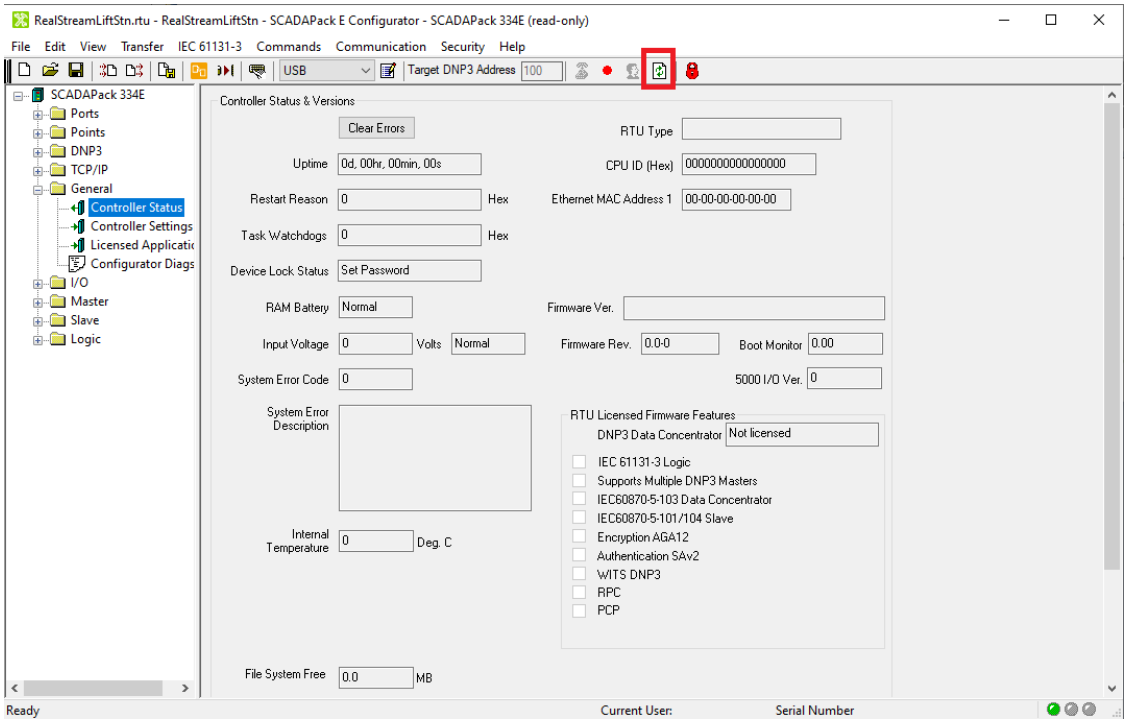
   SCADAPack E Configurator opens.

3. On the toolbar, from the drop-down menu, select USB.

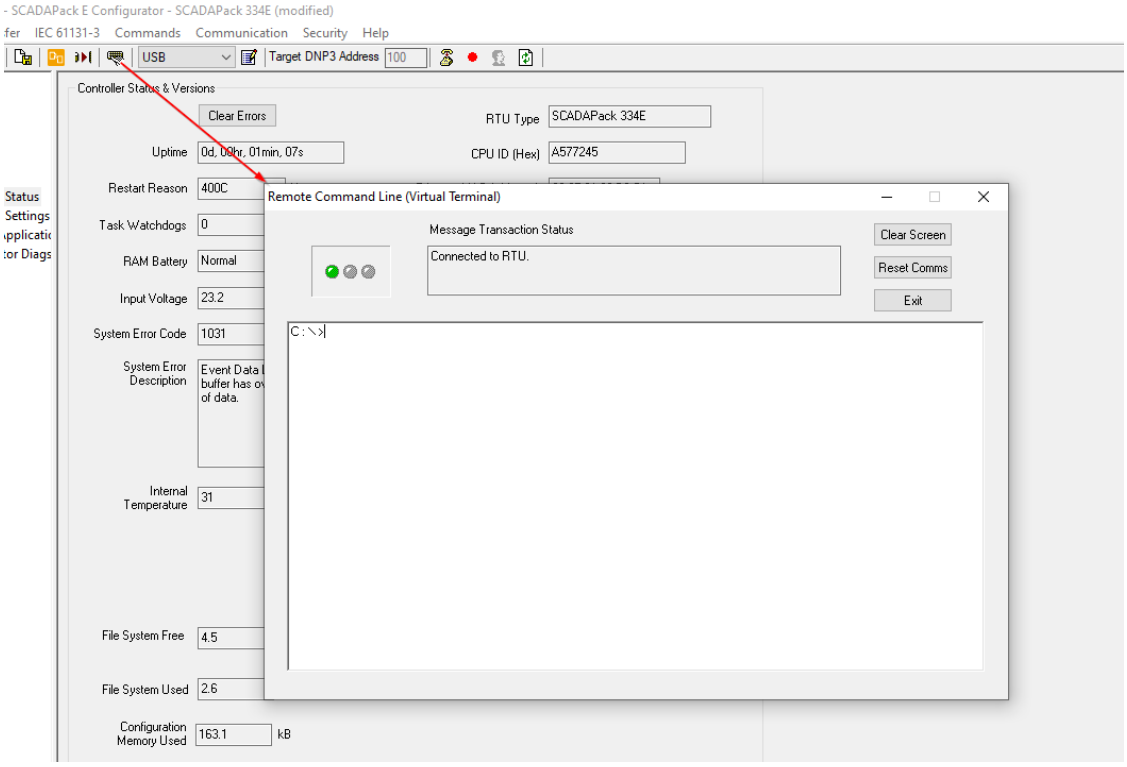


4. To confirm communication, in the left navigation bar, select General > Controller Status and then click Refresh.

   The page should update to show the information from the RealStream RTU.

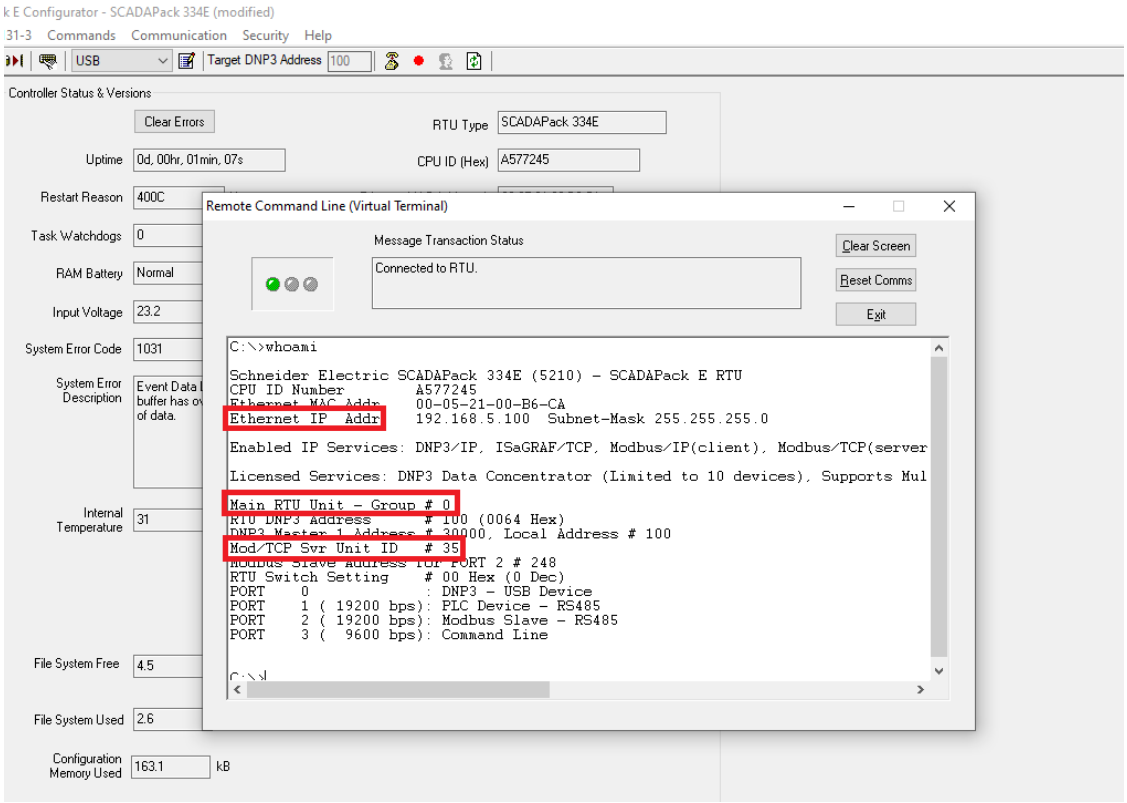


5. Click the Remote Command Line (Virtual Terminal) icon.



5.2.3 Record information

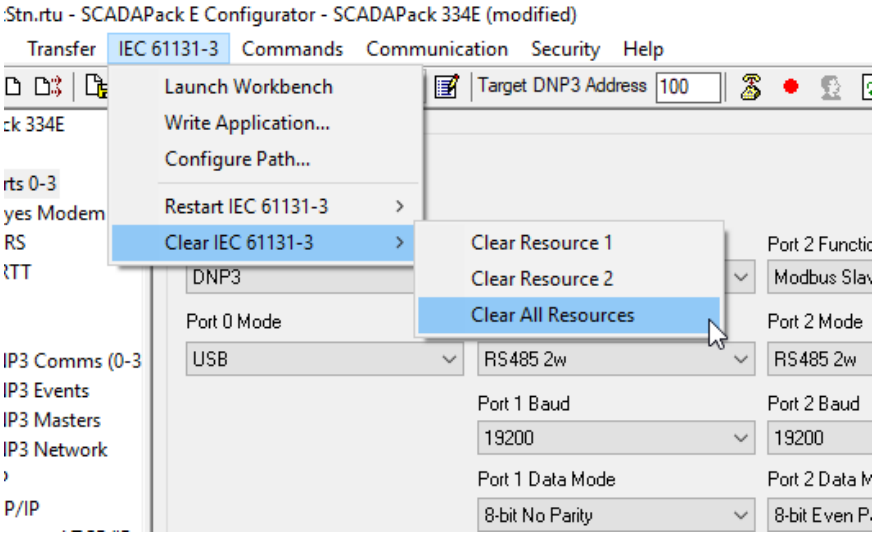
1. In the Virtual Terminal, type whoami and press Enter.



2. Record and save the Ethernet IP address, RTU DNP3 Address, and Mod/TCP Svr Unit ID.

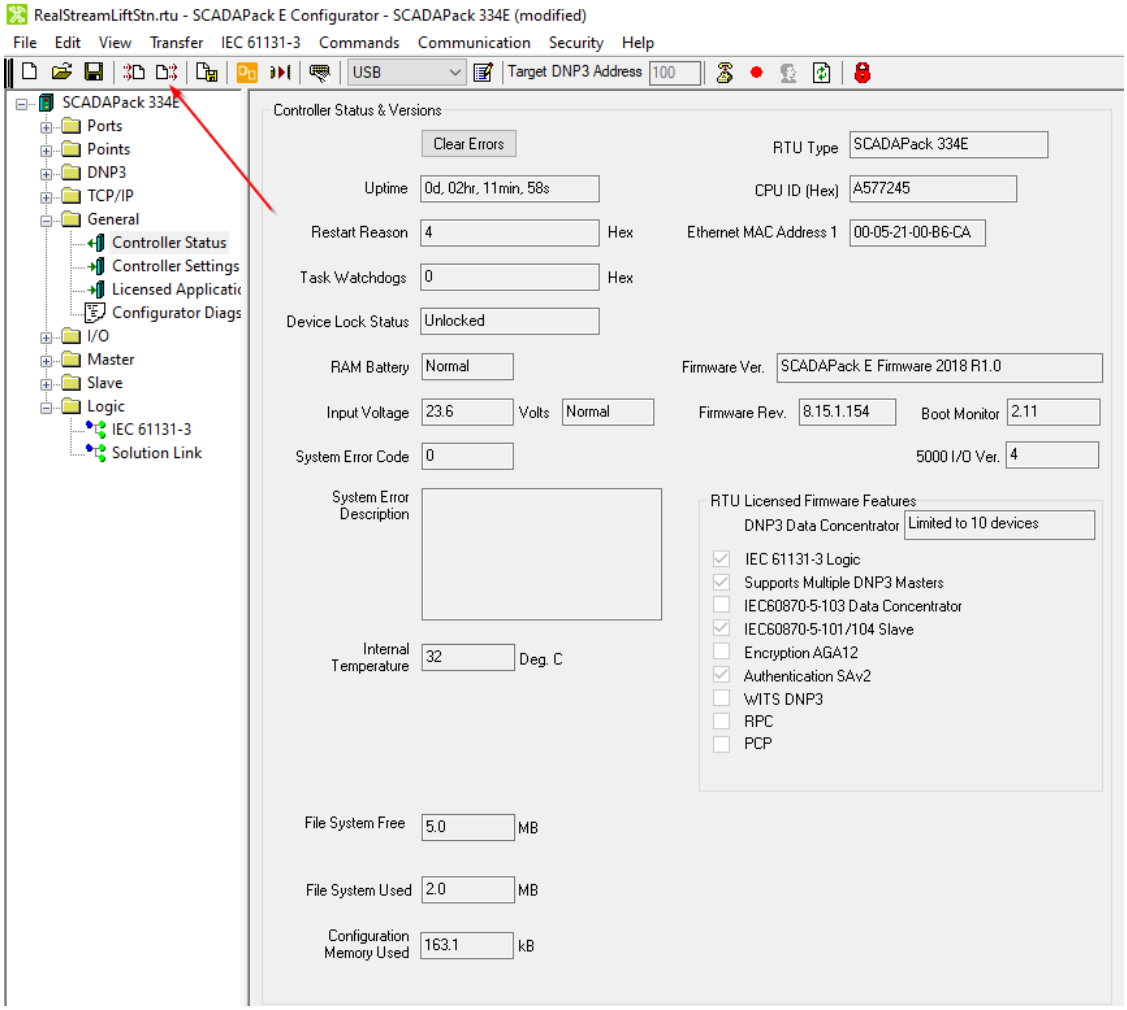
5.2.4 Clear the application

1. On the taskbar, select IEC 61131-3 > Clear IEC 61131-3.
2. Click Clear All Resources.

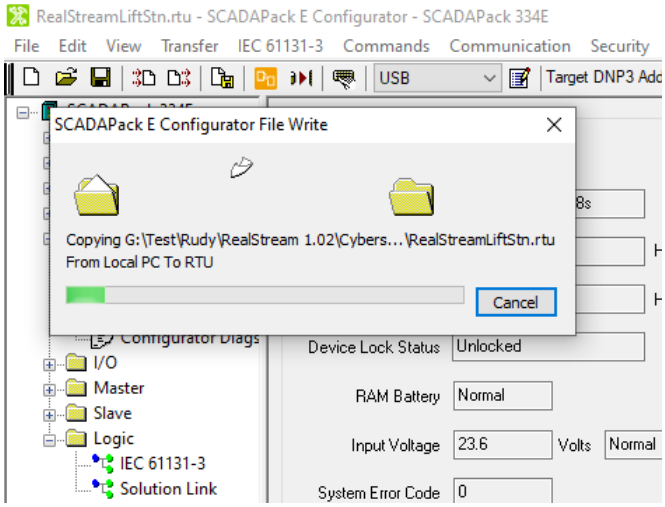


5.2.5 Write the RTU configuration file to the RealStream RTU

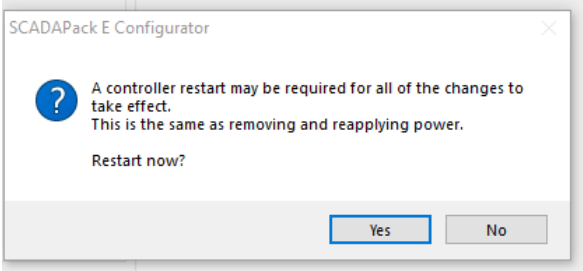
1. On the taskbar, click the Write RTU Configuration icon.



2. When prompted, click Yes to write the file.
3. Confirm that a progress dialog is displayed.



4. When prompted, click Yes to Restart the RTU.
5. Click OK to acknowledge that the RTU will restart.



5.2.6 Update the system firmware (if required)

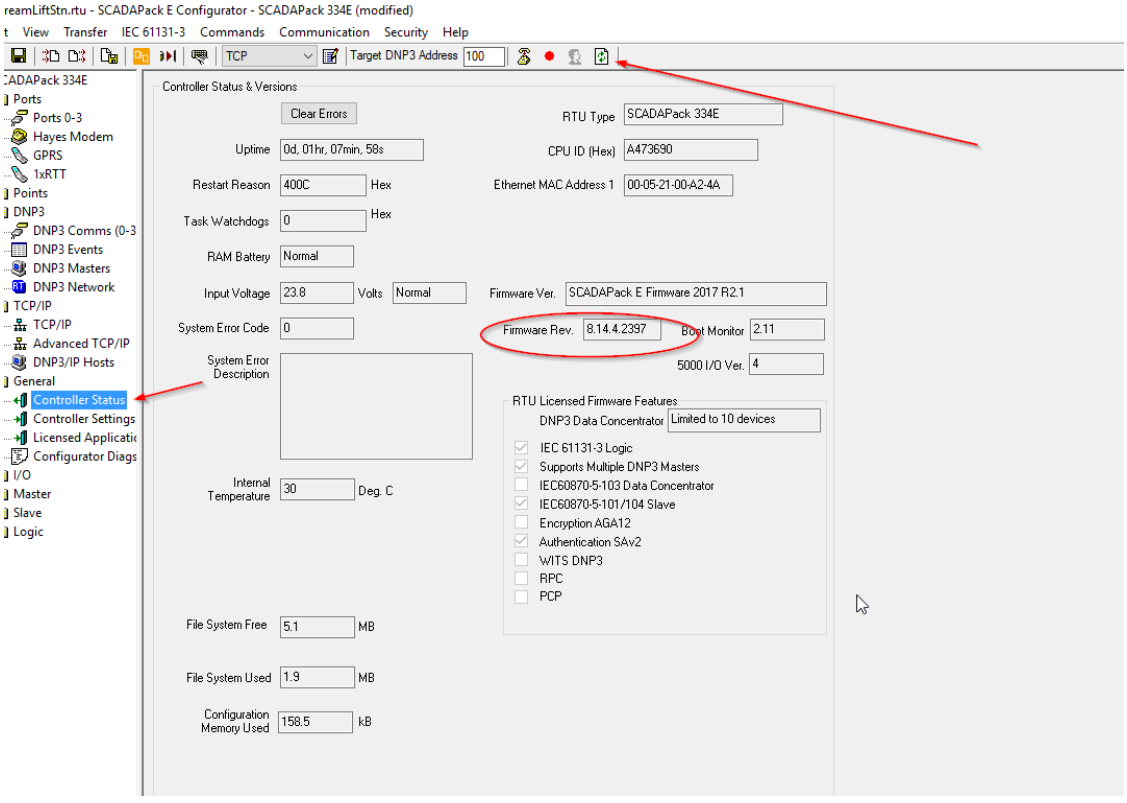
1. To check the current version of the firmware in the RTU, in the left navigation bar, select General > Controller Status and then click Refresh.

NOTICE

LOSS OF CONFIGURATION CONTROL

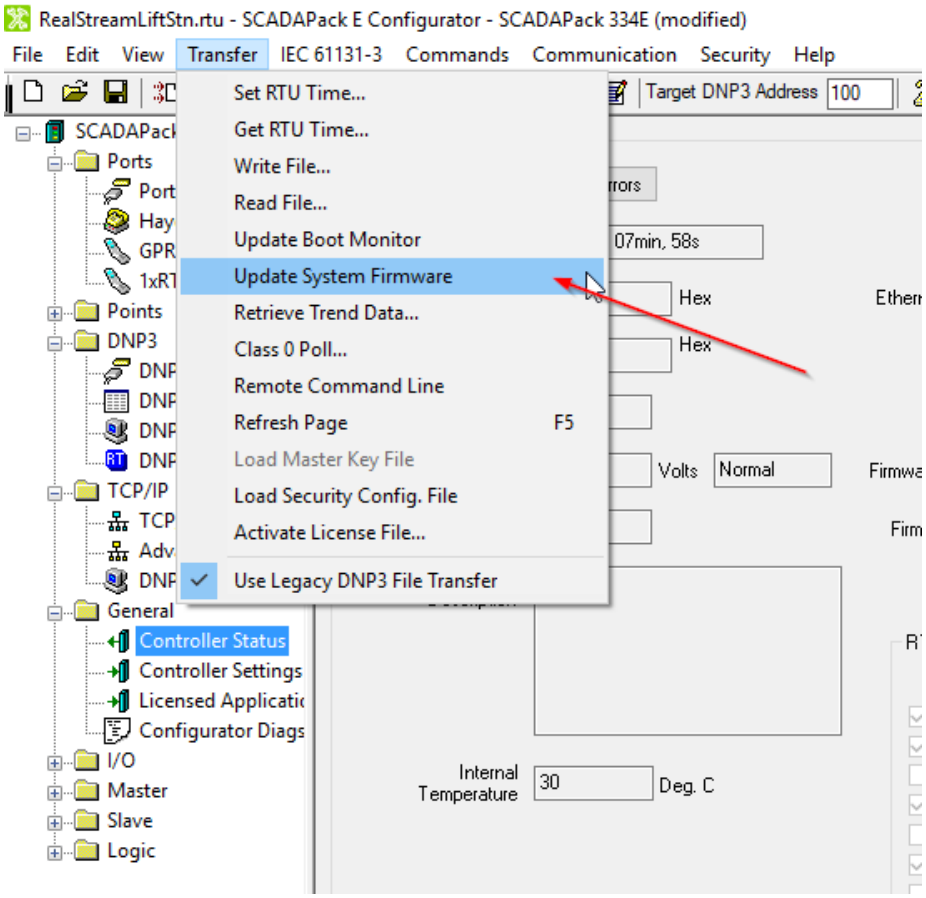
If you refresh a page other than the Controller Status page and write to the RTU, the configuration will no longer be correct.

Failure to follow these instructions can result in a loss of pump control and subsequent overflow.

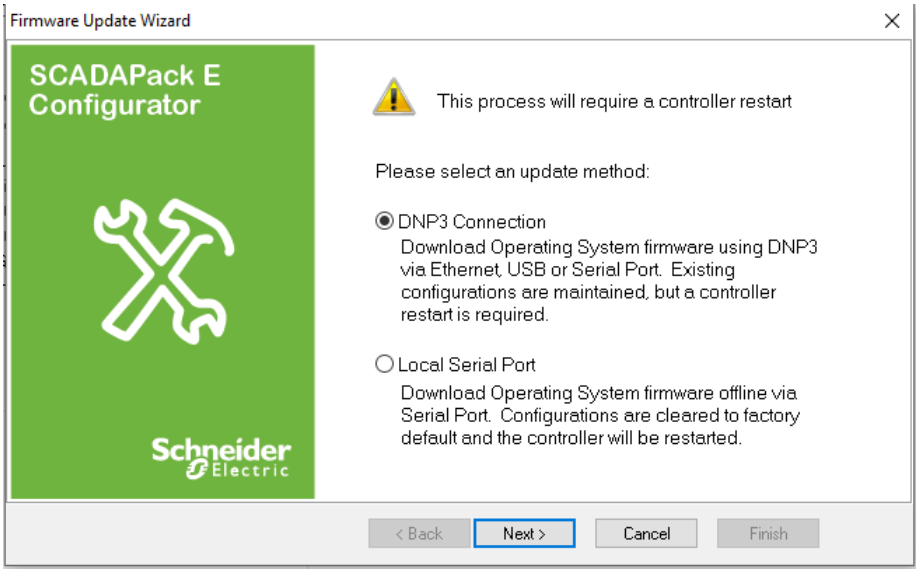


If the firmware version available is more current than the one displayed on the General Status page, then proceed to step 2. Otherwise, skip this section and go to Write GDT files to the RealStream RTU.

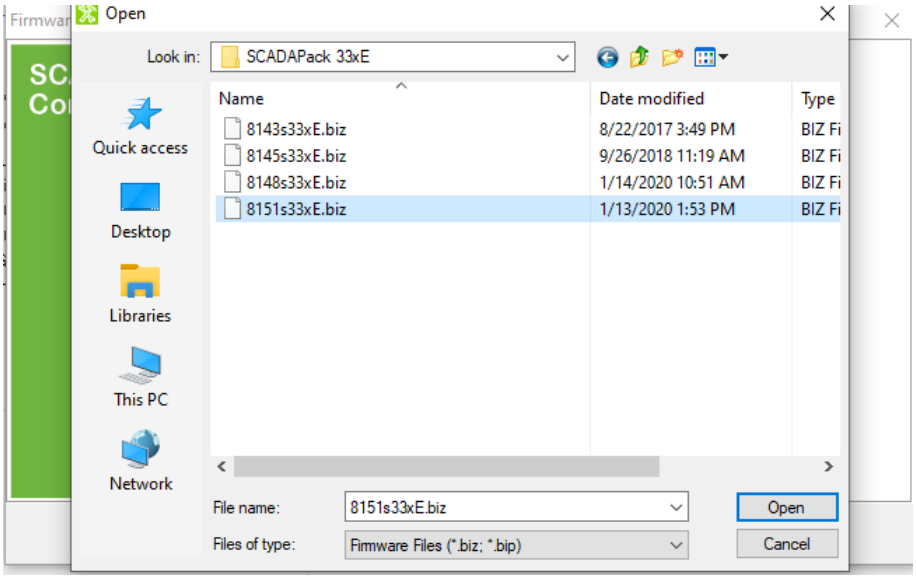
2. On the taskbar, select Transfer > Update system Firmware.



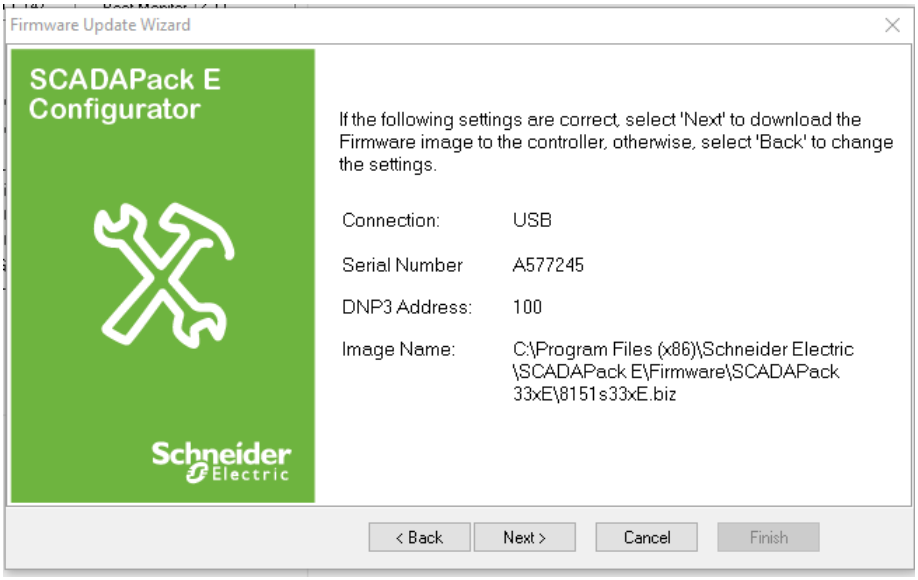
3. In the Firmware Update Wizard, select DNP3 Connect and click Next.



4. Navigate to the system firmware file nnnns33xE.biz and click Open.



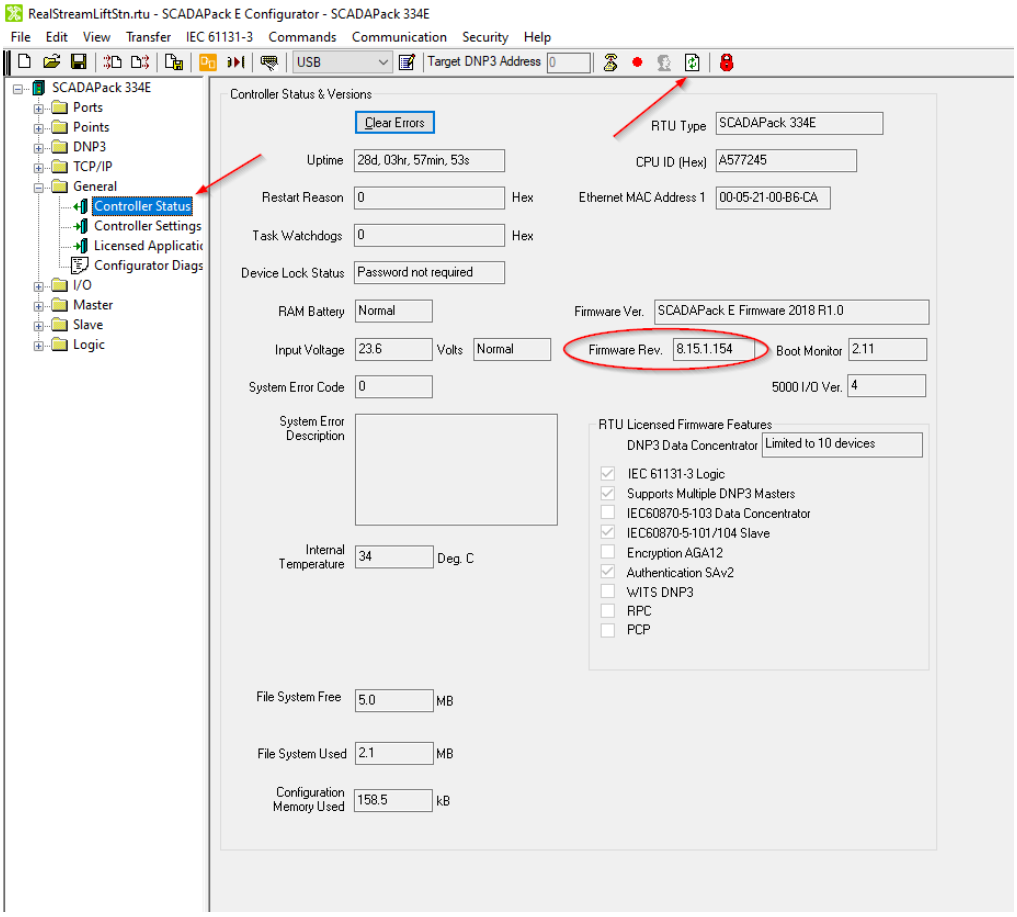
5. Click Next.



6. Wait for the download to complete and then click Next.

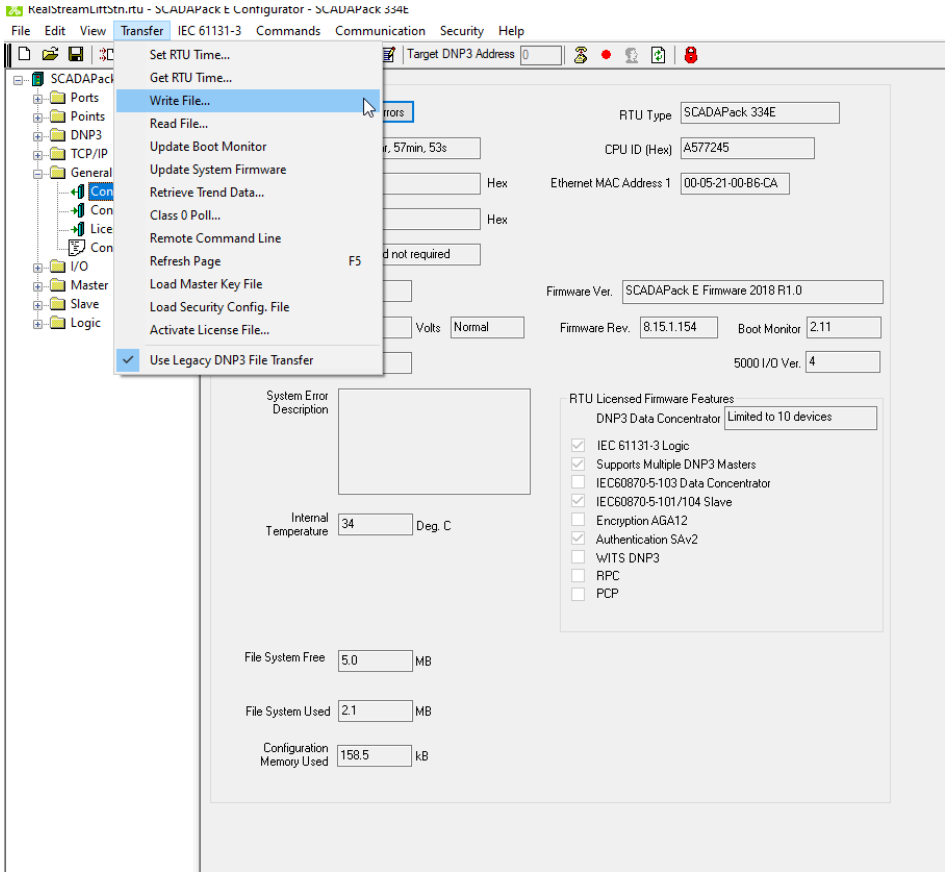
   This process will take approximately 10-15 minutes.

7. Check to see the updated version of the firmware in the RTU by navigating to General > Controller Status and clicking Refresh.

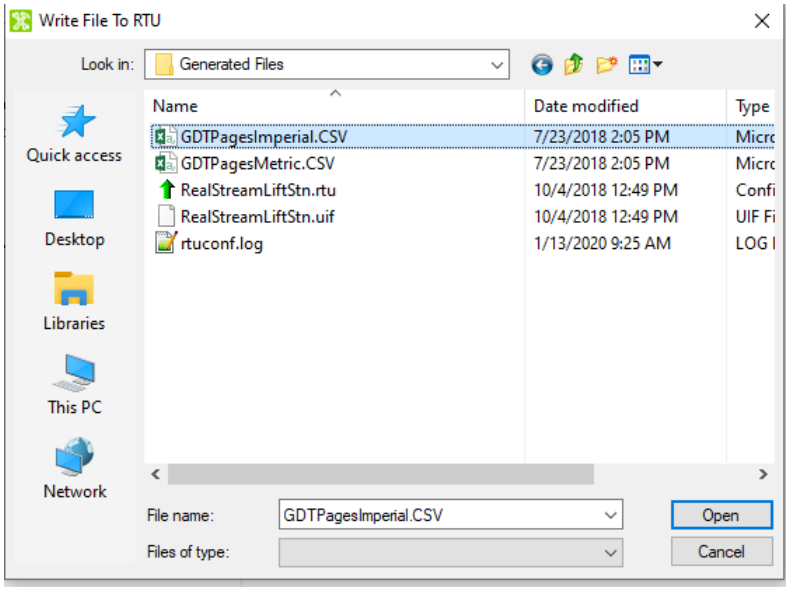


5.2.7 Write GDT files to the RealStream RTU

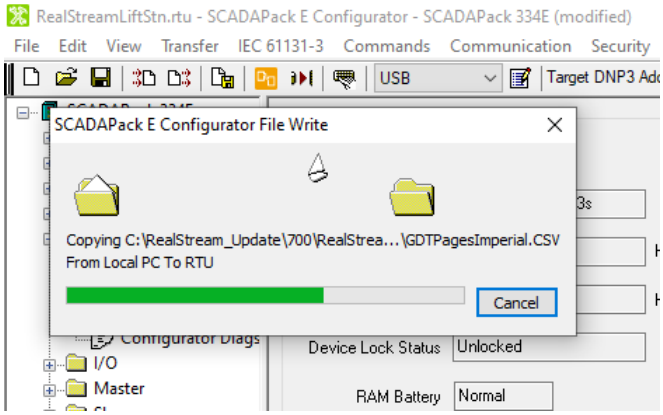
1. On the taskbar, select Transfer > Write File.



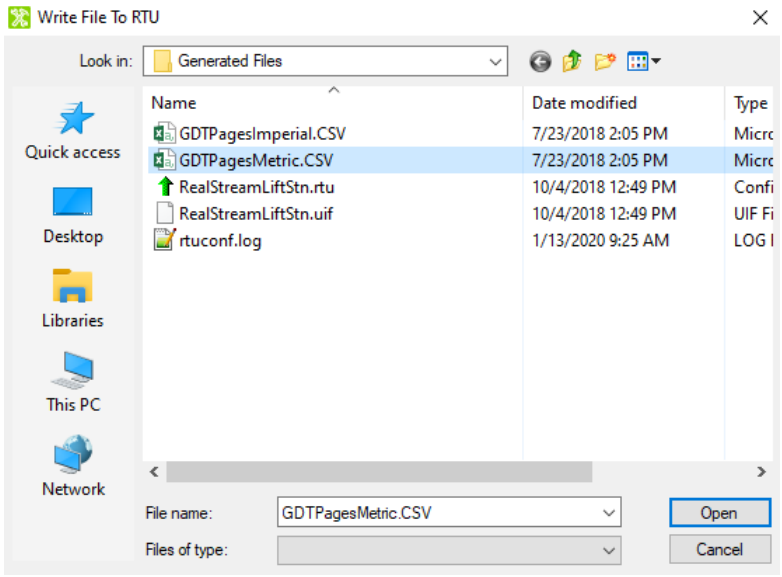
2. Navigate to the file GDTPagesImperial.CSV and click Open.



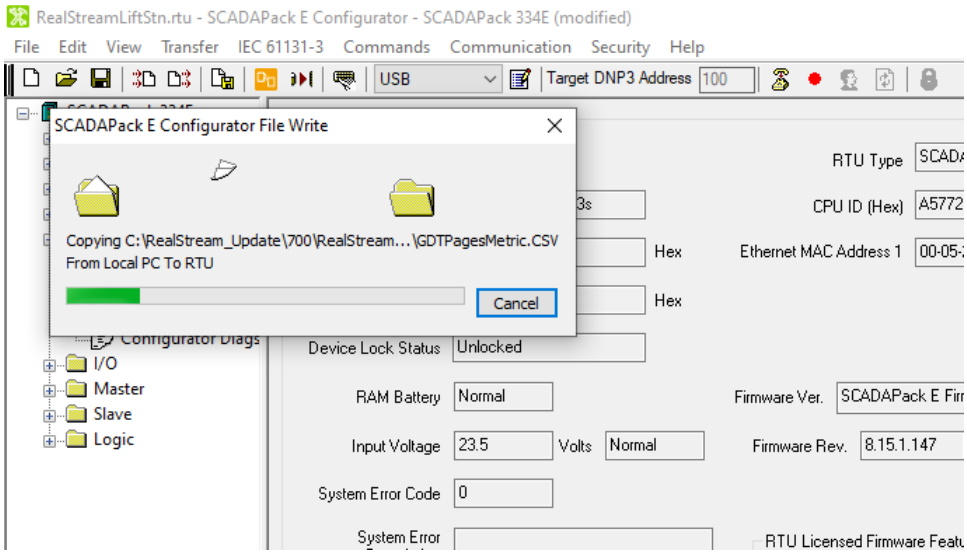
3. Confirm that a progress dialog is displayed and wait for the write process to complete.



4. On the taskbar, select Transfer > Write File.
5. Navigate to the GDTPagesMetric.CSV file and click Open.

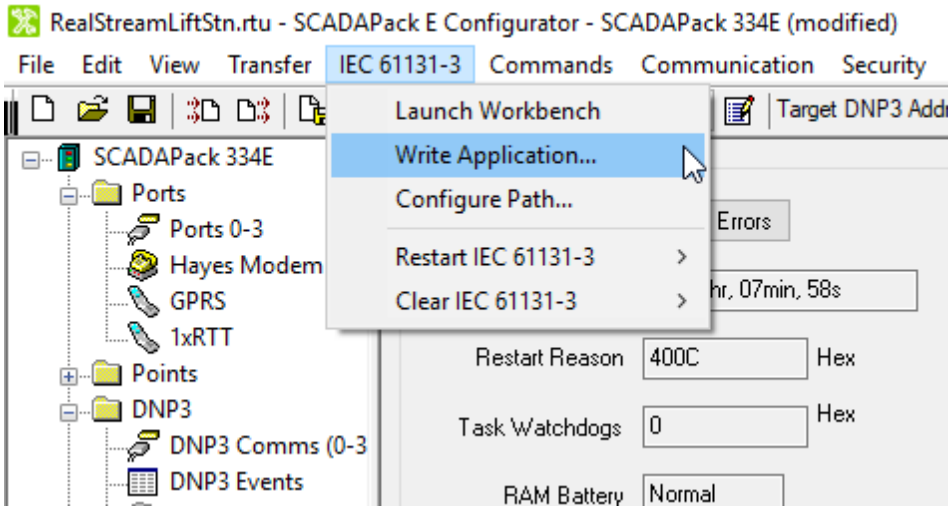


6. Confirm that a progress dialog is displayed and wait for the write process to complete.



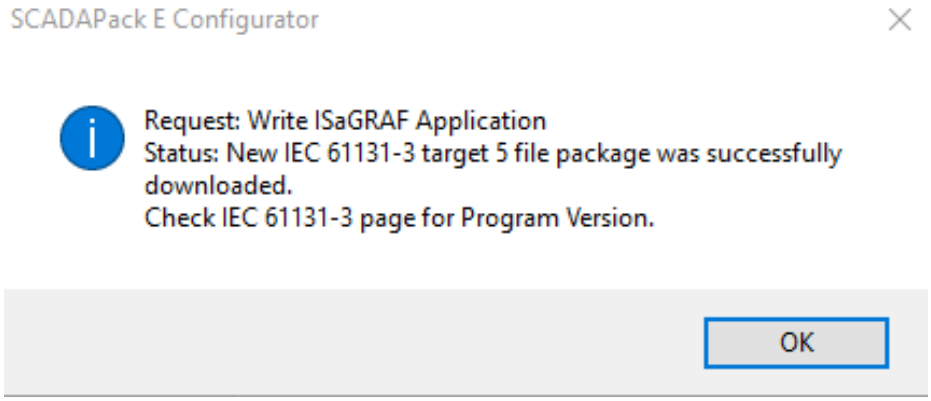
5.2.8 Write the RealStreamStn.I5P file to the RTU

1. On the taskbar, select IEC 61131-3 > Write Application.



2. Navigate to the RealstreamStn.I5P file and select Open.
3. Wait until the following message is displayed.

   This can take up to 2 minutes after the progress bar is no longer displayed.



5.2.9 Confirm that the update was successful

1. Wait for the Graphical Display Terminal (GDT) to display the Welcome message.

   This may take up to 4 minutes.

2. Login as described in Logging in to and out of RealStream GDT.
3. On the Main Menu, select 1.1 Overviews **>** 1.1.1 System Overview and press OK.
4. Scroll to the bottom of the list.

   The App Version and FW Version are displayed.

5. Confirm that the App Version and FW Version match the updated versions of the application and firmware.

⚠CAUTION
LOSS OF CONFIGURATION CONTROL Upon completion of the Update process, the system will be stopped. Automatic pump control is unavailable when the system is in Off mode. After applying the configuration file, perform commissioning verification tests to make sure that the system has been configured as intended. **Failure to follow these instructions can result in minor or moderate injury.**

5.2.10 Perform commissioning tests

1. On the GDT, press the Home button and then the RUN button.

2. Confirm that RUN appears in the top left of the display.

   ALARM and ALERT may also be displayed.

3. Perform any commissioning tests that are relevant to the well.

These may include, but not limited to the following:

- Confirm that the correct level in the well is reported on the top row of the GDT display
- Confirm that all expected pumps are shown to be available on the top row of the GDT display. For example, 2/2 means 2 pumps are available out of the configured 2 pumps.

Confirm that a pump turns on when the level in the well reaches the configured pump turn on level.

6 CONTACT TECHNICAL SUPPORT

Questions and requests related to any part of this documentation can be directed to one of the following support centers.

Technical support: Americas, Europe, Middle East, Asia

Available Monday to Friday 8:00am – 6:30pm Eastern Time

Toll free within North America	1-888-226-6876
Direct Worldwide	+1-613-591-1943
Email	supportTRSS@se.com

Technical support: Australia/New Zealand (Pacific)

Inside Australia	13 73 28 (13 SEAU)
Inside New Zealand	0800 652 999
Email	techsupport.pz@se.com