

STM6000 Edge Box HMI

Demo Setup Guide – AVEVA Insight



Contents

1. Preface
2. STM6000 Edge Box HMI Demo Overview
3. Hardware Configuration
4. AVEVA Insight Configuration
 - a) Overview
 - b) AVEVA Insight Connection
 - c) BLUE Open Studio Project Settings
5. Transfer Runtime and Project Files
6. Mobile Access

Preface

(1) About this quick start guide

This Edge Box HMI Demo Setup Guide is intended for individuals using the Edge Box HMI and its software for demonstration purposes and not for a production environment. This publication will help you quickly configure hardware, software and cloud services.



Advice

Any problems?

Please refer to manuals when having a problem with Edge Box HMI.

(Hardware)

STM6000 hardware manual:

<https://www.proface.com/en/product/hmi/stm6000/download>

(Software)

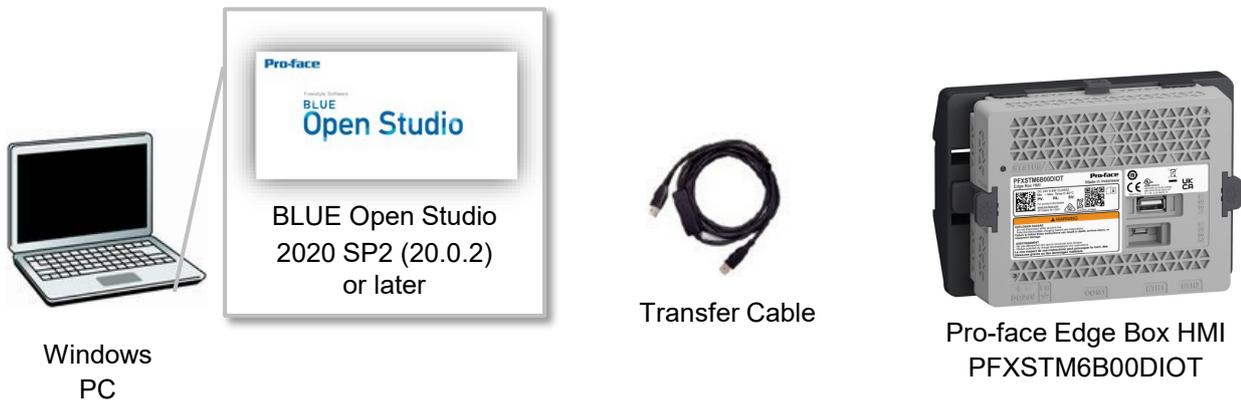
BLUE Open Studio Support /Downloads:

<https://www.proface.com/en/product/soft/blue-os/download>

Preface

(2) Building a development environment

Prepare the following environment.



(A) BLUE Open Studio

BLUE Open Studio is a development and runtime software that incorporates all the tools users need to create SCADA HMI applications, dashboards and OEE interfaces.

(B) Transfer Cable

Two ways of transferring project files



USB Cable
(Type A – Micro-B)

Use an optional USB transfer cable or commercial USB cable (Type A to Micro-B) for transfer.



LAN Cable

Use LAN cable (Ethernet cable) for transfer.

(C) Pro-face Edge PFXSTM6B00DIOT

Please visit <https://www.pro-face.com> for more information on the Pro-face Edge Box HMI.



Pro-face Edge Box HMI
PFXSTM6B00DIOT

Preface

(3) How to get BLUE Open Studio

To create HMI Screen for the Edge Box HMI, the version of BLUE Open Studio needs to be V2020 SP2 or later.



You can download BLUE Open Studio Installer from the following link.

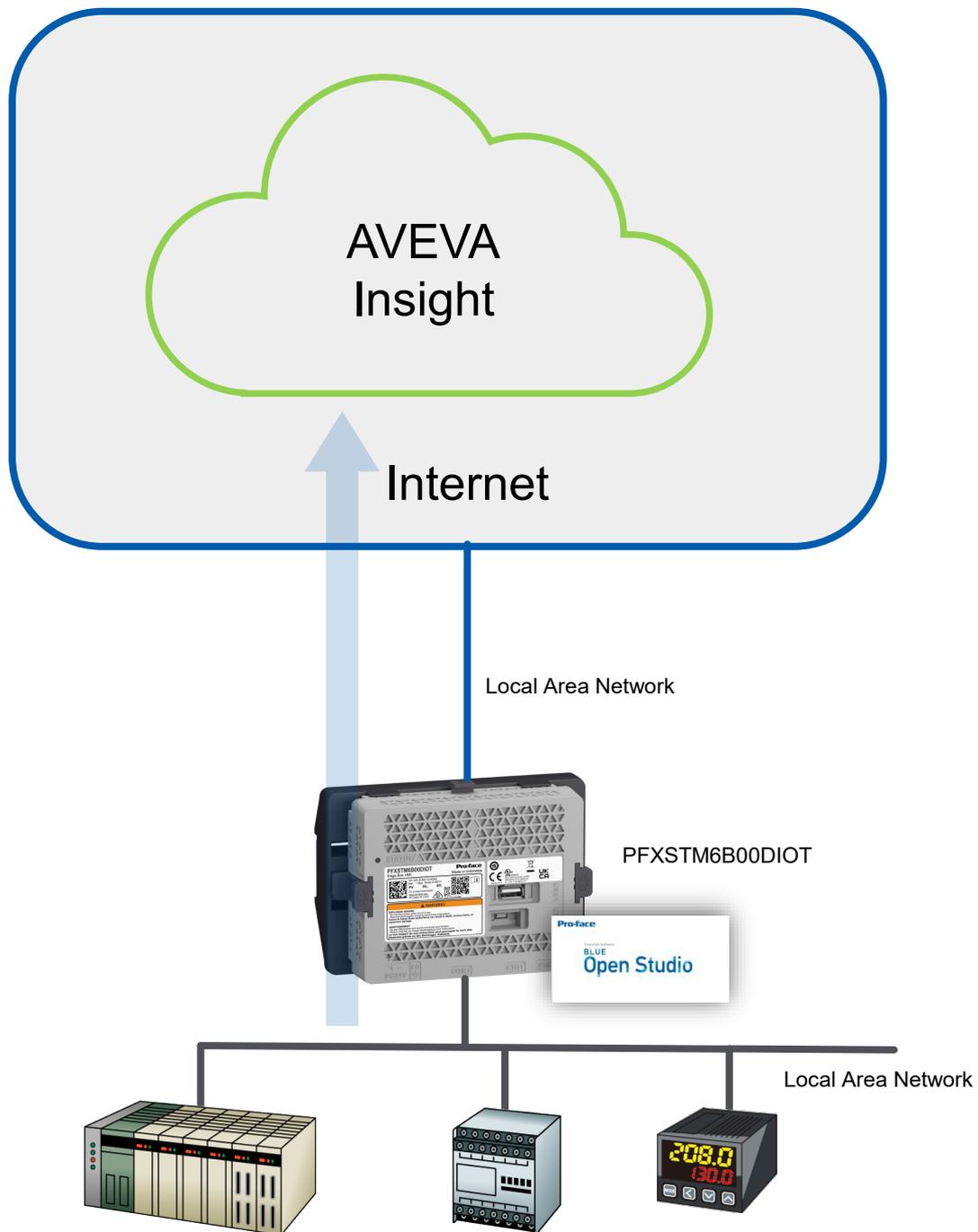
<https://www.proface.com/en/service#/page/installer/bos>

You can use the software without a license in Evaluation Mode for 40 hours. After the evaluation period ends, the program automatically converts into Demo Mode until you apply a valid license. You cannot reactivate the Evaluation Mode even if you reinstall the software on your computer.

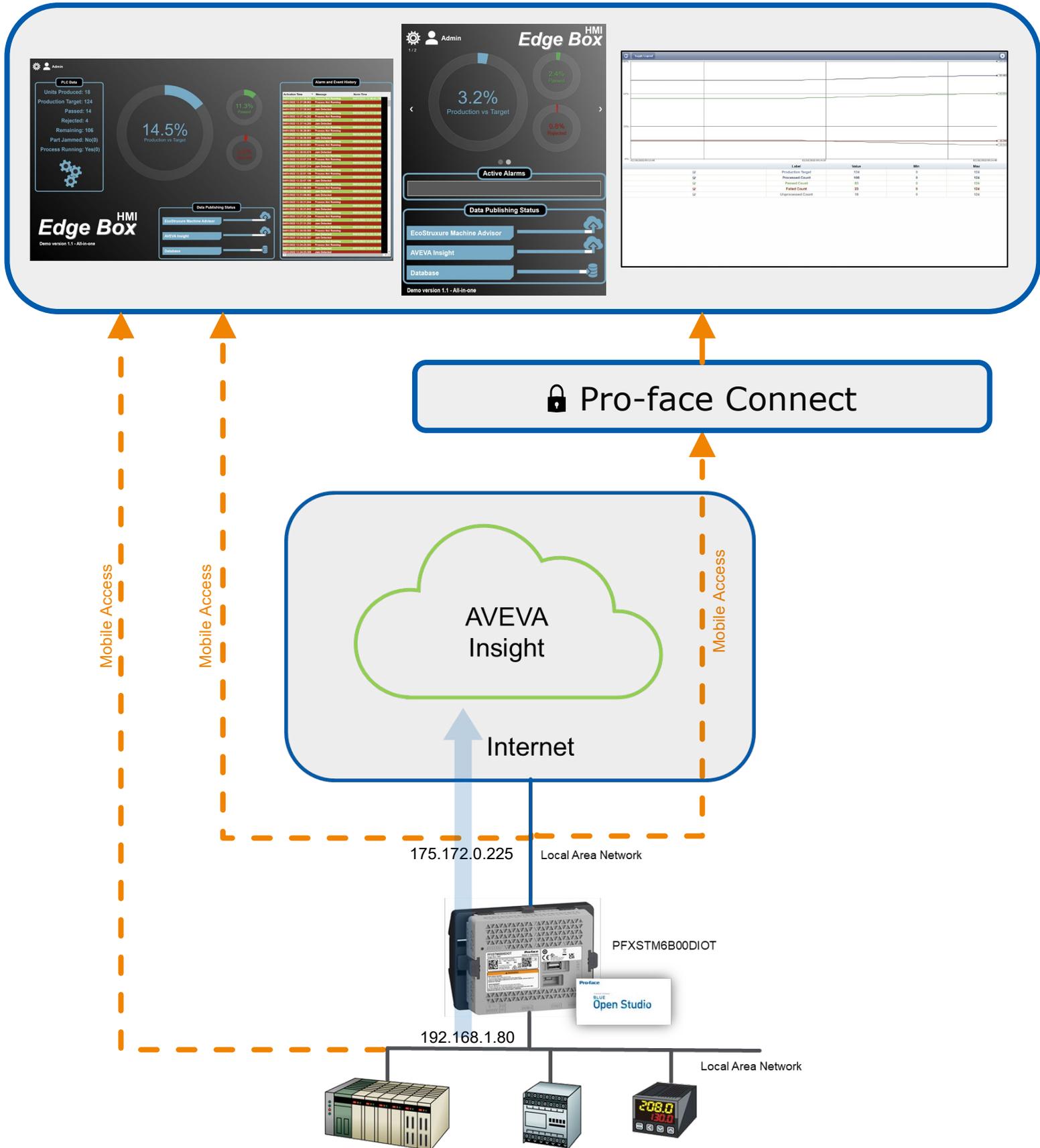
Please access the [activation page](#) to check how to activate BLUE Open Studio.

2. STM6000 Edge Box HMI Demo Overview

The STM6000 Edge Box HMI Demo – AVEVA Insight demonstrates pushing data from internal tags or external devices to the cloud and a local database. EcoStruxure Machine Advisor and AVEVA Insight are used for the cloud. Microsoft SQL Server is used for the local database. Although a PLC or other device can supply data, for demonstration purposes data is internally generated.



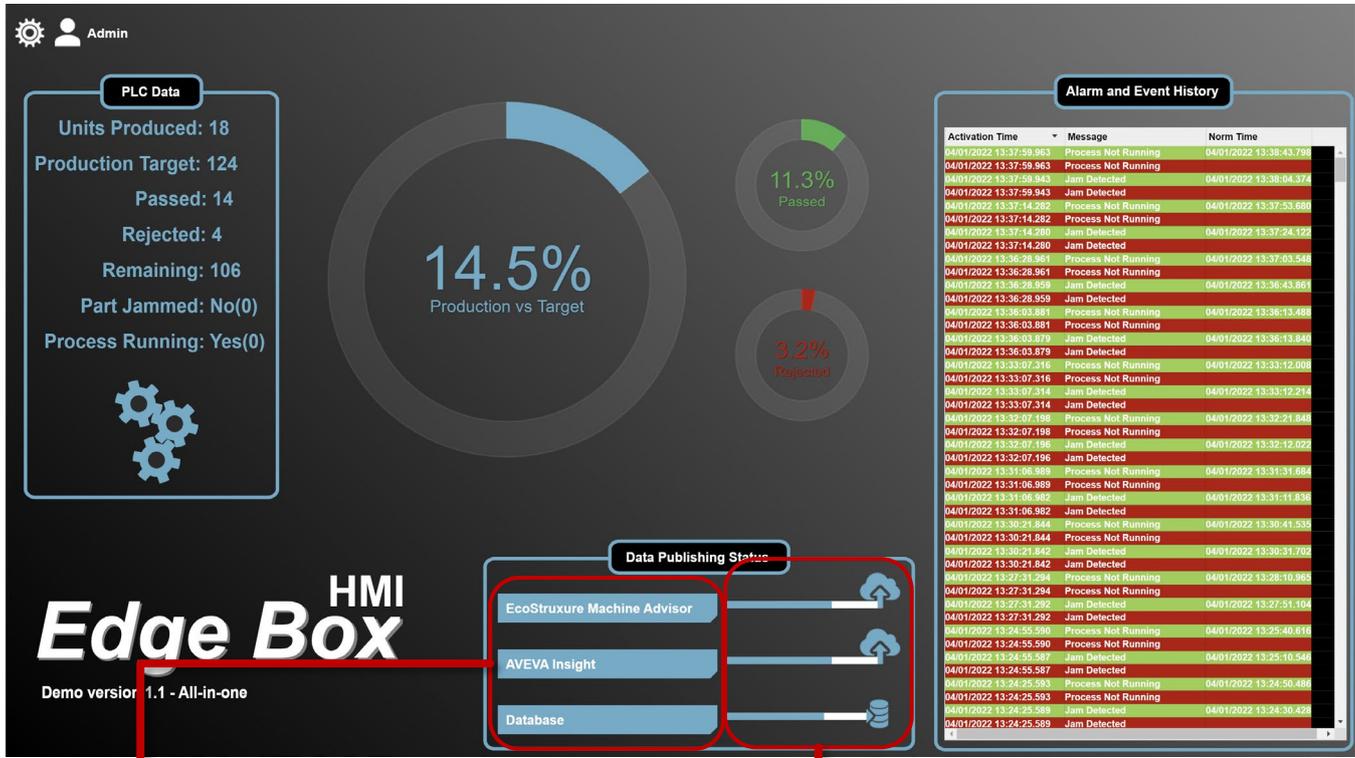
The STM6000 Edge Box HMI cannot be used with an integrated display. However, you can view screens and more within a web browser using Mobile Access. Mobile Access can be used via one of the two possible IP addresses of the Edge Box HMI. For secure remote viewing utilise Pro-face Connect + the local IP.



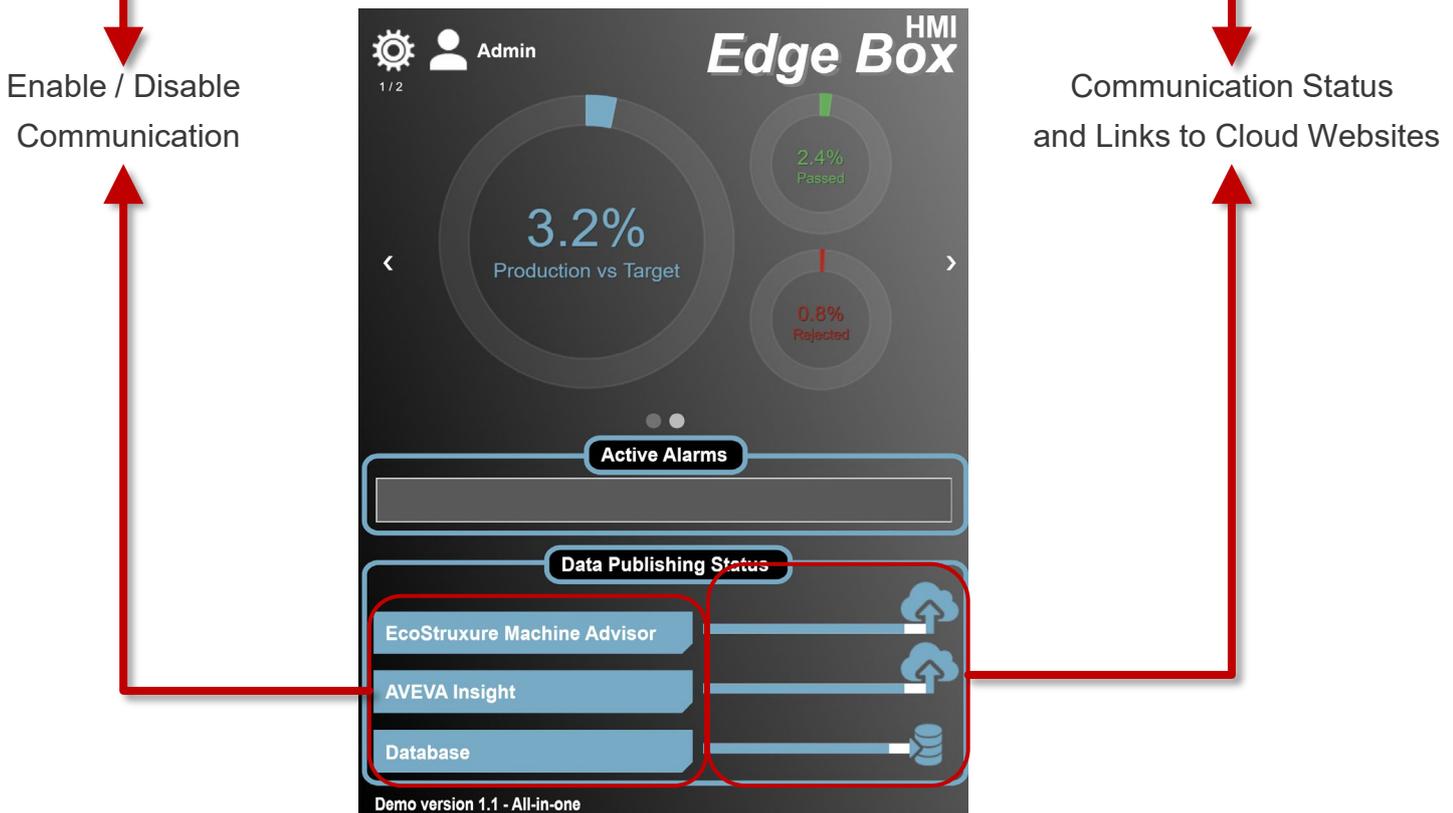
The demonstration project has two user accounts:

- Guest, password = (blank)
- Admin, password = Admin

main_desktop screen



main_mobile screen



3. Hardware Configuration



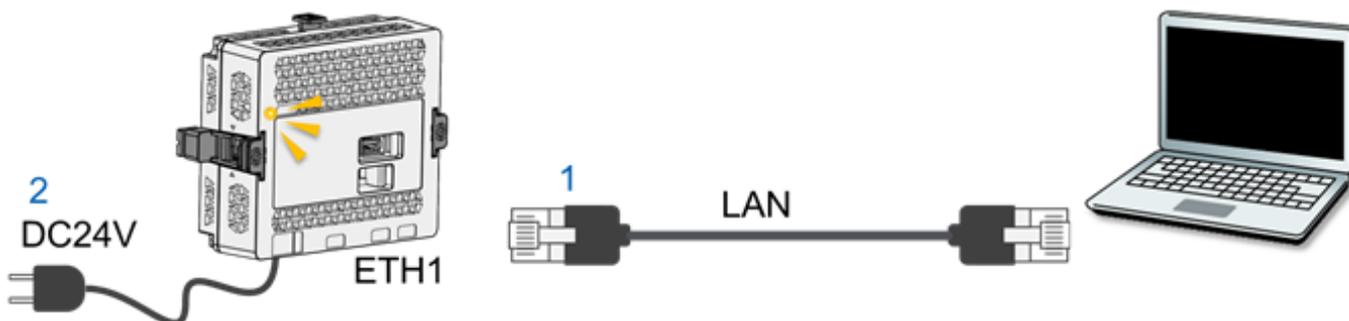
ETH1 – OT Layer
Manual IP
192.168.1.80

ETH2 – IT Layer
Automatic/DHCP
(e.g. 175.172.0.225)
or
Manual IP, Subnet, Gateway settings that
allows access to the Internet
(e.g. IP = 175.172.0.225
Subnet = 255.255.255.0
Gateway = 175.172.0.1)

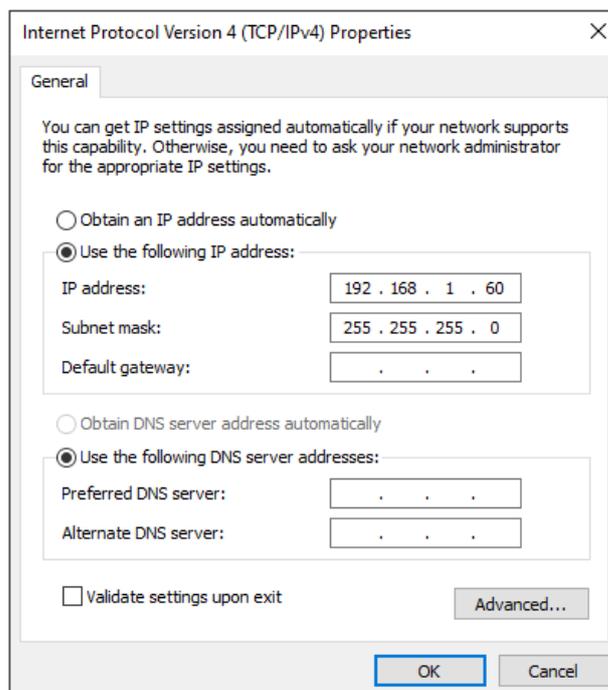
The STM6000 Edge Box HMI will have two connections for demonstration purposes:

- ETH1 is primarily for the Operational Technology layer (OT) and is potentially connected to OT devices. For an easy demonstration experience a database service can also be connected to this layer. No internet connectivity on this port.
- ETH2 is primarily for the Internet Technology layer (IT) and is potentially connected to the internet via a router, Local Area Network (LAN) or other edge/IT devices. Connections to cloud services, databases and other services can be done from this port.

1. Connect a USB transfer cable (micro-B) to Edge Box HMI.
or Connect to the same network as PC (development environment) using ETH1 port of Edge Box HMI.
2. Turn on STM6000 Edge Box HMI. The status LED flashes orange.



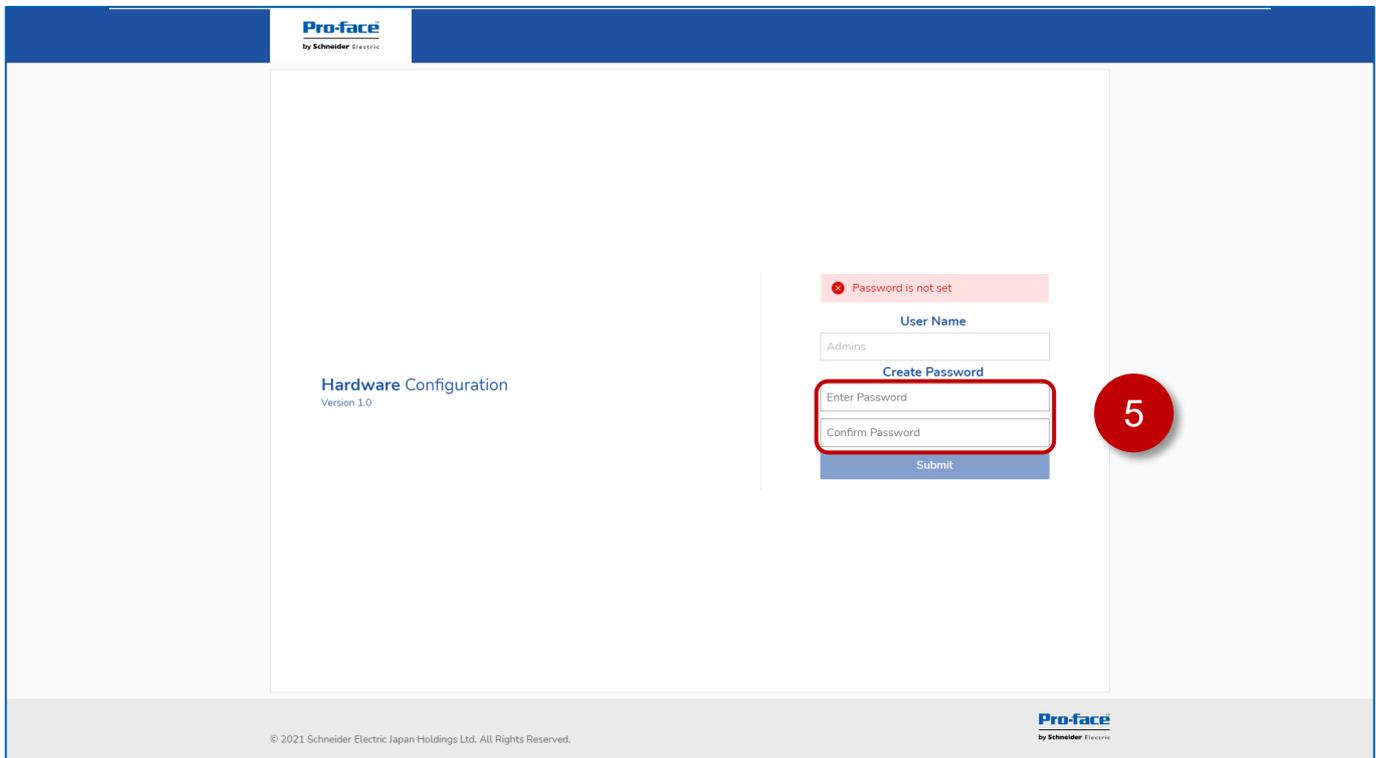
3. Set IP address of your computer as follows:
IP address: 192.168.1.60,
Subnet Mask: 255.255.255.0



- Open a web browser on your PC, and in the address bar enter the IP address of Edge Box HMI.
 (Ethernet) <https://192.168.1.80>
 (USB) <https://169.254.100.100>

The message “Your connection is not private” is displayed. To continue, click Advanced and then click Proceed to *** (***) is the IP address).

- Hardware Configuration screen is displayed.
 Set a login password and click [Submit]. e.g. !Proface1234, and click [Submit]
 Note: The user name is “Admins” and cannot be changed.

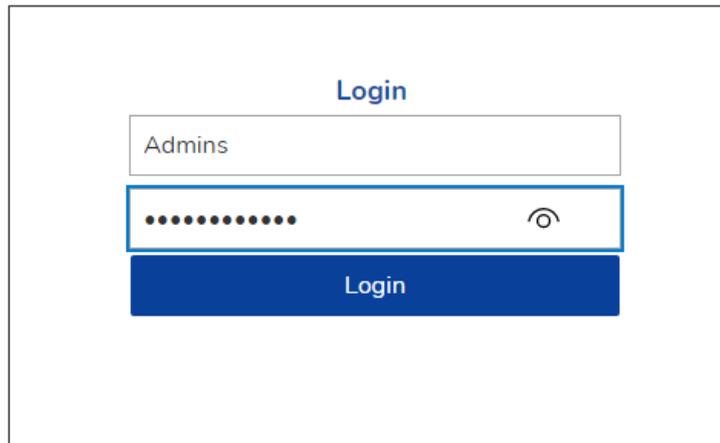


The password must meet the following requirements:

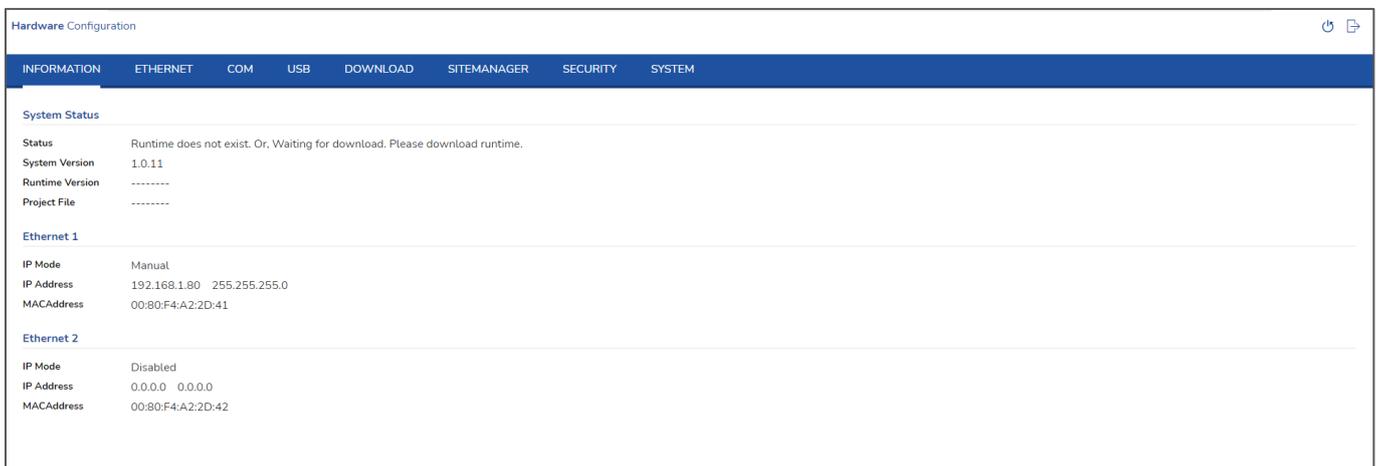
Number of characters	At least 8 single-byte characters, up to 64 characters
Types of characters	Use at least one of each of the following types of characters: <ul style="list-style-type: none"> • Uppercase letter (A-Z) • Lowercase letter (a-z) • Number (0-9) • Symbol (special character): ! # - = _ .

Note: If you forget the password, note that you will not be able to reset it. To restore the product to its original state (at time of purchase), contact customer support. All user data in the product will be lost.

5. Enter the User Name, Admins and the newly created password, e.g. !Proface1234. Click [Login]

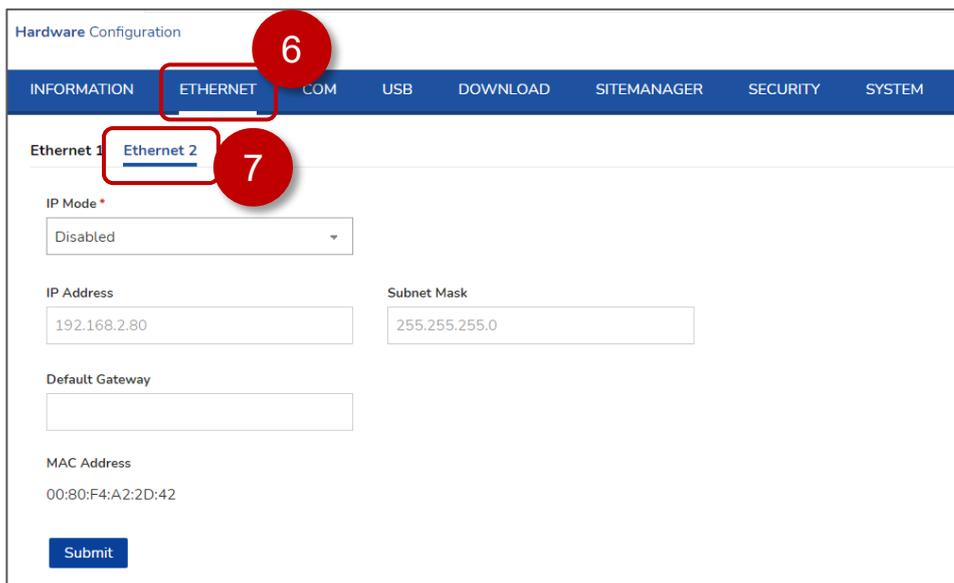


A screenshot of a login interface. At the top, the word "Login" is centered in blue. Below it is a text input field containing the text "Admins". Underneath that is a password input field with ten black dots and a small eye icon on the right. At the bottom is a blue button with the text "Login" in white.



A screenshot of the "Hardware Configuration" web interface. The top navigation bar includes tabs for INFORMATION, ETHERNET, COM, USB, DOWNLOAD, SITEMANAGER, SECURITY, and SYSTEM. The main content area shows "System Status" with fields for Status, System Version (1.0.11), Runtime Version, and Project File. Below this are sections for "Ethernet 1" and "Ethernet 2", each with fields for IP Mode, IP Address, and MAC Address.

6. Click [ETHERNET] to display the Ethernet Settings.
7. Click [Ethernet 2] to display ethernet port 2 settings.



A screenshot of the "Hardware Configuration" web interface, similar to the previous one, but with red annotations. A red box labeled "6" highlights the "ETHERNET" tab in the navigation bar. Another red box labeled "7" highlights the "Ethernet 2" sub-tab. The "Ethernet 2" settings are displayed, including an "IP Mode" dropdown menu set to "Disabled", "IP Address" (192.168.2.80), "Subnet Mask" (255.255.255.0), "Default Gateway", and "MAC Address" (00:80:F4:A2:2D:42). A "Submit" button is at the bottom.

- Set the [IP Mode] to [Automatic] or [Manual] . [Automatic] for DHCP or [Manual] to enter in the necessary settings to allow internet access.

Hardware Configuration

INFORMATION ETHERNET COM USB DOWNLOAD SITEMANAGER SECURITY SYSTEM

Ethernet 1 Ethernet 2

IP Mode* 8

Automatic

IP Address Subnet Mask

192.168.2.80 255.255.255.0

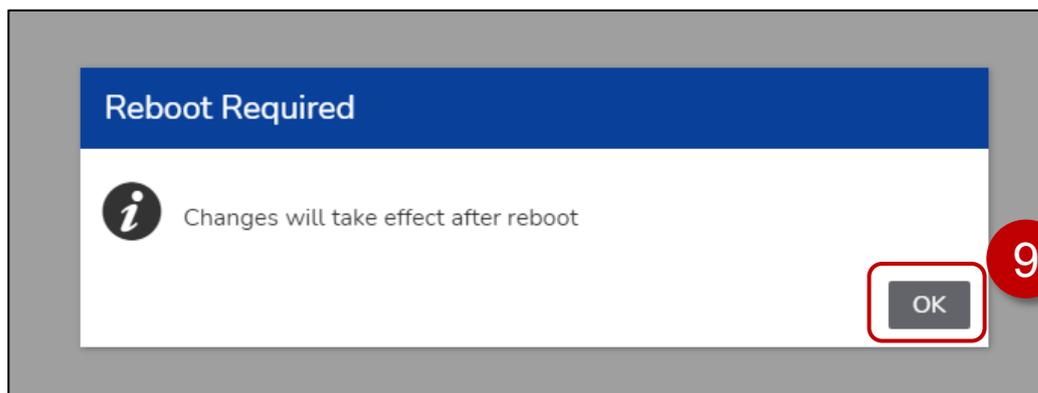
Default Gateway

MAC Address

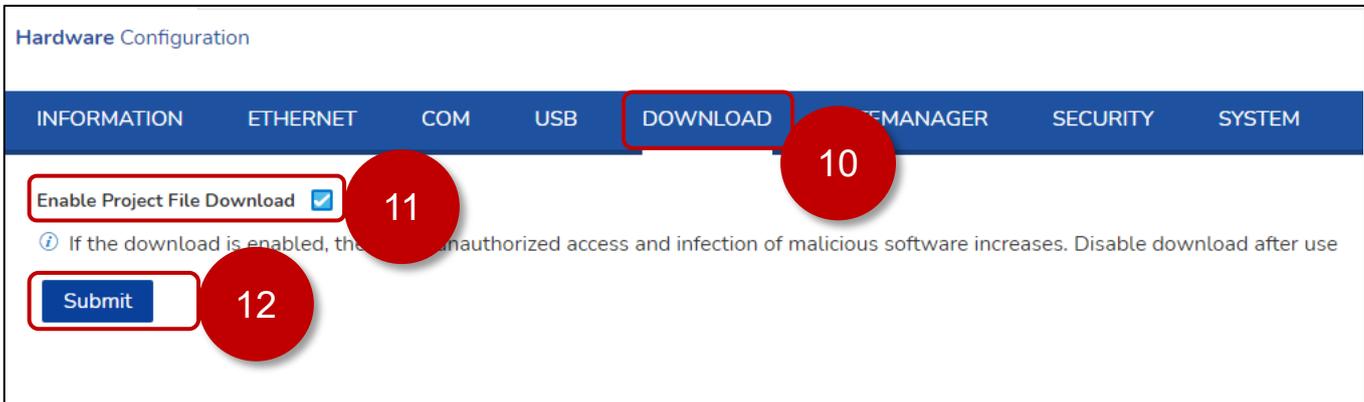
00:80:F4:A2:2D:42

9 Submit

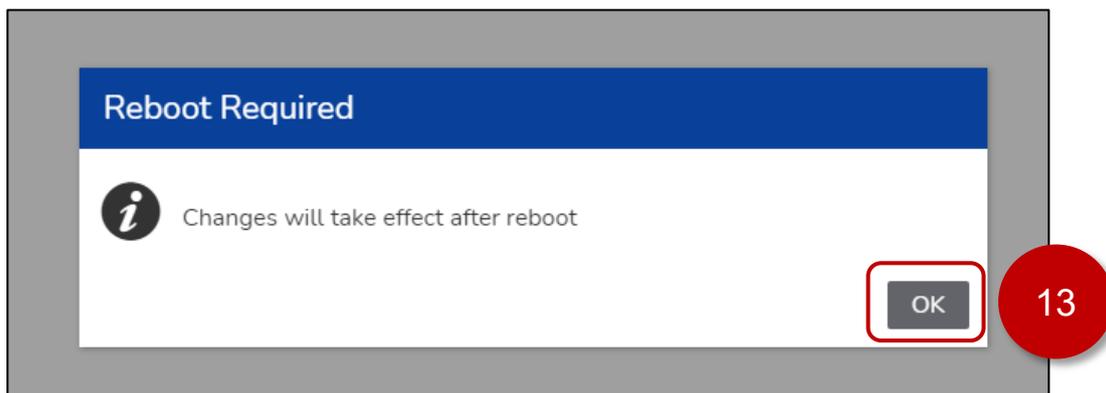
- Click [Submit] to apply the ethernet setting. Note that the settings will only take effect after a reboot. [OK] to dismiss the Reboot Required dialog.



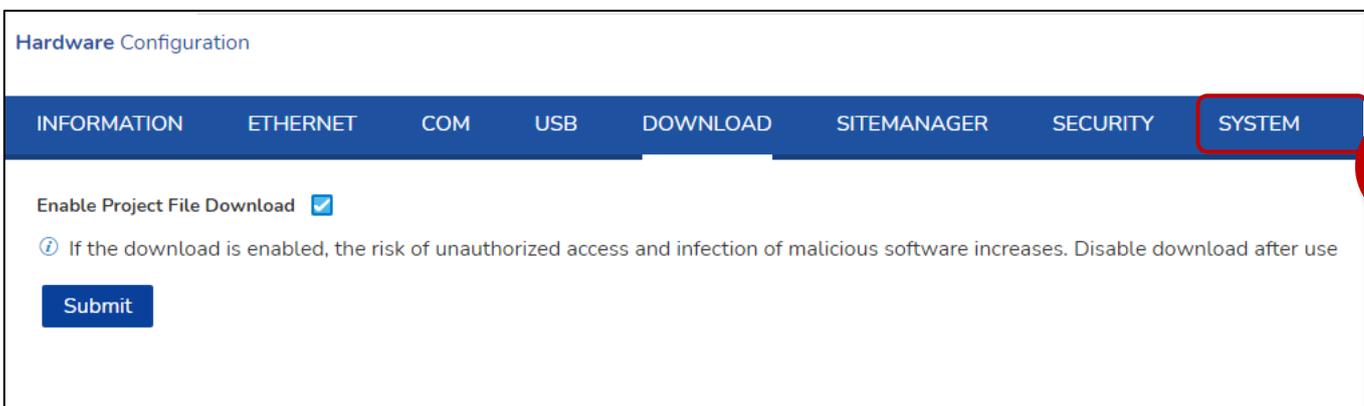
10. Click [DOWNLOAD].



11. Check [Enable Project File Download]
12. Click [Submit]. Changes will take effect after a reboot.
13. Click [OK] to accept the Reboot required message.



14. Click [SYSTEM]

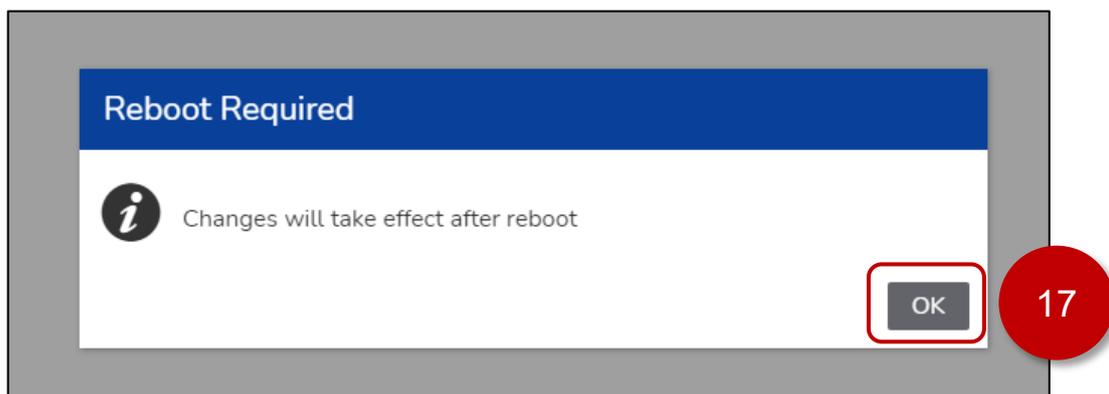


15. Set the [Date], [Time], [Time-zone] for your region.

The screenshot shows the 'Hardware Configuration' page with a navigation bar at the top containing 'INFORMATION', 'ETHERNET', 'COM', 'USB', 'DOWNLOAD', 'SITEMANAGER', 'SECURITY', and 'SYSTEM'. Below the navigation bar, there are tabs for 'Date and Time', 'Firmware Update', 'Factory Reset', and 'Backup and Restore Configuration'. The 'Date and Time' tab is active. The 'Date' field is set to '2022-04-12', the 'Time' field is set to '05:56:00 PM', and the 'Time-zone' dropdown is set to '(UTC-04:00) Canada/Eastern'. There is a checkbox for 'Synchronized with NTP Server' which is unchecked, and an empty 'NTP Server' field below it. A blue 'Submit' button is at the bottom left. Red circles with numbers 12, 15, 15, and 16 are overlaid on the image to indicate specific elements: 12 is on the Time field, 15 is on the Date field, 15 is on the Time-zone dropdown, and 16 is on the Submit button.

16. Click [Submit], changes will take effect after reboot.

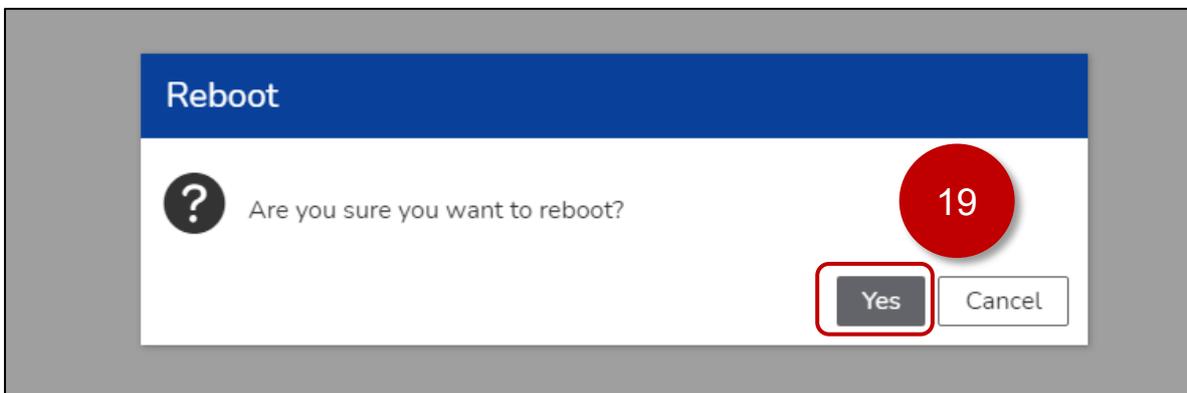
17. Click [OK] to dismiss the Reboot Required dialog.



18. Click the [Reboot] icon  at the top right of the web page.



19. Click [Yes] in the Reboot dialog.



20. After the Edge Box HMI has rebooted. Confirm the [Ethernet 2] Settings, [Enable Project File Download] check box, [Date], [Time], [Time-zone] are as previously selected.

Hardware Configuration

INFORMATION ETHERNET COM USB DOWNLOAD SITEMANAGER SECURITY SYSTEM

System Status

Status Runtime does not exist. Or. Waiting for download. Please download runtime.
 System Version 1.0.11
 Runtime Version -----
 Project File -----

Ethernet 1

IP Mode Manual
 IP Address 192.168.1.80 255.255.255.0
 MACAddress 00:80:F4:A2:2D:41

Ethernet 2

IP Mode Automatic
 IP Address 175.172.0.225 255.255.255.0
 MACAddress 00:80:F4:A2:2D:42

Hardware Configuration

INFORMATION ETHERNET COM USB DOWNLOAD SITEMANAGER SECURITY SYSTEM

Enable Project File Download

ⓘ If the download is enabled, the risk of unauthorized access and infection of malicious software increases. Disable download after use

Submit

Hardware Configuration

INFORMATION ETHERNET COM USB DOWNLOAD SITEMANAGER SECURITY SYSTEM

Date and Time Firmware Update Factory Reset Backup and Restore Configuration

Date
 2022-04-12

Time
 05:56:00 PM

Time-zone
 (UTC-04:00) Canada/Eastern

Synchronized with NTP Server

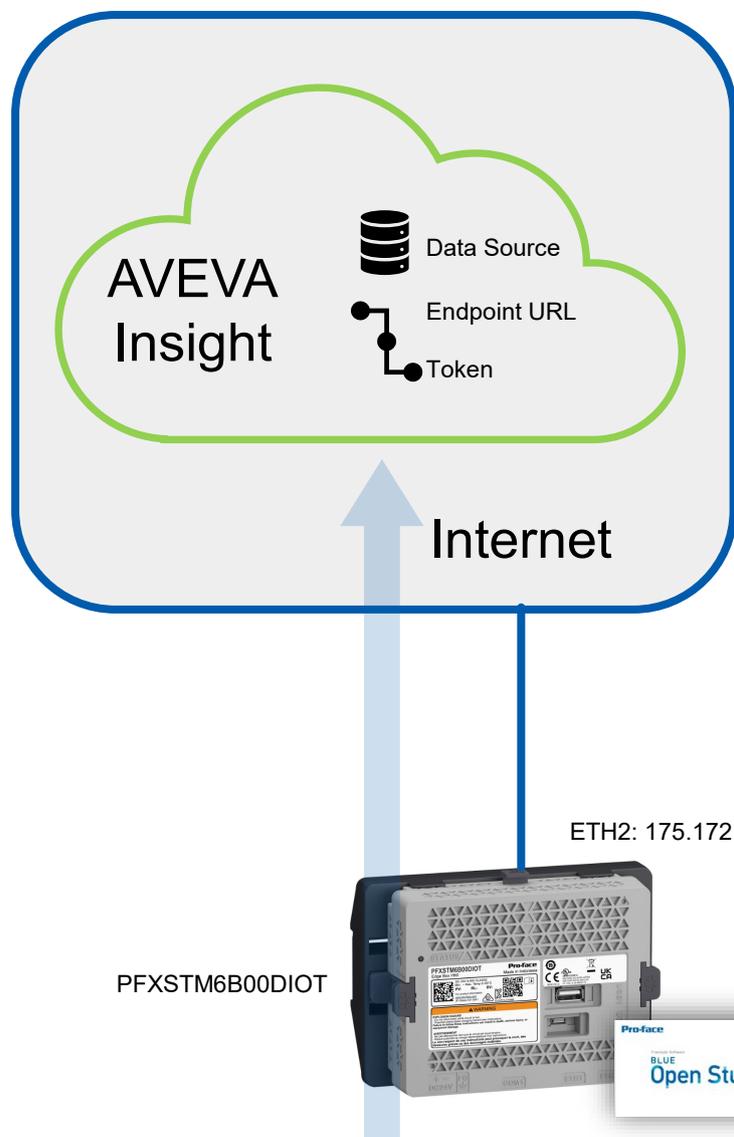
NTP Server

Submit

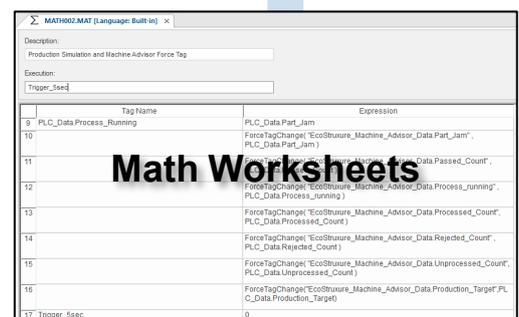
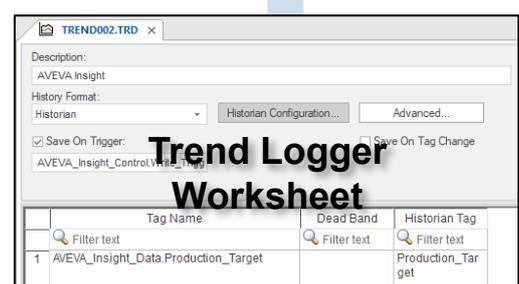
4. AVEVA Insight Configuration

Overview

The STM6000 Edge Box HMI Demo – AVEVA Insight uses a Trend Logger worksheet to communicate to an AVEVA Insight account. A Data source definition is required in AVEVA Insight. Trend Logger data is logged every 5 seconds. Accumulated data is forwarded to AVEVA Insight every 15 seconds. All data in the demo is internally generated using one or more math worksheets.



Forwarder – 15 seconds



Scheduler – 5 seconds

AVEVA Insight Connection

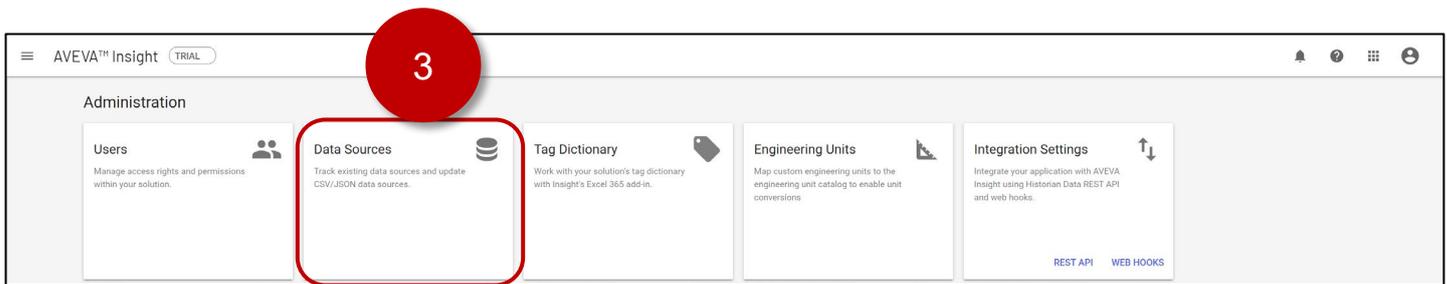
To establish a connection to EcoStruxure™ Machine Advisor you will need the following:

- AVEVA Insight Account and Solution
- AVEVA Insight Data Source
- Upload Endpoint
- Authentication Token

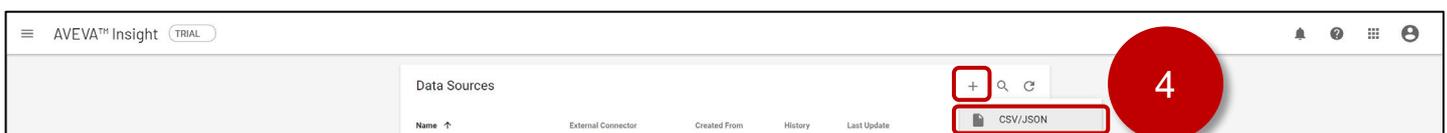
1. SIGN-IN to AVEVA Insight (<https://insight.connect.aveva.com>) and create a solution.
2. Navigate to AVEVA Insight Suite -> [Administration]



3. Navigate to [Data Sources]



4. Click [+] icon and select [CSV/JSON]



5. Enter Name, Location Name, etc. and click [OK]

Add CSV/JSON Data Source

Name*

! The following fields will apply to all new tags, but do not apply to existing tags.

Location

Select a location or type a new one

If you define a new default location, it will be created when the first new tag using this default is created.

Geolocation Coordinates

BLUE Open Studio Project Settings

1. Open the Edge Box HMI Demo v1.1 – AVEVA Insight.app project in BLUE Open Studio
2. [Project Explorer] -> [Tasks] tab
3. [Trend Logger] -> [2: AVEVA Insight]
4. Click [Historian Configuration]

The screenshot displays the BLUE Open Studio interface. The 'Project Explorer' on the left shows the project structure for 'Edge Box HMI Demo v1.1 - AVEVA Insight.A'. The 'Tasks' tab is selected in the bottom status bar. The configuration panel for 'TREND002.TRD' is open, showing the 'Historian' format and the 'Historian Configuration...' button.

	Tag Name	Dead Band	Historian Tag
	Filter text	Filter text	Filter text
1	AVEVA_Insight_Data.Production_Target		Production_Tar get
2	AVEVA_Insight_Data.Processed_Count		Processed_Co unt
3	AVEVA_Insight_Data.Unprocessed_Count		Unprocessed_ Count
4	AVEVA_Insight_Data.Passed_Count		Passed_Count
5	AVEVA_Insight_Data.Rejected_Count		Rejected_Count
6	AVEVA_Insight_Data.Part_Jam		Part_Jam
7	AVEVA_Insight_Data.Process_Running		Process_runnin g

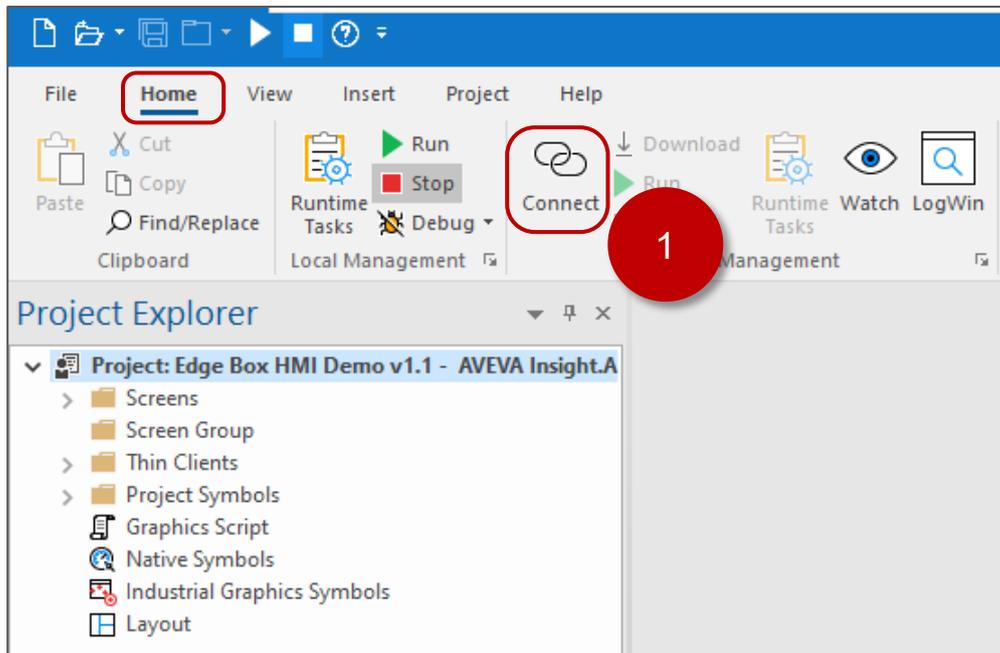
8. Save the TREND002 Sheet.

The screenshot shows the AVEVA Insight software interface. The 'Save' icon in the top toolbar is highlighted with a red circle and the number '8'. The Project Explorer on the left shows the project structure for 'Edge Box HMI Demo v1.1 - AVEVA Insight.A', including folders for Alarms, Trend Logger, Recipes, Reports, Math, Script, Scheduler, and Database/ERP. The main workspace displays the configuration for 'TREND002.TRD', including a description, history format, and a table of tags.

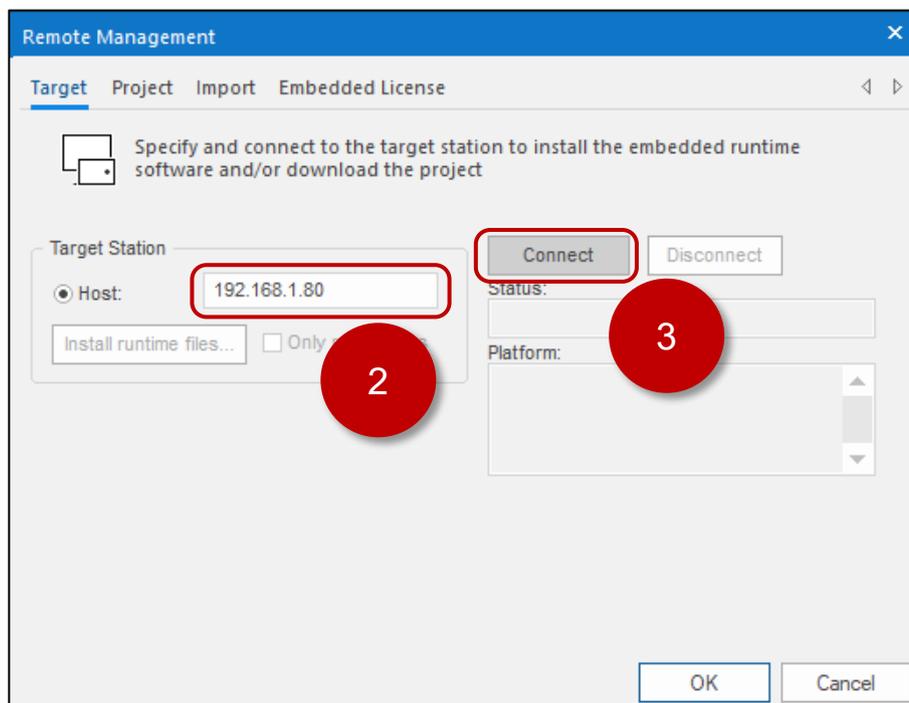
	Tag Name	Dead Band	Historian Tag
	Filter text	Filter text	Filter text
1	AVEVA_Insight_Data.Production_Target		Production_Tar get
2	AVEVA_Insight_Data.Processed_Count		Processed_Co unt
3	AVEVA_Insight_Data.Unprocessed_Count		Unprocessed_ Count
4	AVEVA_Insight_Data.Passed_Count		Passed_Count
5	AVEVA_Insight_Data.Rejected_Count		Rejected_Count
6	AVEVA_Insight_Data.Part_Jam		Part_Jam
7	AVEVA_Insight_Data.Process_Running		Process_runnin g

5. Transfer Runtime and Project Files

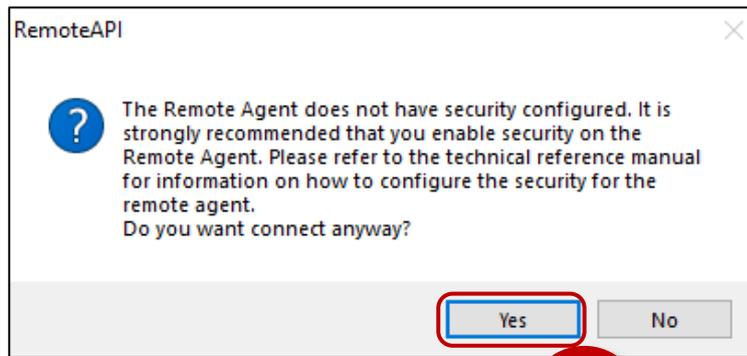
1. [Home] tab and Click [Connect] in Remote Management.



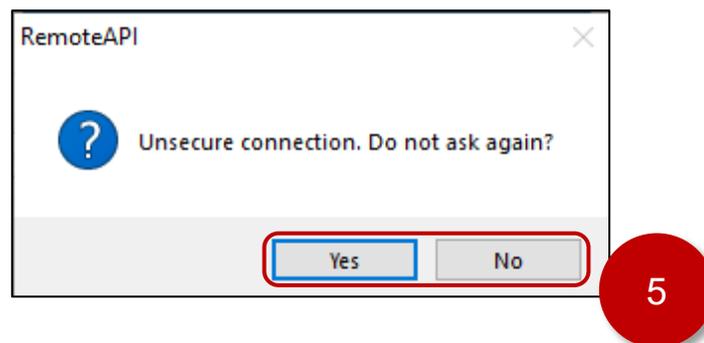
2. Set the IP Address of your Edge Box HMI e.g. 192.168.1.80
3. Click [Connect]



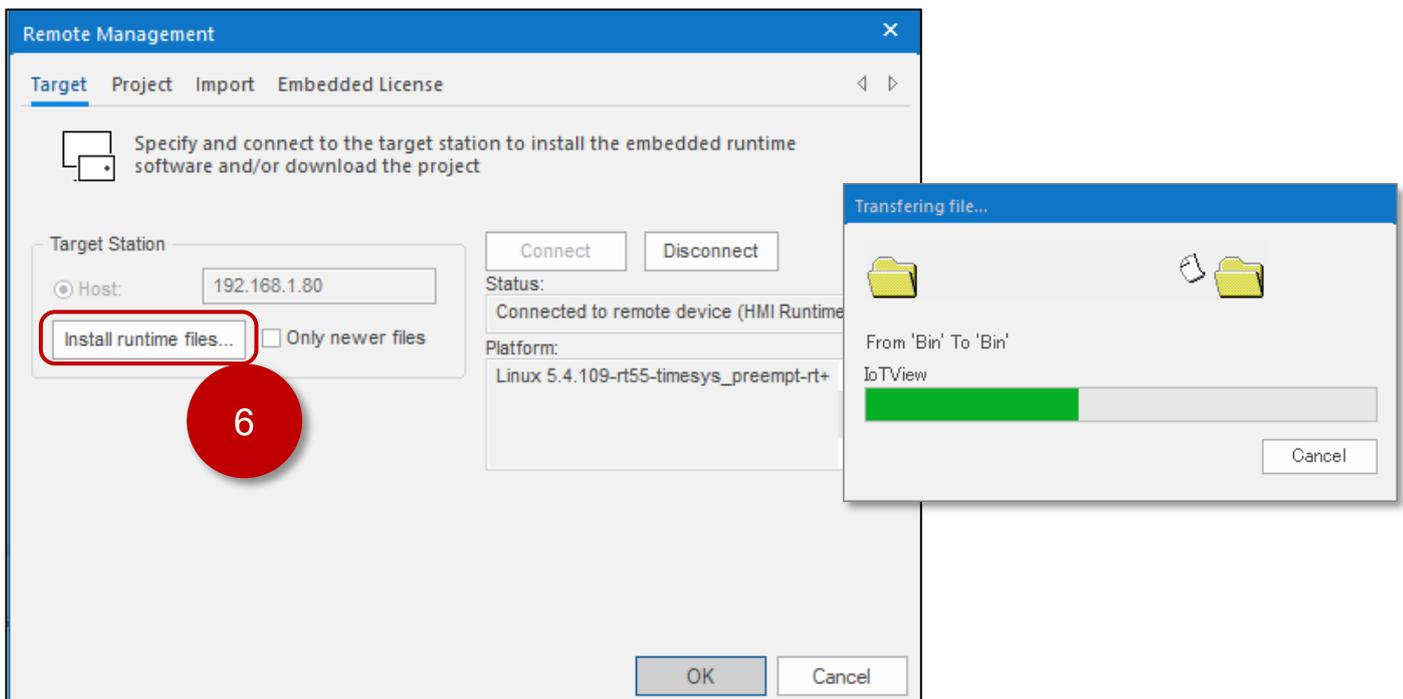
- If prompted about Remote Agent, click [Yes]



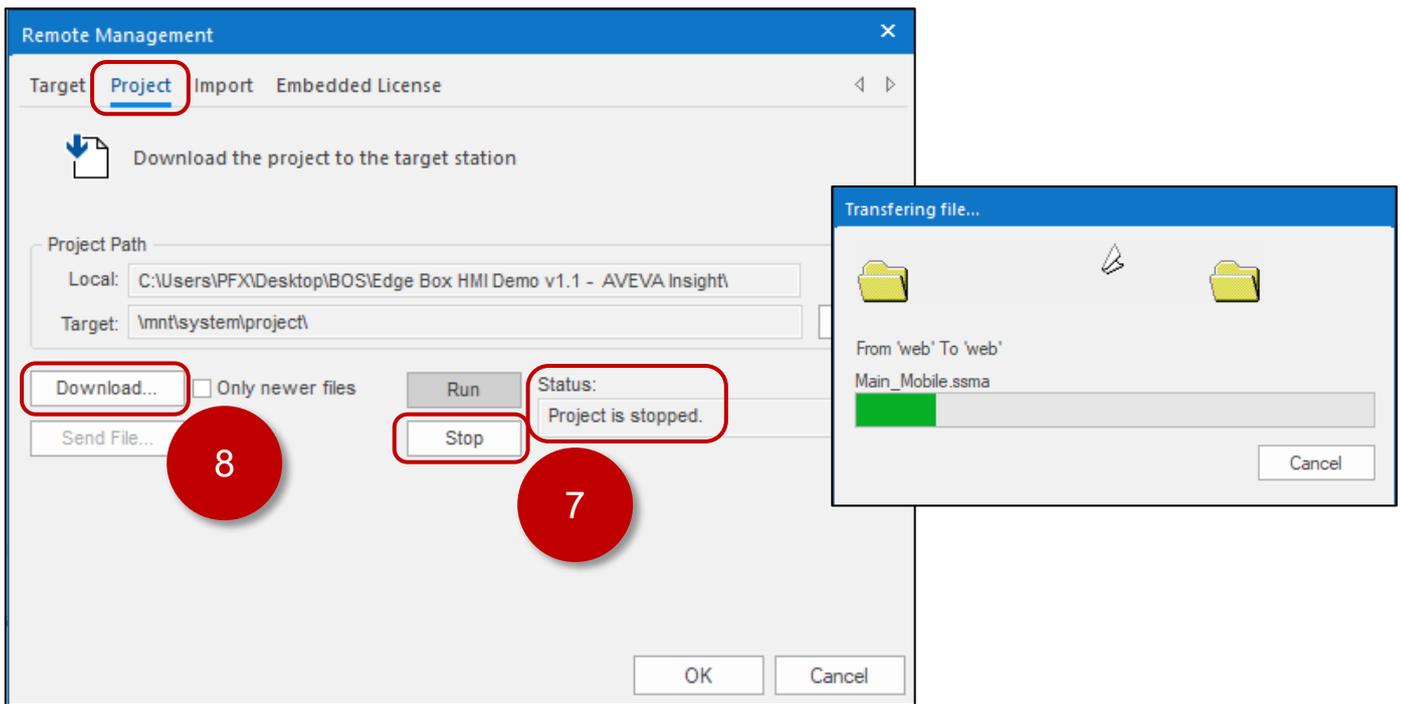
- Answer the question by clicking [Yes] or [No] as appropriate.



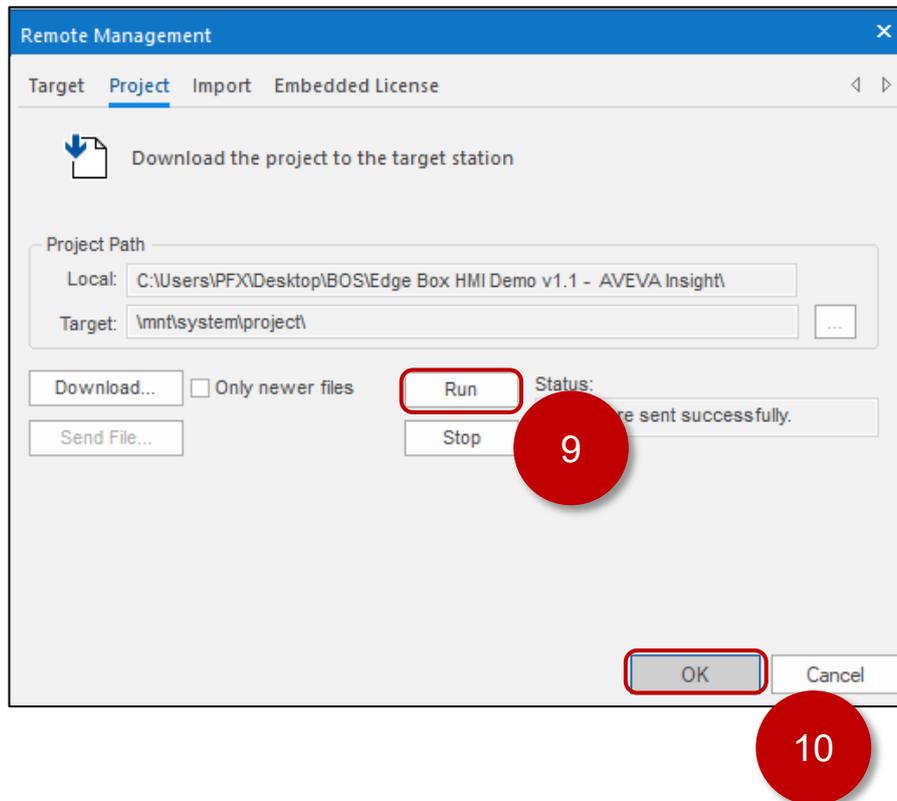
- Click [Install Runtime Files]



7. [Project] tab, confirm that the Status is stopped. If running, click [Stop]
8. Click [Download]



9. Click [Run]
10. Click [OK]



6. Mobile Access

Mobile access is used for both local and remote viewing of Edge Box HMI. You can use either ETHERNET 1 or ETHERNET 2 as the IP address for mobile access.

There are a several mobile access URL options to view the Edge Box HMI.

- Mobile Access Generic Interface
- Mobile Access Direct to screen access
- Mobile Access Watch screen Access

Web Browser URL Examples for the Edge Box HMI Demo:

Link	Description
https://192.168.1.80/MA	Generic Interface login prompt
https://192.168.1.80/MA/#guestuser=1	Generic Interface auto login as Guest
https://192.168.1.80/MA/#user=Admin&password=Admin	Generic Interface auto login as Admin
https://192.168.1.80/MA/#screen=main_desktop	Direct to main_desktop screen login prompt
https://192.168.1.80/MA/#screen=main_desktop&guestuser=1	Direct to main_desktop screen auto login as Guest
https://192.168.1.80/MA/#screen=main_desktop&user=Admin&password=Admin	Direct to main_desktop screen auto login as Admin
https://192.168.1.80/MA/#screen=main_mobile	Direct to main_mobile screen login prompt
https://192.168.1.80/MA/#screen=main_mobile&guestuser=1	Direct to main_mobile screen auto login as Guest
https://192.168.1.80/MA/#screen=main_mobile&user=Admin&password=Admin	Direct to main_mobile screen auto login as Admin
https://192.168.1.80/MA/#watch=1	Watch screen login prompt Guest access denied
https://192.168.1.80/MA/#watch=1&guestuser=1	Watch screen auto login as Guest Guest access denied
https://192.168.1.80/MA/#watch=1&user=Admin&password=Admin	Watch screen auto login as Admin