

SIEMENS

Kiosk Mode

Including FIN Builder Graphic Support and Application MC

User Guide

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To the Reader

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FIN Builder Graphics Tool

FIN Builder Graphics Tool Overview

FIN Builder is a J2 Innovations (www.j2inn.com) graphics creation and publication tool. Using the Siemens Connector application, many customized features of FIN Builder are accessible through the Siemens controllers on Firmware Revision 3.3.1 or later.

FIN Builder allows you to create FIN Builder projects (.finp files), binding complex data to sophisticated graphics. FIN Builder also allows you to publish the graphics to a Siemens PXC Modular or PXC-36 controller that has a USB port with Drive **B** connected to it, and view them in a Web browser (Kiosk mode). See the *Using the FIN Builder Graphics Tool* [→ 6] section for more information.

FIN Builder is an Adobe® AIR® application and requires Adobe AIR to be installed.

FIN Builder Prerequisites

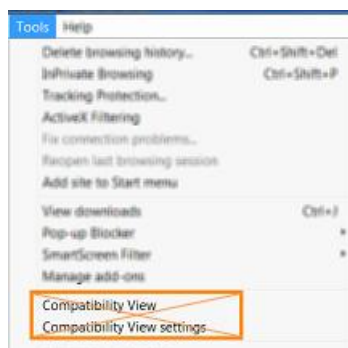
FIN Builder features are supported on Siemens PXC Modular or PXC-36 controllers. Graphics can only be published to PXC Modular or PXC-36 controllers with Firmware Revision 3.3.1 or later, a USB port, and a USB memory storage device.

- A copy of FIN Builder must be purchased and installed. Contact J2 Innovations for more information (www.j2inn.com).
- Adobe AIR must be installed (www.adobe.com).
- An internet browser that supports Adobe AIR, such as Microsoft Internet Explorer (IE), Google Chrome, or Mozilla Firefox, is required.



NOTE:

If you use Internet Explorer, do not select the **Compatibility View** options located in the IE **Tools** menu.



- You must also have a BACnet/IP connection from the computer where FIN Builder is installed to the Siemens control system for which the graphics are being published.



CAUTION

Frequent Polling May Tax the System

A FIN Builder graphic's default poll rate interval is one (1) second. This means that the graphic will attempt to obtain the current value for each bound point every second. For some systems, this may be too frequent. The recommended poll rate interval is 15 seconds. See the *Default Settings* [→ 35] section of this document to change the poll rate from the default.

FIN Builder Licenses

FIN Builder graphics can be published to a PXC Modular or PXC-36 field panel with a memory storage device plugged into the USB port (**B:** drive), and with Web Services enabled.

FIN Builder graphics display with an **UNLICENSED** watermark if any of the following apply:

- The field panel hosting the displayed graphic does not have an **FPWEBPLHST** license installed.
- Any component on the displayed graphic is bound to a point in a field panel (or its FLN devices), which does not have an **FPWEBPL** or **FPWEBPLHST** license installed.
- The field panel hosting the displayed graphic has a Firmware Revision earlier than 3.3.
- Any component on the displayed graphic is bound to a point in a field panel (or its FLN devices) with a Firmware Revision earlier than 3.3.
- No components on the displayed graphic are bound to a point in the host field panel.

See the *License Manager Start-up Procedures* (145-600) for more information on licenses.

Using the FIN Builder Graphics Tool

This document describes the features of the FIN Builder tool that are specific to the Siemens Connector or Siemens device data.

Information about standard FIN Builder functionality is not included in this document. For that information, refer to the FIN Builder user documentation created by J2 Innovations (www.j2inn.com). It is strongly recommended that anyone authoring a FIN Builder graphic complete the FIN Builder training course, which is offered by J2 Innovations.

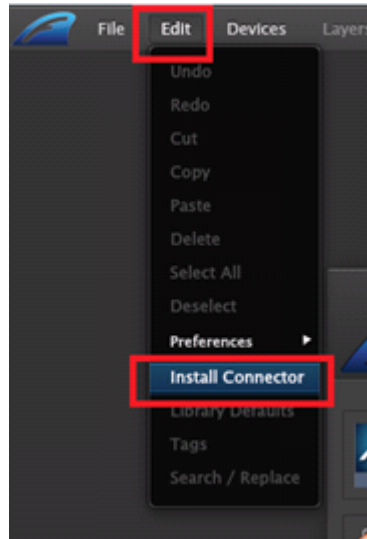
Siemens Connector

The Siemens Connector is a software file that is installed in FIN Builder. It allows FIN Builder to communicate with Siemens field panels, and allows access to supported FIN Builder features.

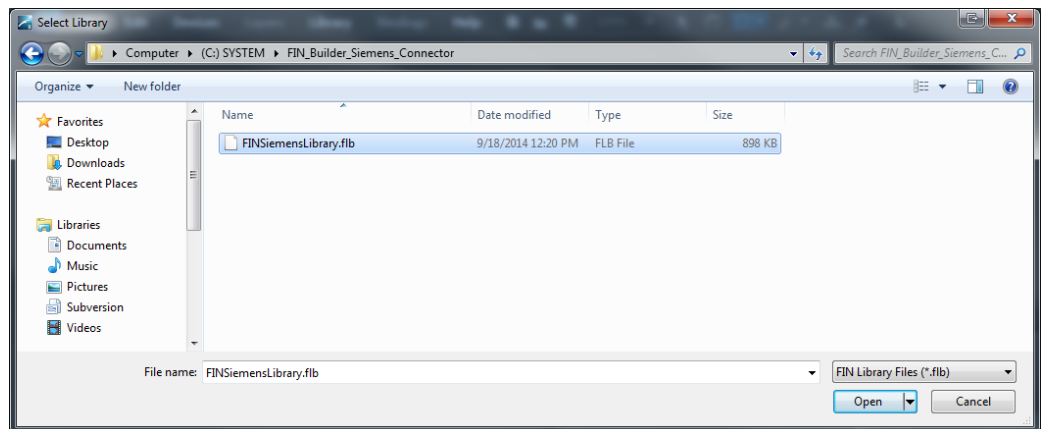
Installing the Siemens Connector

Once FIN Builder is installed, the Siemens Connector (FINSiemensLibrary.flb) must be installed. The Siemens Connector is available from the StdApps drive.

1. From the FIN Builder **Edit** menu, select **Install Connector**.

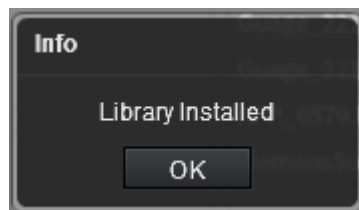


⇒ A Select Library window displays.

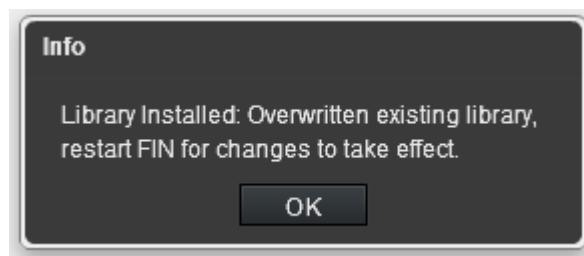


2. Browse to the location where you have stored the Siemens Connector file. Double-click the **FINSiemensLibrary.flb** file, or highlight the file and then click **Open**.

⇒ Successful new installation displays. Click **OK**.



⇒ When upgrading, a successful replacement/upgrade displays. Click **OK**, close **FIN Builder** and then restart the application.





CAUTION

FIN Builder Shuts Down Automatically

If this installation of FIN Builder starts to run and then shuts down automatically, you may need to delete the FINSiemensLibrary.flb file in the **Network** folder from the AIR cache:

1. Exit **FIN Builder**.
2. Navigate to: C:\Users\<YourUserFolder>\AppData\Roaming\com.j2inn.FinBuide\Local Store\system\Network.
3. Locate and delete the **FINSiemensLibrary.flb** file.
4. Start **FIN Builder**.
5. Install the Siemens Connector.

Viewing Siemens Connector Revision Graphic

With Siemens Connector build 1.5.1 or later, the Siemens Connector Revision graphic files are included in the Application MC deployment or from the [Partner Extranet](#) site. Previous releases of the Siemens Connector do not support the Siemens Connector Revision object. If a prior version of build 1.5.1 of FINSiemensLibrary.flb is found in the Drive B:\FIN directory, the Siemens Connector Revision graphic displays the revision string as grayed text.

Siemens Connector Revision

???

is currently in use

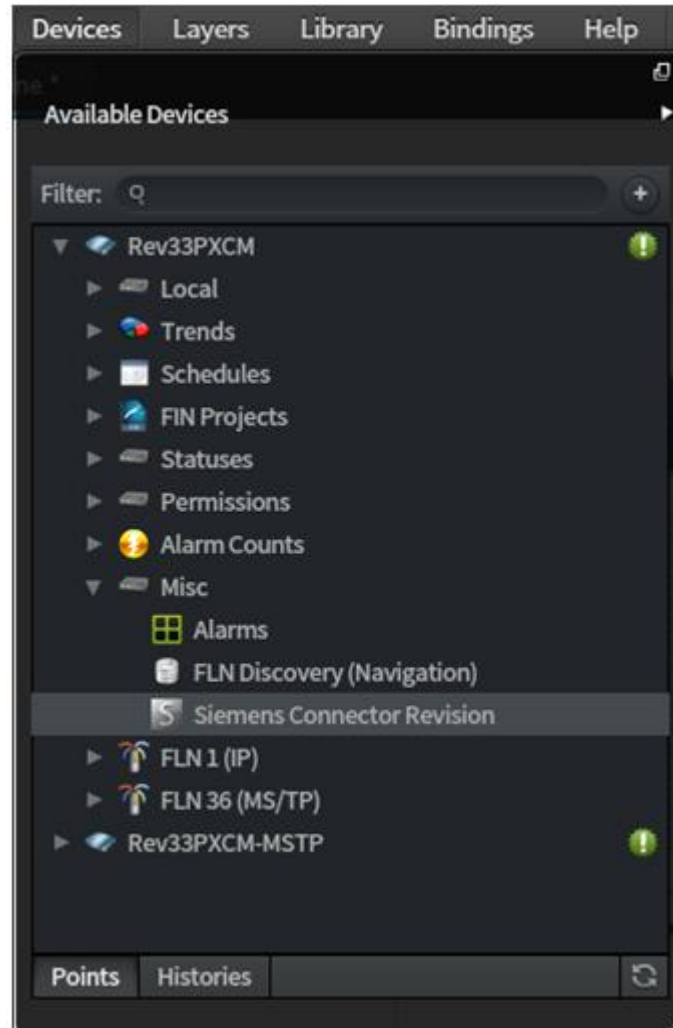
Logoff

To view the Siemens Connector Revision information from FIN Builder or from the field panel, use the corresponding procedure.

Viewing from FIN Builder

▷ FIN Builder is open.

1. From the **Misc** directory of each field panel device, select **Siemens Connector Revision** object and then drag to the **Mapping & Equipment** pane.



2. In the **Mapping & Equipment** window, the **VALUE** field of the Siemens Connector Revision object displays the revision string of the Siemens Connector Revision currently installed.

▼ Mapping & Equipment	
NAME	Siemens Connector Revision
LONG NAME	
TYPE	stringWritablePoint
URI	siemens://192.168.1.100/8,100/5000,-1
SOURCE	Default-HostN... X
HARDWARE	
UITAG	
STATUS	OK
VALUE	1.5.6
	<input type="checkbox"/> Write On Change
INIT	Subscribe ▼
REFRESH	Go
<div>Return Delete</div>	

Viewing at the Field Panel

When the Siemens Connector Revision graphic files are uploaded to the Drive B:\FIN directory you will see the thumbnail of the graphic in Kiosk mode.



NOTE:

Web browsers such as Firefox or Internet Explorer may have cached an older version of FINSiemensLibrary.flb. If the Siemens Connector Revision graphic does not display a revision string that matches the version stored in the Drive B:\FIN directory, clear the cache of the web browser first to make sure the intended version is uploaded and put to use.

1. In **Kiosk** mode of Field Panel Web Server UI (FP Web), log in with your credentials.
 2. Double-click the **Siemens Connector Revision** graphic thumbnail.
- ⇒ Revision information is retrieved and displays the revision string.

Siemens Connector Revision

1.5.6

is currently in use

Logoff

Getting the Siemens Connector Revision Graphic

Downloading from Partner Extranet Site

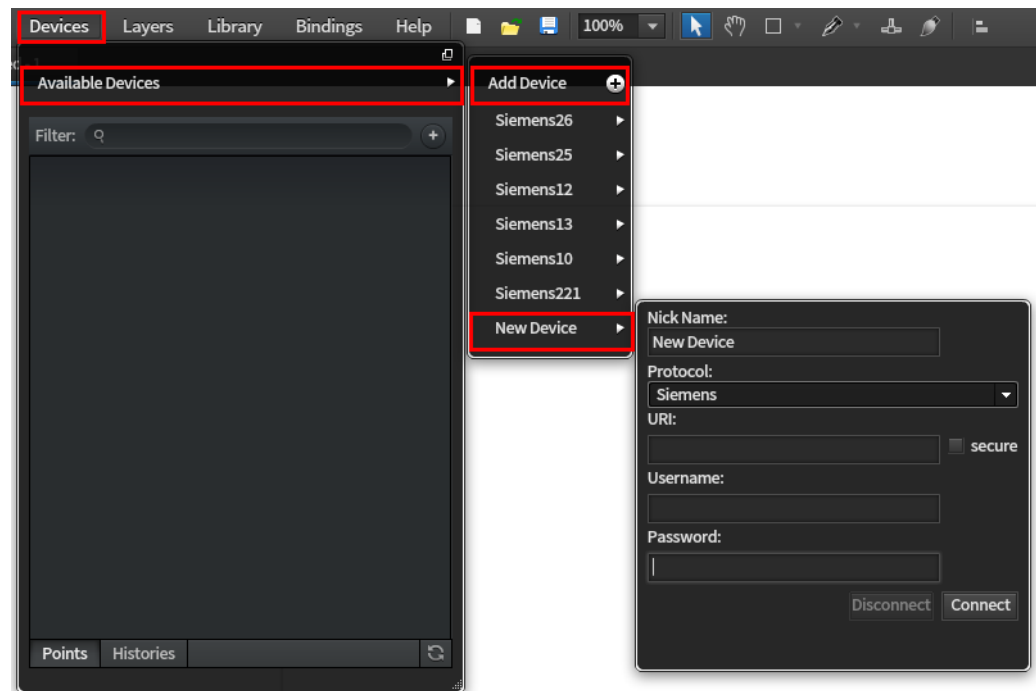
1. Open **Partner Extranet** web site and navigate to **\Products\Building Automation, Engineering Tools** section, and then select **FIN Builder**.
2. From the **Resource Center**, right-click **FIN Builder Connector (.flb – 1 MB)** and then extract **FIN_Lib.zip** file. The following files are extracted:
 - FINSiemensLibrary.flb
 - Siemens Connector Installation ReadMe.pdf
 - \FIN\HTML\SiemensConnectorRevision.html
 - \FIN\Projects\SiemensConnectorRevision.finp
 - \FIN\Projects\SiemensConnectorRevision.jpg
3. Copy the graphic (.html, .finp and .jpg) files to the corresponding directories on Drive B:\ of the field panel.

Connecting to a Device

Once the Siemens Connector is installed, you can add Siemens field panels to FIN Builder. This will allow you to connect to those devices and bind information from those devices to components in FIN Builder graphics.

▷ To connect a device to FIN Builder:

1. From the **Devices** menu, move your cursor over **Available Devices** and select **Add Device**. A **New Device** selection displays. Select **New Device**.

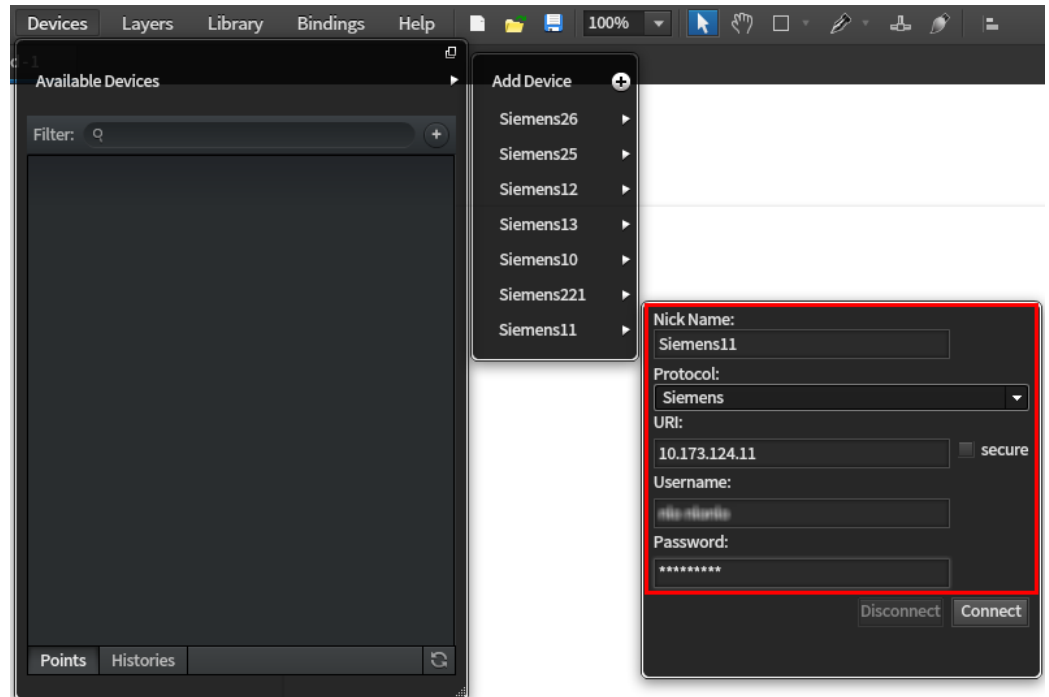


2. Enter the appropriate information in the **New Device** dialog box fields:
Nick Name: Enter a user-defined name for the ALN panel into this field.
Protocol: Select **Siemens** from the drop-down menu.
URL: Enter the IP Address or DNS Name of the ALN panel.
Username: Enter the username for logging into the ALN panel.
Password: Enter the password for logging into the ALN panel.

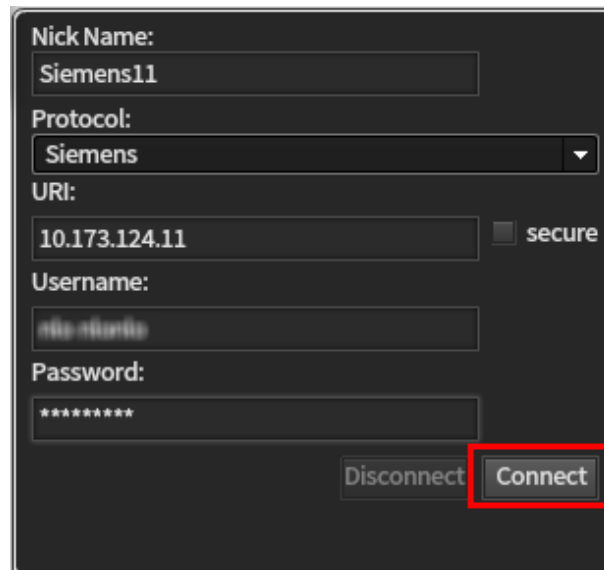


NOTE:

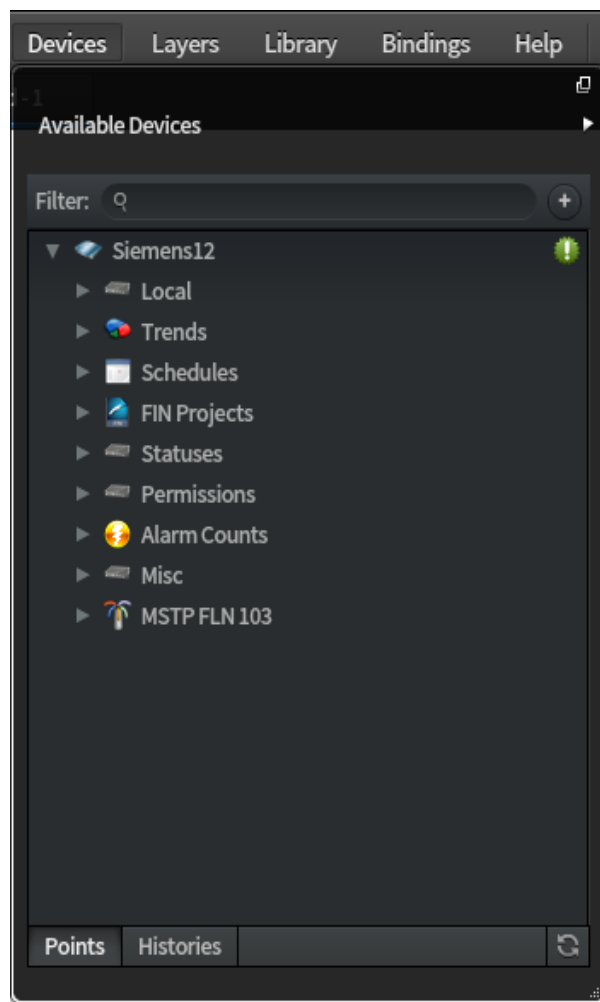
FIN Builder access to Siemens data is limited based on the ALN user account permissions.



3. Click the **Connect** button.



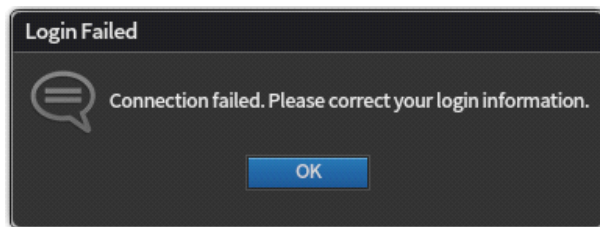
- ⇒ Once connected, the device and associated data display in the device tree, including:
- Local points
 - Trend log objects
 - Schedule, calendar, and command objects
 - FIN projects
 - Status values
 - Permissions
 - Alarm counts



NOTE:

If you connect to a device with Firmware Revision 3.2.5 or earlier, data from that device will not be available in the device tree.

⇒ If FIN Builder cannot connect to a device, a Login Failed error message displays:



Accessing Data on Multiple FLN Types

FIN Builder supports multiple FLN device types. Each controller can support at least one type of FLN device (BACnet MS/TP or IP, P1, or Integration).

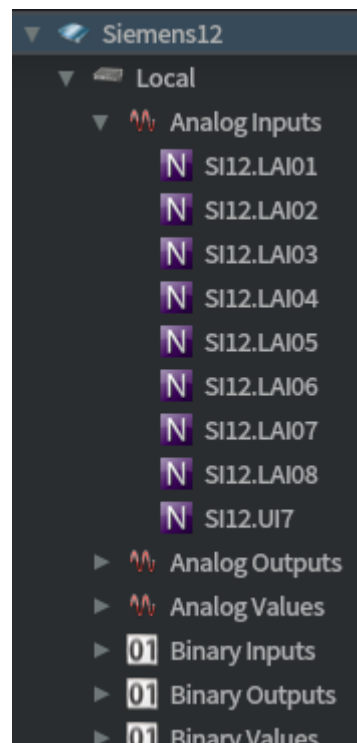
FIN Builder displays FLN devices in the device tree. Data from any of these FLN devices is available for use in a graphic.

Mapping Siemens Device Data to FIN Builder Graphical Components

Through the Siemens Connector, Siemens device data is made available for mapping to FIN Builder graphical components. The available device data includes the following:

- Point Data
- Permissions
- Alarm Counts
- Alarm Data
- FLN Discovery (Navigation) Data

Point Data



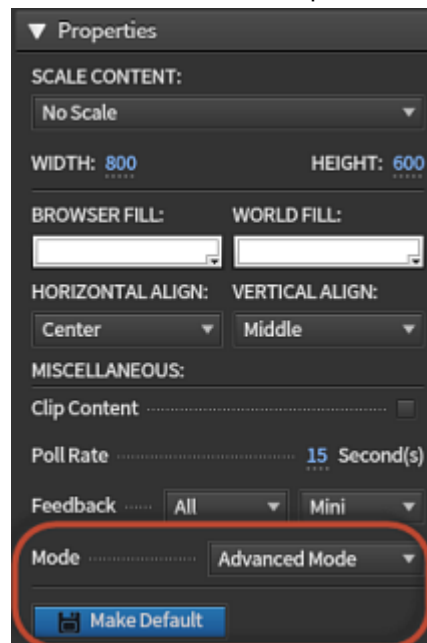
Panel point data is located in the **Local** folder of each device. This includes Analog Inputs, Outputs, and Values; Binary Inputs, Outputs, and Values; and Multi-state Inputs, Outputs, and Values.

The data can be mapped to a variety of graphical components including Labels, Gauges, and Numeric/Boolean/Enum Editors.

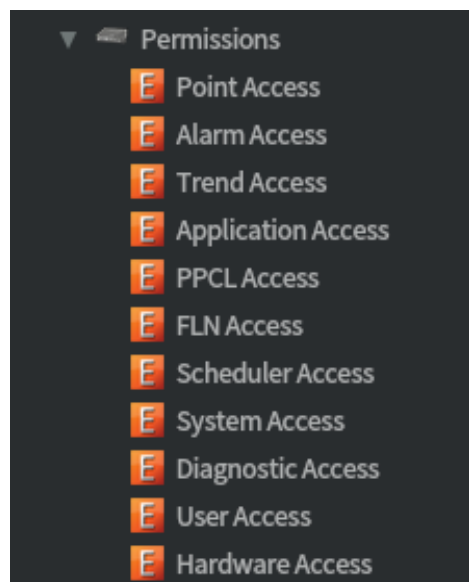


NOTE:

If the Editor's Palette is not available in Basic Mode, set **Advanced Mode** as your default in the Canvas Properties. See the following Figure.

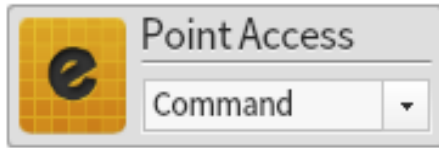


Permissions



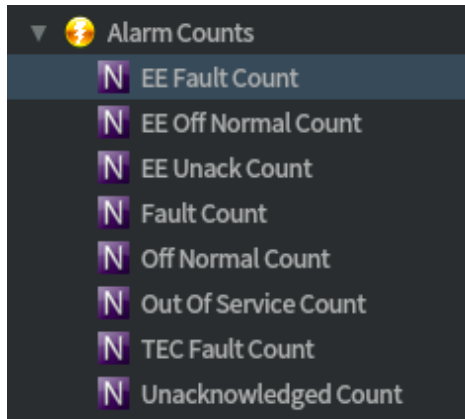
The Permission objects align with the User Account permissions in the field panel. Each object represents the permissions of the user (No Access, Read Only, Command, and Edit) currently logged into the field panel hosting the displayed graphic. Permissions data can be used with FIN Builder Actions or Bindings to restrict users from certain activities.

In FIN Builder, they are stored as enumerated values:



In the above example, the Point Access permission of the user currently logged in is **Command**.

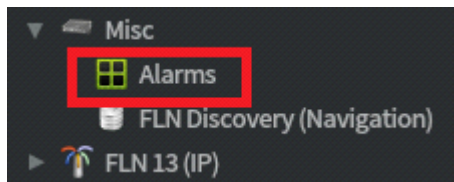
Alarm Counts



Alarm Counts are numeric values in FIN Builder that represent the values of the corresponding resident points in the field panel. Alarm Count data can be used with FIN Builder Actions or displayed directly on the graphic.

Alarm Counts can be bound to Labels or Numeric Editors.

Alarm Data



Alarm data includes a list of unacknowledged alarms from the host panel and its FLN devices, including both intrinsic and Event Enrollment alarms.

This data can be bound to a Grid component. When the graphic is displayed, the user can view and acknowledge alarms from this grid.

This Alarm Data is static by default; it does not update automatically. To have the Grid update periodically, a Timer component must be added to the graphic.

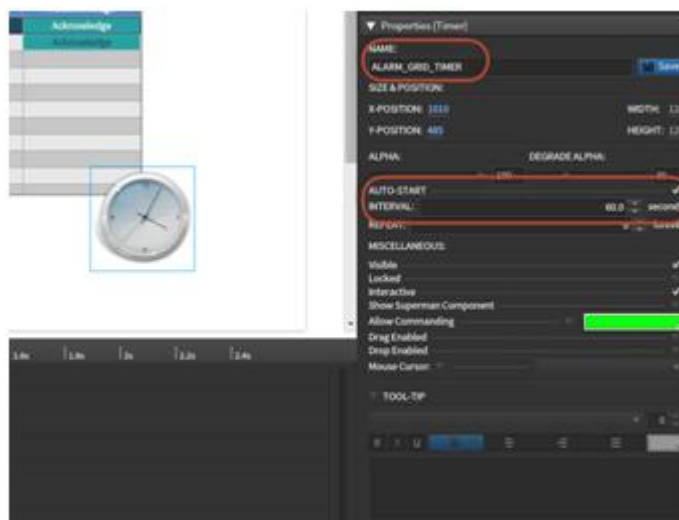
<div>!</div>	NOTICE
	Refreshing a grid containing a large number of Alarms may impact the performance of the controller. When adding a Timer component to the graphic, take care to select an appropriate Interval for the timer.


Adding an Alarm Grid Update Timer

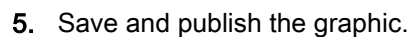
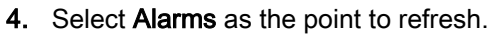
1. Select the **Timer** component from the **Controls** palette and add it to your graphic.
You may want to place the component close to the Alarm Grid for readability.
The Timer will not be visible once the graphic is published.



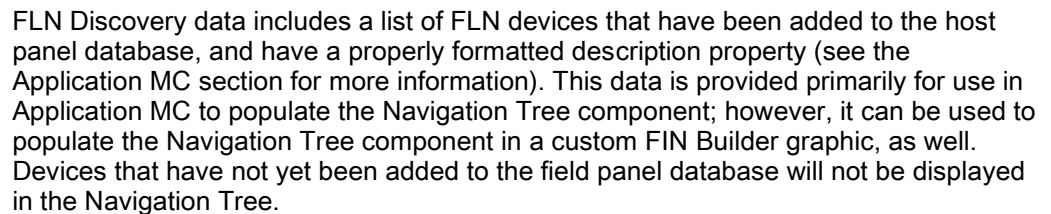
2. In the Timer Properties, do the following:
 - Change the Name of the Timer to **ALARM_GRID_TIMER**.
 - Verify that **AUTO_START** is selected.
 - Change the **INTERVAL** to **60** seconds.



3. Select the **Timer** component, click the plus  button to add a new Action, and then select **Timer > Refresh Point**.



FLN Discovery (Navigation) Data



Designing Your Graphic to Support Object Failure and Other Status Indications

- The graphic contains components that are bound to points on a device that is Failed when the graphic is opened.
- The device hosting your graphic fails after the graphic is opened.

If a device (other than the device hosting the graphic) fails after the graphic is opened, this is seen as a change in status. The graphic components that are bound to objects in this device will **not** automatically display as degraded unless specific settings have been selected in the graphic properties. The FIN Builder feature **Status to Simple** is used to select a variety of visual indications, including changing a background color or degrading the display of a component.

FIN Builder Statuses Supported for Siemens BACnet Objects

FIN Builder provides nine statuses; however not all of the FIN Builder statuses are mapped to a Siemens APOGEE BACnet Object status. The following table outlines the FIN Builder statuses that are supported for Siemens APOGEE BACnet Objects. The statuses are listed in descending order by priority.



NOTE:

Only one color can be displayed on a graphic at a time. Therefore, the highest status always takes priority on the graphic. For example, if a point is currently in **Alarm** but also **Out Of Service**, the **Out Of Service** color is displayed because this status has the highest priority.

*Table 1: FIN Builder Statuses
Supported for Siemens BACnet Objects.*

FIN Builder Status in Descending Order of Priority (See section above.)	Siemens APOGEE BACnet Object Status
Disabled	Out Of Service
Fault	Failed
Down	
Alarm	Alarm
Stale	
Overridden	Overridden
OK	Normal
Un-Ack	
Null	

Property Settings for the Status to Simple Feature

The **Status to Simple** feature is based on the property being used.

- For the **Fill** property, the **Status to Simple** feature allows you to map a color to each status.



- For the **Alpha** property, the **Status to Simple** feature allows you to select the Alpha level for each status.



Examples

The following examples outline how to map the Failed state of an object to the Fault state in FIN Builder.

Example 1: Degrading a Label Component

In this example, a Label component is set up to degrade when the device containing the point bound to that component point is Failed. This behavior is consistent with the basic error handling.

1. Add a Label component to your graphic.
2. Bind it to the desired device point. In our example, we are using an FLN device point **AOV1**.

Siemens10:AOV1

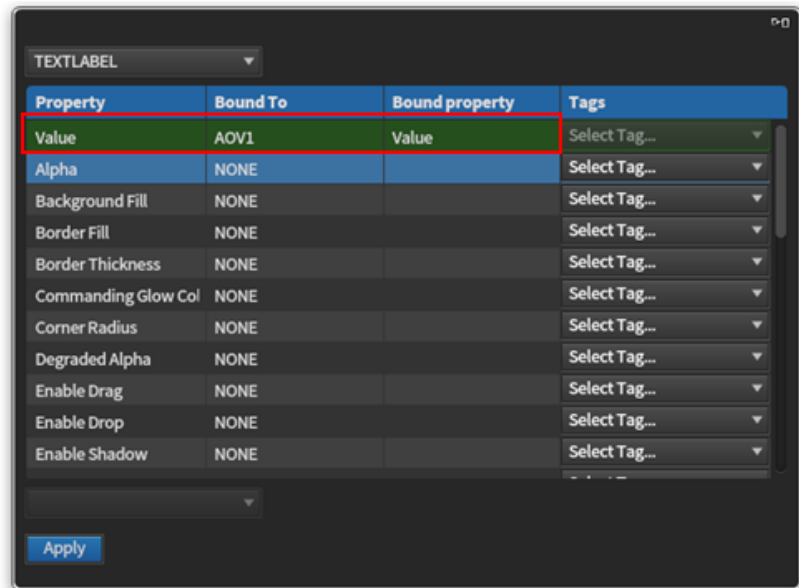


Figure 1: Degrading a Label Component - Binding a Label Component to the Device Point.

3. Bind this same point to the **Alpha** property.

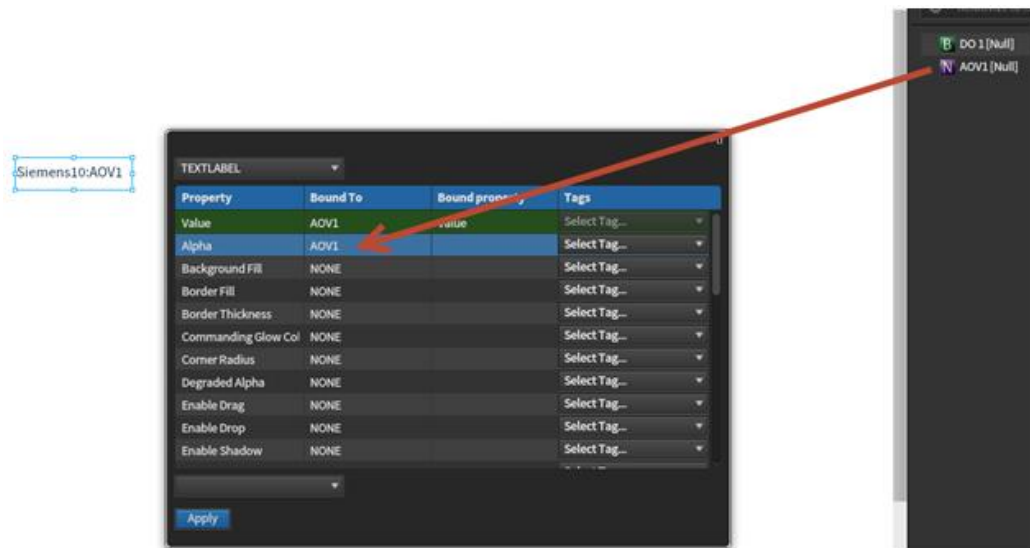


Figure 2: Degrading a Label Component - Binding the Point to the Alpha Property.

4. Select the **Alpha** property.
5. From the drop-down menu at the bottom of the screen, select **Status to Simple**.

Siemens10:AOV1

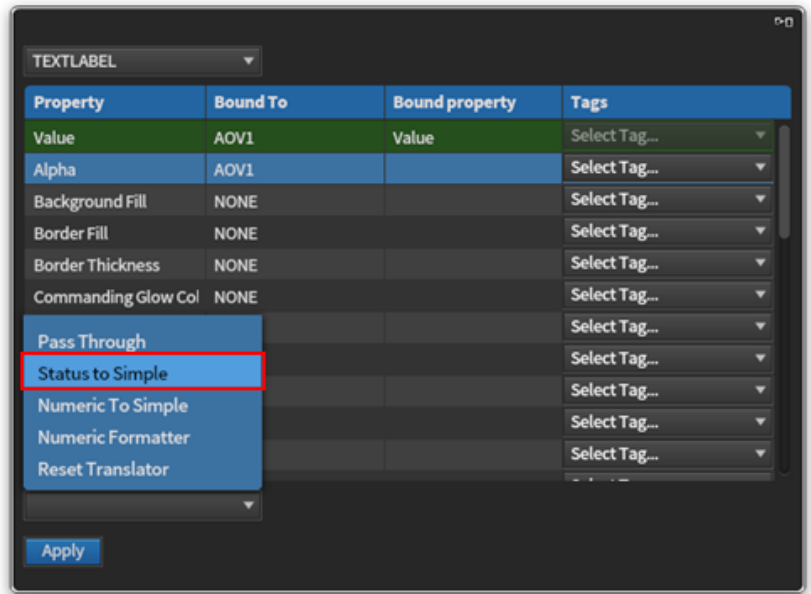


Figure 3: Degrading a Label Component - Selecting Status to Simple for the Alpha Property.

⇒ The menu to adjust the Alpha level options for each status is displayed.

- To degrade the Label to 15% Alpha when the point goes into a Failed state, select the slider for **Fault** and drag it to an Alpha setting of **15.00**.

Siemens10:AOV1

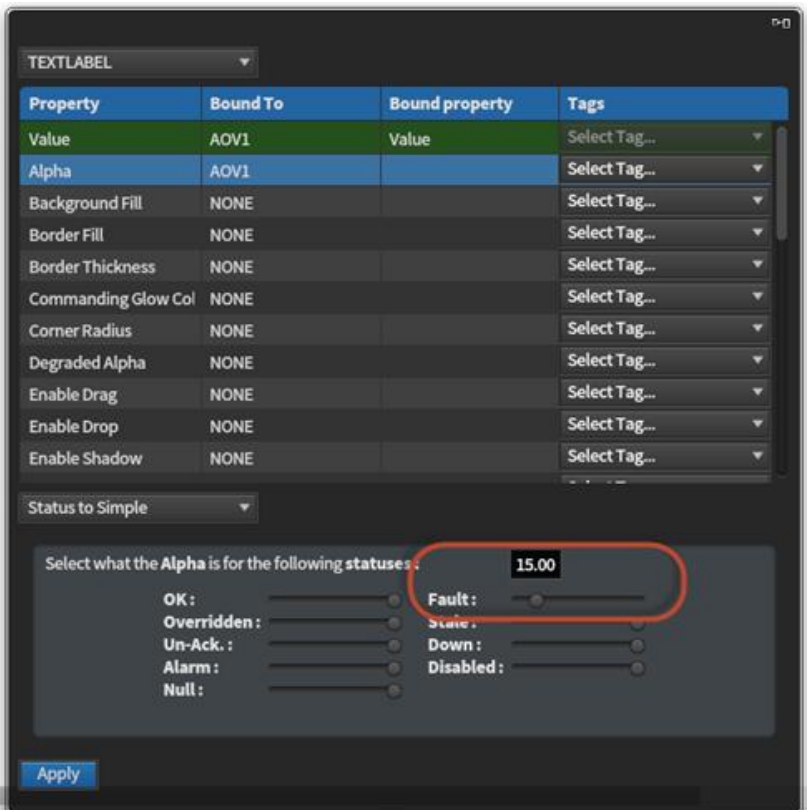


Figure 4: Degrading a Label Component - Adjusting the Label Display when the Point is Failed.



NOTE:

Any value can be selected for the **Fault** state. However, a low value, such as 15%, is recommended so that the failure or other condition is evident to the user.

7. Leave the other Alpha level options unchanged and click the **Apply** button.
8. Repeat this procedure for all bound components that you want to display as degraded when the point (or device) they are bound to fails.

Example 2: Degrading a Gauge Component

In this example, a Gauge component is set up to degrade when the bound point is Failed.

1. Add a Gauge Component to your graphic.
2. Bind it to the desired device point. In our example, we are using an FLN device point **AOV1**.

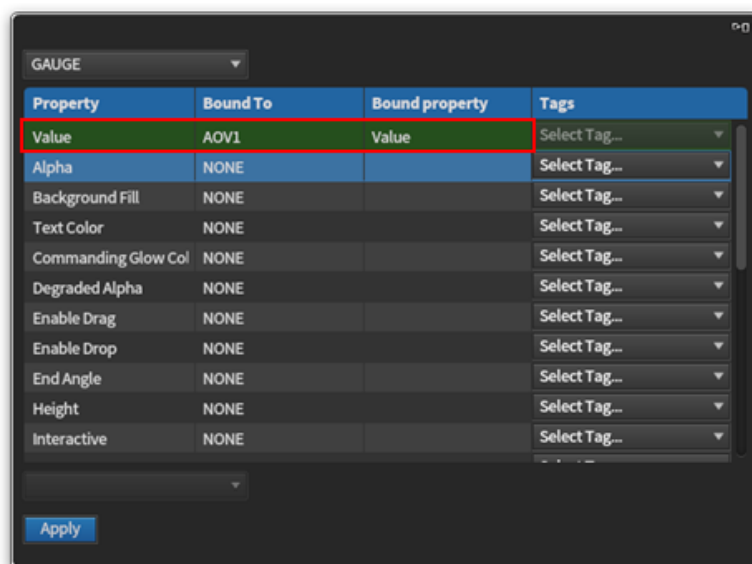


Figure 5: Degrading a Gauge Component - Binding a Gauge Component to the Device Point.

3. Bind this same point to the **Alpha** property.

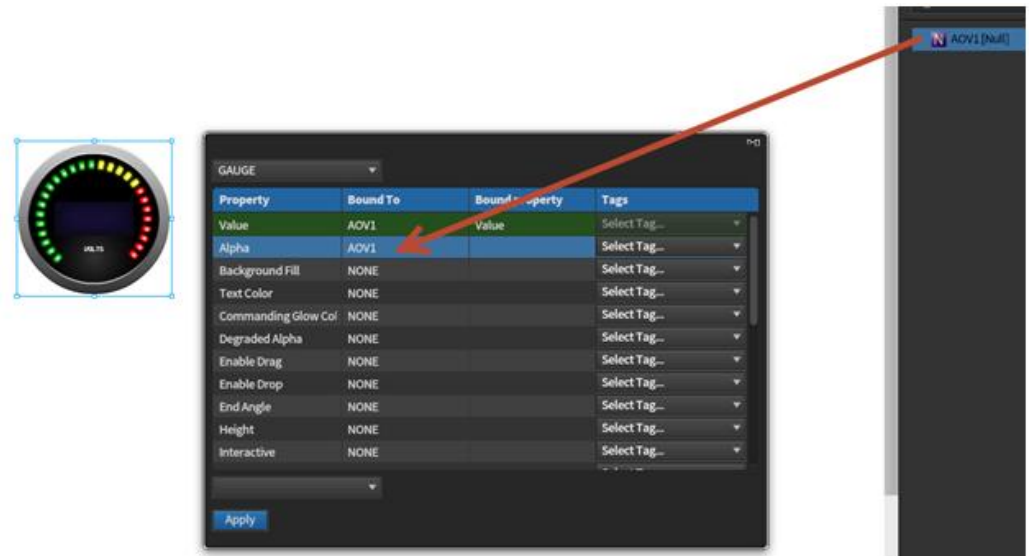


Figure 6: Degrading a Gauge Component - Binding the Point to the Alpha Property.

4. Select the **Alpha** property.
5. From the drop-down menu at the bottom of the screen, select **Status to Simple**.

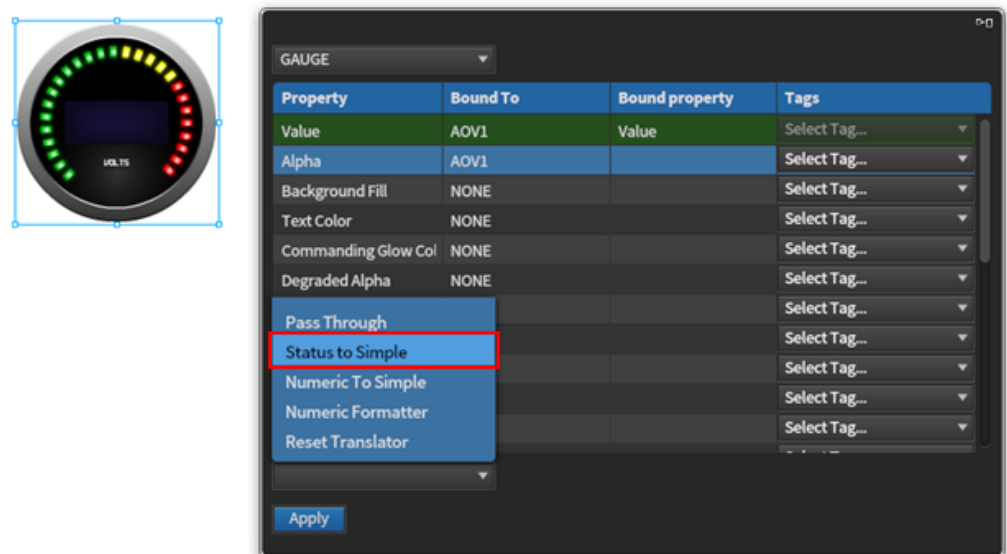


Figure 7: Degrading a Gauge Component - Selecting Status to Simple for the Alpha Property.

- ⇒ The menu to adjust the Alpha level options for each status is displayed.
6. To degrade the Gauge to 15% Alpha when the point goes into a Failed state, select the slider for **Fault** and drag it to an Alpha setting of **15.00**.

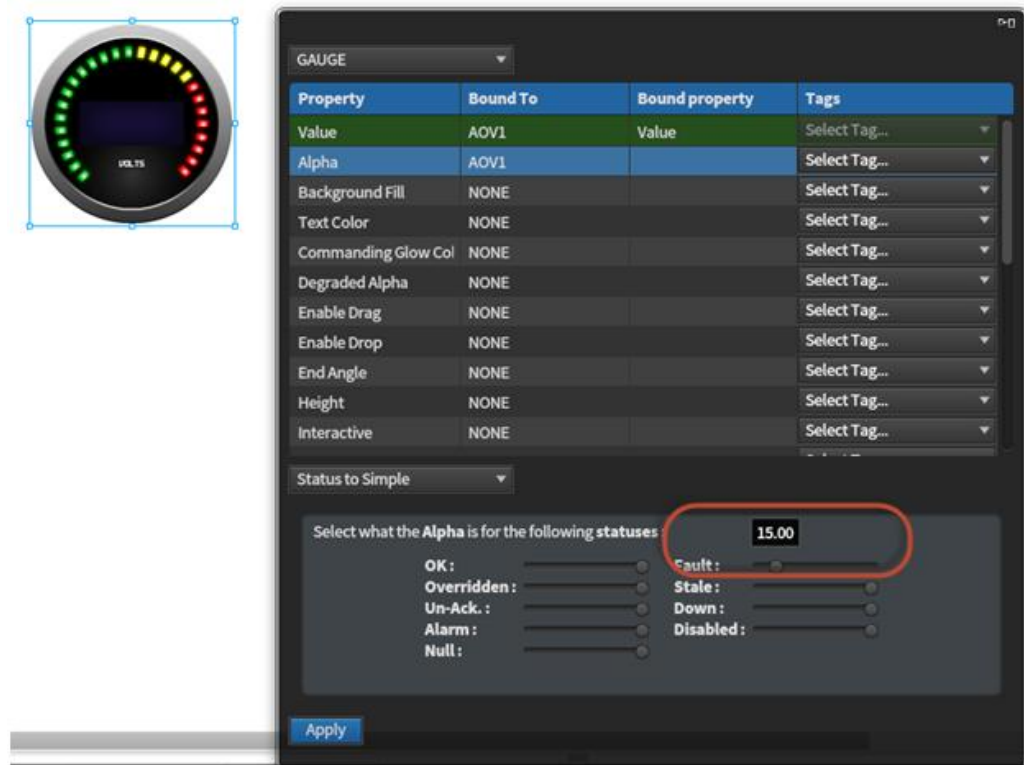


Figure 8: Degrading a Gauge Component - Adjusting the Gauge Display when the Point is Failed.



NOTE:

Any value can be selected for the **Fault** state. However, a low value, such as 15%, is recommended so that the failure or other condition is evident to the user.

7. Leave the other Alpha level options unchanged and click the **Apply** button.
8. Repeat this procedure for all bound components that you want to display as degraded when the point (or device) they are bound to fails.

Example 3: Changing the Background Color of a Label

In this example, the background color of a Label is set to change color of when the device containing the point bound to that component point is Failed.

1. Add a shape to your graphic.
 - ⇒ In this example, we are adding a rectangle, which will be the background for your label.
 - ⇒ The Stroke Color of the rectangle has been set to Alpha 0 so that the rectangle does not have a border.



Figure 9: Changing the Background Color of a Label - Adding a Shape to the Graphic.

2. Add a Label Component to your graphic.
3. Bind it to the desired device point. In our example, we are using an FLN device point **AOV1**.
4. Center the Label in the Rectangle.



Figure 10: Changing the Background Color of a Label - Binding the Label Component to the Device Point.

5. Select the Rectangle. Bind the same point to the **Fill** property as you have bound to the Label.

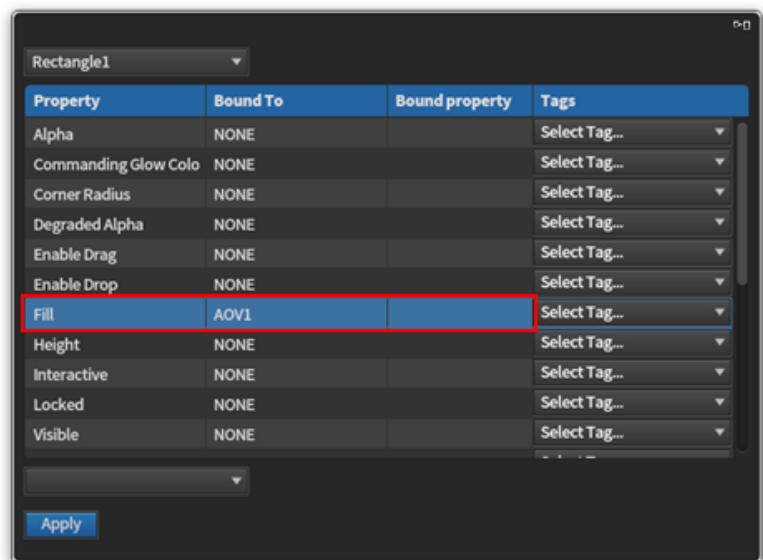


Figure 11: Changing the Background Color of a Label - Binding the Point to the Fill Property.

6. From the drop-down menu at the bottom of the screen, select **Status to Simple**.

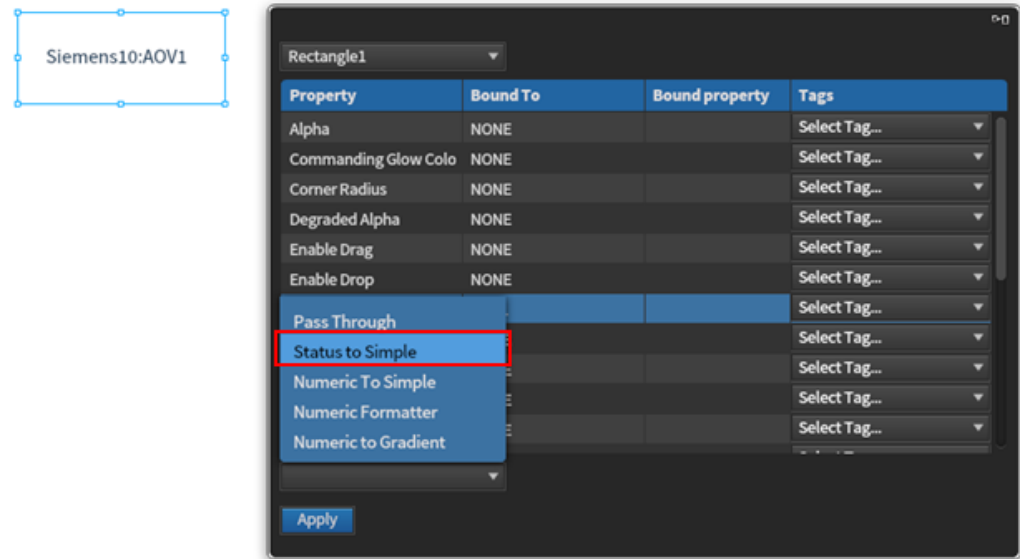


Figure 12: Changing the Background Color of a Label - Selecting Status to Simple for the Fill Property.

- ⇒ The menu to select the background fill color for each status is displayed.
7. To change the fill color of the rectangle when the point goes into a Failed state, select a color for the **Fault** state. In this example, red is chosen for the Fault state.

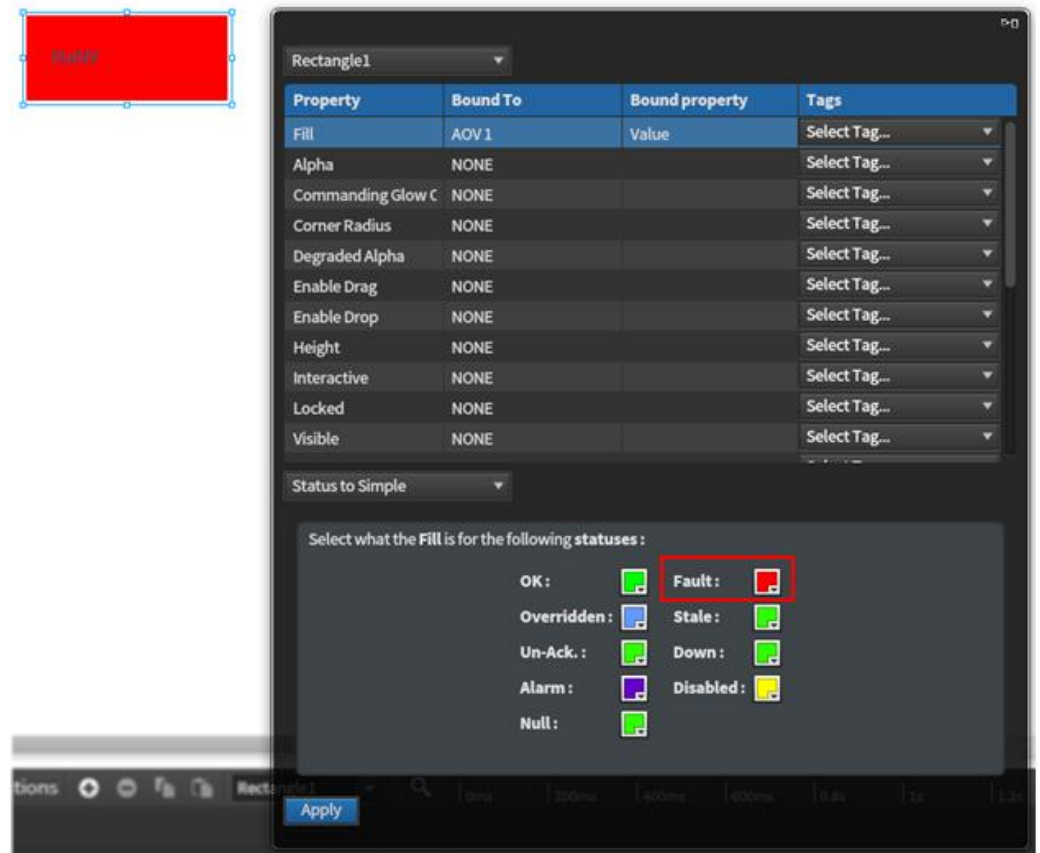


Figure 13: Changing the Background Color of a Label - Selecting the Color to Display when the Point is Failed.

8. Click the **Apply** button.
9. Repeat this procedure for all bound components that you want to change color when the point (or device) they are bound to fails.



Using the Siemens Greenleaf Indicator Model in FIN Builder

A FIN Builder graphic model called **Siemens_Greenleaf_Indicator** is available in the FIN Builder Models library on the Graphic Group's SharePoint Site ([SharePoint Graphics Library](#)).

The FIN Builder graphic model, **Siemens_Greenleaf_Indicator**, allows you to display the current value of the DXR application Greenleaf energy efficiency indicator in your FIN Builder graphic.

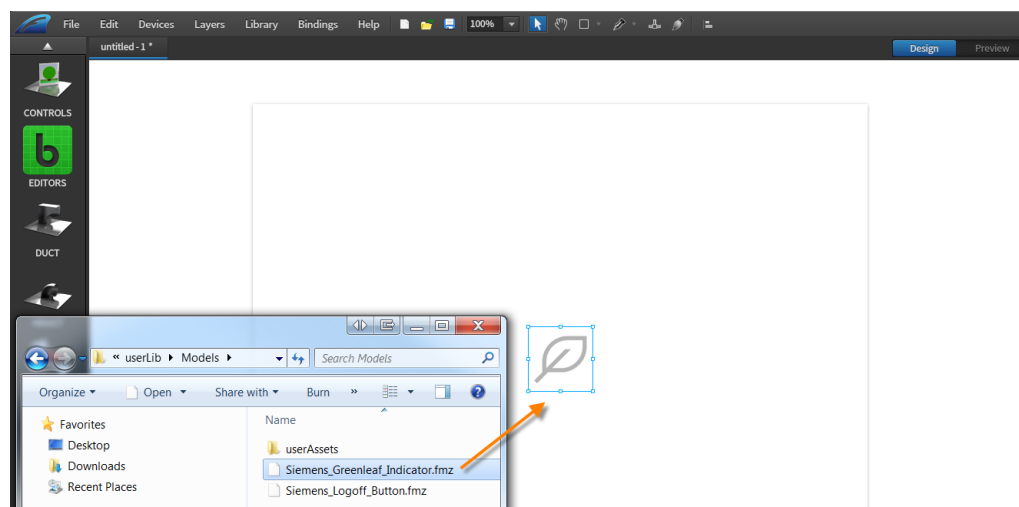
The model (.fmz) and readme (.pdf) files are zipped into a single **Siemens_Greenleaf_Indicator.zip** file. The readme file explains how to use the model in a graphic.

Graphics Library

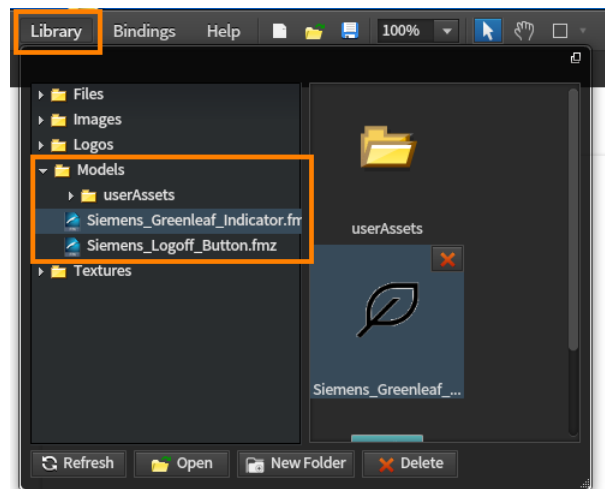
Type	Name
	Siemens_Greenleaf_Indicator NEW
	Siemens_Logoff_Button

Using the Greenleaf Component

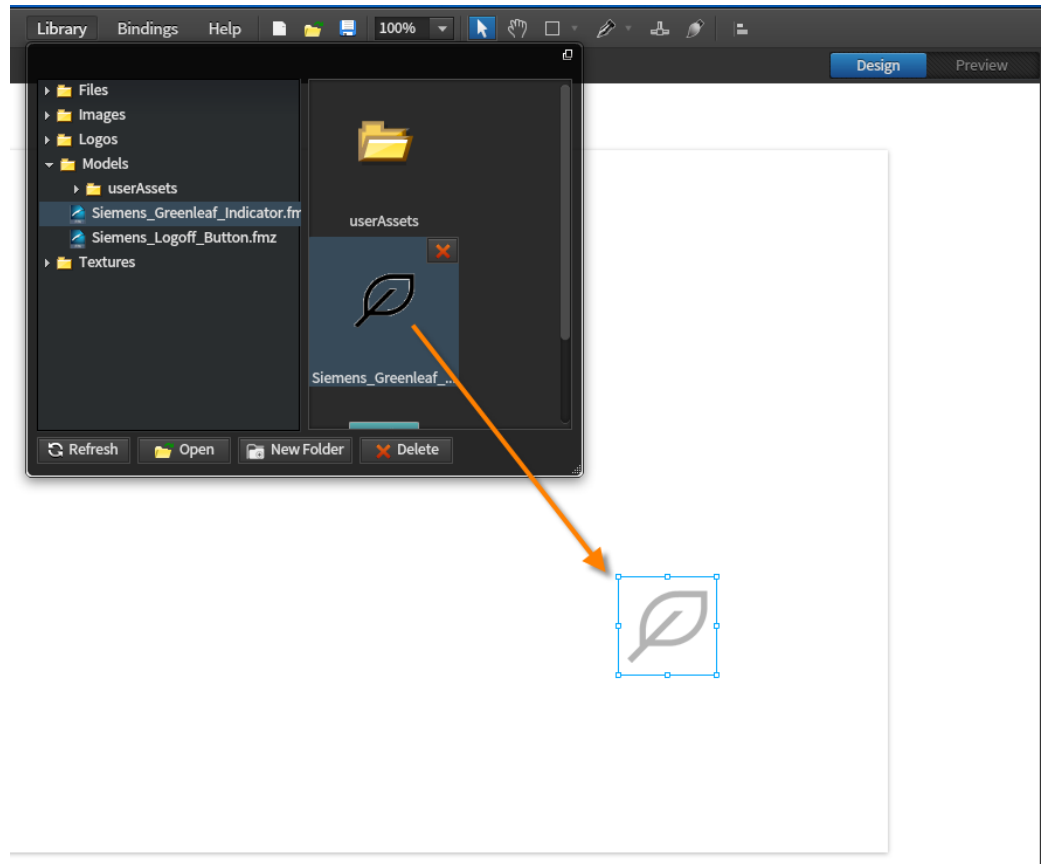
While you are in FIN Builder's design mode, you can drag the model from your local computer to the canvas of an open graphic.



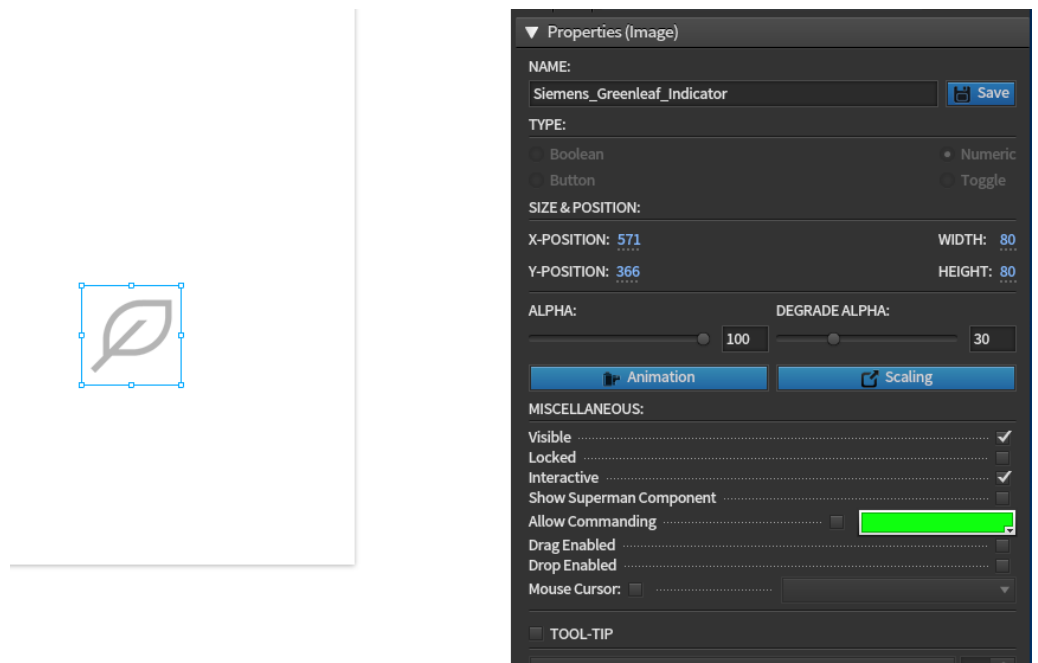
The first time you use the model in a FIN Builder graphic, the model is automatically saved to your FIN Builder **Models** folder for use in other graphics.







The Greenleaf model can be dragged from the **Library/Models** folder and dropped onto the FIN Builder graphic.



The model's default properties are as shown:



When the model is bound to one of the available Greenleaf objects, the model will indicate the energy efficiency state as determined by the DXR energy efficiency algorithm.

Greenleaf Object	Description	Indication
	Gray	DXR energy efficiency is in an undefined state or that there is a connection or binding issue with the equipment or graphic.
	Degraded gray	The graphic has not yet received a value from the device for the bound point.
	Green	DXR energy efficiency rating is Good or Excellent .
	Red	DXR energy efficiency rating is Satisfactory or Poor .



Greenleaf functionality is supported for a variety of features within a DXR Application. For a detailed under-standing of the feature and the appropriate objects to bind to the model, refer to the DXR Application Guide for the application you are using.

The model (Siemens_Greenleaf_Indicator.f mz) can be used in any FIN Builder graphic and saved in the local **Models** folder for re-use in other graphics. The model can also be saved locally to your computer.

Relativization

The relativization function allows similar data from multiple devices to be monitored using the same graphic. This is sometimes referred to as creating template graphics. Data can be relativized across devices as long as the data being relativized has the same BACnet object identifier (object type, instance number) in all devices.



NOTE:

The relativization function cannot be used with P1 devices.

Relativizing Panels

You can relativize graphics from panel to panel. In order to do this, the points being relativized must have the same object identifier in each panel. If two panels are controlling the same type of equipment, you can relativize input and output points.

For example, field panel points representing a chiller can be relativized if the object ID for each point is identical.

Relativizing MS/TP Devices

You can relativize graphics from one BACnet FLN Device to other BACnet FLN Devices. With Siemens BACnet devices the application point mappings are similar across devices.

For example, Room Temperature always has an object identifier of **0,4**. Therefore, the points will relativize easily from device to device.

Relativizing ALN and FLN Devices

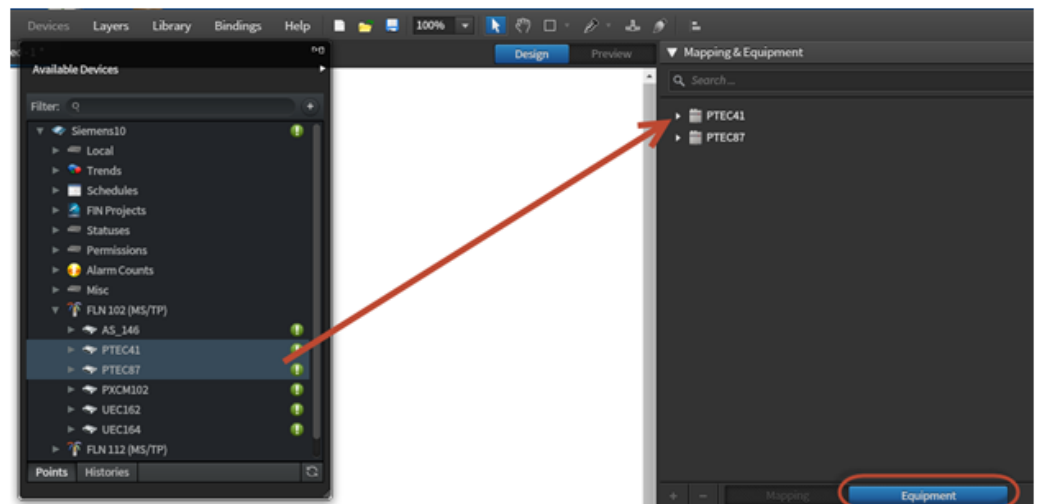
This is strongly **NOT** recommended. However, if you want to relativize from mixed devices, the object instance must be the same in both devices.

For example, you must make sure the object identifiers are the same for all devices being relativized. If you are relativizing to the Room Temperature point in a PTEC, you must make sure that the Room Temperature point exists in the panel and has the same object identifier (**0,4**)

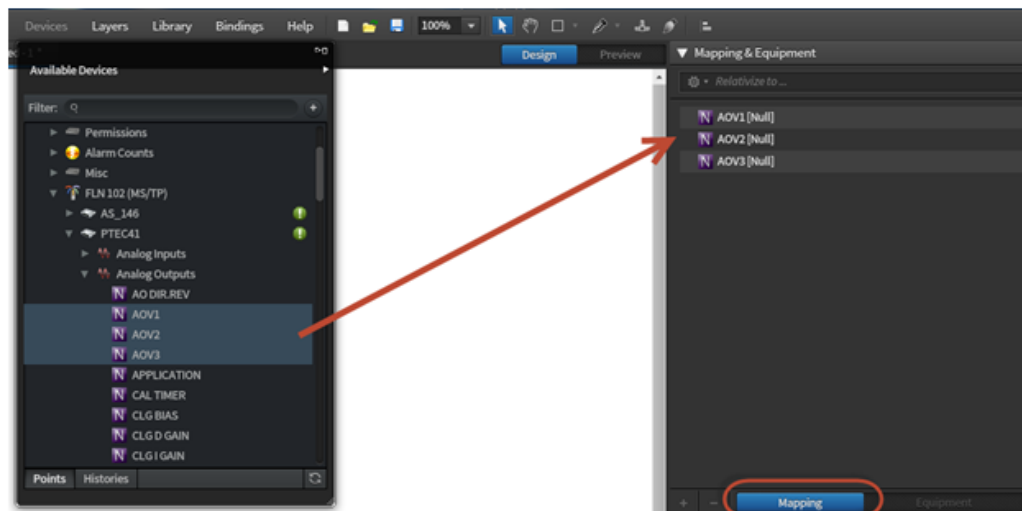
Using the Relativization Feature

▷ In your FIN project:

1. Drag the appropriate devices from the Devices pane and drop them onto the Equipment pane.



2. Drag the appropriate points from one of the devices and drop them onto the Mapping pane.



3. Drag the appropriate components onto the graphic canvas. In the following example, three gauges are being used.



4. Drag and drop the points from the **Mapping** pane and bind them to the graphical component that is being relativized.



5. Repeat Step 4 for all points.
6. Click the **Relativize to** drop-down arrow at the top of the **Mapping** pane and then select the device that contains the points you dropped into the Mapping pane in Step 2.

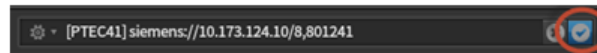


⇒ A drop-down list displays.

7. Use the checkmarks to the right of the points to select all the points that you want to relativize, or deselect all the points that you do not want to relativize.



8. Click the blue checkmark  in the upper right corner to indicate that you are done.



- ⇒ The **Mapping** window displays the relativized points.
- ⇒ The **Equipment** window displays the unrelativized points, organized by device folder.
- ⇒ The data is now ready for use with Actions or the Equipment Combo control.



NOTE:

If you want to use a point that is not relativized, you must drag and drop it from the Equipment pane or the Device pane.

Default Settings

It is recommended that you use the following settings as your default settings for all graphics.

A FIN Builder graphic's default poll rate interval is one (1) second. This means that the graphic will attempt to obtain the current value for each bound point every second. For some systems, this may be too frequent. The recommended poll rate interval is 15 seconds.

By default, FIN Builder is set to Basic Mode. It is recommended that you set FIN Builder to Advanced Mode in order to access all of the available FIN Builder features and components.

These settings can be saved as default settings and will apply to all new graphics.

To adjust these settings:

1. Select the canvas (graphic background).
2. In the properties settings, adjust the poll rate to the desired value.
3. Change the mode to Advanced Mode.
4. To make this the default for every graphic, select the **Make Default** button after adjusting the poll rate.

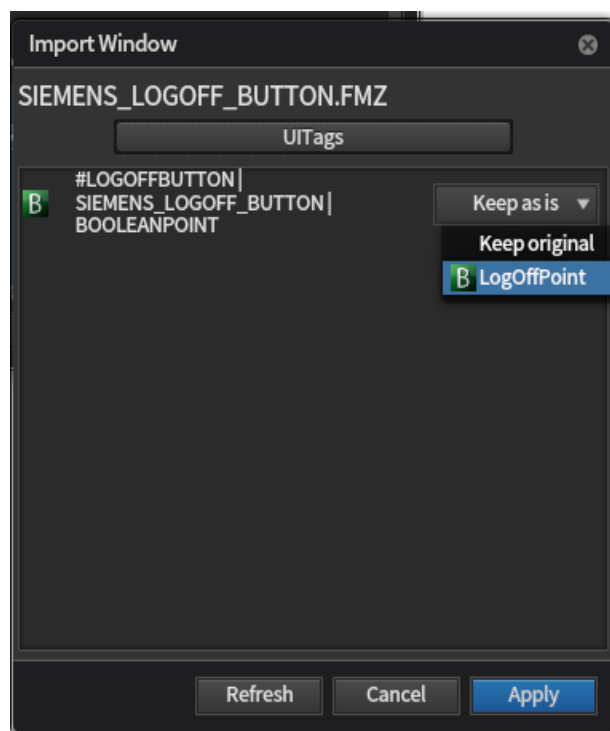
Logoff Management

To ensure proper logoff management of Web sessions at the field panel, a logoff button should be added to each graphic.

This button is available in the FIN Builder Models folder on the Siemens Graphics Library SharePoint site (<https://projects-industry.usa.siemens.com/bt/graphicslib/Graphics%20Library/Forms/AllItems.aspx>), or you can create one. Contact your Siemens representative for assistance.

Using the Logoff Button Model

1. Copy the Siemens Logoff Button model (Siemens_Logoff_Button.fmz) from the Graphics Library SharePoint site to any folder on the computer running FIN Builder.
2. Open the FIN Builder application.
3. Connect to the device which will host the graphic.
4. Open the graphic to which the **Logoff** button will be added.
5. Drag-and-drop any Binary Value point from the host panel onto the Mapping Pane. This point allows the FIN Builder Logoff action access to the host panel to initiate logoff.
NOTE: Binding this point to the **Logoff** button does not interfere with normal operation of this point.
6. From Windows Explorer, open the folder containing the model. Drag the Siemens_Logoff_Button model onto the canvas.
⇒ The **Import** window displays
7. From the **Keep as is** drop-down menu, select the Binary Value that you dropped onto the Mapping Pane.



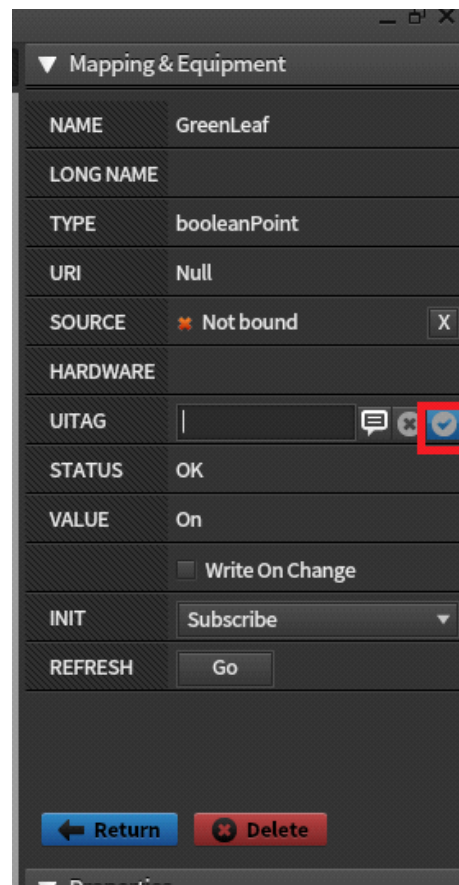
8. Click **Apply**. The model is automatically saved to your **Models** folder.

9. Publish the graphic to the host panel.
10. Using a Web browser, connect to the host panel.
11. From the Landing Page, select **Kiosk** and open the graphic you just published.
12. Verify that selecting the **Logoff** button returns you to the Landing Page.

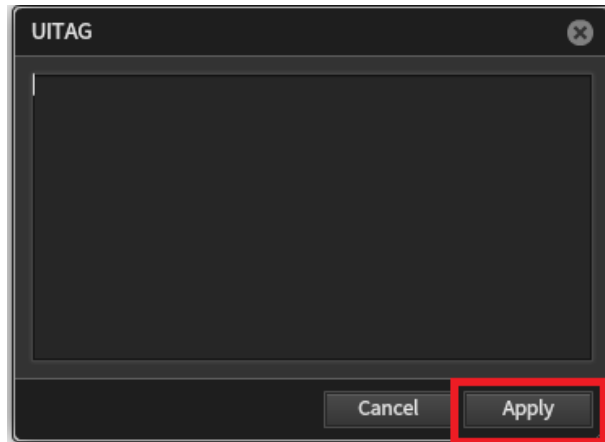
Creating a Logoff Button Model


To create a **Logoff** button that returns you to the Landing Page:

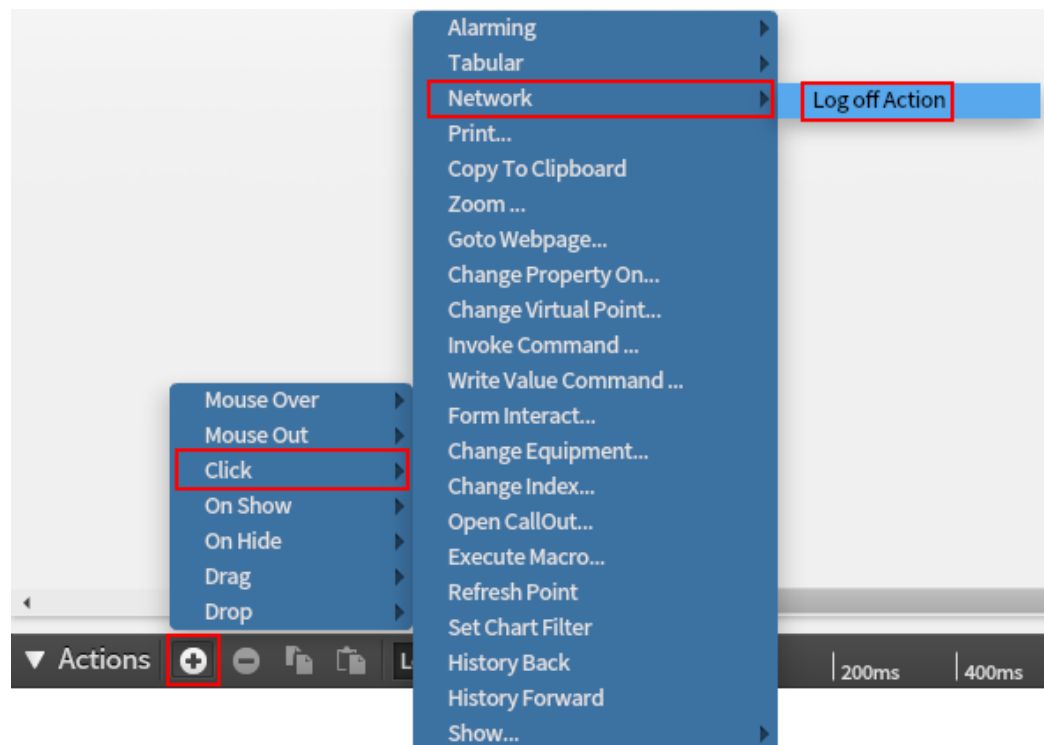
1. Place a Button component from the Controls Palette on the canvas.
2. Modify the properties of the Button component to fit the needs of your graphic (that is, Up/Over/Down color, Up/Over/Down label, corner style, etc.).
3. Select the **+** button in the **Mapping** pane to create a local Boolean point.
4. In the properties of this point, do *one of the following*:
 - Add a name to the **UITAG** field (for example, **LogOffButton**) and click the check mark icon to save.




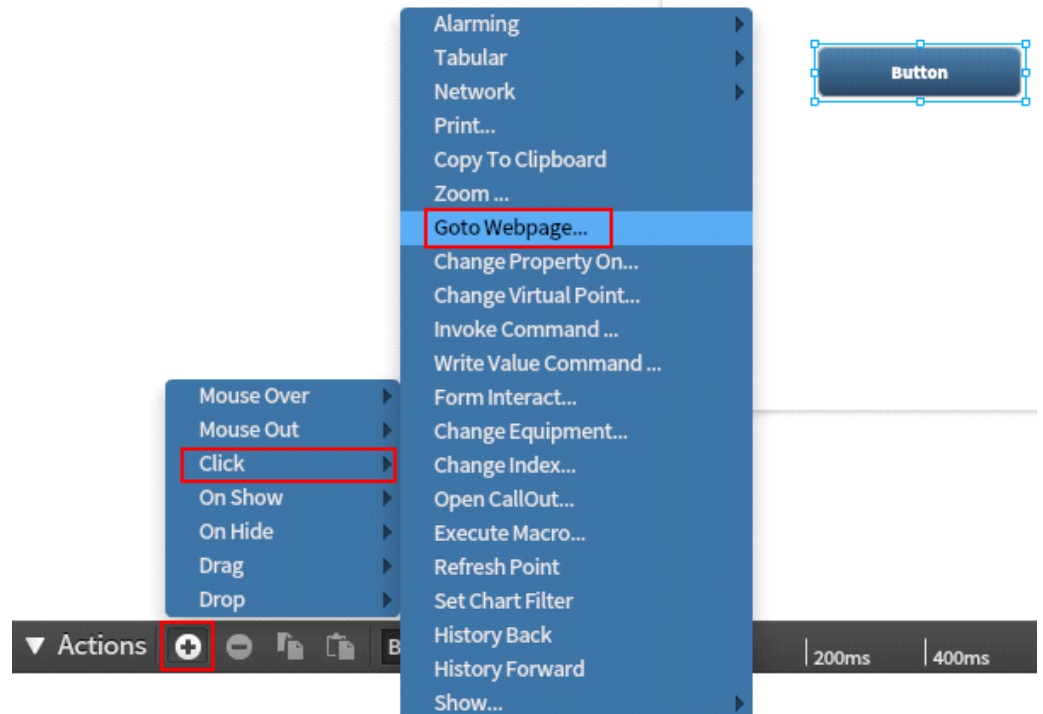
- Click the speech bubble icon to the right of the **UITAG** field to open a UITAG dialog box.
Enter the content and click the **Apply** button.



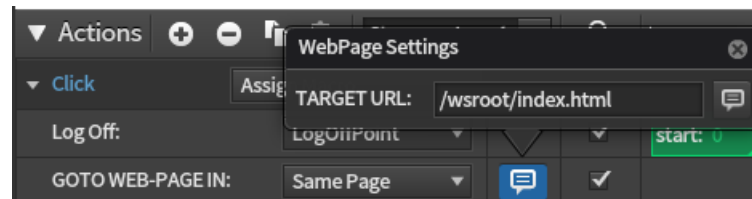
5. Select the Button component.
6. To the right of the **Actions** drop-down menu, select the  button to add an action.
7. Move your cursor over the **Click** option, then **Network**, and then select **Log off Action**.



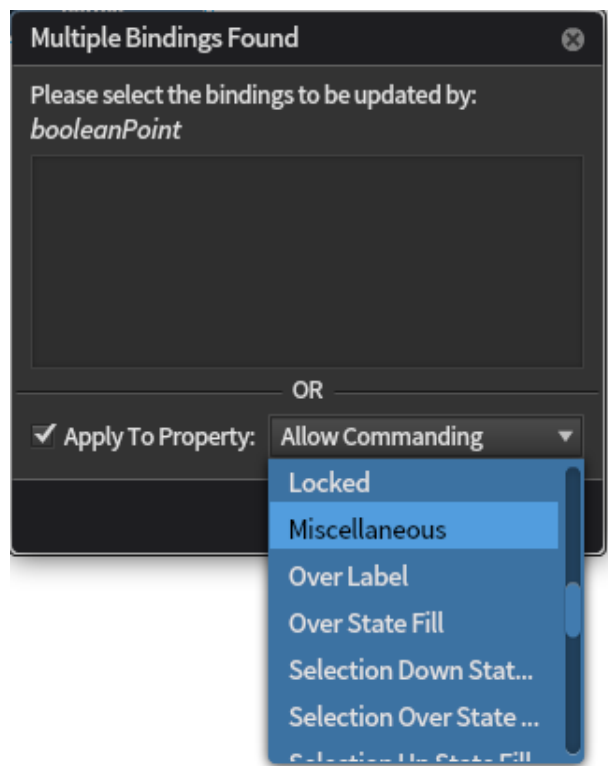
8. From the **Select Point** drop-down list, select the point you created.
9. Select the check box to the right of the newly added point. Leave the delay at 0 milliseconds.
10. Add another action by clicking the  button.
11. Move your cursor over the **Click** option and select **Goto Webpage**.



12. In the **Actions** drop-down menu, select **Same Page**.
13. Click the settings caption button to open the **WebPage Settings** property box. Enter **/wsroot/index.html** in the **TARGET URL** field.



14. Check the box to the right of the **Actions** drop-down menu and select **200 milliseconds**.
15. Drag-and-drop the point you created from the Mapping pane onto the button. In the **Multiple Bindings Found** window, select **Apply to Property** and choose the **Miscellaneous** property. Click **Apply**.



16. Name the component.

17. Click **Save** and save to the **Models** folder.

Publishing a Project (Graphic)

Graphics, referred to in FIN Builder as FIN Builder Project files (.finp), must be published to Drive B on the field panel.



NOTE:

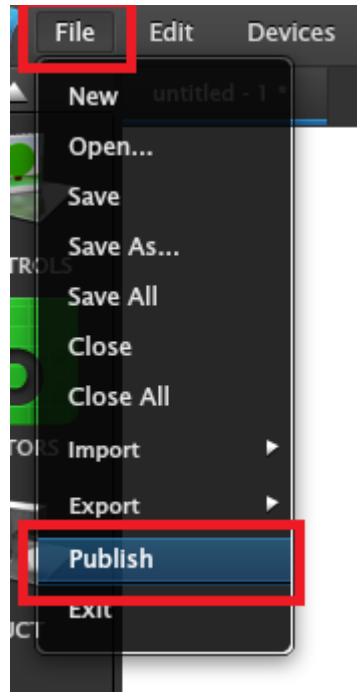
Multiple users publishing to the same panel at the same time is not recommended; this may reduce PPCL performance and may cause publication to fail.

NOTE:

Before transferring a file to a field panel, you must verify that enough RAM is available in the field panel to hold the entire file or it cannot be transferred to its final location.

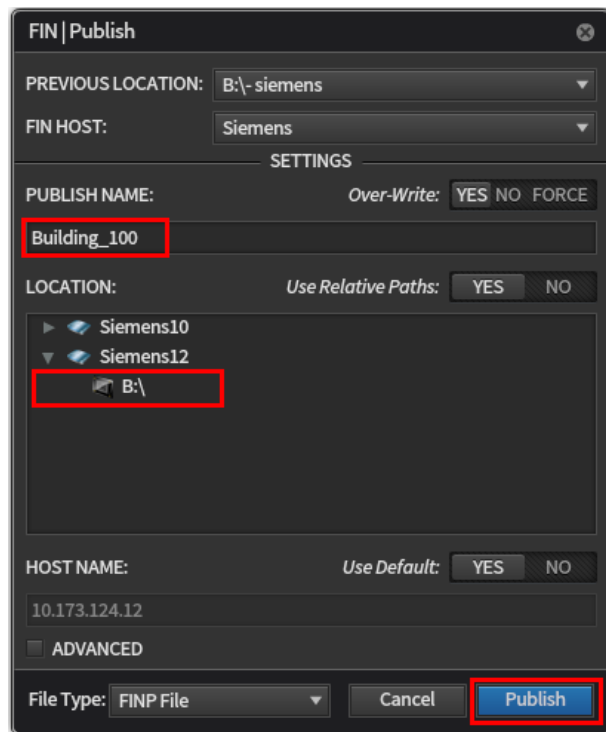
To publish a graphic to the field panel:

1. From the **File** menu, select **Publish**.



⇒ A list of field panels to which the project can be published displays. FIN Builder projects can only be published to Drive **B** of PXC Modular or PXC-36 controllers with Firmware Revision 3.3 or later.

2. Expand the panel to display Drive **B**.
3. Select Drive **B** on this panel as the location to publish the project.
4. Verify that the **FIN HOST:** selection is **Siemens**.
5. Provide a **PUBLISH NAME** for the project.
6. Select **Publish**.

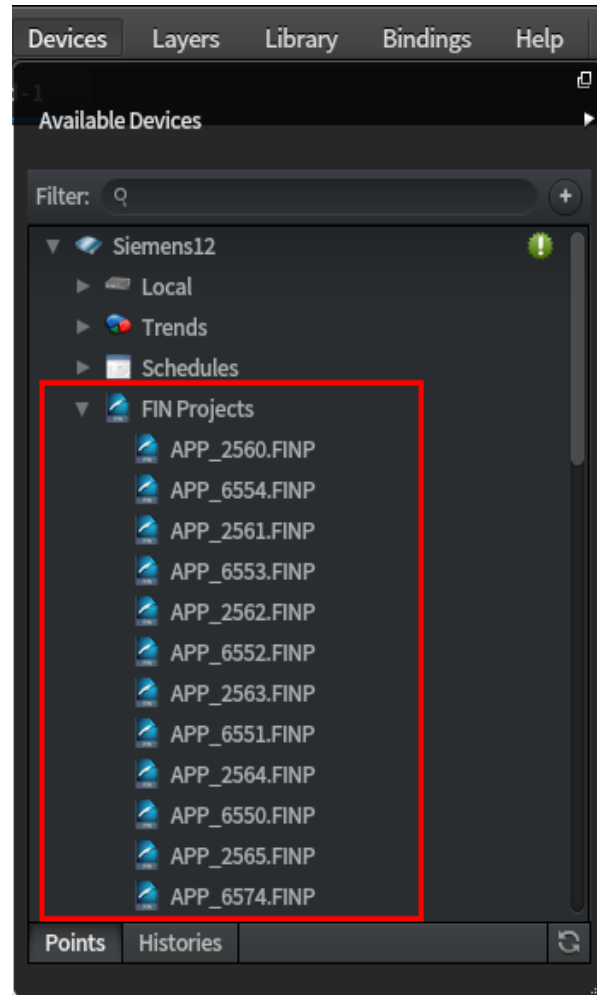


⇒ FIN Builder creates a thumbnail for each project and publishes it with the project.

Thumbnail files are named **ProjectName.jpg** and are stored in the **B:\FIN\Projects** folder along with the **ProjectName.finp** file. When displaying a project from within a browser, thumbnails display and can be used to select which project to display.

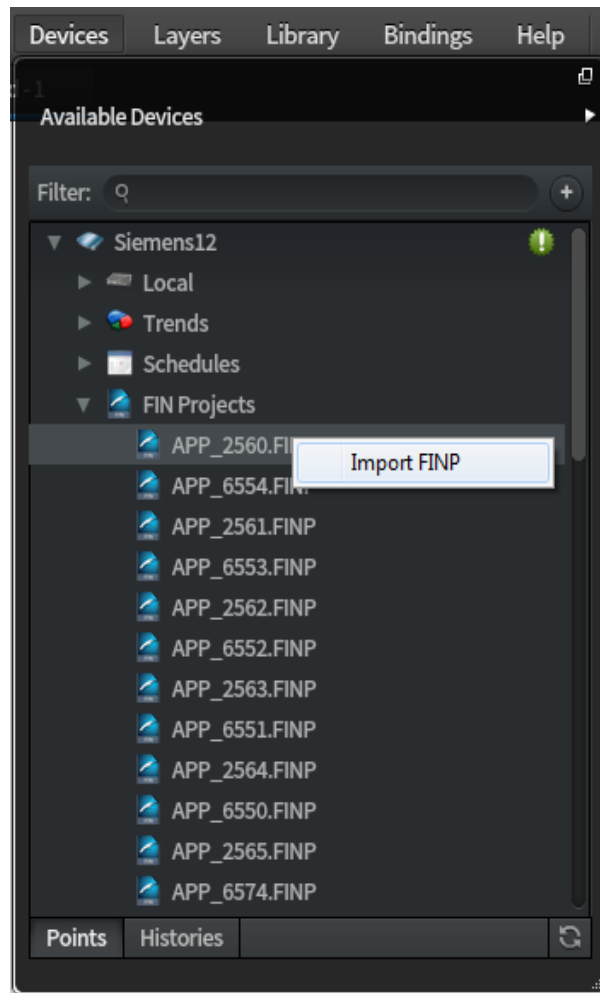
Modifying a Project (Graphic)

When connected to a device, the Devices pane displays all the FIN Builder projects currently published to the device.



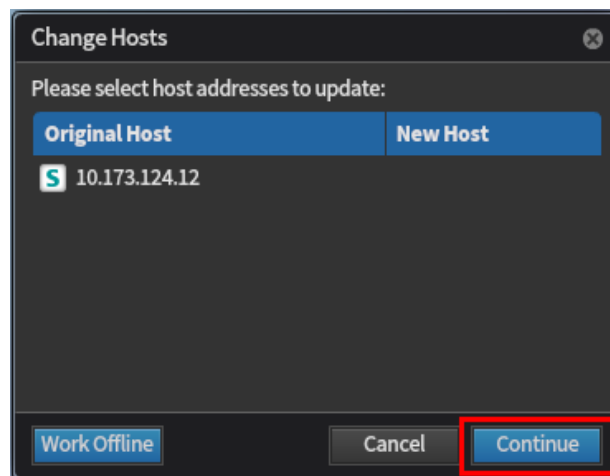
To make modifications to a FIN Builder project:

1. Connect to the field panel in FIN Builder.
2. From the Devices pane, expand the panel.
3. Expand FIN Projects.
4. Right-click on the project you want to edit and select **Import FINP**.

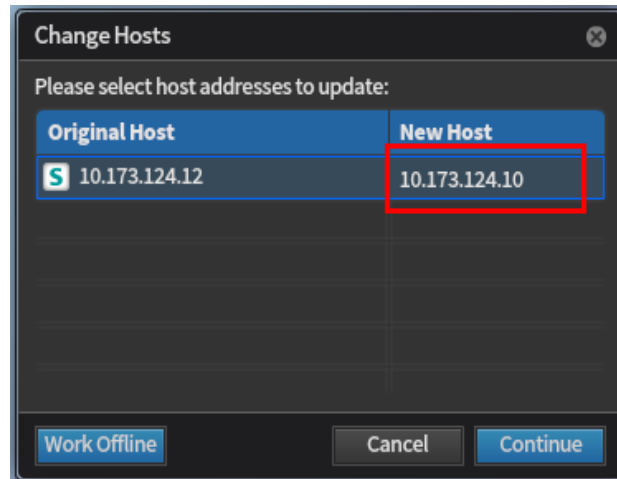


5. Do *one of the following*.

- If you plan to publish the modified project to the same field panel, click **Continue**.



- If you plan to publish the modified project to a different panel, enter the destination panel IP Address in the **New Host** field.



6. Make modifications to the project and click **Publish**.
7. To save the project for backup purposes, select **Save As** from the **File** menu.

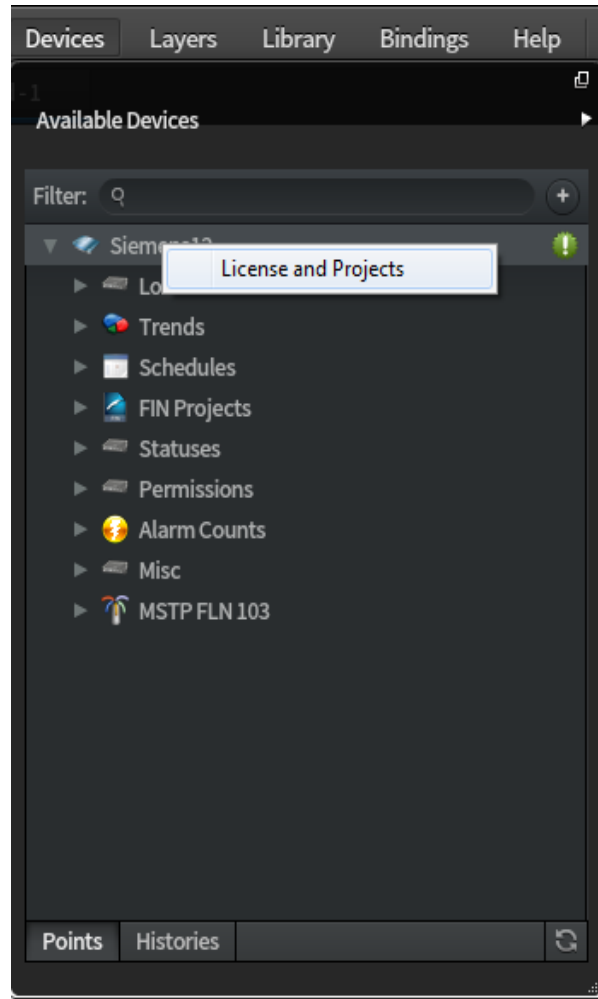
Deleting FIN Projects (Graphics)

FIN Projects (.finp files) include the graphic as well as all the assets used in that graphic. Assets include all elements of the graphic including FIN Builder graphical components, models, and external images. Assets are not shared among FIN projects. Deleting one project will not affect another project that uses the same assets.

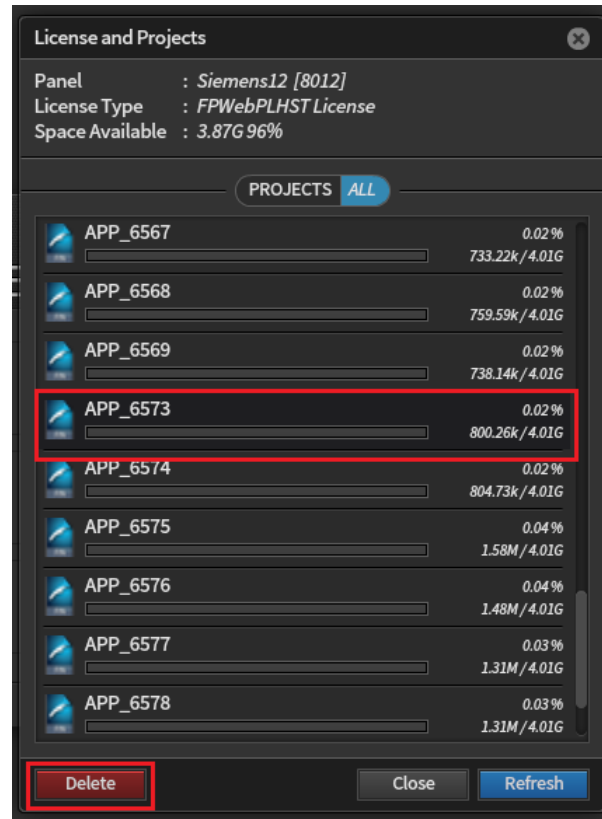
Deleting a FIN Project removes the project from Drive **B** of the host panel.

To delete a graphic:

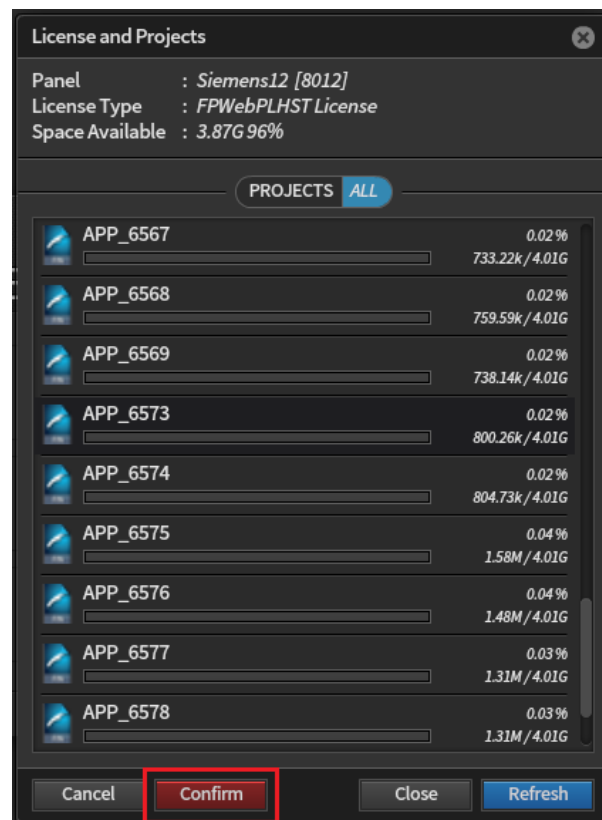
1. Connect to the field panel in FIN Builder.
2. From the Devices pane, right-click the panel and select **License and Projects**.



3. Highlight the graphic you want to delete and click the **Delete** button.



4. Click the **Confirm** button to confirm the deletion.



Viewing a FIN Builder Graphic in Kiosk Mode

1. Open a supported Web browser on the computer.
2. Type one of the following in the **Address** field:
 - IP address of the field panel.
 - Field panel node name/Fully Qualified Domain Name.



NOTE:

The browser must be configured to ignore the proxy settings for the panel names and/or IP addresses. See the *Troubleshooting* [→ 50] section for more information.

3. If this is the first time the field panel has been accessed through a browser, the **End User License Agreement (EULA)** page displays. Click the **Accept** button to accept the EULA.

**END USER LICENSE AGREEMENT
FOR SIEMENS WEB SERVER SOFTWARE**

IMPORTANT – READ CAREFULLY: This End-User License Agreement ("EULA") is a legal agreement between You (either an individual, a legal entity or any affiliated companies or other entities) and Siemens Industry, Inc. as the licensor, ("Licensor" or "Siemens"). This EULA authorizes You to use the Licensed Software, specified in Clause 1 below, under the terms and conditions set forth below. Read this EULA carefully before installing or using the Licensed Software. Use of the Licensed Software is only permitted in connection with this EULA.

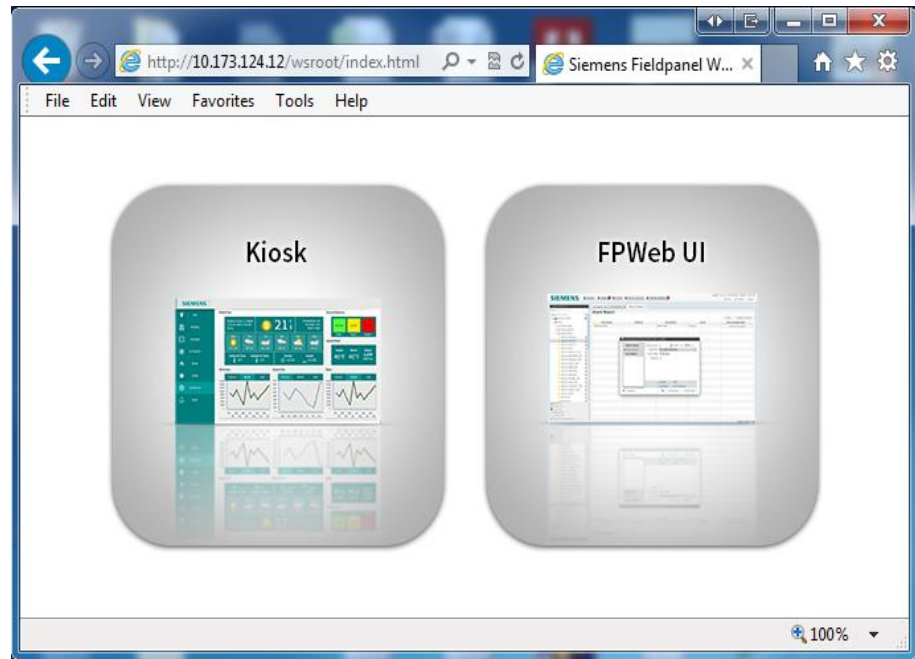
By pressing the "ACCEPT" button at the bottom of this page or otherwise installing, copying, and/or using the Licensed Software you acknowledge that you have (1) read and understood this EULA as well as each of the third party licenses, Open Source Software licenses and additional terms set forth in the "Other Component Agreement Readme" identified below ("Additional Terms"); and (2) agree to be bound by all of the terms and conditions of this EULA and such Additional Terms. You further agree that if Siemens or any licensor of Siemens is required to engage in any proceeding, legal or otherwise, to enforce their rights under this EULA, Siemens and/or its licensor shall be entitled to recover from You, in addition to any other sums due, reasonable attorney's fees, costs and disbursements. Furthermore you confirm that you have the power to make such a declaration also for your company. If you do not agree to all the terms and conditions of this EULA, press the "Reject" button at the bottom of this page and the installation process will not proceed as you are not otherwise entitled to install or use the Licensed Software.

This EULA governs any updates, releases, revisions, or enhancements to the Licensed Software.

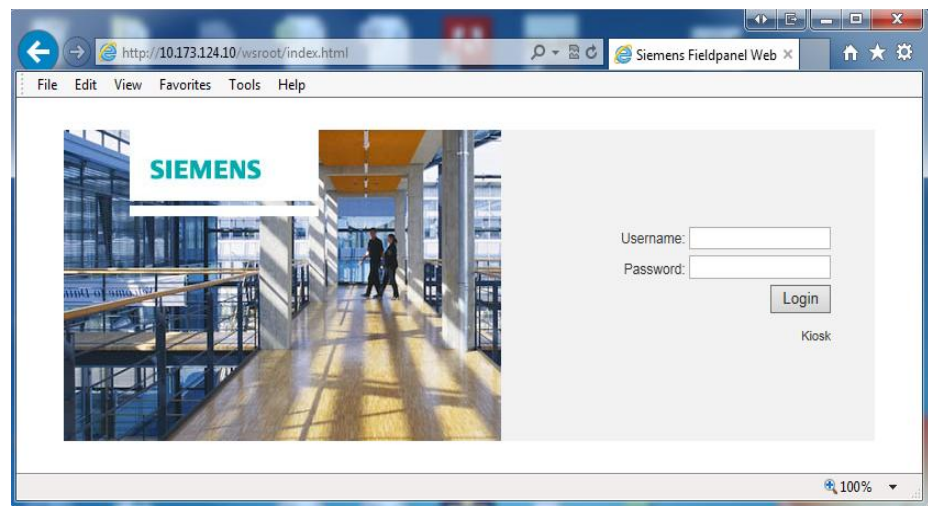
1. LICENSED SOFTWARE. As used in this EULA, the term "Licensed Software" means the components which make up the BACnet Field Panel Web Server solution. The solution includes such products as (i) Siemens' BACnet Field Panel Web Client Application (also referenced in related documentation as "Field Panel Web UI"), Field Panel Web Server Software (also referenced in related documentation as "BACnet Field Panel Web Server" and "Field Panel Web Server"), Data Exchange Protocol and Data Exchange Software in any release of the foregoing, and (ii) any related media, printed materials, and "online" or electronic documentation. The Licensed Software is provided as embedded software in a Siemens' field panel controller ("Field Panel"), such as a Siemens' Compact or Modular Field Panel. The Licensed Software is accessed and used via the BACnet Field Panel Web Client Application that may be uploaded to a single computer upon acceptance of this EULA by You.

I have read and accept this agreement

- ⇒ Field panels which host the FPWeb UI and FIN Builder projects provide a user interface (Landing Page) for selecting whether to display a graphic or enter the FP Web UI.
 - ⇒ Field panels which host only FIN Builder projects will not provide this option.
4. If the Landing Page displays, click the **Kiosk** icon.



⇒ The **Login Page** displays.



⇒ Once you are successfully authenticated, a list of thumbnail images from Drive **B** of the host field panel displays. Moving the cursor over a thumbnail image displays the name of the graphic.



⇒ If no thumbnail image exists for the graphic, a generic FIN thumbnail image displays.



5. Click a thumbnail to display that graphic. If only one graphic exists, it will display automatically.



NOTE:

Thumbnails are created during publication by FIN Builder. See the *Saving and Publishing a Project* section of this document. If you manually delete a thumbnail image, the project must be republished in order to recreate the thumbnail.

NOTE:

Kiosk Mode does not support FINlite graphics.

6. Click the **Logoff** button to properly close the graphic.



NOTE:

To properly log off of the field panel and close Web sessions, a Logoff button must be added to each graphic. See the *Logoff Management* section for instructions on how to add a Logoff button to a graphic.

Troubleshooting

FIN Builder graphics display with an *UNLICENSED* watermark.

- The field panel hosting the displayed graphic does not have an **FPWEBPLHST** license installed.
- Any component on the displayed graphic is bound to a point in a field panel (or its FLN devices), which does not have an **FPWEBPL** or **FPWEBPLHST** license installed.
- The field panel hosting the displayed graphic has a Firmware Revision earlier than 3.3.
- Any component on the displayed graphic is bound to a point in a field panel (or its FLN devices) with a Firmware Revision earlier than 3.3.
- No components on the displayed graphic are bound to a point in the host field panel.

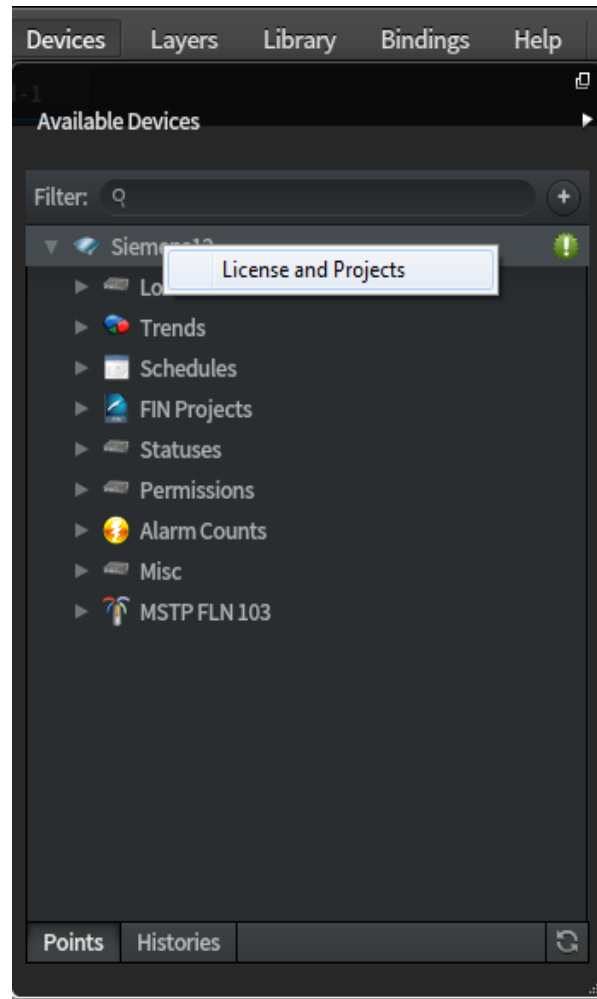
See the *License Manager Start-up Procedures* (145-600) for more information on licenses.

Determining the Current FIN Builder Field Panel License

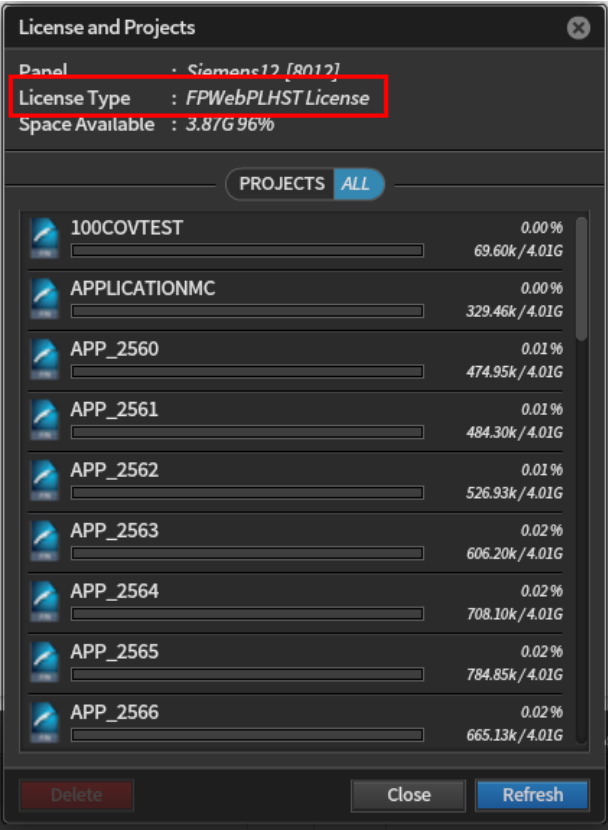
FIN Builder displays the most comprehensive FPWeb license installed on a connected panel.

To view this license information:

1. Connect to the field panel in FIN Builder.
2. From the **Devices** pane, right-click the panel and select **License and Projects**.



- ⇒ License information displays along with a list of the graphics currently published to the field panel. The size of each graphic and the percentage of space on Drive B is also listed.



Application MC

Introduction to Application MC

Application MC (Monitor & Control) is a FIN Builder Project that contains a Navigation Tree and application graphics for many of the available MS/TP FLN device applications. By selecting this project from within Kiosk mode, you can view the current values of control applications, command control values, acknowledge alarms, and update the navigation tree to display devices that have been added to or removed from the field panel's database.

Application MC is accessible through a browser and contains several pre-defined graphics for use with TEC applications, such as Unit Vents, Heat Pumps, and VAV controllers.

- Graphics for VAV applications include a **Flow Balancing** drop-down window for entering balancing settings.
- Graphics for Heat Pump applications contain a **Configuration** drop-down window for entering configuration settings.

Application MC is deployed to the field panel using Launch Pad. It is provided as an example of the types of graphics that can be created using the FIN Builder product.

Features

Application MC allows you to:

- View the MS/TP FLN devices that have been added to the host field panel.
- Monitor the current value of application points using a graphical interface.
- Command points using graphical interface.
- View and acknowledge alarms.
- Manage Flow Balancing settings for VAV applications.
- Manage Configuration settings for Heat Pump applications.
- View available Application Notes.

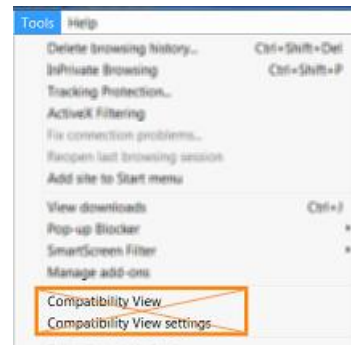
Compatibility

Field panel type to which Application MC is deployed	Siemens Modular or 36 (Compact series) controller with a USB memory storage device plugged into the USB port (Drive B:)
Firmware Revision	3.3.1 or later
Internet browser	<ul style="list-style-type: none"> • Must support Flash Player 25.0.0.x or later, such as Microsoft Internet Explorer (IE) 9, 10 or 11, Edge 25 or later, Chrome, or Mozilla Firefox. • Cookies must be enabled.



NOTE:

If you use Internet Explorer, do not select the **Compatibility View** options located in the IE **Tools** menu.



Licensing

If the graphics are left unmodified, only a Field Panel Web Server License (LSM-FPWEB) is required.

If you plan to use FINBuilder to modify any of the graphics, the graphic is considered a Kiosk graphic and either a Field Panel Web Server Service License (LSM-FPWEBPL) or a Field Panel Web Server Host License (LSM-FPWEBPLHST) is required. For more information, see the *Kiosk User Guide* (A6V10435686).

Supported Application Numbers

Supported application numbers include:

- 2560-2567
- 6520-6527
- 6540-6541
- 6550-6554
- 6557
- 6565-6569
- 6573-6574
- 6575-6579
- 6600-6607
- 6620-6627
- 6640-6648
- 6650-6654
- 6657
- 6665-6669
- 6673-6674
- 6675-6679

You can also add custom applications. For more information, see the *Customizing Application MC* [→ 67] and *Modifying the Application MC Mapping File* [→ 71] sections of this document.

Application MC Prerequisites

- The **Description** field in the properties for each FLN device is properly configured. For more information, see the procedure *Setting up the Description Property using WCIS* [→ 76].
- Application MC files are deployed to the field panel from the **Tools** menu of Launch Pad.

Accessing Application MC

The Application MC graphic is hosted on the USB memory storage device, which is plugged into the USB port (Drive **B**) of a field panel, and displayed using one of the supported browser applications [→ 53]. To display Application MC, do the following:

1. Open a supported Web browser on the computer.
2. Type one of the following in the **Address** field:
 - IP address of the field panel.
 - Field panel node name/Fully Qualified Domain Name.



NOTE: The browser must be configured to ignore the proxy settings for the panel names and/or IP addresses. See the *Appendix A - Troubleshooting and Error Management* [→ 78] section for more information.

3. If this is the first time the field panel has been accessed through a browser, the **End User License Agreement (EULA)** page displays. Click the **Accept** button to accept the EULA.

**END USER LICENSE AGREEMENT
FOR SIEMENS WEB SERVER SOFTWARE**

IMPORTANT – READ CAREFULLY: This End-User License Agreement ("EULA") is a legal agreement between You (either an individual, a legal entity or any affiliated companies or other entities) and Siemens Industry, Inc. as the licensor, ("Licensor" or "Siemens"). This EULA authorizes You to use the Licensed Software, specified in Clause 1 below, under the terms and conditions set forth below. Read this EULA carefully before installing or using the Licensed Software. Use of the Licensed Software is only permitted in connection with this EULA.

By pressing the "ACCEPT" button at the bottom of this page or otherwise installing, copying, and/or using the Licensed Software you acknowledge that you have (1) read and understood this EULA as well as each of the third party licenses, Open Source Software licenses and additional terms set forth in the "Other Component Agreement Readme" identified below ("Additional Terms"), and (2) agree to be bound by all of the terms and conditions of this EULA and such Additional Terms. You further agree that if Siemens or any licensor of Siemens is required to engage in any proceeding, legal or otherwise, to enforce their rights under this EULA, Siemens and/or its licensor shall be entitled to recover from You, in addition to any other sums due, reasonable attorney's fees, costs and disbursements. Furthermore you confirm that you have the power to make such a declaration also for your company. If you do not agree to all the terms and conditions of this EULA, press the "Reject" button at the bottom of this page and the installation process will not proceed as you are not otherwise entitled to install or use the Licensed Software.

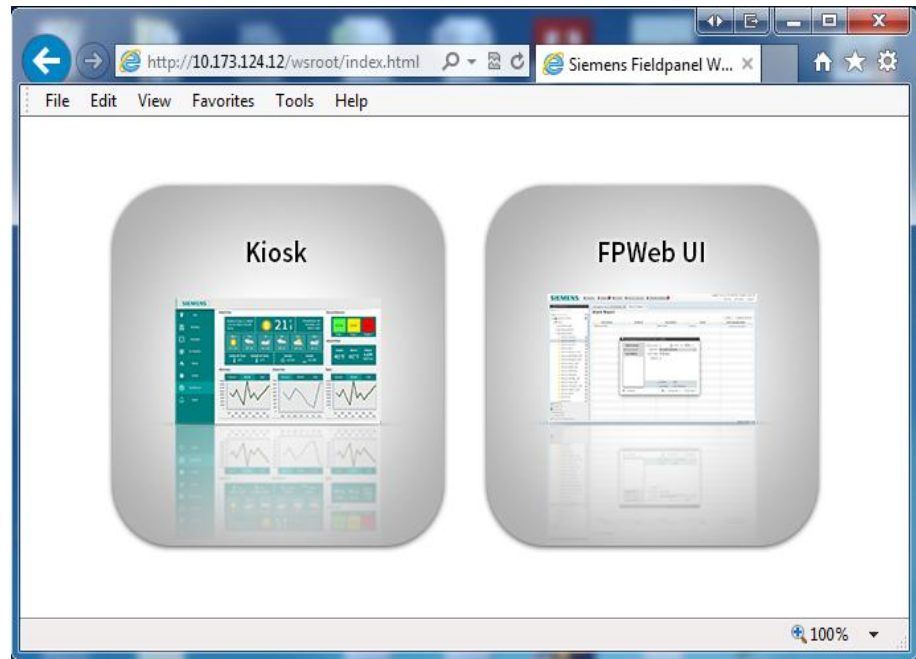
This EULA governs any updates, releases, revisions, or enhancements to the Licensed Software.

1. LICENSED SOFTWARE. As used in this EULA, the term "Licensed Software" means the components which make up the BACnet Field Panel Web Server solution. The solution includes such products as (i) Siemens' BACnet Field Panel Web Client Application (also referenced in related documentation as "Field Panel Web UI"), Field Panel Web Server Software (also referenced in related documentation as "BACnet Field Panel Web Server" and "Field Panel Web Server"), Data Exchange Protocol and Data Exchange Software in any release of the foregoing, and (ii) any related media, printed materials, and "online" or electronic documentation. The Licensed Software is provided as embedded software in a Siemens' field panel controller ("Field Panel"), such as a Siemens' Compact or Modular Field Panel. The Licensed Software is accessed and used via the BACnet Field Panel Web Client Application that may be uploaded to a single computer upon acceptance of this EULA by You.

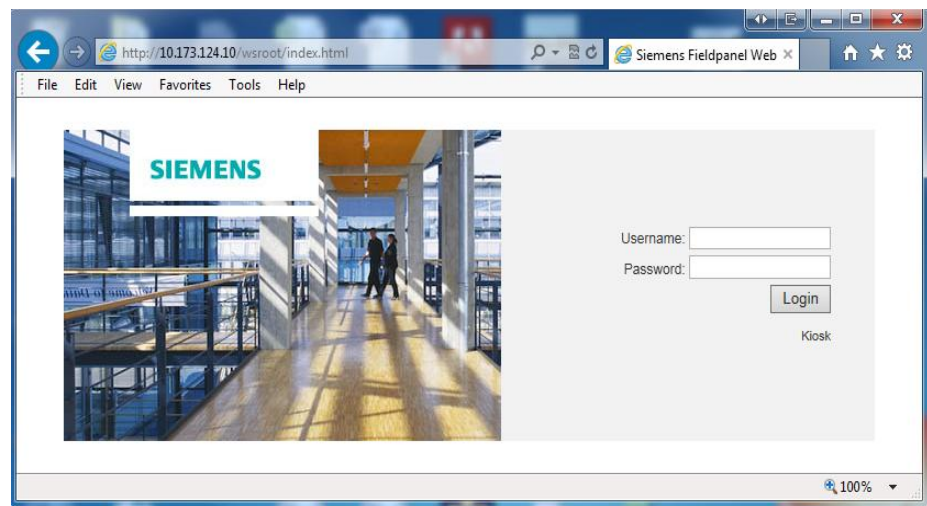
I have read and accept this agreement

- ⇒ Field panels that host FPWeb UI and Application MC provide a user interface (Landing Page) for selecting whether to display Application MC or enter the FP Web UI.
- ⇒ Field panels that host only Application MC and/or FINBuilder graphics will display the **Login Page**.

4. If the Landing Page displays, click the **Kiosk** icon.



⇒ The **Login Page** displays.



⇒ If you only have Application MC deployed and no other FIN Builder projects are published to Drive **B**, Application MC starts automatically. If you have other FIN Builder projects, once you are successfully authenticated, a list of thumbnail images from Drive **B** of the host field panel displays. Moving the cursor over a thumbnail image displays the name of the graphic.



5. Click the **Application MC** graphic thumbnail, if necessary.

User Interface Navigation Overview

The following figure shows the default Application MC user interface.

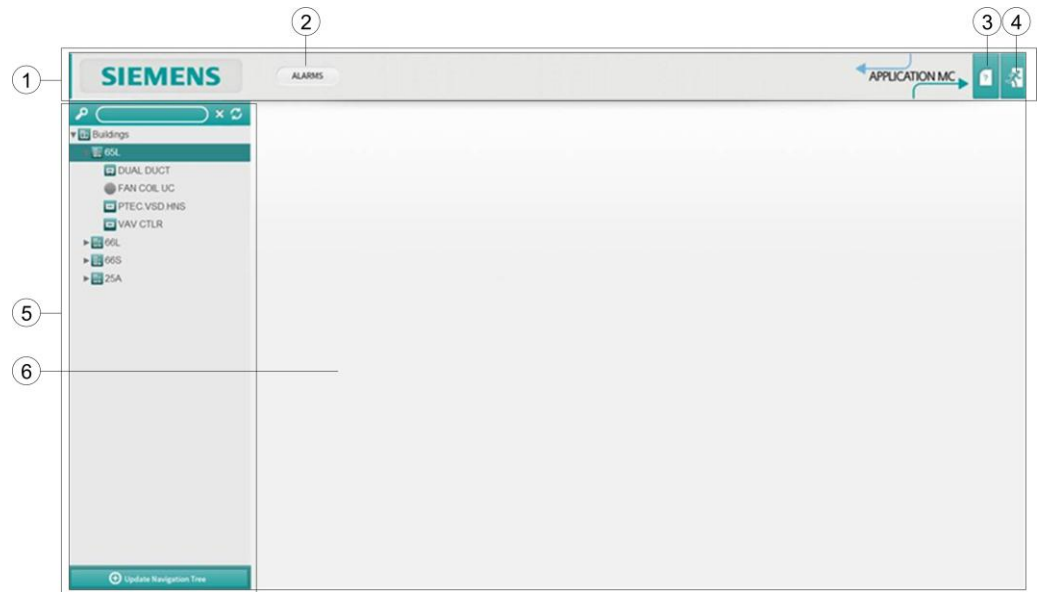


Figure 14: Application MC User Interface.

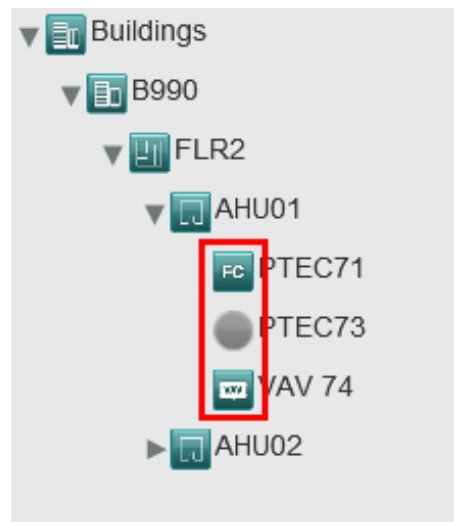
- 1 **Title Pane.** The Title Pane contains the **Alarm Report** button, the **Application MC User Guide** button, and the **Logoff** button.
- 2 **Alarm Report** button. Generates an alarm report.
- 3 **Application MC User Guide** button. Opens the user documentation.
- 4 **Logoff** button. Logs off the user.
- 5 **Navigation Pane.** The Navigation Pane displays the FLN devices currently available in Application MC. The Navigation Pane also displays the **Update Navigation Tree** button.
- 6 **Application Graphic Pane.** The Application Graphic Pane displays the application graphics.

Navigation Tree

The Navigation Tree displays in the Navigation Pane on the left side of Application MC. The Navigation Tree structure is based on the Description properties of the host panel's FLN devices. For more information, see the *Setting up the Description Property using WCIS* [→ 76] section.

Expansion arrows allow you to expand and contract each level of the tree.

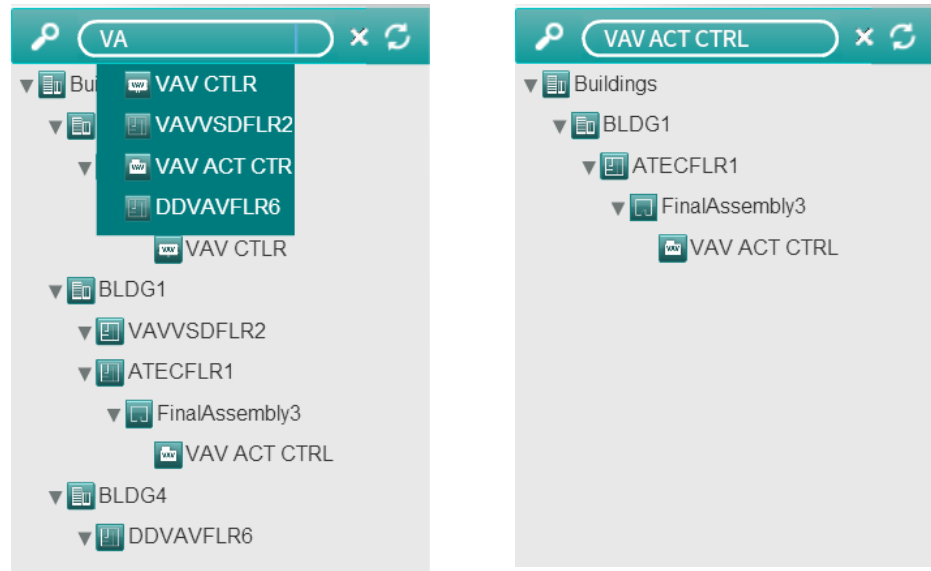
Icons representing the application type are displayed for each FLN Device. A default icon displays for a device if an application icon is not defined in the **ApplicationMC_Mapping.xml** file.



Searching the Navigation Tree

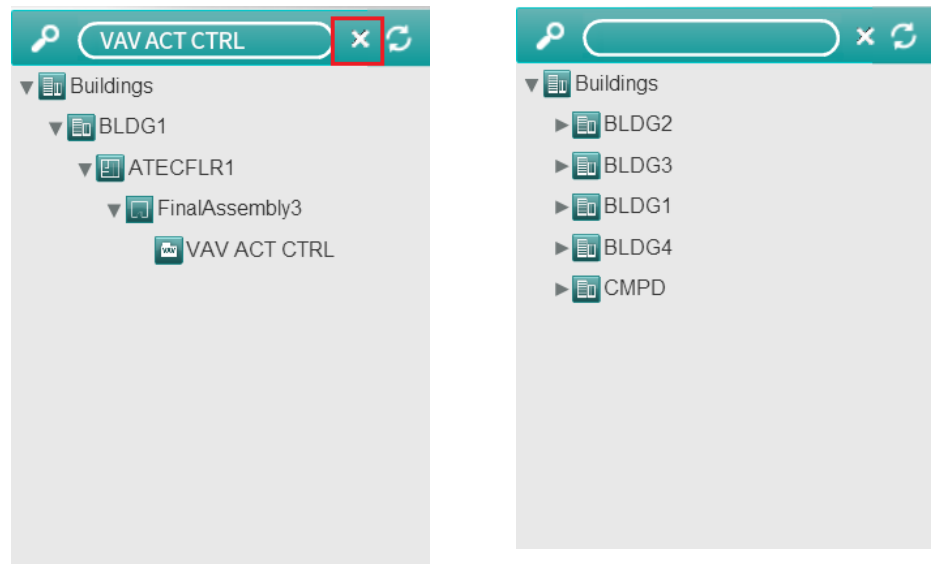
- To search the Navigation Tree for a specific FLN device, enter the search criteria in the search field above the Navigation Tree.

The tree only displays the devices matching the search criteria.



- To clear the search criteria, click the **Clear (x)** button.

The navigation tree collapses.



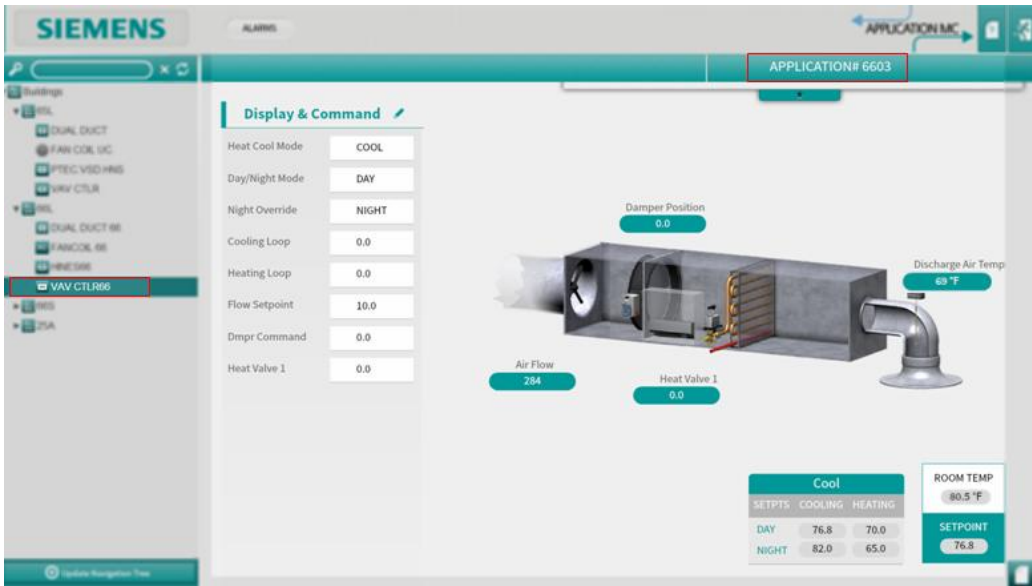
Creating and Refreshing the Navigation Tree

- To create or refresh the Navigation Tree, click the **Update Navigation Tree** button.

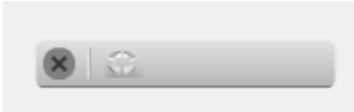
The Navigation Tree is updated to include devices that have been added to or removed from the host field panel since the last Update Navigation Tree operation.

Accessing the FLN Graphic

An application graphic is displayed in the Application Graphics pane when you select an FLN device in the Navigation Tree.

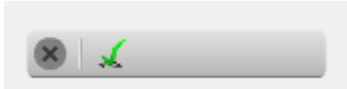


The Application Number displays in the graphic header.



As the graphic is loading, a progress bar displays:

Once the graphic has loaded, the progress bar indicates completion:



A graphic is not fully loaded until the background color of all value labels is white.

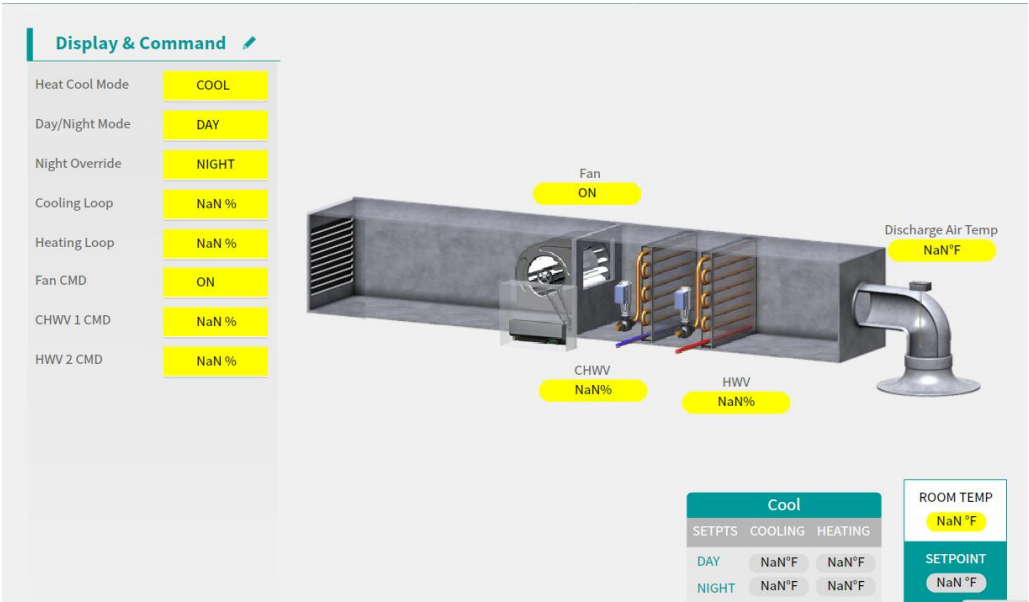


Figure 15: Graphic in the Process of Loading.

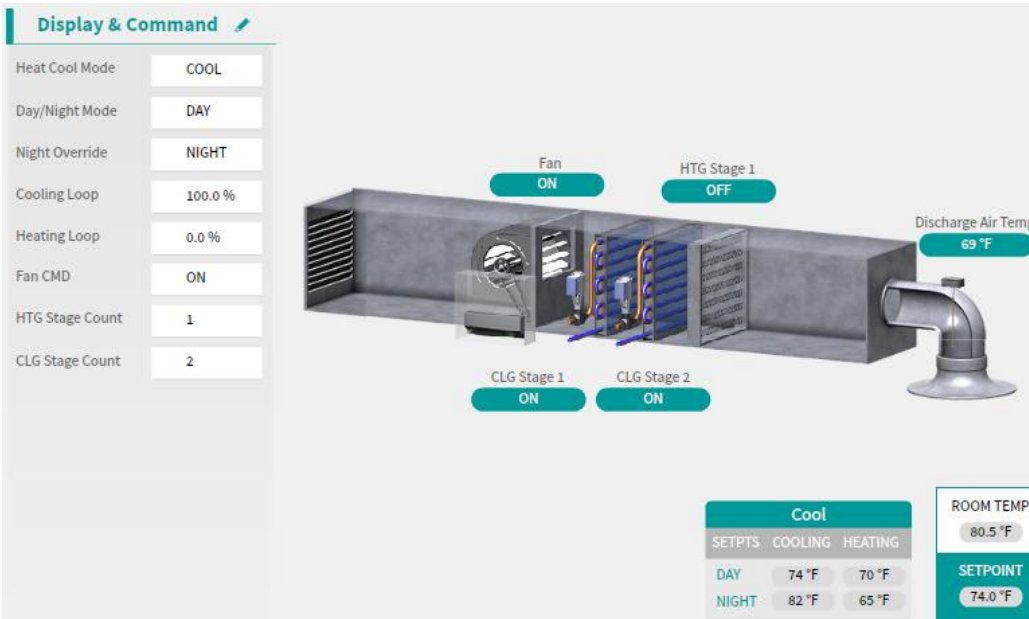
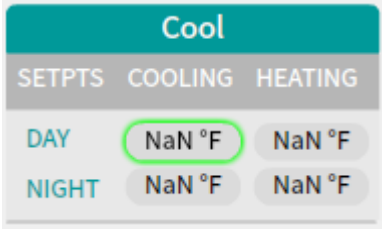


Figure 16: Graphic Finished Loading.

The application graphic is populated with data from the selected device. Any objects on the graphic which cannot be resolved with data from the device will display the error NaN (Not a Number).



Points that are Failed display with an orange background.



Figure 17: Graphic with Failed Point.

If the selected device has no available graphic, the following image displays:

No Graphic Found



Verify that the ApplicationMC_Mapping.xml file is properly formatted and contains the target application.
Verify that a graphic file with the correct file name exists on the USB Drive.
Please refer to the ApplicationMC User Guide for detailed instructions.

Figure 18: Selected Device has no Graphic.

Viewing and Commanding Points



NOTE:

You must have Point Command or Point Edit permission to command the value of device points from an Application MC graphic.

Certain points can be commanded from an application graphic.

- Points that are non-commandable are designed to prevent damage to equipment.

- Commandable points display with a green border when the cursor is moved over them.

Displaying the Application Notes

- To display the Application Notes, click the **Application Notes** button on the application graphic.

The screenshot displays the Siemens BACnet PTEC Unit Vent Controller interface. The top section, titled 'Display & Command', contains a list of controls on the left and a 3D unit diagram on the right. The controls include:

- Heat Cool Mode: COOL
- Day/Night Mode: DAY
- Night Override: NIGHT
- Cooling Loop: 100.0 %
- Heating Loop: 0.0 %
- Fan CMD: ON
- HTG Stage Count: 1
- CLG Stage Count: 2

The 3D diagram shows the unit with the following status indicators:

- Fan: ON
- HTG Stage 1: OFF
- CLG Stage 1: ON
- CLG Stage 2: ON
- Discharge Air Temp: 69 °F

Below the diagram is a 'Cool' table and a 'ROOM TEMP' box:

	SETPTS	COOLING	HEATING
DAY	74 °F	70 °F	
NIGHT	82 °F	65 °F	

ROOM TEMP: 80.5 °F
SETPOINT: 74.0 °F

The bottom section, titled 'SIEMENS', contains the following text:

BACnet PTEC Unit Vent Controller

Application 6575 - Heating and/or Chilled Water Cooling, ASHRAE Cycles I and II

Application Note

A red box highlights the 'Application Notes' button in the bottom right corner of the interface.

Viewing/Acknowledging Alarms


The **ALARMS** button in the Application MC Title pane displays an Alarm Report. You must be logged in with Alarm Read Only or higher permission to view the Alarm Report.

➤ To view the Alarm Report, click the **ALARMS** button.



The report displays a list of objects from the host field panel that are currently in the unacknowledged alarm state.


Point Name	EE Name	Description	Panel	Status	Event Time	Acknowledge
AMCDLFB-FAIL.AI			APPLICATIONMC	*ASF*un.ACK	3-12-2015 10:42:02 AM	Acknowledge
BAC_13035_AV_0	APPLICATIONMC:an.B		APPLICATIONMC	*F*un.ACK	Unknown	Acknowledge
BAC_13052_AO_00	APPLICATIONMC:FC		APPLICATIONMC	*AS*un.ACK	3-12-2015 11:45:10 AM	Acknowledge
VAV CTRL ROOM TEMP	APPLICATIONMC:VAV		APPLICATIONMC	*F*un.ACK	Unknown	Acknowledge

- 1 Host field panel
- 2 **Alarms button.** Displays the point in alarm.
- 3 **Point Name column.** Displays the name of the point currently in alarm.
- 4 **EE Name column.** Displays the name of the Event Enrollment Object currently managing alarming for the point.
- 5 **Description column.** Displays the point description.
- 6 **Panel column.** Displays the panel in which the point or Event Enrollment Object in alarm exists.
- 7 **Status column.** Displays the alarm status of the point.
- 8 **Event Time column.** Displays the time of the most recent alarm event for the displayed point.
- 9 **Acknowledge button.** Allows you to acknowledge the alarm.

- To view the alarm event details, click the **Event Details**  button.

A pop-up displays the alarm event details.

Event Time		Acknowledge	
9-22-2014 2:13:53 PM 		Acknowledge	
10-07-2014 3:01:29 PM 		Acknowledge	
9-22-2014 2:13:54 PM		Event Time	
10-07-2014 3:01:28 PM		Ack Time	
Alarm:	10-07-2014 3:01:29 PM		
Fault:			
Normal:	10-07-2014 3:01:21 PM		

- To acknowledge an alarm, click the **Acknowledge**  button.

An alarm acknowledgement is sent to the field panel. A progress indicator displays.


Once the alarm is acknowledged, it is removed from the Alarm Grid.



NOTE:

You must be logged in with Alarm Command or higher permission to acknowledge an alarm.

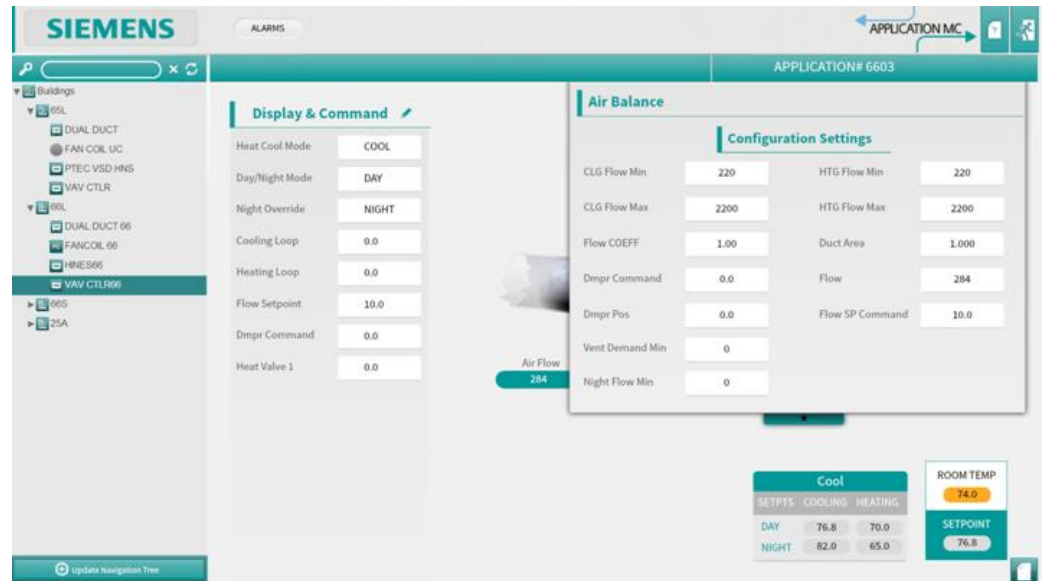
Logging Off

- Click the **Logoff**  button to properly close the graphic.

VAV Balancing and Heat Pump Configuration for Applications

Flow-related points can be accessed from the configuration drop-down window in VAV or Heat Pump applications, such as Terminal Box, VAV with Variable Speed Drive, Dual Duct, and Heat Pump controllers.

- To access the drop-down window, click the window handle.



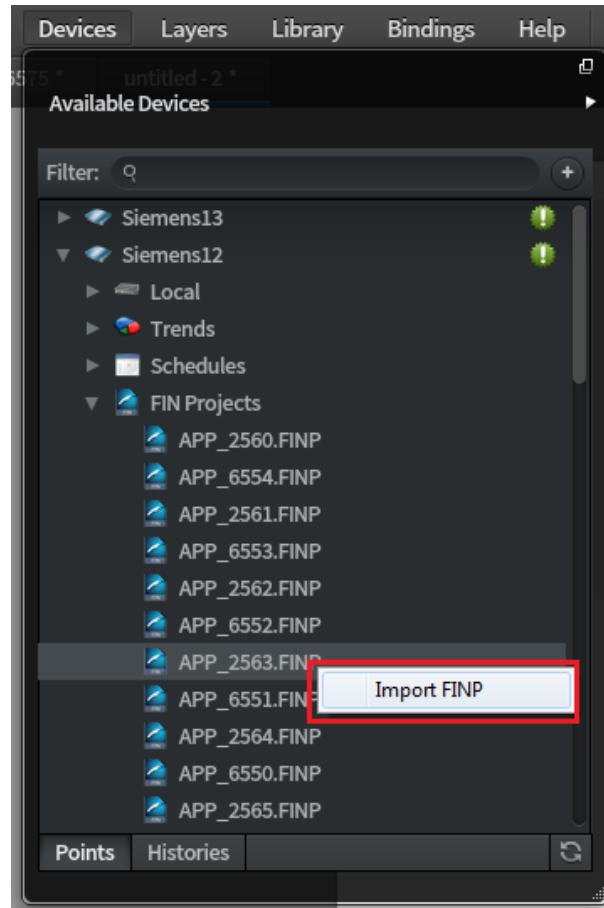
To close the window, click the handle again.

Customizing Application MC

The Application MC FIN Builder project is a combination of several FIN Builder components. The main **.finp** file contains components and logic for the Title pane, Navigation pane, and Application Graphic pane. In addition, **app_NNNN.FINP** files (*where NNNN is the FLN device's application number*) contain the application graphics for each supported FLN device application.

To customize Application MC.finp or one of the application graphics (app_NNNN.FINP), do the following steps:

1. Start FIN Builder and connect to the field panel that hosts the graphic you want to customize.
2. Expand the **FINP Projects** folder for that panel.
3. Right-click the graphic you want to customize and select **Import FINP**.



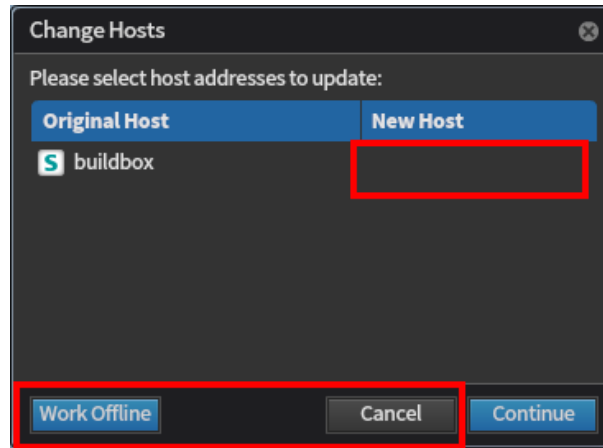
4. Wait for the FINP file to be uploaded from the panel.
5. Do one the following when the **Change Hosts** window displays:
 - Select **Cancel** to cancel the operation and close the graphic file.
 - Select **Work Offline** if you plan to modify the graphic without being connected to the host panel.



NOTE:

*Do not select **Continue**, which will relativize the graphic to the original field panel used for creation. The graphic will not function properly once it is published to the destination panel.*

6. Double-click the cell under the **New Host** column and enter the IP address of the field panel where you plan to publish the graphic.
7. Click **Continue**.



8. Make modifications to the graphic.
9. From the **File** menu, select **Publish** to publish the modified graphic to the desired field panel.



WARNING

Modifying the ApplicationMC.finp graphic is not recommended.

This is the parent graphic for Application MC and it will be overwritten the next time Application MC is deployed.

When customizing an application graphic, publish the graphic using a **different** name than the original to ensure that your graphic will not be overwritten when a newer version of Application MC is deployed. For example, **APP_6575.finp** becomes **Custom_APP_6575.finp**.

Customizing applications and customizing application graphics involves working with the **ApplicationMC_Mapping.xml** file. See the *Application MC Mapping File* [→ 69] section for information on the different options for customization.



WARNING

Once an Application MC graphic has been modified, the graphic is treated as a Kiosk graphic rather than an Application MC graphic.

Without the appropriate license, the graphic will display with an **UNLICENSED** watermark. See the *FIN Builder Prerequisites* section for more information.

Application MC Mapping File

The Application MC mapping file is an XML-formatted file that Application MC uses to determine which graphic, icon, and *Application Notes* document to display for each application. The mapping file may also be used to add customized applications to the range of supported applications.

The mapping file contains an *[Application]* element for each application. The following figure is an example of the *[Application]* element for Application **2560 – VAV Cooling Only**. The legend describes the properties that are contained within each *[Application]* element .

```
<Application ApplicationNumber="2560" IconFile="VAV1_ICON.PNG" ApplicationGuide="APP_2560_PDF.PDF" ApplicationDescription="VAV...">
  <Graphic GraphicName="APP_2560"/>
</Application>
```

The diagram shows an XML snippet for an application. Five numbered callouts point to specific parts of the code: 1 points to the value '2560' in ApplicationNumber; 2 points to the value 'VAV1_ICON.PNG' in IconFile; 3 points to the value 'APP_2560_PDF.PDF' in ApplicationGuide; 4 points to the value 'VAV...' in ApplicationDescription; and 5 points to the value 'APP_2560' in the GraphicName attribute of the nested <Graphic> element.

- 1 **ApplicationNumber.** The application number that describes this element in the mapping file.
- 2 **IconFile.** The icon image that displays in the Navigation Tree to indicate the application type (i.e. Heat Pump, VAV, and so on.)
- 3 **ApplicationGuide.** The name of the Application Notes .pdf file that will display for the application.
- 4 **ApplicationDescription.** A short description displayed in the selection window during Application MC deployment.
- 5 **GraphicName.** The graphic that displays for the application.

If you are not customizing any applications and you are not making changes to the graphics supplied with Application MC, then you do not need to modify the mapping file. If you plan to customize an application or would like to modify an existing Application MC graphic, see the *Modifying the Application MC Mapping File* [→ 71] section for details.

When to Modify the Application MC Mapping File

The Application MC mapping file is deployed to the field panel as part of Application MC deployment from Launch Pad. For most installations, the default deployment will be sufficient; however, if you are making any of the following changes, the mapping file must be modified in order for Application MC to function properly:

- Customizing an application and assigning a new application number (for example, adding additional points or PPCL to a PTEC device).
- Using FINBuilder to customize one of the application graphics supplied with Application MC.
- Using FINBuilder to create a custom application graphic.
- Adding a custom icon for use in the Application MC Navigation Tree.
- Adding a custom application note.

Application MC uses an .xml file to map application graphics. If graphics are modified, Application MC also provides backup files in case you need to return to the previous version. The following figure shows where these files are stored in the field panel, and the legend describes the purpose for each xml file.

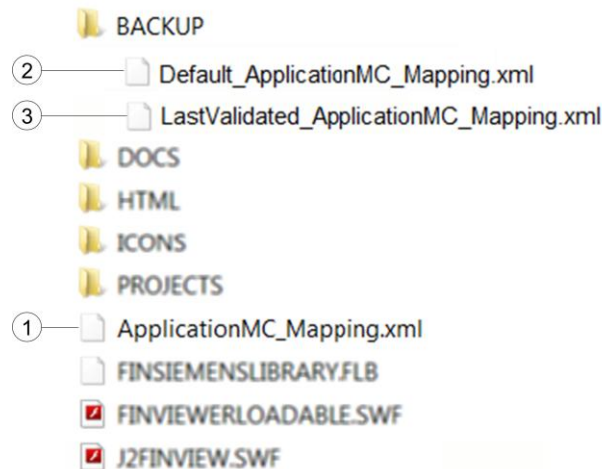


Figure 19: Application MC Mapping File Locations.

- 1 The **ApplicationMC_Mapping.xml** file is deployed to the **B:\FIN** folder of the target field panel. Once Application MC has been deployed, you can remove the USB (**B:**) drive from the field panel and connect it to the computer. When finished with modifications, the USB drive can be removed from the computer and returned to the field panel.
- 2 The **BACKUP** folder contains a **Default_ApplicationMC_Mapping.xml** file, which is provided in case you must return to the last “Deployed” version of the mapping file.
- 3 If you modify the mapping file and then deploy a newer version of Application MC, the **BACKUP** folder will also contain a **LastValidated_ApplicationMC_Mapping.xml** file. This file is provided in case you need to return to the last validated copy of the “Merged” file.

Each time Application MC is deployed, the deployed mapping file is merged with the existing mapping file. This merges any new XML elements included with the new deployment into the existing mapping file. New elements are always inserted after any existing elements so that any modifications you have made are preserved.

Modifying the Application MC Mapping File

When customizing the Application MC mapping file, you may need to use a combination of the procedures in this section to achieve all the desired customizations.

Program Required

The procedures in this section require a text editor or XML editor. Siemens Industry, Inc. suggests *Notepad++*, which is widely available on the Web.



NOTE:

Some XML editors automatically sort properties. This will not adversely affect your modifications, however the examples in the following sections may show the properties ordered differently than in the editor you are using. All examples in this guide were captured while using *Notepad++*.

Displaying the Default Graphic for a Customized Application

Follow this workflow if you have made modifications that result in a new application number and you would like to use the default graphic supplied with Application MC for the original application number. For example, you have added additional points or PPCL to a PTEC device with an original application number of 6575 and have now assigned it a custom application number of 12575. You want the Application MC graphic displayed for Application 6575 to now also display for devices with Application 12575.



NOTE:

This procedure outlines using the USB drive to transfer the **ApplicationMC_Mapping.xml** file to your computer. You can also use FTP to transfer the file to your computer, and then transfer the file back on the field panel once changes are made.

1. Verify that you have deployed Application MC to the field panel.
2. Remove the USB (B:) drive from the field panel.
3. Connect the USB drive to your computer.
4. On your computer open Windows Explorer and navigate to the **FIN** folder of the USB drive.
5. Open the **ApplicationMC_Mapping.xml** file with your preferred text/XML editor.
6. In the XML file, navigate to the original **[Application]** element.

```
<Application ApplicationNumber="6574" IconFile="HEATPUMP_ICON.PNG" ApplicationGuide="APP_6574_PDF.PDF" ApplicationDescription="Multiple...">
  <Graphic GraphicName="APP_6574"/>
</Application>
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
<Application ApplicationNumber="6576" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6576_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6576"/>
</Application>
```

7. Copy the entire **[Application]** element and paste it after the last **[Application]** element. Be careful not to paste it after the **[/ApplicationMC_Mapping]** element.

```
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
```

8. Change the **ApplicationNumber** property to the application number of your customized application.

```
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
<Application ApplicationNumber="12575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
```

9. Save the XML file to the **FIN** folder in the USB drive.
10. Put the USB drive back into the field panel.

Displaying a Customized Graphic for a Default Application

Follow this workflow if you have modified the default graphic or have created a FINBuilder custom graphic for one of the standard applications deployed with Application MC. For example, you have modified the application graphic for Application 6575.

1. Verify that you have deployed Application MC to the field panel.
2. Remove the USB (Drive B) from the field panel.
3. Connect the USB drive to your computer.
4. On your computer open a windows browser and navigate to the FIN folder of the USB drive.
5. Open the ApplicationMC_Mapping.xml file with your preferred text/XML editor.
6. In the XML file, navigate to the desired [Application] element.

```
<Application ApplicationNumber="6574" IconFile="HEATPUMP_ICON.PNG" ApplicationGuide="APP_6574_PDF.PDF" ApplicationDescription="Multiple...">
  <Graphic GraphicName="APP_6574"/>
</Application>
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
<Application ApplicationNumber="6576" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6576_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6576"/>
</Application>
```

7. Copy the Graphic node and paste it above the existing node.

```
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
  <Graphic GraphicName="APP_6575"/>
</Application>
```

8. Rename the graphic file name to the name of the custom graphic you want to display.

```
<Application ApplicationNumber="6575" IconFile="UNITVENT_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="My_Custom_APP_6575"/>
  <Graphic GraphicName="APP_6575"/>
</Application>
```


9. Save the XML file to the **FIN** folder in the USB drive.
10. Put the USB drive back into the field panel.

Customizing the Icon Displayed in the Navigation Tree

Icons are supplied with Application MC for the following application types:

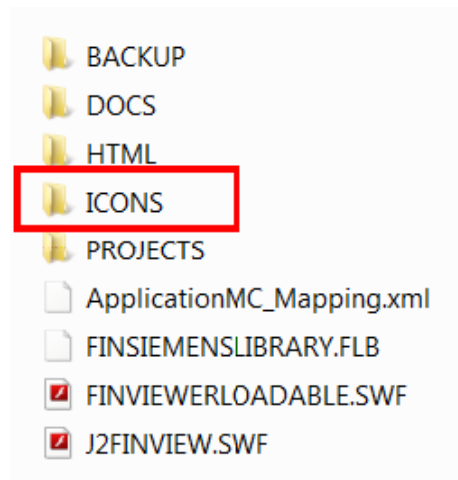
- Fan Coil
- Heat Pump
- Unit Vent
- VAV
- AHU

This icon is displayed in the Navigation Tree and indicates the application type (i.e. Unit Vent, Heat Pump, and so on.)

	<p>CAUTION</p>
	<p>If creating a custom icon, each icon must be a 69 x 69 pixel .png image for the Navigation Tree to display correctly.</p> <p>Siemens Industry, Inc. suggests the following naming convention: XXXX_ICON.PNG where XXXX identifies the application, such as RTU_ICON.PNG for a Roof Top Unit application icon.</p>

Follow this workflow if you would like to create a custom Icon.

1. Verify that you have deployed Application MC to the field panel.
2. Remove the USB (Drive **B**) from the field panel.
3. Connect the USB drive to your computer.
4. On your computer, open a windows browser and navigate to the **FIN\ICONS** folder of the USB drive.
5. Paste your customized Icon file in this folder.



6. Open the ApplicationMC_Mapping.xml file with your preferred text/XML editor.
7. In the XML file, navigate to the desired *[Application]* element.
8. Update the **IconFile** property to the name of your customized Icon file.
In the following example, the icon file **RTU_ICON.PNG** has been added to the

Icons folder and the mapping file is being changed to use that icon for Application 13000.

```
<Application ApplicationNumber="13000" IconFile="RTU_ICON.PNG" ApplicationGuide="APP_6575_PDF.PDF" ApplicationDescription="Heating...">
  <Graphic GraphicName="APP_6575"/>
</Application>
```

9. Save the XML file to the **FIN** folder in the USB drive.
10. Put the USB drive back into the field panel.

Customizing the Application Note for an Application

The most current version of Application Notes at the time of release is included in the Application MC deployment. Follow these instructions if you want to replace these application notes with a newer or custom version.



⚠ CAUTION

When creating custom Application Notes, the file must be a file type understood by your computer so that the Application Note link displays the Application Notes correctly.

For example, do not create a custom Application Note in Microsoft Word format if your computer does not have a version of Microsoft Word installed that can open the file successfully.

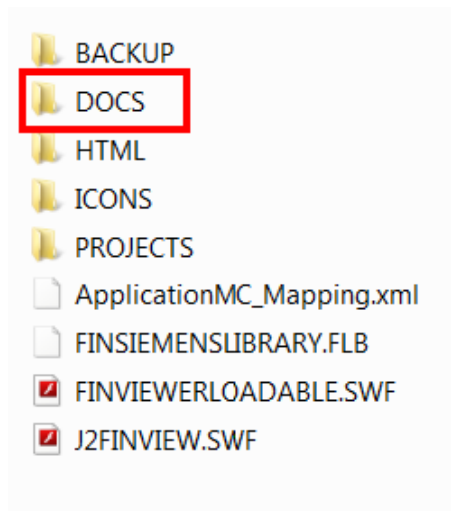
To be consistent with other Application Notes deployed with Application MC, Siemens Industry, Inc. suggests using the .pdf format and adhering to the following naming convention: **APP_NNNNN_PDF.PDF**

Where:

NNNNN identifies the application number, such as APP_13000_PDF.

Keep in mind that you do not need to provide custom application notes when customizing an application. The mapping file allows you to indicate that you want to use the Application Notes from the existing application for the customized application. Follow this workflow if you would like to create a custom Application Note.

1. Verify that you have deployed Application MC to the field panel.
2. Remove the USB (Drive B) from the field panel.
3. Connect the USB drive to your computer.
4. On your computer open a windows browser and navigate to the **FIN\DOCS** folder of the USB drive. Paste your customized Application Note file in this folder.



5. Open the ApplicationMC_Mapping.xml file with your preferred text/XML editor.
6. In the XML file, navigate to the desired *[Application]>* element.
7. Update the ApplicationGuide property to the name of your customized Application Notes file. In this example, Application Note APP_13000_PDF.PDF has been added to the DOCS folder and the mapping file has been changed to use that Application Note for Application 13000.

```
<Application ApplicationNumber="13000" IconFile="RTU_ICON.PNG" ApplicationGuide="APP_13000_PDF.PDF" ApplicationDescription="Heating...">  
  <Graphic GraphicName="APP_6575"/>  
</Application>
```

8. Save the XML file to the **FIN** folder in the USB drive.
9. Put the USB drive back into the field panel.

FLN Device and Network Set-up

In order to create the hierarchy of the Application MC Navigation Tree, the FLN device description properties must be configured in a specific way. This section describes the format required for the description properties and outlines how to change the change the description to use a different control diagram.

Setting up the Description Property using WCIS

The hierarchy of the Navigation Tree is determined by the **Description** field of the FLN device. This field must be configured using WCIS. The **Description** field can contain up to 60 alphanumeric characters. There must be no spaces in the text of each segment and each segment must be separated by a period, whether or not there is content in the segment. All spaces will be replaced with underscores and must be formatted as follows:

D1.D2.D3\$#

Where:

- **D1** is the first segment of the **Description** property is required. At a minimum, the **Description** string must contain: **D1..**
- All segments (**D1**, **D2**, **D3**) must be represented, but the optional fields do not need to contain content.
- (*Optional*) **D2**

- (Optional) **D3\$#** (the \$# parameter is for Unit Vent applications only.) Since Unit Vent applications contain several Control Diagrams you need to specify which Control Diagram should display. Therefore, type **\$#** where **#** is the number of the Control Diagram as specified in the *Application Guide*. For example, **\$2** would display Control Diagram 2 (Control Diagram 1 is the default).

The following examples show correctly formatted **Description** fields:

- **BUILDING1.FLOOR2.ROOM203\$2**
- **THOMAS_HALL..LOBBY\$2**
- **THOMAS_HALL..\$2**
- **KBuilding.Flr2.RM201**



NOTE:

Only devices with correctly formatted description strings, which have been added to the host field panel database, are added to the navigation tree.

The layout of the navigation tree is as follows:

Buildings

D1 (Suggestion – Building) - Required

D2 (Suggestion – Floor) - Optional

D3 (Suggestion – Room)

Device1

Device2

...

Device *n*


Changing the Control Diagram in the Description Property using WCIS

If the control diagram in the description of a Unit Vent controller is incorrect, and the Unit Vent was already discovered by Application MC, you can change the description to use a different control diagram.



NOTE:

The **Description** field can also be changed using the BACnet Object Browser.

1. Connect to the PTEC with WCIS, either directly or through the room temperature sensor.
2. Select **Device > Device Properties**.
3. Edit the **Description** field.
4. Reset the PTEC by selecting **Reset** and **Reset App**.
5. If necessary, log on to Application MC.
6. Click the **Update Navigation Tree**  button.

7. To display the correct control diagram, select the Unit Vent with the changed description (even if it is already selected).

Deploying Application MC

Application MC is deployed by selecting **Deploy Application MC** from the **Tools** menu in Launch Pad. See the *Launch Pad User Guide* (145-1005) for more information.

Appendix A - Troubleshooting and Error Management

- BACnet Field Panel Web Server must be enabled.
- Appropriate licenses must be installed.
- Panel can be pinged successfully using the ping command.
- Applications must not be failed.
- Failed points display as orange.
- The **ApplicationMC_Mapping.xml** file is up-to-date with custom applications.
- The **ApplicationMC_Mapping.xml** is free of formatting errors.

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