Module 2

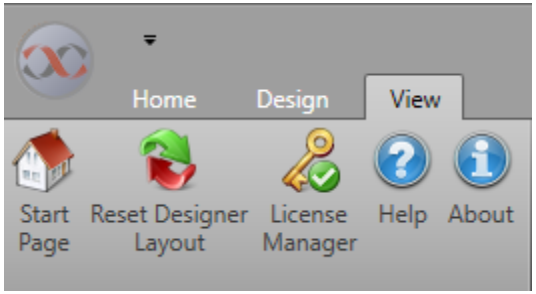
Designer Tools

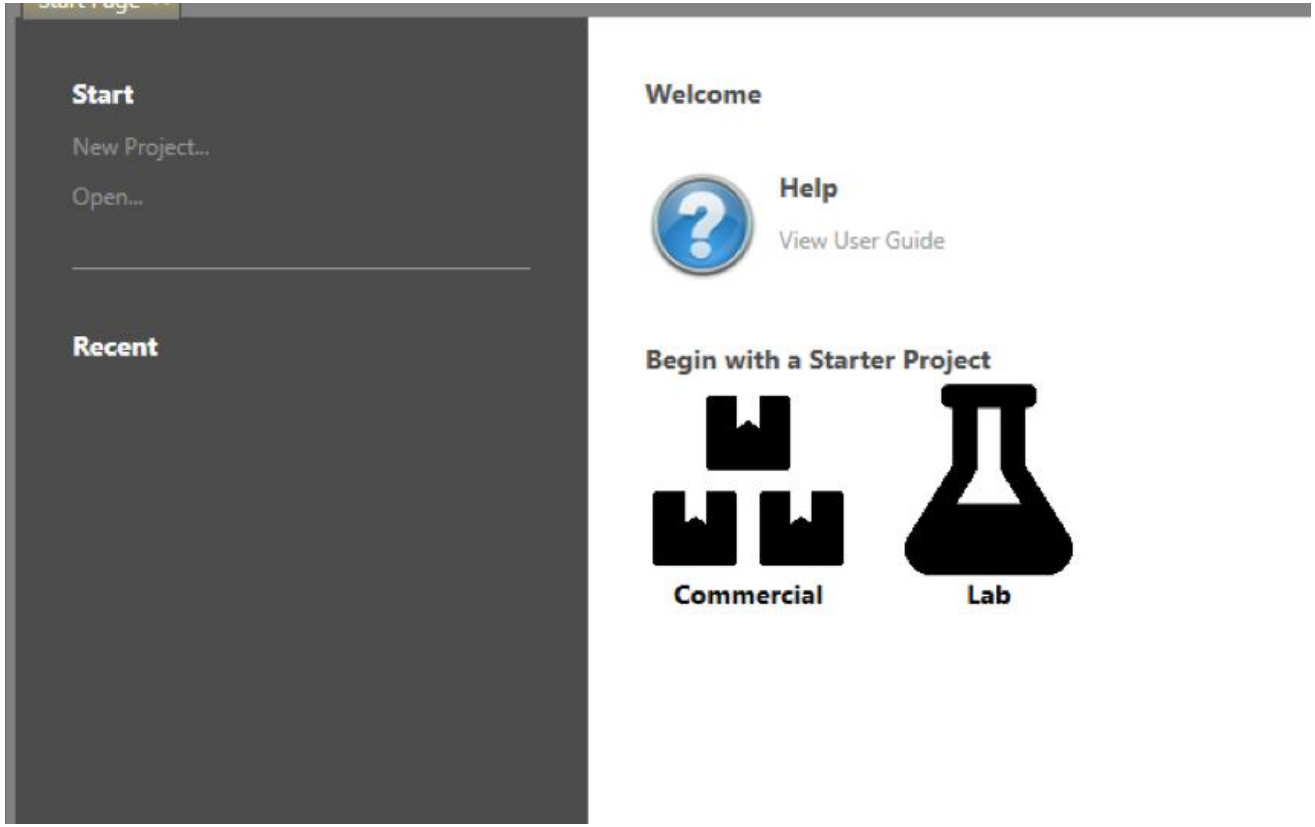
IPFUSION

Project Creation

Start Page

- Opens when starting Designer
- Can be accessed from the **View** tab
- Project management

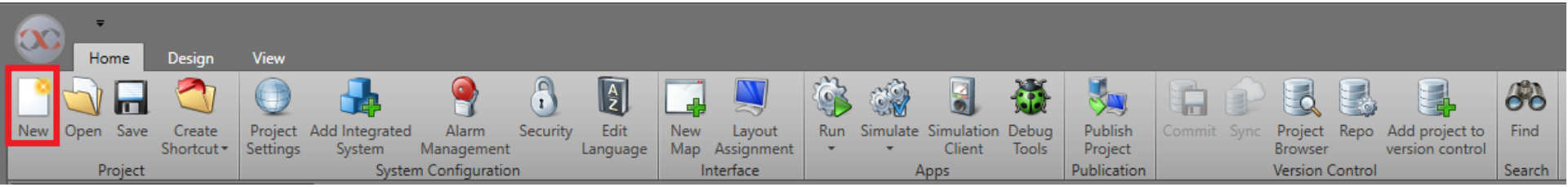


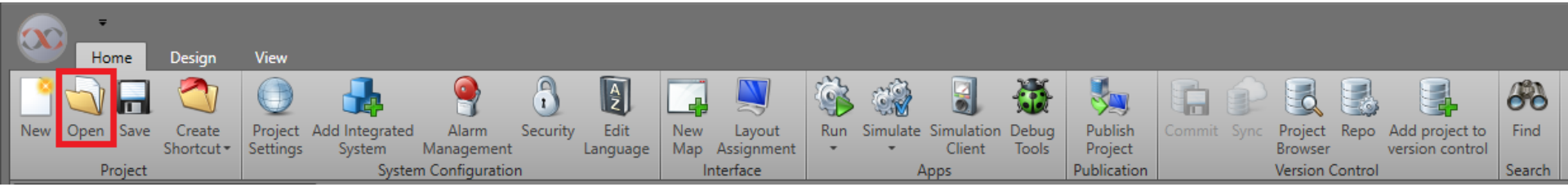


IPFUSION

Home Tab — Project

- **New** — Create new project
- **Open** — Open existing project

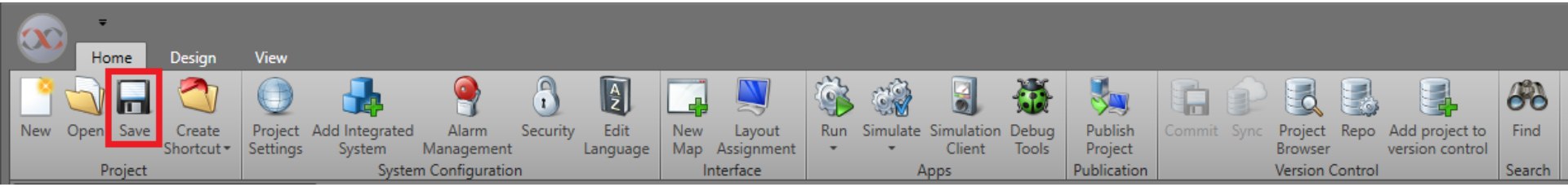




IPFUSION

Home Tab — Project

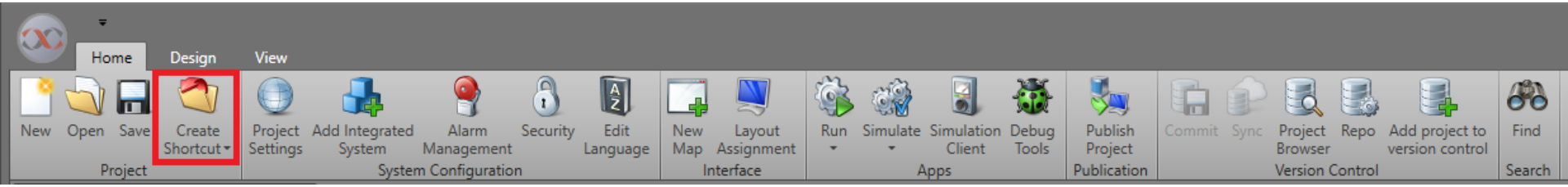
- **Save**
  - Save current project

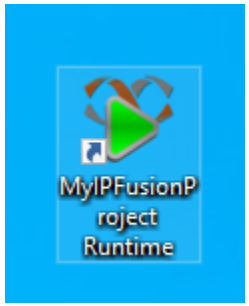


IPFUSION

Home Tab – Project

- **Create Shortcut**
  - **Designer**: Launches Designer and automatically loads the current project
  - **Runtime**: Launches Runtime and automatically loads the current project
  - **Simulation**: Launches Runtime in simulation mode and automatically loads the current project

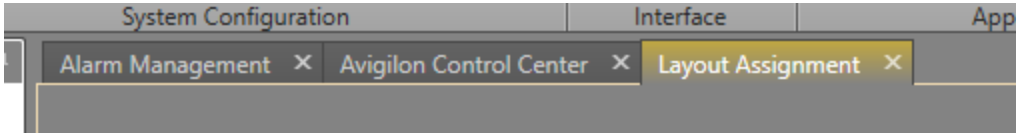




IPFUSION

Design Tabs

- Most tasks are performed in tabs



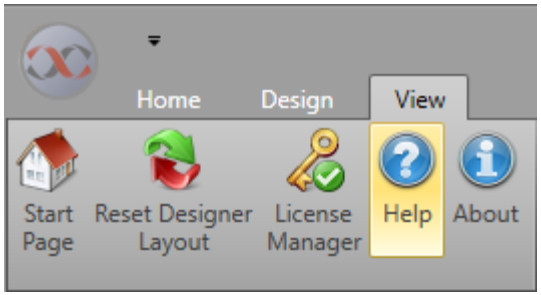
IPFUSION

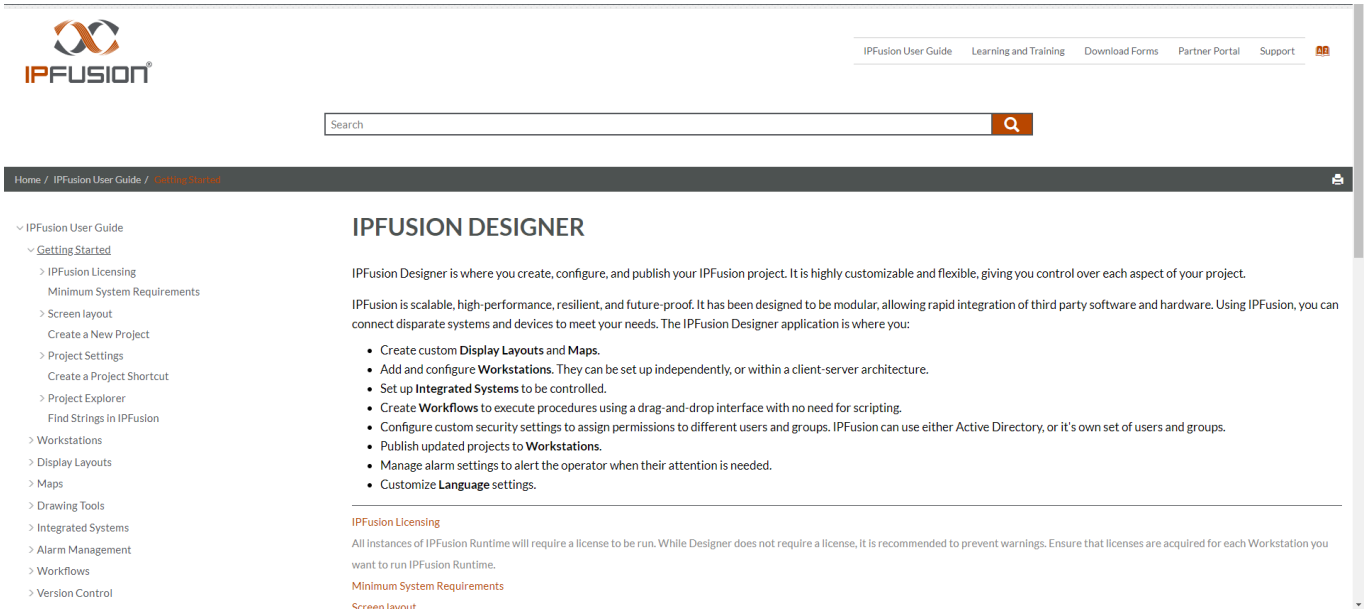
IPFusion Help

IPFUSION

View Tab – Help

- Open Designer user guide
- F1 Context-sensitive help

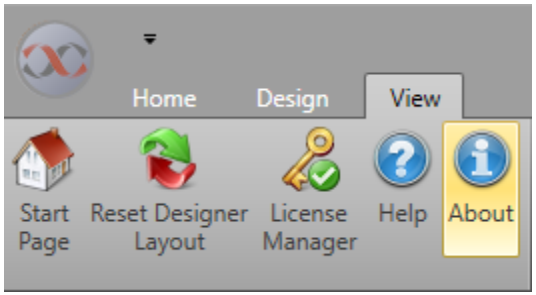


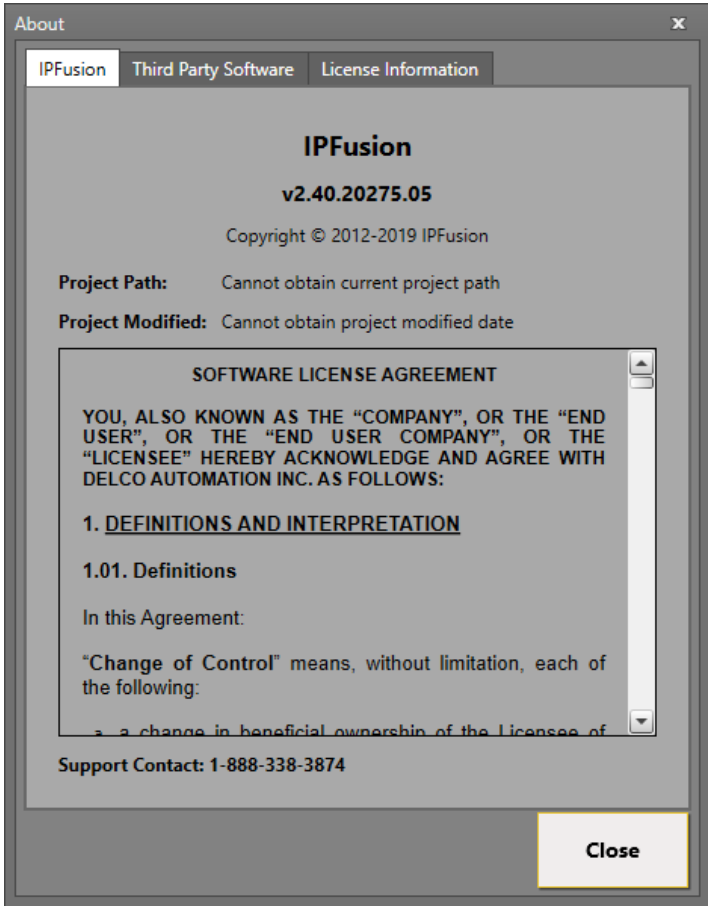


IPFUSION

View Tab – About

- Open IPFusion Designer License Information window





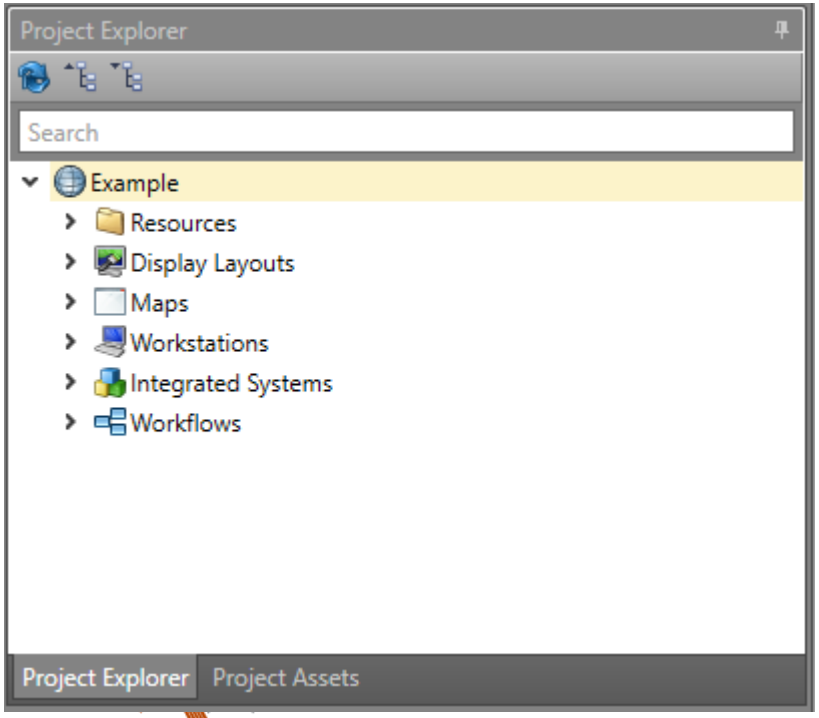
IPFUSION

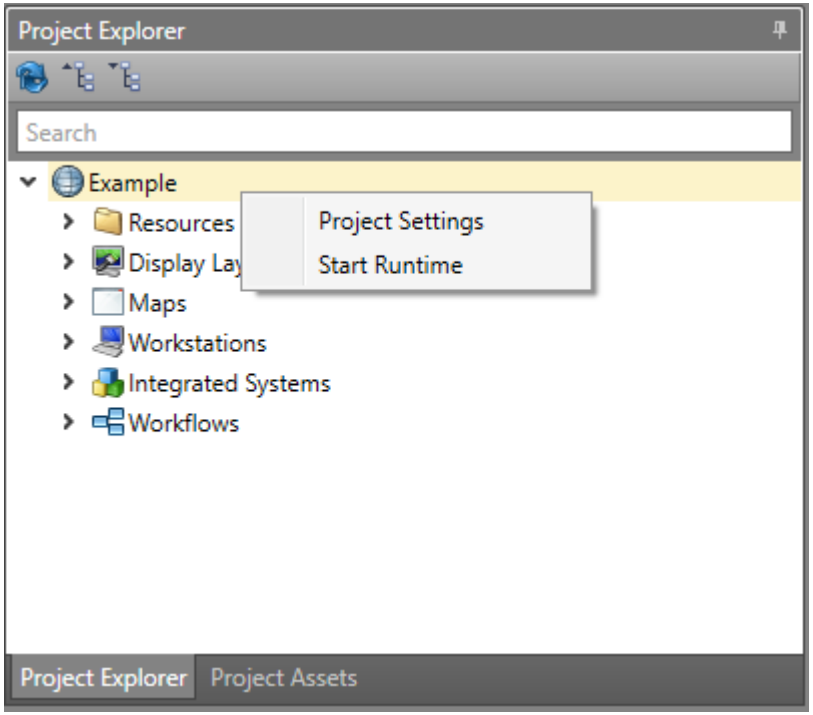
Project Explorer

IPFUSION

Project Explorer – Project

- Top level of **Project Explorer**, contains all other elements
- Right click access to settings and Runtime

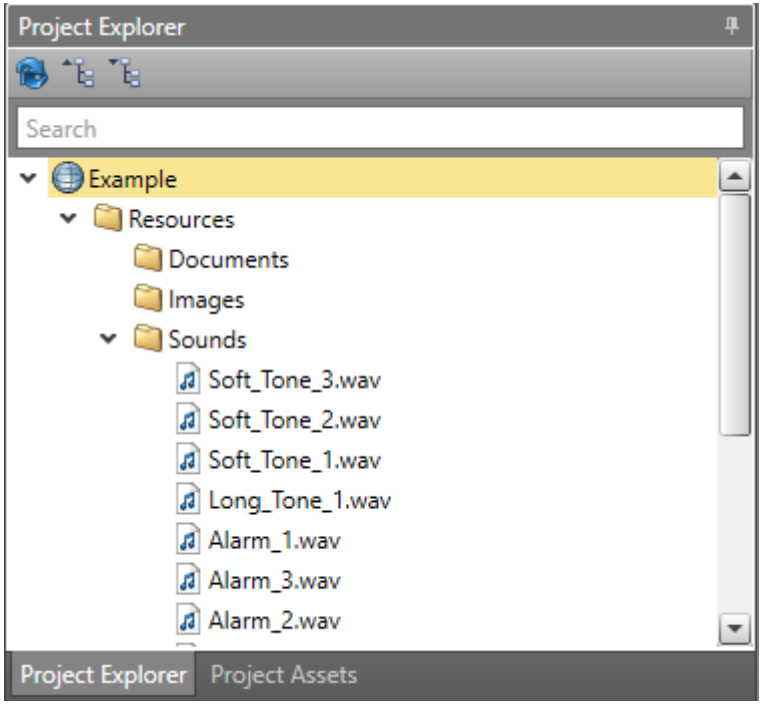


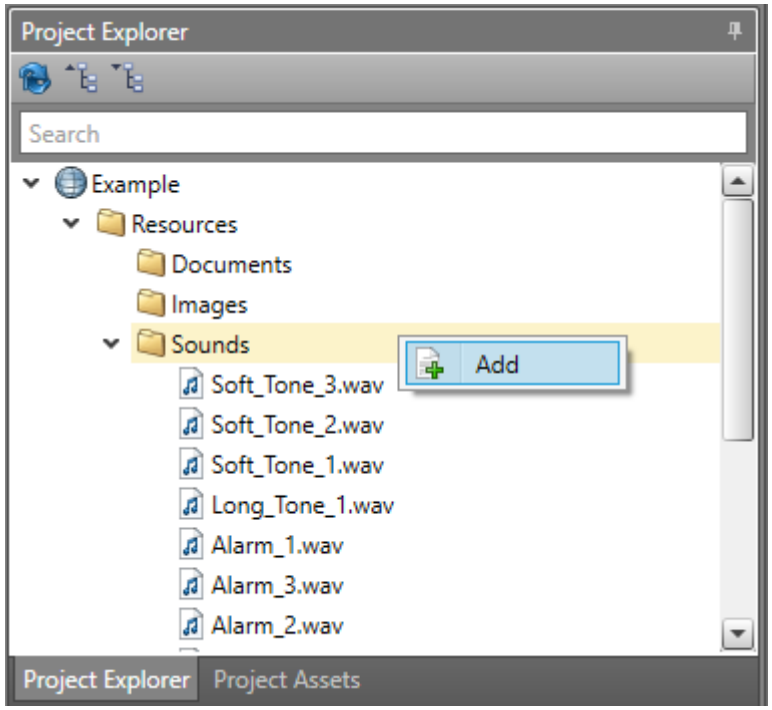


Right-click menu

Project Explorer – Resources

- Add and store files for use throughout the project





IPFUSION

Right-click menu

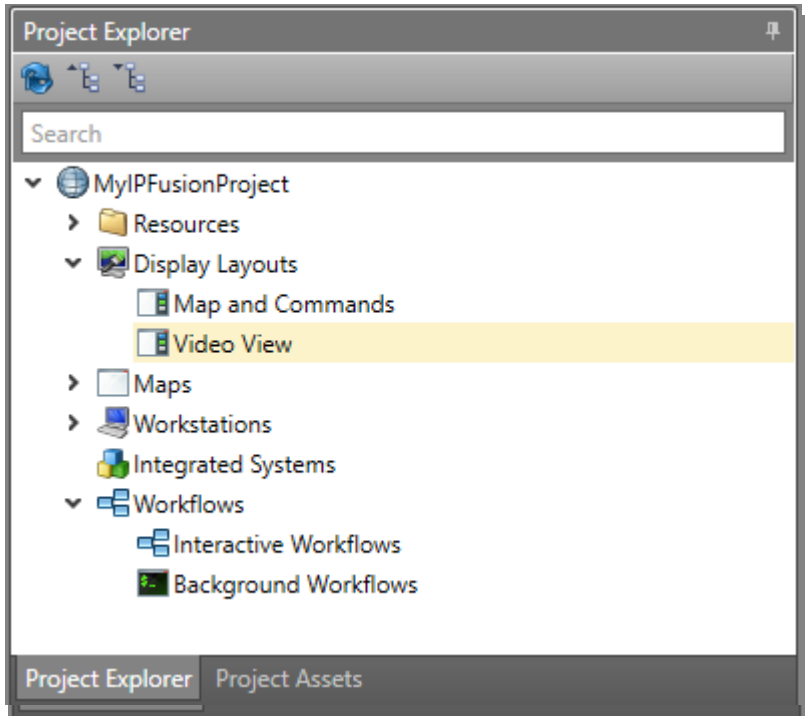
Project Explorer – Resources

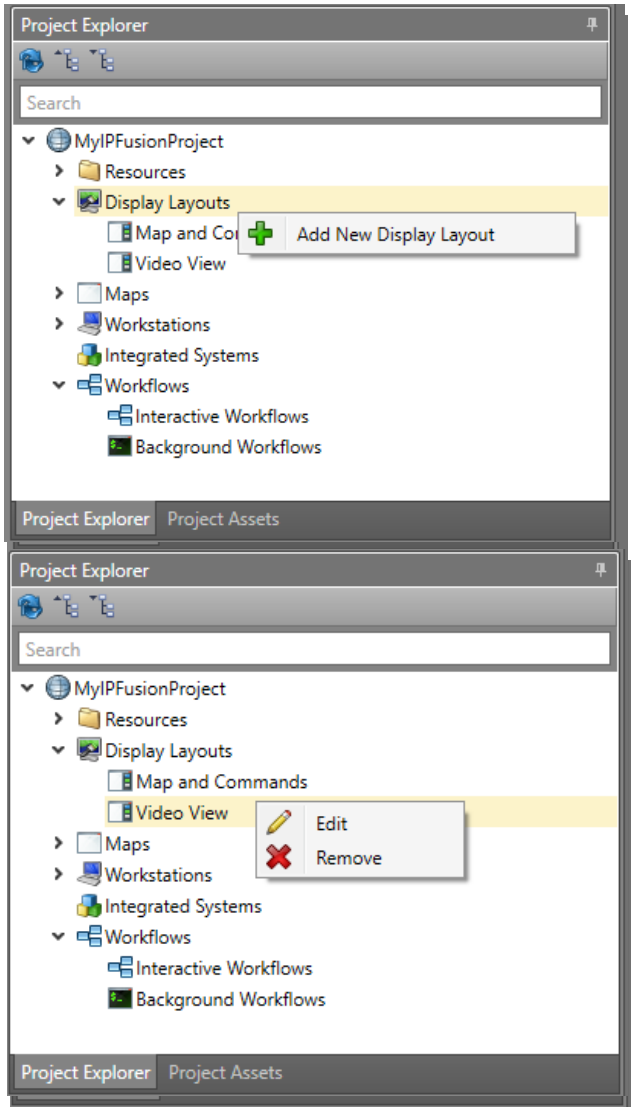
- **Documents**
  - Some integrated systems require configuration files uploaded here
- **Images**
  - Used in many places such as map backgrounds and icon images
- **Sound Files**
  - Used for alarms

IPFUSION

Project Explorer – Display Layouts

- Add and **Display Layouts**

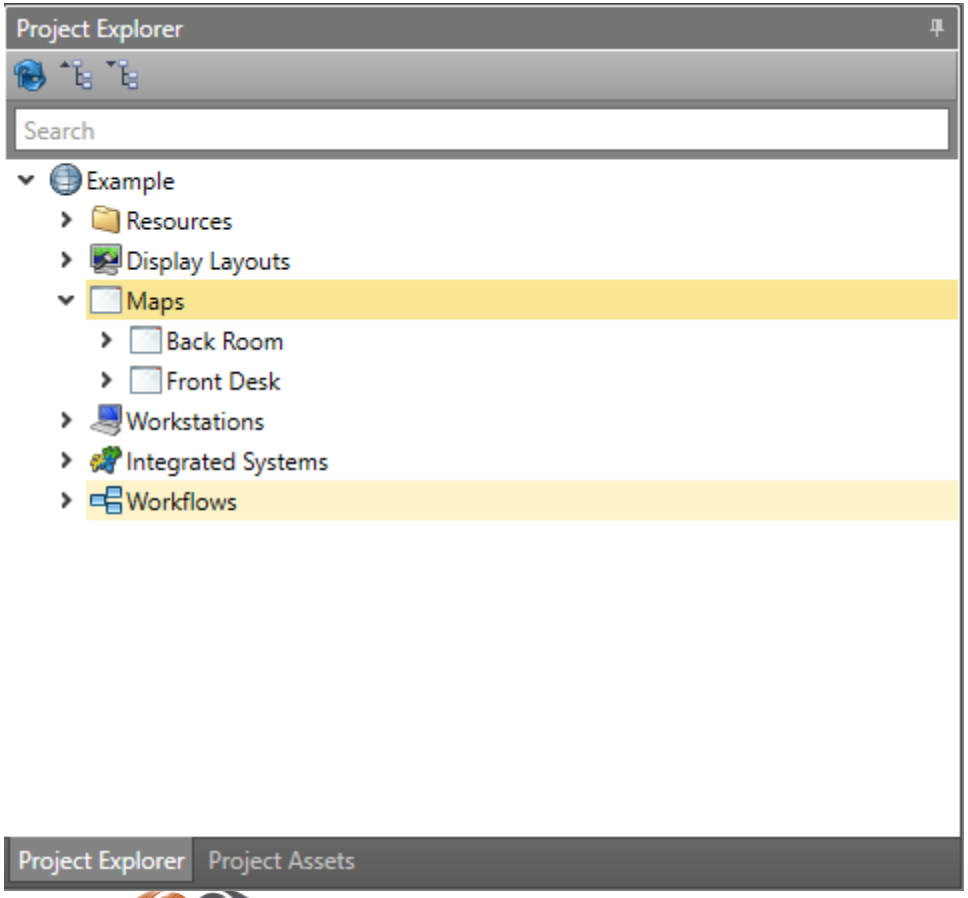


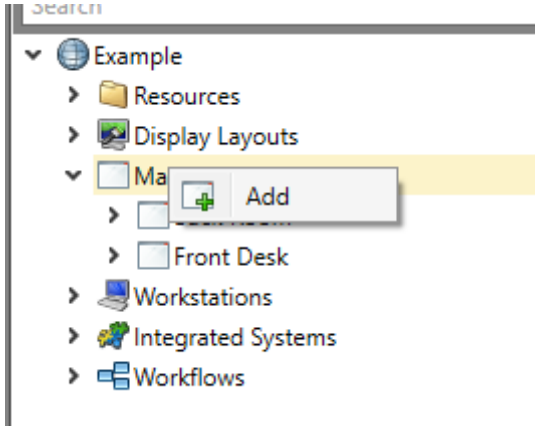


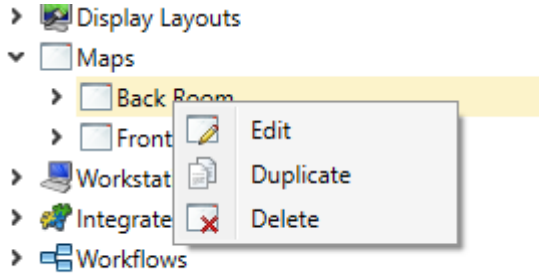
IPFUSION

Project Explorer – Maps

- Add and manage **Maps**



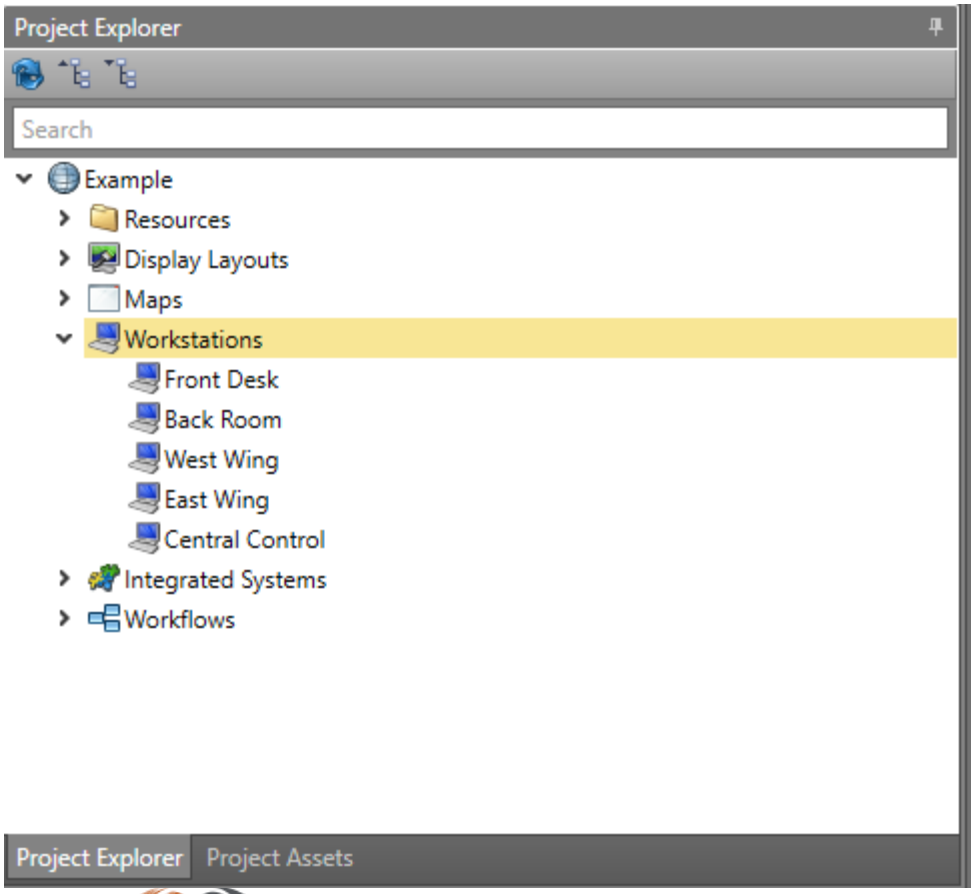


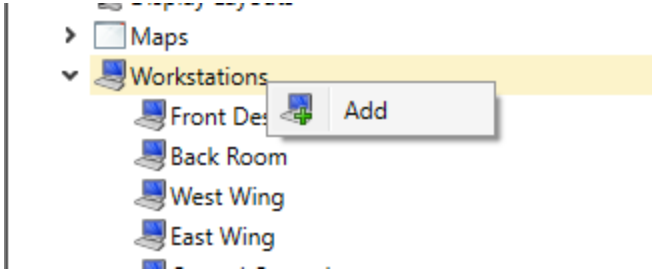


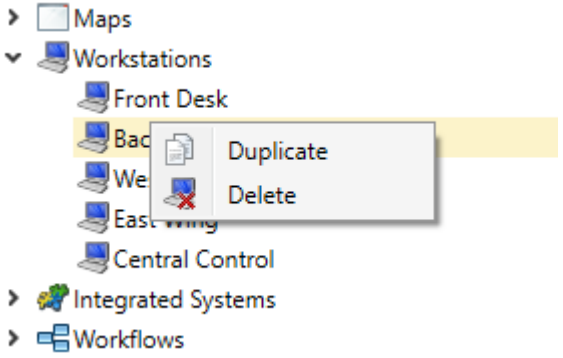
IPFUSION

Project Explorer – Workstations

- Add and manage **Workstations**



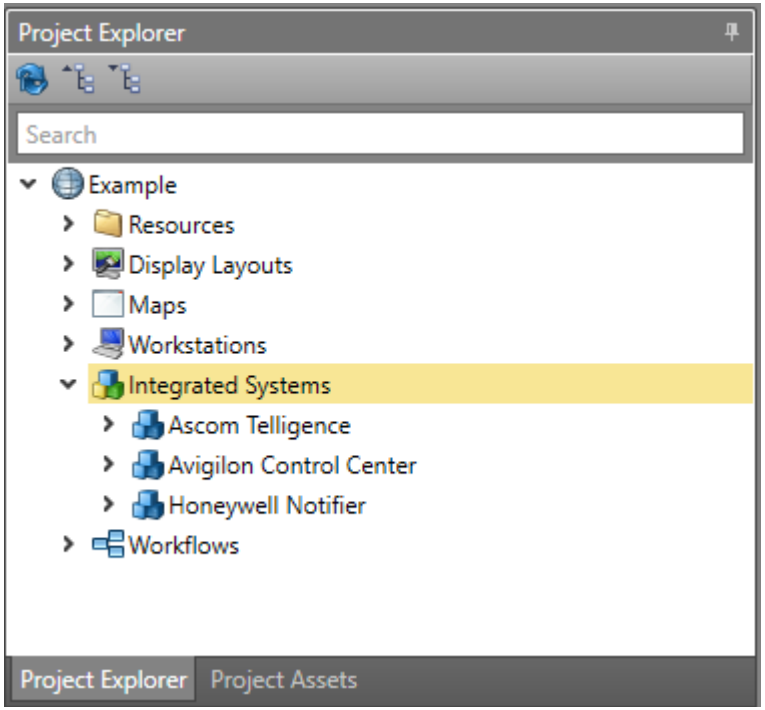


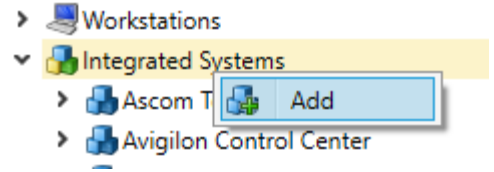


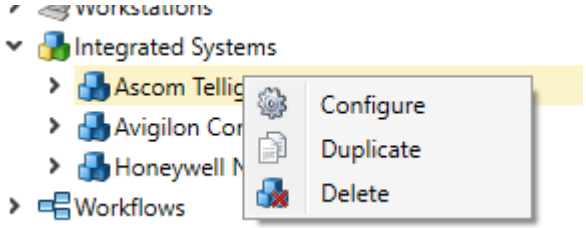
IPFUSION

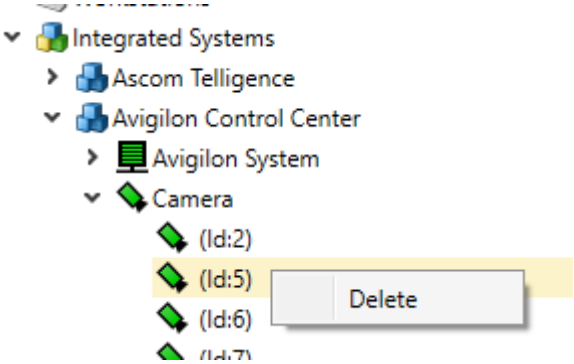
Project Explorer – Integrated Systems

- Add and manage **Integrated Systems**
- Right click access to system configuration





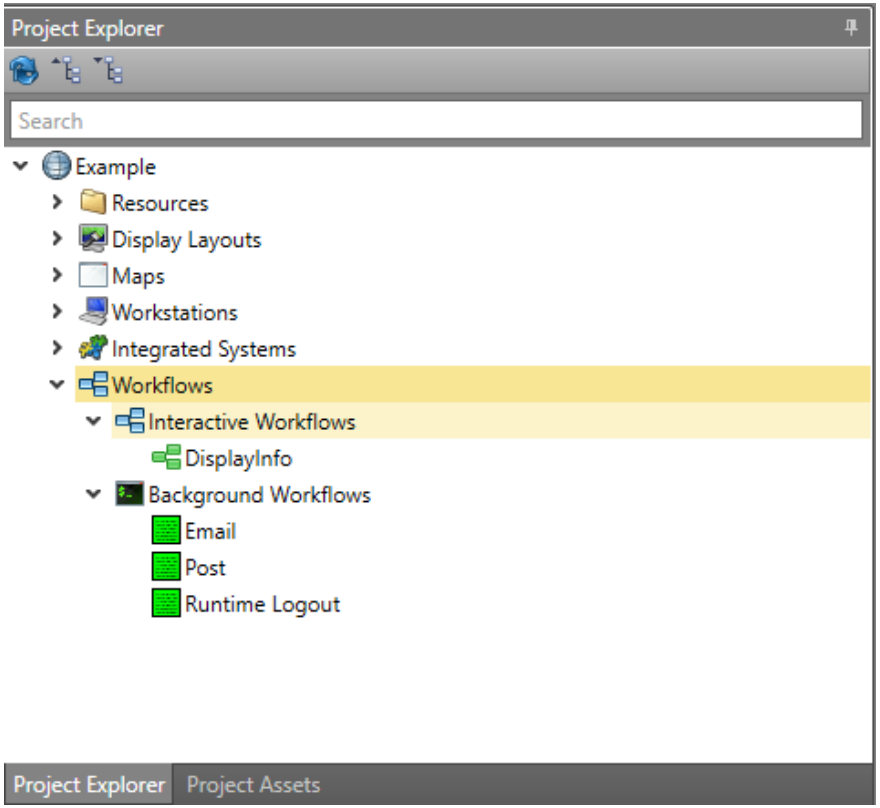


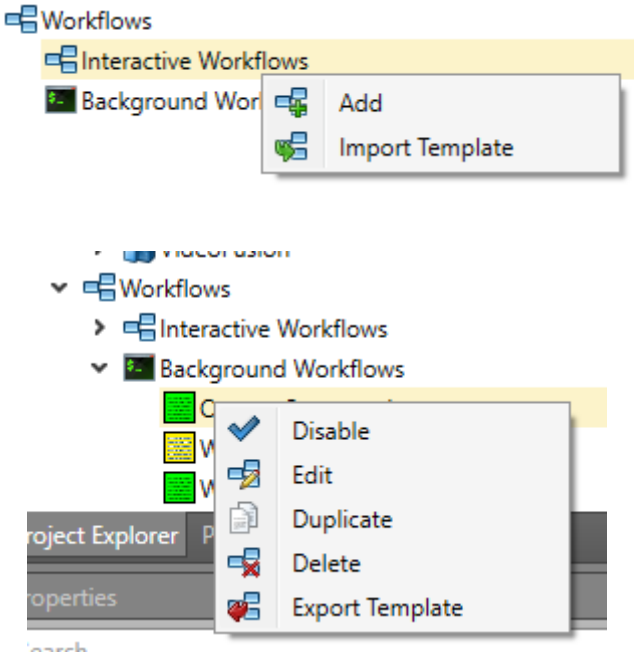


IPFUSION

Project Explorer - Workflows

- Add and configure **Workflows**





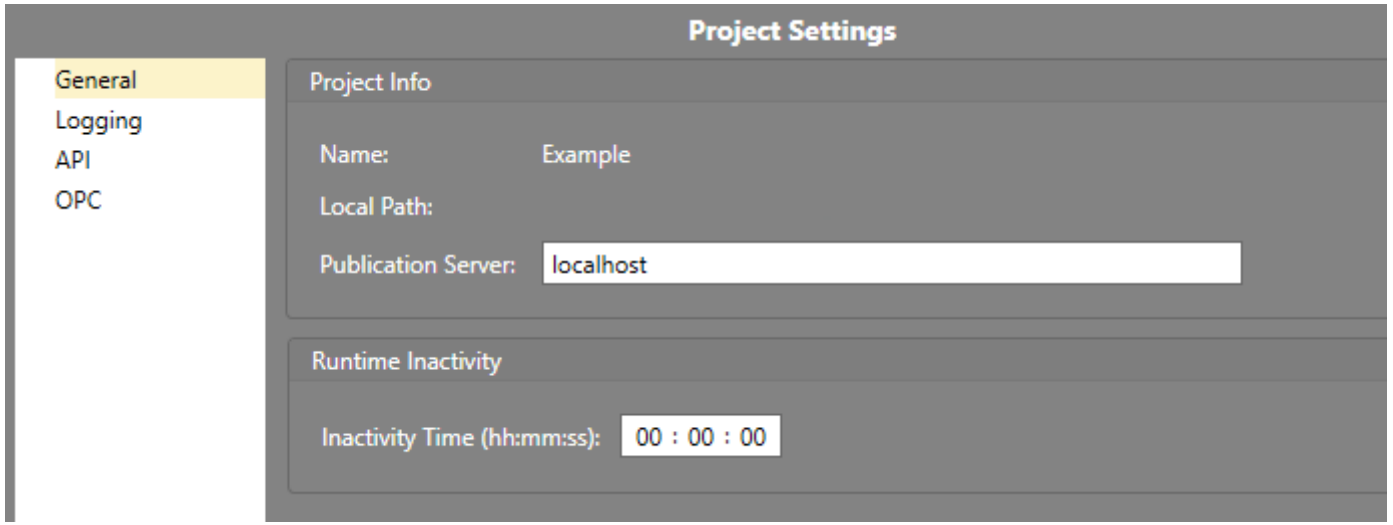
IPFUSION

Adding and Configuring Systems

IPFUSION

Project Settings

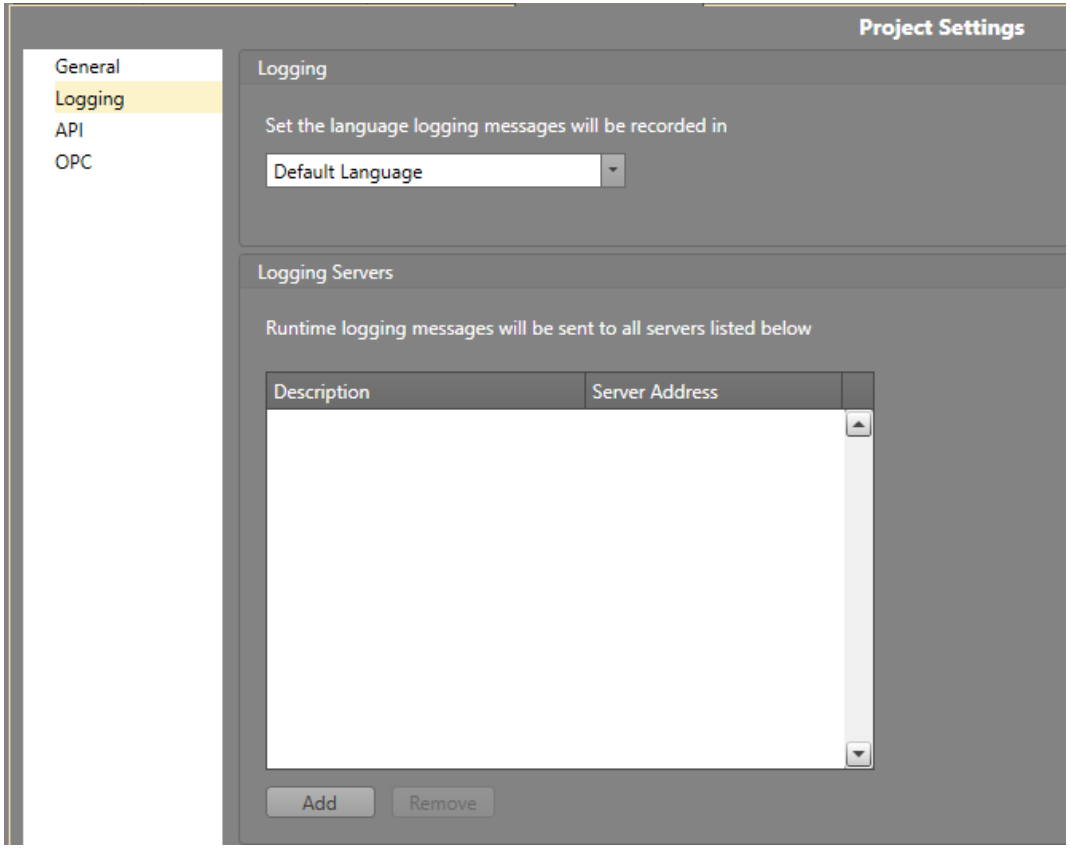
- **General**
  - Set project folder
  - Set time before a user in Runtime is considered inactive



IPFUSION

Project Settings

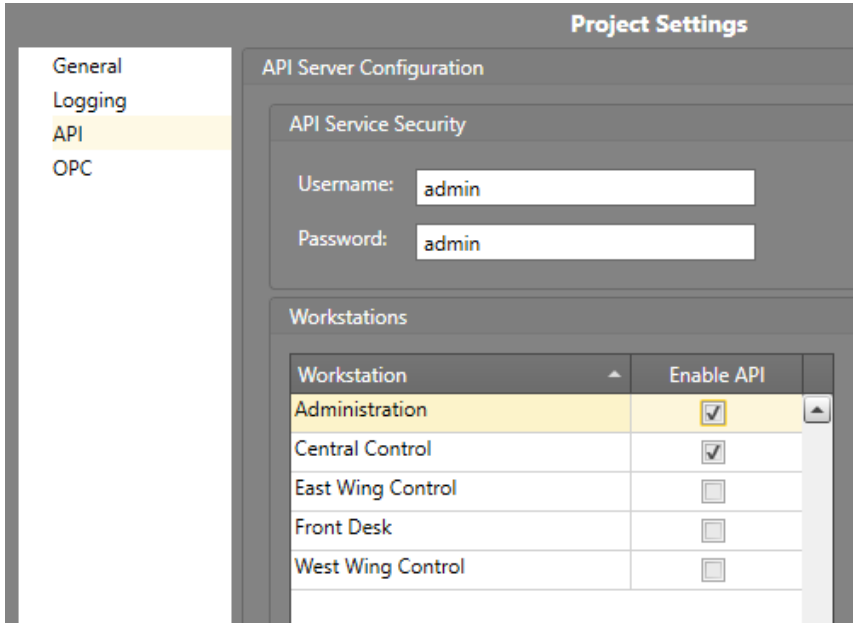
- **Logging**
  - Set default language used for logging
  - Add logging servers to project



IPFUSION

Project Settings

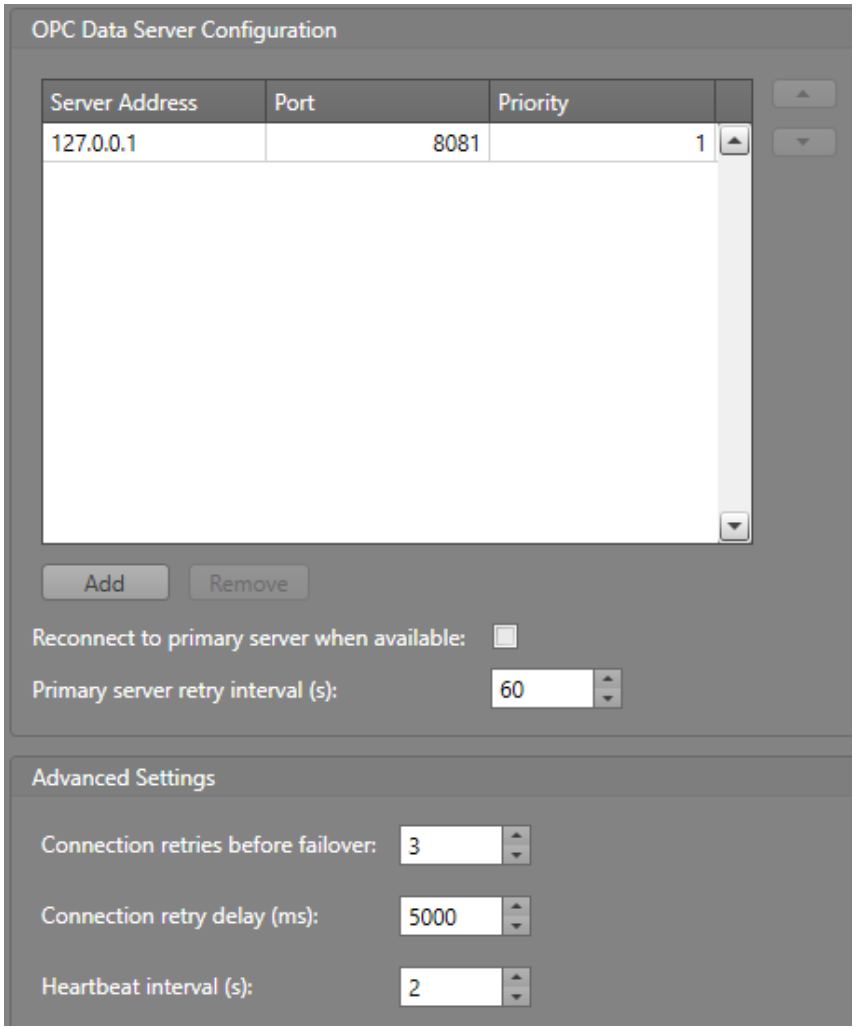
- **API**
  - Enable API server for individual Workstations
  - Set up API login information



IPFUSION

Project Settings

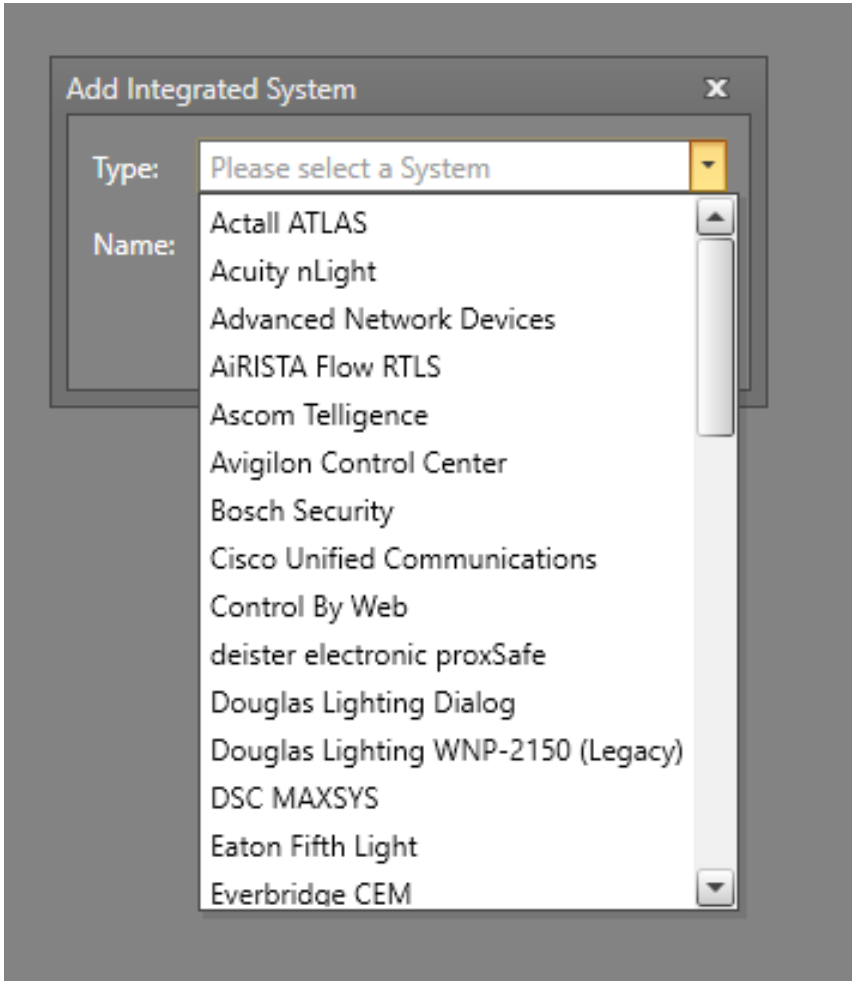
- **OPC**
  - Set global OPC data server communication parameters
  - Individual integrated systems can override these settings
  - Multiple prioritized servers allow for failover



IPFUSION

Add Integrated System

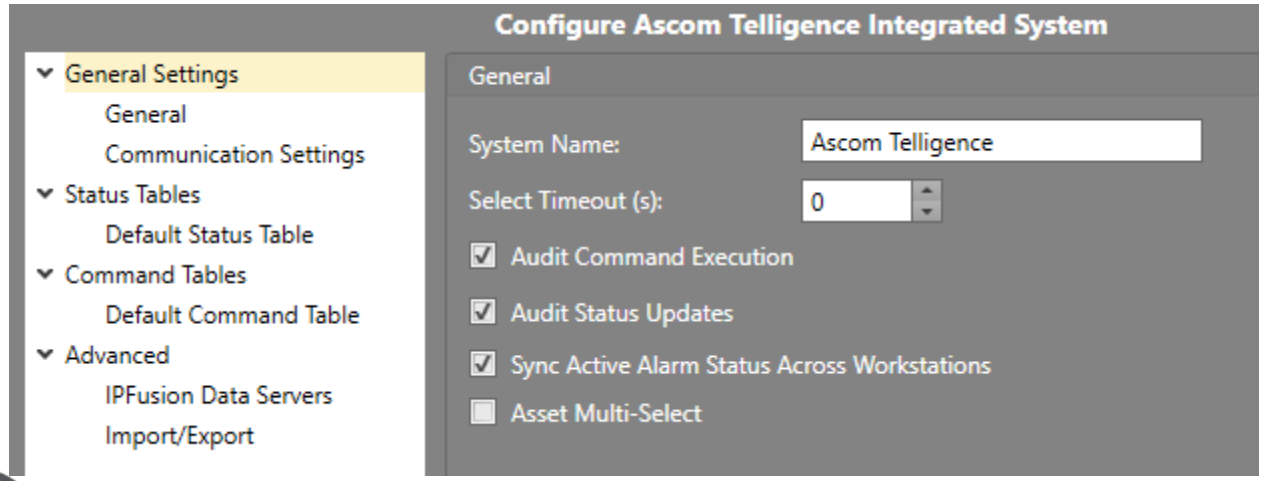
- Used to add new integrated systems to the project



IPFUSION

Integrated System – General

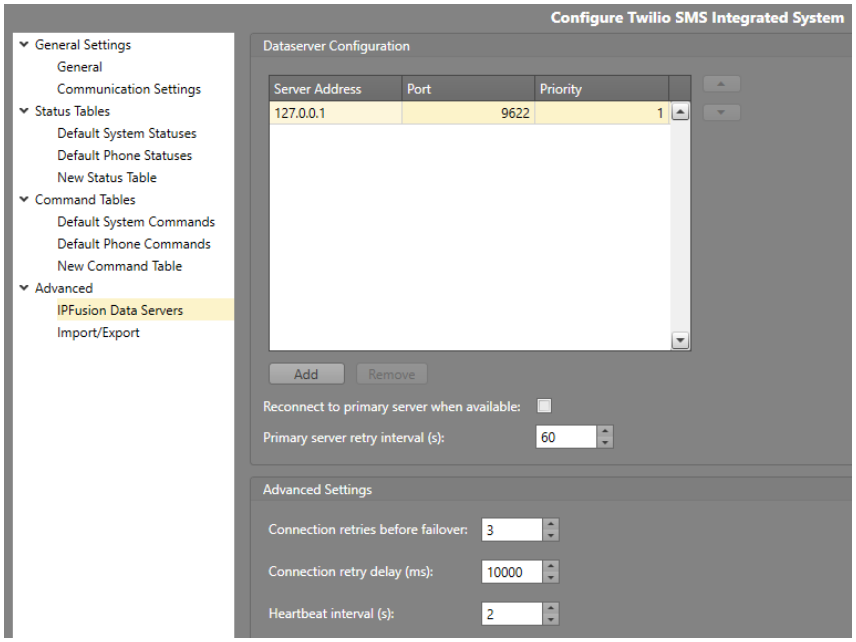
- **System Name** — Unique name for system
- **Select Timeout** — Number of seconds the system will keep assets selected (set to 0 to disable timeout)
- **Audit Command Execution** —Log executed commands
- **Audit Status Updates** — Log when an asset's status is updated
- **Sync Active Alarm Status Across Workstations**— Communicate asset alarm states between Workstations
- **Asset Multi-Select**— Multiple assets from this system may be selected at once



IPFUSION

Integrated System – IPFusion Data Servers

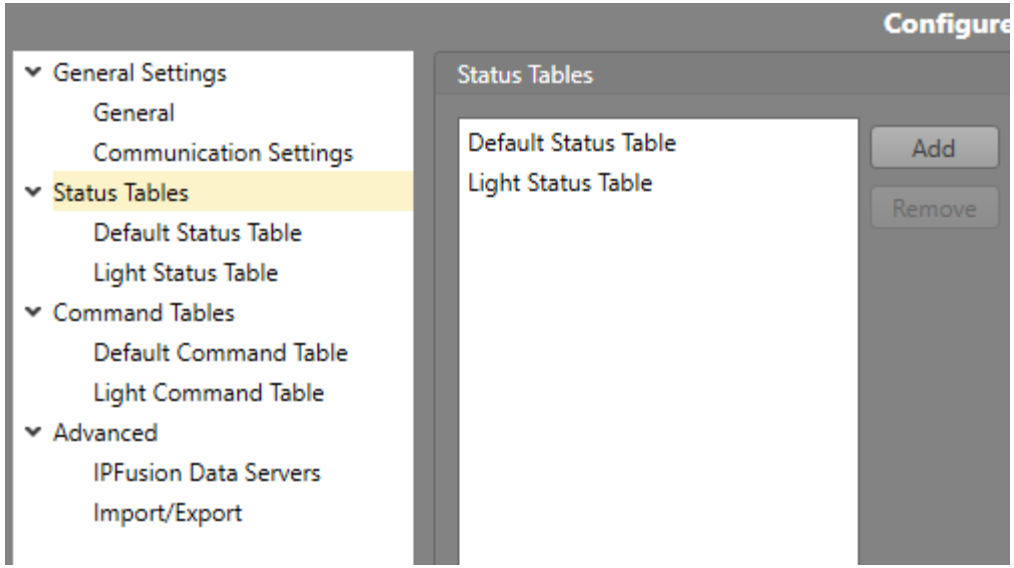
- Choose network location where the system driver will be running
  - Driver facilitates connection between Runtime and the third-party integrated system
  - Can be located on local machine, separate data server, or on the third-party system server
- Leave as 127.0.0.1 if the driver will run on the local computer
- Configure connection parameters



IPFUSION

Integrated System – Status Tables

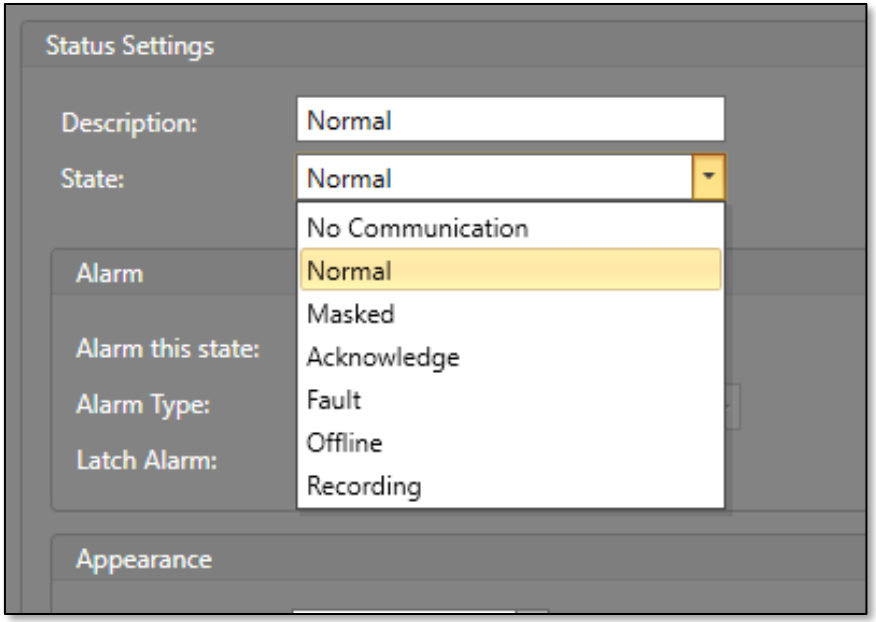
- Add and configure status tables
- Status tables translate real device states into visual icon representations



IPFUSION

Integrated System – Status: States

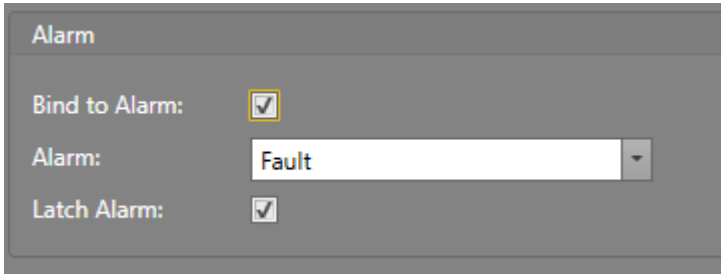
- Common States
  - **Acknowledge** — an active alarm has been acknowledged
  - **Fault** — an error reported by the driver
  - **No Communication** — there is no communication with the driver
  - **Normal** — asset is online and in its default state
  - **Masked** — the asset has been masked over its true state
- System Specific States
  - Dependent on the system type
  - Real device states reported by the driver (door unlocked, intercom connected, etc.)



IPFUSION

Integrated System – Status: Alarm

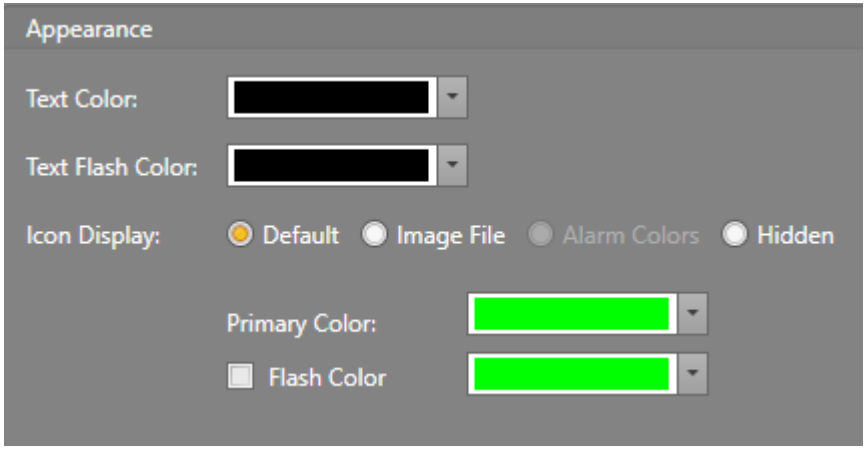
- **Bind to Alarm**
  - Configure this state to trigger an alarm in the alarm grid
- **Alarm Type**
  - Set the alarm type to display in the alarm banner when this alarm is triggered
- **Latch Alarm**
  - When checked, the alarm will only be cleared when an Acknowledge command and then a Reset command have been sent to it.

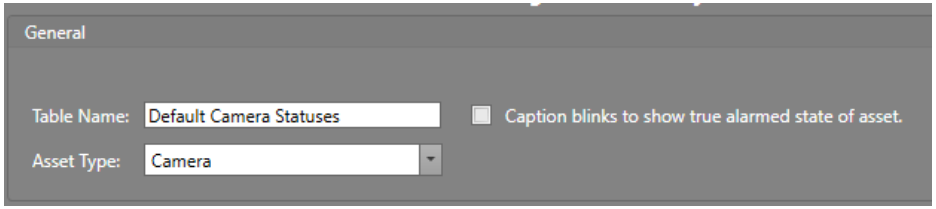


IPFUSION

Integrated System – Status: Appearance

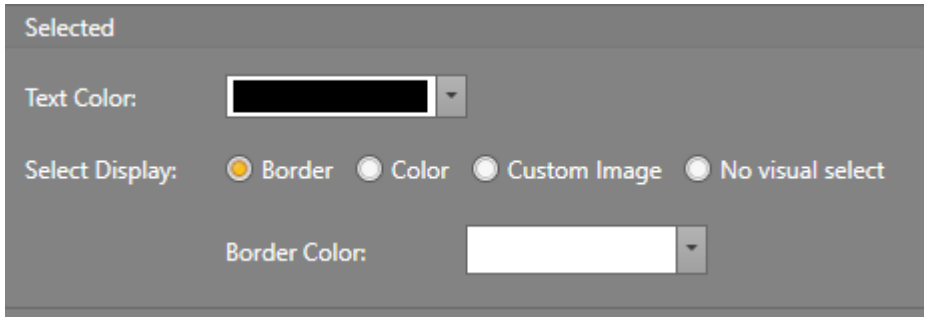
- **Text Color/Flash Color**
  - Configure caption color and flash color
- **Icon Display – Default**
  - Configure primary and flash color
- **Icon Display – Image File**
  - Display an image (and optional flash image) instead of the default icon
- **Icon Display – Alarm Colors**
  - Use the configured alarm colors for the icon
- **Icon Display – Hidden**
  - Do not display the icon or caption for this state
- **Caption blinks to show true alarmed state of asset**
  - Caption text will blink to show true alarmed state





IPFUSION

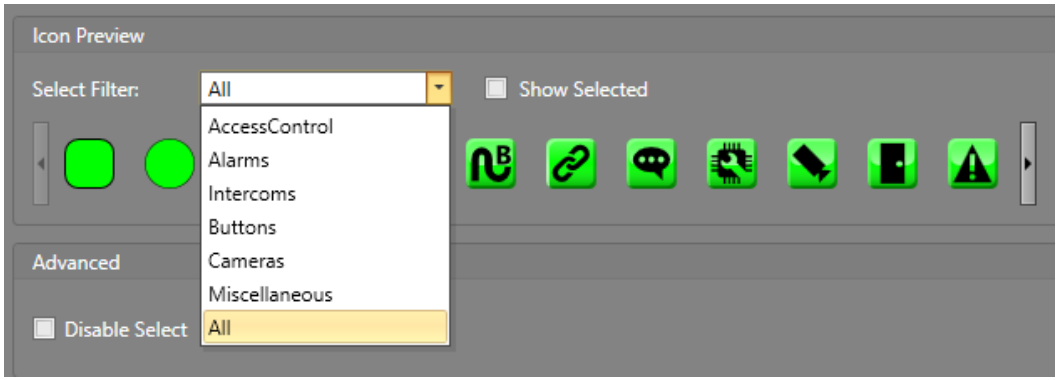
Integrated System – Status: Selected



- **Text Color**
  - Caption color to display when the asset is selected
- **Select Display**
  - **Border** – Display a border around the icon when the asset is selected
  - **Color** – Change the color of the icon when the asset is selected
  - **Custom Image** – Display a custom image instead of the icon when the asset is selected
  - **No visual select** – Do not change the display of the icon when the asset is selected

IPFUSION

Integrated System – Status: Icon Preview

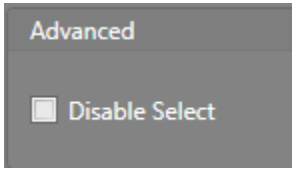


- Shows icons with the current state's settings applied
- Allows user to preview visual settings without the need to launch Runtime
- **Select Filter**
  - Filters icon types displayed in the icon preview area

IPFUSION

Integrated System – Status: Advanced

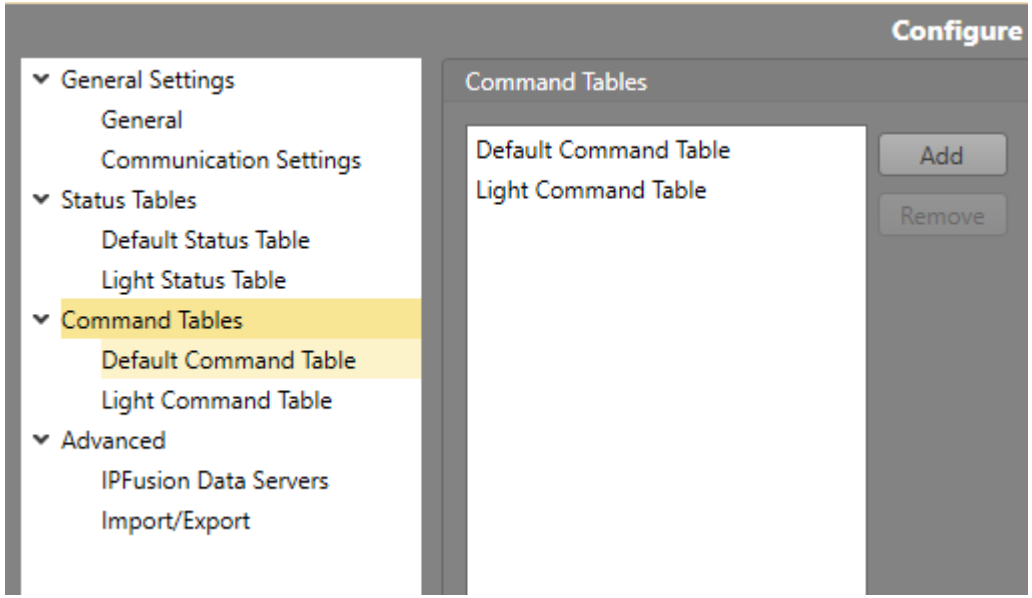
- **Disable Select**
  - Disable asset selection for this state



IPFUSION

Integrated System – Command Tables

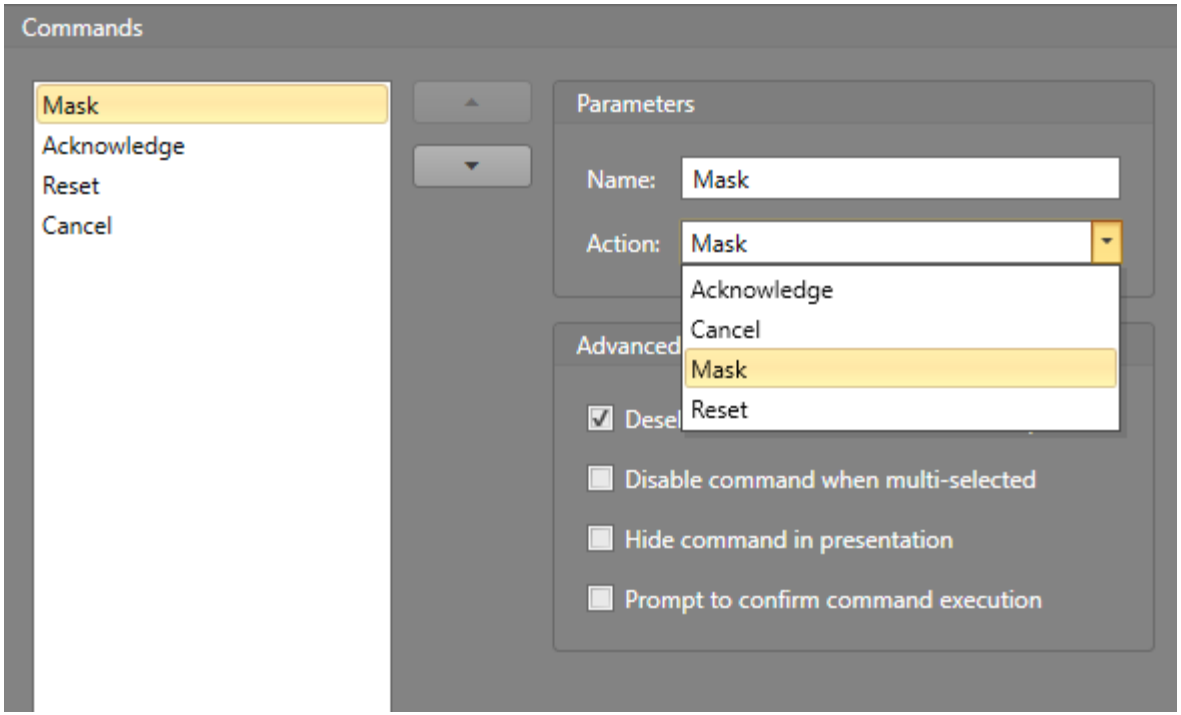
- Add and configure command tables
- Command tables translate command names into driver commands used to control real devices



IPFUSION

Integrated System – Commands: Actions

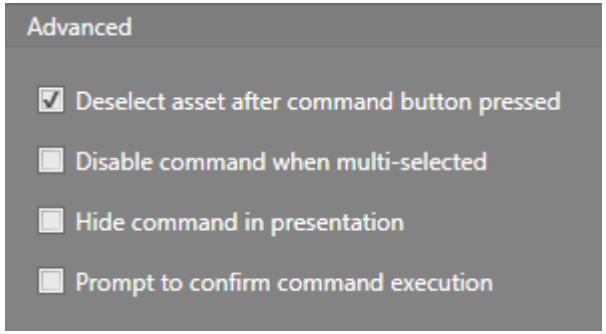
- Chooses the action that will be sent to the driver when each command button is pressed
- Defaults contain all available commands and can be customized to project needs



IPFUSION

Integrated System – Commands: Advanced

- **Deselect asset after command**
  - Deselect the currently selected asset when the command button is pressed.
- **Disable command when multi-selected**
  - This command will not be available if more than one asset is selected at the same time.

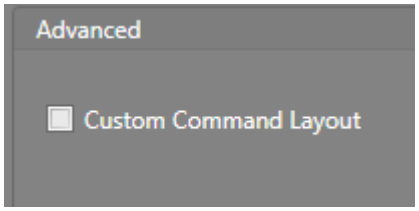


- **Hide command in presentation**
  - Do not show this command in the command popup or function panel
  - Allows workflow integration of commands between systems without exposing these commands to the user.
- **Prompt to confirm command execution**
  - Prompts the user in Runtime to confirm they want to execute the command.

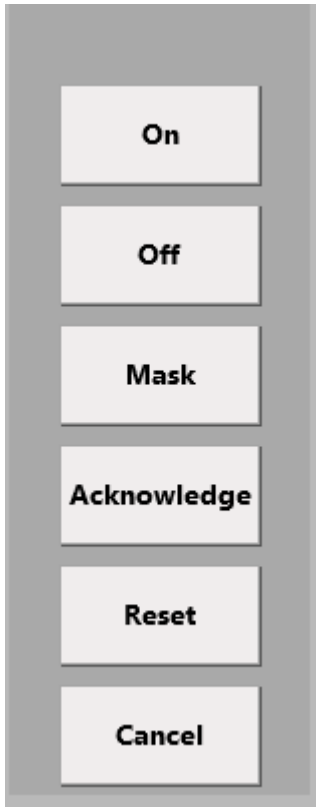
IPFUSION

Integrated System – Commands: Advanced

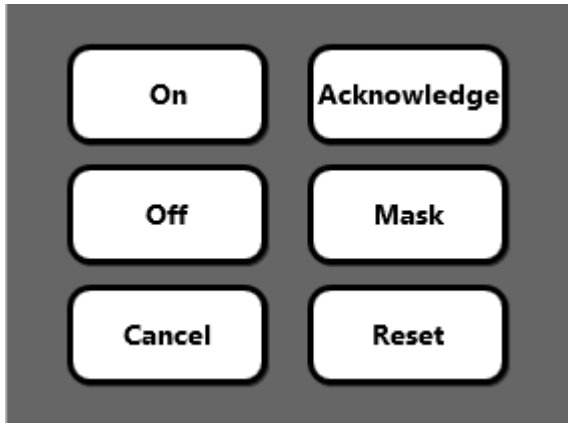
- **Custom Command Layout**
  - Customize the display of command buttons in the popup or function panel
  - If left unchecked, the commands will simply be displayed as a list of buttons
  - If checked, the entire popup or function panel can be customized similar to designing a display layout (position, size, look of buttons as well as adding custom drawing objects)



Default



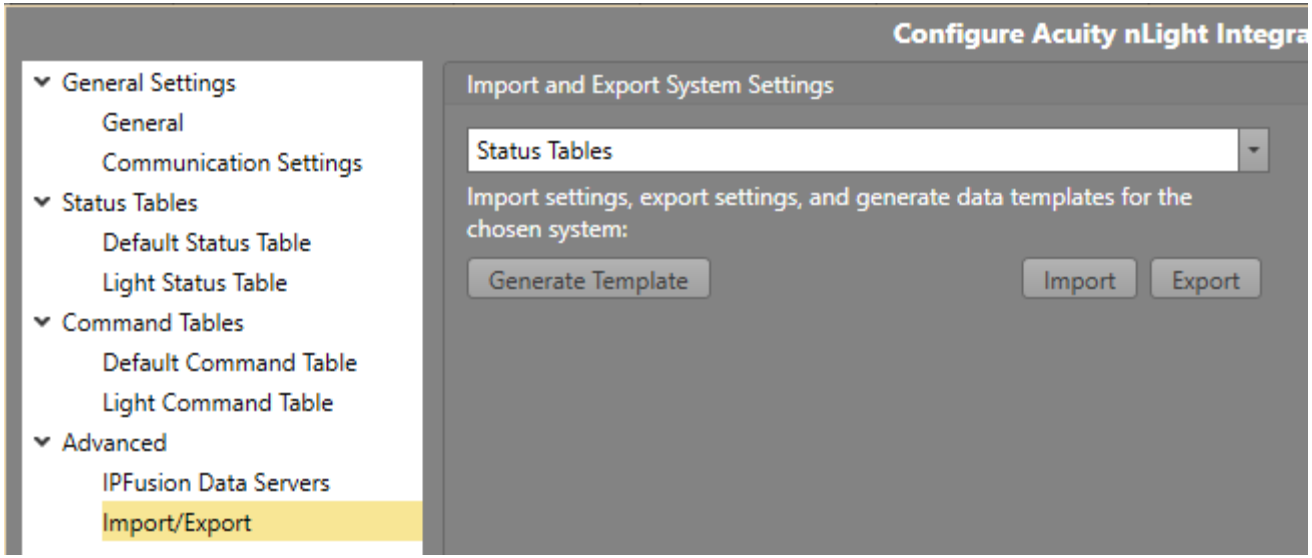
Customized



IPFUSION

Integrated System – Import/Export

- Import or export a .csv file that contains various data settings of the integrated system: Status/Command tables, and the configured assets and their properties.
- Generate Template



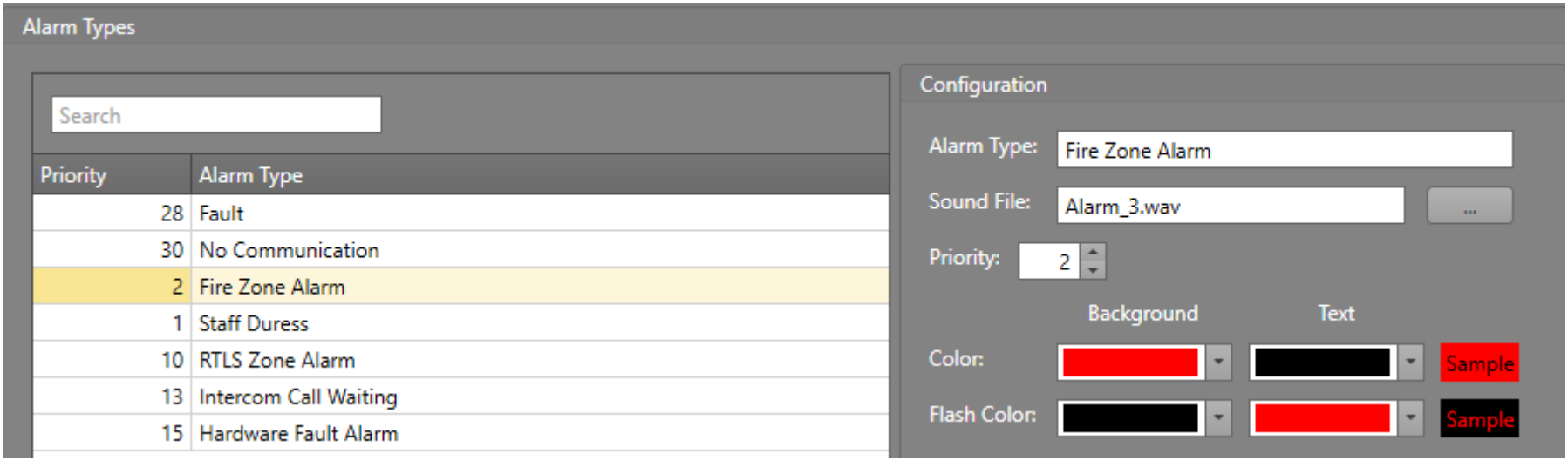
IPFUSION

Alarms

IPFUSION

Home Tab – System Configuration

- **Alarm Management**
  - Configure alarm types
  - Configure alarm postings



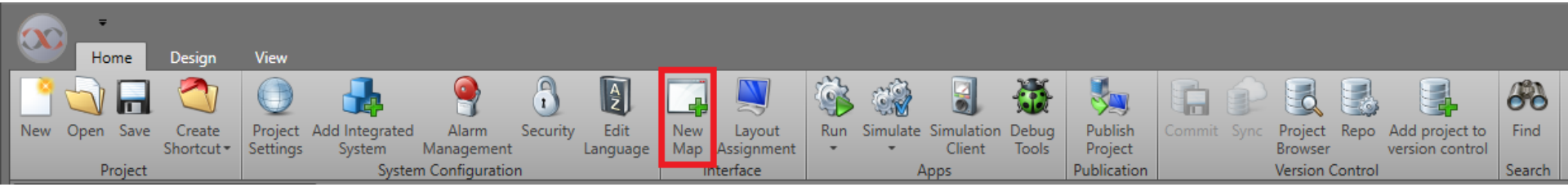
IPFUSION

Maps

IPFUSION

New Map

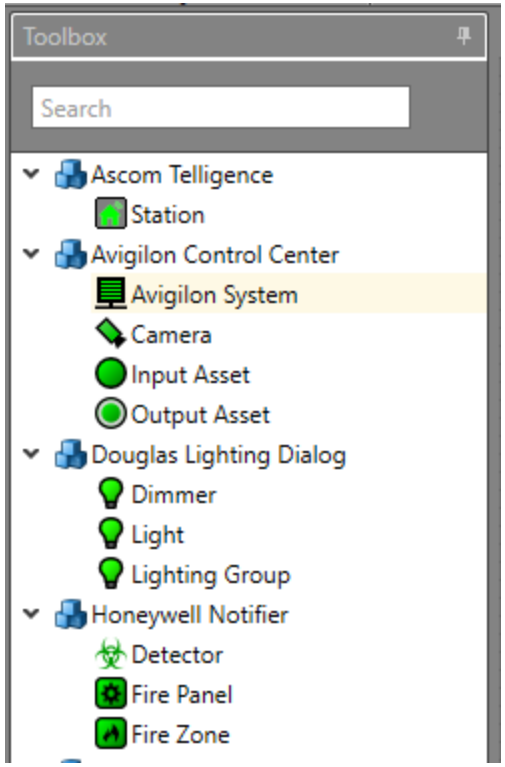
- Add new **Maps** to the project

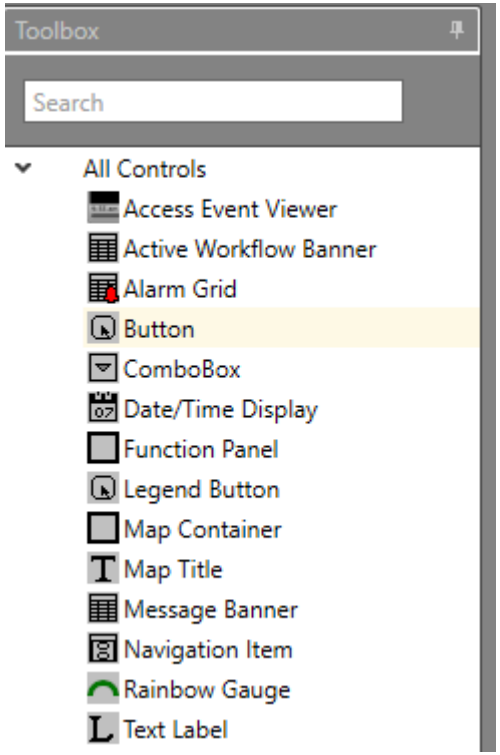


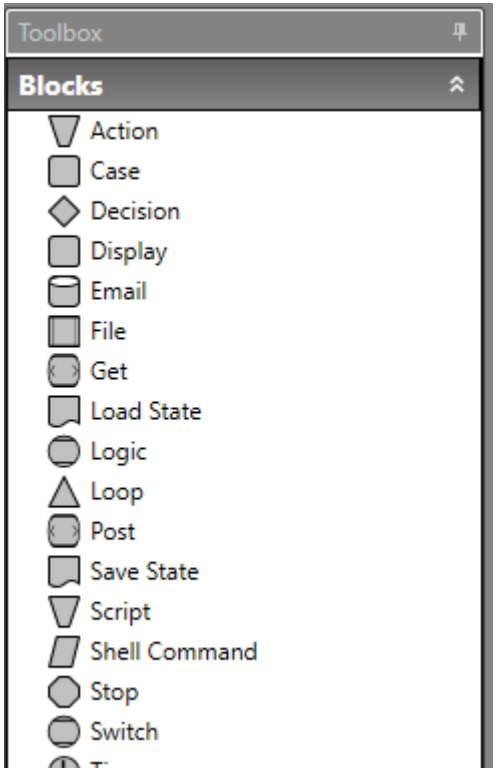
IPFUSION

Toolbox

- Add new assets to **Maps**
- Add new control items to **Display Layouts**
- Add new blocks to **Workflows**

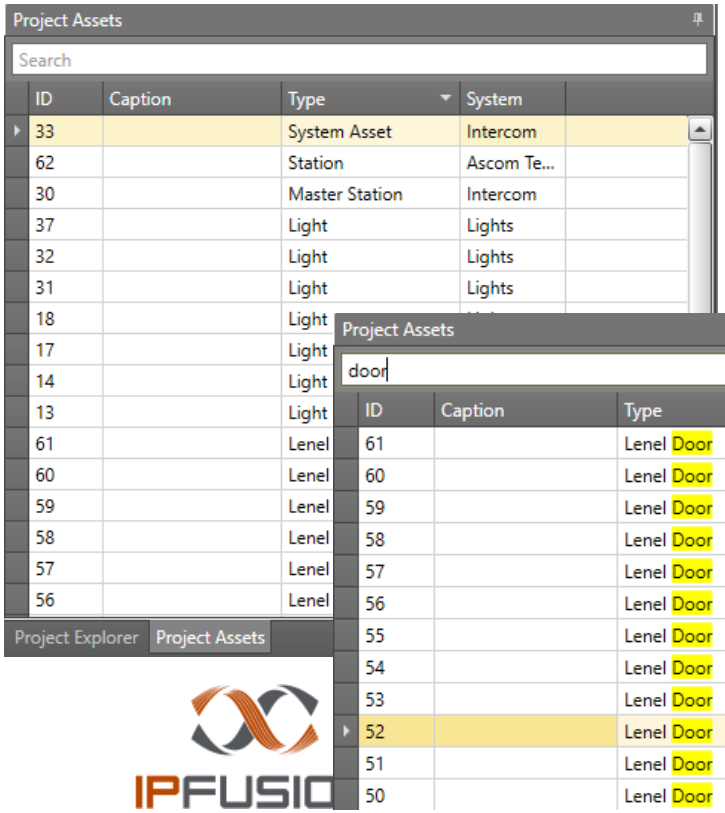


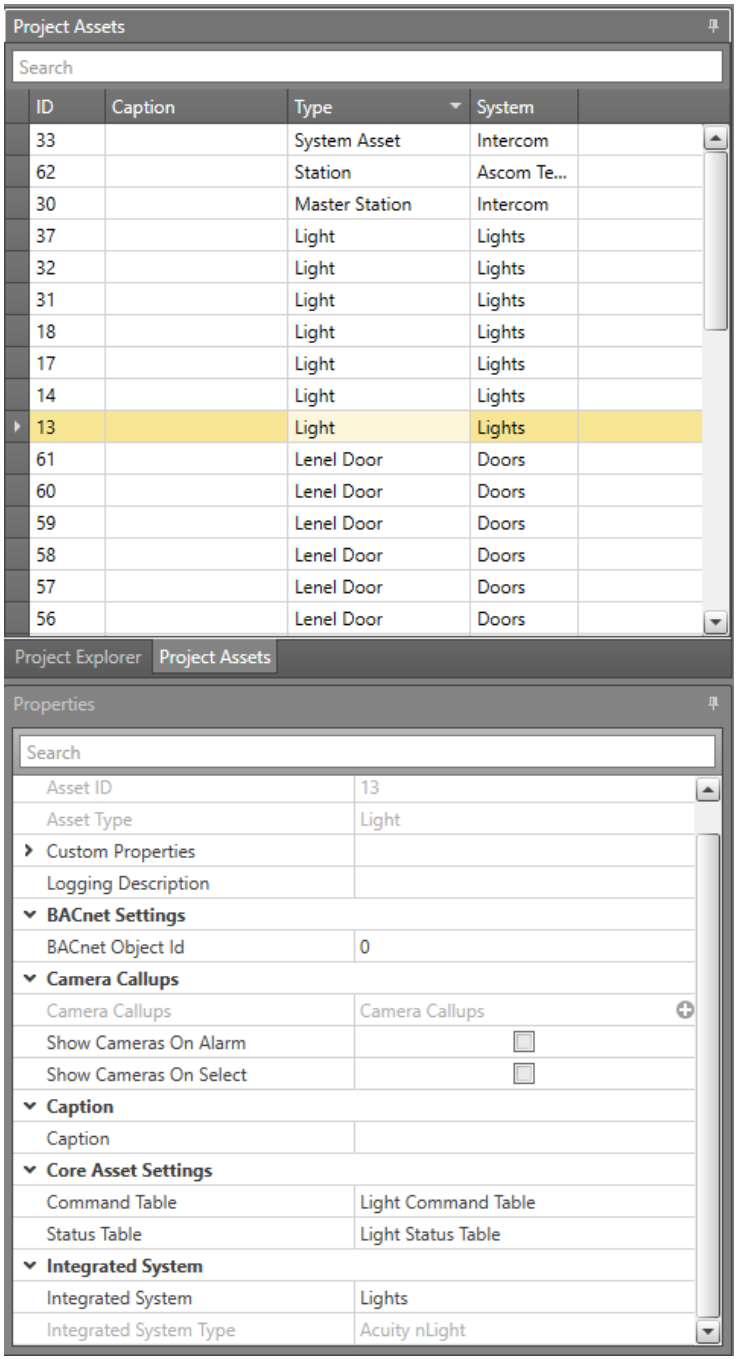




Project Assets

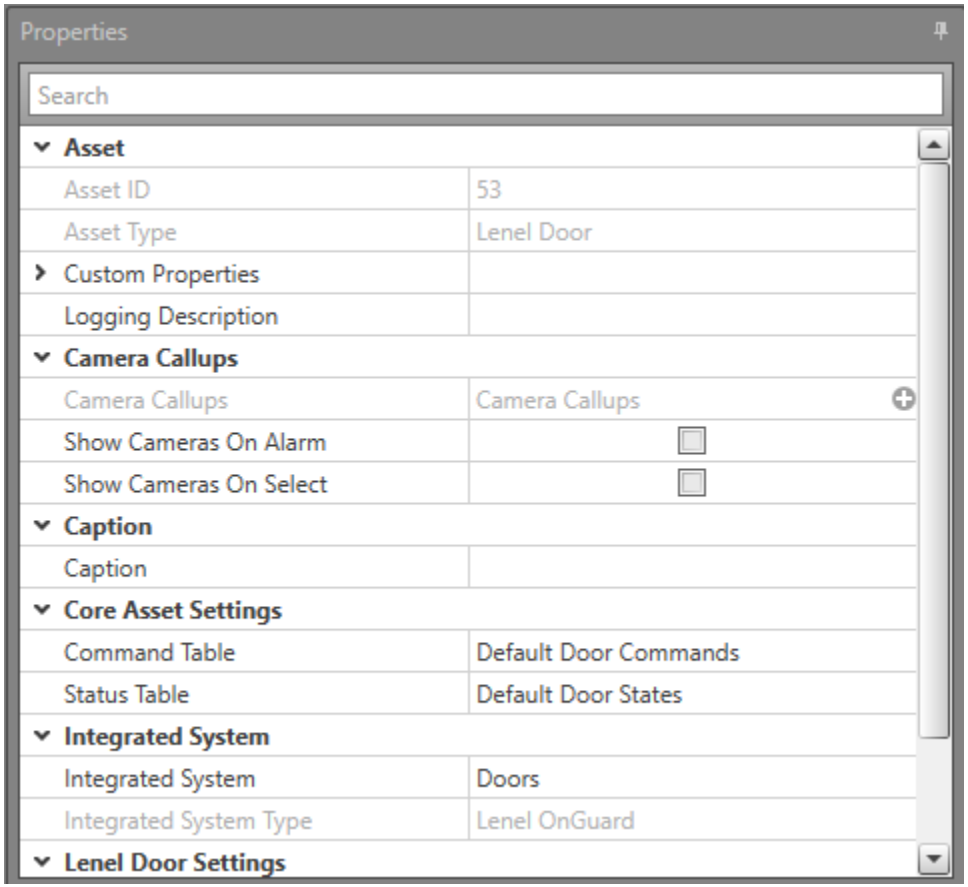
- Central management of all assets
- Provides search, sort and filter
- Can update properties





Properties Grid

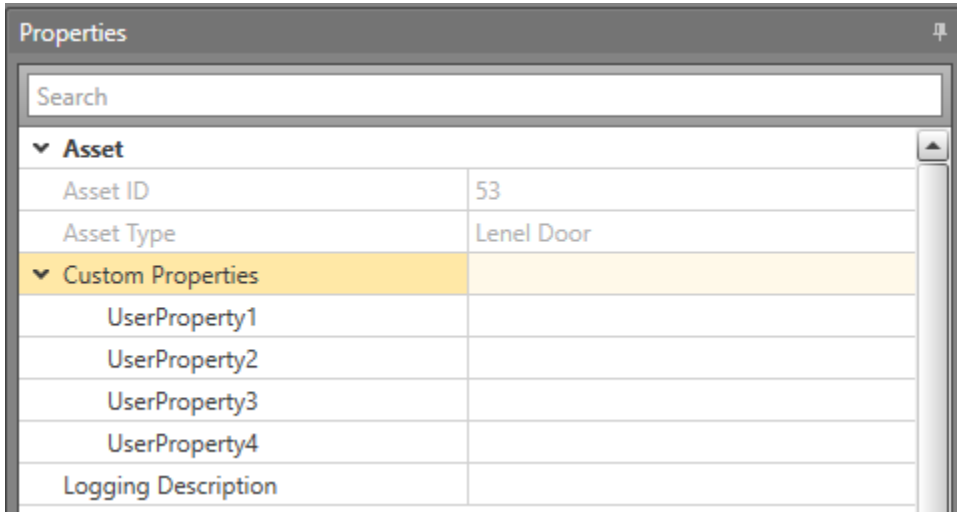
- Configure properties for the selected object including assets, screens, Workflow blocks and drawing objects.



IPFUSION

Properties – Asset

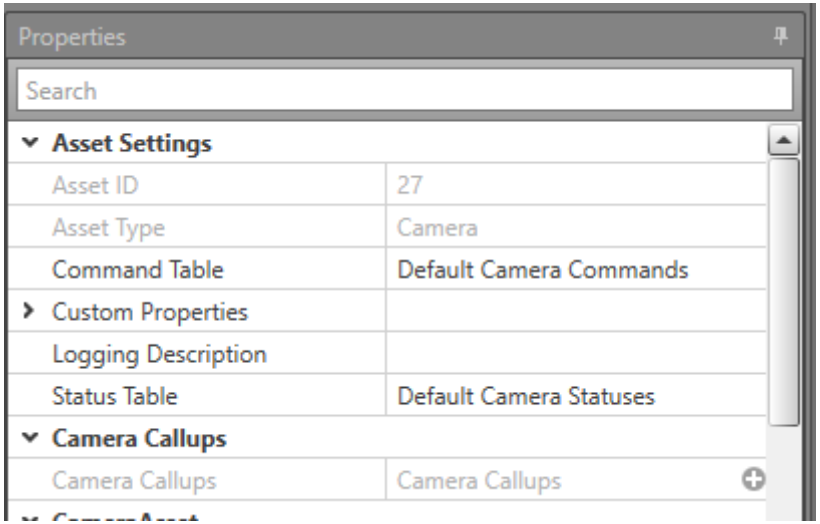
- **Custom Properties**
  - Add a number of user defined custom value properties for the asset.
- **Logging Description**
  - If this string is present it will be used as the logging location for commands and statuses associated with this asset. If it is empty, the asset's caption will be used for logging.



IPFUSION

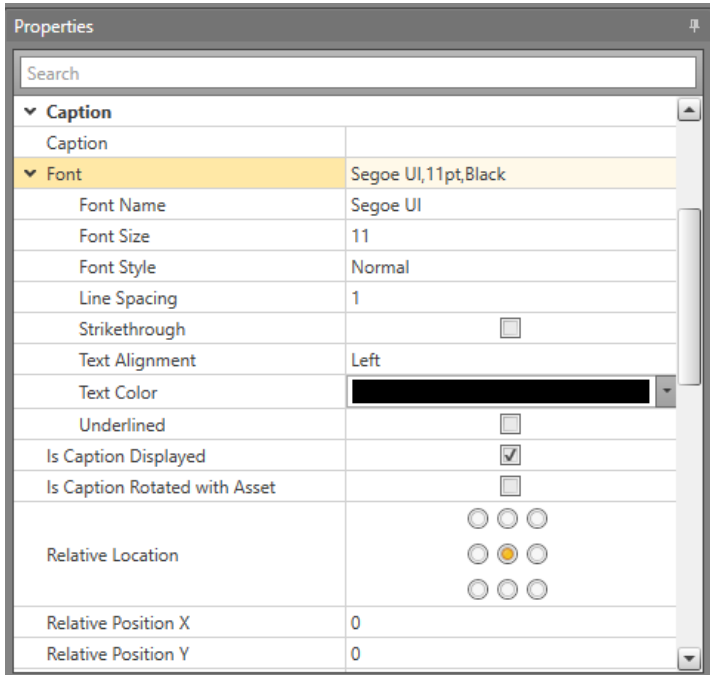
Properties – Camera Callups

- **Camera Callups**
  - Add cameras to the list of cameras associated with the asset



IPFUSION

Properties – Caption

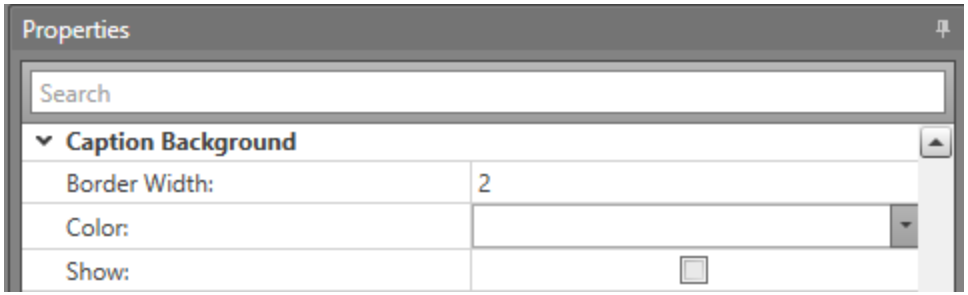


- **Caption**
  - Text displayed on screen with icon
  - Used for logging if Logging Description is empty
- **Font**
  - Customize caption font
- **Is Caption Displayed**
  - Show caption on screen with icon
- **Is Caption Rotated**
  - Rotate caption when icon is rotated
- **Relative Location**
  - Position of caption relative to icon
- **Relative Position X/Y**
  - Manually adjust caption position relative to icon center

IPFUSION

Properties – Caption Background

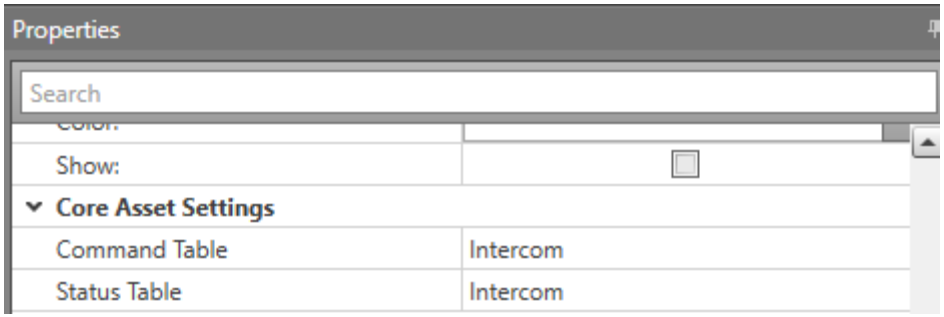
- Enables placement of a background color behind the caption to enhance readability
- **Border Width**
  - Number of pixels to extend background beyond caption
- **Color**
  - Color of caption background
- **Show**
  - Show caption background



IPFUSION

Properties – Core Asset Settings

- **Command Table**
  - Choose command table to show when the asset is selected
  - Command table consists of a list of commands, configured by integrated system
- **Status Table**
  - Choose status table the asset will use to determine icon display and alarms
  - Status table consists of a lookup table that translates system states into icon displays, configured by integrated system



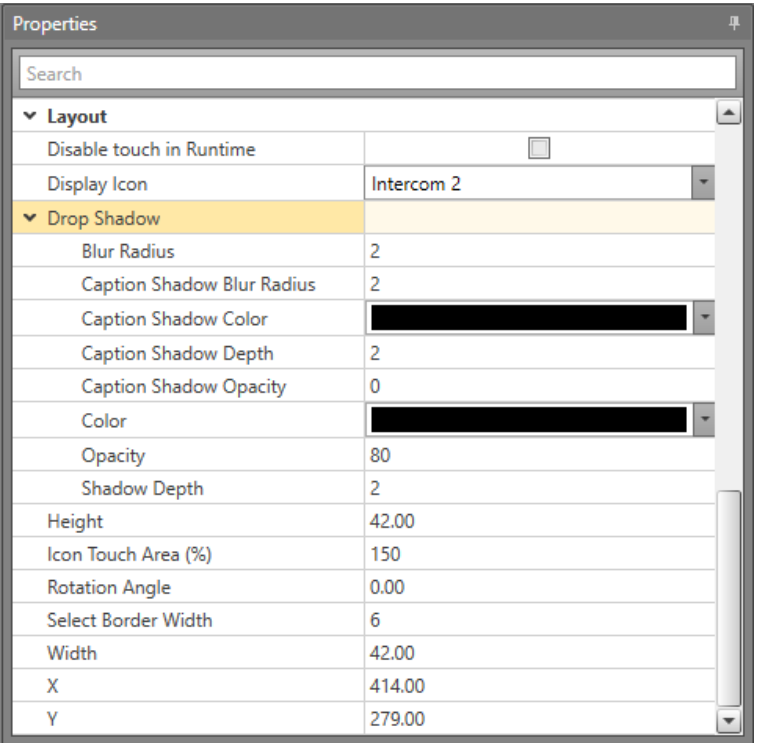
IPFUSION

Properties – Integrated System

- **Integrated System**
  - Choose integrated system
  - Can only choose between systems of the same type
- **Integrated System Type**
  - Displays system type (read only)

IPFUSION

Properties – Layout



- **Disable touch in Runtime**
  - Check to disable asset touch

Display Icon

- Choose icon to display for asset

Configure drop shadow settings for asset and caption separately

- Blur Radius – "fuzziness" of drop shadow
- Color – drop shadow color
- Opacity – drop shadow opacity (transparency)
- Shadow Depth – distance between asset/caption and drop shadow

X/Y/Width/Height/Rotation Angle

- Set size, location and rotation of asset

Icon Touch Area (%)

- Used to extend icon touch area beyond the visible portion of the icon

- **Select Border Width**
  - Set the width of the visual border used to indicate a selected asset icon

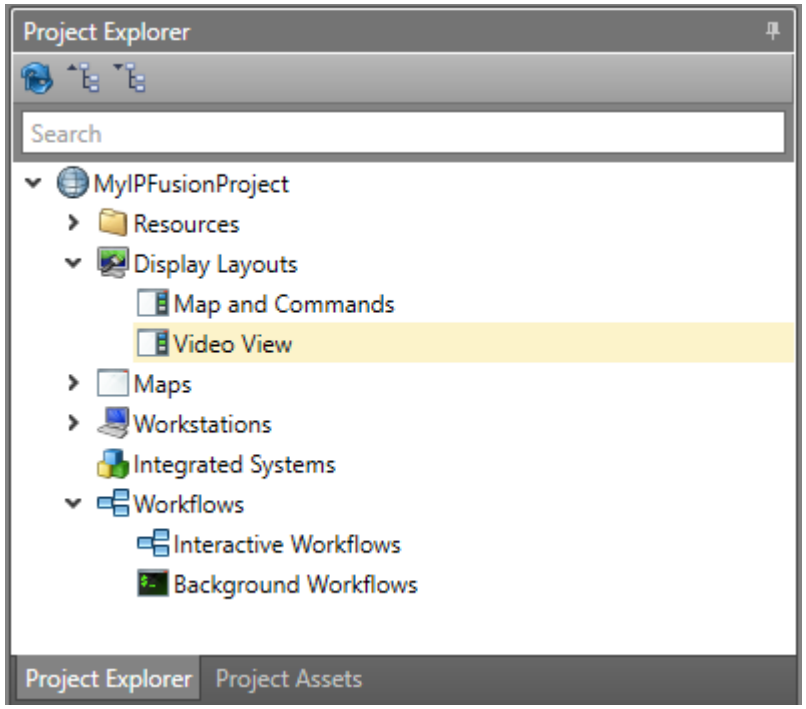
IPFUSION

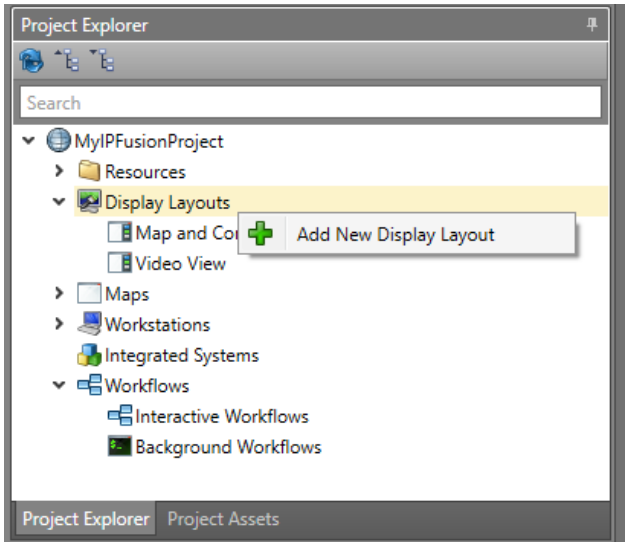
Display Layouts

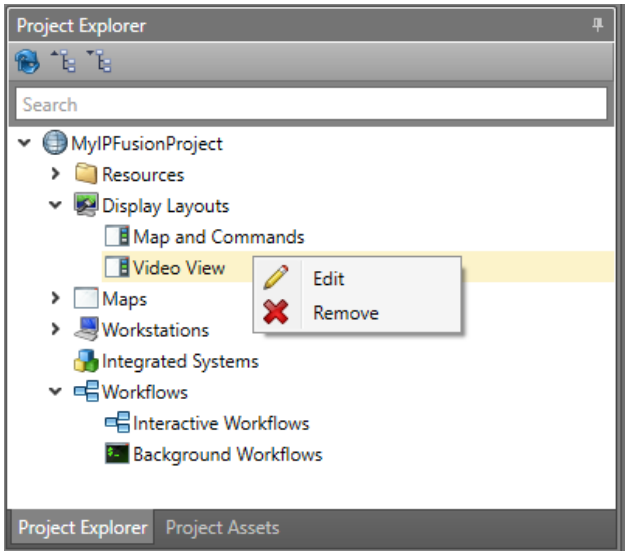
IPFUSION

Project Explorer – Display Layouts

- Add or Edit Display Layouts



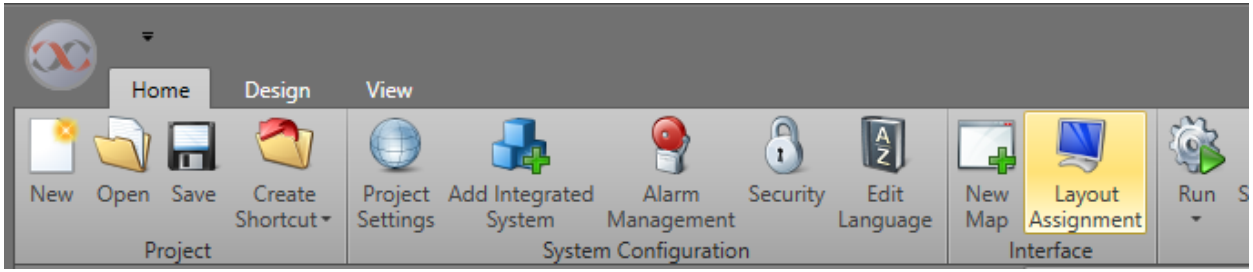


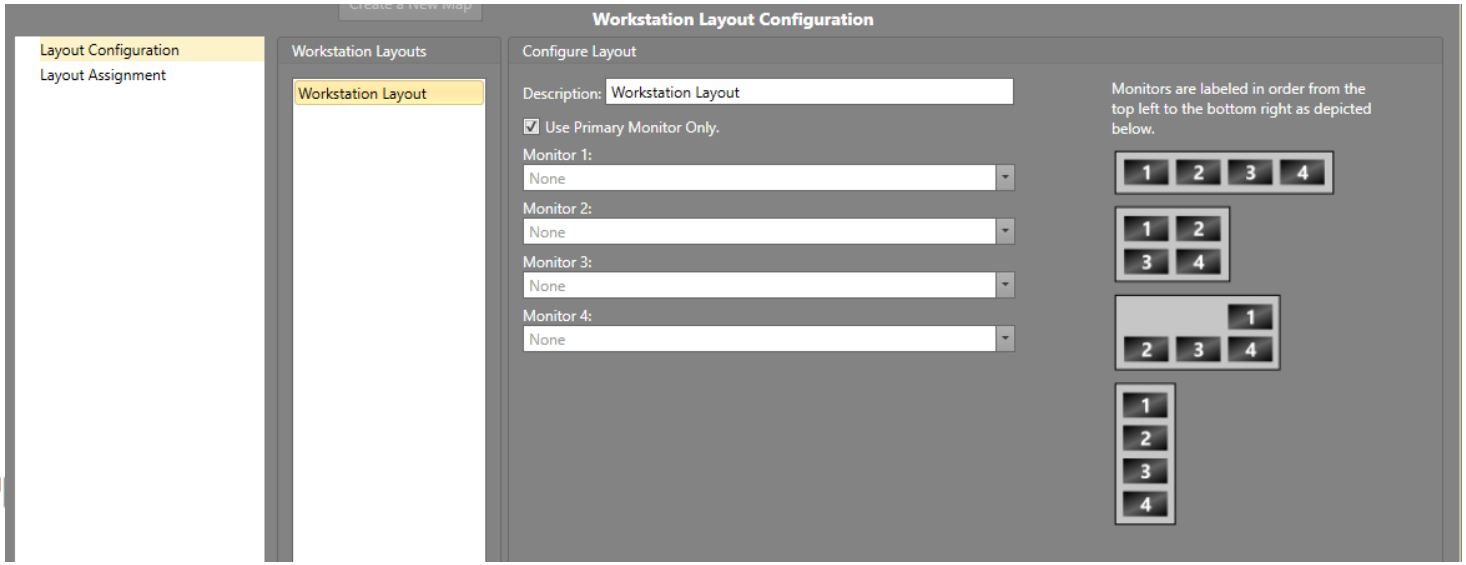


IPFUSION

Home Tab – Layout Assignment

- **Layout Assignment**
  - Assign the display layouts
  - Set which display layout appears on each monitor for every Workstation
  - If multiple Workstations have the same configuration, the same layout can be used for them, otherwise they will require their own dedicated Workstation Layout

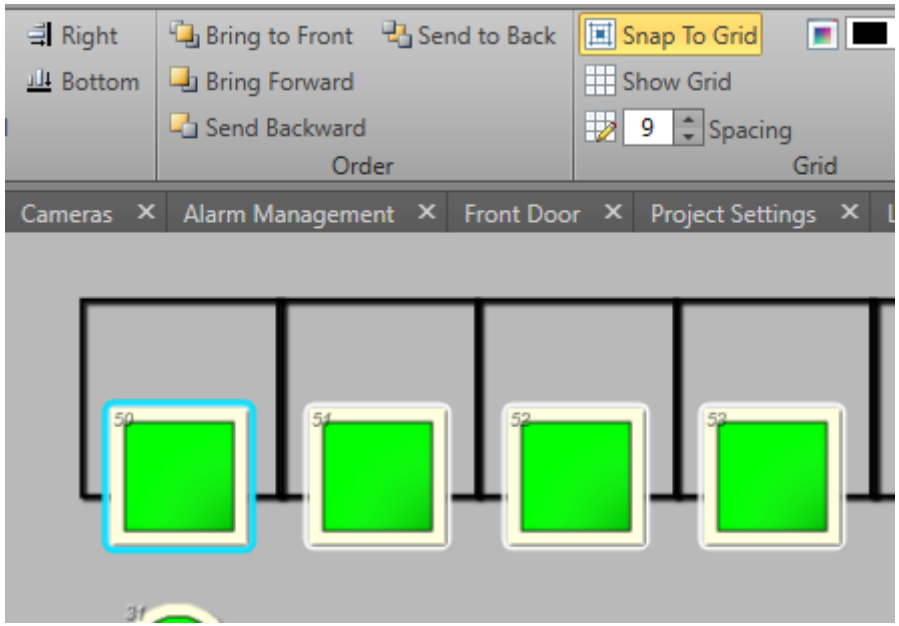




Design Tools

Design Tab – Alignment

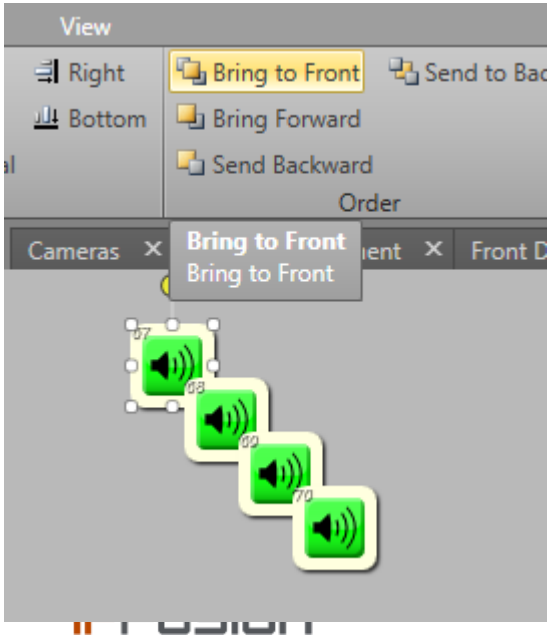
- Aligns and distributes multiple objects
- Selected objects will be aligned relative to the object with the blue border

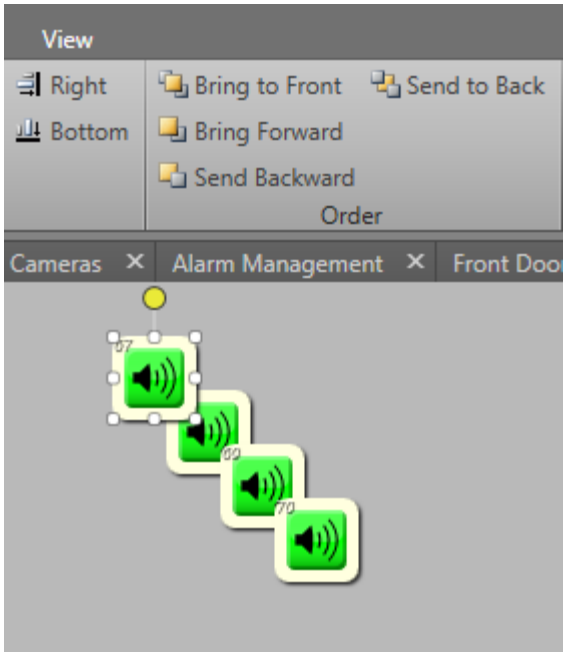


IPFUSION

Design Tab – Order

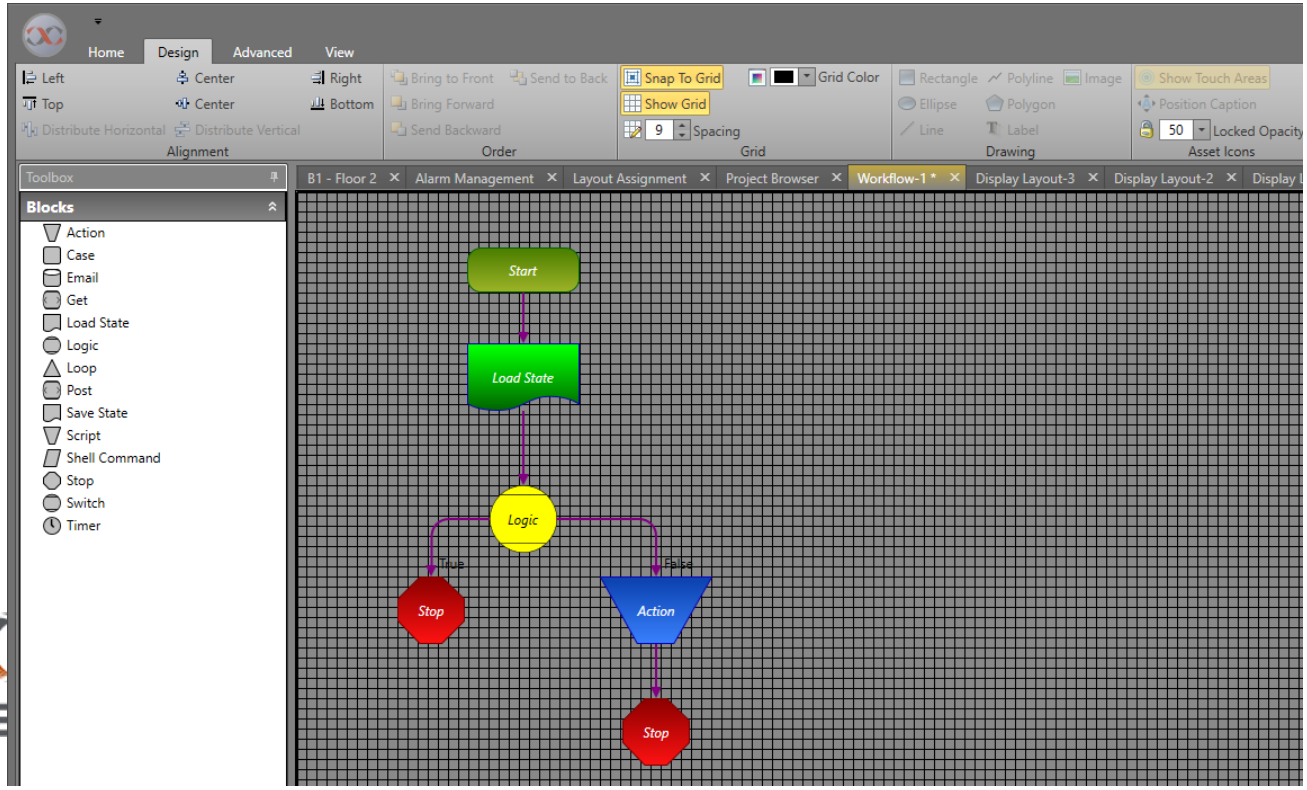
- Change z-order of selected assets (moves selected objects in front of or behind other objects)





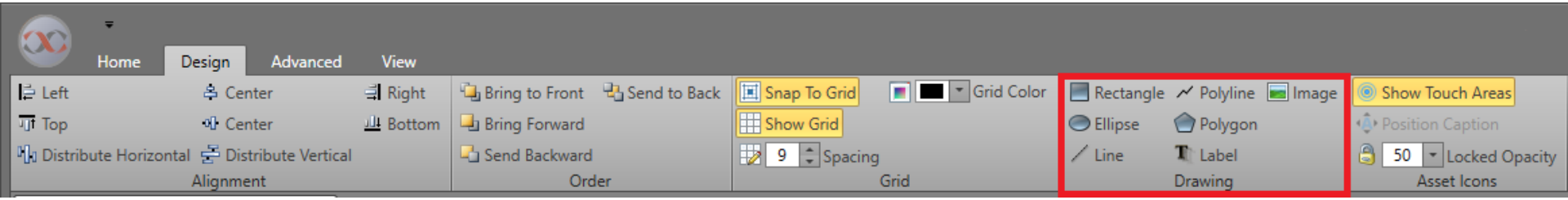
Design Tab – Grid

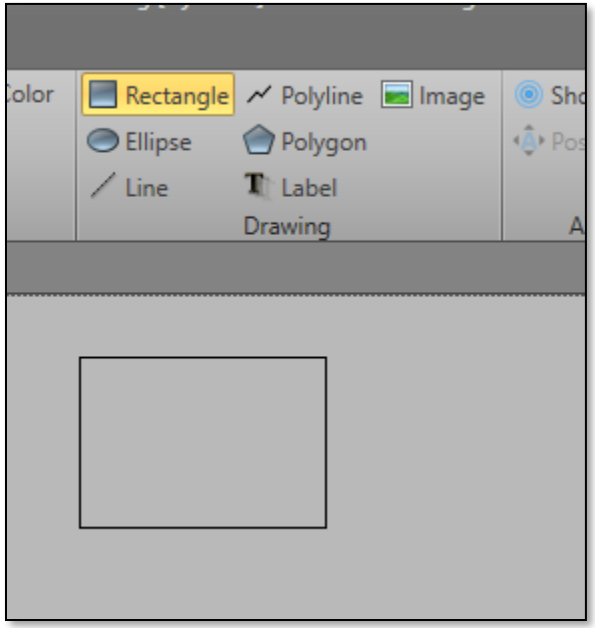
- **Snap to Grid** – force objects to align with grid lines
- **Show Grid** – show the grid lines
- **Grid Spacing** – set the number of pixels between grid lines
- **Grid Color** – set the color of the grid lines



Design Tab – Drawing

- Add drawing shapes, labels and images to a screen, template panel or custom popup





IPFUSION

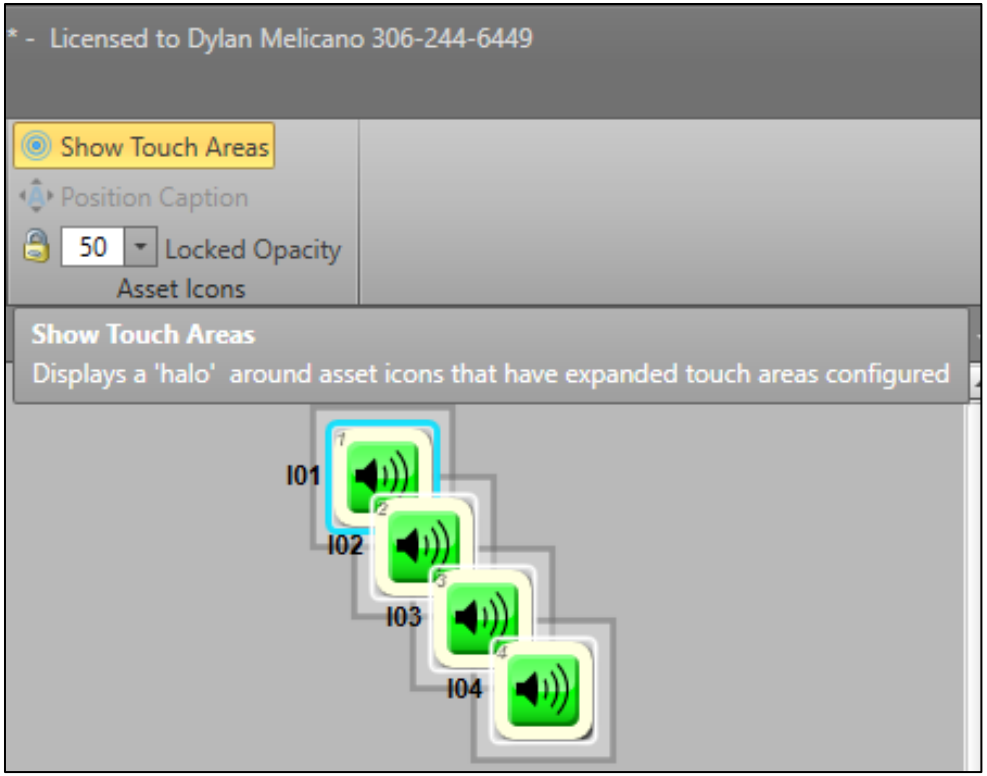
Design Tab – Drawing

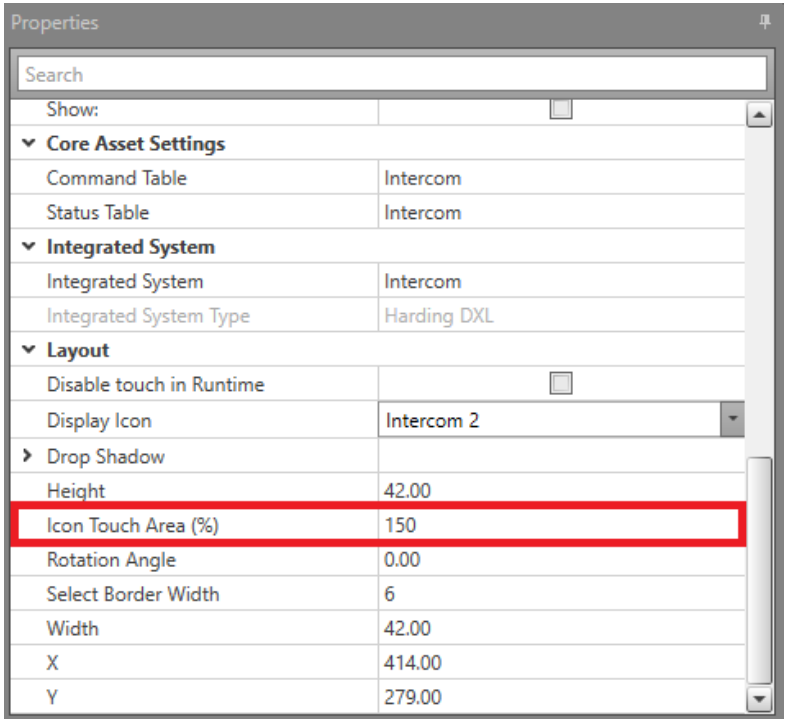
- **Rectangle** – basic rectangular shape
- **Ellipse** – basic elliptical shape
- **Line** – basic line (point to point)
- **Polyline** – line with multiple segments, drawn by clicking on the nodes (segment end points)
- **Polygon** – basic polygonal shape. The number of sides can be set within the properties grid
- **Label** – text box with fully customizable text properties
- **Image** – image container, can select file to display as well as stretch mode

IPFUSION

Design Tab – Asset Icons

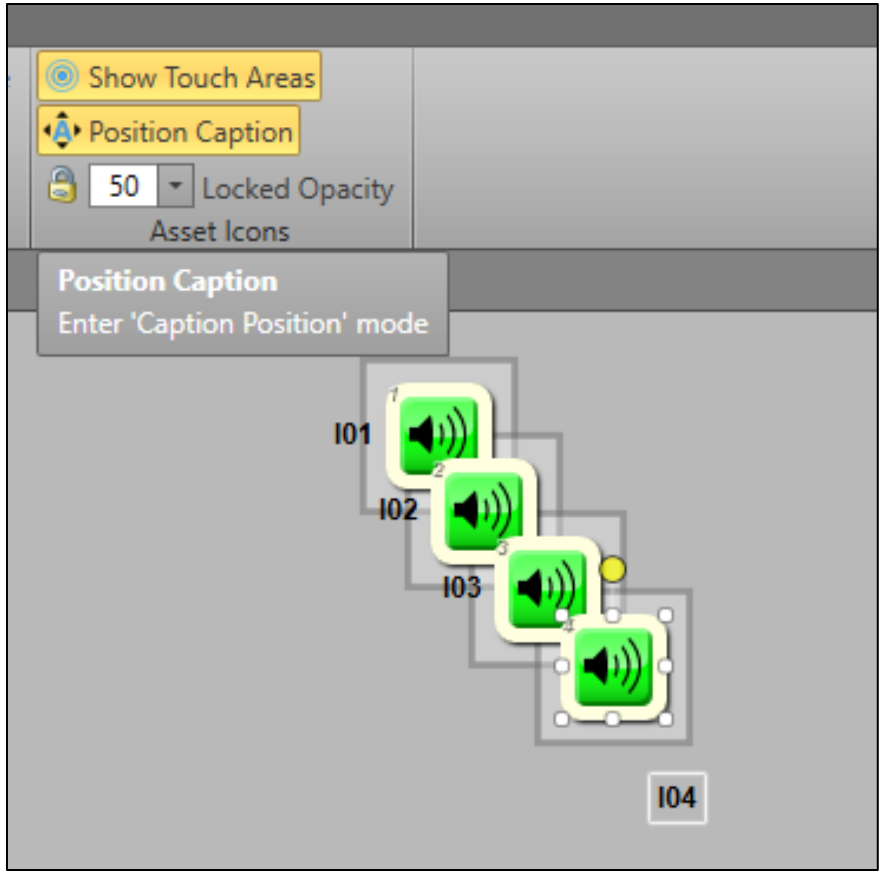
- **Show Touch Areas**
  - Displays asset touch areas when configured to be larger than the icon size (>100%)





Design Tab – Asset Icons

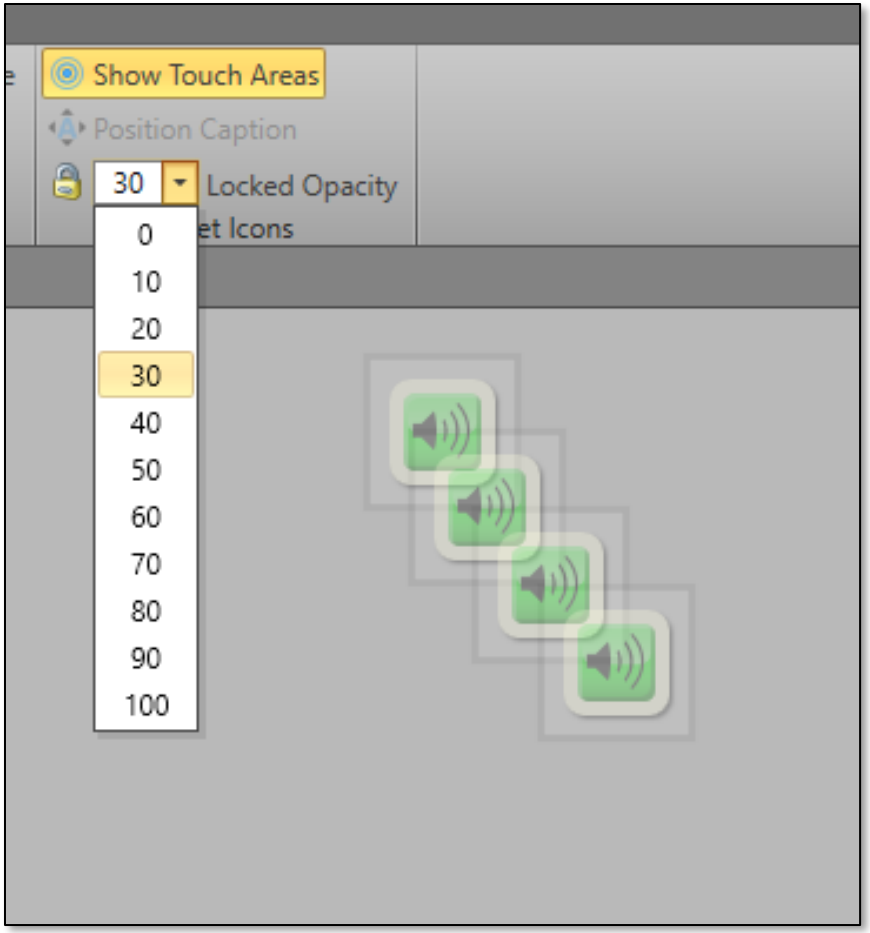
- **Position Caption**
  - Configure custom caption position
  - Useful when icon spacing is limited



IPFUSION

Design Tab – Asset Icons

- **Locked Opacity**
  - Configure the opacity of locked item groups.
  - Assets and Drawing items can be locked in order to prevent any selection and changes to them.
  - Reducing the opacity of these locked items can lessen visual clutter on maps when editing.

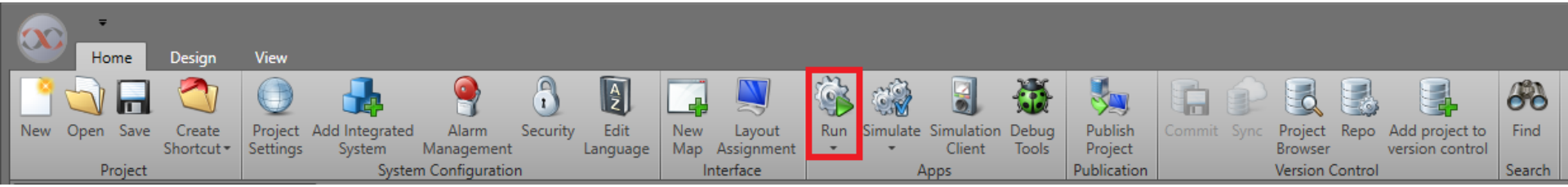


IPFUSION

Runtime

Home Tab – Runtime

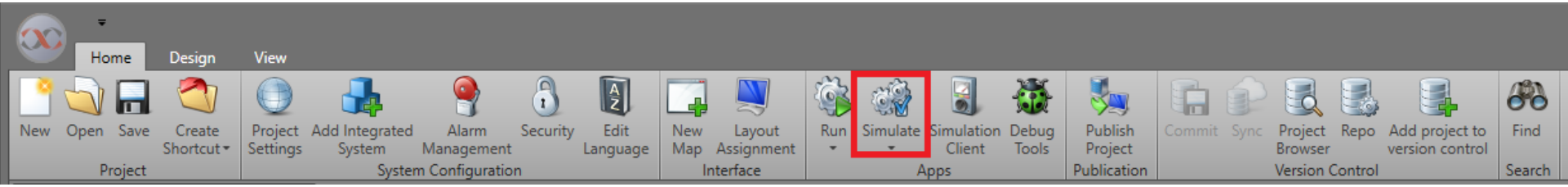
- **Run**
  - Launch the current project in the Runtime application



IPFUSION

Home Tab – Runtime

- **Simulate**
  - Launch the current project in the Runtime application in simulation mode

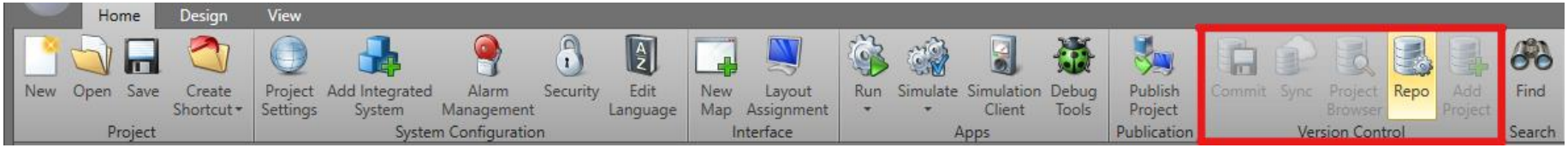


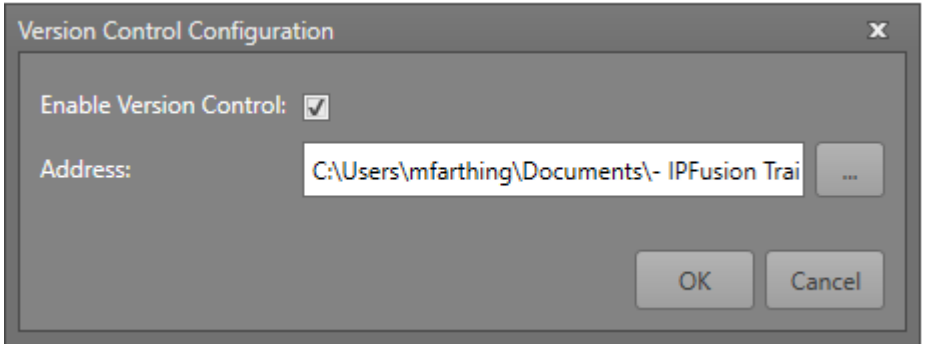
IPFUSION

Version Control

Overview – Version Control

- Allows you to create a repository to track project changes
  - Commit new changes
  - Sync changes made to repository
  - Revert to previous versions
- Repository can be located on local machine or on remote server

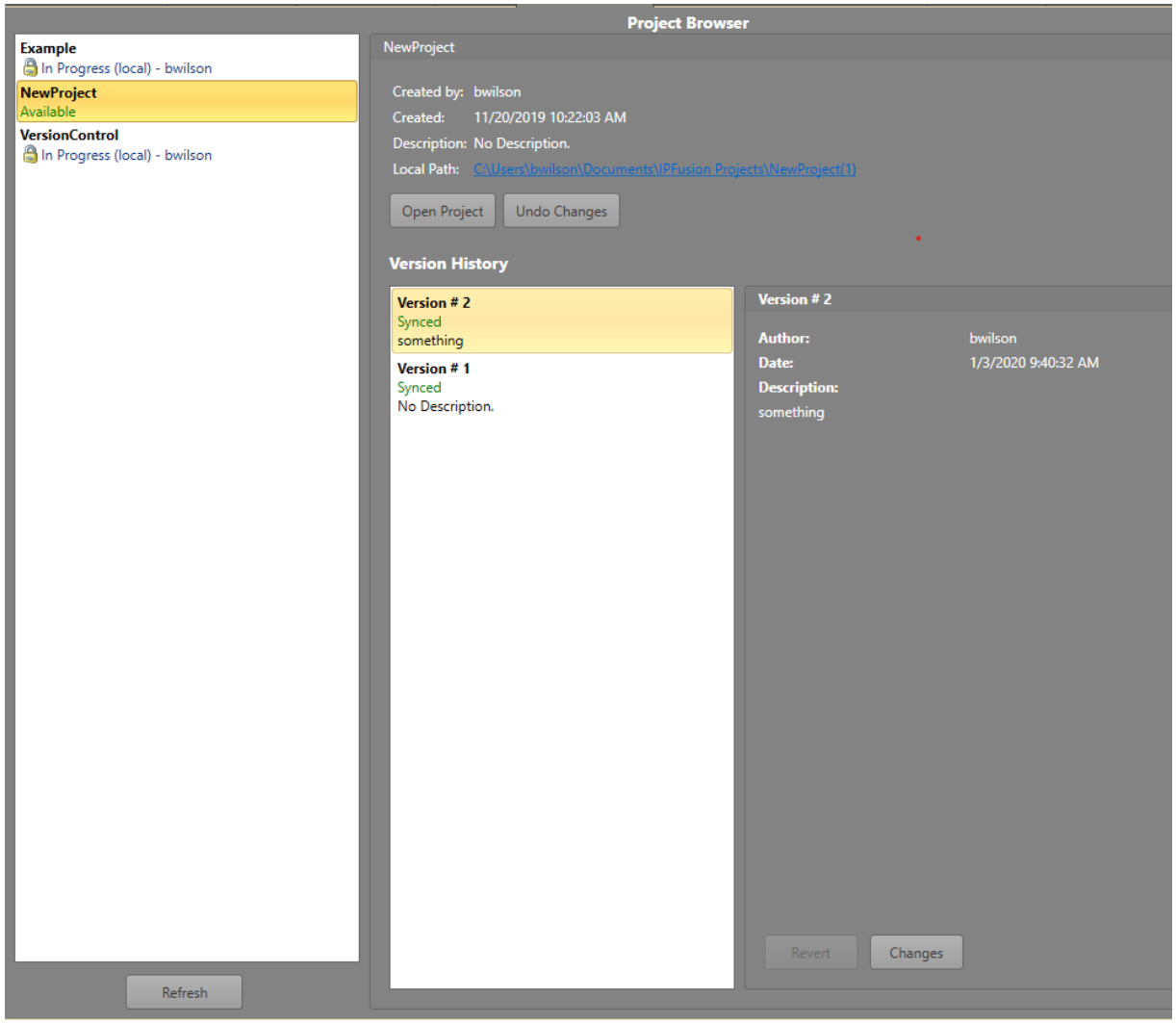




IPFUSION

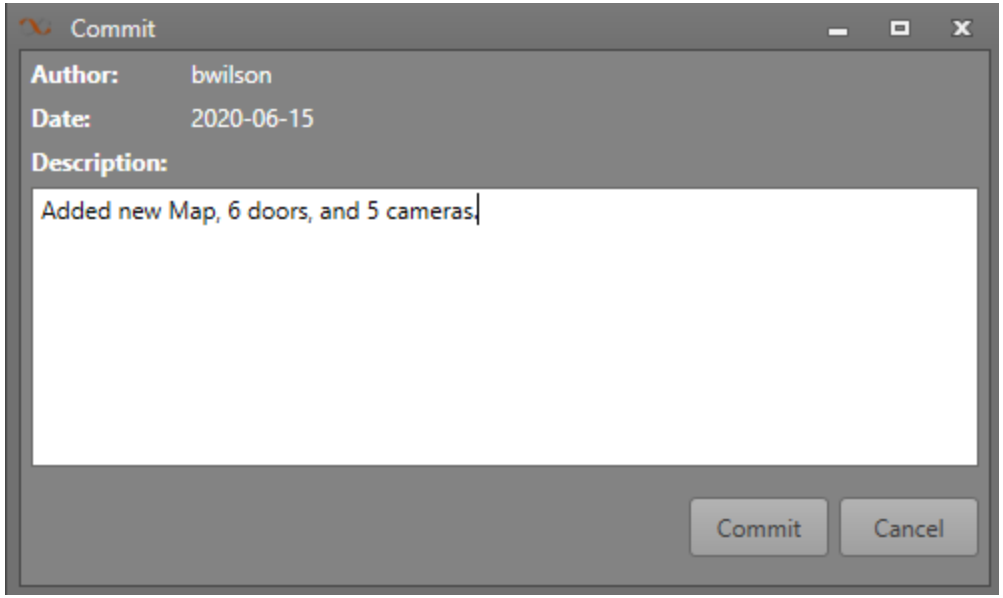
Home Tab – Version Control

- Project Browser



Home Tab – Version Control

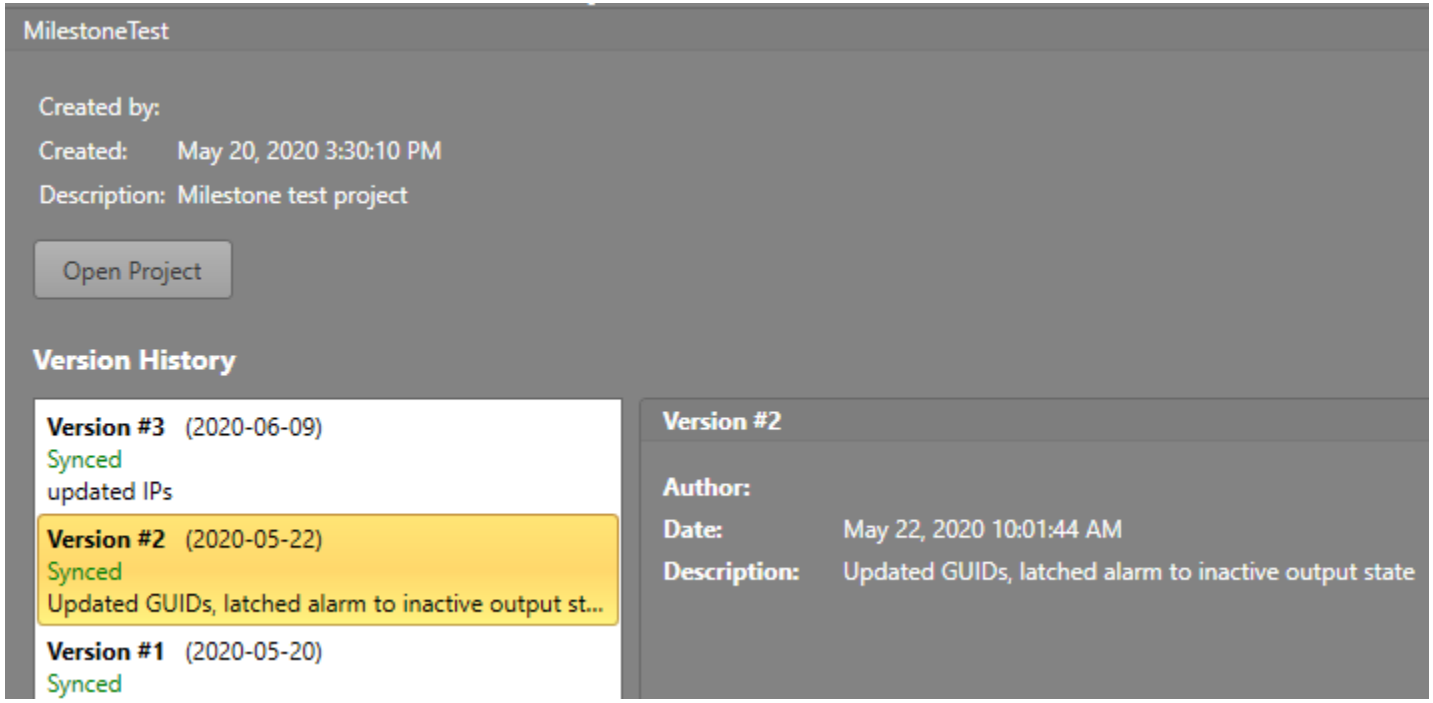
- Commit
- Commits will be sent to remote once they are synched



IPFUSION

Home Tab – Version Control

- Version History



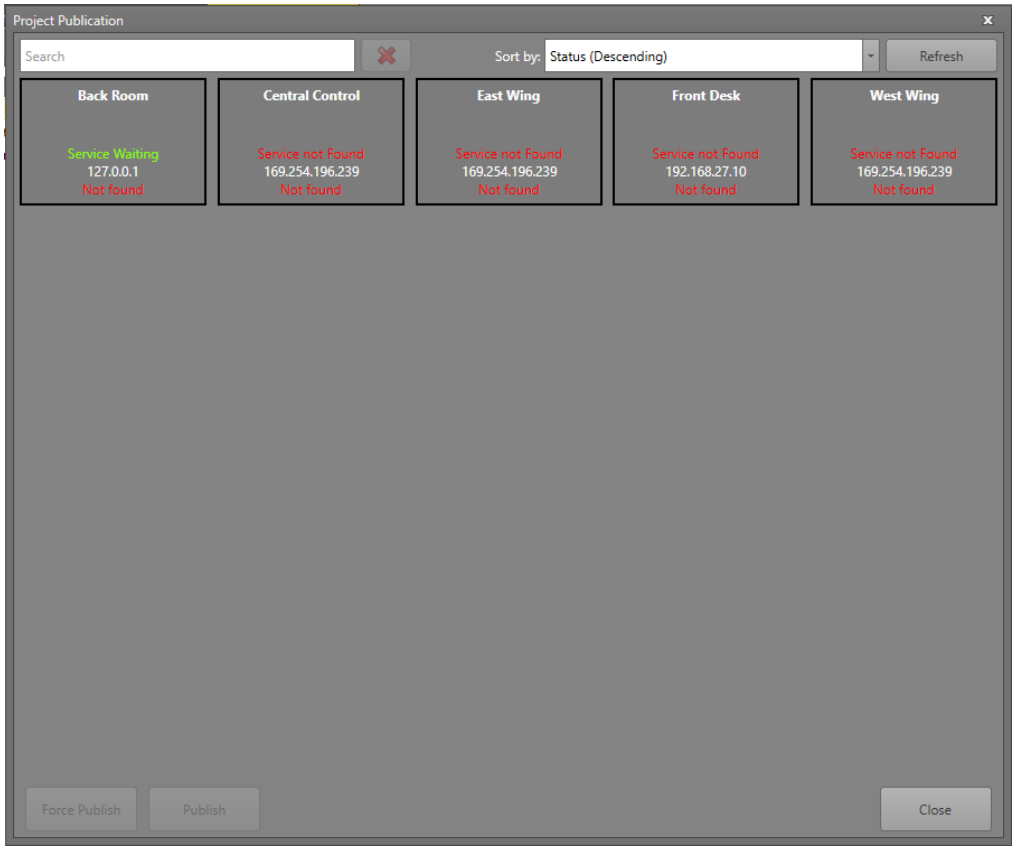
IPFUSION

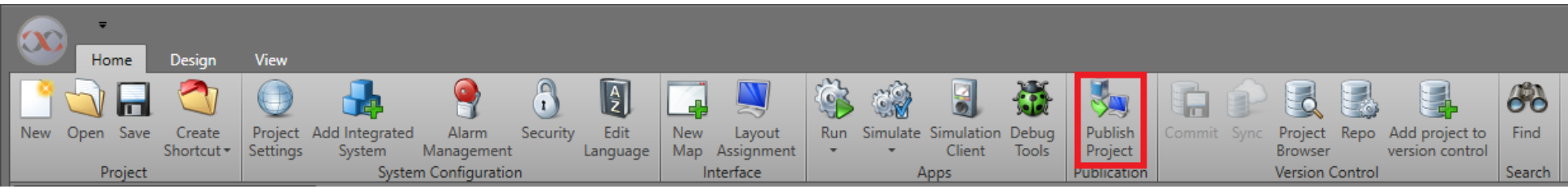
Publication

IPFUSION

Home Tab – Publication

- **Publish Project**
  - Copies the current project to Workstation
  - Shows current status of each Workstation's published project (white = current, red = outdated/fault)
  - If required, Runtime will restart
  - When Runtime.exe is launched, Runtime will load the most recently published project

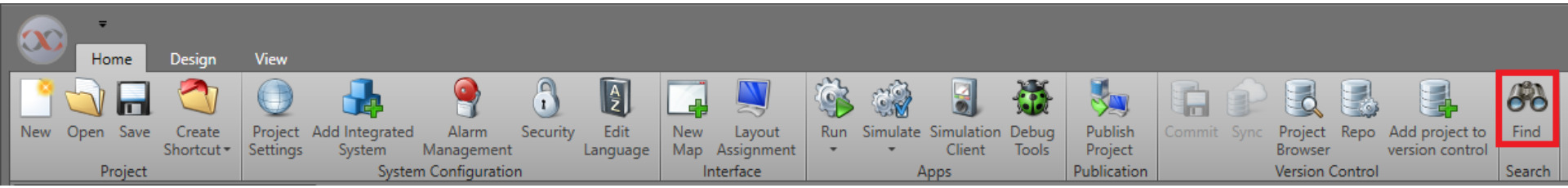




Find

Home Tab – Search

- **Find**
  - Find and specific strings found throughout the project
  - Advanced searching with regular expressions



IPFUSION

Layout

IPFUSION

View Tab – Layout

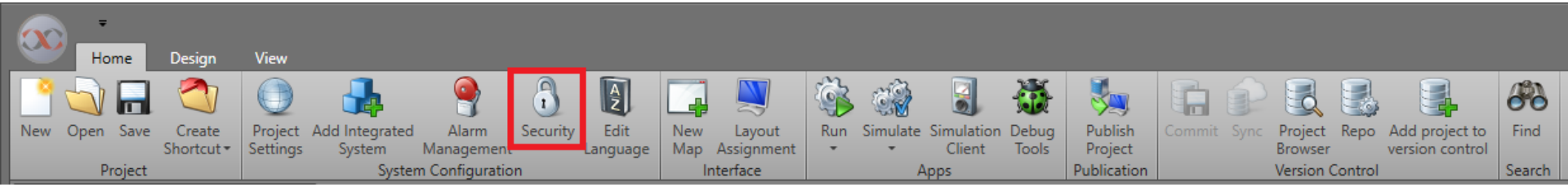
- **Reset Designer Layout** — Sets layout back to default settings

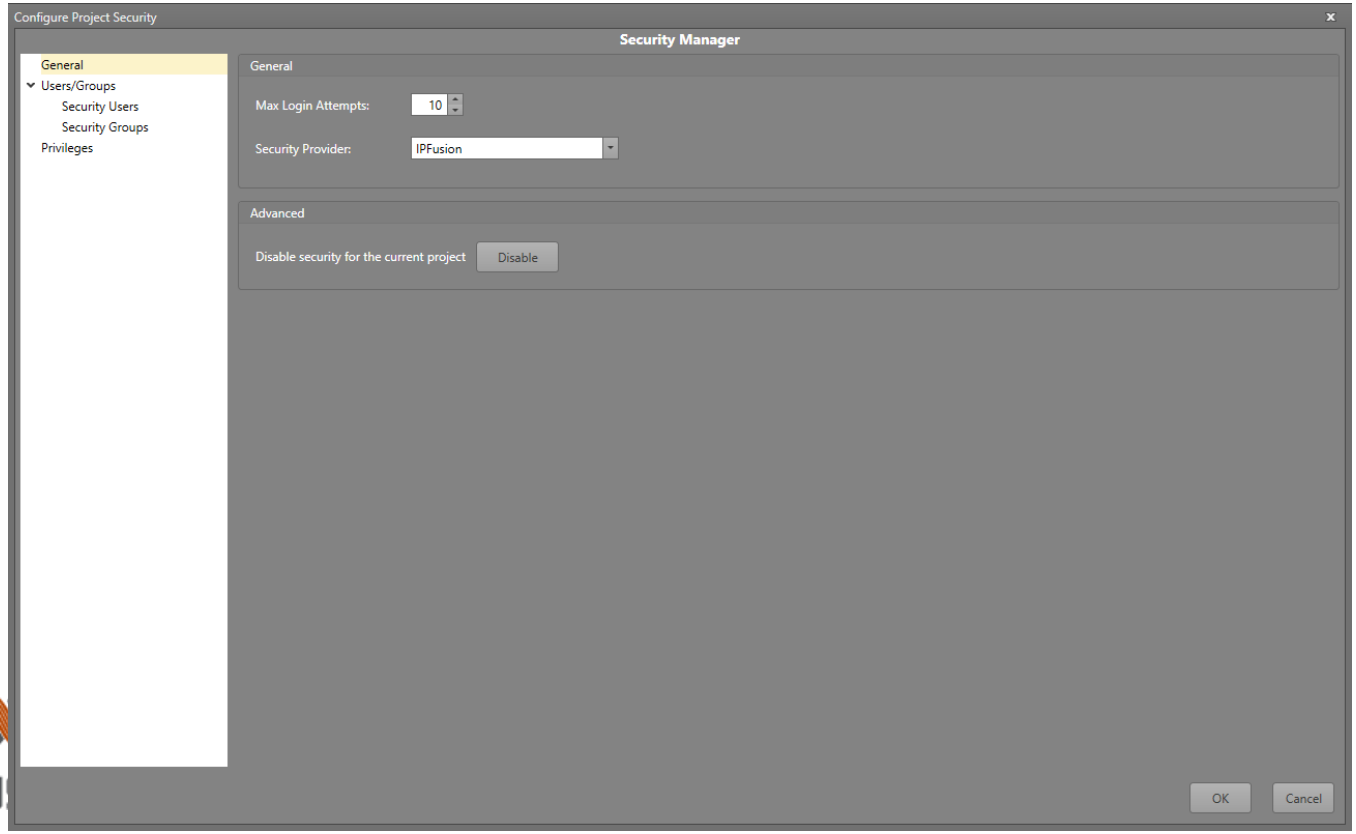
IPFUSION

Security

IPFUSION

Home Tab – Security

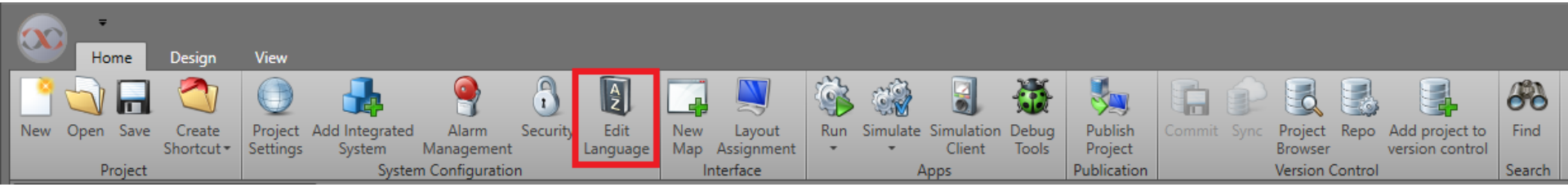


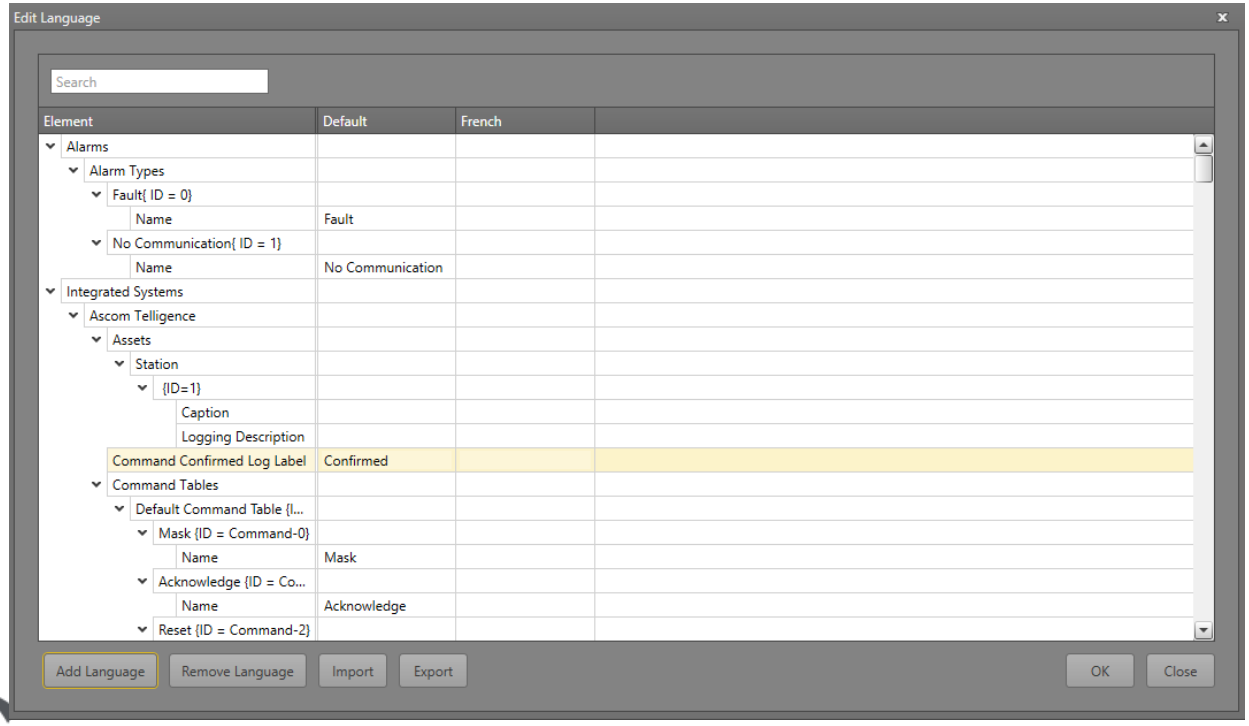


Language Manager

IPFUSION

Home Tab – Edit Language





IPFUSION

Module 2 Complete