FT Optix

FactoryTalk Optix v1.3

FactoryTalk

Rockwell Automation

expanding human possibility®

January 2024

PUBLIC

FactoryTalk Optix Program Priorities

Core Capabilities

Core product capabilities that create a strong and sustainable platform for core automation visualization and edge applications.

Expanded Architectures

Support for integrated hardware, larger distributed architectures, process systems, remote control, and cloud-based operations.

Digital Design Experience

FactoryTalk Hub integrated workflows for a cohesive customer experience when building a system using SaaS-based design tools.

Data Connectivity

Robust edge connectivity and application platform to enable data and analytics with core operations data.

FactoryTalk Optix v1.3

Core Capabilities

- Project upload from device
- New Buttons
- Trend updates – many enhancements
- New Sparkline object
- Flexbox style layout container
- Advanced Dynamic Links (IF-THEN-ELSE)
- Multi-monitor support for Optix Studio
- Multi-Aliases (to support faceplates)
- Web Object - Progressive web apps
- Role-based security support
- Enhanced color picker
- Exclusive Alarms enhancements
- Flexible stylesheet options
- Alarms Import/Export script update

Expanded Architectures

- Docker w/ disconnected licensing
- Linux Ubuntu22 OS
- Web client disconnect alert and automatic re-connect
- IP Address property for connected client sessions

Digital Design Experience

- Azure DevOps and BitBucket support (on-prem)
- GitLab cloud support
- Create remote repos on initial push

Data Connectivity

- OPC UA client value updates w/o sub
- Export OPC UA NodeSet files
- Instances reference imported types
- Logix AOI local tags – online only
- Beckhoff & Siemens Driver updates
- PushAgent - Store and Fwd on MQTT
- SQLite Database storage usage script

FactoryTalk Optix v1.3 (Feature Preview)

Core Capabilities

Expanded Architectures

Digital Design Experience

Data Connectivity

- Logix extended tag properties - Eng Units, Min/Max, Desc, State 0/State 1 (Feature Preview)
- Micro800/MicroLogix 1400 (Feature Preview)

Core Capabilities

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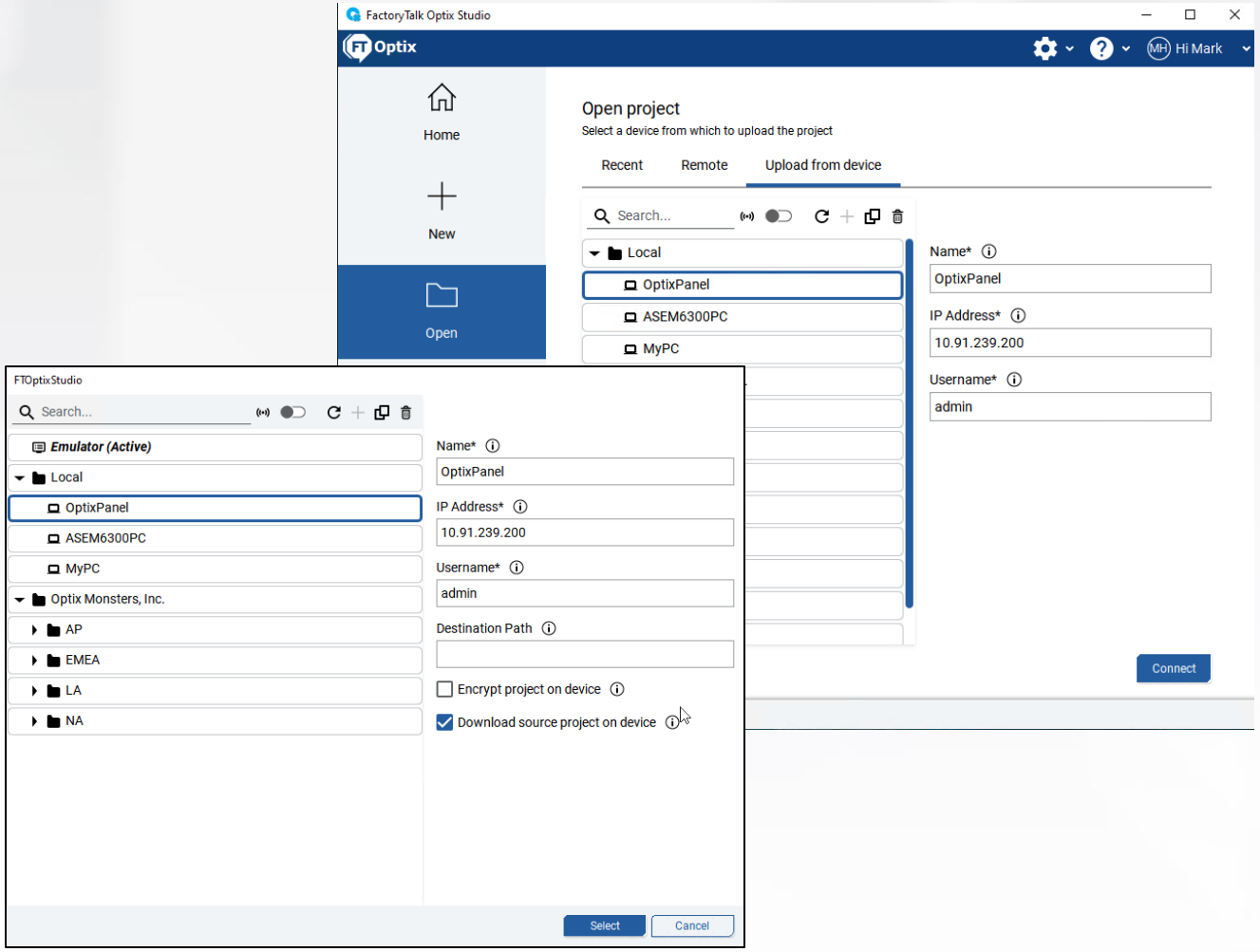
Upload project from device

Core Capabilities

- As part of the deployment of an application, you can now choose to "**Download source project on device**"
- This allows the project to be uploaded at a later time from any deployed device back to your development computer
- This is supported with Optix applications deployed to
  - Personal and Industrial computers
  - OptixPanel terminals
  - Embedded Edge Compute (EEC)



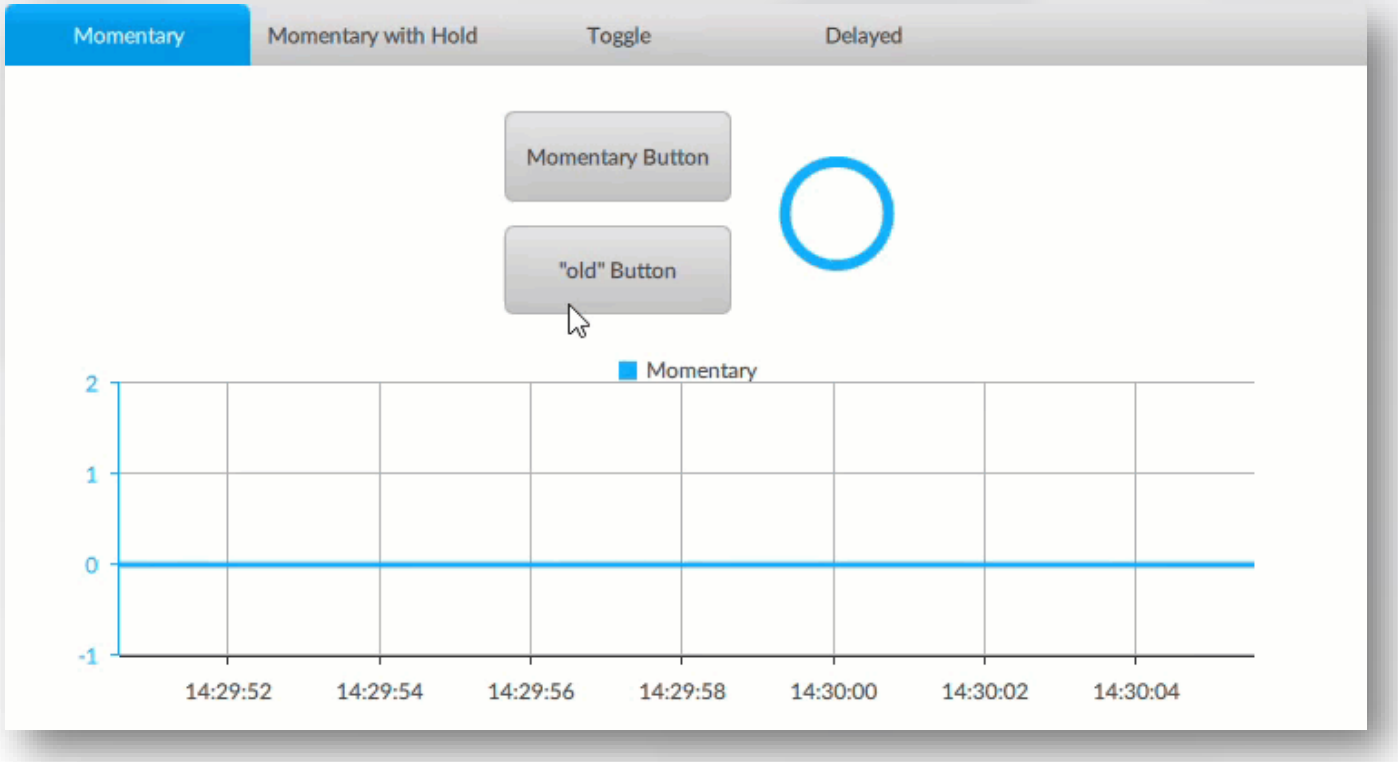
New Buttons

Core Capabilities

- **Momentary** Button
  - Replicates the behavior of an actual "Button" and simplifies the configuration by allowing the assignment of a tag to the Active state
  - Configuration includes the assignment of holding times (Min and Max)

- **Toggle** Button
  - Replicates the behavior of a "switch" control, and provides all events of a Button

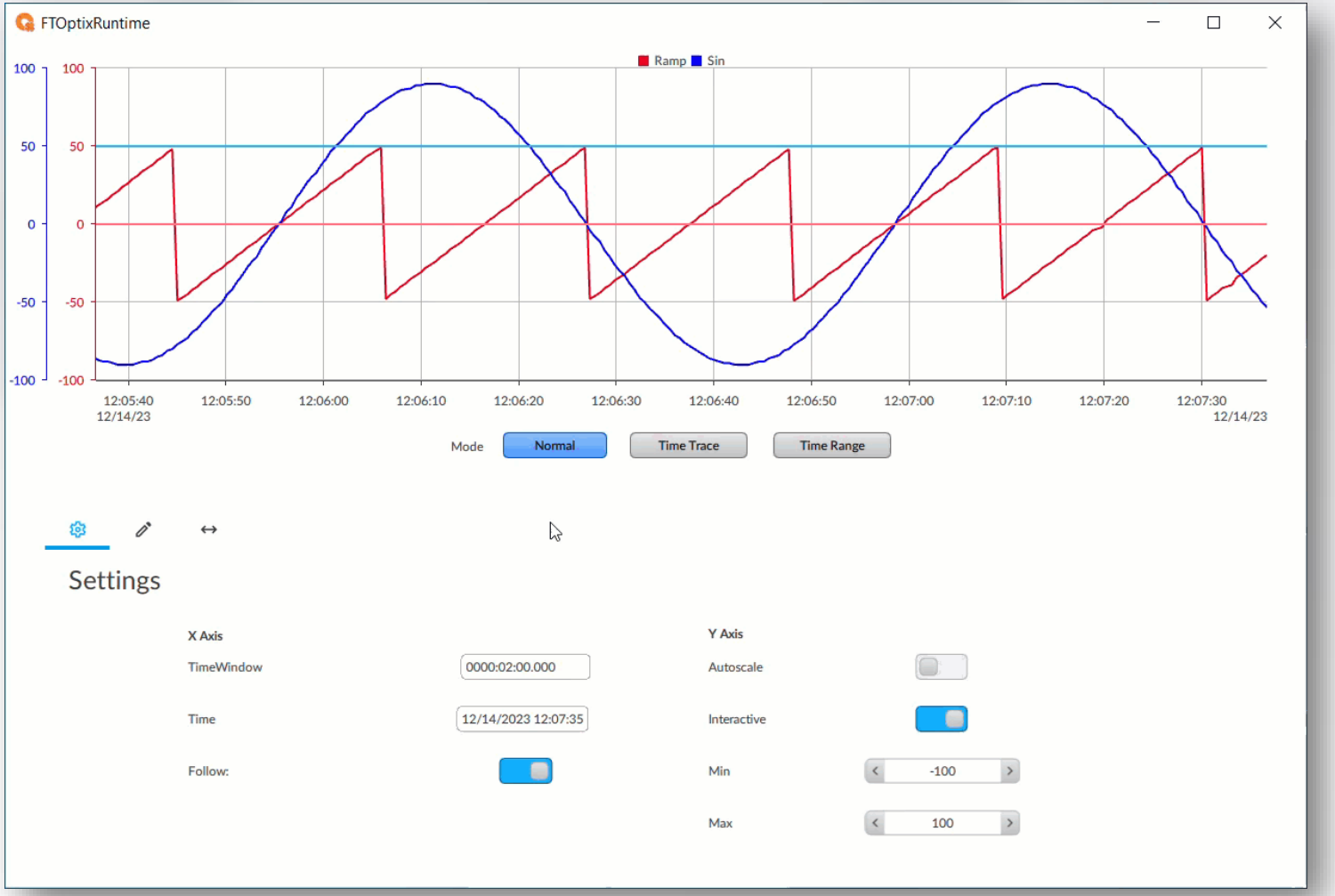
- **Delayed** Button
  - Executes commands after a certain amount of time (LongPress event)



Trend updates

Core Capabilities

- Major improvements
  - **Pen threshold**: set a threshold line
  - **Time Trace**: turn tracing point on
  - **Time Ranges**: get min, max, avg values within a time range
- Minor improvements
  - Pen Title
  - Pen Y Axis position: Left, Right
  - Pen X Axis Snap position: Left, Center, Right

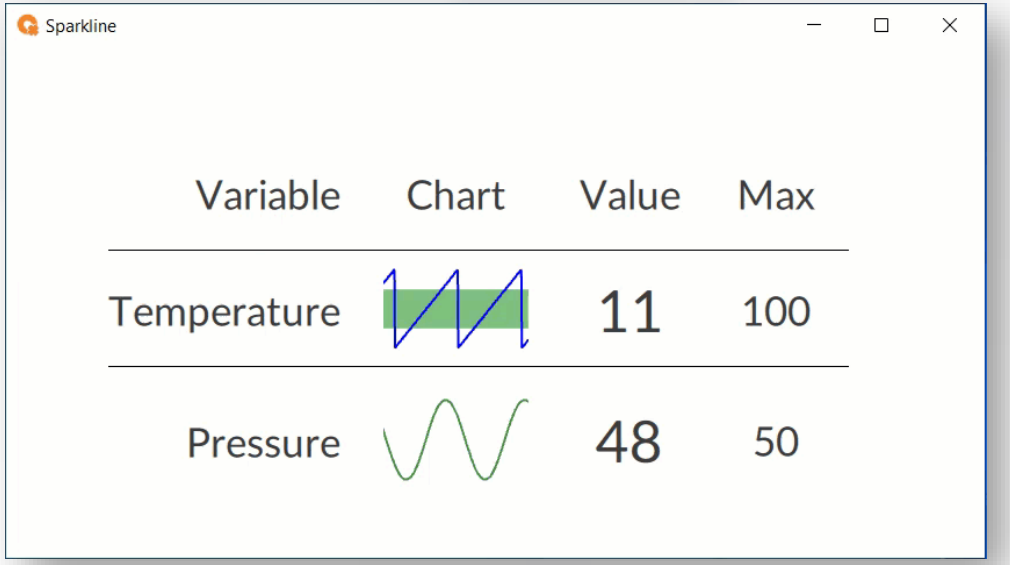


New Sparkline object

Core Capabilities

- Small charts like sparklines can provide useful contextual information as it is needed in a compact way

- Like the Trend, a Sparkline is great for showing value changes over time
  - connecting directly to a Variable for live data
  - connecting to a Datalogger for historical data

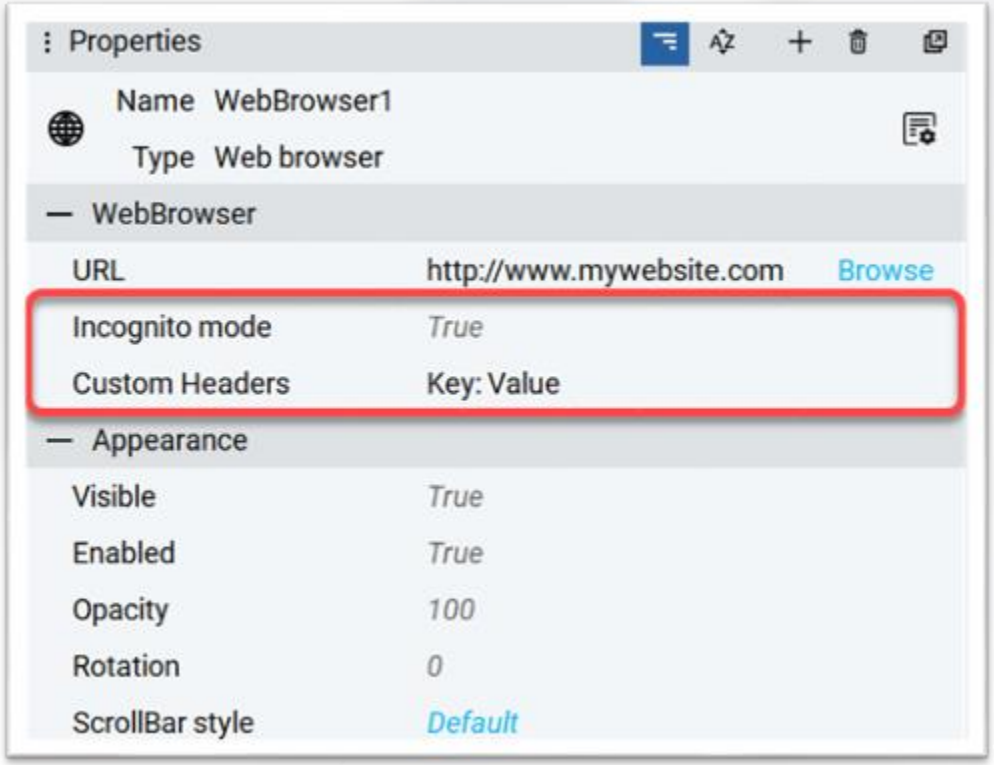


WebBrowser object updates

Core Capabilities

- The Web Browser object now supports
  - **Custom Headers:** use to login to IP Cameras or passing custom arguments to an interactive page
  - **Incognito mode:** In Incognito, none of your browsing history, cookies and site data, or information entered in forms are saved on your device.

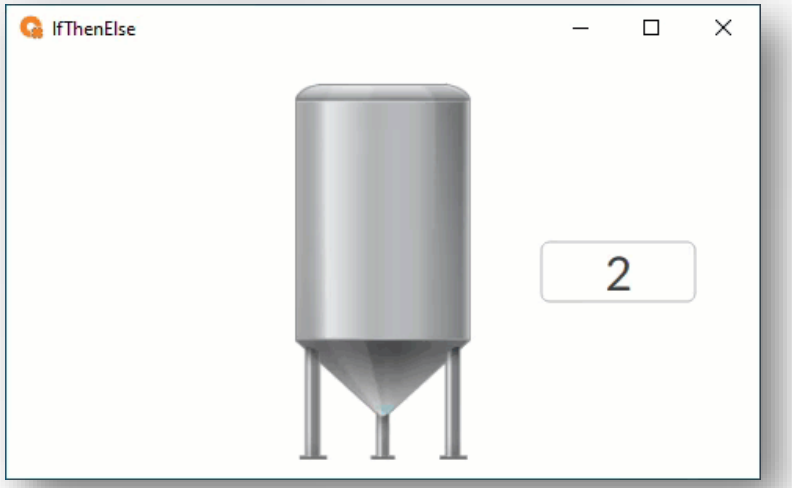
    Please note: Incognito is only available when used within Native Presentation Engine
  - Supports **Progressive Web Apps**

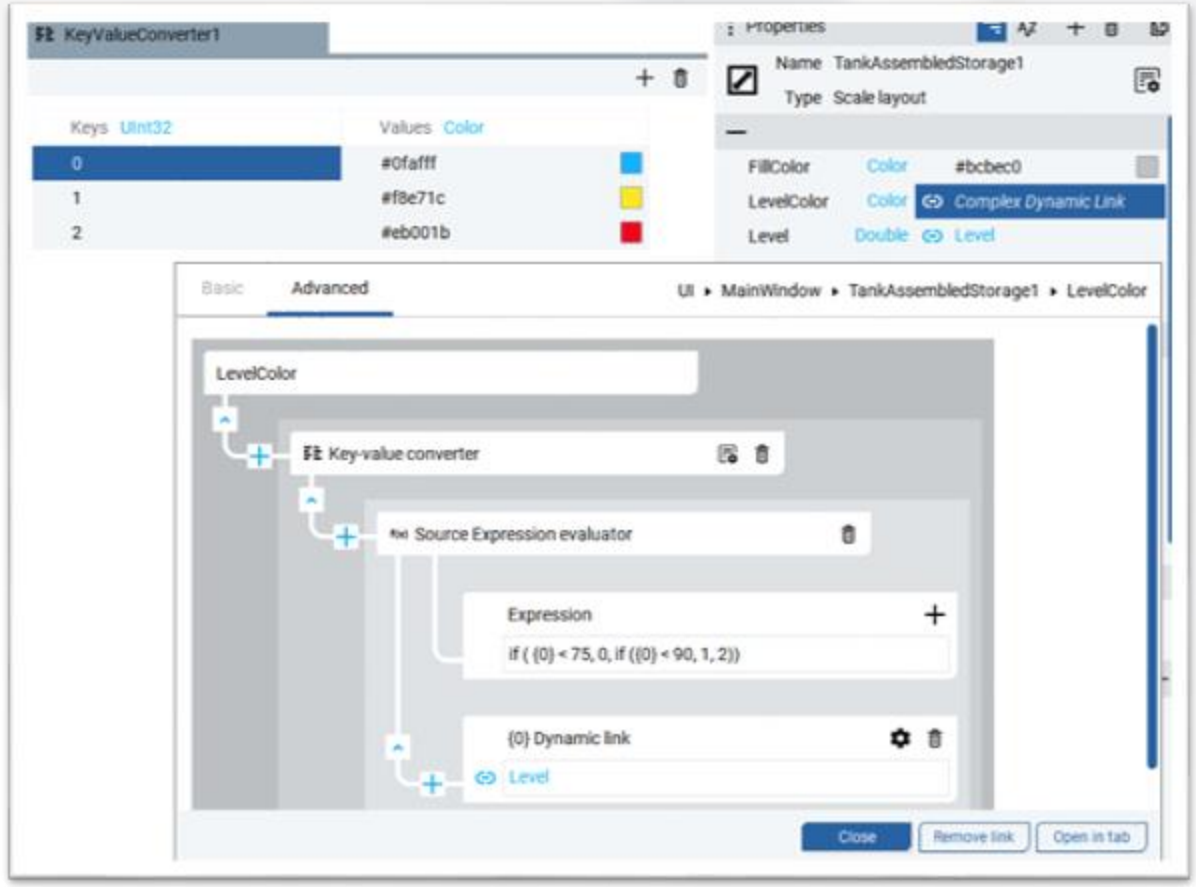


Expressions evaluator updates

Core Capabilities

- Expression Evaluator now supports
  - **If** function: see example
  - **Like** function: returns true if the string parameter matches the given pattern with % wildcard
    example: *like ("motor23", "motor%") evaluates true*
  - **IsEmpty** function: return true if the string is empty





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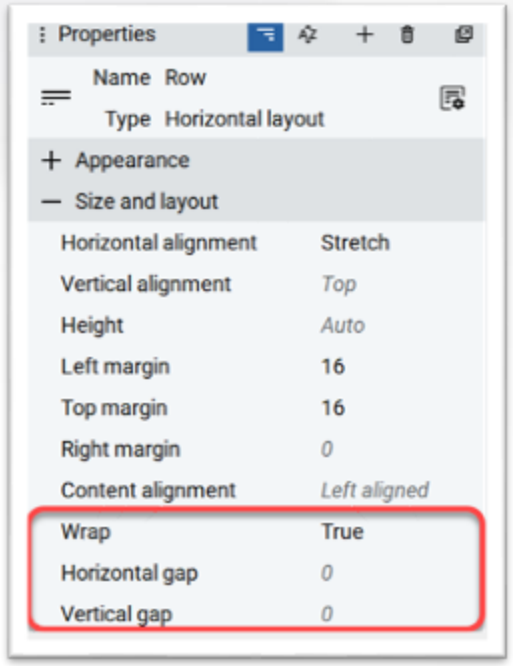
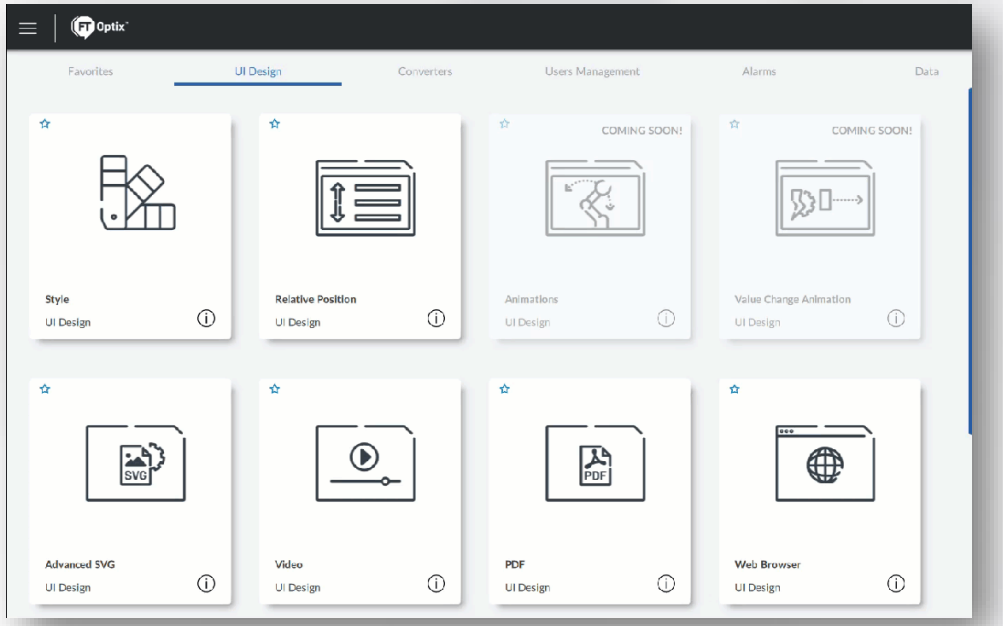
Responsive design with content wrapping

Core Capabilities

- Content on **Vertical and Horizontal layouts** can wrap to the next row or column for improved responsive design
  - **Wrap** property
  - **Horizontal Gap** and **Vertical Gap** properties for spacing between columns and rows





Color Picker enhancements

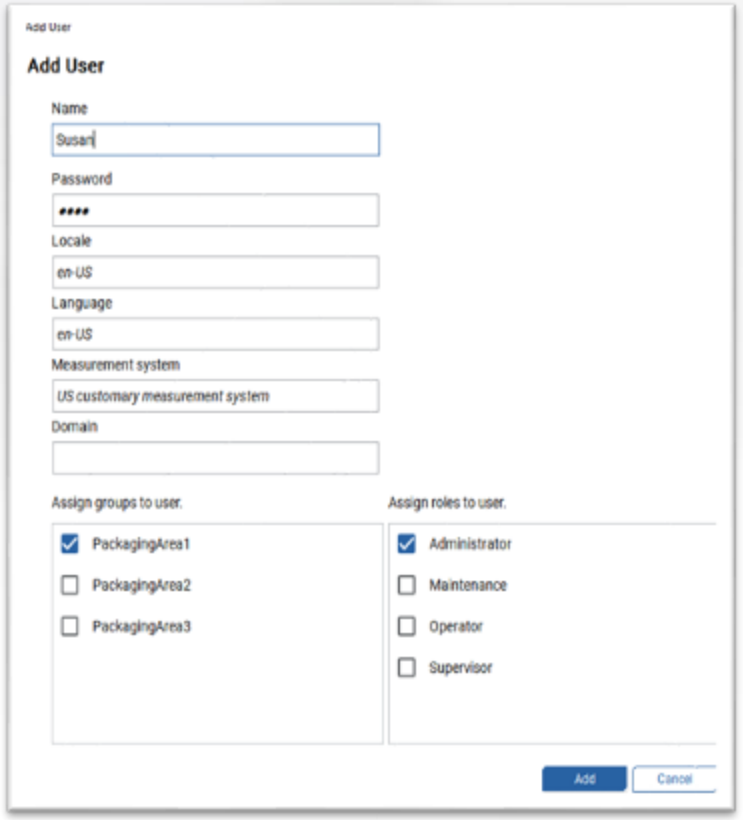
Core Capabilities

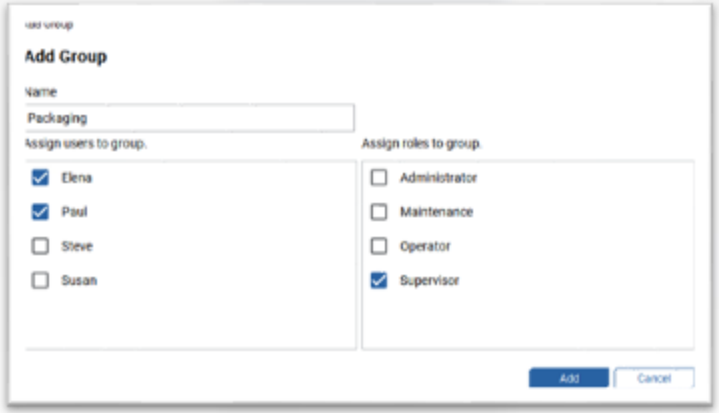
- Enter Hex or RGB color values
- Add favorite colors
- Select a color from new color palettes
  - Stylesheet
  - Recents
  - Favorites

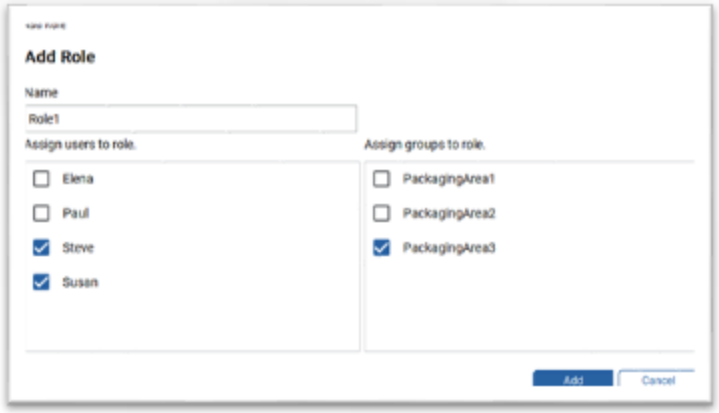
Manage users and groups editor improvements

Core Capabilities

- Ability to add and edit users, groups and roles
  - Add a user, group or role
  - Rename a user, group or role
  - Delete a user, group or role







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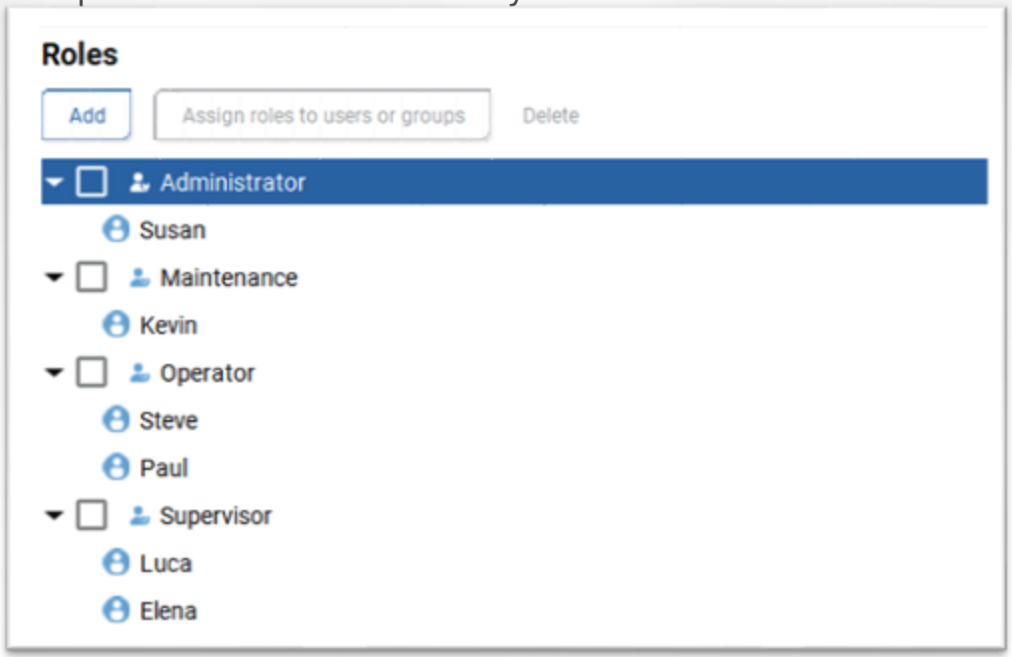
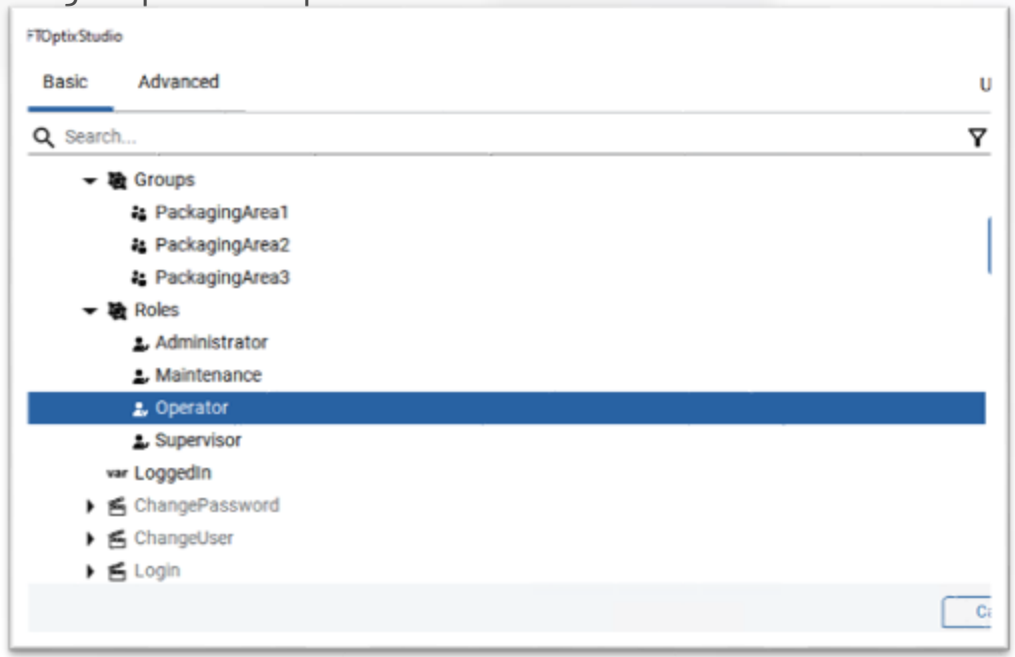
Role-based Security

Core Capabilities

- Ability to add roles to your application
  - Create roles
  - Assign roles to users and groups
- Browse for users, groups or roles and assign to application logic to provide an extra layer of security
  - Example: Enable a button only when a user is a member of a specific group and a specific role

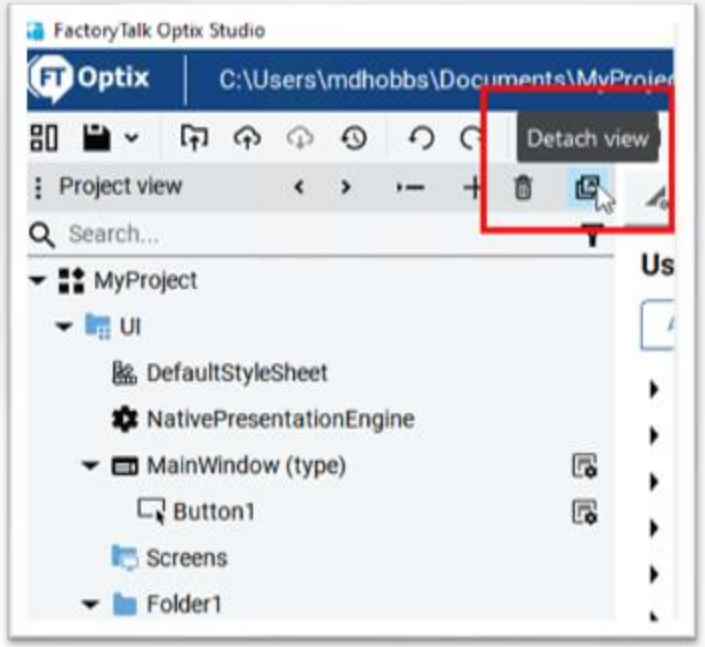


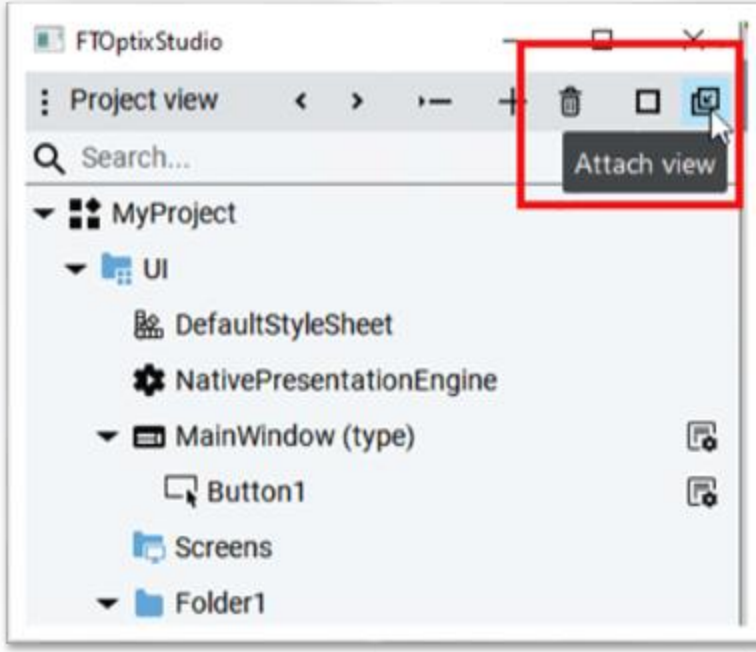


Multi-monitor support

Core Capabilities

- In a multi-monitor setup during design-time
  - Use the Detach view icon to undock panels (listed below) from the IDE frame and move them to other monitors to maximize the center pane for creating and editing screens.
  - Panels that can be detached/re-attached:
    - Project View / Type View
    - Property Pane / Events View
    - Template Library
    - Dialogs
- Attach view to redock panels back to the IDE frame





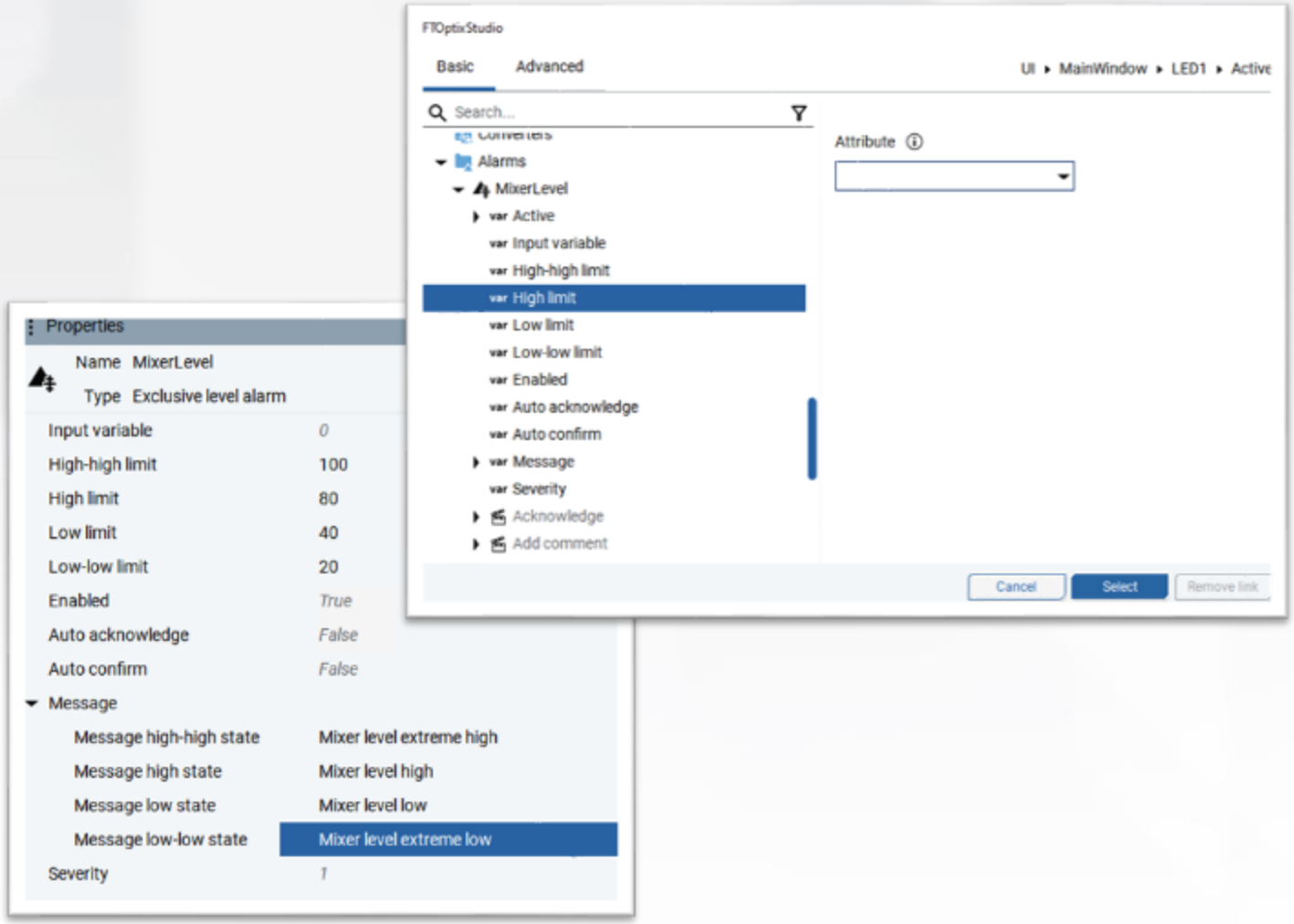
Exclusive alarm message and state enhancements

Core Capabilities

- Each alarm threshold can now have a unique message, providing more precise information for operators

- Each alarm level can now have a unique active variable, enabling you to bind properties of graphic objects to animate based on individual alarm levels becoming active

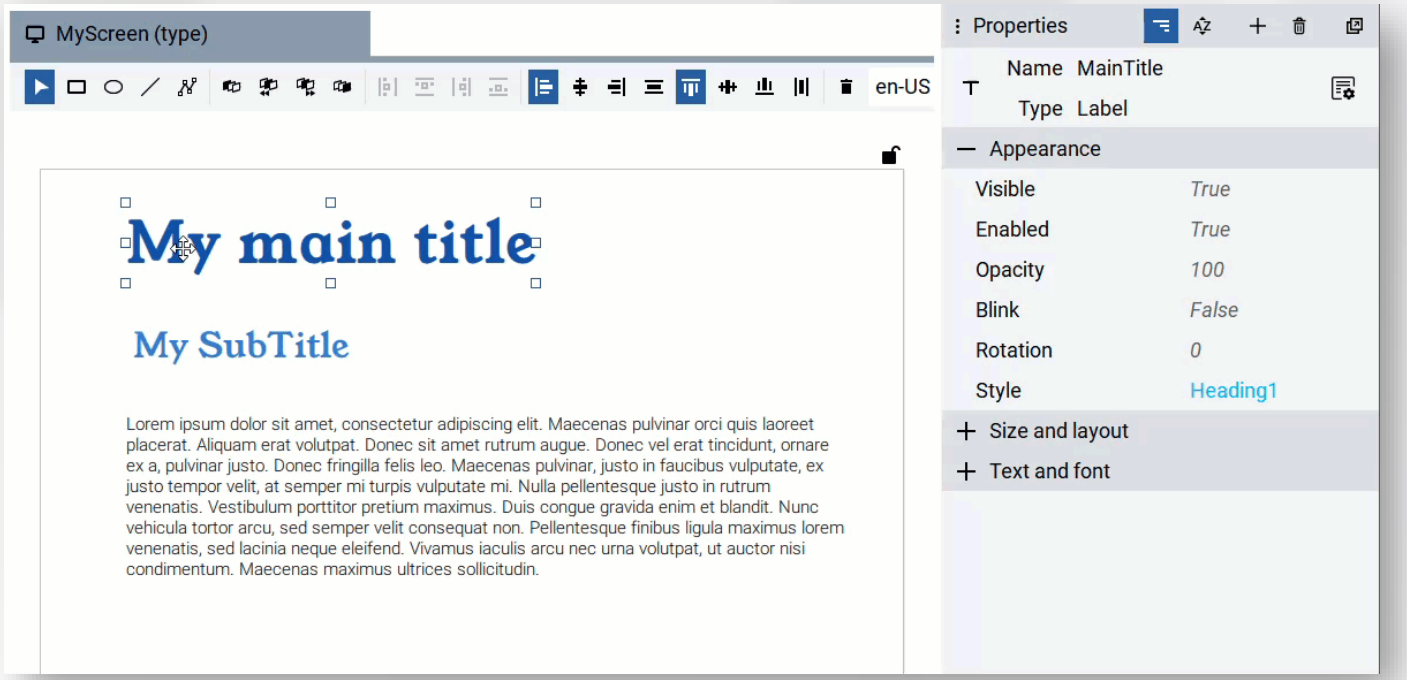
  - Example: Configure 1 alarm with 4 unique and separate messages and separate alarm states



Style sheet with sub-styles

Core Capabilities

- Now it's possible to define **more than one style for every control** into the style sheet
  - This is useful not only ad design-time but also at runtime, allowing to change the style of some controls under predefined conditions (instead of changing the entire style sheet as before)

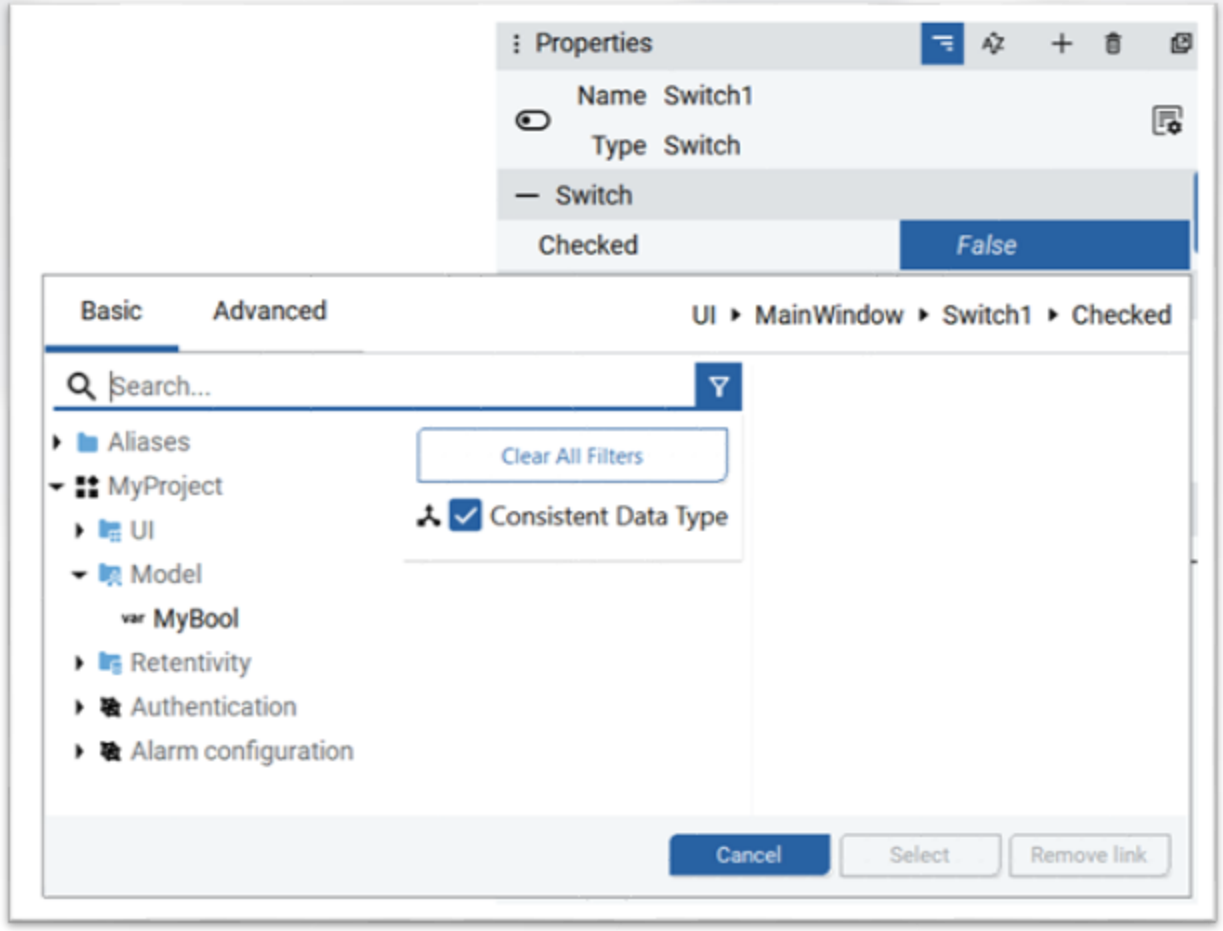


- The style sheet includes some new controls styles
  - Radio Button
  - Checkbox
  - Label

Dynamic Link window filter by Data Type

Core Capabilities

- **Dynamic Link** window now filter variables based on consistent Data type
  - Example: applying the Consistent Data Type filter when opening the Dynamic Link window for the property "Checked" of a Switch object, then only boolean variables will be shown

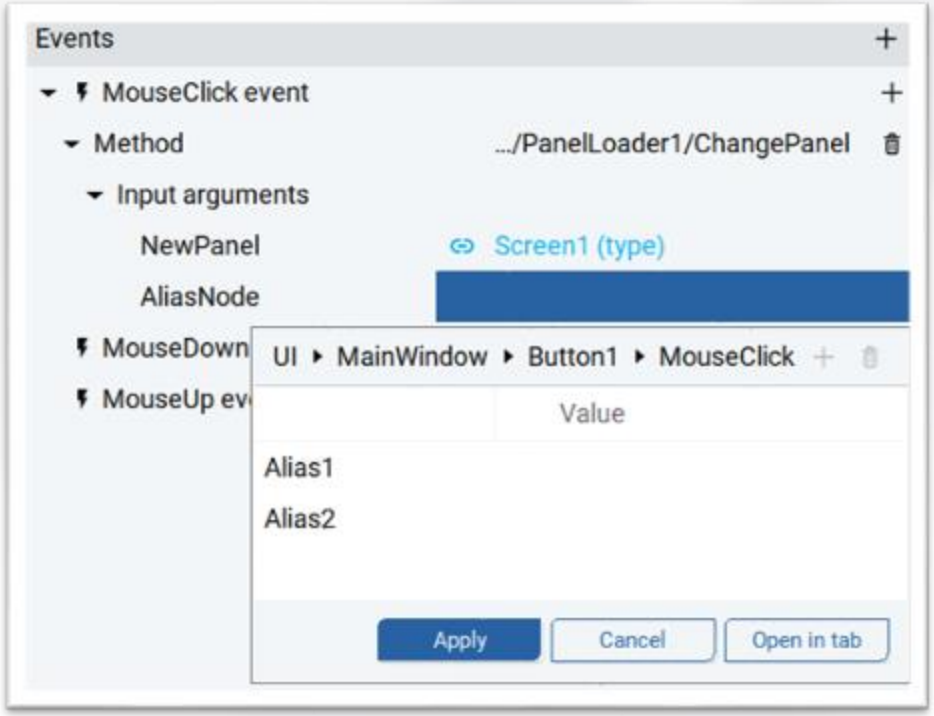


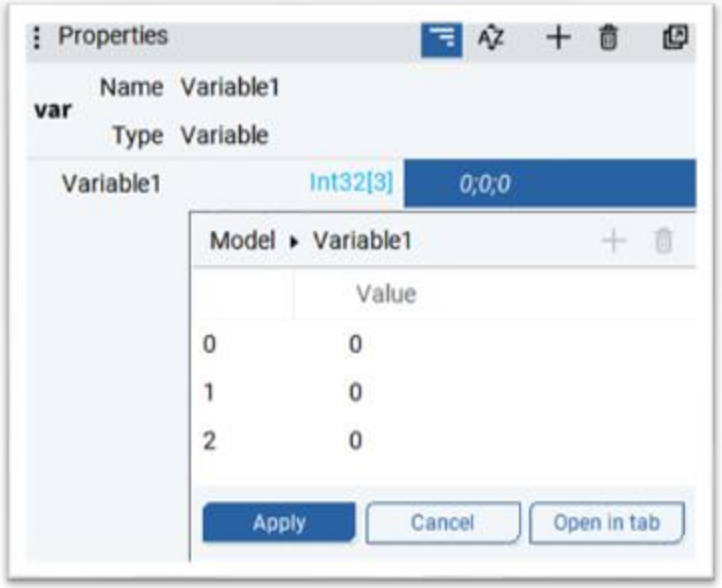
Multiple Aliases and Array Editor

Core Capabilities

- **Panel Loader**, **Navigation Panel** and **DropDown Button** now support **multiple aliases** through ChangePanel and OpenDialog methods

- The new **Array Editor** window can be used to assign aliases and for easy configuration of array variables





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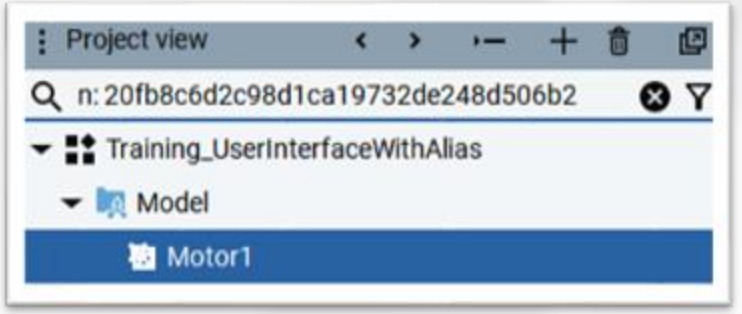
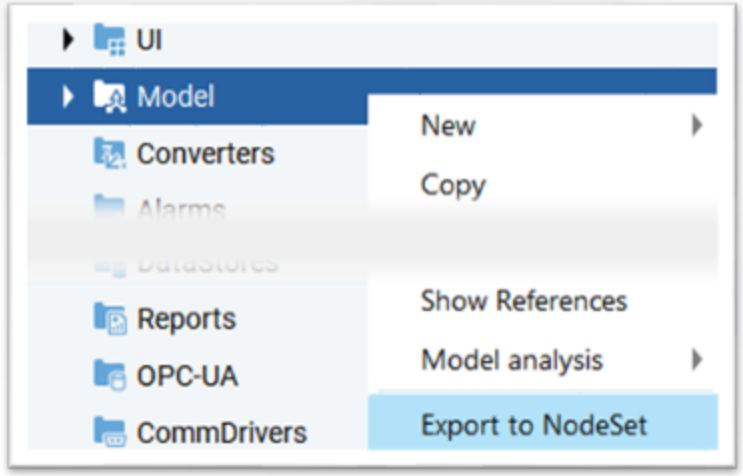
Other enhancements

Core Capabilities

- **Search by nodeid** in the Project View
  - Prepending the *"n: "* into search criteria, allow to find objects that reports error in the Studio Output log window



- **Export/Import the OPC UA NodeSet**
  - Export or Import via xml file is useful for 3rd party integration and Companion Specifications



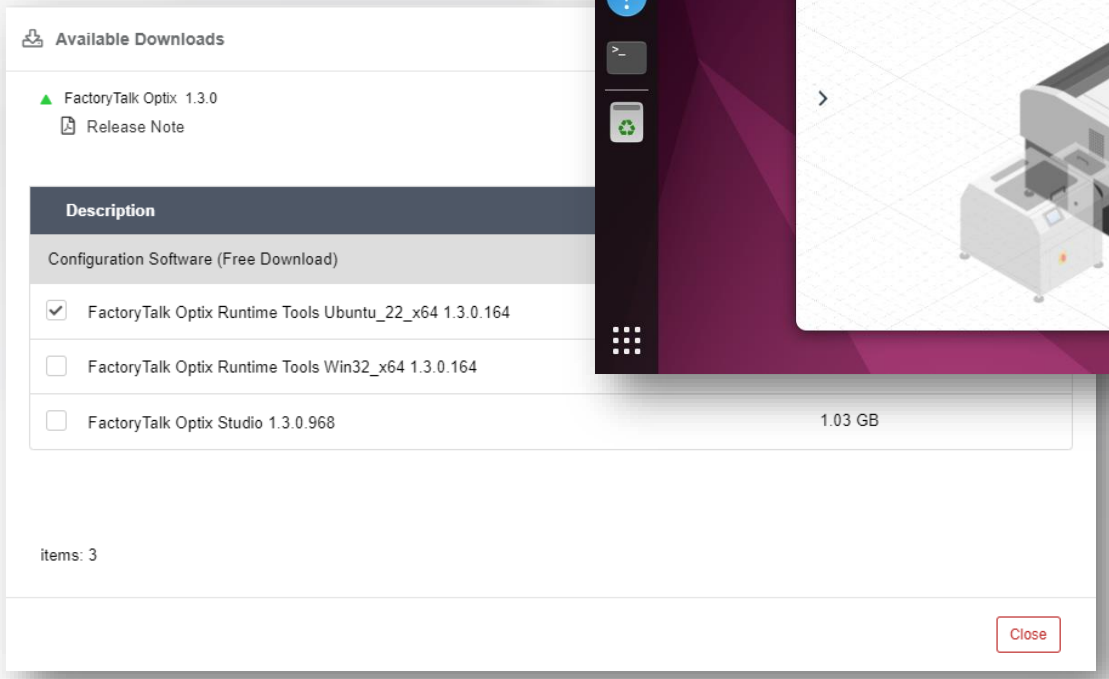
Expanded Architectures

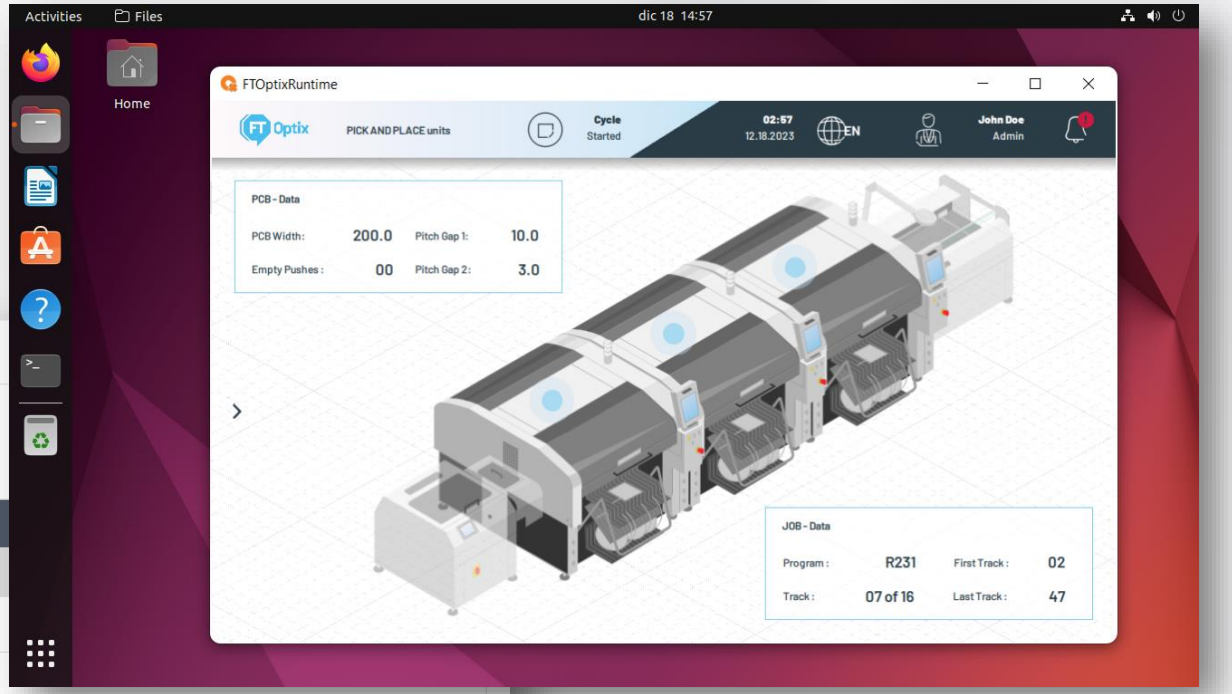
FT Optix

Linux Ubuntu22 Runtime

Expanded Architectures

- Optix runtime tools
  - Entitlement Manager
  - Update Server
- Available for Linux Ubuntu22 and Windows OS
- Can be downloaded from either the Optix portal through FT Hub or PCDC.





Web clients disconnect/reconnect

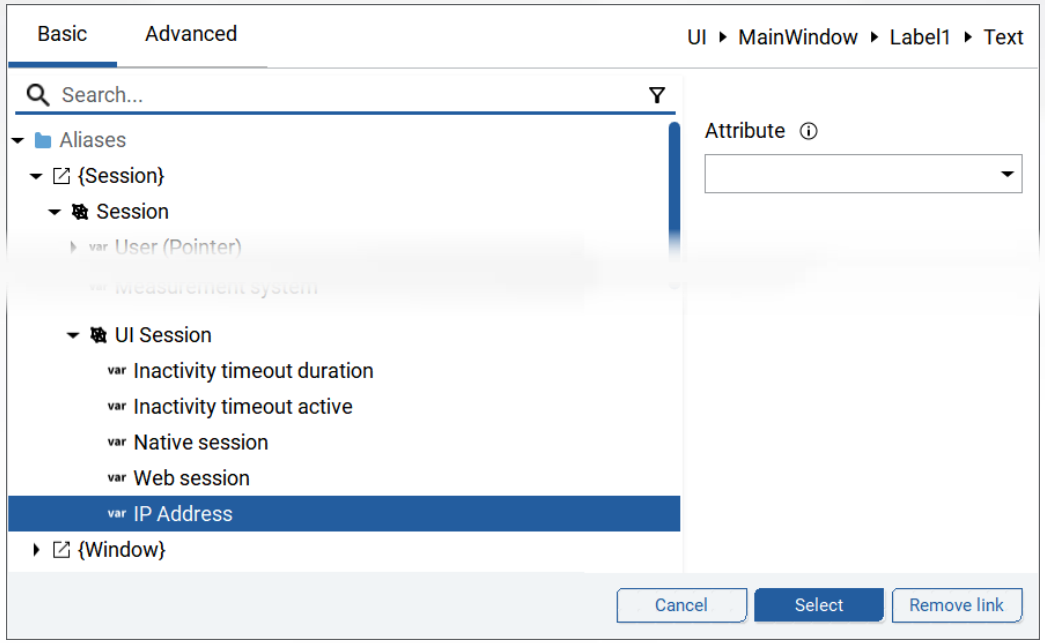
Expanded Architectures

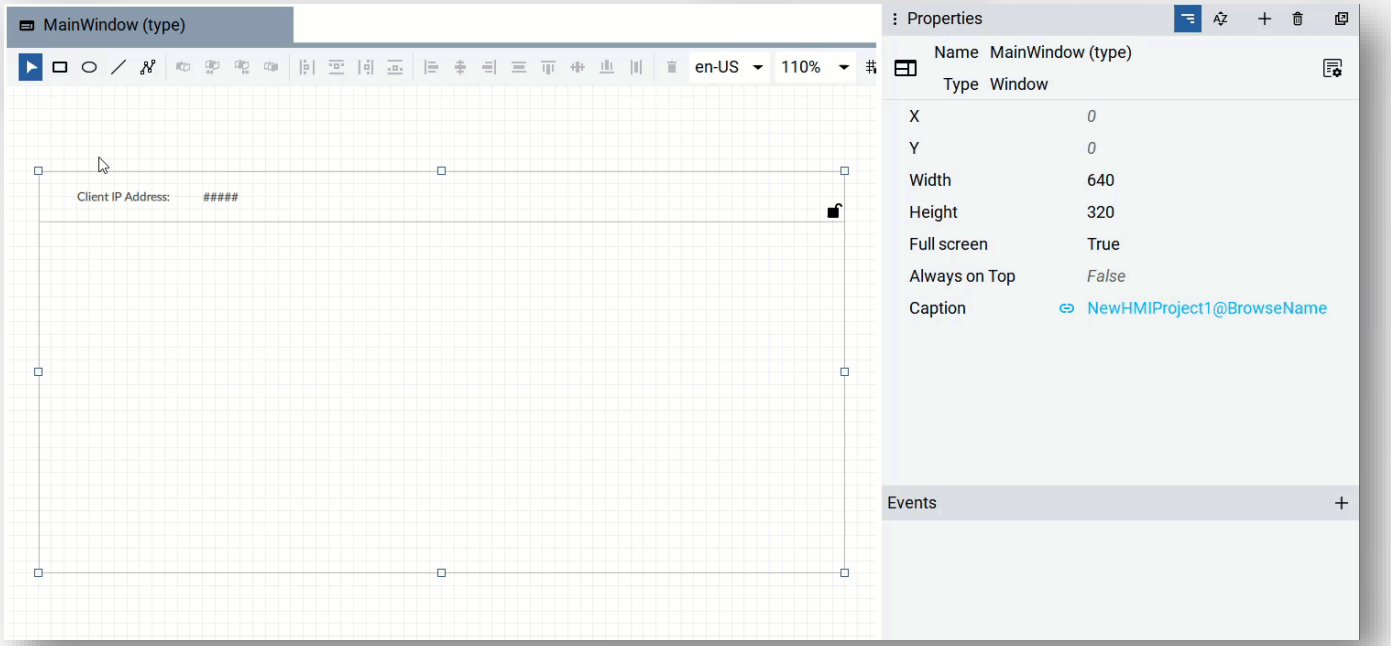
- Web clients (running in a web browser) connected to the Web Presentation Engine
  - Alerts the operator when the connection to the Optix Runtime is unreachable
  - And automatically reconnects when the connection becomes available

IP Address for connected Client sessions

Expanded Architectures

- The web client IP Address property is now available to the UI session
- Example: Use the IP Address property in your application logic to open Screens based on the web client IP Address





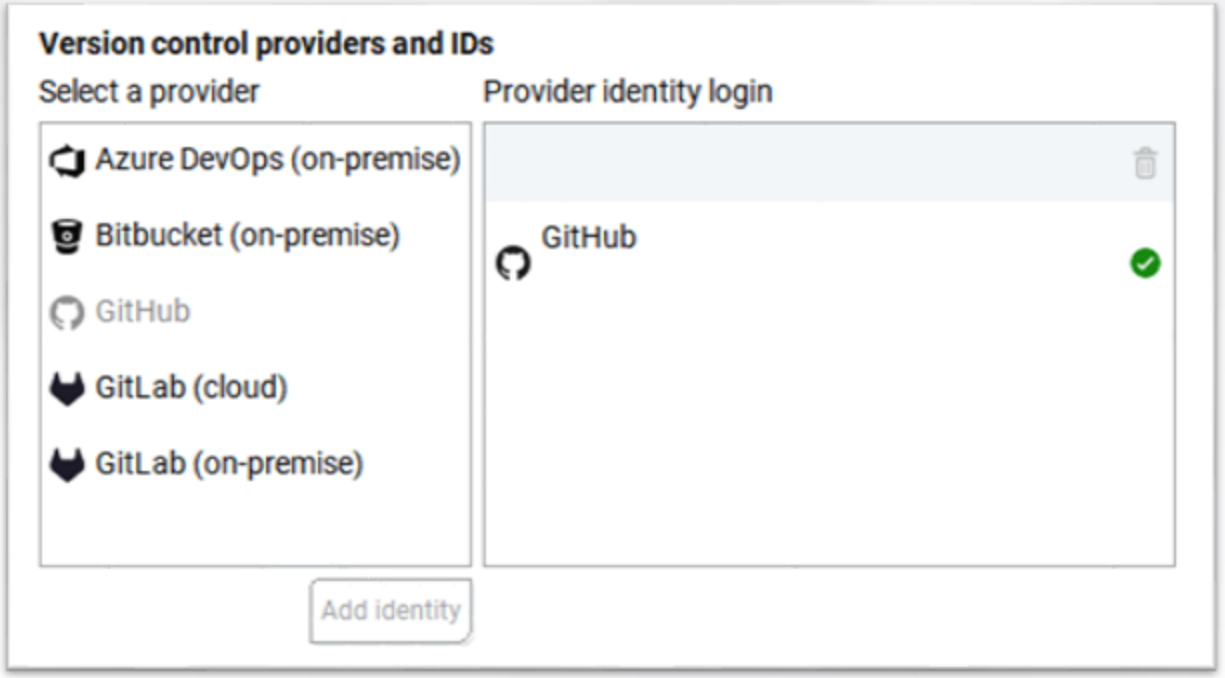
Digital Design Experience

FT Optix

Support for additional version control providers

Digital Design Experience

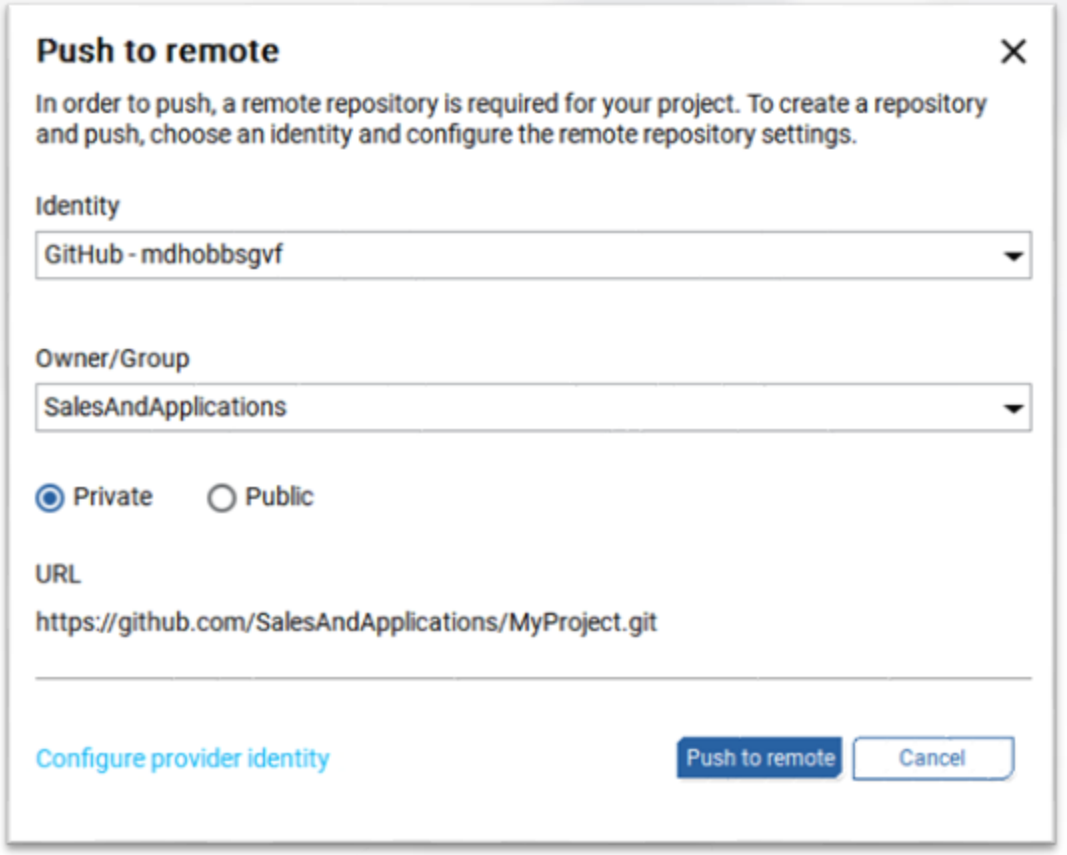
- Added Git provider support for both cloud-based and on-premise version control solutions
  - GitLab cloud-based central project repository
  - Azure DevOps & Bitbucket on-premise central project repository
- Compliments existing provider support for
  - GitHub
  - GitLab (on premise)
- Consistent user experience for all front-end operations independent of backend Git provider solution
  - Clone / Open Remote
  - Push
  - Pull
  - View History



Create a remote repository on initial project / library push

Digital Design Experience

- Ability to automatically create a repository on initial project push
  - Select an identity for **any of the supported providers** configured in FactoryTalk Optix Studio
  - A list of available Owners/Groups for the selected provider is returned
  - Choose an Owner/group from the list
  - Choose to create a public or private repository
- Select the "Push to remote" button to create a new repository and push the project in one easy step
- The same capability is available for user-defined libraries



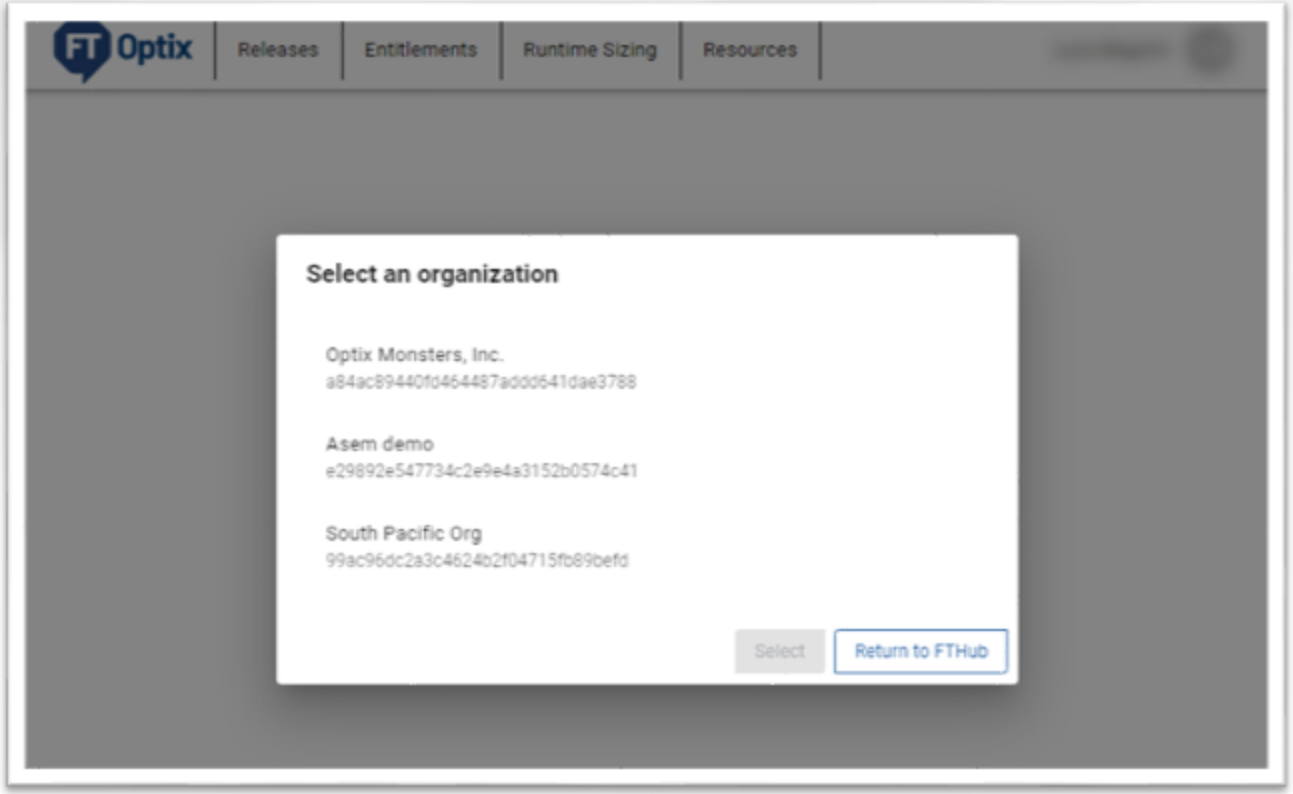
FT Hub & Online Portal

FT Optix

Easy access to FT Optix portal

FT Hub and online portal

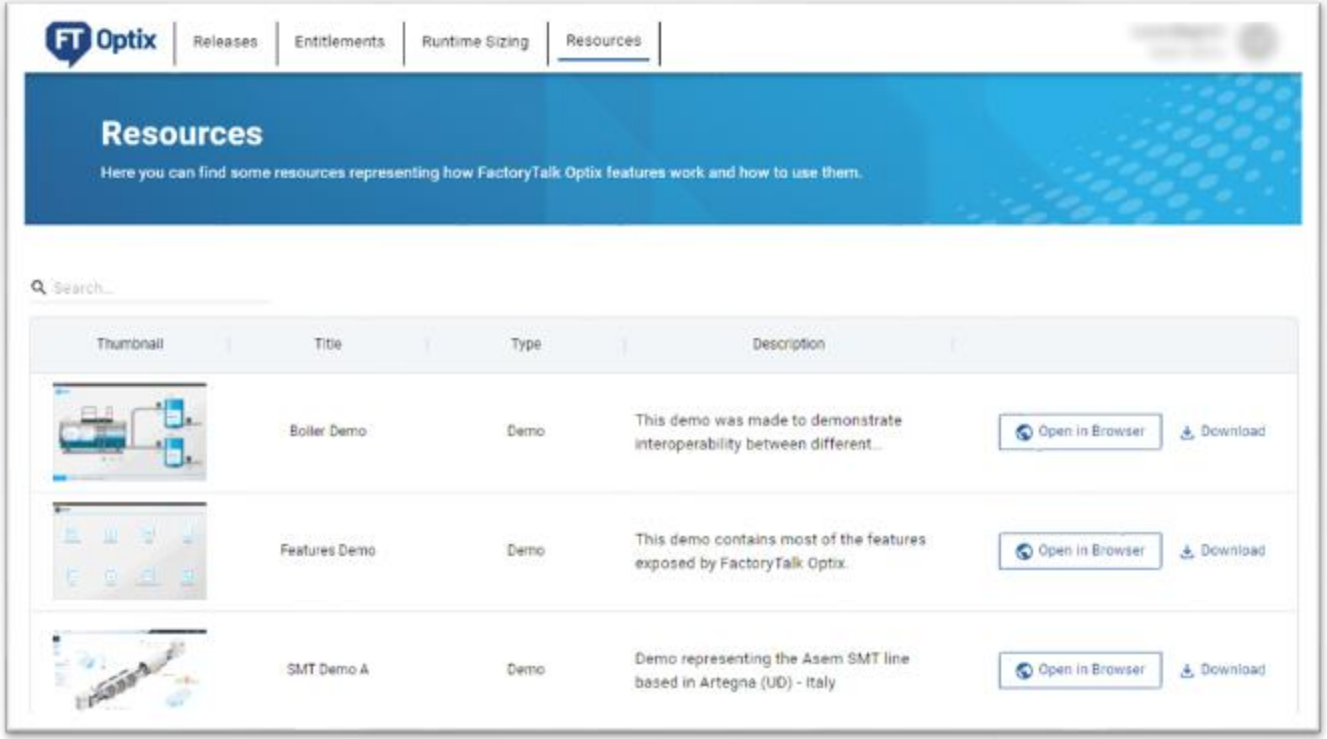
- It's now possible to jump directly into the FT Optix portal accessing the link optix.cloud.rockwellautomation.com
  - Authentication and MFA is still required,
  - In case of membership in more than one organization a selection dialog will be shown

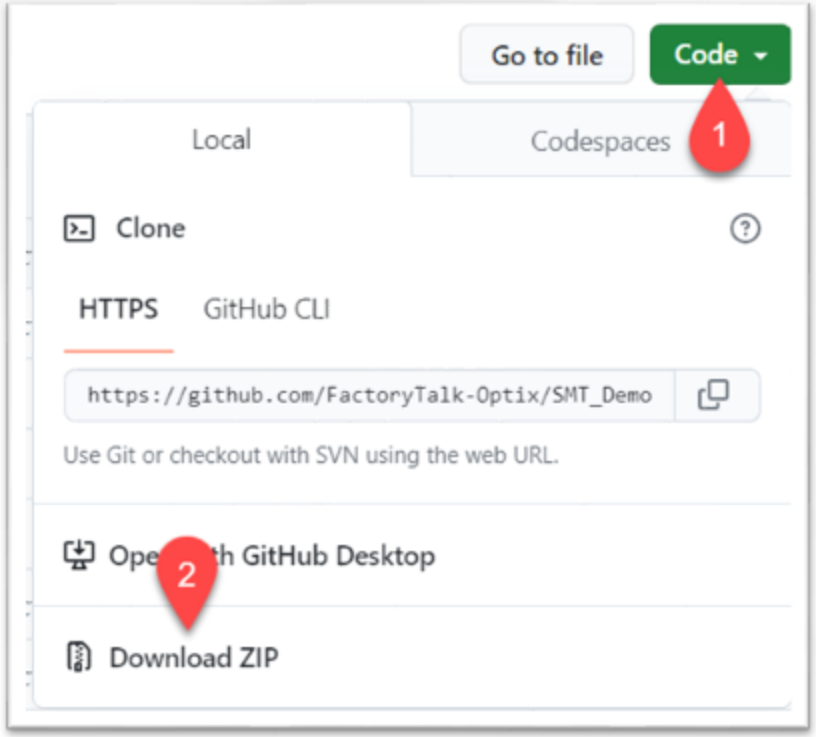


FactoryTalk Optix Demo Applications

FT Hub and online portal

- **Resources** tab provides access to many FactoryTalk Optix demo applications
  - Click **Open in Browser** to run each demo application in your web browser
  - Click **Download** to save the demo application on your computer and run with FT Optix Studio and his Simulator



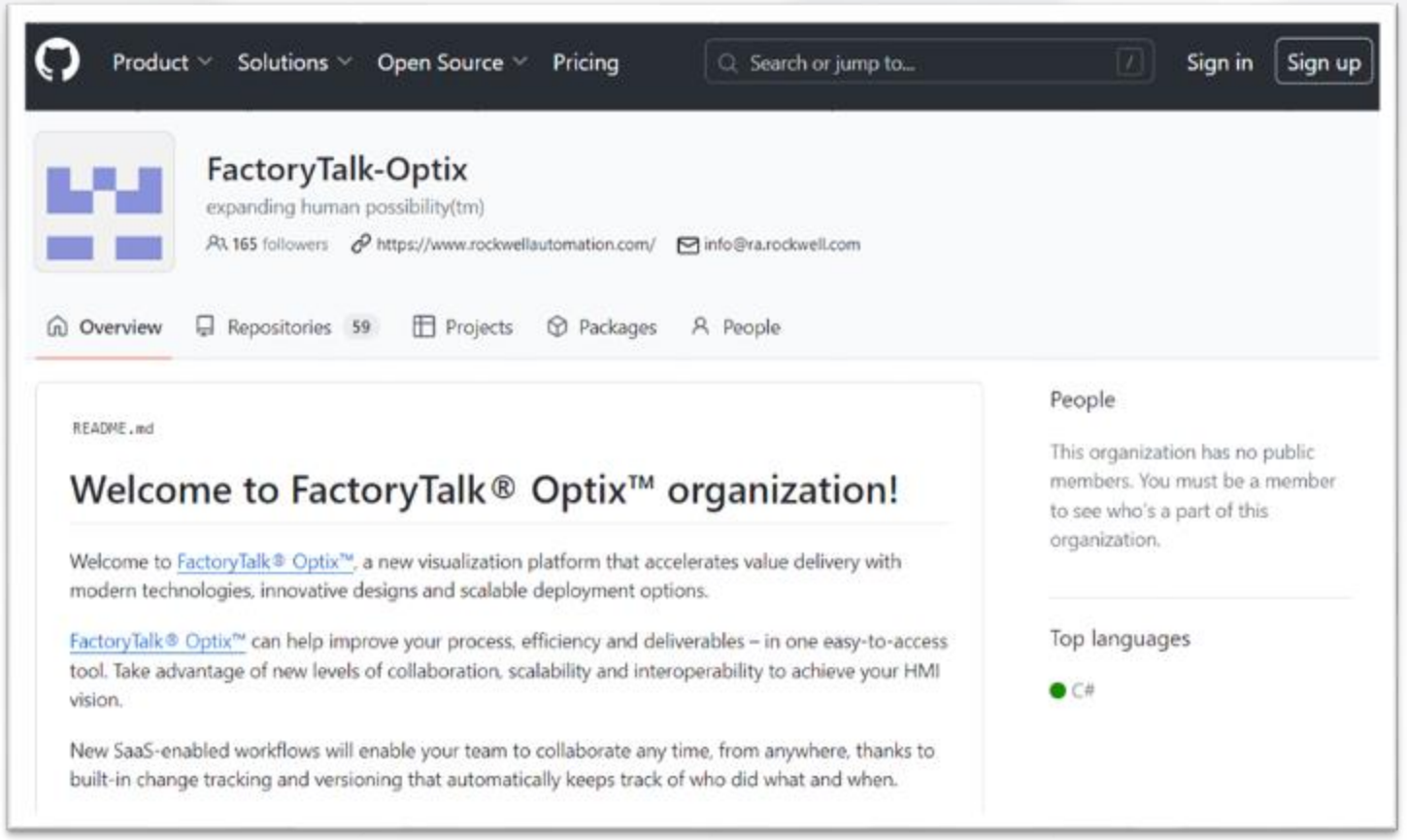


FactoryTalk Optix public GitHub repository

FT Hub and online portal

- github.com/factorytalk-optix is the new public GitHub repository!

- On this repository are shared:
  - Demo applications
  - Sample projects
  - Training projects

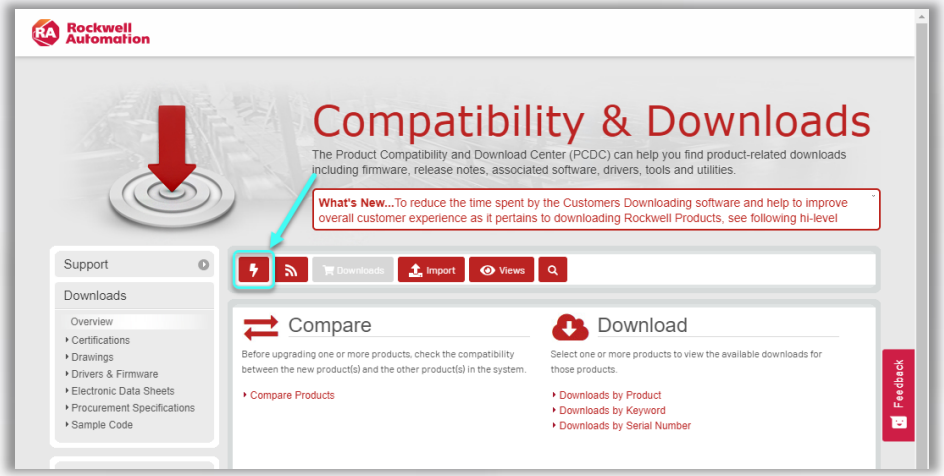


PCDC Release Notifications

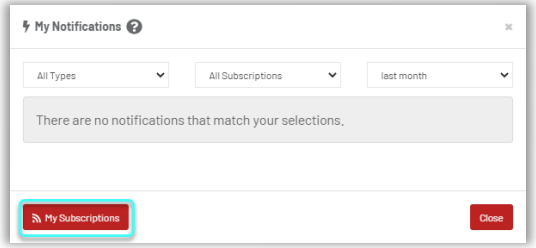
FT Optix

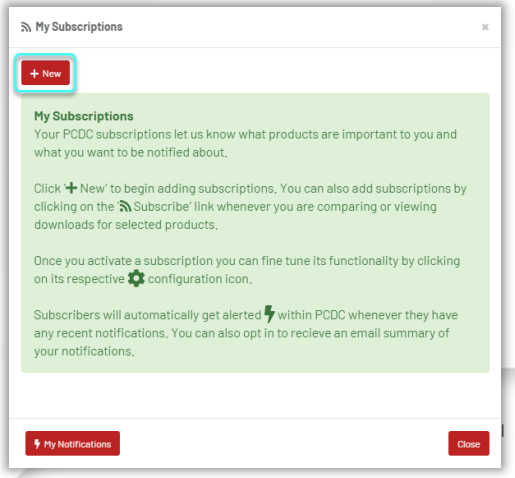
How to get notification of a new FactoryTalk Optix release on PCDC

1. Log in to PCDC and click the Notifications button

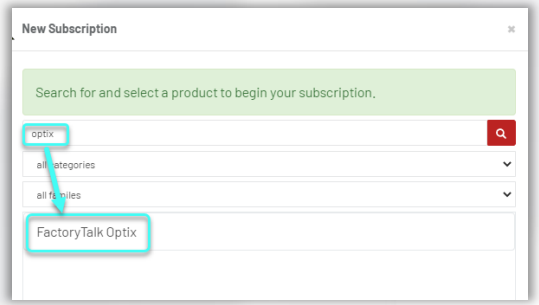


2. Click **My Subscriptions** at bottom, then **New**

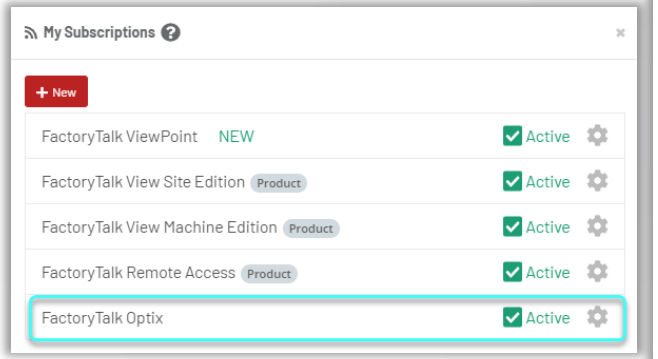


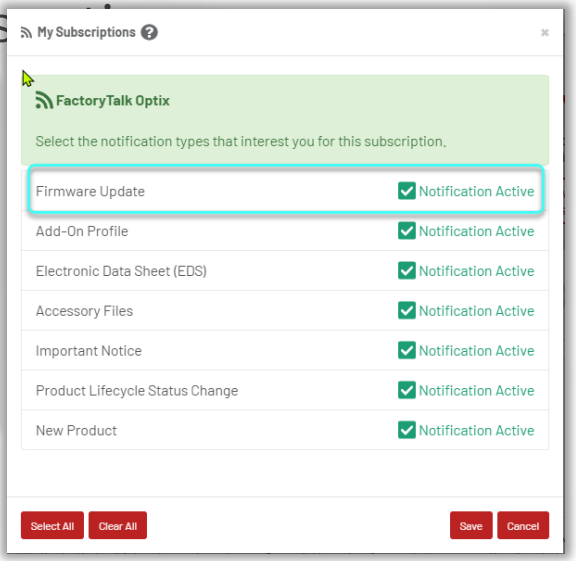


3. Search for the product(FactoryTalk Optix)and select it from the list



4. Once the product is added to your subscription list, click the s ings button to customize your notification options. For notification of new software versions, make sure **Firmware Update** is





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