



THE **REYNOLDS**  
COMPANY  
ELECTRICAL SUPPLY

User Group  
Online Seminars

# HMI Design Guidelines

## September 2022

# Technical Seminars from TRC

## Register to receive a calendar invite



### TECH TALK

Month	TechTalk Topic	YouTube Link
January	Installed Base Evaluations (IBE) Overview	<a href="https://youtu.be/pwPs8NuF2KE">https://youtu.be/pwPs8NuF2KE</a>
January	Stratix Portfolio Update	<a href="https://youtu.be/8eUy8feCtXM">https://youtu.be/8eUy8feCtXM</a>
February	Energy Monitoring with PowerMonitor	<a href="https://youtu.be/uNo-y-QDHIE">https://youtu.be/uNo-y-QDHIE</a>
February	Quality Remanufacturing by Rockwell Automation	<a href="https://youtu.be/rC1oo_TGjKU">https://youtu.be/rC1oo_TGjKU</a>
April	ESolutions Punchout Integration	<a href="https://youtu.be/mWLCREX4Ofw">https://youtu.be/mWLCREX4Ofw</a>
May	Proactive Digital Maintenance Strategy with Fiix	<a href="https://youtu.be/h9IYGVbRLHg">https://youtu.be/h9IYGVbRLHg</a>
June 8	Impact of DCOM Hardening Patch	<a href="https://youtu.be/qYte4oRNzCk">https://youtu.be/qYte4oRNzCk</a>
July 27	Remote Access Solutions	<a href="https://youtu.be/6ZhsRap-p8">https://youtu.be/6ZhsRap-p8</a>
Aug 31	Stratus Disaster Recovery	<a href="https://youtu.be/0Ctjlx6G_w">https://youtu.be/0Ctjlx6G_w</a>
Sept 28	Skill Development: The Rockwell Certificate Program	

### USER GROUP

Month	Description	YouTube Link
January	Rockwell Automation Controllers & I/O	<a href="https://youtu.be/ovmxFPIv-ZI">https://youtu.be/ovmxFPIv-ZI</a>
February	Intro to Rockwell Automation Operator Interfaces	<a href="https://youtu.be/82tyizbnOGO">https://youtu.be/82tyizbnOGO</a>
March	Smart Safety for Machines	<a href="https://youtu.be/rjihZ2wWIsM">https://youtu.be/rjihZ2wWIsM</a>
April	Studio 5000 Update	<a href="https://youtu.be/tT3FANr8JEA">https://youtu.be/tT3FANr8JEA</a>
May	Process System Update	<a href="https://youtu.be/_ALxxNuzBms">https://youtu.be/_ALxxNuzBms</a>
June	CLX Redundancy Network Architectures	<a href="https://youtu.be/5ghP4bUi-OE">https://youtu.be/5ghP4bUi-OE</a>
July	Modernization Solutions	<a href="https://youtu.be/EgZQwRuaO9o">https://youtu.be/EgZQwRuaO9o</a>
August	Integrated Power and Process Update	<a href="https://youtu.be/N4rLtpmfSJc">https://youtu.be/N4rLtpmfSJc</a>
September	HMI Design Guide	
October	Automation Fair Event Preview	

Visit our Resources page on [reynoldsonline.com](https://reynoldsonline.com)

# Updated Website

ReynoldsOnline.com

Resources Section includes

- Blog articles
- Podcast
- Videos
- News

The screenshot displays the website for The Reynolds Company Electrical Supply. At the top, a navigation bar includes the company logo, contact information ((866) 739-6260), and links for Chat, Locations, Services & Solutions, Resources, Training & Events, and About Us. Below this is a search bar with a 'SEARCH' button and a 'SIGN IN' button next to a shopping cart icon. A dark banner below the navigation bar states: 'Our New Orleans branch will remain closed until power is restored. [Learn more.](#)'

The main content area is titled 'RESOURCES' and features a 'Filter By Category' dropdown set to 'Show All' and a 'Filter By Type' dropdown set to 'Show All', with a 'CLEAR FILTERS' button. The resources are displayed in a grid of six cards:

- TRC Talks**: a podcast on industrial automation. Card title: 'LOTO Part 1 - The Components of Lockout Tagout'. Date: August 27, 2021 | Safety | Podcasts. Description: 'In this episode of TRC Talks, Brad Freeman speaks with Tim Bohmann from Rockwell Automation on the topic of Lockout Tagout. LOTO is a crucial component of any safety...'.
- TechTalk Online Seminars**: Card title: 'TechTalk - Spectrum Controls'. Date: August 26, 2021 | Automation | Training & Events. Description: 'In this TRCTechTalk, we are joined by a guest presenter - Spectrum Controls.'
- User Group**: Card title: 'User Group - Introduction to InnovationSuite'. Date: August 19, 2021 | Automation | Training & Events. Description: 'FactoryTalk software is built for supporting an ecosystem of advanced industrial applications, including IoT. It all starts at the edge where manufacturing happens and scales from on-...'.
- TechTalk Online Seminars**: Card title: 'TechTalk - Lockout/Tagout Program Management'. Date: August 12, 2021 | Safety | Training & Events. Description: 'Watch our TechTalk to learn how ScanESC'.
- Fiix**: A ROCKWELL AUTOMATION COMPANY. Card title: 'Introducing Fiix'. Date: August 04, 2021 | Services | Featured Products. Description: 'Fiix is a Computerized Maintenance'.
- TechTalk Online Seminars**: Card title: 'TechTalk - PlantPAX System Estimator'. Date: July 29, 2021 | Networking | Training & Events. Description: 'Watch our TechTalk to learn how to use the'.

# Our Presenters

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**Rockwell  
Automation**

# FactoryTalk<sup>®</sup> View SE Update

# What's new with FactoryTalk® View SE?

If you haven't seen the last few releases of FactoryTalk® View SE, there's a lot you've been missing!

## Platform and license simplification

- New redundant server license
- New easier-to-buy software bundles
- Unlimited displays for server and station
- Unlimited web clients (FactoryTalk® ViewPoint) included
- Restructured packaging and pricing
- Lower TCO with new support pricing structure for distributed systems

## Modernization and sustainability

- Modernized design environment
- OPC UA support
- Web client / mobile device support
- ThinManager®, FactoryTalk® AssetCentre, and FactoryTalk® Historian integration

## New tools for designers and operators

- Scripting and extensibility improvements
- Tools that enable easier to build, test, and maintain redundant systems
- New objects: recipe, trend, data grid, and web browser
- ASM multiple monitor framework and ISA-101.01 style objects
- .SVG image and .NET object support
- Badge authentication

# FactoryTalk® View v13.00 feature summary



## DATA CONNECTIVITY AND PRESENTATION

- **New Data Grid** data source: data log model
- **XY Plot Control** for FactoryTalk® View SE Client and ViewPoint

## EXTENSIBILITY AND SCRIPTING IMPROVEMENTS

- HMI Tag access for **Server-Side scripts**
- Client-specific tags for Network Applications
- **Native .NET Control Object**
- **OPC UA** A&E Client adoption

## IMPROVED APPLICATION DESIGN

- Add Component Tool Enhancement
- Use and Evaluate Tag Based Alarms as desired (v.6.21)

## IMPROVED APPLICATION MAINTENANCE

- **System Status Portal**
- Mobile Access to Automatic Diagnostics

## FEEDBACK-DRIVEN ENHANCEMENTS

- Support for language switching in TrendPro & Recipe Pro Plus
- Custom User Message for Electronic Signature and String Input
- Application export to XML from Application Documenter
- Synchronization of HMI Tag Values in a Redundant System
- HMI Tag access for Server-Side scripts
- Client-specific tags for Network Applications
- **Native .NET Control Object**
- Animation driven by **Automatic Diagnostics**

## FACTORYTALK® View SE MODERNIZATION

- **SQL Server** LocalDB Compatibility Update
- Adoption of MS FactoryTalk® Analytics™ Edge Web Browser

## PlantPAX SUPPORT

- Simplified PlantPAX library installation
- System status/diagnostic display template



# V13 FactoryTalk® View SE license simplification



Introducing new licensing tiers for the FactoryTalk® View SE portfolio to simplify buying decisions by including everything needed for a visualization solution in one part number

Station Lite	Station	Small	Medium	Large
<b>View SE Station</b> <ul style="list-style-type: none"><li>• 25 display count</li><li>• Unlimited web clients</li></ul>	<b>View SE Station</b> <ul style="list-style-type: none"><li>• Unlimited display count</li><li>• Unlimited web clients</li></ul>	<b>View SE Distributed</b> <ul style="list-style-type: none"><li>• HMI server with unlimited display count</li><li>• <b>5 HMI clients</b></li><li>• Unlimited web clients</li></ul>	<b>View SE Distributed</b> <ul style="list-style-type: none"><li>• HMI server with unlimited display count</li><li>• <b>10 HMI clients</b></li><li>• Unlimited web clients</li></ul>	<b>View SE Distributed</b> <ul style="list-style-type: none"><li>• HMI server with unlimited display count</li><li>• <b>25 HMI clients</b></li><li>• Unlimited web clients</li></ul>
<b>Two options for Station</b> <ul style="list-style-type: none"><li>• Station Lite – 25 displays with unlimited web clients</li><li>• Station – unlimited displays with unlimited web clients</li></ul>		<b>Three options for Distributed</b> <p>All options have unlimited displays and <b>unlimited web clients</b>, plus:</p> <ul style="list-style-type: none"><li>• Small – 5 full HMI clients</li><li>• Medium – 10 full HMI clients</li><li>• Large – 25 full HMI clients</li></ul>		
With add-on option: <ul style="list-style-type: none"><li>• FactoryTalk® View Studio Enterprise</li></ul>		With add-on options: <ul style="list-style-type: none"><li>• Additional HMI client, full or read-only</li><li>• FactoryTalk® View Studio Enterprise</li><li>• Redundant HMI server</li></ul>		

# Mobile device / Web client support

## FactoryTalk® ViewPoint

- Commitment to mobile device / web client support over last five versions with performance and feature enhancements
- Driving support of full client features in web clients, with emphasis on **Alarm interaction and Trending**
- Unlimited web clients now a built-in feature, included with every FactoryTalk® View SE Server or Station bundle

### FactoryTalk® View SE V9

- Mobile alarm view
- Alarm interactions from web client (Ack/Shelve alarms from mobile device)
- Performance enhancements

### FactoryTalk® View SE V10

- Mobile recipe support

### FactoryTalk® View SE V11

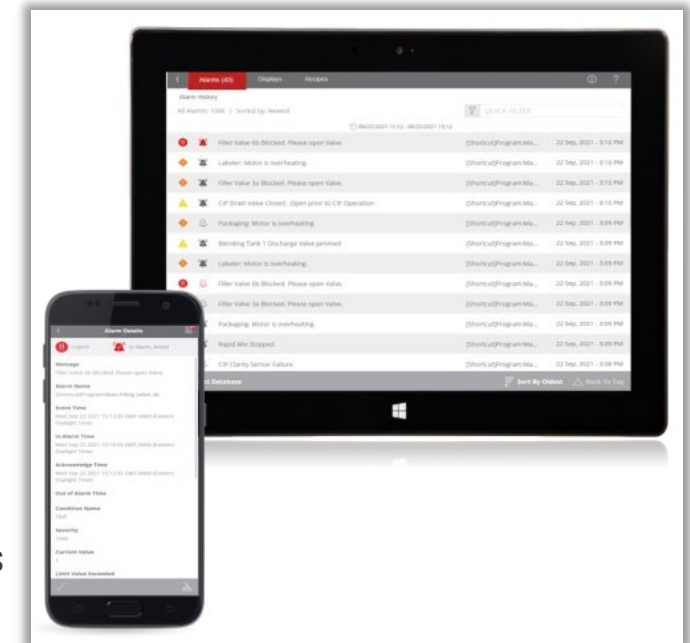
- Support for alarms on mobile trend
- Support for mobile FactoryTalk® Alarms and Events commands

### FactoryTalk® View SE V12

- Mobile trending of OSI PI data source
- Mobile Data Grid control
- Usability enhancements

### FactoryTalk® View SE V13

- XY Plot control
- Support for **Automatic Diagnostics**
- Include FactoryTalk® ViewPoint web clients as built-in functionality



# System-wide integration

Enhanced integration with software and hardware to build a stronger system

## ThinManager® integration

- License integration for FactoryTalk® View SE clients
- Authentication pass-through

## FactoryTalk® AssetCentre

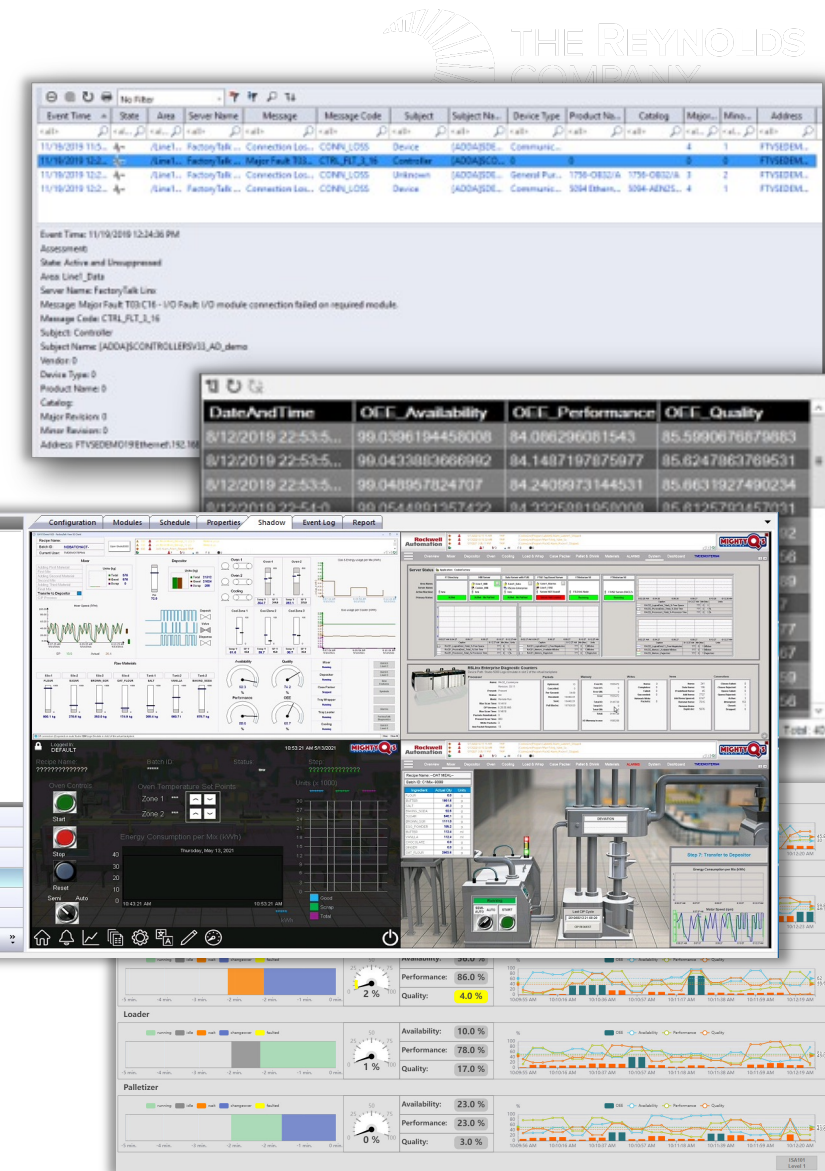
- Disaster recovery for FactoryTalk® View SE applications (V11)
- Operator actions (audits) on TrendPro

## Logix controller integration

- FactoryTalk® Alarms and Events and controller-based alarms
- Automatic Diagnostics – display in HMI and drive animation
- Controller tag extended properties (min, max, description, units)
- Controller-based language switching

## Partner integration

- FactoryTalk® Alarms and Events support for SyTech XL Reporter, Ocean Data Systems Dream Report, and WIN-911



# Pre-built alarm objects in FactoryTalk® View SE

## Alarm Summary

Primary alarm object that shows all alarms and current status, with details of the selected alarm

Severity	Event Time	Alarm Name	Condition Name	Message
600	9/22/2021 2:40:22 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
1000	9/22/2021 2:40:12 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
600	9/22/2021 2:40:00 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:40:00 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh
600	9/22/2021 2:40:00 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
1000	9/22/2021 2:40:00 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
1000	9/22/2021 2:39:50 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh
600	9/22/2021 2:39:40 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:39:22 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
600	9/22/2021 2:39:12 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
1000	9/22/2021 2:39:00 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:38:50 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh
600	9/22/2021 2:38:40 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
600	9/22/2021 2:38:22 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
1000	9/22/2021 2:38:12 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
600	9/22/2021 2:38:00 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:38:00 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh

Priority: High Alarm Status: Normal, Unack'd Severity: 600  
Event Time: 9/22/2021 2:40:22 PM Current Value: 22  
Condition Name: LO Limit Value Exceeded: 20  
Alarm Class: TagFTAE Tag 1 Value:  
Event Type: Condition Tag 2 Value:  
Event Category: Level Tag 3 Value:  
User Name: Level Tag 4 Value:  
User Comment: RMA/Global/ISA\_101\_CookinDemoLine1\_Alarms  
Server Name: Line1\_TagFTAE  
Group: UrgentPriority  
Alarm Name: Tank1\_Pressure  
Events: 22/79 Not Filtered Reading events from database: FTAE

## Alarm Log Viewer

Shows historical alarms from the FactoryTalk® Alarms and Events database and all operator interactions with them

Severity	Event Time	Alarm Name	Condition Name	Message
600	9/22/2021 2:40:22 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
1000	9/22/2021 2:40:12 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
600	9/22/2021 2:40:00 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:40:00 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh
600	9/22/2021 2:40:00 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
1000	9/22/2021 2:40:00 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
1000	9/22/2021 2:39:50 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh
600	9/22/2021 2:39:40 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:39:22 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
600	9/22/2021 2:39:12 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
1000	9/22/2021 2:39:00 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:38:50 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh
600	9/22/2021 2:38:40 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:38:22 PM	Tank1_Pressure_LO	Tank1_Pressure_LO	Tank1 pressure is Low
1000	9/22/2021 2:38:12 PM	Tank1_Pressure_LOLO	Tank1_Pressure_LOLO	Tank1 pressure is LowLow
600	9/22/2021 2:38:00 PM	Tank1_Pressure_HI	Tank1_Pressure_HI	Tank1 pressure is High
1000	9/22/2021 2:38:00 PM	Tank1_Pressure_HHFI	Tank1_Pressure_HHFI	Tank1 pressure is HighHigh

Priority: High Alarm Status: Normal, Unack'd Severity: 600  
Event Time: 9/22/2021 2:40:22 PM Current Value: 22  
Condition Name: LO Limit Value Exceeded: 20  
Alarm Class: TagFTAE Tag 1 Value:  
Event Type: Condition Tag 2 Value:  
Event Category: Level Tag 3 Value:  
User Name: Level Tag 4 Value:  
User Comment: RMA/Global/ISA\_101\_CookinDemoLine1\_Alarms  
Server Name: Line1\_TagFTAE  
Group: UrgentPriority  
Alarm Name: Tank1\_Pressure  
Events: 22/79 Not Filtered Reading events from database: FTAE

## Alarm Banner

Shows up to 5 active alarms in the system with highest severity; intended for header/display that is always visible

Severity	Alarm Name	Condition Name	Message
500	Cooling.CL_TunnelSpeed_Alarm HI		Cooling Tunnel - HIGH speed alarm. The limit is: 55.0.
500	...am:Mixer.Mixer_Storage_12 LOLO		Material Lo Lo
500	...am:Mixer.Mixer_Storage_12 LO		Material Lo

17 6 4 2 0

## Alarm Explorer

Provides overview of all alarms in the system, with the ability to enable/disable, shelve/unshelve, and view the suppressed state of the alarm

State	Suppressed	Shelved	Alarm Name	Path
			Cooling.CL_TunnelSpeed_Alarm HI	FTViewDemoLine1_Data FactoryTalk Line
			Cooling.CL_TunnelSpeed_Alarm HI	FTViewDemoLine1_Data FactoryTalk Line
			Cooling.CL_TunnelSpeed_Alarm HI	FTViewDemoLine1_Data FactoryTalk Line
			Alarm01	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm02	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm03	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm04	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm05	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm06	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm07	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm08	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm09	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm10	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm11	FTViewDemoLine1_AlarmLine1_TagFTAE
			Alarm12	FTViewDemoLine1_AlarmLine1_TagFTAE
			Signal-vent-1	FTViewDemoLine1_AlarmLine1_TagFTAE
			Signal-vent-2	FTViewDemoLine1_AlarmLine1_TagFTAE
			Turbo-FTAE	FTViewDemoLine1_AlarmLine1_TagFTAE

FT View  
Alarm source list  
Name:  
Status: [X] [Y] [Z]



# FactoryTalk® View SE TrendPro

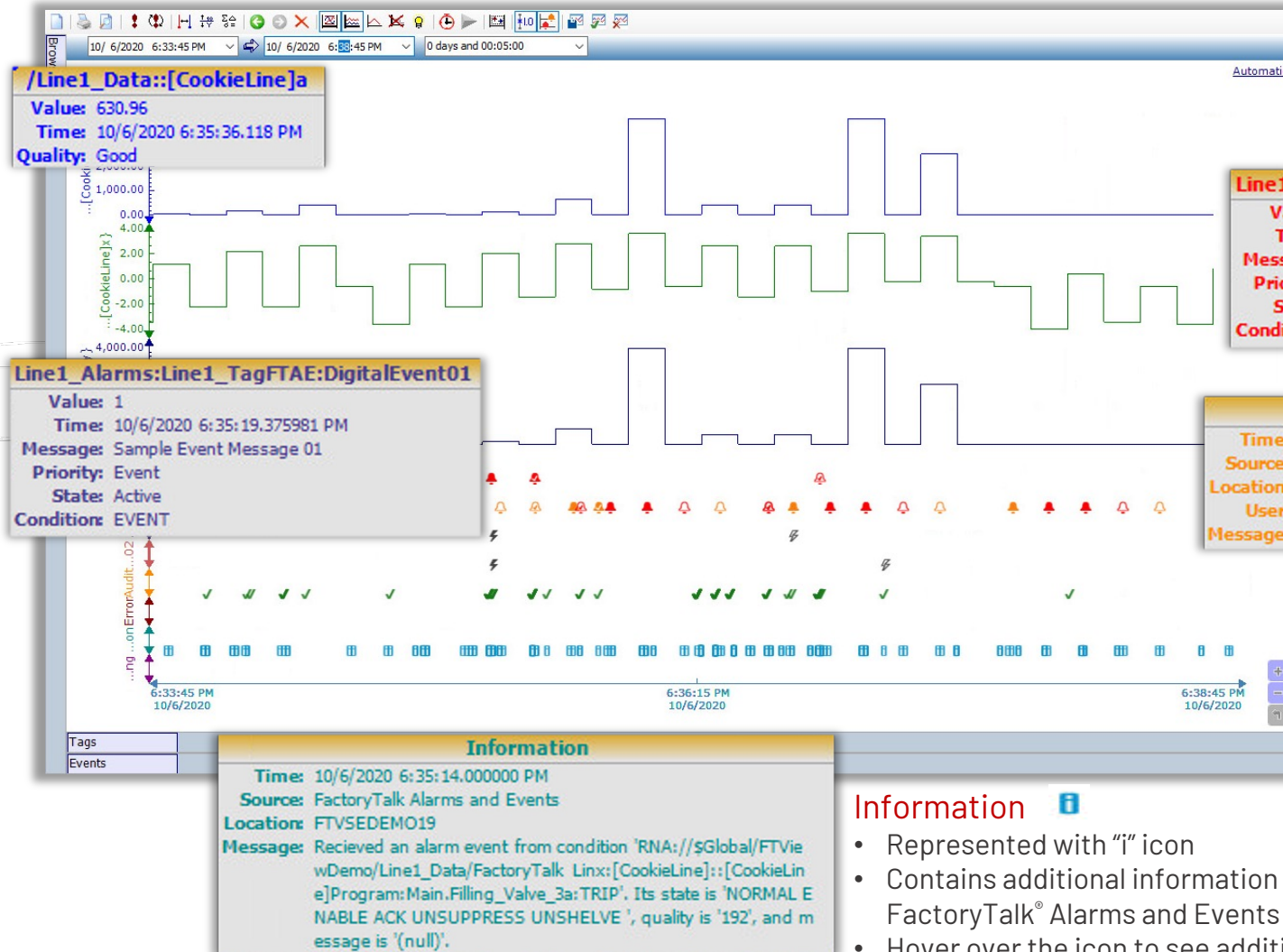


## Production data

- Represented over time with configurable pens
- Hover over trend to see value details for a particular time
- Data source can be a controller or historical database

## Event data

- Represented with lightning bolts
- Indicates occurrence of system events – configurable system events of lower priority than an Alarm and don't require acknowledgment
- Hover over the icon to see details for an event, including customized message with related data



- ## Alarms
- Represented with bell icons
  - Color and fill of the bell indicates different alarm states (active, acknowledged, etc.)
  - Hover over the icon to see alarm priority, status, time stamp, and condition
  - Alarms provided by FactoryTalk® Alarms and Events

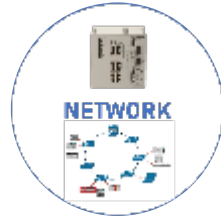
- ## Audits
- Represented with a check mark
  - Indicates an operator action took place
  - Hover over the icon to see details of the audit – user, action, location, and time stamp
  - Audits come from integration with FactoryTalk® AssetCentre

## Information

- Represented with "i" icon
- Contains additional information from FactoryTalk® Alarms and Events
- Hover over the icon to see additional detail about the alarm or event

# Device Object Libraries

Overview of each library and support devices



## Power Device Library

Discrete: E300, SMC-50,  
ArmorStart 28x/29x

Velocity: PowerFlex  
525/753/755/755T,  
ArmorStart 284/294

Motion: Kinetix  
350/5100/5300/5500  
/5700/6500, PowerFlex  
527/755CM

Power Monitor:  
PM500/1000/5000

Energy, State Monitor  
and Predictive  
Maintenance Extensions

## Network Device Library

Stratix Managed  
Switches: 2500/  
5400/5410/ 5700/5800

Device Level Ring (DLR):  
Single/Triple Ring

## Safety Device Library

DCS - Dual Channel Input  
Stop

DCSTL - Dual-Channel  
Input Stop w/ Test &  
Lock

DCSTM - Dual Channel  
Input Stop w/ Test &  
Mute

CROUT - Configurable  
Redundant Output

Safety Group Monitor &  
Member

## IO Device Library

1756 ControlLogix I/O

1769 Compact I/O

1734 POINT I/O

1794 Flex I/O

1738 ArmorPoint I/O

1732E ArmorBlock I/O

1719 Ex I/O

5094 Flex I/O

5069 Compact 5000 I/O

## IO-Link Device Library

42EF/42JT/42AF/45DM  
S Photoelectric &  
Distance

836P & 837T Pressure &  
Temperature Sensors

45CRM Color  
Registration Mark

871C/871TM/ 871FM  
Inductive & Proximity  
856T Tower Light

1694 Elec Circuit  
Protection

IO-Link Hubs & Masters



# Improvements

# HMI Tag access for server-side scripts

Transitioning scripting from the client to the server

**Bidirectional interactions with data** using PowerShell scripts

Further extends the PowerShell Scripting Engine capabilities introduced in FactoryTalk View SE v12.00

Trigger/call scripts from system events or application clients

V13.00 provides the capability to write information back to HMI Tags from the PowerShell script

## BENEFITS

Use PowerShell scripts to:

- Change tag values in the HMI Tag database with script
- Push data from FactoryTalk View SE to Microsoft Excel (ex: send an Excel spreadsheet with parts that must be ordered right from an HMI display)
- Import data from Excel or a database to PowerShell, send this information to control system via HMI Tags
- Send email
- Update a text file

Select a Recipe ID:


**Upload&NewRecipes** **DownloadRecipe** **Delete Recipe** **ResetID**

RecipeID	Flour	Butter	Salt	Baking Soda	White Sugar
1	1	2	3	4	5
2	6	7	8	9	10
3	10	20	30	40	50



Recipe ID: Recipe00

Ingredient	Target Qty	New Input	Units
FLOUR	0.0	0.0	g
BUTTER	0.0	0.0	g
SALT	0.0	0.0	g
BAKING SODA	0.0	0.0	g
WHITE SUGAR	0.0	0.0	g

 Input new values and upload to a recipe file



# Native .NET control object support

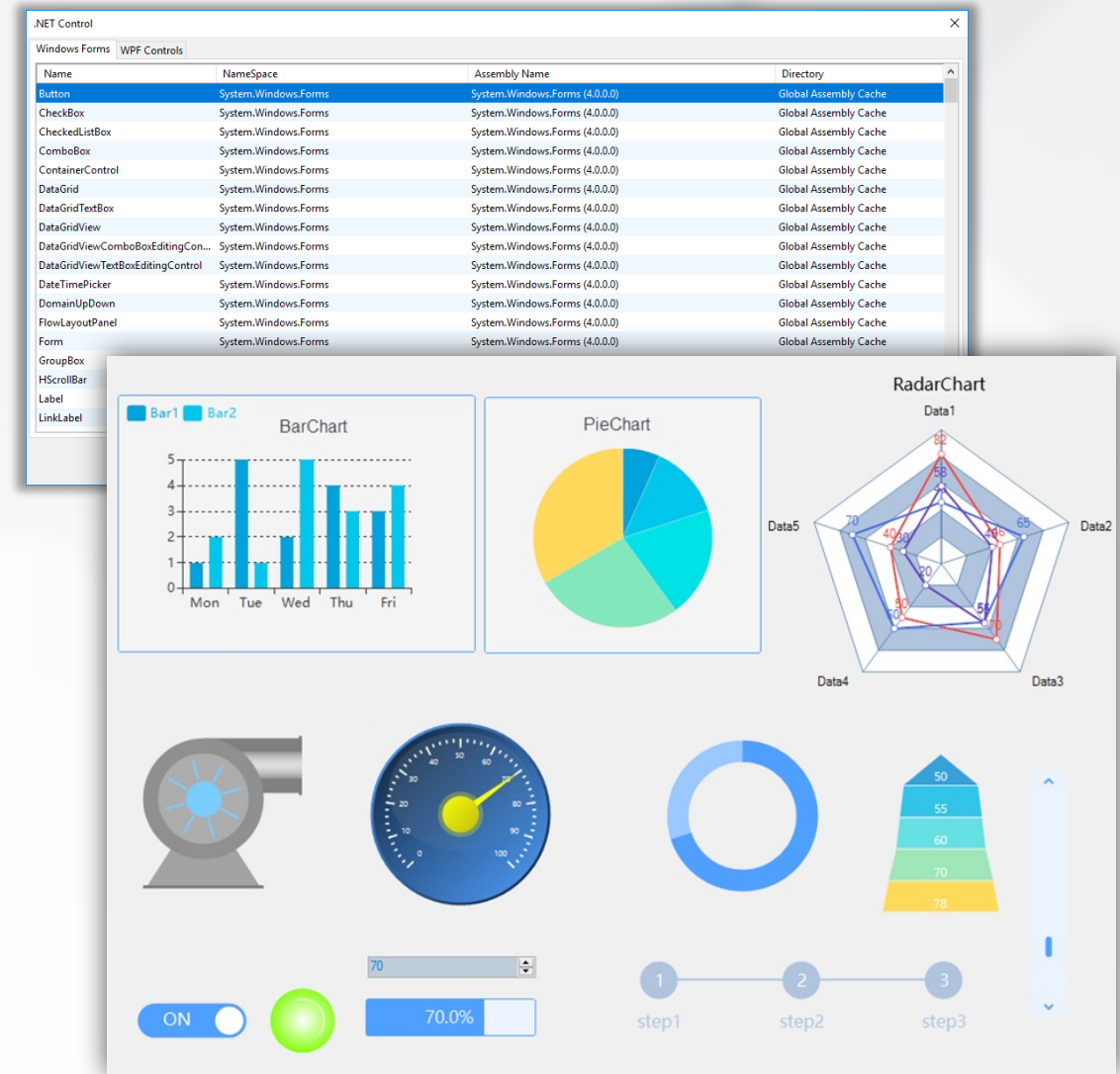
Leverage reusable custom tools in the FactoryTalk View platform

.NET objects are developed with the .NET Framework to provide a graphical interface to a business function

Support for Windows Form Control and Windows Presentation Foundation (WPF Control)

## BENEFITS

- Provides greater flexibility with control system connectivity
- Users can develop their own .NET controls and use them in FactoryTalk View SE applications (ex: systems integrators)
- Native support for .NET means no need to convert from .NET to ActiveX
- Third-party libraries of .NET controls can be added to FactoryTalk View SE applications



# System Status Portal

Included with FactoryTalk® Services Platform

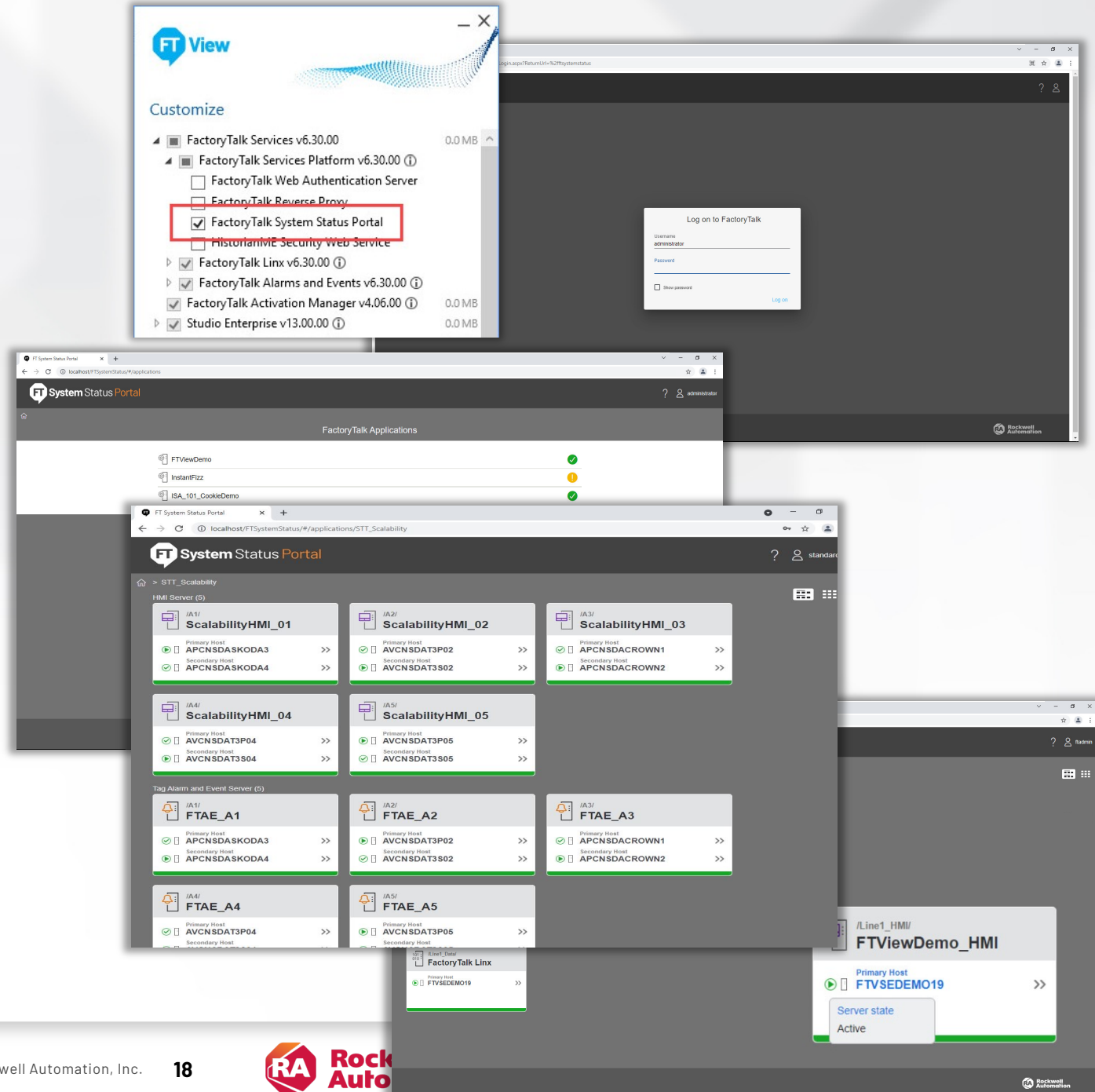
Webpage that provides an overview of all FactoryTalk application servers and their respective status: HMI, Data servers (FactoryTalk® Linx, OPC) and FactoryTalk Alarm and Events servers

Accessible via link:

[http://<ftsystemstatus\\_server>/ftsystemstatus/](http://<ftsystemstatus_server>/ftsystemstatus/)

## BENEFITS

- Enabled with checkbox during install
- Access application server status via web browser, either from a web browser object inside a FactoryTalk View application or from a separate web browser
- Status of application servers
  - Loading, Running, Failed
  - Redundancy – Active, Standby
- Only an indication of server status



# FT Linux OPC UA Connector

## OPC UA Alarms and Conditions integration

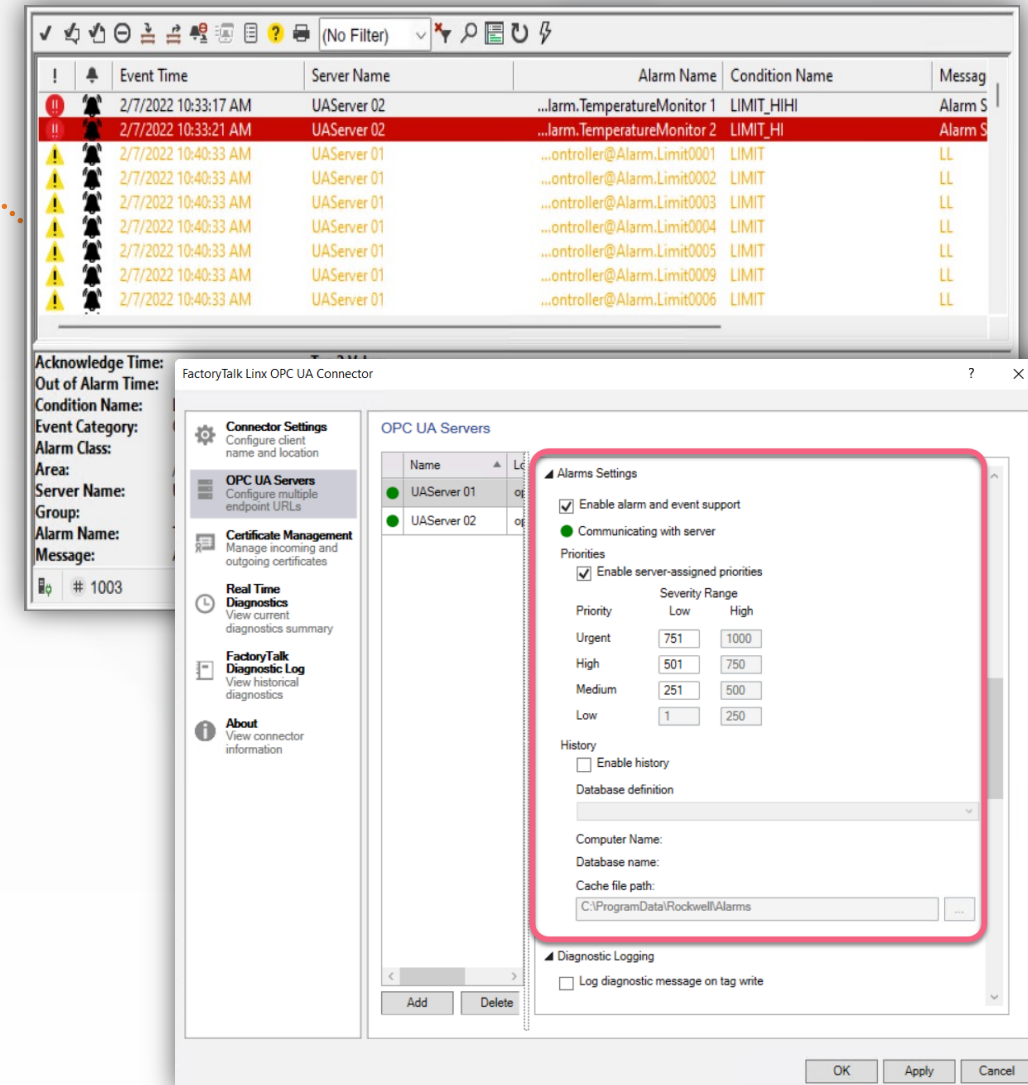
Simplified integration of FactoryTalk View SE with other systems and vendors

Enabled and configured in the OPC UA Connector

FactoryTalk Alarms and Events will retrieve alarm definitions from the OPC UA Server, receive alarm state change messages, and return operator feedback

### BENEFITS

- Eliminates the need to duplicate alarm configurations in the FactoryTalk Alarms and Events Server when third-party OPC UA systems are leveraged
- Automatic integration into FactoryTalk Alarms and Events
  - Subscribe to OPC UA Alarms and Conditions
  - Visualize and interact with existing FactoryTalk Alarms and Events objects, providing consistent interactions for operators
  - Historize the information to the centralized FactoryTalk Alarms and Events database





# THINMANAGER®

A ROCKWELL AUTOMATION TECHNOLOGY



## The Platform

For more than 20 years ThinManager has simplified content delivery and device management in manufacturing to achieve the following outcomes:

- Reduce total cost of ownership
- Reduce downtime
- Reduce security risk
- Increase workforce productivity

## Value Proposition:

### Reduce Cost of Ownership

- Reduced cybersecurity footprint with zero clients
- Simplify application and patch management for IT
- Reduce time to replace and commission workstations
- Industry leading vendor agnostic visualization of content

## Version 13 Value

- Delivery of information to the right people when it matters
- Simplified tools to deploy at scale and validate installations
- Simple troubleshooting of ControlLogix controller code
- Support for more modern IT infrastructures



**INTERNAL**  
Unauthorized use and  
external disclosure prohibited



# ThinManager Integration

Centrally manage the secure deployment of your industrial applications to devices and users based on their role, their location in the facility and at the time an event occurs

## Content Types

Remote Desktop  
Server Applications



VNC Server  
PanelView™ Plus,  
PanelView™ 5000



Terminal Shadow



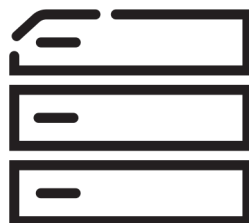
Web Content



IP Cameras  
USB Cameras



## Configuration



## Management



Container Images



Hardware

## Delivery

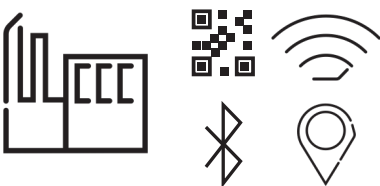
DEVICES



USERS



LOCATIONS



EVENTS



NEW IN V13!

Events can be internal to ThinManager® or from external sources and trigger a wide variety of actions

# FactoryTalk View SE Add Component tool enhancements

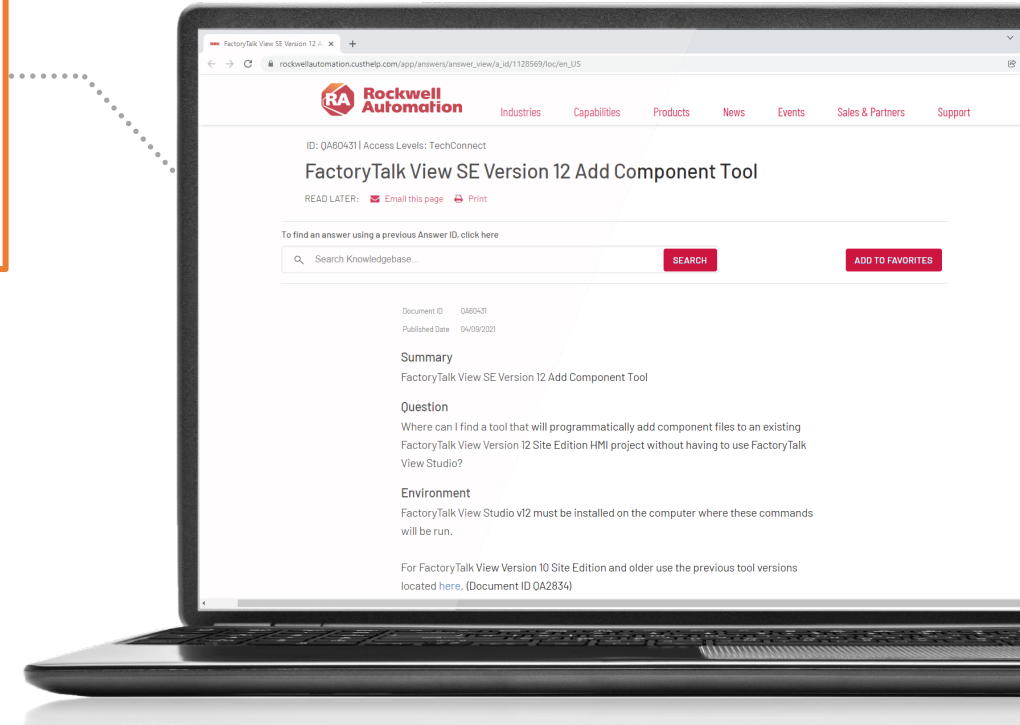
The FactoryTalk View SE Add Component tool allows users to add project elements to an existing FactoryTalk View SE HMI project via command line

Command-line utility capable of adding or updating components in a deployed FactoryTalk View SE application

Add displays, global objects, macros, or data log models programmatically

## BENEFITS

- Update a running application without FactoryTalk View Studio (ex: OEM/SI updates)
- No longer necessary to back up and restore the entire application
- Added security:
  - Username and password
  - Account must have Create Children, Delete, List Children, Read, and Write access
- Support for XML file format
- Enhanced to allow import for applications that leverage Language Switching
- Support for FactoryTalk® Alarms and Events configurations



## DID YOU KNOW?

The FactoryTalk View SE Add Component tool is available for all versions back to v3.2

Download the v12/13 tool from the [Knowledgebase](#)

# Use and Evaluate Tag-based Alarms

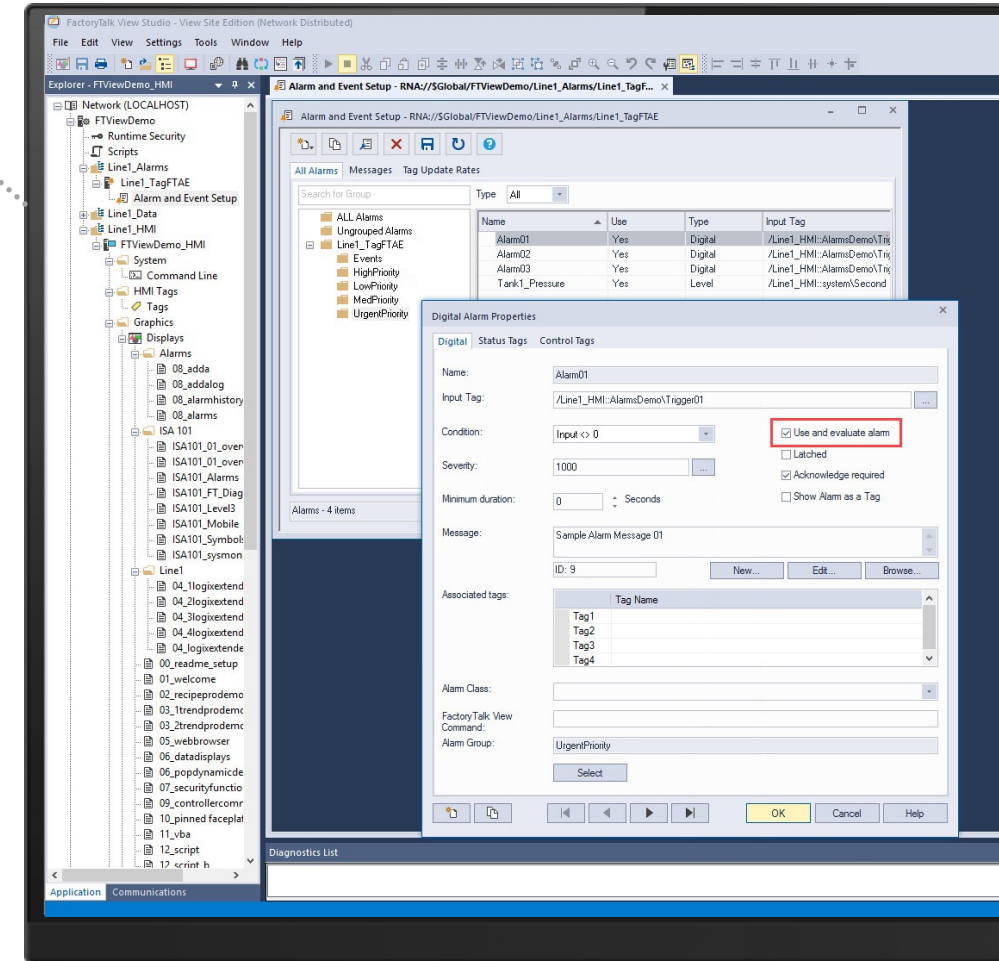
FactoryTalk Alarms and Events v6.21.00

Design time property allowing users to specify whether an alarm configuration should be evaluated

For alarms defined in FactoryTalk View SE (OPC alarms / legacy or third-party controllers)

## BENEFITS

- If building a project from a template or importing XML, you must define alarms, but not use them for certain applications
  - Helpful in commissioning and maintenance of systems
  - Check box to use and evaluate the alarm once all components are in place
- Alarms with “Use and Evaluate” unchecked will not be evaluated or show up in any alarm object





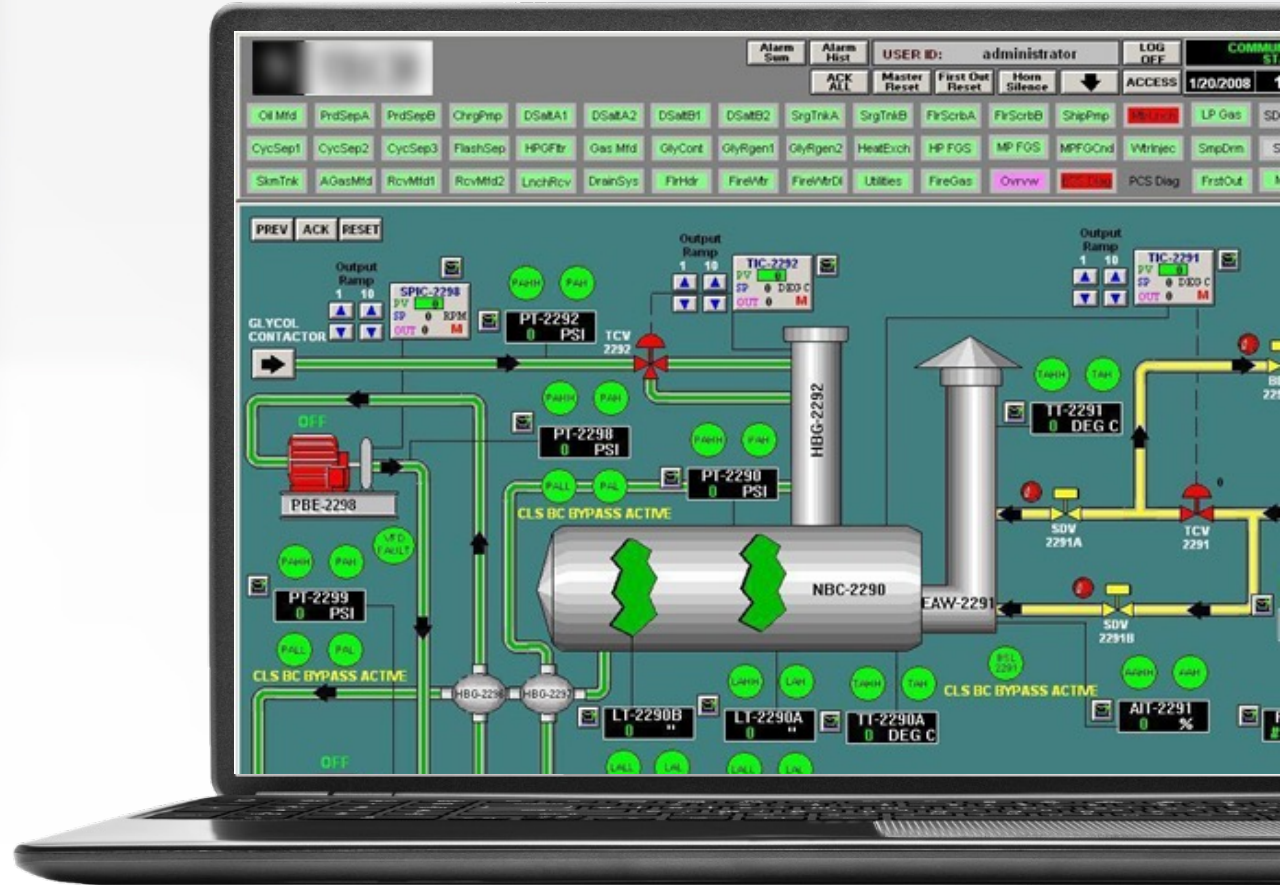
**Rockwell  
Automation**

# Situation Awareness

# The problem

Lack of situation awareness

- Information overload
  - Large amounts of process data
  - Ineffective alarm system
  - Ineffective displays
  - Inappropriate use of graphics
- Human cognitive limitations
  - Memory
  - Attention
  - Vision



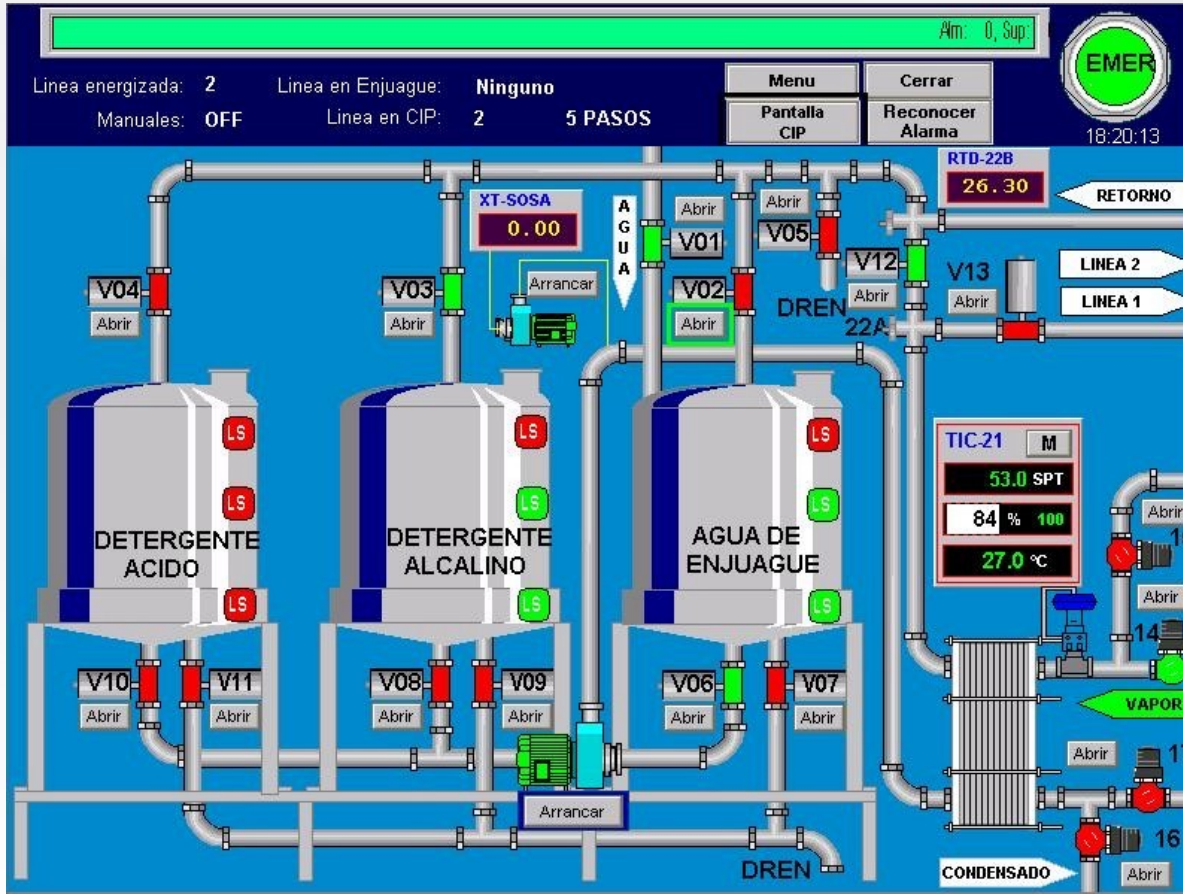


90823049823049750987234985710982134098709  
874230598710982134098720987509817230948721  
30984709824980982345908298098172309487123  
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45334630854890097370981391582488121983498  
0139852340968702943867092

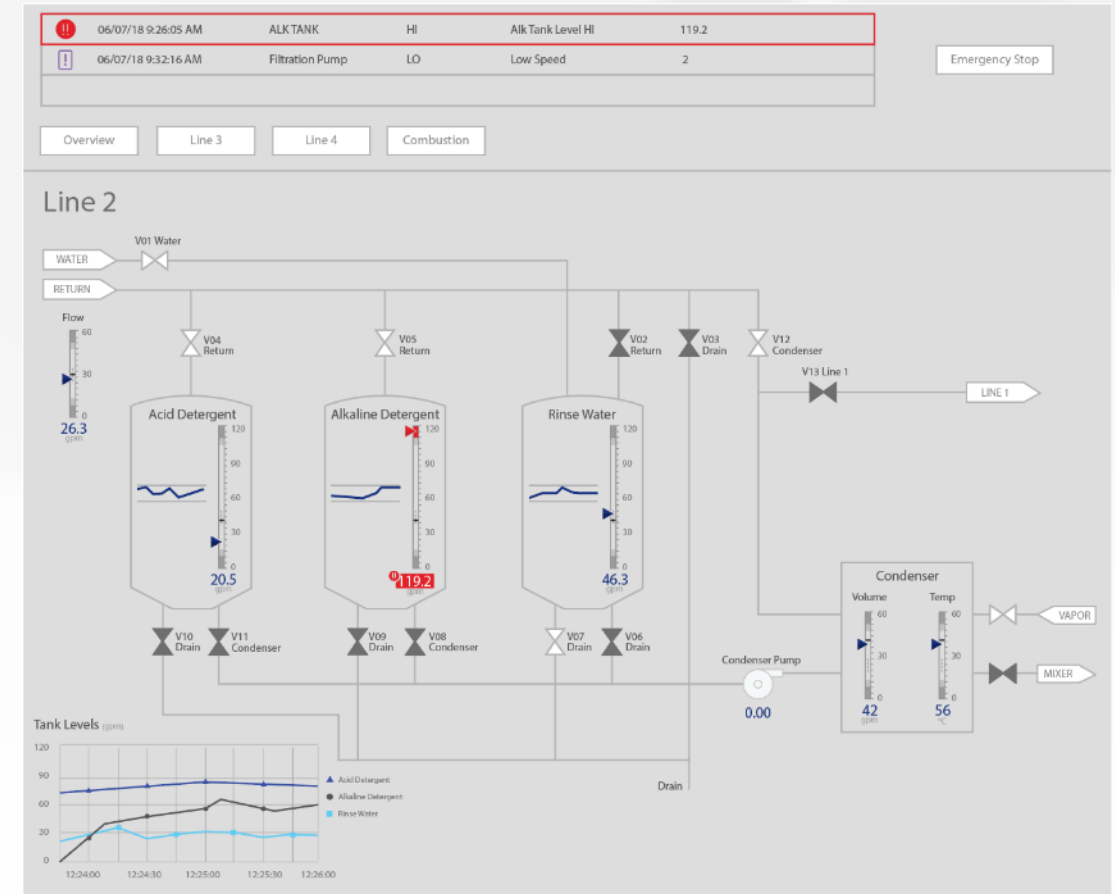
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# Improved situation awareness



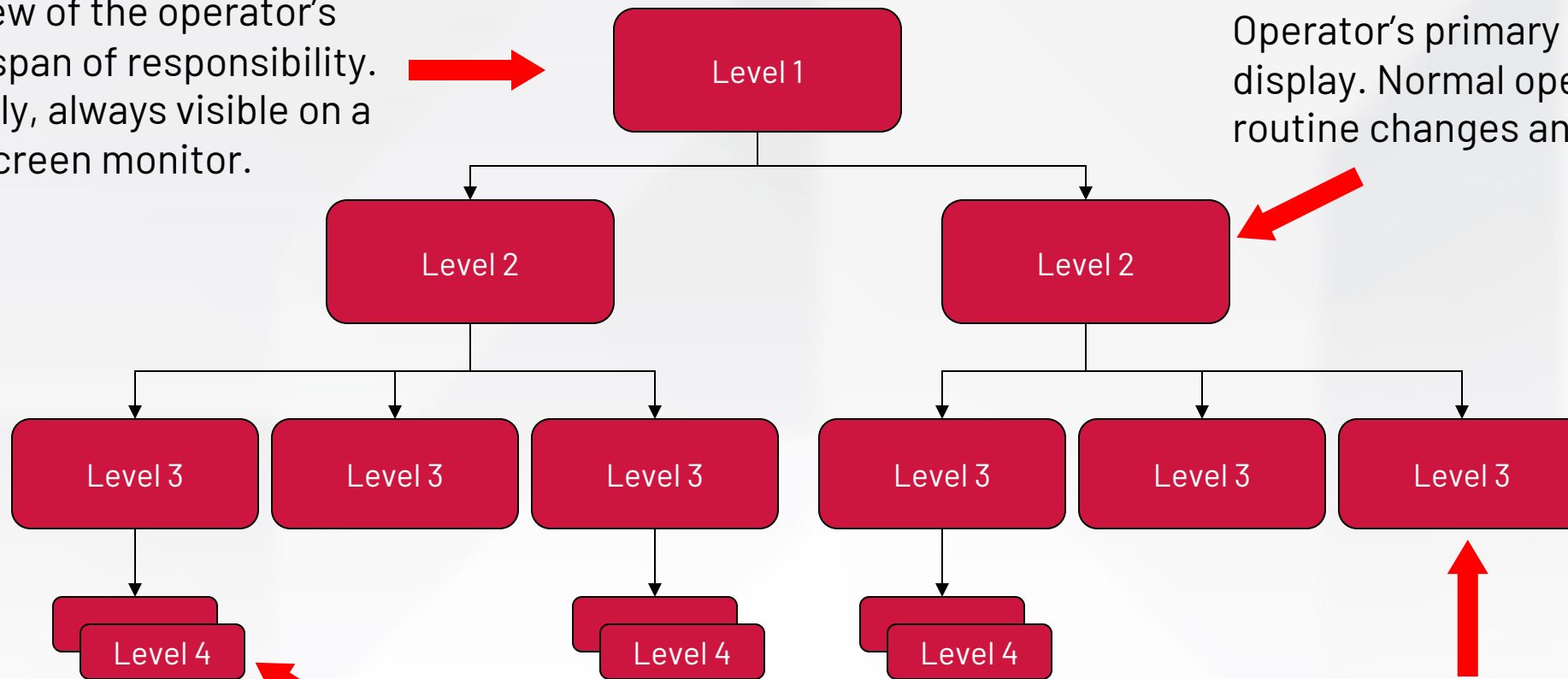
Data



Useful Information

# Multi-Level, Multi-View Displays

Overview of the operator's entire span of responsibility. Typically, always visible on a large screen monitor.



Operator's primary operating display. Normal operations, routine changes and monitoring.

Interlocks, Diagnostics, Help and Documentation. Usually, faceplates or popups. Task-oriented displays. (optional)

Non-routine operations. Provide enough information to facilitate process diagnostics.



# Navigation

A four-level display hierarchy may not be ideal for your process



## Must be quick

- Minimize number of clicks/selections and amount of typing
- Navigation by typing display name may be helpful in some scenarios but should not be necessary



## Must be logical



## Must be consistent

≤ 4

ISA suggests a maximum of four levels is recommended

# PlantPax<sup>®</sup> templates

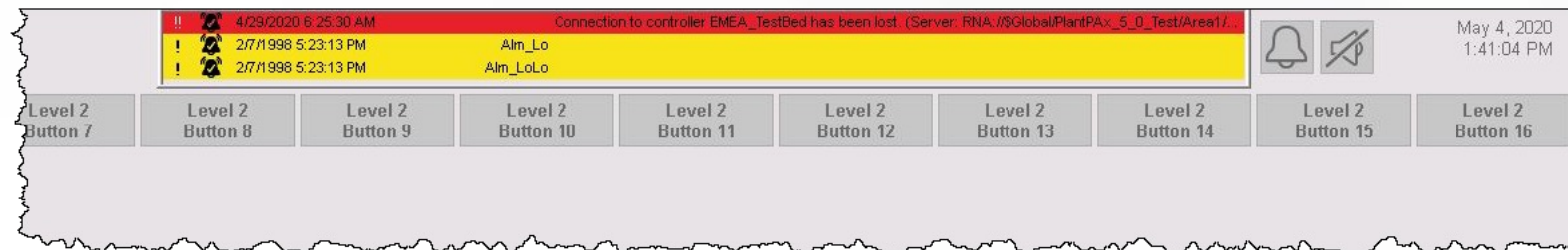
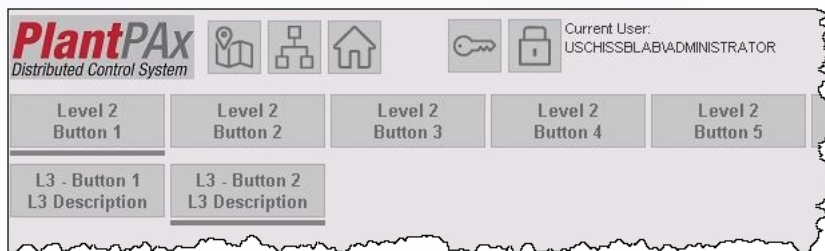
Enhanced in PlantPax<sup>®</sup> 5.0!

## Multiple Monitors

Four Monitor Header	Four Monitor Header
Level 1 Display	Alarm Summary with Alarm Display Navigation Buttons
	Alarm HButtonBar
Four Monitor Header	Four Monitor Header
Level 2 HButtonBar	Level 2 HButtonBar
Level3 HButtonBar	Level3 HButtonBar
Level 2 or 3 Display	Level 2 or 3 Display

## Single Monitors

Single Monitor Header
Level 2 HButtonBar
Level 1 Overview Display



# Use alarms to help operators navigate to and solve the problem

- Progressive disclosure is a best practice for operator effectiveness in the process industries – use alarm states to prompt the operator where to fix the problem
- Level 1 Display
  - High level information
  - Overview of operator's area of responsibility
  - Provides navigation to Level 2 displays



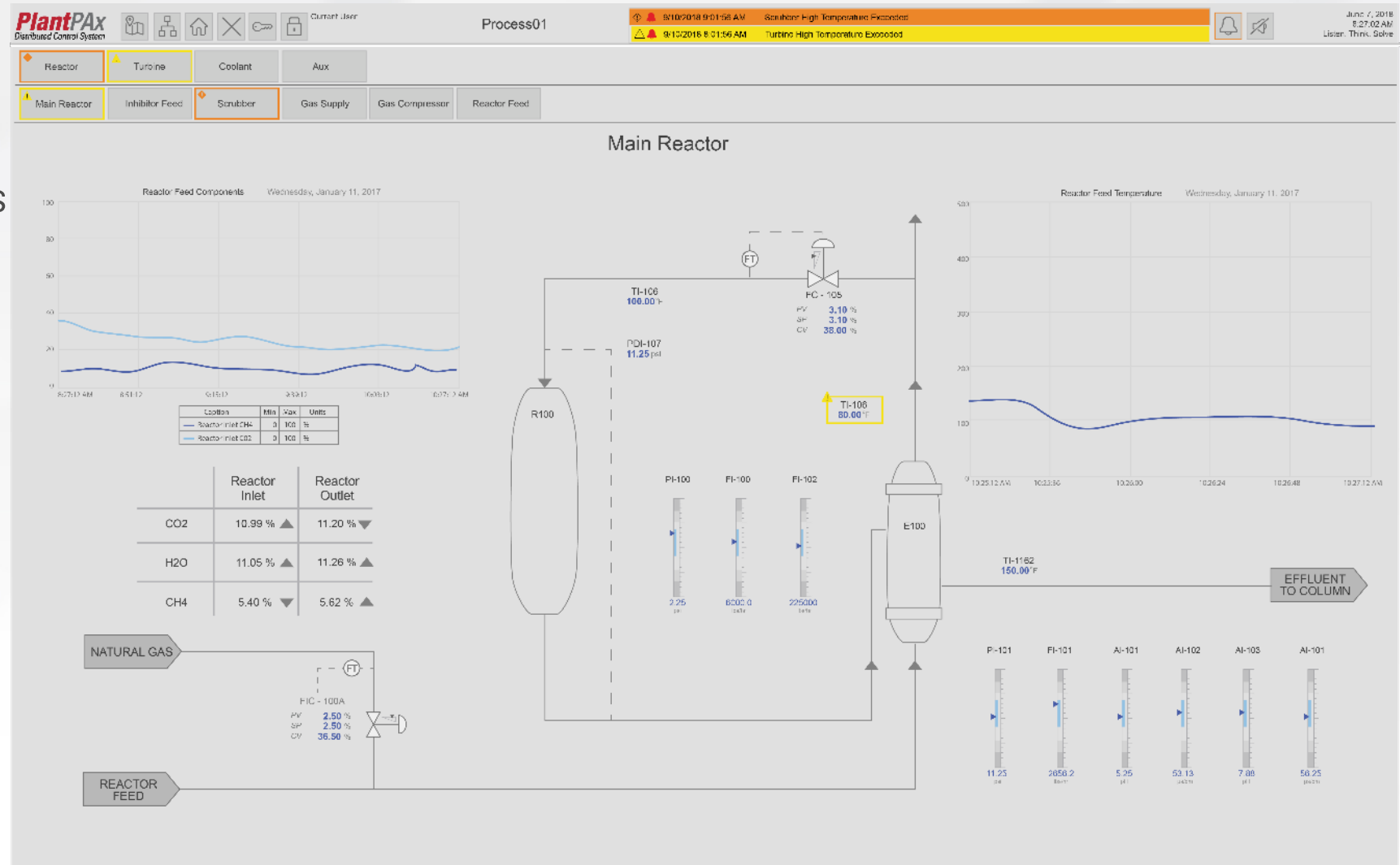
# Use alarms to help operators navigate to and solve the problem

- Progressive disclosure is a best practice for operator effectiveness in the process industries – use alarm states to prompt the operator where to fix the problem
- Level 2 Display
  - Designed for operator's routine activities (surveillance and action)
  - Designed to meet operator's mental model



# Use alarms to help operators navigate to and solve the problem

- Progressive disclosure is a best practice for operator effectiveness in the process industries – use alarm states to prompt the operator where to fix the problem
- Level 3 Display
  - Details essential for non-routine activities
    - Troubleshooting, operating transitions, etc.







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Automation**

# HMI Graphic Framework

# PlantPAx 5.x

## User Interface and Object Library

### Process HMI Style Guide

- Designed using latest guidelines ( ISA 101 )
- Improves situational awareness
- Easy to troubleshoot

### Information Enabled

- Provide diagnostic analytics
- Provide information to improve maintenance and predict failures

### Security & Change Management

- Manage who can see what information and perform actions
- Log operator actions for quality records and analysis – who did what / when / where



# ISA 101

*Reduce complexity, customization, and cost in HMIs across the plant lifecycle*



## PlantPax<sup>®</sup> Graphic Framework

Organizes HMI with a logical progression of complexity from main area overview down to detailed device information

### 4 Main Components

- Header
- Process Control Displays
- Navigation
- Alarm Indication



# PlantPAx 5.0 Graphic Framework

## Basic Structure for HMI Applications

### Modularly Flexible

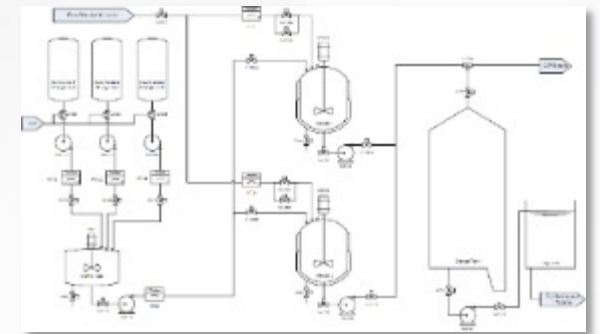
- Delivers different size/complexity of systems using the same Graphic Framework

### Intuitive Deployment

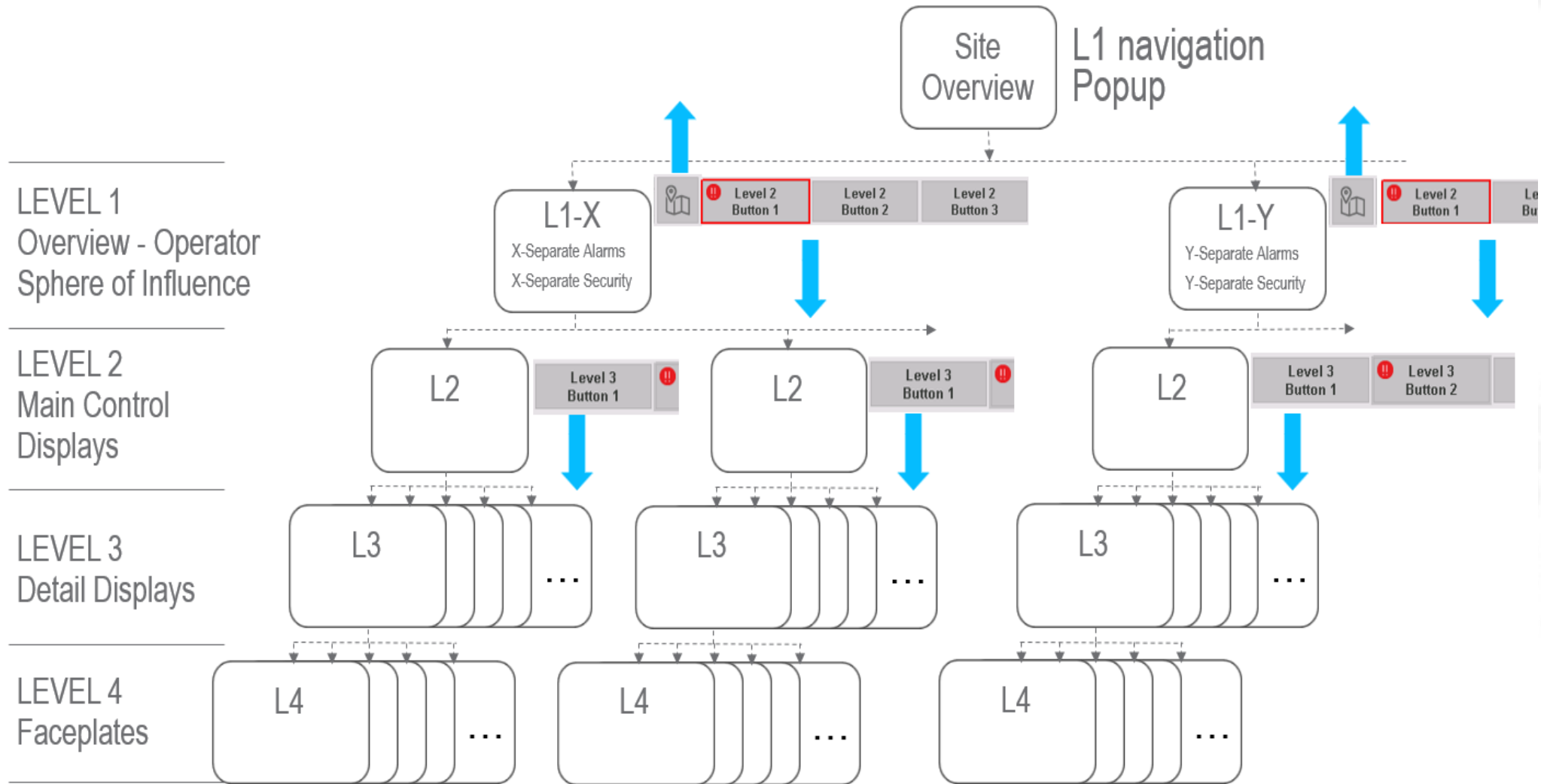
- Simplified Graphic directory
- Graphic Framework is configured; not programmed
- Clear direction of global object instantiation in Global Object Files
- Operator displays consistently built from only two component display files
- L2 Navigation Bar is component of header
- L3 Navigation Bar is component of L2/L3 graphic display
- Configuration included in PlantPAx® Manuals

### Operational Improvements

- Active Display Indicators
- Navigation bars indicate intuitive alarm “breadcrumbs”
- Control Equipment Agnostic Process Alarms
- Three visible alarms in new banner
- Consistent Alarm Colors in all graphical components
- True Language Switching Enabled



# Graphic Framework





# PlantPax® Graphic Framework

Driving a consistent user experience leveraging ISA101, using accepted industry standards

