FT Linx

FT Linx Gateway

FT Linx Data Bridge

FT Linx CommDTM

FT Linx OPC UA Connector

FT Resource and Status

FT Live Data

FT Action Manager

RSLinx® Classic

EtherNet/IP Address Commissioning Tool

Industrial Communications

Version 6.60

Technical Presentation

FT FactoryTalk

Rockwell Automation

expanding **human possibility**®

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Overview – Version 6.60 Capabilities

FT Linx

- Studio 5000® version 38 removes support for RSLinx® Classic
- FactoryTalk® Design Studio™ Smart Object tags
- ControlLogix® 5590 controller support
- RMCT ControlLogix® 5590 redundancy crossload
- Network browser support for EtherNet/IP In-Cabinet

FT Linx OPC UA Connector

- Redundancy predefined tags with status codes
- Timestamp-based value updates

FT Linx Gateway

- MQTT Publisher Cache and Subscriber
- Standalone OPC UA, MQTT and Excel RTD, FactoryTalk® Design Studio™ Smart Object tags
- FactoryTalk® Policy Manager OPC UA certificate push / delivery
- 2-dimension array multi-item indexed access

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FactoryTalk® Linx ≥ version 6.50

Linx Software Portfolio

Communications Services

MaintenanceSuite
DesignSuite
OperationSuite

Linx Gateway

*Data access (OPC DA/UA; MQTT; Excel) and system management services

Linx Data Bridge

*Moves data between FactoryTalk® sources

Linx CommDTM

Communications service for asset management of EtherNet/IP process devices

Action Manager™

Automate system management tasks (wall clock updates)

Service Platform

Linx

Premier connectivity to Allen-Bradley® control hardware

Resource & Status

Computer, service, software and Ethernet device analytics

OPC-DA Interface

Connectivity to third-party OPC-DA Servers

Linx OPC UA Connector

Connectivity to third-party OPC UA hardware and software servers

RSLinx® Classic

Premier connectivity for legacy software

EtherNet/IP Address Commissioning Tool

Assign device IP addresses using BOOTP / DHCP

KEPServer Enterprise

*Connectivity to third-party automation hardware and network protocols

*Purchased separately

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FT Linx

What's new in version 6.60

FT Linx Version 6.60 Capabilities

Aligned Products

- FactoryTalk® View SE/ME version 16
- Logix version 38
- Studio5000® version 38 removes support for RSLinx® Classic

FactoryTalk® Linx

- Enhanced @AlarmGroup/Class and new @shortcut extended properties
- Network Browser
  - ControlLogix® 5590 dual-port / crossload changes
  - EtherNet/IP In-cabinet*
  - Net ETAP devices will have IP Address and LLDP
  - Network Browser – Config tag adds local NIC info and column width changes
  - Device Identity renamed serial number titles
- Redundancy Module Configuration Tool (RMCT)
  - v10.01 with 1756-RM3 support installed with FactoryTalk® Linx
  - Additional Log export
  - ControlLogix® 5590 crossload status / diagnostics
  - Option to initiate a factory reset of the module
- Configuration import/export tool processes files from ≤ v6.40

FactoryTalk® Service Platform

- Install Client/Server/Custom options

FactoryTalk® Linx Gateway

- Indexed access to 2D arrays*
- FactoryTalk® Policy Manager certificate push / delivery
- OPC UA option to change default namespace URI
- MQTT Publisher added Store and Forward (Cache)
- MQTT egress interface added Subscriber
- Standalone UA, MQTT Pub/Sub, RTD
- Standalone to Logix via ControlNet through 1784-U2CN
- Standalone FactoryTalk® Design Studio™ Smart Object tags
- Standalone accepts references beginning with "::"
- Tag list incorporated "add" button to GUI
- SDK to multiple Devices with Standard edition
- Custom namespace data type case insensitivity
- Tag name added to extended tag properties in custom namespace
- Outgoing self-signed certificate expiration options

FactoryTalk® Linx UA Connector

- Change Timestamp-based value updates (trigger mode) from retained tag to GUI setting
- Redundancy predefined tags with status codes
- Outgoing self-signed certificate expiration options

* Version 6.50 patch integrated

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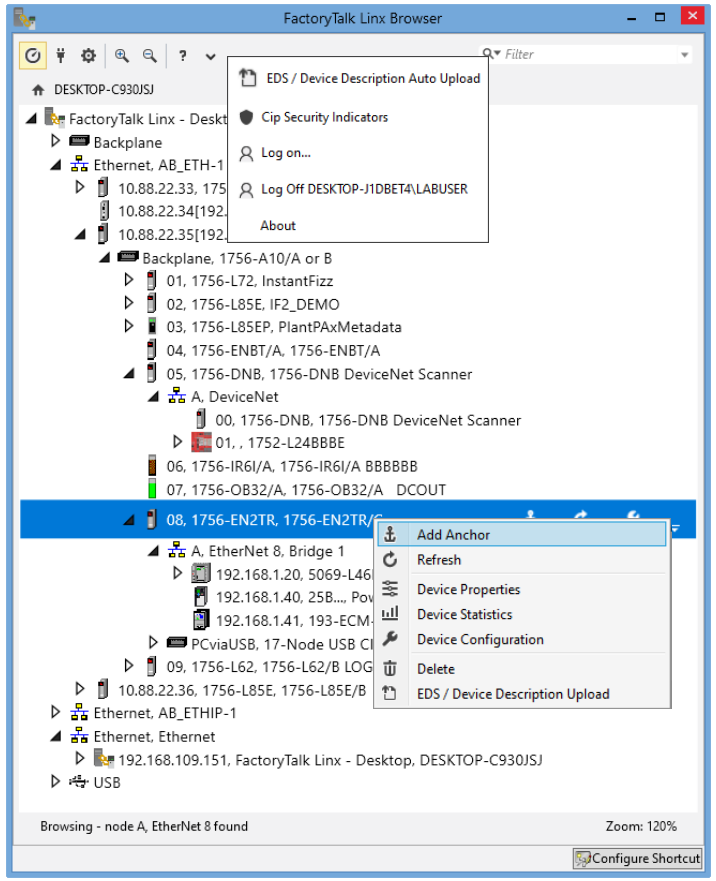
Network Browser

More productive alternative to RSLinx® Classic "Who Browser"

Enhanced Capabilities

- Better driver configuration user interface for improved productivity
- Automatic discovery of bridged devices
- CIP Security, FactoryTalk® Security and FactoryTalk® Audit
- Large packets for improved performance
- Blink LEDs to locate devices
- See connected devices with Link Layer Discovery Protocol (LLDP)
- Supports 5015, GuardLink®, IO-Link and EtherNet/IP In-cabinet (not in RSLinx® Classic)
- Communicate to device not browsed

- **New version 6.60**
  - Integrates EtherNet/IP In-cabinet version 6.50 patch
  - Supports ControlLogix® 5590 dual-port configuration, including crossloading using Redundancy Module Configuration Tool (RMCT)



Supported by

- Studio 5000® Launcher version 31
- Studio 5000® Logix Designer version 31 (***version 38 removes support for RSLinx® Classic)***
- PlantPAx® Process Object Config. tool version 4.10.01
- PlantPAx® MPC version 2.0
- ControlFLASH™ version 14
- ControlFLASH™+ v1
- Connected Components Workbench™ version 12
- FactoryTalk® AssetCentre version 9
- FactoryTalk® Policy Manager version 1.0
- FactoryTalk® Linx CommDTM version 1.04 PowerFlex® HIM version 1.0
- Studio 5000 View Designer® version 7
- FactoryTalk® Batch version 14
- Redundancy Module Configuration Tool version 9.00
- FactoryTalk® Logix Echo version 1
- FactoryTalk® Action Manager™ version 1.00
- SequenceManager™ version 2.00

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Studio 5000 Logix Designer®

Removal of RSLinx® Classic

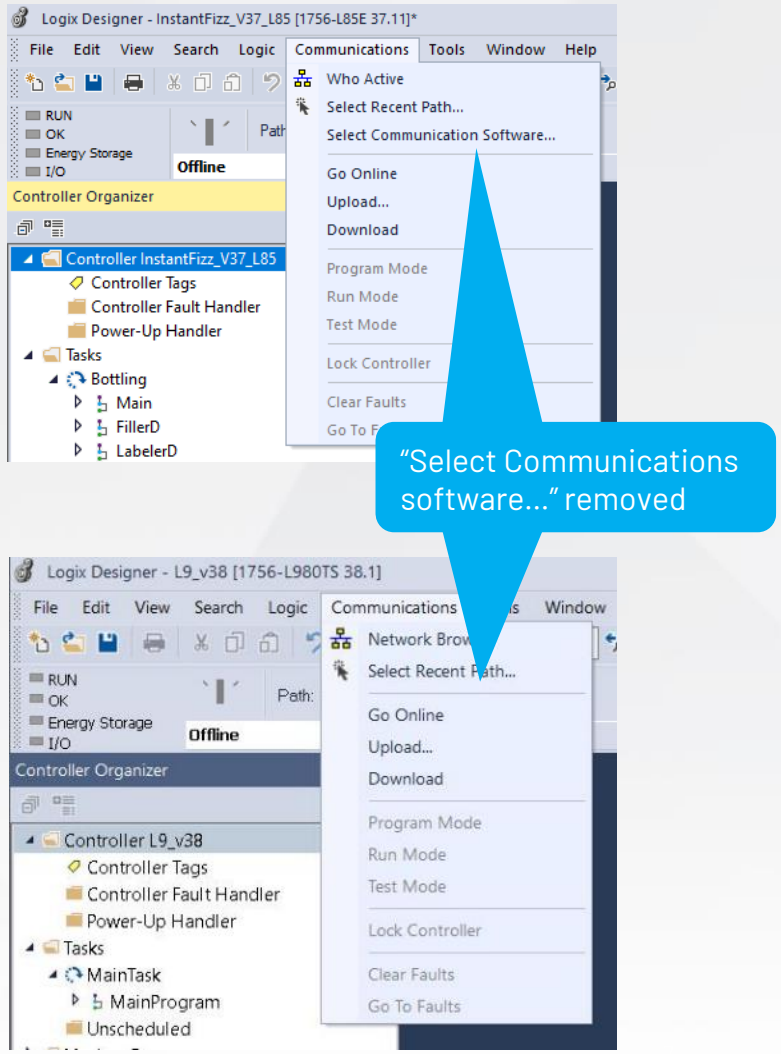
Studio 5000® Logix Designer's final step in the transition to FactoryTalk® Linx

Studio 5000® Logix Designer version 31 -37 support both RSLinx® Classic and FactoryTalk® Linx

- Network browsing to locate controller
- Online communications services (e.g. upload, download, monitor and program edits)

Studio 5000® Logix Designer version 38 removed support for RSLinx® Classic

- Only FactoryTalk® Linx included with installation
- Removed option to switch and support for RSLinx® Classic



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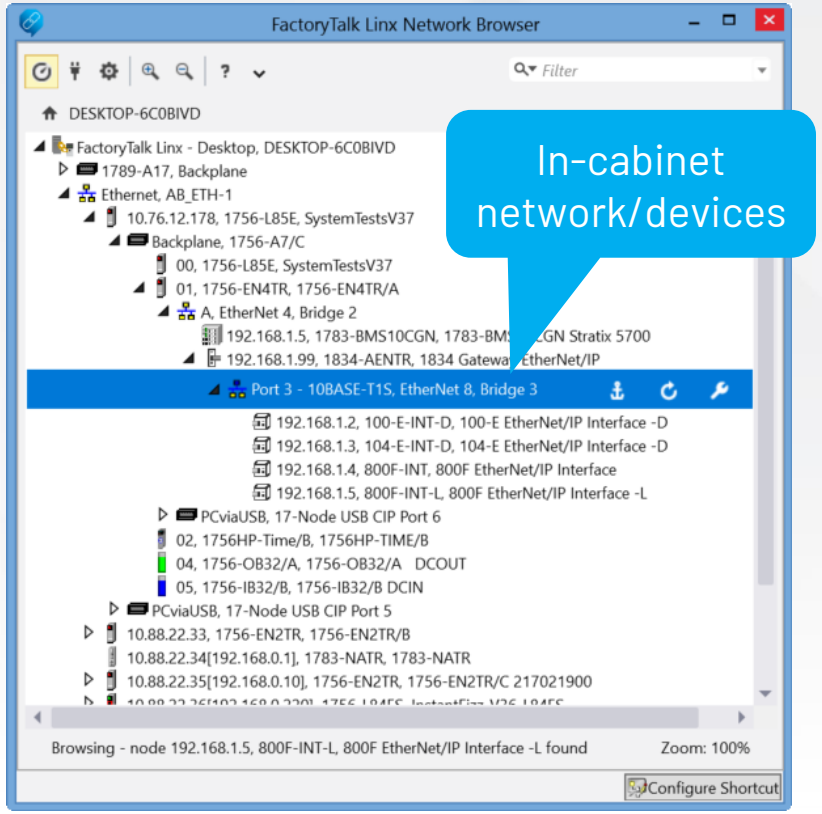
FactoryTalk® Linx ≥ version 6.60

EtherNet/IP In-Cabinet (single pair Ethernet) support

Enhanced productivity and network performance

EtherNet/IP In-Cabinet Support

- EtherNet/IP In-cabinet
  - 10 Mb half-duplex network running on single pair media
  - Ideal for small devices
  - Supports up to 40 devices initially
- FactoryTalk® Linx v6.50 was enhanced to optimize network browsing and discovery on In-cabinet networks
  - The 1834-AENTR gateway uses LLDP to detect devices
  - FactoryTalk® Linx uses the device list to populate the network topology
- Detect device without broadcast, polling or user IP list
  - Zero configuration with Improved efficiency
  - Requires patches 1154358 and 1155103 released Mar-2025



In-cabinet network/devices

Version 6.60 incorporates the enhancements from the patches

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FactoryTalk® Linx ≥ version 6.60

Access to Logix tag “AlarmGroup” and “AlarmClass” attributes

Improved HMI alarm presentation and change tracking

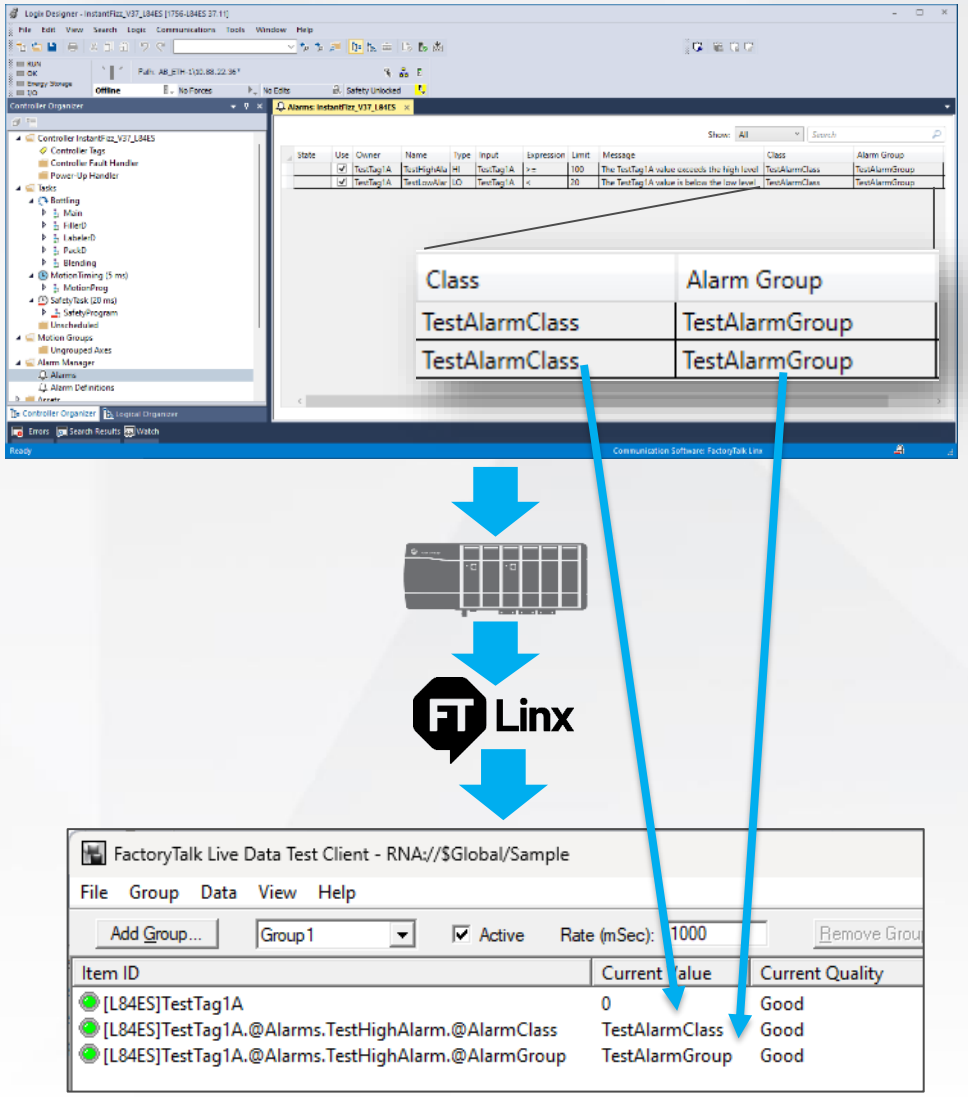
Logix Tag-based Alarms

- FactoryTalk® Linx version 6.00 added access to Logix tag-based alarms
- Version 6.50 enhanced to include the @AlarmClass" and "@AlarmGroup" attributes
  - Initially available when extended properties were not uploaded
  - Patch 1153660 enables access when shortcut extended property upload is configured
  - References must be manually entered (not listed in tag browser)

New in version 6.60

- Incorporates the enhancements from the patches
- Permits FactoryTalk® View SE / PlantPAx® screens to log alarm actions initiated from standard controls
- Previously only Alarm Summary operations were logged

Studio 5000® Logix Designer



FactoryTalk® Live Data Test Client

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Enhanced @AlarmGroup/Class and new @Shortcut extended properties

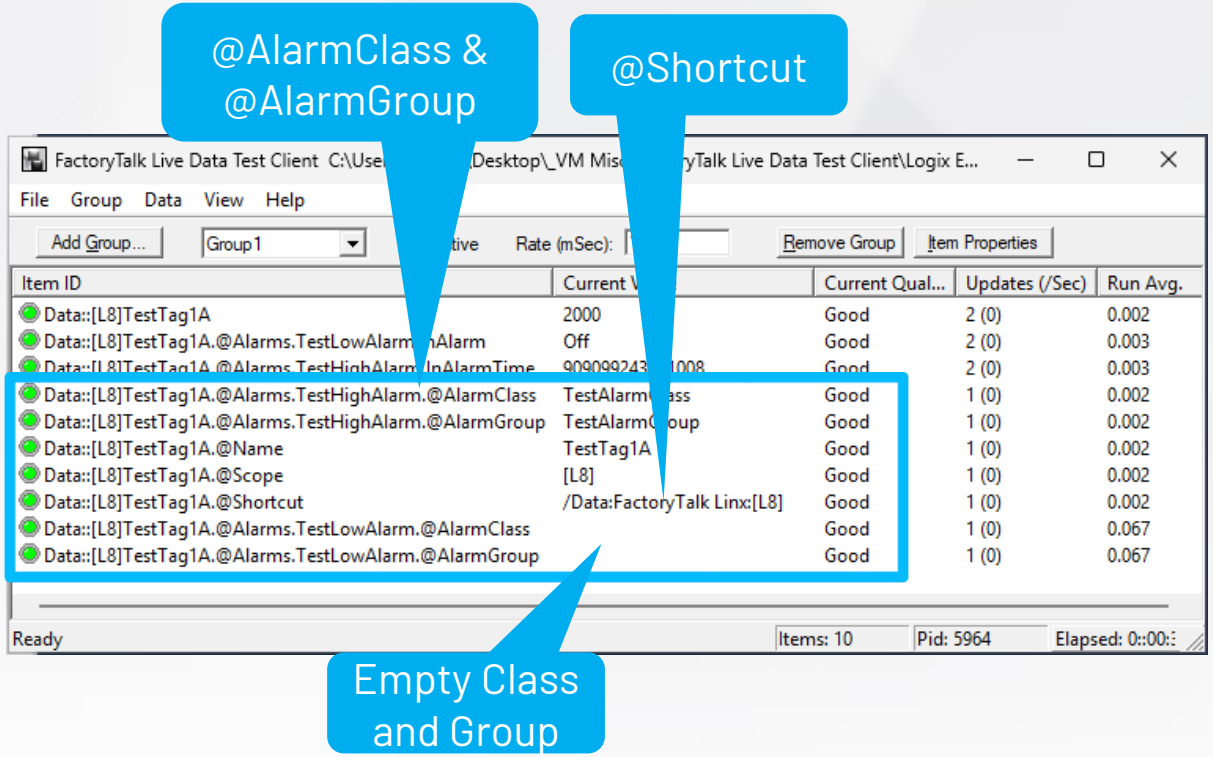
Improved system status visibility

Extended Tag Properties

- FactoryTalk® Linx version 6.50 included @AlarmClass and @AlarmGroup

New in v6.60

- @AlarmClass and @AlarmGroup returns a null string instead error when the attributes are not populated
- New property to a shortcut in FactoryTalk® Application
  - @Shortcut – The FactoryTalk® Lived Data reference
- Accessible to software using FactoryTalk® Application (e.g. FactoryTalk® View, FactoryTalk® Linx Gateway Professional…)



FT Linx Redundancy Module Configuration

New version of the tool adds support for 1756-RM3 module

RMCT ≥ v10.00 & FTL ≥ version 6.50,
1756-RM2 ≥ v20.010, Logix ≥ version 33
1756-RM3 ≥ v21.000, Logix ≥ version 33
RMCT ≥ v10.01, RM3 ≥ v22.011, ControlLogix® 5590 ≥ version 38

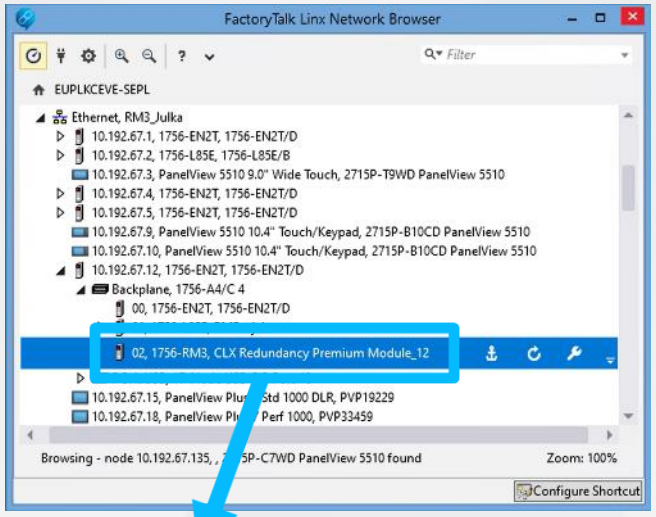
Enhanced productivity when managing a ControlLogix® redundancy system

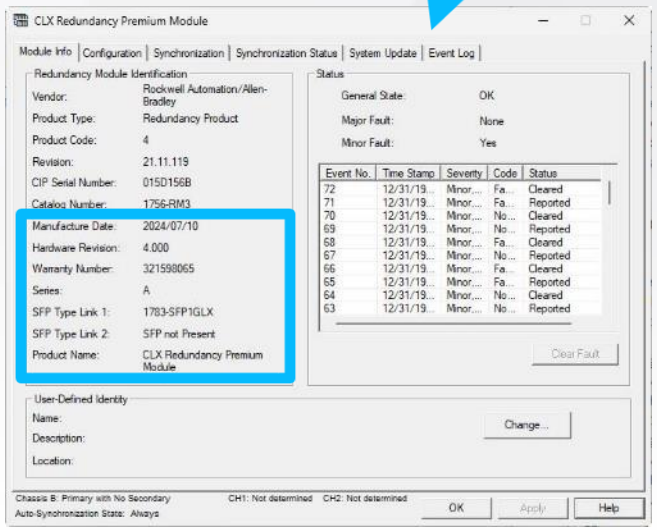
Redundancy Module Configuration Tool (RMCT) Overview

- FactoryTalk® Linx version 6.21 incorporated the RMCT version 9.00 to work with ControlLogix® ≥ version 33 redundancy
- FactoryTalk® Linx version 6.50 Network Browser added support for the 1756-RM3 module
  - FactoryTalk® Linx RMCT version 9.01 included in the version 6.50 installation
- FactoryTalk® Linx RMCT version 10.00 supports both RM2 and RM3 modules
  - Available separately on Product Compatibility and Download Center PCDC

New in v6.60

- FactoryTalk® Linx version 6.60 installation includes FactoryTalk® Linx RMCT v10.01
- Display RM3 module SFP information / status
- Reset RM3 module to Factory Default
- Full diagnostic log extraction / download
- ControlLogix® 5590 crossload status and diagnostics





FactoryTalk® Linx prior to version 6.50 won't manage 1756-RM3 modules, even with RMCT version 10 installed

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Network Browser ControlLogix® 5590 controller redundancy crossload information

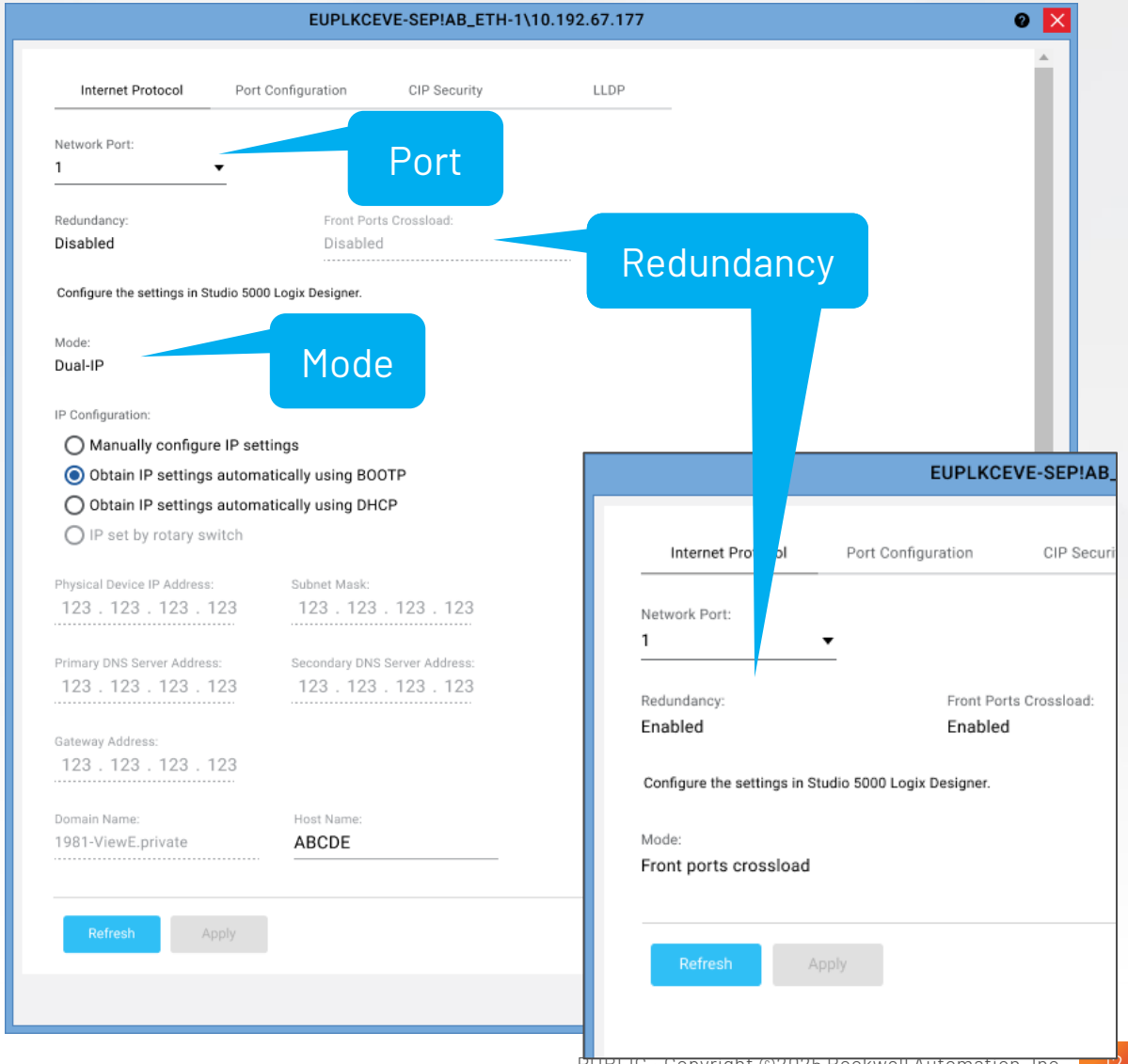
Enhanced visibility to controller's redundancy configuration

The ControlLogix® 5590 family of controllers contain dual front Ethernet ports

- Can operate in a Device Level Ring (DLR)
- Can operate on independent networks with different IP addresses
- Crossload information from the active to standby controller in a redundant configuration

FactoryTalk® Linx version 6.60 Network Browser device configuration

- Dialog enhanced to support the controller's Ethernet port configuration options
- Dual-port configuration
- Adds information when configured for redundancy



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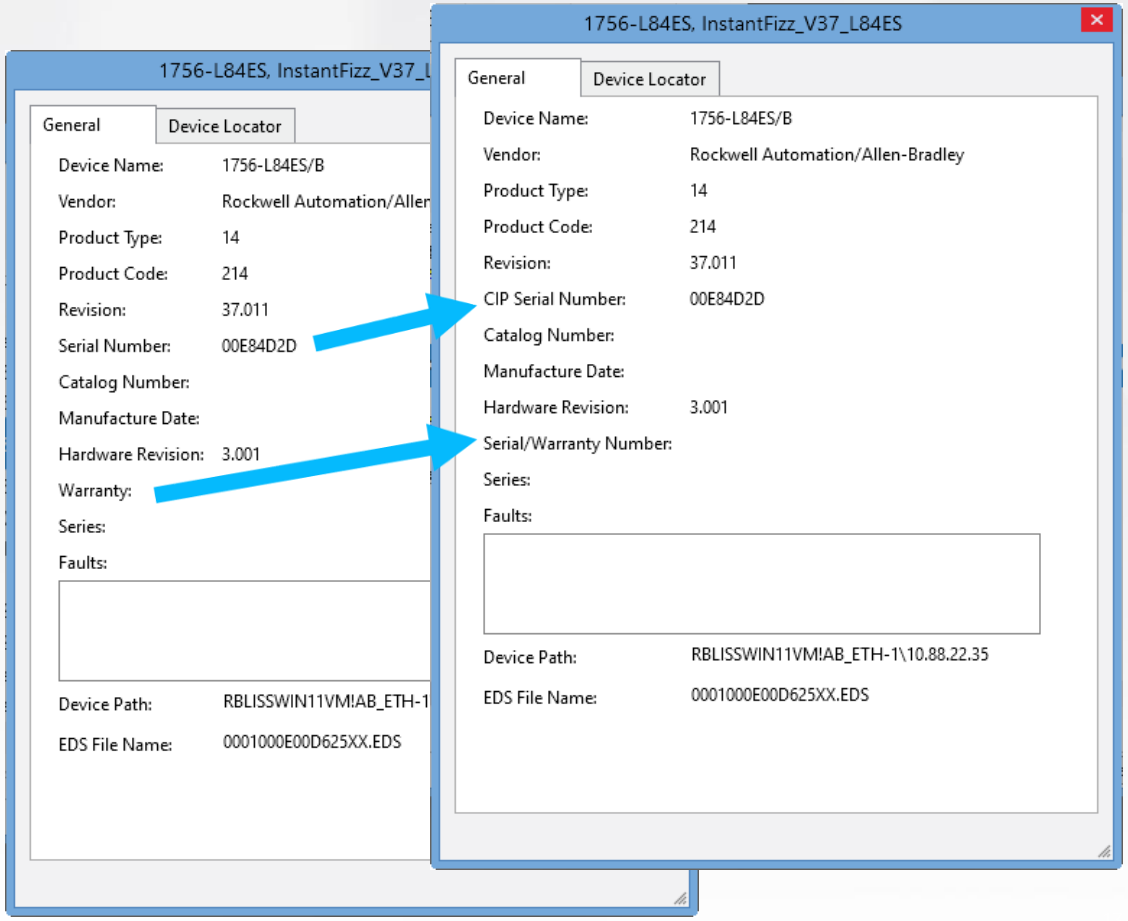
Device Identity renamed serial number titles

More accurate property names to reduce confusion

Updated device property names

- The FactoryTalk® Linx version 6.60 Network Browser Device Property dialog updated the serial number titles
  - Serial Number to CIP Serial Number
  - Warranty to Serial / Warranty Number
- Complies with Rockwell Automation standard change that more accurately represents the properties



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Linx Configuration Import/Export

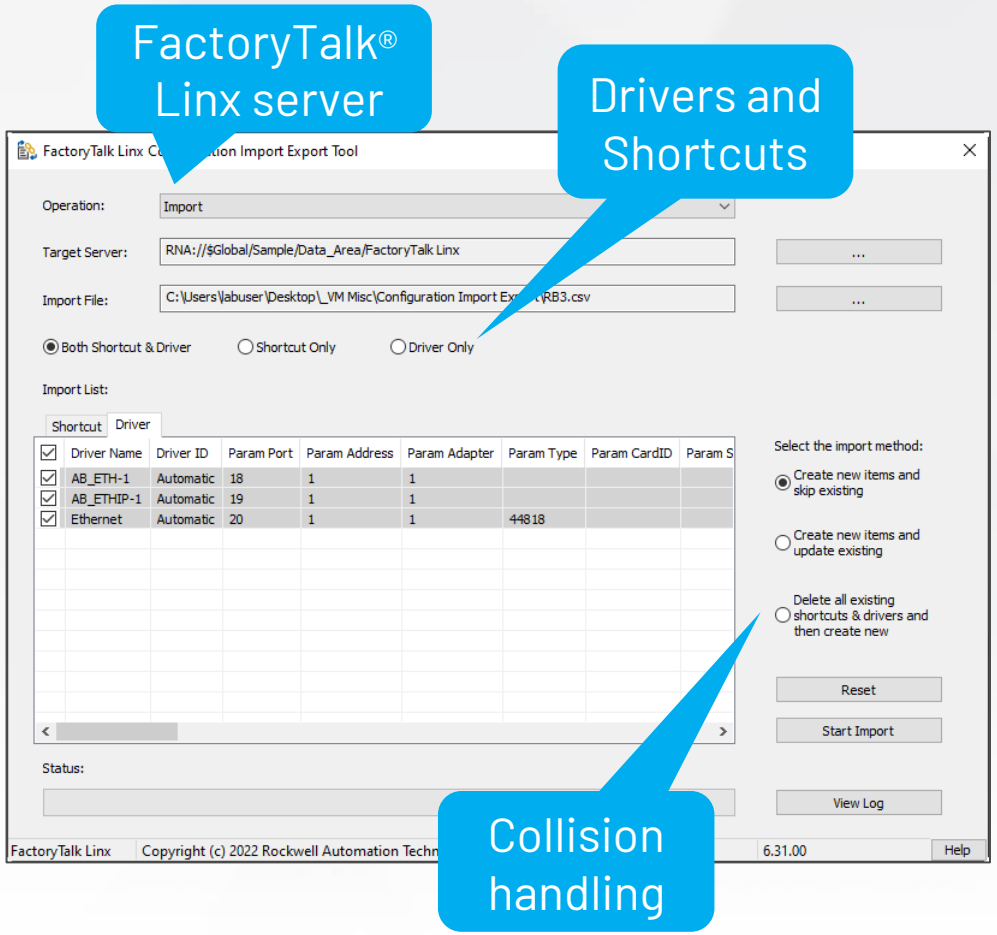
Import/Export projects created by ≤ version 6.40

FactoryTalk® Linx ≥ version 6.60

Enhanced productivity when working with drivers for Network Browser

FactoryTalk® Linx Configuration Import/Export tool version 6.21

- Driver and shortcut configuration via User or command-line interface (CLI)
- Required selection of FactoryTalk® Linx server with FactoryTalk® Application to specify the shortcuts to be processed
- FactoryTalk® Linx version 6.40 permits Import/Export without selecting a FactoryTalk® Application for the Driver only operation
  - Ideal when only using the Network Browser (no Shortcuts / Topics)
- FactoryTalk® Linx version 6.50 added a parameter that changes the CSV file
  - Patch 1156763 to process files from earlier versions



Version 6.60 Includes the patch and adds a version number into the CSV file

FT Linx Gateway

What's new in version 6.60

FT Linx

Comms services and third-party connectivity

Application data sources

- FT Optix™
- OPC Unified Architecture
- OPC Classic DA
- RSLinx® Classic

FT Linx OPC UA Connector

FT Live Data

- Counter Monitor
- Windows & Services
- Device Ping

FT Resource & Status

- Logix Controllers[1]
- PLC-5®, SLC™, MicroLogix™, & MicroLogix™ Controllers
- Devices via CIP™
- CIP Energy™

FT Linx

FT Linx Gateway

Ingress

Data forms

Folders/scalars

All data available (DA[1]/UA/DDE[1]/RTD[1])

Tag groups

Scalars, UDTs, arrays, and access control (UA only)

Custom

Context, mapped, OPC companion specifications, and access control (UA[1]/DDE[1]/RTD[1]/MQTT[1])

Data interfaces

- MQTT Publisher/Subscriber[1]
- OPC Unified Architecture[1]
- OPC Classic DA[1]
- **Dynamic Data Exchange (DDE)**[1]
- **Excel Real Time Data (RTD)**[1]

Egress

Data destinations

- PLEX by ROCKWELL AUTOMATION
- MQTT Broker
- FT Optix™
- FT DataMosaix™
- Microsoft® Azure
- Third-party, HMI, MES and analytics
- Purpose built software
- FT Linx
- RSLinx® Classic

CIP™ communications services

SDK API

Remote Proxy

1. Supported with FactoryTalk® Application and when Standalone option is enabled

Underline = New version 6.60

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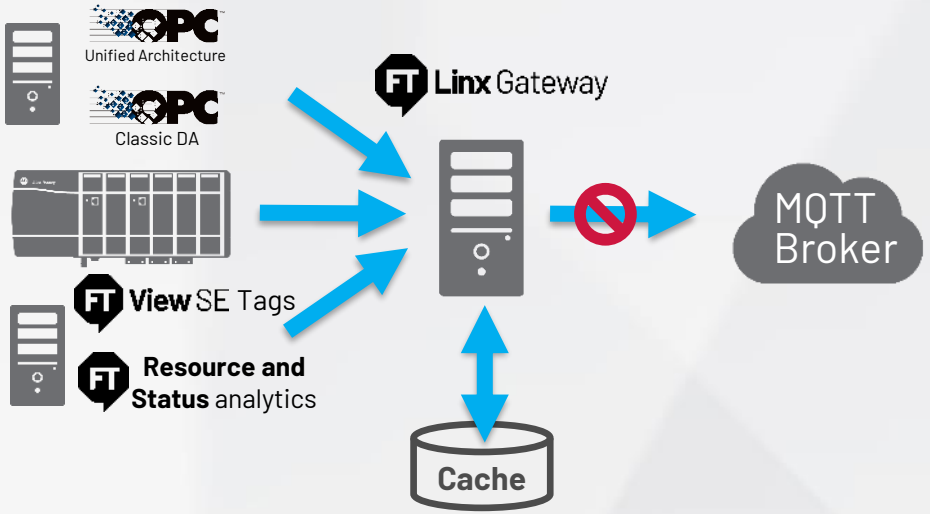
Linx Gateway

MQTT Publisher Store & Forward (cache)

FactoryTalk® Linx Gateway ≥ version 6.60



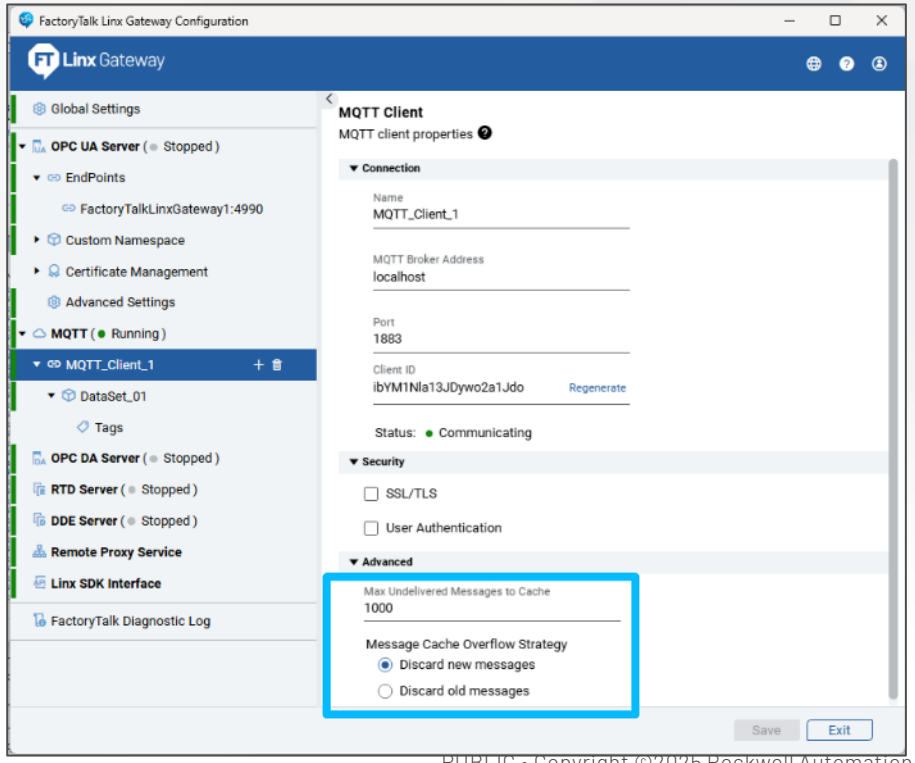
Preserve data when broker is disconnected

MQTT Publisher

- Added in FactoryTalk® Linx Gateway version 6.50
- Ideal for simultaneous delivery to multiple clients and cloud software

New in v6.60

- Adds an option to store & forward
- Cache up to 20,000 MQTT messages in memory
- Capacity limited by available memory and topic Data-Set™ configuration
- Options to automatically discard oldest or newest message when cache fills



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Linx Gateway

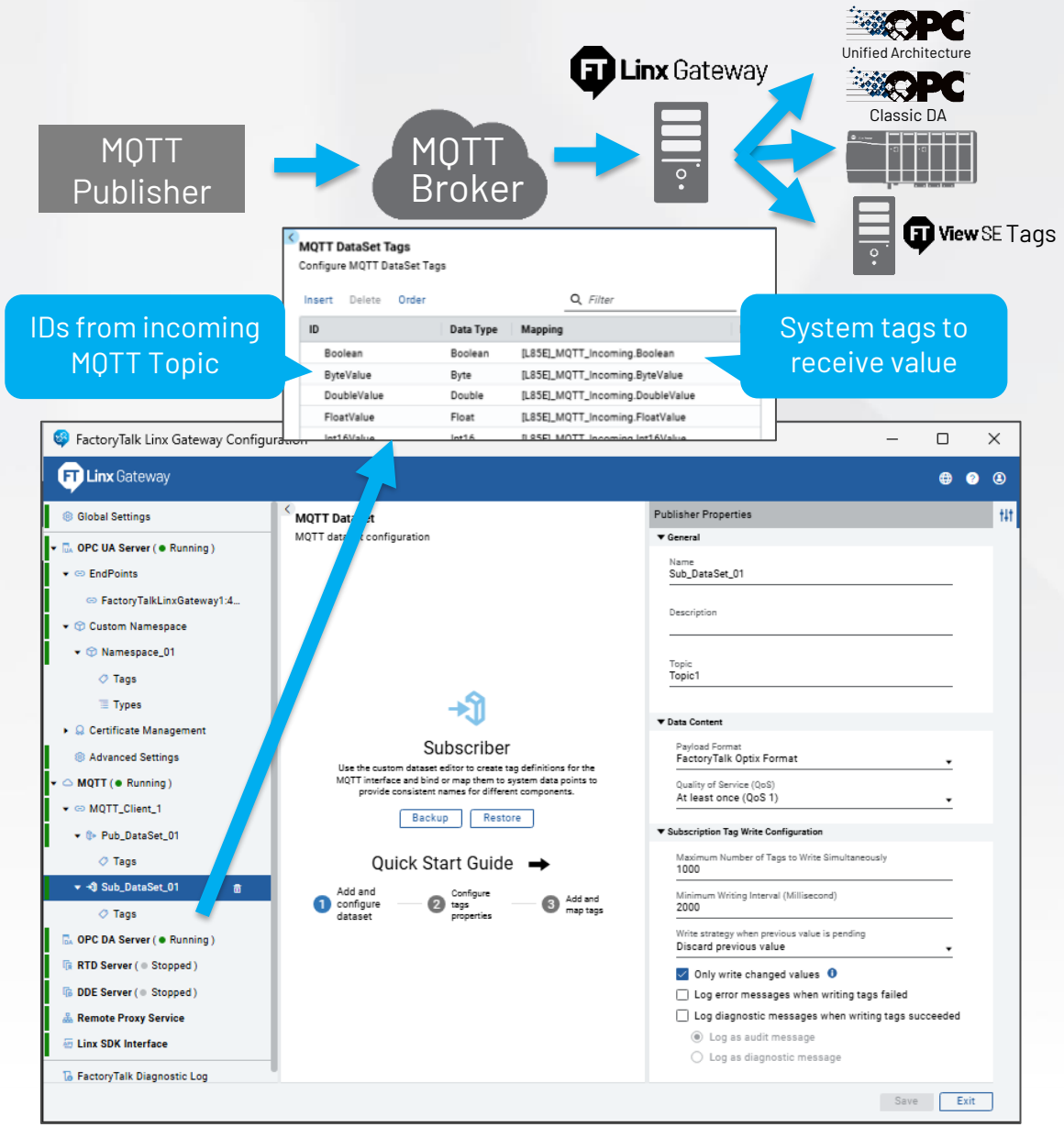
MQTT Subscriber

FactoryTalk® Linx Gateway ≥ version 6.60

Permits Enterprise/Cloud software to send / write data to automation equipment

MQTT interface to subscribe to data in version 6.60

- SSL / TLS and authentication security
- JSON Formats – FactoryTalk® Optix™, flat and rich
- Configuration to map / assign incoming tags to:
  - Tags in FactoryTalk® application
  - Controller referenced by FactoryTalk® Gateway Standalone
- Flow control options
  - Write on change or all received values
  - Simultaneous write qty
  - Repetitive write speed
- Optional logging of tag writes to FactoryTalk® Diagnostic / Audit



Linx Gateway

OPC UA Certificates delivery from FactoryTalk® Policy Manager

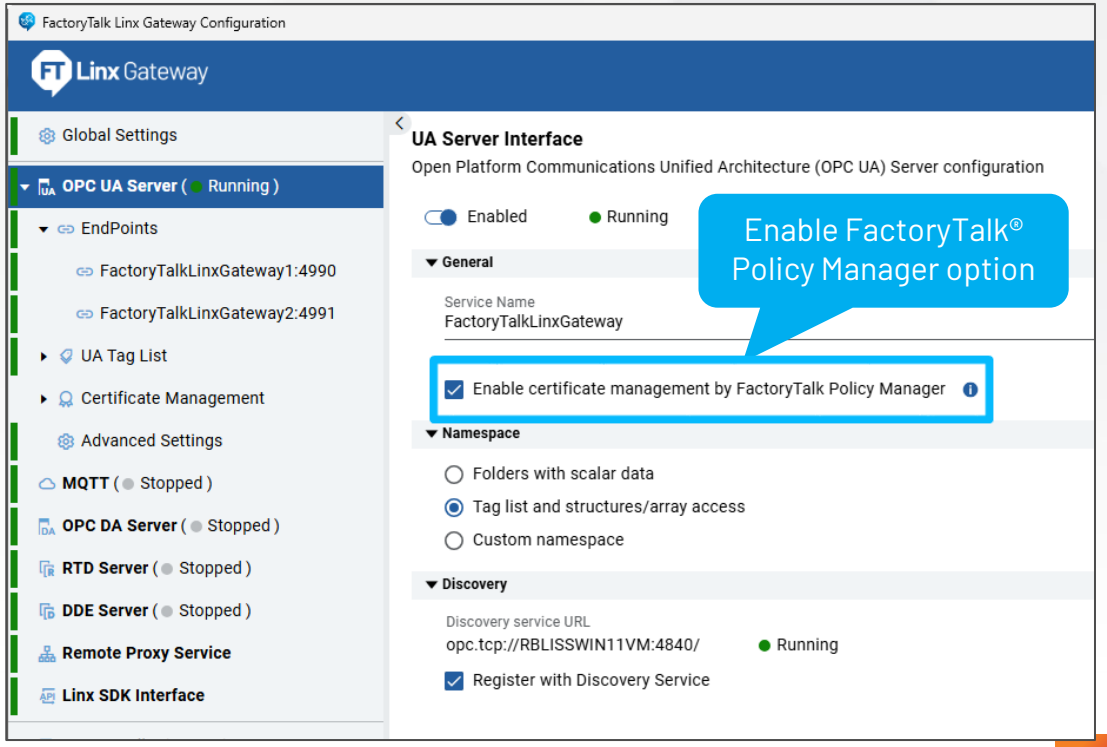
Enhanced productivity by minimizing manual commissioning steps

OPC UA Certificate Management Feature Overview

- FactoryTalk® Policy Manager version 6.40 generates OPC UA certificates needed for communications security
- Generation of outgoing and incoming certificates
- Push mechanism to deliver certificates to Logix controllers
- Certificates were manually added to FactoryTalk® Linx Gateway and the FactoryTalk® Linx OPC UA Connector

New in v6.60

- FactoryTalk® Linx Gateway can automatically receive FactoryTalk® Policy Manager certificates
- New option to enable certificate delivery
- Certificates delivered locally or over Ethernet



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Linx Gateway

Indexed access to two-dimension arrays

FactoryTalk® Linx Gateway ≥ version 6.60

Optimize array data reads and expanded application coverage

Dimension 2

Dimension 1

	0	1	2	3	4
0	0,0	0,1	0,2	0,3	0,4
1	1,0	1,1	1,2	1,3	1,4
2	2,0	2,1	2,2	2,3	2,4
3	3,0	3,1	3,2	3,3	3,4
4	4,0	4,1	4,2	4,3	4,4

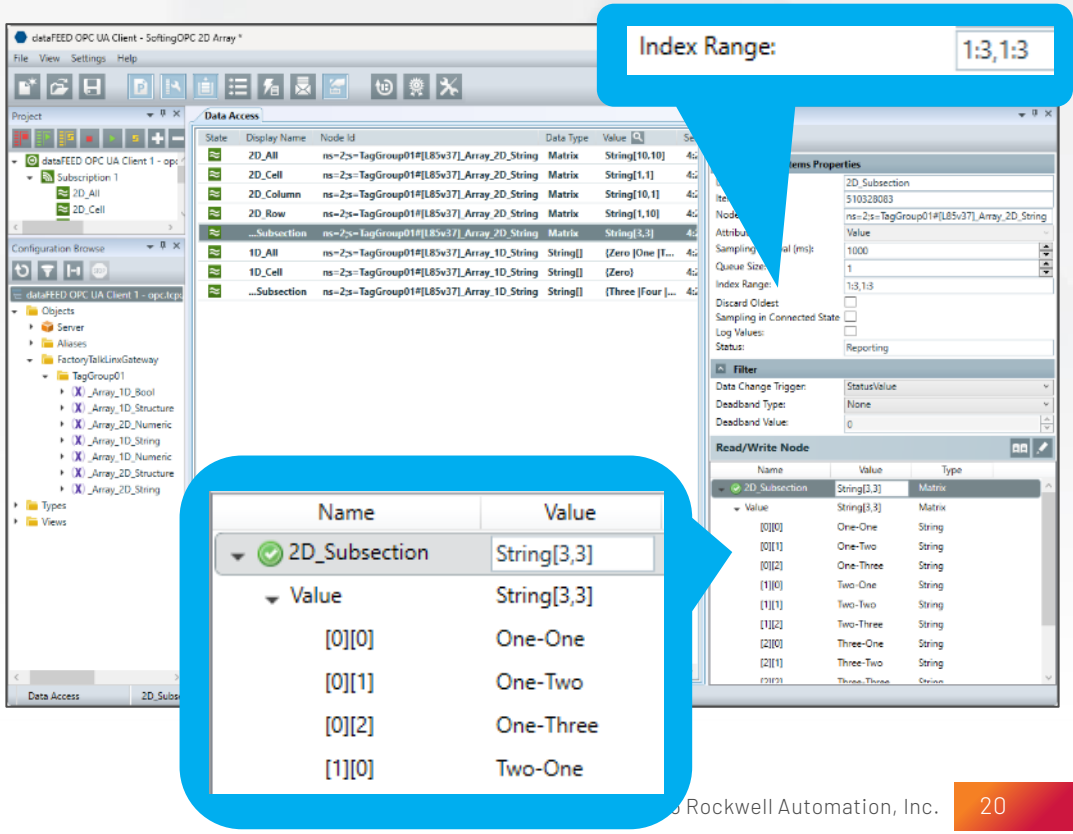
Index 1:3,1:3 returns nine cells

Indexed Arrays Feature Overview

- FactoryTalk® Linx Gateway version 6.20 introduced single dimension indexed access to arrays
- Version 6.50 patch 1154046 adds indexed access to two-dimension arrays
  - Two indexes required to retrieve a subset of array cells
  - Supported in tag list
  - More efficient than reading cells individually

New in version 6.60

- Version 6.60 incorporates the changes from the patch and added support for the custom namespace
- Enables modeling data to align with physical layout or to store multiple values based on a key reference



Linx Gateway

OPC UA option to change default namespace URI text

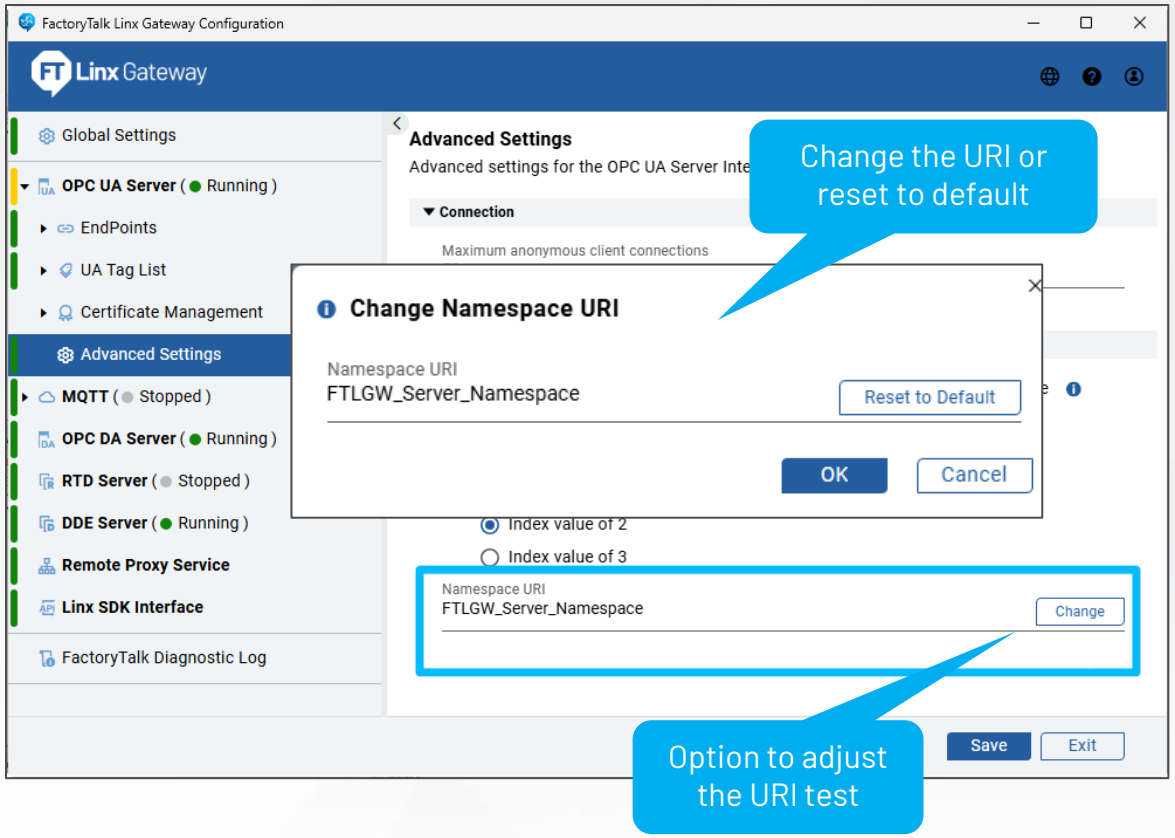
Adjust the namespace URI to simplify version migration

OPC UA Server's Namespace Identification Feature Overview

- Provides a list of indexes and associated URI text
- Clients use the URI text to locate the desired namespace and reference nodes using the index
- FactoryTalk® Linx Gateway's Folders/Scalars and Tag List namespace URI evolution
  - ≤Version 6.21 #2 "http://www.rockwellautomation.com/OpcUa"
  - ≥Version 6.30 #3 "FTLGW_Server_Namespace"
  - Some clients may require configuration changes
  - Version 6.50 patched 1155252

New in version 6.60

- New option to modify the default URI
- Can be set to the original string for simpler version migration



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Linx Gateway

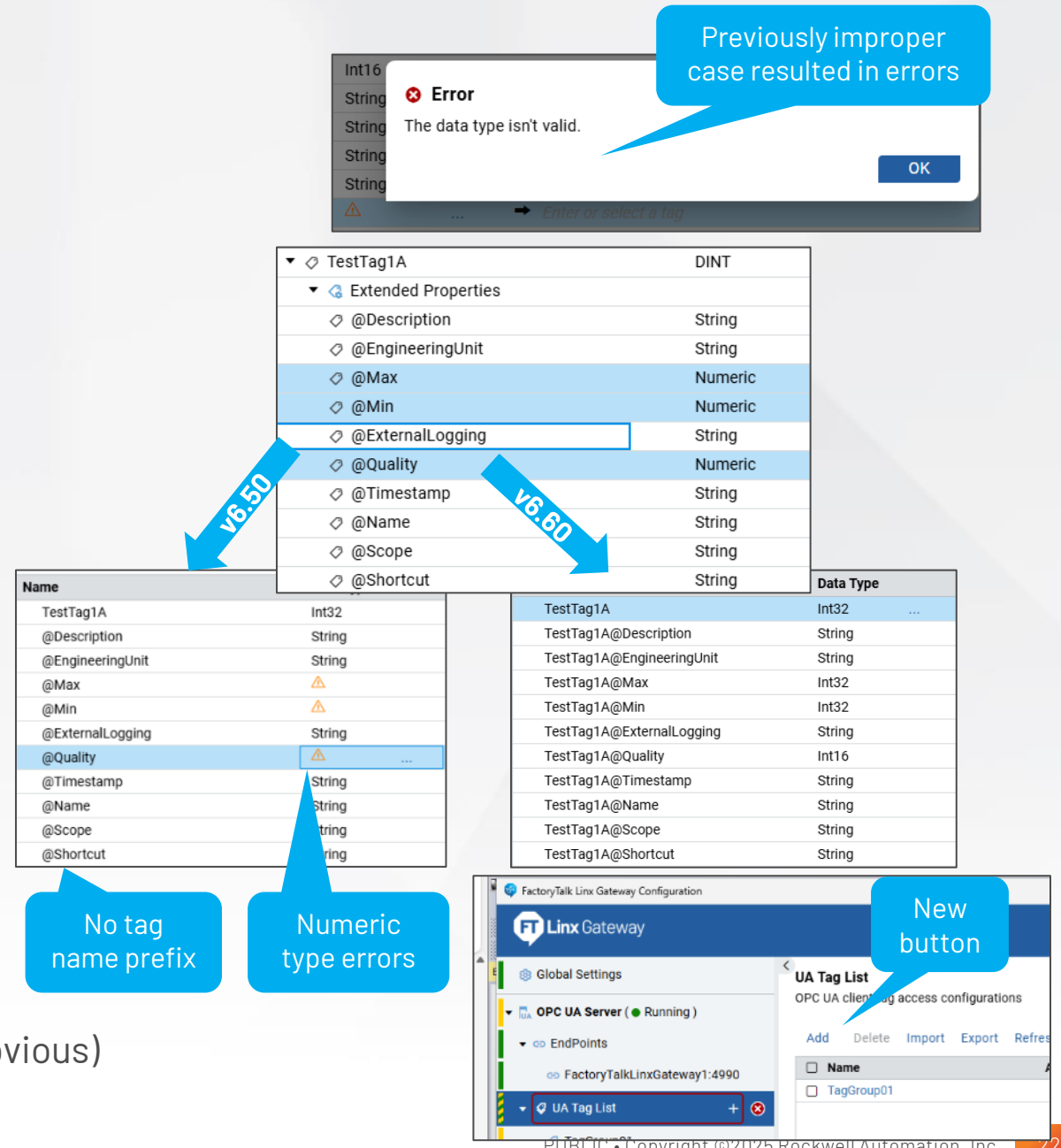
Custom namespace usability improvements

FactoryTalk® Linx Gateway ≥ version 6.60

Enhanced user experience by reducing manual actions

Custom Namespace Usability Improvements in version 6.60

- UA Custom namespace
  - Tag name for extended properties
    - Previously instantiated without the associated tag name
    - Version 6.60 adds the tag name prefix automatically
  - Data type case insensitive
    - Data type were case-sensitive (Upper case for first character and lower for others)
    - Previously typed entries rejected for improper case
    - Version 6.60 automatically converts to the correct case
  - Numeric type for Min, Max and Quality properties
    - Previously manual entry of "Int16" and "Int32" required
    - Version 6.60 provides the correct type automatically
- UA Tag list - group addition
  - Previously added from the project tree
  - Version 6.60 Tag List dialog now has "Add" button (more obvious)



FT Linx Gateway & FT Linx OPC UA Connector

Outgoing certificate expiration options

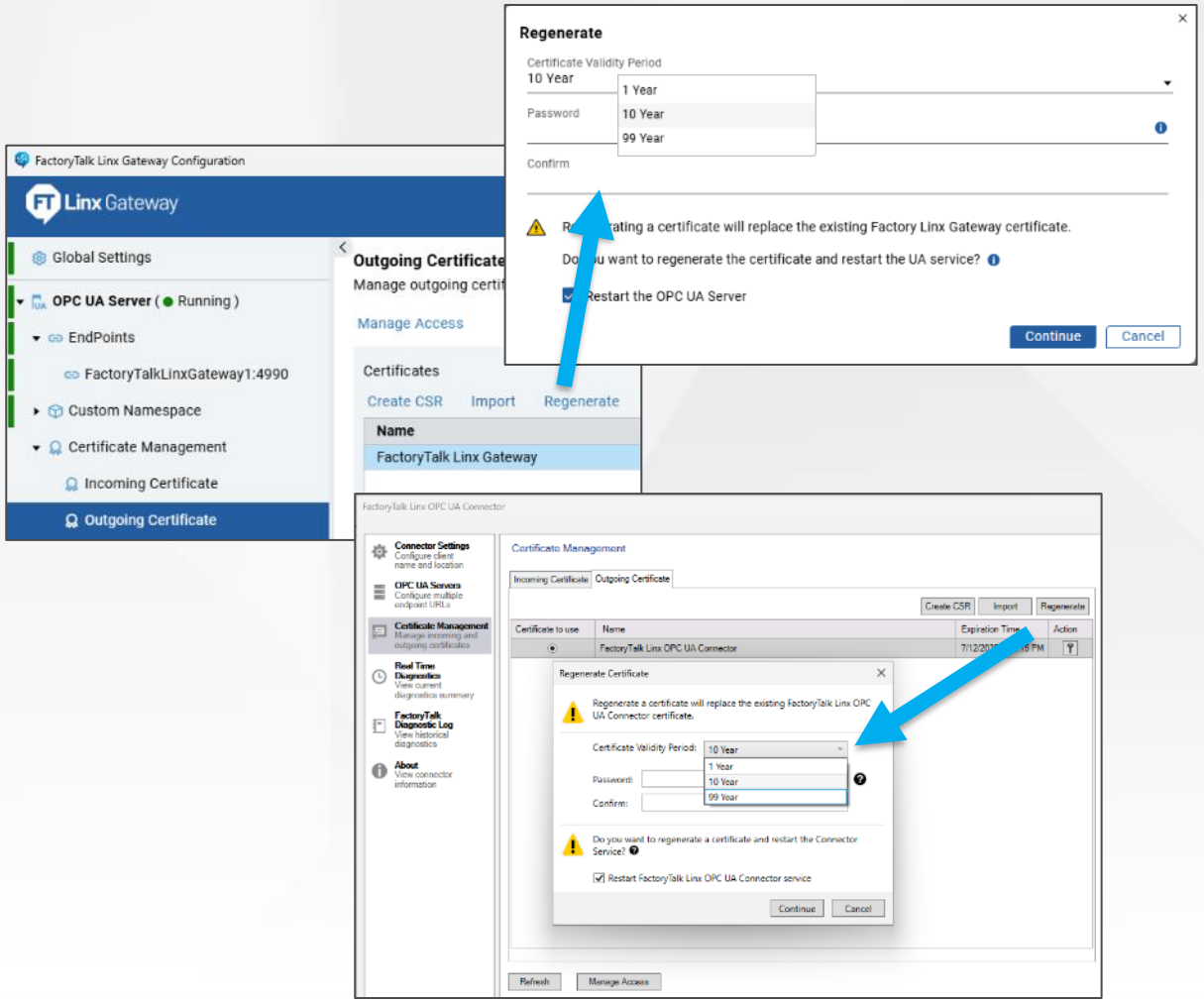
Balance availability and security requirements

Self-Signed Certificates Feature Overview

- Previously, FactoryTalk® Linx Gateway and the OPC UA Connector self-signed outgoing certificates
- Defaulted to 10-year expiration
- Requires regeneration to initialize communications after the expiration

New in version 6.60

- Self-signed certificate expiration can be configured for additional time durations
  - One year - Enhanced security
  - 10 year – Current default
  - 99 year - Improve system availability



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FactoryTalk® Linx Gateway ≥ version 6.60

Linx Gateway

V6.60 Standalone Enhancements

Smart Object Tags	OPC UA Interface	MQTT Pub/Sub	Excel RTD	Logix via U2CN
Access tags within Logix controllers loaded by FactoryTalk® Design Studio™ within Smart Objects and routine scope	Deliver high-speed data to OPC UA Clients using the custom data model	Interface with Message Queue Telemetry Transport (MQTT) Broker Publish and Subscribe to IT and Cloud MES and Info systems	Use Excel's Real Time Data function to access Logix data from	Connect to Logix controllers on ControlNet networks using the 1784-USB2CN adapter

Smaller systems, simpler configuration, improved performance

Linx Gateway – Standalone operation

What's new in version 6.60

FT Linx Gateway

Standalone configuration option

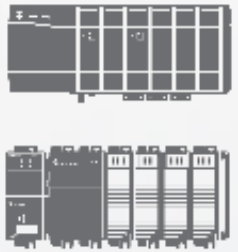
FactoryTalk® Linx Gateway ≥ version 6.60

FT Linx Gateway

Data sources

- ☑ Tags
- ⊘ Offline browse
- ⊘ Extended properties
- ⊘ Tag @Alarms
- ☑ Predefines
- ☑ FactoryTalk® Design Studio™ Smart Objects
- ⊘ Redundancy
- ⊘ CIP Security
- ⊘ Node Inhibit

Logix Controllers



≥v18

FT Linx Ingress

Data forms

Custom

Context, mapped, OPC companion specifications, and access control (UA/MQTT/DDE/RTD)

Folders/scalars

All data available (DA/DDE/RTD)

Data interfaces

MQTT Publisher/Subscriber

OPC Unified Architecture [1]

OPC Classic DA [1]

Dynamic Data Exchange (DDE)

Excel Real Time Data (RTD)

Egress

Data destinations

PLEX by ROCKWELL AUTOMATION

MQTT Broker

FT Optix™

FT DataMosaix™

Microsoft® Azure

Third-party, HMI, MES and analytics

Purpose built software

FT Linx

RSLinx® Classic

CIP™ communications services

SDK API

Remote Proxy

Advantages

- Simpler configuration
- Higher performance
- RSLinx® Classic style references

Underline = New version 6.60

1. Data model aligns with RSLinx® Classic to simplify migration

Linx Gateway

Standalone operation presents Smart Object tags consistent with FactoryTalk® Design Studio™

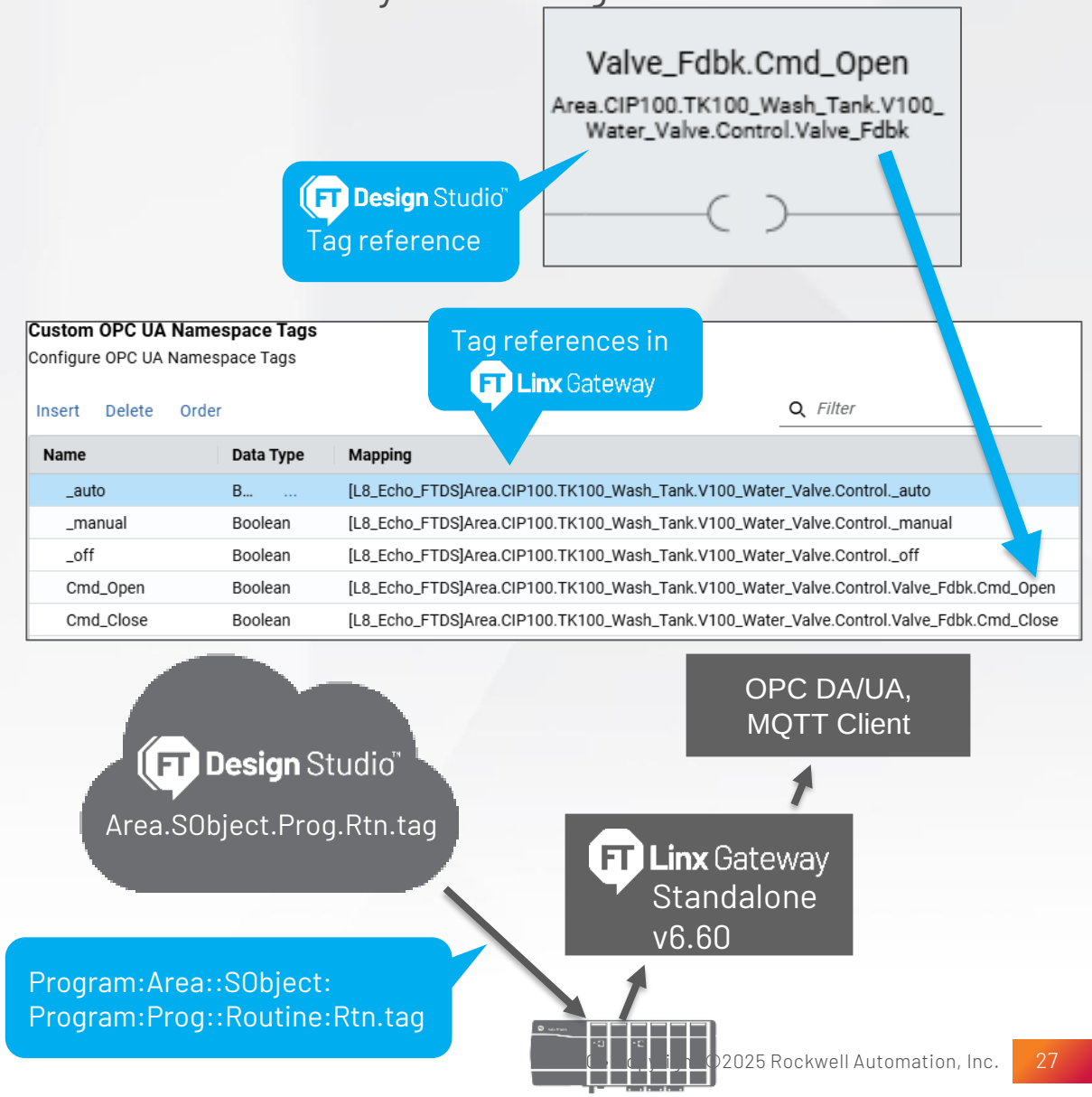
Enabling third-party OPC-DA, UA and MQTT software to access new Logix Smart Object data definitions

Smart Object Tags Feature Overview

- FactoryTalk® Design Studio™ version 2.00 introduces new data constructs for Logix controllers
  - Routine scoped tags
  - Smart Objects
  - Double colon "::" added to Logix namespace references
- FactoryTalk® Linx version 6.50 patched to accommodate new references
  - See Knowledgebase ID:1153248 (included with v6.60)
  - Enabled FactoryTalk® Linx Gateway with a FactoryTalk® Application source to access Smart Object tags

New in version 6.60

- FactoryTalk® Linx Gateway version 6.60 updates standalone service to be consistent with FactoryTalk® Design Studio™



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Linx Gateway

Standalone Adds OPC UA, MQTT Pub/Sub and Excel RTD

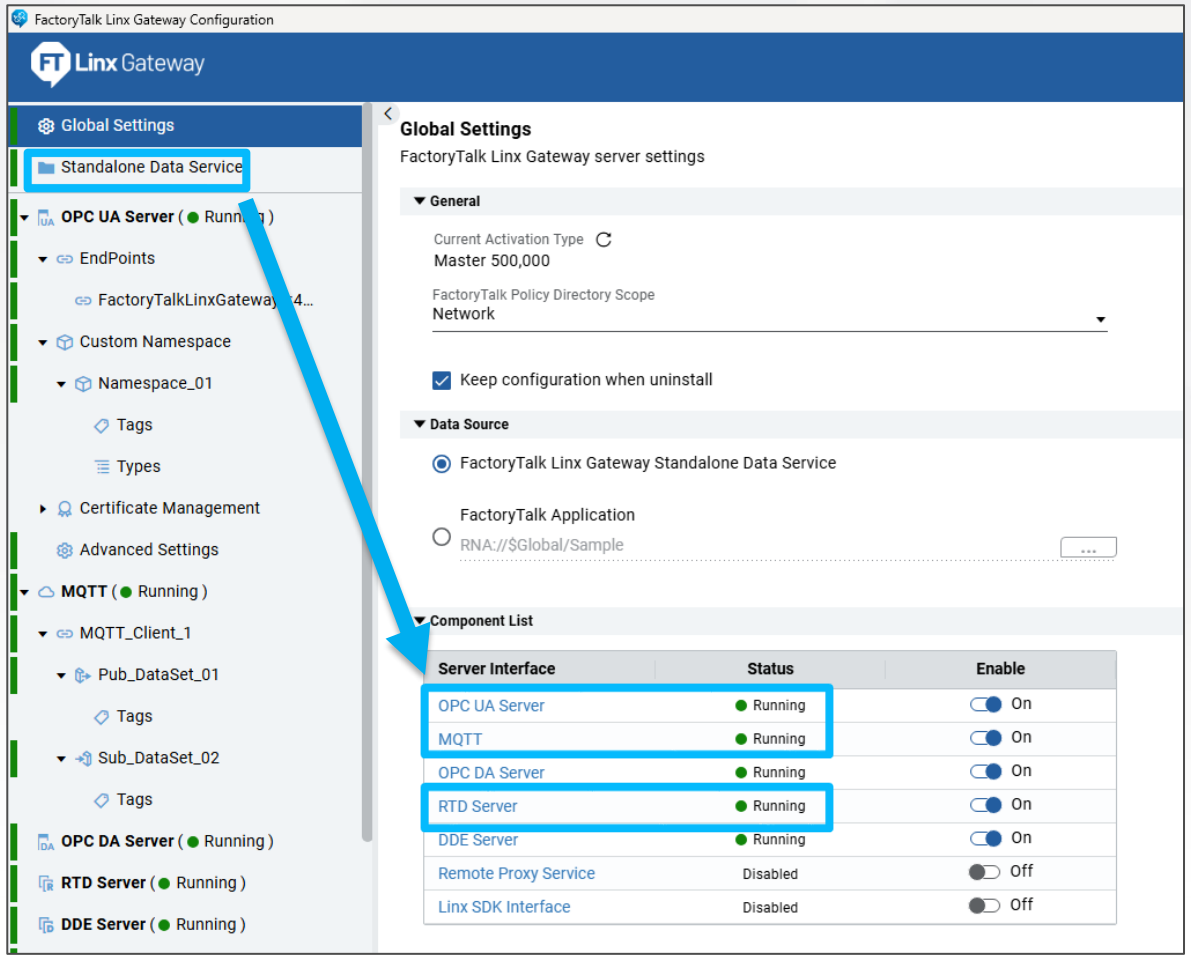
FactoryTalk® Linx Gateway ≥ version 6.60

Standalone Interface	Folder/ Scalar	Tag List	Custom
OPC-DA	✓	⊘	⊘
OPC UA	⊘	⊘	✓
MQTT	⊘	⊘	✓
DDE	✓	⊘	✓
Excel RTD	✓	⊘	✓

Expands the systems the Standalone can serve

Additional Standalone Interfaces in version 6.60

- Previously FactoryTalk® Linx Gateway Standalone version 6.50 supported only OPC-DA and DDE interfaces
- Version 6.60 adds more interfaces
  - OPC UA – Custom Namespace
  - MQTT Pub/Sub – Custom namespace
  - Excel RTD – Folders / scalars and custom namespaces



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Linx Gateway

Standalone accepts tags with null FactoryTalk® application area and server

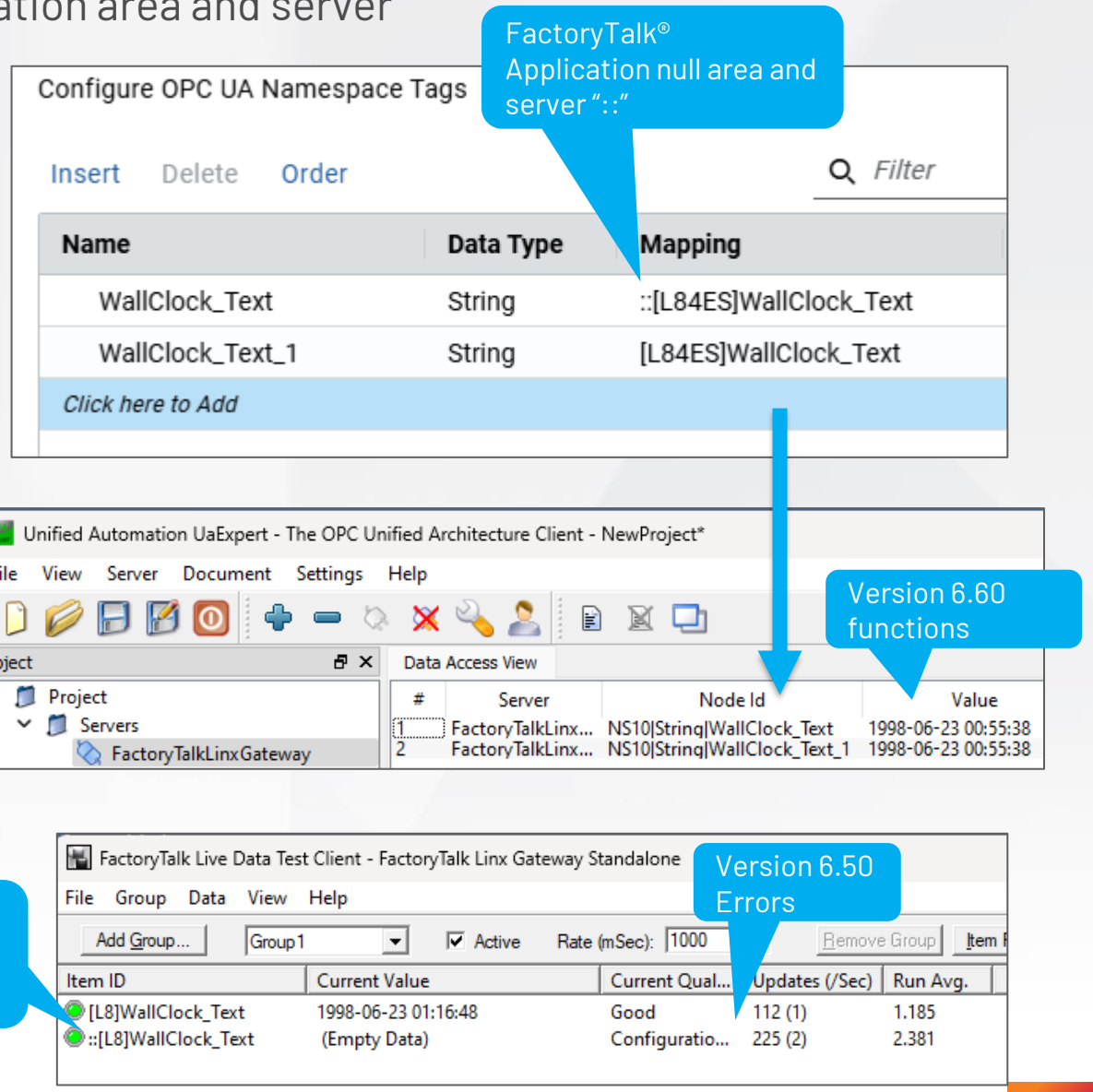
Simplifies switching between FactoryTalk® Application and Standalone data sources for better usability

Data Source Tag Feature Overview

- Tag references from a FactoryTalk® Application include area and server prefix
  - A single server with no area results in a double colon tag reference prefix (e.g. "::[shortcut]tag...")
- FactoryTalk® Linx Gateway Standalone does not need the prefix
  - If "::" is present, the reference would fail

New in version 6.60

- Enhanced the Standalone to ignore the "::" prefix



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Linx Gateway

Choosing the right edition

Ordering guide
FTALK-SP013B-EN-P_WEB

Catalog number codes: x=Activation -> M=Perp, C=Subs y=Support -> 0=self, 1=8x5, 2=24x7 z=Media -> blank=ESD, M=DVD	**Basic** **9355x-FTLGWT1yz**	**Standard** **9355x-FTLGWT2yz**	**Extended** **9355x-FTLGWT5yz**	**Distributed** **9355x-FTLGWT3yz**	**Professional** **9355x-FTLGWT4yz**
FactoryTalk® application operation tags[1,2]	OPC/MQTT/RTD/ DDE 1K (Single computer)	OPC/MQTT/RTD 5K, DDE 4K (Single computer)	OPC/MQTT/ RTD 15K, DDE 4K (Single computer)	OPC/MQTT/RTD 32K, DDE 4K (Distributed and redundant system)	OPC 500K, MQTT/RTD 40K, DDE 4K, Logix Extended tag properties[2] (Distributed and redundant system)
Standalone operation tags[3]	OPC/MQTT/RTD/ DDE 1K (Single computer)	OPC/MQTT/RTD 5K, DDE 4K (Single computer)	OPC/MQTT/ RTD 15K, DDE 4K (Single computer)	OPC/MQTT/RTD 32K, DDE 4K (Single Computer)	OPC 500K, MQTT/RTD 40K, DDE 4K (Single Computer)
SDK[1]		Multiple devices	Multiple devices	Multiple devices	Multiple devices
Proxy service[1]					Supported
Data Bridge					200K

RSLinx® Classic single node

RSLinx® Classic OEM

RSLinx® Classic Gateway

RSLinx® Classic and FactoryTalk® Linx Product Comparison - Knowledgebase ID: IN9850
RSLinx® Classic to FactoryTalk® Linx Conversion Workbook – Knowledgebase ID: QA61597

1. DDE/RTD, SDK, Proxy ≥ version 6.31
2. Extended Tag/alarms for via FactoryTalk® application ≥ version 6.50, OPC UA, MQTT and RTD ≥ version 6.50
3. Standalone ≥ 6.40, Limited to Logix ≥ version 17 data from single computer via EtherNet/IP

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FT Linx OPC UA Connector

What's new in version 6.60

Linx OPC UA Connector

Timestamp-based value updates

FactoryTalk® Linx OPC UA Connector ≥ version 6.60

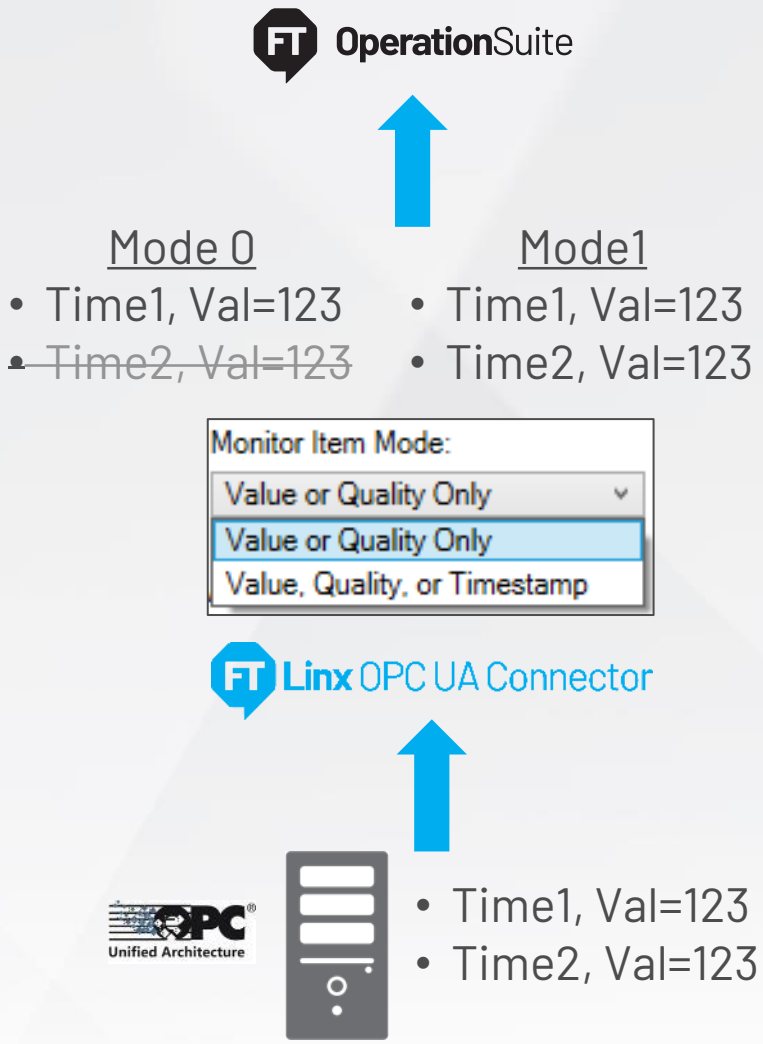
Enhance control over data delivery to track cases when tag is refreshed with same value

Timestamp Feature Overview

- OPC UA and FactoryTalk® Live Data
  - Delivers values with quality code and a time stamp
  - Sent when values change to reduce system loading
- In some cases, it is desirable to send the same value with a new time stamp
  - The time stamp indicates that the value was processed and refreshed with the same value
- FactoryTalk® Linx OPC UA Connector version 6.50 adds an option to deliver data when only the time stamp changes
  (Retained predefined tag @OPC_MonitorItemTriggerMode)
  - Also released as a patch for version 6.40 Knowledgebase ID: 1151746

New in version 6.60

- Moves setting to the FactoryTalk® Linx OPC UA Connector User Interface



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Linx OPC UA Connector

Redundancy status codes

Enhanced OEE by improving visibility to redundancy status

Redundancy Diagnostic Tag Feature Overview

- The FactoryTalk® Linx OPC UA Connector added redundancy in v6.20
- Two predefined diagnostic tags provided status as string tags
  - @LD_Redundancy_GetStatus
  - @LD_Redundancy_GetSubstatus

New in version 6.60

- Adds two additional attributes with the specific codes
  - @LD_Redundancy_GetStatusCode
  - @LD_Redundancy_GetSubstatusCode
- Facilitates other languages and animation on an HMI display
- Tip: use ".S1" and ".S2" to retrieve status from the primary or secondary server respectively

String	Code

@LD_Redundancy_GetStatus
• Unknown (0x80000001)
• Not Loaded (0x80000002)
• Failed (0x80000003)
• Unknown (0)
• Loading/Offline (1)
• Starting (2)
• Ready (3)
• Available, // Active (4)
• Standby (5)
• Active_No_Partner (6)
• ActiveSync (7)
• Standby_Sync (8)
• Active_Ready (9)
• Standby_Ready (10)
	@LD_Redundancy_GetStatusCode
	0x80000001 = Unknown
	0x80000002 = Not Loaded
	0x80000003 = Failed
	0 = Unknown
	1 = Loading/Offline
	2 = Starting
	3 = Ready
	4 = Available, // Active)
	5 = Standby
	6 = Active_No_Partner
	7 = ActiveSync
	8 = Standby_Sync
	9 = Active_Ready
	10 = Standby_Ready

@LD_Redundancy_GetSubstatus • No substatus info • Forced offline • Status toggle triggered • Normal operation • Communication to UA server failed • Address space not yet loaded • Service Shutting down	@LD_Redundancy_GetSubstatusCode 0 = No substatus info 1 = Forced offline 2 = Status toggle triggered 3 = Normal operation 4 = Communication to UA server failed 5 = Address space not yet loaded 6 = Service Shutting down

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FactoryTalk
by ROCKWELL AUTOMATION

Thank you

https://www.rockwellautomation.com/en-us/products/software/factorytalk/operationsuite/communications.html

www.rockwellautomation.com

Appendix

Version 6.50 Functionality Patch Summary

All features are available in version 6.60

FactoryTalk® Linx

- EtherNet/IP In-cabinet - patches 1154358 and 1155103
- @AlarmClass & @AlarmGroup - patch 1153660
- FactoryTalk® Design Studio™ Smart Object tags - 1153248

FactoryTalk® Linx Configuration Import / Export Tool

- Import configuration from v6.40 and earlier - patch 1156763

FactoryTalk® Linx Gateway

- Two Dimension array for Tag List - 1154046
- Namespace URI text change – 1155252

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FT Linx Gateway

Comparing data source / operating approach

Capability	FactoryTalk® Application	Standalone
Client egress protocols	OPC-DA, OPC UA, DDE, Excel RTD, and MQTT	OPC-DA / UA, MQTT, DDE Excel RTD (version 6.60)
Configuration	FactoryTalk® Linx Gateway and FactoryTalk® Administration Console	Fully configured in FactoryTalk® Linx Gateway
Shortcut data sources	All FactoryTalk® Linx shortcut types, OPC UA Connector endpoints, OPC-DA servers and Resource and Status service; offline tag browsing;	Processor shortcut to Logix controllers ≥version 18; no offline tag browsing
Scalability	One to ten servers, dozens to hundreds of controllers	One computer, with few dozen controllers
Data model (egress interface)	Folders / scalars (All), Tag List (UA), Custom (UA, DDE, RTD)	Folders / Scalars (DA, DDE, RTD); Custom (UA, MQTT, DDE, RTD)
Data extensions	@predefines, tag modifiers (e.g. TC,S,L...), extended tag properties & tag-based @Alarms (v6.50 Professional)	Some @predefines
RSLinx® Classic Tag reference	Local & Network with single server, no areas	Format matches to RSLinx® Classic
Secure communications	CIP Security, OPC UA Security & access control, OPC-DA Packet Integrity and confidentiality	OPC-DA Packet Integrity and confidentiality, OPC UA Security, MQTT TLS/SSL
High availability	Redundant FactoryTalk® Linx, OPC UA Connectors and OPC-DA and UA servers, redundant path and controller shortcuts	No redundancy

FactoryTalk® Linx Gateway ≥ v6.60

FT Linx Gateway

Data model option comparison

Capability	Folders / Scalars	Tag List	Custom
Data Model description	Individual scalar data types presented in folders for scope, arrays and structures	User-selected tag groups with Logix arrays & structures, and UA client access control	User-defined tags and structures to reorganize and mapped to system tags (supports OPC UA Companion Specs)
Data Types	Scalars	Scalar, structures & Arrays	Scalar, structures & Arrays
Folders	Scopes, structures and arrays	Controller and Scopes	User defined
Array direct element access	Yes	Yes [1]	Yes [1]
Array element index access	No	Single or multiple items from 1D or 2D arrays	Single or multiple items from 1D or 2D arrays
Structures presentation	Presented as folders	Logix Structures / UDT	Defined by User, inherited from Logix
Structure read	Single Element	Single element or full structure	Single element or full structure
Reorganize / rename tags	N/A	N/A	Mapped by user
Extended tag properties and Logix Tag-based Alarms	Available [2]	Available [2]	Supported [2]
OPC Meta Data (Low, High, EU)	N/A	N/A	N/A
Client access control	All clients	List assigned to FactoryTalk® Security Group to limit to clients	All Clients
Egress – FactoryTalk® Application	DA, UA, DDE, Excel RTD	UA	UA, MQTT, DDE, Excel RTD
Egress - Standalone	DA, DDE, Excel RTD	N/A	UA, MQTT, DDE, Excel RTD
Online Logix tag definition changes	Client can manually add to communicate, restart service to browse	Requires namespace refresh and service restart	Manually change namespace and service restart
RSLinx® Classic compatible references	Yes [3]	Yes [3]	No

1. Option to enumerate array elements
2. Requires Professional activation
3. Standalone or FactoryTalk® Local & Networked station