

Linux Data Bridge

Moving Information between FactoryTalk® data sources



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Linux Data Bridge

Interfaces



Premier connectivity to
Allen-Bradley® control hardware

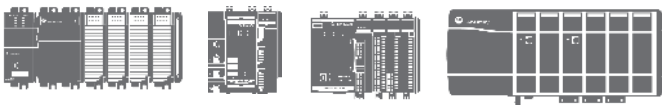


 **OPC-DA Interface**
Connectivity to third-party OPC-DA Servers



Connectivity to third-party OPC UA Servers

Data Sources



Third-party software
to vendor-specific
protocols

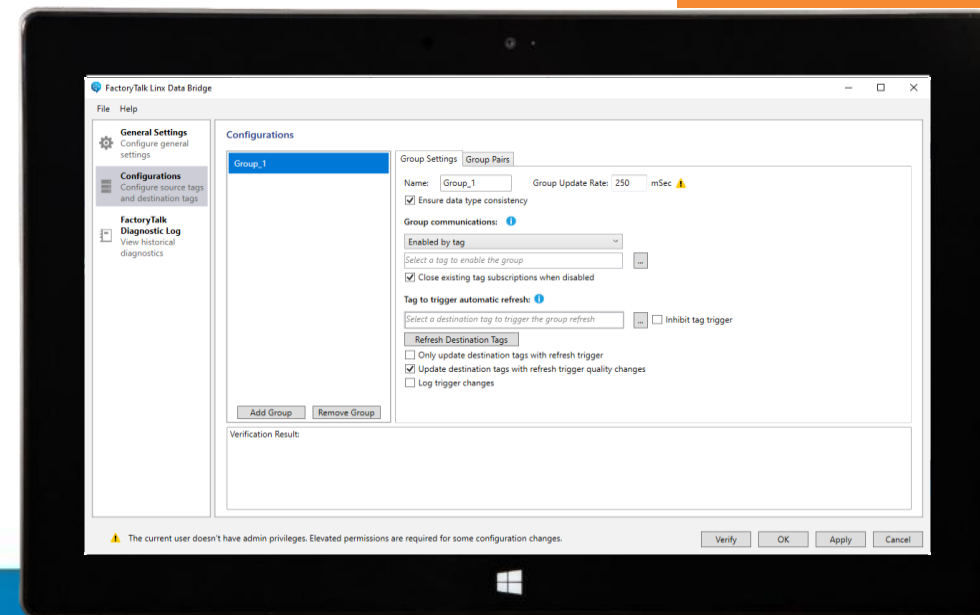
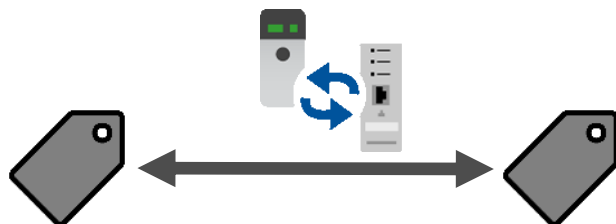


Third-party Devices
with OPC UA
Embedded

Service to pull information from one source and deliver it to another



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Connectivity

- Moves data between multiple FactoryTalk® sources
 - Allen-Bradley® control hardware
 - OPC UA Servers
 - OPC-DA Servers
 - Third-party equipment via KEPServer Enterprise

Availability

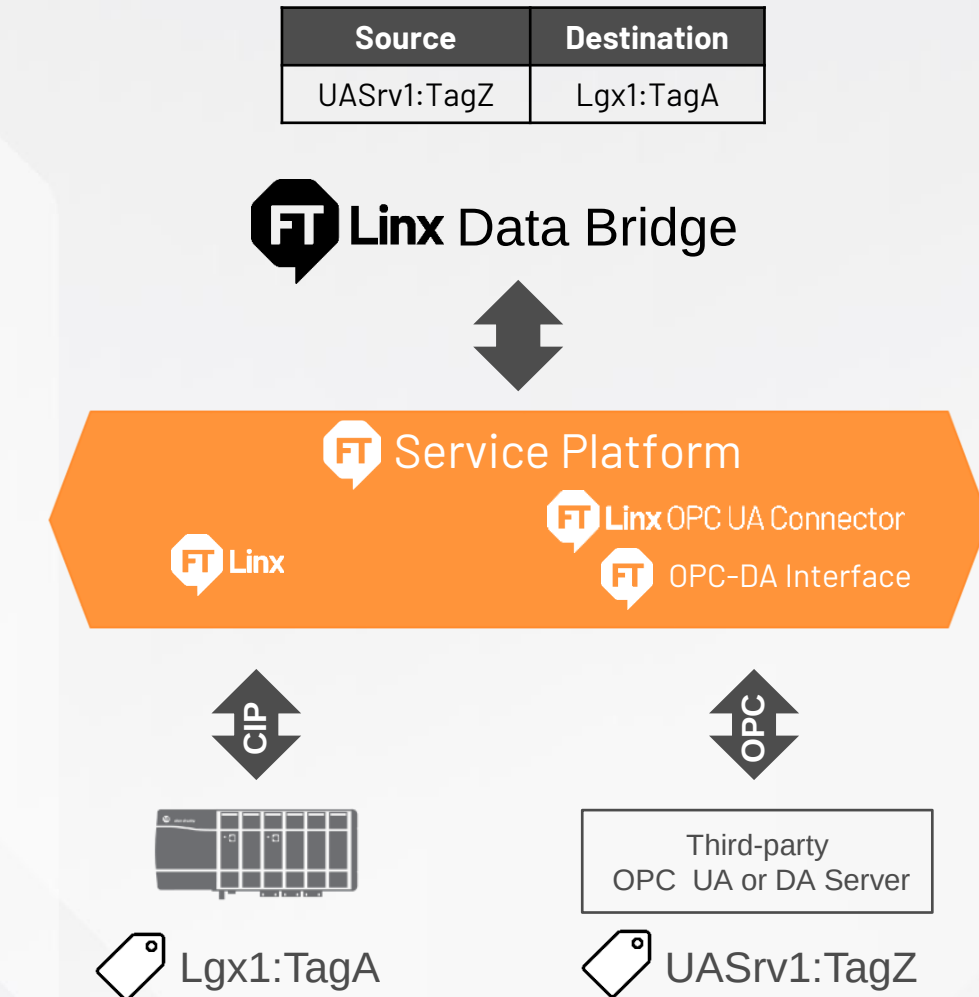
- Included with FactoryTalk® Linx Gateway Professional edition (v6.20 enhanced to support 200K tag pairs) and FactoryTalk® Linx Gateway Embedded 500 tag pairs
- FactoryTalk® Linx Data Bridge Standard edition (2K tag pairs)

Data Access

- User configurable tag group update rate, manual or tag enable/disable and refresh
- Includes time stamp and quality status tag both source and destination
- Import / export of configuration
- Enables Logix controllers to access OPC UA server data

Single service to move data around a control system

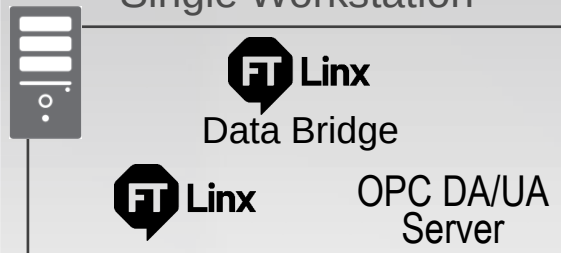
- Windows-based software that operates on single PC or distributed system
 - Can share a local activation with FactoryTalk® Linx Gateway Professional
- Utilizes any FactoryTalk® Source
 - Controllers via FactoryTalk® Linx (Logix, PLC-5®, SLC™ 500, MicroLogix™, Micro800™ ...)
 - OPC UA or DA Servers via FactoryTalk® Services
 - KEPServer Enterprise (9301-OPCSRVE) to interface with third-party network protocols and hardware
- User configured tag pairs
 - Subscription to data source based on user selected rate
 - Source data delivered to the Data Bridge is forwarded to destination
 - Optional quality and time stamp values delivered to both source and destination
- V6.21.01 provides an option to force destination refresh manually or from a tag change
- V6.40 adds options to enable/disable groups manually or tag, and option to control diagnostic logging
- Configuration import / export to back up the settings or streamline the setup process



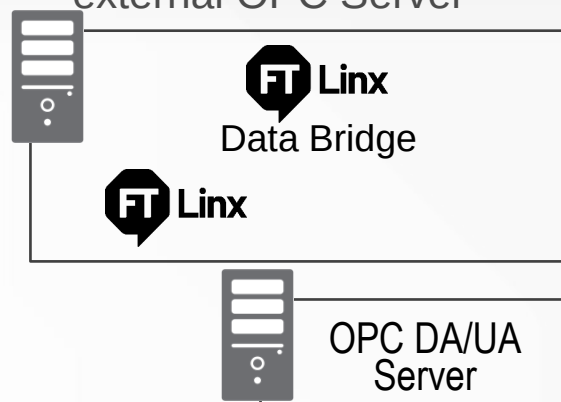
FT Linx Data Bridge

System configuration options

All Software on a Single Workstation

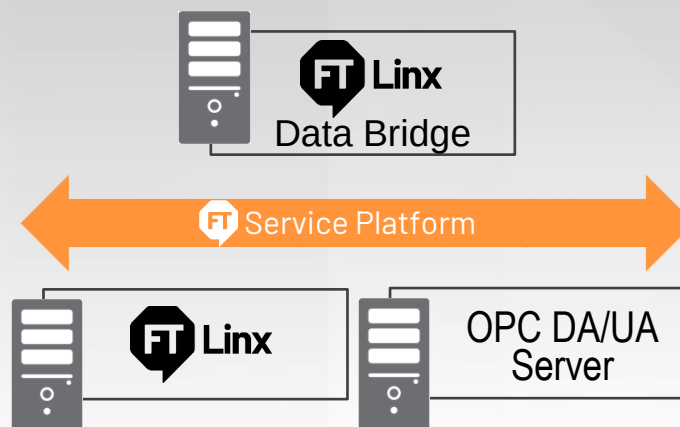


All FactoryTalk® Software on a Single Workstation to external OPC Server

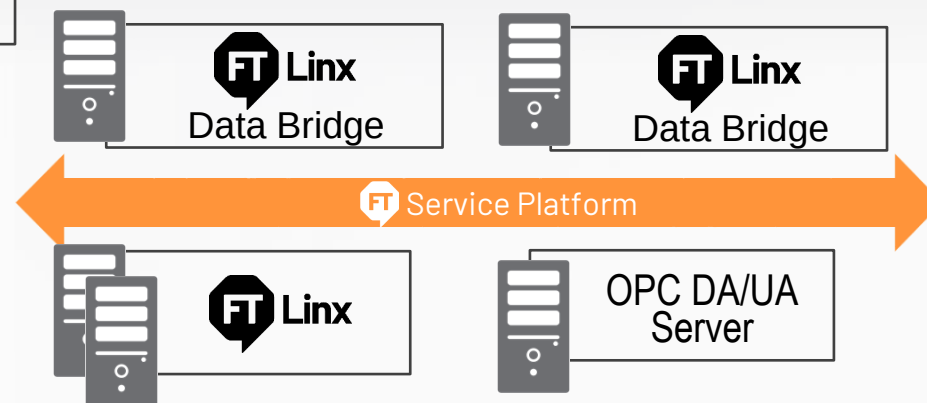


Local Directory

Distributed data server sources



Multiple Distributed Data Bridges to Multiple Distributed and redundant data servers



Network Directory

Scalable solution from small to large with multiple system configurations



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Manage the configuration via its user interface or externally using the text import/export

- Group enable / disable manually or based on tag value (v6.40)
- Group update based on rate, manually or on tag value change (6.31)
- Source / Destination tags must match type (option to relax in v6.20)
- Optional destination quality/timestamp so it can determine when data arrived
- Optional quality/timestamp response back to source when destination receives the data
- Option to avoid writing duplicate values (reduce system impact)
- Configuration import/export
 - CSV and XML Text file Options
 - Perform mass edits in Excel or other desktop tools
 - Backup for the configuration

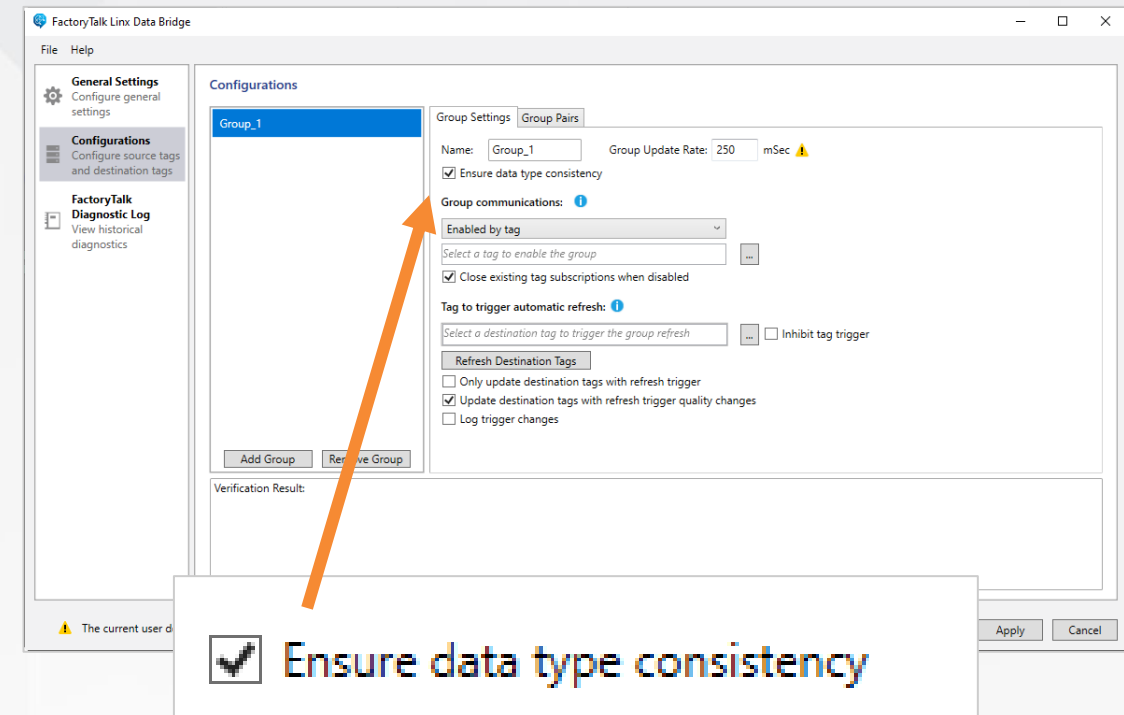
The screenshot displays the Linux Data Bridge application window and an Excel spreadsheet. The application window has a menu bar with options: Create configuration (CTRL+N), Log On, Log Off, Export configuration, Import configuration, and Exit (CTRL+Q). The main panel shows 'Group Settings' and 'Group Pairs' tabs. The 'Group Pairs' tab is active, showing a list of groups with columns for Name, Group Update Rate, and Group Update Rate. The 'Group Settings' tab is also visible, showing options for 'Group communications' and 'Tag to trigger automatic refresh'. The Excel spreadsheet shows a table with columns for 'Type', 'Project', 'Active', 'ServerSite', 'Directory', 'Inhibit', 'Group', 'Rate', 'PairName', 'SourceTag', 'SourceTag', 'DestinationTag', 'DestinationTag', and 'Timestamp'. The table contains data for various groups and their configurations.

Callouts highlight the following features:

- Import/export**: Points to the 'Import configuration' menu item.
- Relax type checking**: Points to the 'Relax type checking' checkbox in the 'Group Settings' tab.
- Group update rate**: Points to the 'Group Update Rate' field in the 'Group Pairs' tab.
- Group enable/disable/trigger**: Points to the 'Group enable/disable/trigger' checkbox in the 'Group Settings' tab.
- Refresh trigger**: Points to the 'Refresh trigger' checkbox in the 'Group Settings' tab.
- Tag configuration CSV file**: Points to the 'Tag configuration CSV file' option in the 'Group Settings' tab.

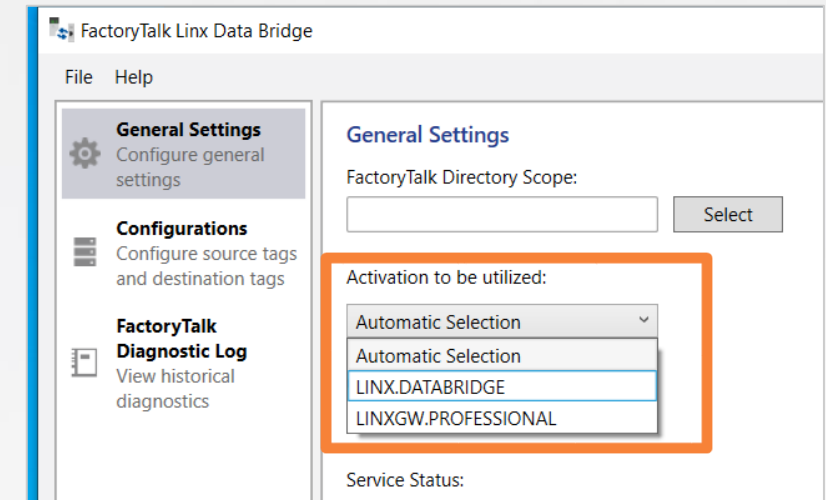
Relaxes type matching to permit exchange of more data

- The FactoryTalk® Linx Data Bridge initially required the source and destination tag type to have the same type
 - Ensures that data is directly usable in the destination without modification
 - In some cases, this has proven to be too strict
- V6.20 adds a user option to permit delivery of data when the source and destination tag types do not match
 - Requires recipient to perform type conversion
 - V6.40 move to Group Setting tab



Ensures that the correct functionality is enabled in large systems with multiple installations and a centralized FactoryTalk® Activation server

- Previously FactoryTalk® Data Bridge requested to most functional activation available
 - When using an FactoryTalk® Activation server, the server startup order could result in the different activation being used than was needed
 - Optionally an activation configuration file could be created to force a specific activation request
- With V6.20 both FactoryTalk® Linux Data Bridge permit the user to select the desired activation
 - Simplifies the activations selection
 - Defaults to Automatic Selection like previous versions



Enhanced system uptime and accuracy by ensuring destination values are updated for exception conditions

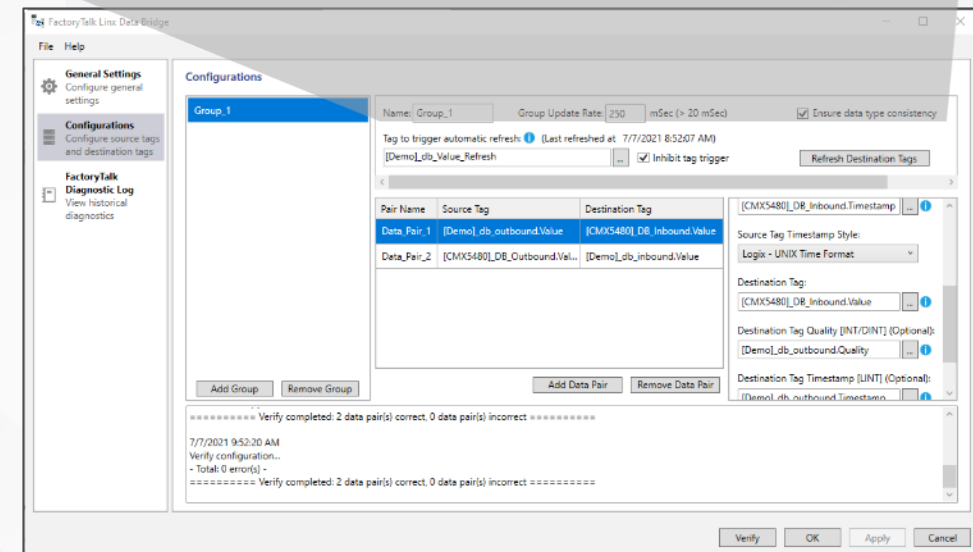
- The FactoryTalk® Linx Data Bridge sends values from a source to a destination when the source value changes
- Scenarios causing destination to be out of sync
 - Value is modified via an alternative method
 - Destination is offline when a source value changes
- V6.21.01 adds options to force the destination values to be updated
 - Manual option for one group or all groups
 - Auto refresh when trigger value or quality changes
 - V6.40 move to Group Setting tab

Automatic refresh from
value or quality change

Manual
Refresh

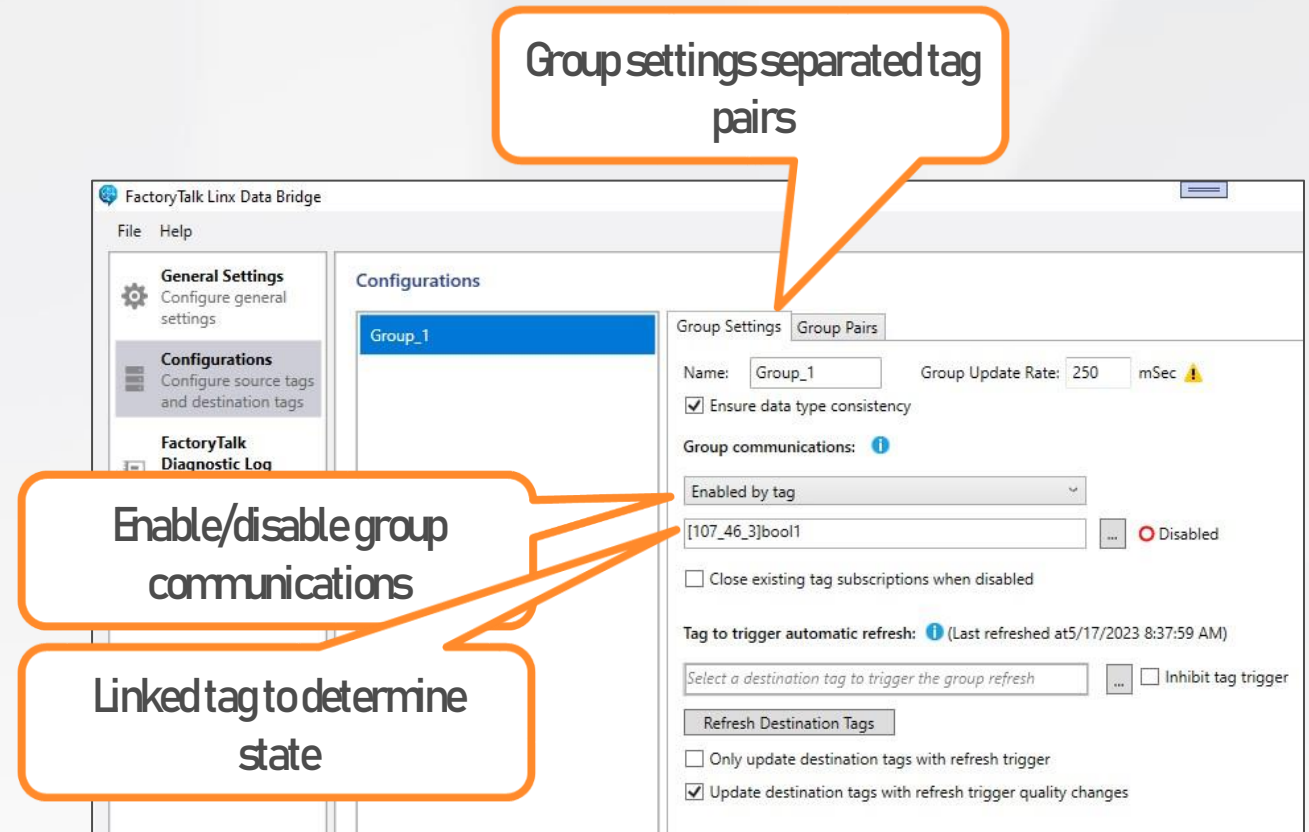
Tag to trigger automatic refresh: (Last refreshed at 7/7/2021 8:52:07 AM)
[Demo_db_Value_Refresh] ☒ Inhibit tag trigger

Refresh Destination Tags



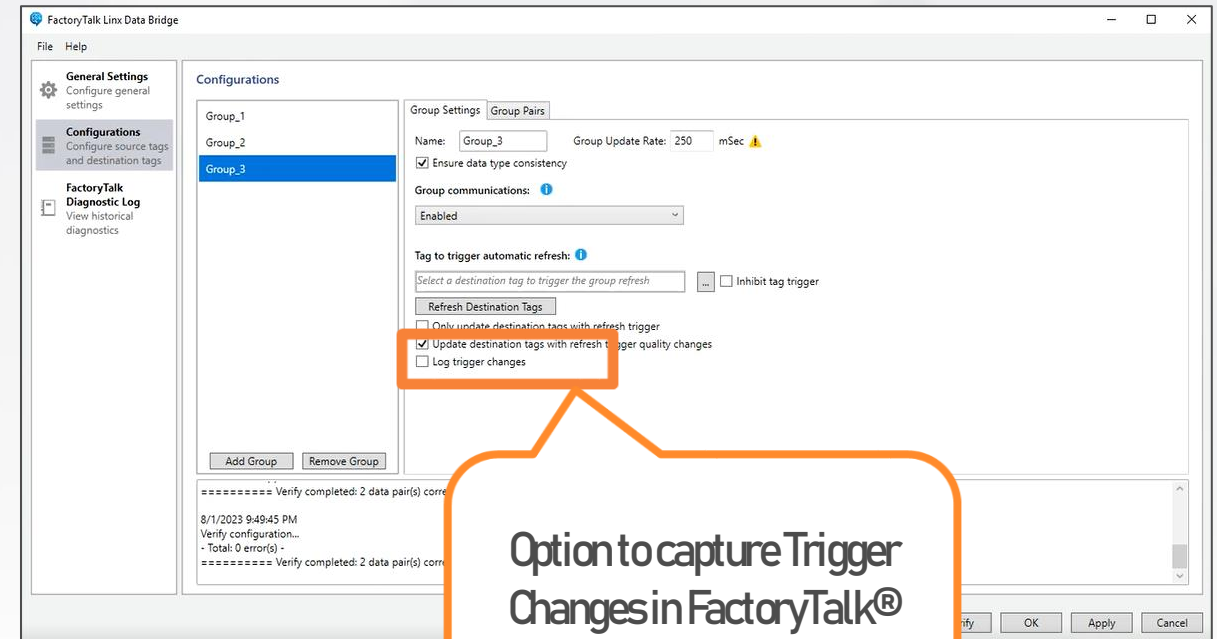
Enhanced system performance, flexibility and productivity

- Previously the FactoryTalk® Linx Data Bridge groups were all active together
- FactoryTalk® Linx Data Bridge v6.40 includes an option to enable / disable each group individually
 - Use different source data to a set of destination
 - Accommodate different machine states
 - Facilitates isolated testing portion(s) of a system
 - Reduce communications loading when data is not needed



Reduced computer / system overhead

- The FactoryTalk® Linx Data Bridge group trigger option was added in v6.30
- Previously all tag group trigger value changes were logged to the FactoryTalk® Diagnostic Log
 - Frequent triggers could add impact system and generate a high volume of unwanted diagnostic records
- V6.40 adds an option to control the diagnostic logging
 - Disabled by default
 - Reduces the log records and system overhead
 - Enable when testing or diagnosing operation



Scalable options for small or large systems

- Capacity determined by purchase method
 - Included with FactoryTalk® Linx Gateway Professional and Embedded
 - Sold individually as a standalone package
- Currently only perpetual, subscription activation planned
- Utilize with an embedded compute product to provide OPC UA connectivity with Logix
 - Discount code provided for with CompatLogix5480
- Can function as data concentrator for control products
- Retrieve data from Logix and older controllers (for example, PLC-5®, SLC™ 500, MicroLogix™) without having to make changes to their applications

Product	Tag pair Quantity	FactoryTalk® Directory / Linx
FactoryTalk® Linx Gateway Professional (Data Bridge Included) LINXGW.PROFESSIONAL	200K (2K before v6.20)	Networked / Multiple Distributed & Redundant
FactoryTalk® Linx Gateway Embedded (Data Bridge Included)	500 (available starting with v6.21)	Limited to CompactLogix™ 5480 Windows Core
FactoryTalk® Linx Data Bridge Standard LINX.DATABRIDGE	2K	Networked / Multiple Distributed & Redundant



FT Linx Data Bridge

Compute options

Built-in



CompactLogix™ 5480

- Logix 5000™ control coupled with Windows 10 Internet of Things Enterprise PC
- Single core for Windows isolated from Logix control
- Includes discount code for FactoryTalk® Linx Gateway (500 tags) and Data Bridge Embedded (500 tag-pairs)

In-Chassis



1756 Compute Module Series B

- ControlLogix® chassis module
- Intel Atom / 32 GB SSD / 4 GB RAM
- Windows 10 Internet of Things Enterprise LTSC (2022)
- Dual Core performance

Panel Mount



ASEM™ 6300 Box PC

- Intel Atom or Intel Core class processor
- Book mount or DIN rail mount
- Up to 1 TB SSD / up to 8 GB RAM
- Windows 10 Internet of Things Enterprise LTSC (2019)

Embed OPC UA directly into a machine



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Thank you



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