



What's New in FactoryTalk® AssetCentre v11.00?

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AssetCentre
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4 Comparing
FactoryTalk
AssetCentre



**Rockwell
Automation**

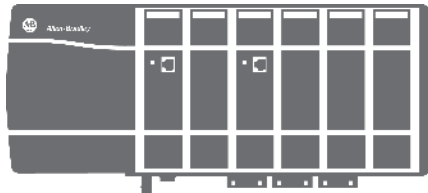
FactoryTalk AssetCentre Summary

Automation assets

Industrial organizations have
100s or 1000s

OF AUTOMATION ASSETS

PHYSICAL, PROGRAMMED, AND CONFIGURED COMPONENTS



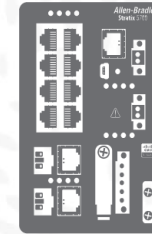
Automation controller programs



Human machine interface configurations



Drives, motion, robot configurations



Ethernet switch configurations

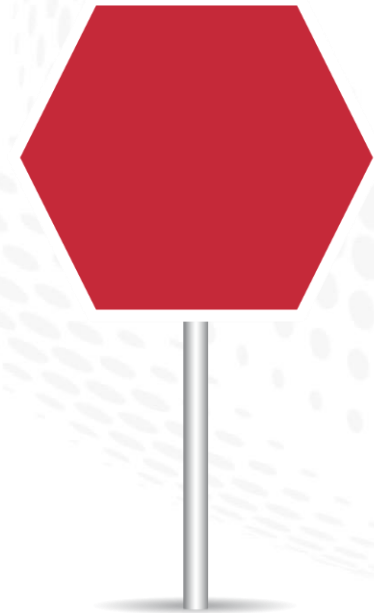
Common challenges / potential risks

Where can value be added?

Challenges to keep production running are numerous and varied

- Poor product quality from unauthorized changes being made
- Production scrap or rework when wrong version of program/configuration downloaded to device
- Long production delays if the correct device configuration cannot be located after replacing a failed device
- Excessive downtime when devices late in their lifecycle fail with no migration plan

Unsecure and unmanaged manufacturing systems can adversely impact production in many ways



Financial impact and business outcomes

TOP REQUESTED CAPABILITIES



- *Better collaboration between maintenance and operations*
- *Capture incident resolutions and build knowledge base*
- *Search control system content*

CO\$T OF DOWNTIME (per hour)

 **76%** between \$1K-10K

 **11%** between \$10K-50K

 **Several** over \$100K

 **Few** over \$1 MILLION!

Rockwell Automation TechED™ 2014 Customer Survey of Downtime Cost (~300 Customer Responses)

Loss of
PRODUCTION



Idled
EMPLOYEES



Damaged
EQUIPMENT



Concerns of
SAFETY



Increased
LABOR COSTS

How can we address these challenges...



FactoryTalk AssetCentre

 CHANGE AND VERSION MANAGEMENT

 DISASTER RECOVERY

 LIFECYCLE MANAGEMENT

 OPERATOR TRACK AND TRACE

 SYSTEM SECURITY

FactoryTalk AssetCentre software is a centralized tool for securing, managing, versioning, tracking and reporting automation-related asset information across your entire production system.

FactoryTalk AssetCentre broad capabilities

FactoryTalk® AssetCentre



ARCHIVE AND DISASTER RECOVERY

- Centrally manage versions of programs, files and folders
- Automate backup of automation assets
- Generate detailed difference detection reports of assets



OPERATOR TRACK AND TRACE

- Track user actions – who did what, when, where?
- Ad-hoc reporting associating users, assets, and programs
- Automate the reporting process via email



SECURITY

- Restrict viewing of artifacts
- Help prevent unauthorized access to make changes
- Help prevent unauthorized users from creating new versions



LIFECYCLE MANAGEMENT

- View Rockwell Automation® product lifecycle status information for your plant floor devices
- Compare and detect changes in deployed plant floor devices



EXTENSIBILITY

- Ability to extend and add support for third party devices
- Web client available to track assets from a mobile device

Scalable deployment

- FactoryTalk AssetCentre scales in two ways:
 - **Capabilities**, that are added to the FactoryTalk AssetCentre server, ex. Disaster Recovery for Rockwell Automation
 - **Asset Capacity**, the number of physical devices FactoryTalk AssetCentre is managing
 - Files and folders in the Archive do not count against asset capacity

FactoryTalk® AssetCentre Server

Governs the system's operations

FactoryTalk® AssetCentre Client

Configuration & view system operation & reports

FactoryTalk® AssetCentre Agent

Perform backup, compare & search operations

FactoryTalk® Directory / Security

Common security provider for all FactoryTalk® components

Microsoft® SQL Server

Hosts FactoryTalk® AssetCentre database



FactoryTalk® AssetCentre



Multiple servers



Client



Multiple agents



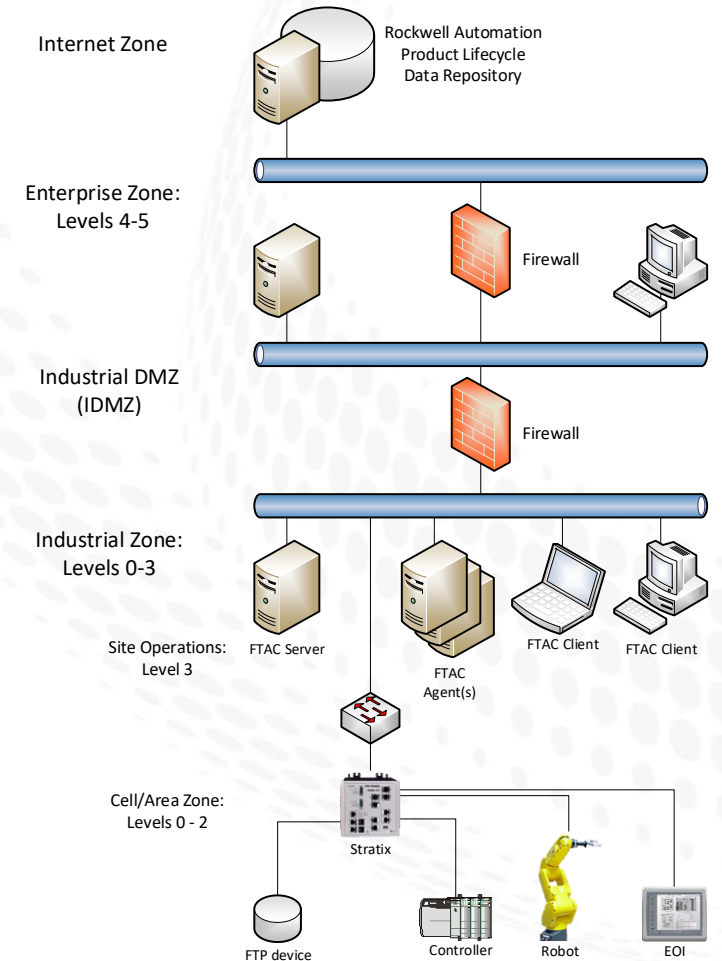
Agent 1 Agent 2 Agent 3

FactoryTalk AssetCentre agents can be added to handle systems with higher asset count

FactoryTalk AssetCentre architecture

Things to remember

- FactoryTalk AssetCentre is primarily an on-premises solution
- FactoryTalk AssetCentre relies on an on-premises Microsoft SQL Server
- A FactoryTalk Directory Server can contain a single FactoryTalk AssetCentre Server
- A FactoryTalk AssetCentre Agents can perform Disaster Recovery on **approx. 100** devices per 24hr period with a 10MB, or greater, connection
- FactoryTalk AssetCentre web-client is primarily a read-only system view
- FactoryTalk AssetCentre supports network security like IPSEC or HTTPS
- FactoryTalk AssetCentre Asset Inventory requires Internet zone access to retrieve product metadata from Rockwell Automation Product Compatibility and Download Center (PCDC)
- FactoryTalk AssetCentre capabilities are licensed per server, ex. Disaster Recovery



FactoryTalk AssetCentre proof-point

Large dairy Producer




CHALLENGE

- Unable to produce the seamless data necessary to continuously improve operations
- Milk processing facility with manual data collection and hardware near end of life

SOLUTION

- **FactoryTalk AssetCentre:**
 - **Single tool for managing, versioning and tracking automation asset information**
 - **In case of failure, a system backup is available**
- FactoryTalk® View Site Edition converts reams of data into actionable information
- FactoryTalk® Metrics improves OEE by providing performance data and production benchmarks
- FactoryTalk® VantagePoint® offers a centralized data source that automatically provides reporting and dashboards based on users' needs

RESULTS

-  **ELIMINATED** need for investment in new equipment by discovering over 33 hours of additional production time per year
-  **REDUCED** 48 hours per year of system back up and version control
-  **AVOIDED** 2,500 hours of manual data collection per year
- 30%** **REDUCED** lube consumption by creating benchmark reports and estimating the benefit of new hardware



**Rockwell
Automation**

What's New in FactoryTalk AssetCentre v11.00?

Feature summary

FactoryTalk AssetCentre v11.00 software

**FactoryTalk[®]
AssetCentre 11.00
Software**
Target AFD Mar 2021



- Improved system security
- Asset Inventory enhancement

- Archive Management of Change
- Enhanced search
- Update web client

- SQL Server access uses MS Service Account (VSA or gMSA/MSA)
- Asset Inventory displays version lifecycle metadata
- Asset inventory filtering
- Asset inventory performance
- Enhance archive security with workflow
- Store results as CSV file
- Refresh underlying infrastructure
- Log filtering

Microsoft Service Accounts used to access SQL Server

Strengthening system security



- AssetCentre Server uses Microsoft Service Accounts to access SQL Server
 - Service Accounts are AD accounts; the OS manages the password
 - Native SQL users have known security weaknesses
- **New AssetCentre Server Systems** use Microsoft Service Accounts
 - When AssetCentre and SQL Server servers are installed on **same** PC
 - AssetCentre install **will use** Virtual Service Account (VSA)
 - When AssetCentre and SQL Server servers are installed on **different** PCs
 - Select Group Managed Service Account (gMSA) or Managed Service Account (MSA)
 - **gMSA/MSA must be** instantiated in the **domain prior to installation**
- **Upgraded AssetCentre Server Systems** can continue using native SQL user accounts, if desired, through command-line install option

Evolving FactoryTalk AssetCentre SQL Server access strengthens system security



FactoryTalk AssetCentre proof-point

Major U.S. Food Company

CHALLENGE

- Inadequate control measures in place to manage automation control system
- Excessive downtime resulting from unknown or unauthorized changes to controller programs

SOLUTION

- **Implemented FactoryTalk AssetCentre software to provide change management control and disaster recovery**
- **Deployed user security to restrict who could make changes to controller programs**
- **Provided audit reports showing authorized changes to the automation control system**
- **Used FactoryTalk AssetCentre archive to provide change control for production related documentation**

RESULTS

7% **REDUCED DOWNTIME events by 7% or more**



REDUCED WASTED PRODUCT by 10% due to equipment stoppages

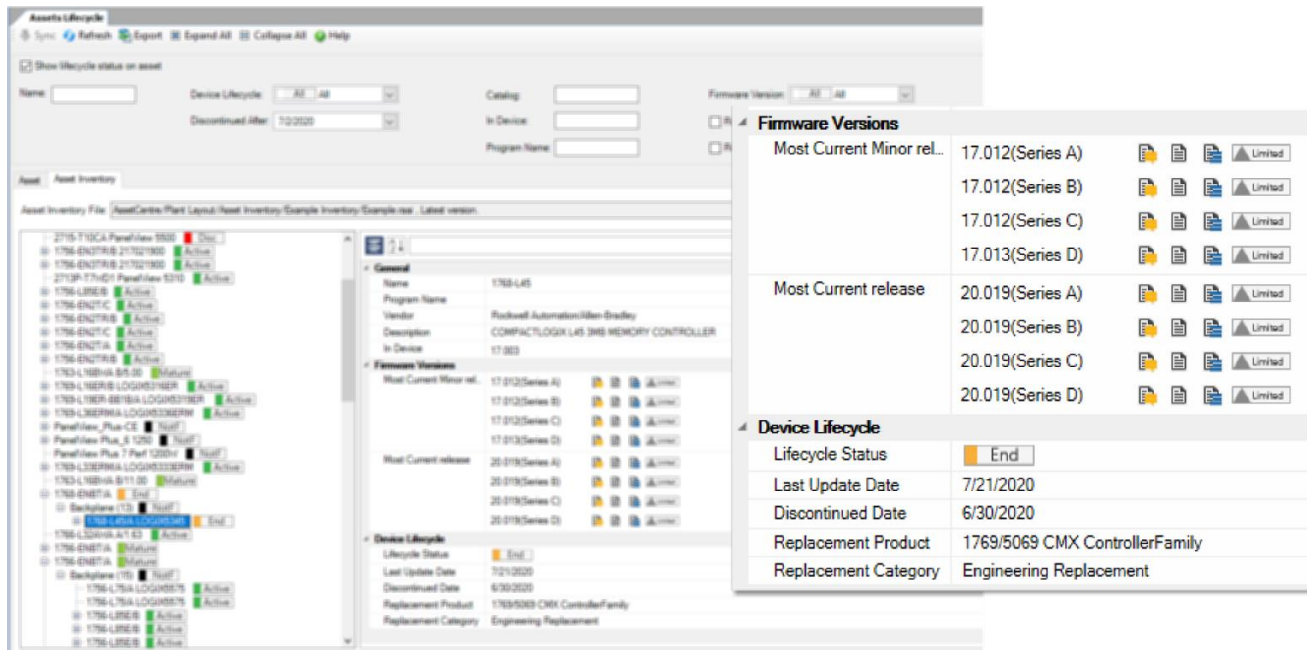


IMPROVED ACCESS to audit reports and archived repository through change management system

Asset Lifecycle View displays version lifecycle

Know more about what you have...

- New look-n-feel for the Asset Inventory view
- Views display version lifecycle state: Preferred, Limited, Retired, & Managed
- Filtering allows users to group assets based on selected characteristics



In January 2020 Rockwell Automation began publishing software and firmware *version lifecycle* information, on our Program Compatibility and Download Center, to help customers

- Improve customer experience
- Comply with latest industry standards, such as IEC-62443
- Guide users who want to keep their systems protected by staying current

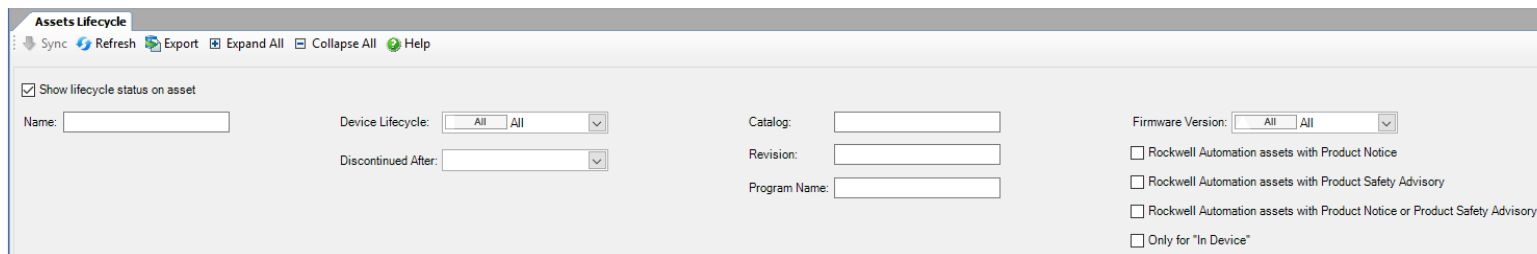
Filter Asset Inventory View

Quickly find asset groups of interest in Asset Inventory

- Group assets in view by characteristics:
 - Name
 - Type of Asset
 - Catalog (Ex. 1756-L7*)
 - Firmware version detected in device (Ex. 20.*)
 - Product lifecycle state
 - Product planned to be discontinued **after** a selected date
 - Version lifecycle state
 - Existence of product notice or product safety advisories

Readily find assets in your inventory that need attention.

- For example, finding assets that will be discontinued in the next six months to facilitate planning



The screenshot shows the 'Assets Lifecycle' filter interface. It includes a toolbar with 'Sync', 'Refresh', 'Export', 'Expand All', 'Collapse All', and 'Help' buttons. Below the toolbar, there is a checkbox labeled 'Show lifecycle status on asset' which is checked. The filter fields are arranged in two rows. The first row contains: 'Name:' with a text input field; 'Device Lifecycle:' with a dropdown menu showing 'All' and 'All'; 'Catalog:' with a text input field; and 'Firmware Version:' with a dropdown menu showing 'All' and 'All'. The second row contains: 'Discontinued After:' with a date picker; 'Revision:' with a text input field; 'Program Name:' with a text input field; and a list of four checkboxes: 'Rockwell Automation assets with Product Notice', 'Rockwell Automation assets with Product Safety Advisory', 'Rockwell Automation assets with Product Notice or Product Safety Advisory', and 'Only for "In Device"'. All checkboxes are currently unchecked.

FactoryTalk AssetCentre proof-point

Wastewater Treatment Facility

CHALLENGE

- Multi-faceted treatment process is susceptible to unpredictable environmental conditions
- Government-run operation had assortment of equipment, which made it difficult to plan upfront investments for long-term benefits and cost-savings
- Remote pumping stations were difficult and costly to monitor and maintain

SOLUTION

- **FactoryTalk AssetCentre change management software is used to ensure compliance for disaster recovery**
- Standardized on Rockwell Automation hardware and software
- Integrated FactoryTalk View SE into plant's SCADA system for wireless monitoring of 4 remote pumping stations
- Services and support provide support, employee training and regular software upgrades

RESULTS



STANDARDIZED APPROACH
eased maintenance time and cost-burden as one service provider can take care of entire system



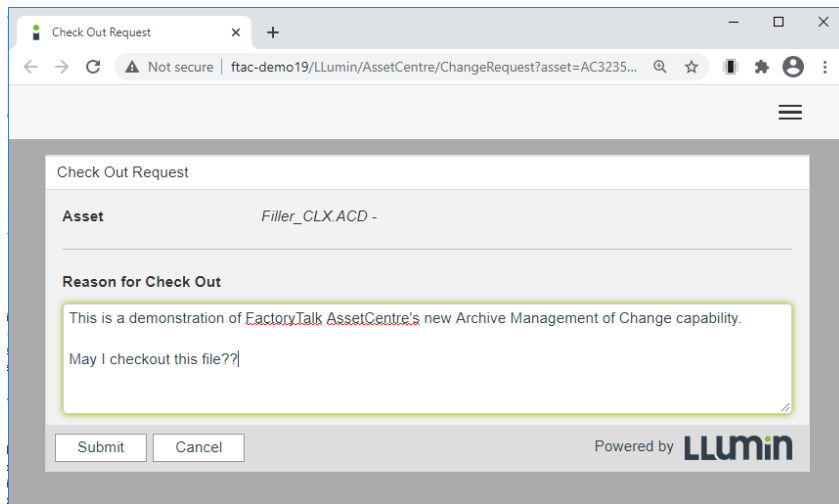
CITY CAN RUN PLANT
on reduced budget and less in-house technical expertise while remaining secure in regulatory compliance

Improved control over when archive changes are initiated

Archive Management of Change

- Separately licensed AssetCentre capability augmenting Archive security
- Ensures control and oversight for archive files and binder changes
- New security permissions to enable for check-out and check-in
- Control change through an electronic workflow process

Many industries (Ex. Oil & Gas) require an additional level of control over when changes are permitted which the Archive Management of Change capability provides



Check Out Request

Asset *Filler_CLX.ACD -*

Reason for Check Out

This is a demonstration of FactoryTalk AssetCentre's new Archive Management of Change capability.
May I checkout this file??

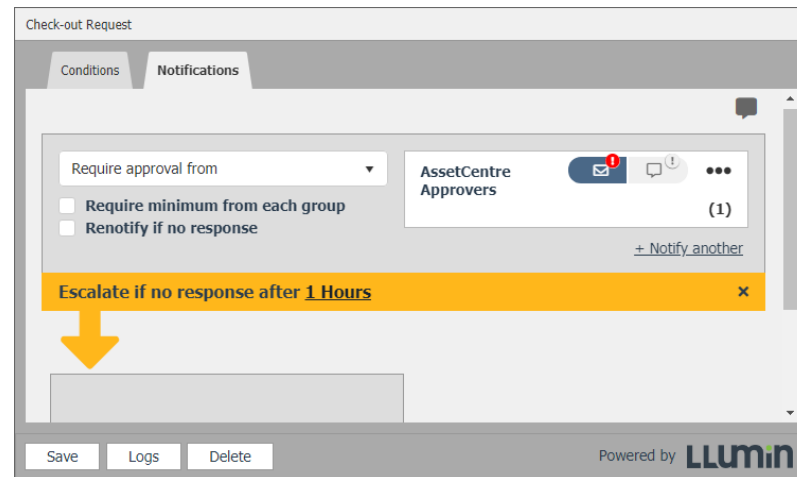
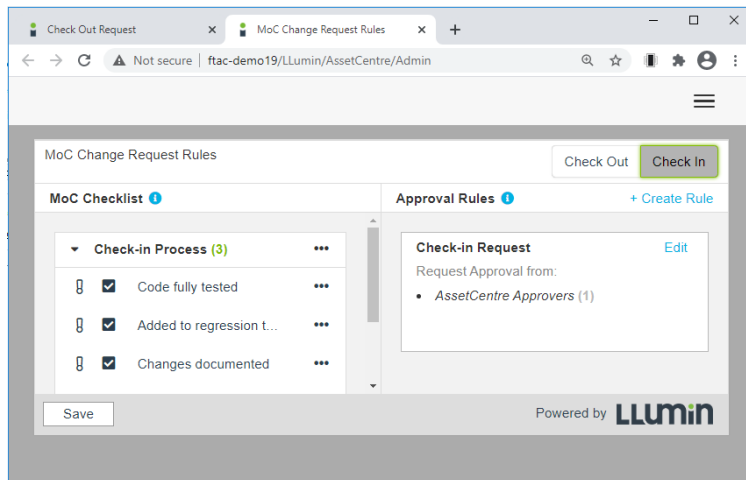
Submit Cancel

Powered by **Lumin**

Configurable workflow rules

Archive Management of Change workflow

- Configurable Archive Management of Change workflows
 - Single and multi-party electronic signature
 - Checklist
- Escalation path when first-tier approvers fail to approve or reject



FactoryTalk AssetCentre proof-point

Water/Wastewater Municipality

CHALLENGE

- Produce reliable operations reports (single version of the truth)
- Reduce engineering time to upgrade control system
- Reduce ongoing maintenance costs

SOLUTION

- **FactoryTalk AssetCentre manages control system changes, tracks user actions and provides backup and recovery of asset configurations**
- FactoryTalk® Historian SE provides a high-availability historian server collecting data from remote stations
- FactoryTalk View SE provides an easy-to-use human-machine interface with alarm and events that identify critical events to maximize operational efficiency

RESULTS



ENABLED stakeholders to visualize and act on reporting data presented through web-based dashboards

10x IMPROVED data capture speed 10 times faster than project specifications; the system can handle reliable data capture at one-minute intervals

Additional improvements

Other actions we've taken to make the product better...

- Enhanced asset inventory PCDC product lookup
 - Improve success rate; find more inventoried assets in PCDC
- Improve utility of search results
 - Scheduled search results optionally returned as CSV
 - Control if the system sends email when search returns no results
- Improved disaster recovery diagnostics
 - Report missing version of Logix when attempting backup task
 - More detail regarding halted schedules

Additional improvements

Other actions we've taken to make the product better...

- Improvements to archive capability
 - New security permission to force comment on check-out
 - AssetCentre Working Folder allows Windows environment variable
- Additional assets clarify supported devices
 - Move legacy “ABB Robot”, “FANUC Robot”, and “RA Drive” assets to a new “Legacy Asset” container

FactoryTalk AssetCentre proof-point

Global Automotive Component Supplier

CHALLENGE

- Existing, asset-management system resulted in costly downtime during troubleshooting
- Reduce deployment and support costs of infrastructure
- Improve risk management for harmful changes to production code

SOLUTION

- **Uses FactoryTalk AssetCentre as a centralized tool for securing, managing, versioning, tracking and reporting automation-related asset information across an entire facility**
- **Deployed security providing centralized authentication and access control using a single login**
- **Compare graphically represents any logic changes with easy-to-read reports**

RESULTS



SYSTEM BACKUPS and comparisons are now 95% faster, enabling company to slash troubleshooting to a fraction of what it was before



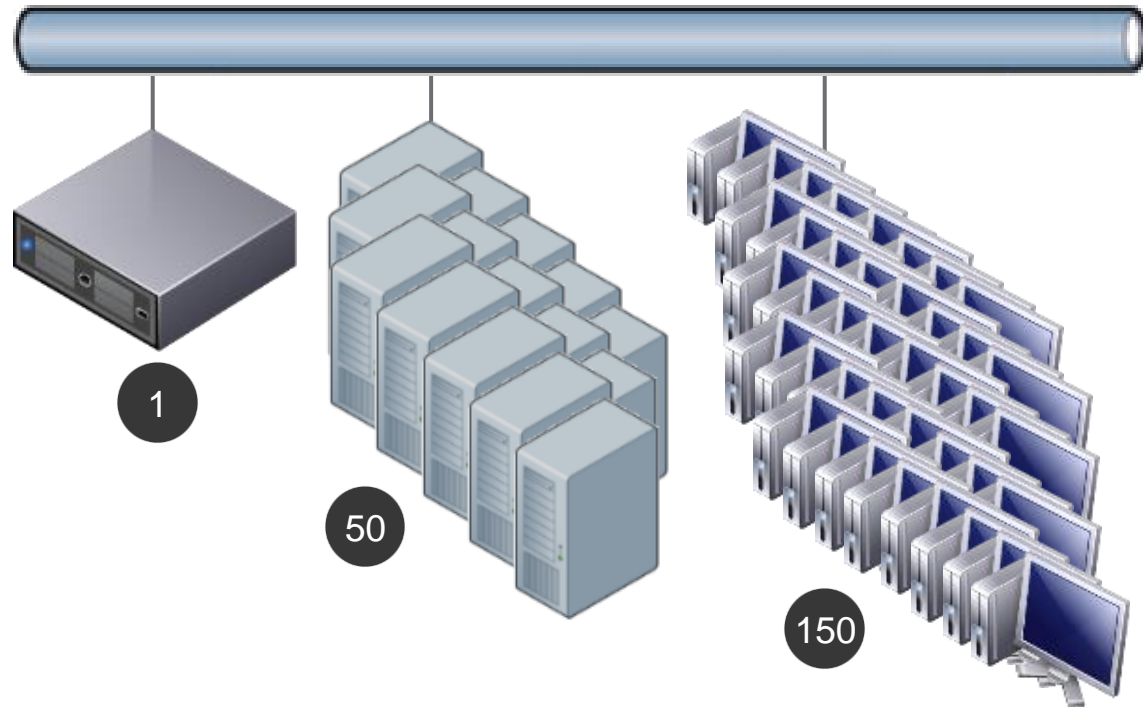
NEW SOFTWARE came at 1/3 of the cost compared to legacy system



IMPROVED SECURITY by regulating access to data assets

Increased large systems recommendations

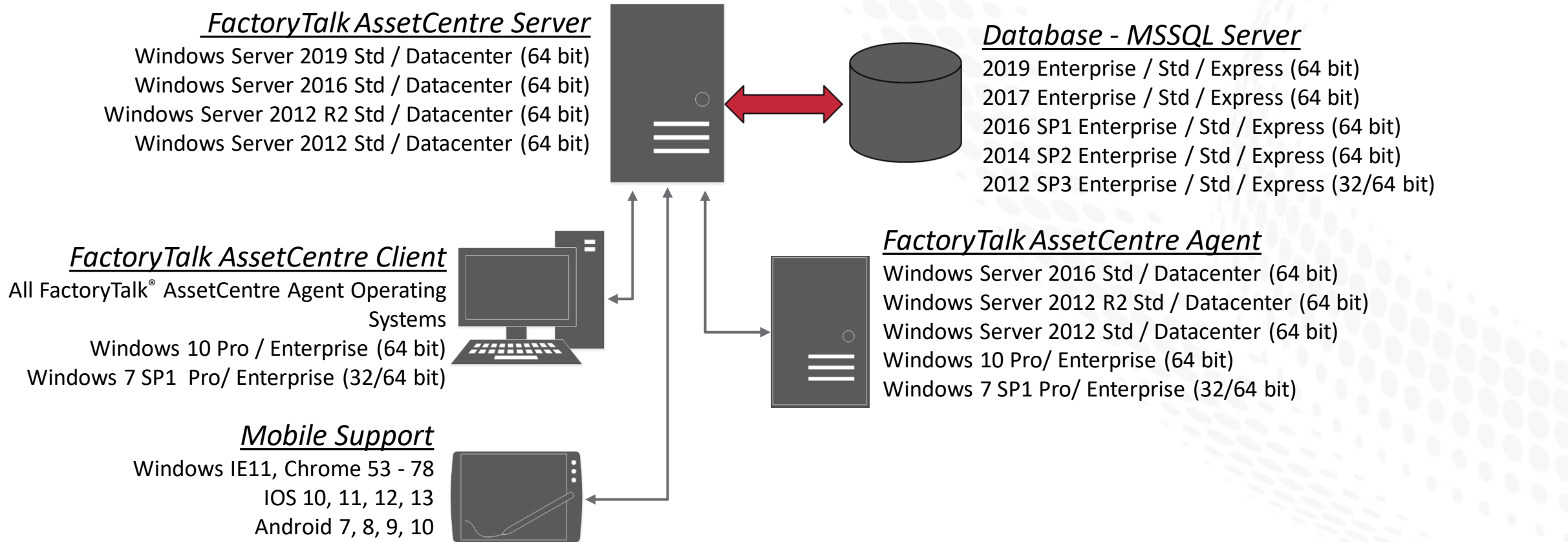
FactoryTalk AssetCentre v11.0 Software – Architecture



- **One** FactoryTalk AssetCentre Server
- **Fifty** FactoryTalk AssetCentre Agents & Agent Groups
 - Single agent services ~100 assets/12 hours
 - Limit of 50 agent groups
- **150** concurrent FactoryTalk AssetCentre Clients

Operating system / platform support

FactoryTalk® AssetCentre v11.0 Software – OS/Platform Support



FactoryTalk® Services Platform Support (CPR9 SR13)





**Rockwell
Automation**

FactoryTalk AssetCentre 3rd-Party Device Support

Native non-Rockwell Automation disaster recovery

- Siemens S7 Agent
 - 400 and 300 family using TCP/IP
 - Uses STEP7 software, not TIA Portal
- Remote computer agent
 - Remote files and folders
- Custom device plug-in
 - Supports a wide variety of 3rd party devices
- Generic FTP agent supports
 - Files & folders via FTP Server
 - Robot controllers hosting FTP Server
 - Fanuc Robots
 - Ex.: RJ3 and RJ3i controller
 - ABB Robots
 - Ex.: RC5 or S4C+ robot controller
 - Fanuc CNCs
 - Requires FASConnect v1.4
 - Motoman Robots
 - Ex.: XRC and NX-100 controller

Generic FTP Agent can be used for any 3rd-party device that provides an FTP Server

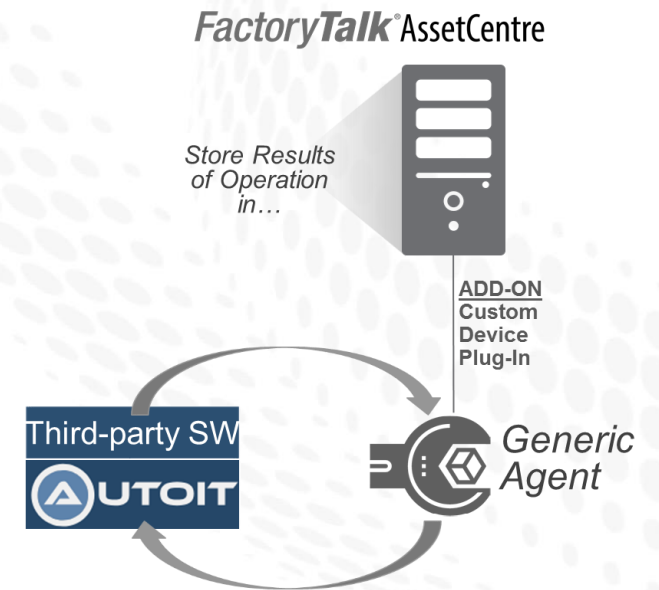
Support for 3rd-party assets

Custom device plug-in

Scripting tool integration greatly expands FactoryTalk AssetCentre's 3rd-party device support

- Scripting tool emulate mouse and keyboard to 'drive' 3rd-party software application
 - Backup and Backup & Compare operations supported if 3rd-party tool exists to perform the desired operation
- Custom event log messages support improved troubleshooting and diagnosis
- AutoIt is a qualified scripting tool that works with FactoryTalk AssetCentre
- 3rd-party automated test tools that support DLL loading can be used

FactoryTalk AssetCentre 3rd-party support limited by 3rd-party's toolset functionality





**Rockwell
Automation**

Comparing FactoryTalk AssetCentre to third-party solutions

Premier integration powers industry leading solutions

FactoryTalk AssetCentre differentiating value

- **Only FactoryTalk AssetCentre provides**
 - “Real-time” operator track and trace (audit)
 - Other 3rd-party solutions attribute differences found during check-in triggered compare to the user performing check-in
 - Industrial security integration
 - FactoryTalk Security, CIP Secure
 - Asset inventory
 - Product Lifecycle advertisement from PCDC, with networked device difference detection
 - Real-time change detection monitor for ControlLogix® controllers
 - Safety signature, firmware application, key-switch position, etc.
- FactoryTalk AssetCentre audit log information can be displayed in FactoryTalk® View TrendPro and FactoryTalk VantagePoint for additional manufacturing intelligence

Premier Integration with Rockwell Automation hardware and software products produces unique capabilities and benefits to customers

FactoryTalk Services integrates powerful tools

FactoryTalk AssetCentre differentiating values

- Only FactoryTalk AssetCentre shares native connectivity to the FactoryTalk Security, Diagnostics and Audit logs with other FactoryTalk-enabled applications, such as FactoryTalk View, Studio 5000®, and RSLogix™ family of programming package
- Only FactoryTalk AssetCentre will collect and manage audit and diagnostic logs produced by all FactoryTalk-enabled products, e.g., Studio 5000, or FactoryTalk View
- FactoryTalk AssetCentre supports new versions of Studio 5000/RSLogix at release. Customer using competitive third-party solutions often experience delays while the vendor adds support that can be measured in months
- FactoryTalk AssetCentre **does not require software licenses** for the applications used by the Agent computers to directly connect to Rockwell Automation/ Allen-Bradley® controllers, drives, and other Rockwell Automation devices
- 3rd-party solutions often implement security by disabling icons in the resource files of the program which is easily defeated

Integration with FactoryTalk Service Platform provides Rockwell Automation customers tremendous values such as, securing the system, monitoring operator actions, managing plant-floor product lifecycle

Part of Rockwell Automation's product ecosphere

FactoryTalk AssetCentre differentiating values

- Only FactoryTalk AssetCentre allows programs to be checked in and out from within Studio 5000 and RSLogix programming packages
- Only FactoryTalk AssetCentre can provide immediate notification if a ControlLogix controller is compromised
- Only FactoryTalk AssetCentre includes an Asset Inventory Agent to scan and catalog CIP, SMNP(v2) and WMI compatible products. This includes Rockwell Automation controllers, drives, devices, switches, etc.
- Only FactoryTalk AssetCentre retrieves product lifecycle state information for Rockwell Automation products from the Rockwell Automation Product Compatibility and Download Center

FactoryTalk AssetCentre's tight integration with other Rockwell products and technologies reduces initial and on-going costs

FactoryTalk AssetCentre proof-point

Sustainable Solutions Provider

CHALLENGE

- Unreliable backup of control and visualization systems
- Cumbersome disaster recovery process
- Excessive manpower used to implement and maintain weekly backups

SOLUTION

- **Deployed FactoryTalk AssetCentre providing change management control and disaster recovery**
- **Scheduled backup detects differences and notify appropriate resources, especially for the non-daylight shifts**
- **Flexible system allows for differences between the various site businesses and accommodates individual control system maintenance strategies**

RESULTS



RELIABLE backup of control systems



EFFICIENT and easy system recovery



AUTOMATED weekly backup process



INTEGRATED seamlessly into existing IT disaster recovery policy

Thank you



www.rockwellautomation.com

