

“Niagara^{AX} 3.5 Features”

October 2009

Scott Muench
James Johnson
Marc Petock

Welcome!

- The goal of TridiumTalk is to share with the Niagara community timely content on sales, products and technical topics. Each session will last between 45-60 minutes and will be a mix of presentation, demonstrations and Q&A.
- This session and past sessions will be posted on our community web site at www.Niagara-Central.com.
- The content presented here is representative of Tridium's Niagara technology and products in general, please contact your channel partner for specific details and pricing.
- As a courtesy to others in the conference, we will place your phone on mute until the Q&A portion of the program

What's new in Niagara^{AX} Release 3.5

- As the leading automation infrastructure solution, the NiagaraAX Framework continues to expand and add new features and enhancements. The latest version of the NiagaraAX Framework (Release 3.5) includes several new productivity and tools features, host level features, station features and advanced SI/Developer functionality.
- This installment of TridiumTALK provides an overview of all the new features and functionality of this release.

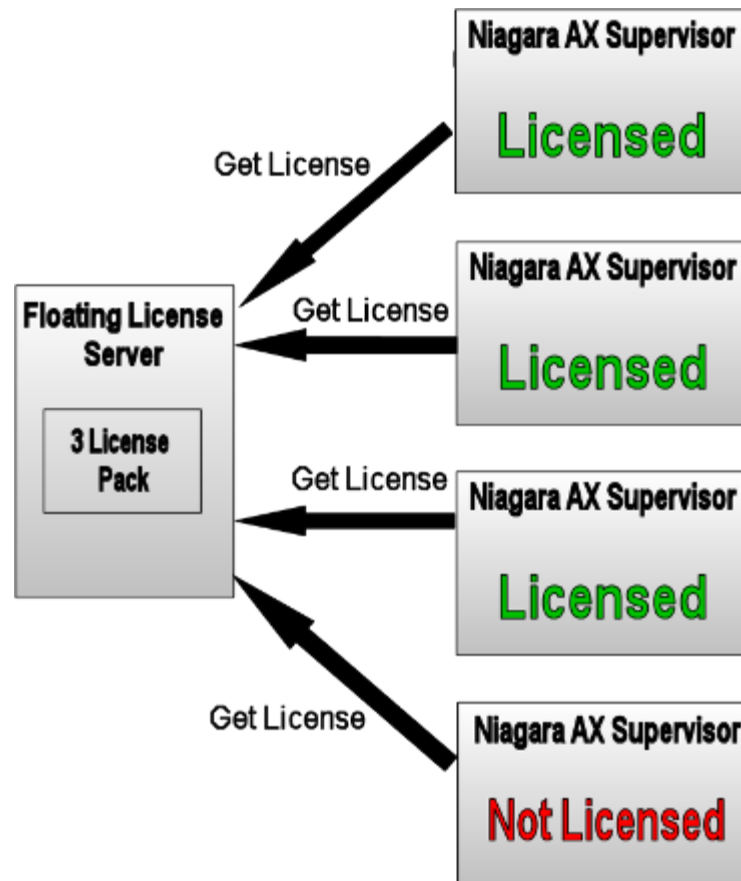
Niagara^{AX} 3.5

Productivity and Tools Features

- Floating License Repository
- Commissioning Wizard Enhancements
- Platform View Enhancements
- Wiresheet Enhancements
- Palette Enhancements
- Px Editor Enhancements

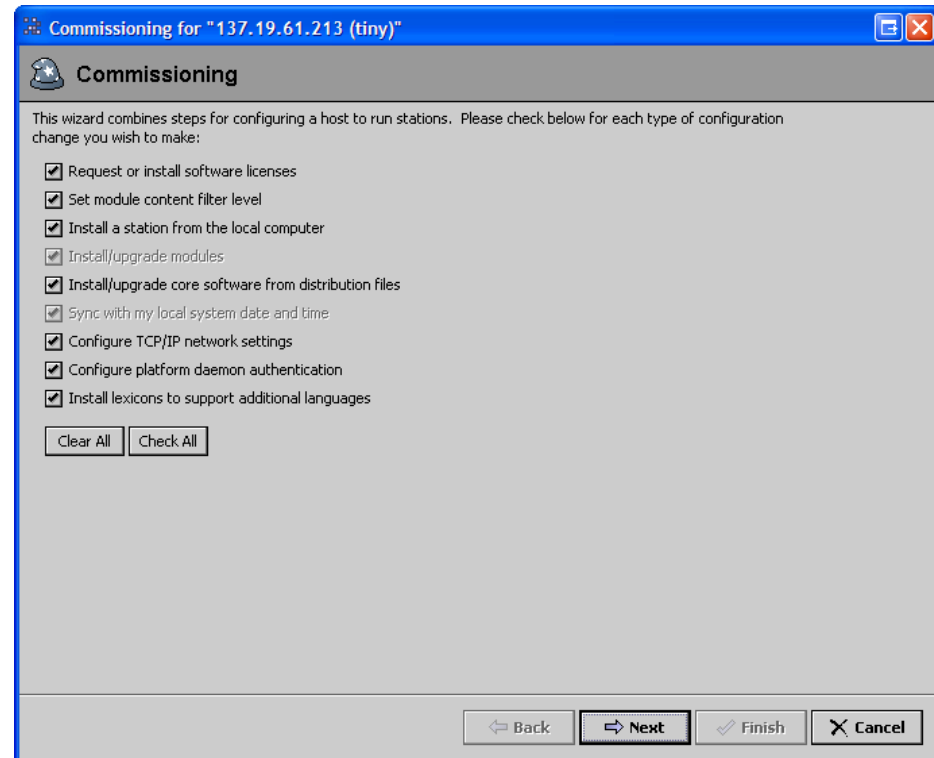
Floating License Repository

- Licenses available for lease from a license server.
- Licenses installed in packs.
- Supports licensing by concurrent usage.
- Supports virtual environments where host ID is inconsistent.
- Enables more flexible licensing for OEMs and new markets



Commissioning Wizard Enhancements

- Avoid installation of software that won't run because it's unlicensed.
- Avoid installation of core software outside of commissioning:
 - unintended version upgrade
 - incomplete installation

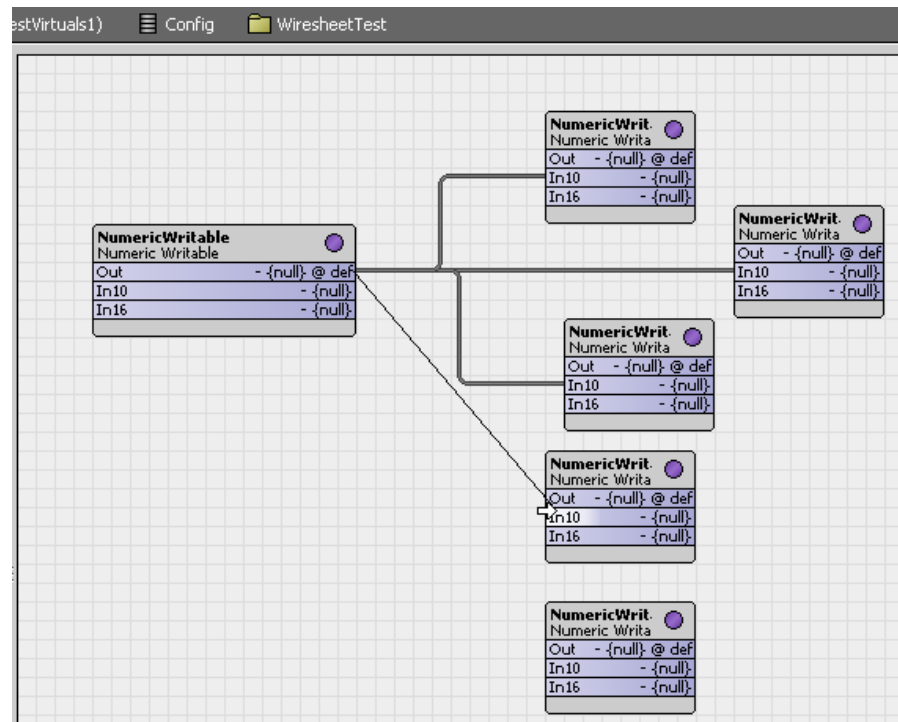
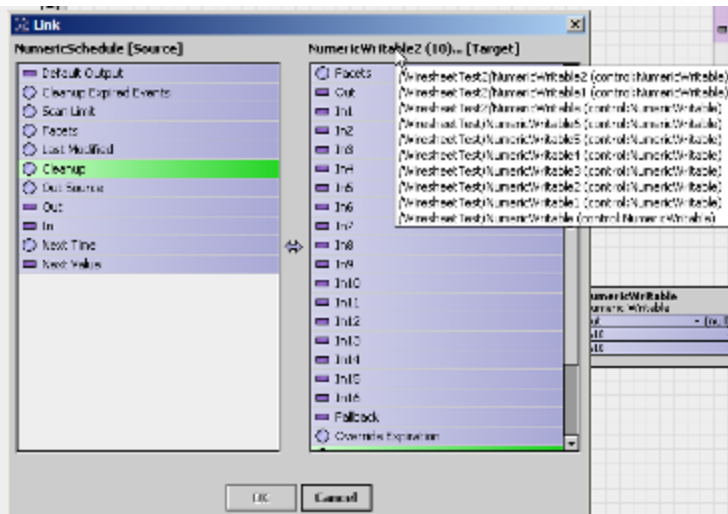


Platform View Enhancements

- Changes to Station Copier.
- Software Manager.
- Application Director.
- Distribution File Installer.

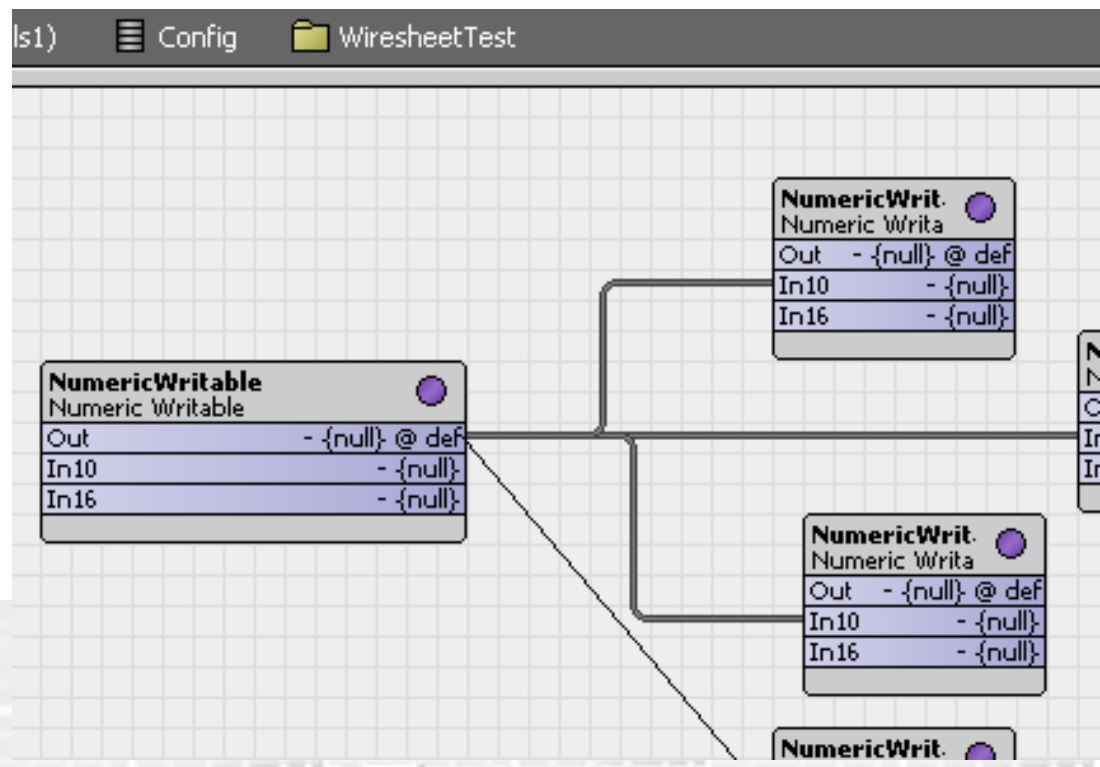
Wiresheet Enhancements

- The Wiresheet view has a new feature that allows more efficient linking from a single source component to multiple target components.
- Also works with the Nav view with Link Mark to multiple selected components.



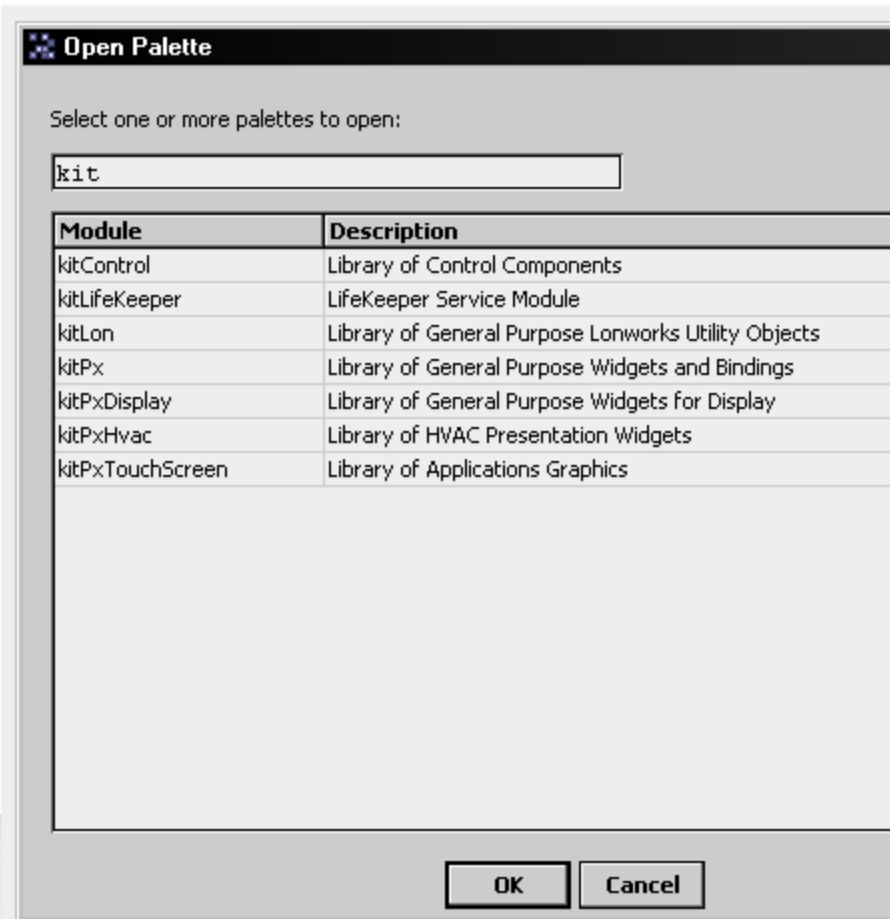
Wireshet Enhancements

- The Wireshet view now grows dynamically as components are placed near the edge of the Wireshet.
- Wireshet zooming has been added, there are tool bar icons for zoom in/out and reset. There are also keyboard (ctrl + up/down arrows) and mouse (ctrl + mouse wheel) shortcuts .



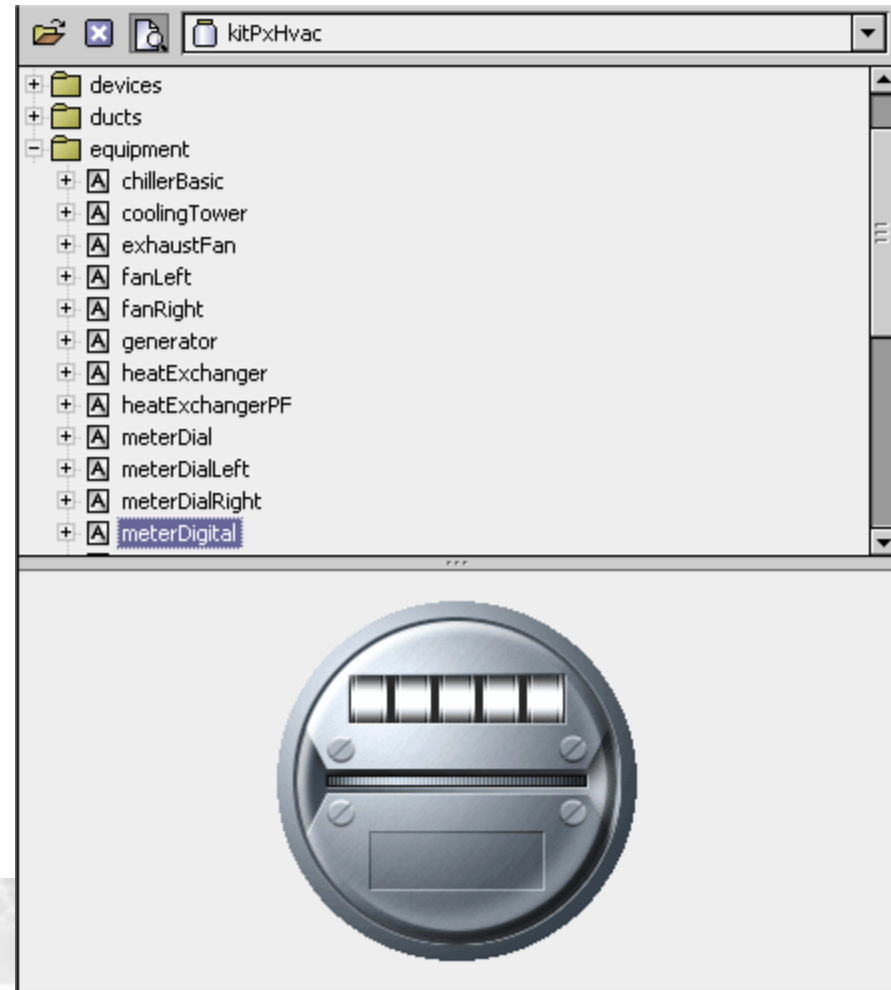
Palette Enhancements

- The Open Palette now supports a search function, simply type the first few characters of the module and the results are displayed. (no more scrolling past a long list of LON devices!)
- Also supports multiple selection for opening more than one palette at a time.



Palette Enhancements

- The palette sidebar now has a preview display for widgets and components.
- Preview functionality can easily be added to existing palettes too, making personalized graphics libraries much more efficient to use.



Px Editor Enhancements

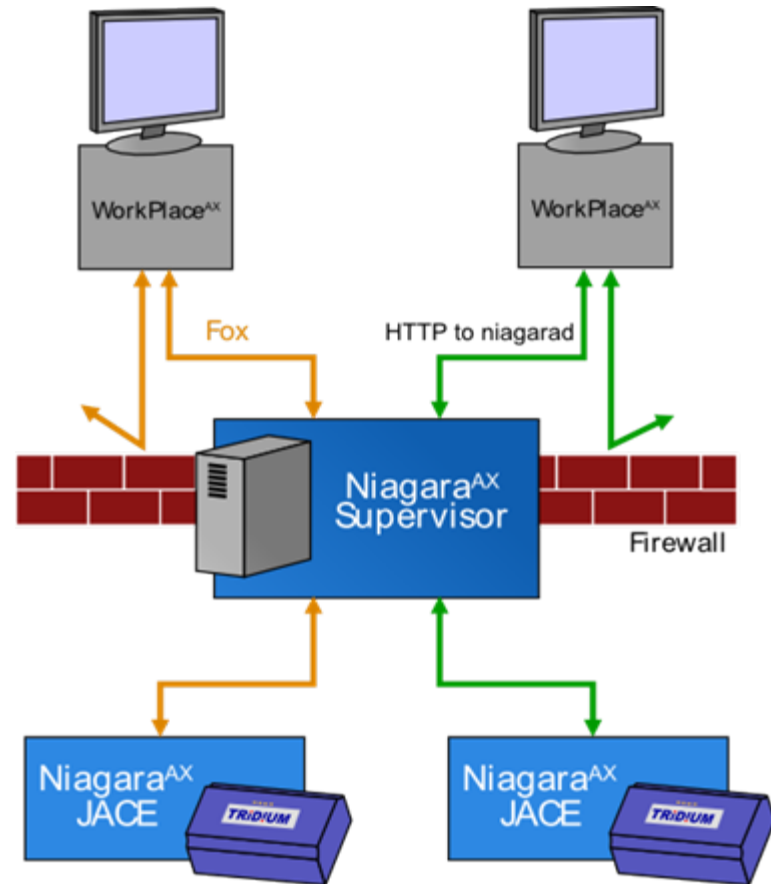
- The Px Editor now supports layers:
 - Widgets can be grouped into named layer.
 - Layers can be locked and/or made invisible.
- New alignment function which is designed to align multiple widgets on vertical or horizontal center.
- New distribute function which is designed to evenly space multiple widgets either vertically or horizontally
- Makes drawing in the editor easier and more productive.

Niagara^{AX} 3.5 Host Level Features

- Platform Tunneling
- Station Based Discover for the Niagara Driver
- Writable Niagara Virtual Components
- Provisioning Service Updates
- Hotspot JVM for JACEs

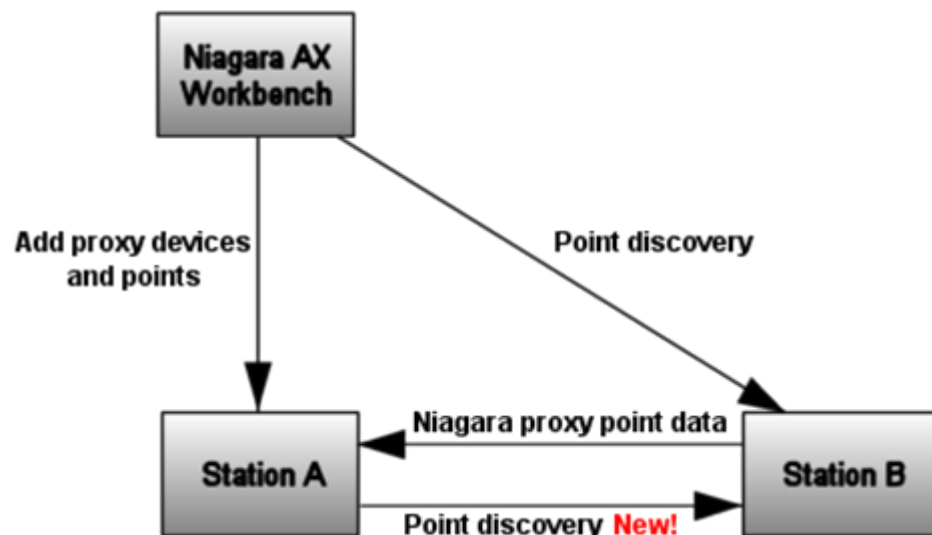
Platform Tunnelling

- HTTP and fox tunnelling have been available since 3.3.
- Platform tunnelling allows access to JACE platform configuration by tunnelling through a supervisor.



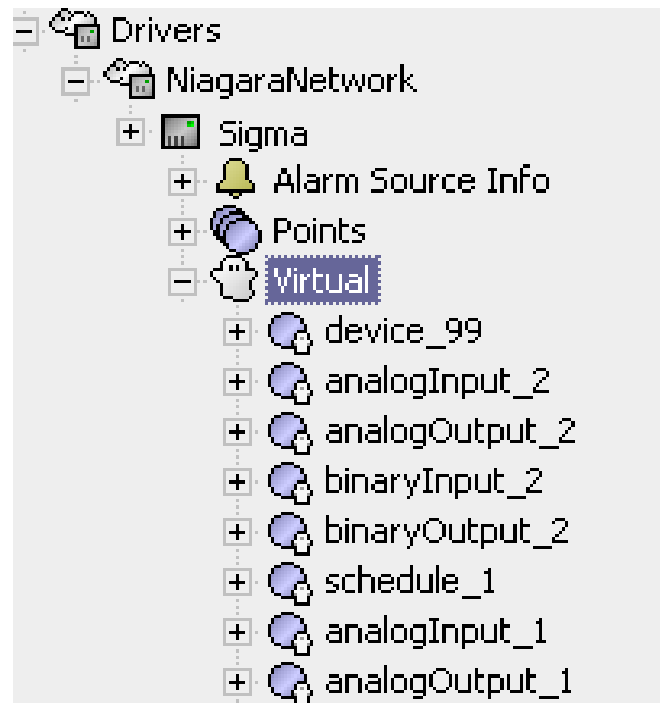
Station Point Discovery

- A change to the Niagara driver point discovery process.
- The station that needs to proxy points will initiate the point discovery on the remote station.
- Allows points to be discovered even when the tool brand is a mismatch with the station brand.



Writable Niagara Virtual Components

- Light weight proxy points.
- Intended for use in graphics, not linkable.
- Cleaned up when not in use.
- Increases capacity of station due to proxy point savings.
- Originally introduced in 3.4
- Now adds Writable points that can be commanded to set values.



Provisioning Service Updates

- Two new properties:
 - Device Reboot Timeout.
 - Station Shutdown Timeout.
- Provides for better handling of an unavailable host during the processing of a provisioning job.

Hotspot JVM for JACEs

- Current JACE's use the J9 Java Virtual Machine (JVM) from IBM.
- The HotSpot Java Virtual Machine by Sun supports the latest Java VM technologies and libraries.
- Provides a performance boost and allows developers to use the latest features of Java.
- Has a larger flash file footprint, therefore is only supported on the JACE-6 platform.

Niagara^{AX} 3.5 Station Features

- History Grouping
- History Shortcuts Container
- Hx Enhancements
- New On-call Service
- Alarm Acknowledger Components

History Grouping

- Works in conjunction with new History Property feature
- Allows for customizable organization of histories into groups based on logical property sheet values
- Histories can be organized in folders in the history tree
- Histories can show up multiple nav paths, in addition to the standard Device and Station name tree view

History Shortcuts Container

- New History Nav Shortcuts container can be added anywhere in the station to provide nav links to a filtered list of histories:
 - When placed under a device, can easily find histories filtered just for that device
 - Not duplicating histories, just providing shortcuts to the actual histories in the history space
 - History list can be filtered even further with a BQL query
- Chart builder view available to be applied to filtered list

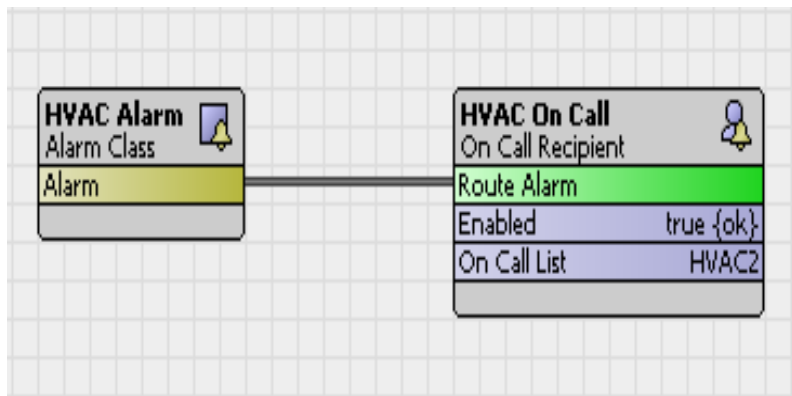
Hx Enhancements

- Goal is to make the Hx web environment the common choice for end user web interfaces.
- Better functionality for scheduling and alarm management.
- More accurate rendering of Px views.
- New profiles and widgets for better support of touch screens
- Cookie-Digest authentication algorithm used by web service has been strengthened.

On Call Service

- New service to enable sophisticated routing of alarms to people.
- Uses call schedules to assign responsibility based on time of day, day of week, etc.
- Supports prioritization and escalation for users in the same on call list.
- Supports SMS and email alarm delivery.

On Call Service



Database		
Name	Active	Status
HVAC Normal	Inactive	{ok}
HVAC Weekends	Active	{ok}
Security Normal	Inactive	{ok}
Security Weekends	Active	{ok}

The weekly schedule interface displays service times for each day of the week. The days are Sun, Mon, Tue, Wed, Thu, Fri, and Sat. The times are: Sun (HVAC Weekends), Mon (HVAC Normal), Tue (HVAC Normal), Wed (HVAC Normal), Thu (HVAC Normal), Fri (HVAC Normal), and Sat (HVAC Weekends). The time slots are 3:00 AM, 6:00 AM, 9:00 AM, 12:00 PM, 3:00 PM, 6:00 PM, and 9:00 PM. Below the schedule, the 'Event Start' and 'Event Finish' are both set to 10:51 AM. The 'Event Output' is set to null 0. At the bottom, there are tabs for 'Weekly Schedule', 'Special Events', 'Properties', and 'Summary'.

Alarm Acknowledger Components

- Allow alarms to be acknowledged via SMS or email.
- Works well with on call service that delivers alarms via SMS or email.
- Matches phone number of email address with existing user to validate acknowledgement.

Niagara^{AX} 3.5

Advanced SI and Developer Features

- Program Module Builder
- Supervisor Auto-configuration
- System Definition
- Semantic Tagging (History properties)
- Metadata Browser

Program Module Builder

- Allows Niagara Program objects to be compiled into a standard Niagara module.
- Allows programs to be versioned and distributed like any other Niagara module.
- Decreases memory overhead of program objects
- Allows program code changes to be made in a single location
- Provides a level of protection for the program source code.

Program Module Settings

Module Name: niagaraforum

Description: Niagara Forum Demo

Vendor: Tridium

Vendor Version: 1.0

Programs

Name
Add
Multiply

Supervisor Auto-configuration

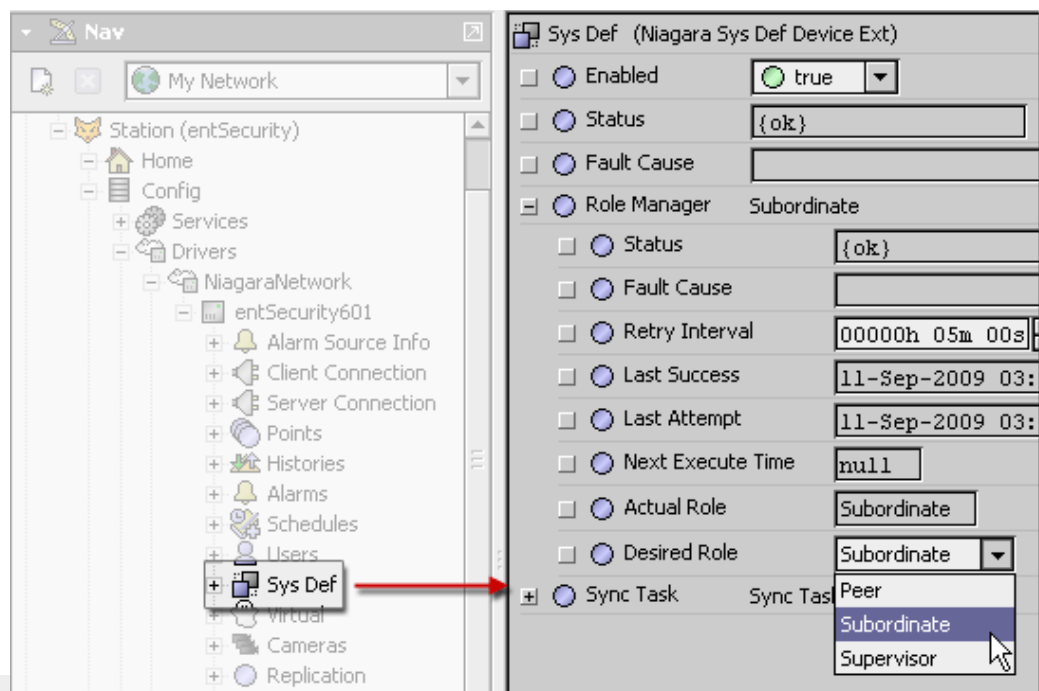
- Provides the ability for a Web Supervisor to automatically configure itself, reduces engineering time for large systems.
- Engineer your JACE in the standard way.
- Tag the items you want exported to the Supervisor (i.e. Histories, Px Views, Schedules etc.)
- When the JACE 'Joins' the Supervisor, the Px Graphics, History Imports, Schedules and anything else will be automatically created on the Web Supervisor based upon the tag information stored in the JACE.
- A Join can be launched from the Supervisor or JACE side

Supervisor Auto-configuration

- Items that can be tagged and automatically be exported to the Supervisor:
 - Points: Niagara Proxy Points can automatically be created on the Supervisor.
 - Histories: This creates Niagara HistoryImports on the Supervisor.
 - Schedules: Both master and slave Schedule relationships can automatically be configured.
 - Files: Files that need to be exported to the Supervisor can be tagged
 - Px Views: Px Views can be exported up to the Supervisor. This is the most exciting feature since just about any existing Px view that's been set up on a Jace can automatically be exported. This includes...
 - Automatically copying any associated files (Px files, images etc).
 - Automatically virtualizing any ORDs. Therefore, all ORDs are replaced with their 'virtual' equivalent. As this is all done for you, there's no need to create any Niagara Proxy Points on the Supervisor for any other reason than control purposes.
 - Components: Any Component can also be tagged and included in a Join

System Definition

- New service manages the relationship between stations
- Used by developers to provide automatic behavior based on the relationship of a station to other stations on the network



Semantic Tagging (History Properties)

- First implementation to “Semantic Tagging” which allows for components to have logical tags added, which then can be used by higher level queries and organization.
- Histories now have a property sheet and slot sheet

The screenshot displays the Niagara AX configuration interface. The top window shows the 'Slot Sheet' for the 'HousingUnit AirHandler CoolingCoil' component, listing five properties: id, historyName, source, sourceHandle, and timeZone. Below this, the 'Property Sheet' for the 'HousingUnit AirHandler CoolingCoil (Fox History)' is visible, showing various configuration options for the history property.

Slot	#	Name	Display Name	Default
Property 0	id	Id	Id	From
Property 1	historyName	History Name	History Name	From
Property 2	source	Source	Source	From
Property 3	sourceHandle	Source Handle	Source Handle	From
Property 4	timeZone	Time Zone	Time Zone	From

The Property Sheet configuration includes the following fields:

- Id: /NewLynch/HousingUnit AirHandler CoolingCoil
- Source: station: |slot:/Logic/HousingUnit/AirHandler/Coolin
- Time Zone: America/New York (-5/-4)
- Record Type: history | NumericTrendRecord
- Capacity: Record Count | 500 records
- Full Policy: Roll
- Interval: Irregular
- System Tags: Lynch
- valueFacets: max=+inf,precision=2,units=%,min=-inf
- minRolloverValue: null | 0.00
- maxRolloverValue: null | 0.00
- precision: 32 bit

Metadata Browser

- New view on the station root (Config)
- Allows navigation and viewing of metadata properties on components (Histories) using the new Metadata slot flag
- Provides batch add/edit and remove for changing meta data\
- Can be used to assign metadata (Semantic tagging) to histories to allow easier configuration of the histories grouping feature

Niagara^{AX} 3.5

Even More Good Stuff

- Email - Outgoing and incoming email accounts now support making an SSL connection to mail servers. Outgoing email account has new properties to track the number of discarded messages, last discard (timestamp), and last discard cause.
- Niagara Network history imports - Can now be organized in sub folders. Previously all imports had to be in a flat file architecture, so this provides a way to organize groups of imports by logical groupings.
- kitControl - Added a new factorial math object. Added a new digitalInputDemux component. Optimized Start Stop component now includes an earliest start time property which can be used to limit the calculated start time to prevent wasting energy.
- Weather - Providers now include properties for longitude and latitude of the current weather station. Weather states have been updated to include hazardous weather conditions such as tsunami, tornado, flood, fire, hurricane, earthquake and volcano. Weather module has been updated to include new sun position (day length, sunrise, sunset, noon, midnight, max elevation, min elevation, current elevation, current sun azimuth, current declination and current right ascension) and moon position (phase, age and illumination) components which provide useful details for better controlling outdoor lighting.
- Alarm extensions have a new property 'time delay to normal' which separately controls the delay time when transitioning from an alarm to a normal condition.
- Email report recipient now has configurable properties for the subject and body.
- User service now includes properties for configuring the maximum number of failed login attempts within a specified amount of time that results in locking out a user account. Previously this was hard coded, so this provides more flexibility to meet the customer's security requirements.

More Information

- For more information visit Niagara Central blogs:
 - www.niagara-central.com
- Watch for product launch announcement:
 - www.tridium.com
- See your channel partner for full details.
- Join us at the Niagara Summit in May 2-4, 2010 for more individual topics technical sessions:
 - www.niagarasummit.com

Question and Answer Session

- Select the Q&A icon in the menu bar to type your questions
- Feel free to speak up for further discussion
- Please introduce yourself, company name, and where you are calling from.

Frequently Asked Questions

- What documentation resources are available for Release 3.5?
 - This TridiumTALK overview presentation
 - Knowledgebase Articles and blog posts
 - Niagara-Central Release notes
 - Updated technical publications covering new features
- When will Release 3.5 be available?
 - Scheduled to release end of November 2009

Thank you!

- We would like your feedback on today's TridiumTalk
- Please take a moment to answer our short survey
- If you have any further questions, comments or topic suggestions, please email them to SalesSupport@tridium.com



Scott Muench



James Johnson



Marc Petock