TRIDIUMTALK

Niagara AX

# "Niagara AX 3.4 Features"

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TRIDIUM

Connecting minds and machines

# 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 (more details to come)
- 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, please place your phone on mute until the Q&A portion of the program

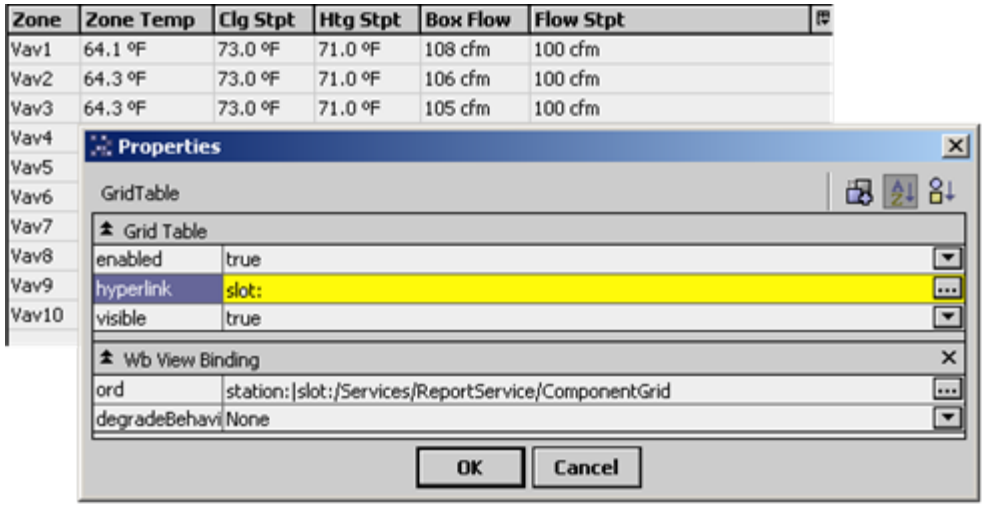
# What's new in Niagara AX 3.4 – New Capabilities

- The latest software release of NiagaraAX brings new features for report generation and graphical reporting displays.
- Enhancements to the BQL, RDBMS driver and Report Service take Niagara to a new level for business intelligence functions.
- Additional Host level features and options continue to supplement connectivity functionality.
- The hardware family continues to evolve into new form factors with the introduction of the JACE-5R rack mounted controller.

# Niagara AX 3.4 Key Features

- Report Service Enhancements
- BQL RDBMS Enhancements
- Host Level Features
  - NTP Time Sync for hosts
  - Non-Transparent Proxy Server Support
  - Support for IPv6 addressing
  - Niagara Software install for 64 bit Windows
  - Windows 2000 Support Discontinued
  - Niagara Software install for Linux
  - Fox and HTTP Tunneling
- Drivers and Station Features
  - New Niagara Virtual Points
  - Weather Service Enhancements
  - New On-demand Histories
- New Hardware Platform – JACE5-5R

# Report Service Enhancements




- New BqlGrid Component used to generate a Grid Table from a BQL query
- Grid Tables enhanced to provide hyperlink by double clicking a row in the table
- Report generation performed on a separate thread
- Improved display handling in table views

# BQL Aggregate Function

Function Supports Minimum, Maximum, Average, Sum and Count

| Min Temp | Max Temp | Avg Temp | Number of Zones |
|---|---|---|---|
| 68.9 | 75.5 | 71.5 | 10 |

Select **min(out.value), max(out.value), avg(out.value), count(out.value)** from **control:NumericWritable** where name like **zoneTemp**

# BQL Order Clause

Clause which is used to sort the return in either ascending or descending order based on the sort specification

Select name,**out.value** from **control:NumericWritable** where name like **zoneTemp** order by **out.value desc**

| Zone | Zone Temp |
|---|---|
| Vav1 | 75.9 |
| Vav6 | 74.5 |
| Vav2 | 70.5 |
| Vav3 | 70.5 |
| Vav4 | 70.5 |
| Vav5 | 70.5 |
| Vav7 | 70.5 |
| Vav9 | 70.5 |
| Vav10 | 70.5 |
| Vav8 | 68.5 |

# BQL Having Clause

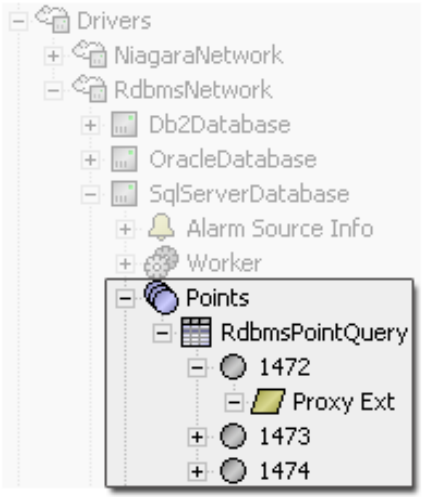
Clause which is used to filter the return by using a boolean comparator for an aggregate in the projection

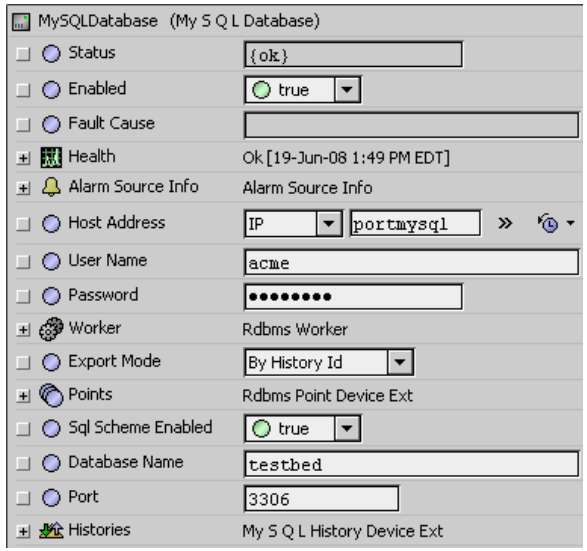
| Input | Temp |
| --- | --- |
| slot:/Equipment/Vav1/Inputs/ZoneTemp | 81.9 |
| slot:/Equipment/Vav6/Inputs/ZoneTemp | 80.8 |

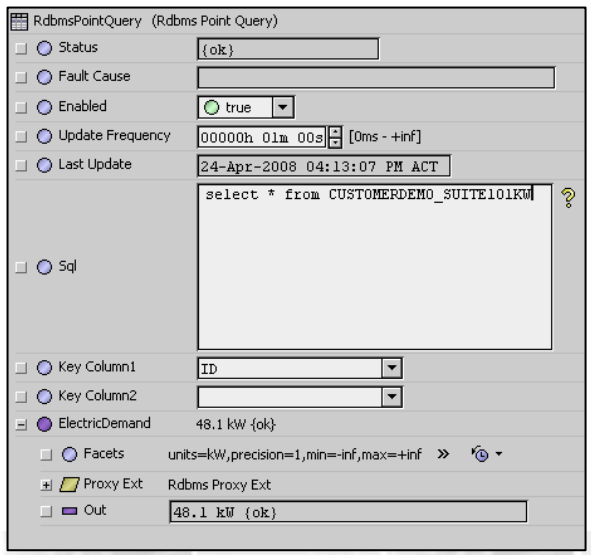
Select **slotPath** as **'Input'**, **max(out.value)** as **'Temp'** from **control:NumericPoint** where name like **'*Temp'** having **max(out.value)>78**

# RDBMS Driver

- Support for MySQL database format
- New support for proxy points created from a relational database



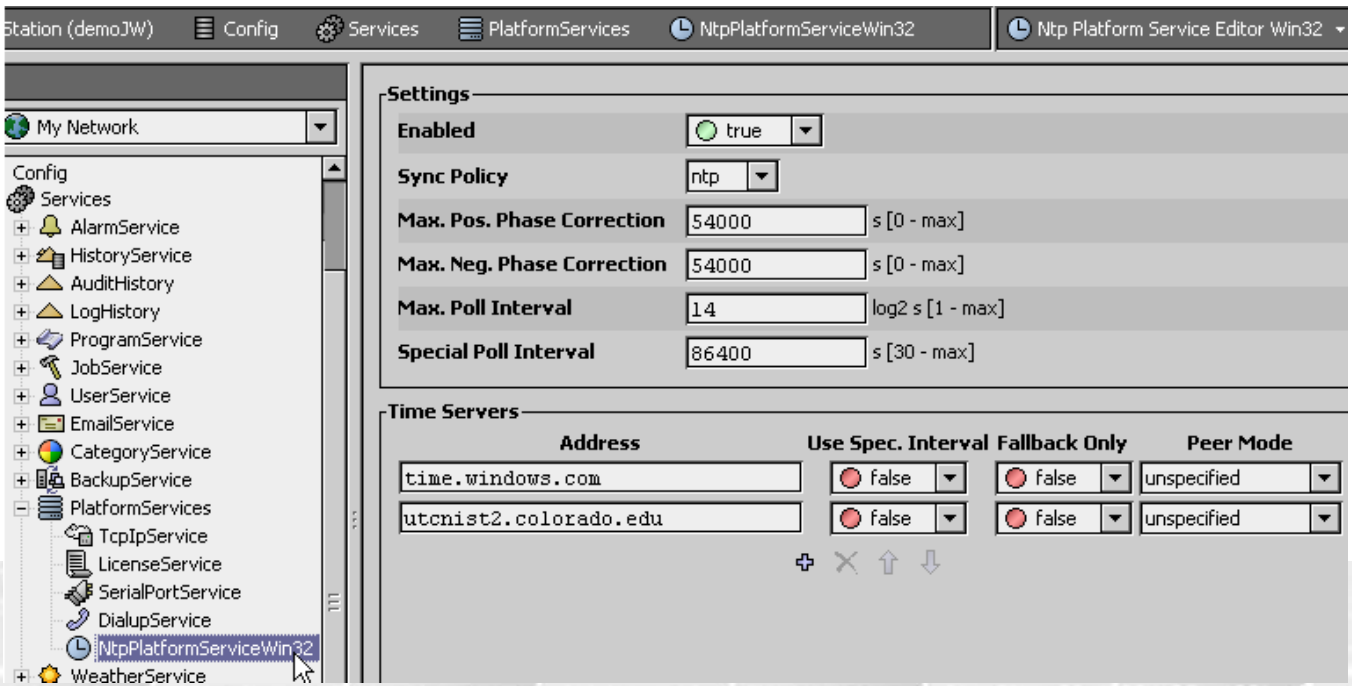



# Host Level Features

- NTP Time Sync for hosts
- Non-Transparent Proxy Server Support
- Support for IPv6 addressing
- Niagara Software install for 64 bit Windows
- Windows 2000 Support Discontinued
- Niagara Software install for Linux
- Fox and HTTP Tunneling

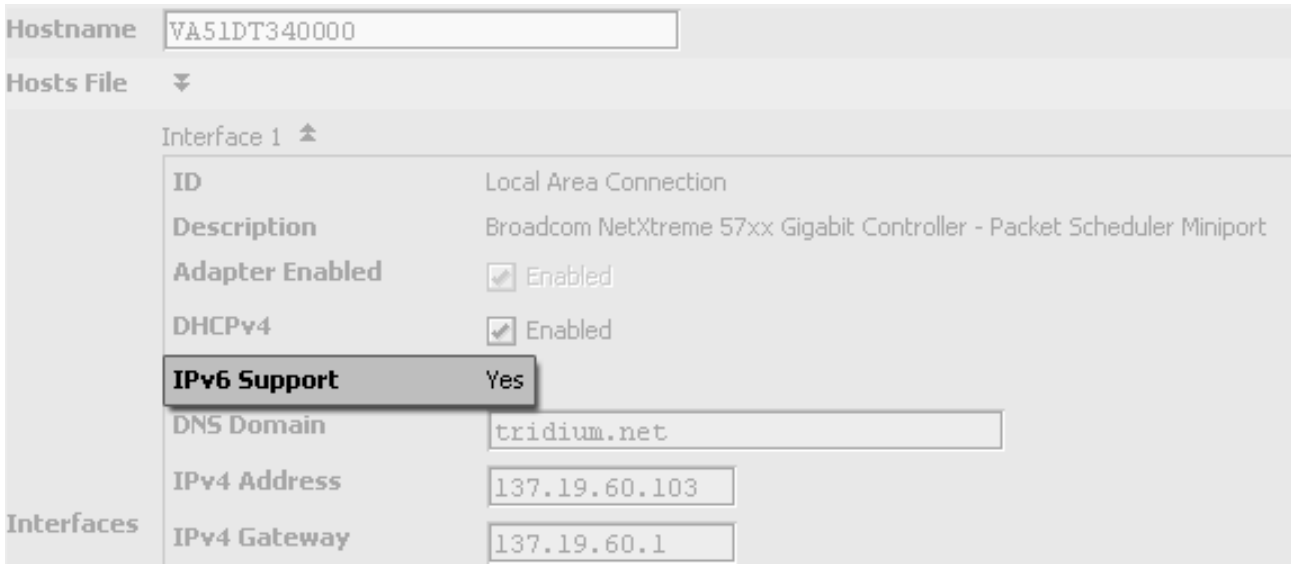
# NTP Time Sync for hosts

- Support for the RFC 1305-compliant NTP (Network Time Protocol) running on QNX and Windows host platforms
- NTP is the currently recommended time synchronization protocol to use between internetworked devices, offering more accuracy than the RFC 868 Time Protocol



# Support for IPv6 addressing

- Support for IPv6 has been added to the Niagara Framework including support by the Workbench platform administration to enable the ability to manage and view IPv6 addresses while maintaining the ability to manage IPv4 addresses.



# Niagara Software install for 64 bit Windows

- Niagara-AX-3.4 introduces 64 bit AxSupervisor support for installation on PCs running 64-bit Windows operating systems. This includes, for example, Windows Server 2003 or Windows XP Professional x64 Edition.
- The primary application for this feature is an AxSupervisor station that has a very large NiagaraNetwork (job has large numbers of JACEs, each with many Niagara proxy points), and thus, a large station database.
- In particular, the 64-bit JVM (Java Virtual Machine) does not have a 2GB memory limit, unlike the JVM on a Win32-based AxSupervisor. Typically, any PC with 64-bit Windows also has 4GB or more of RAM installed, as (unlike with a 32-bit Windows PC), the 64-bit OS can effectively utilize all of it.
- Therefore, a Win64-based host may be the solution for the large "enterprise level" AxSupervisor

# Windows 2000 Support

- With this release, support for Windows will **no longer** include support for Windows 2000 as this OS does not support IPv6 or the 64 bit environment. If you plan to upgrade to Release 3.4 and you are currently using Windows™ 2000, you must plan on also upgrading your PC's operating system

# Niagara Software install for Linux

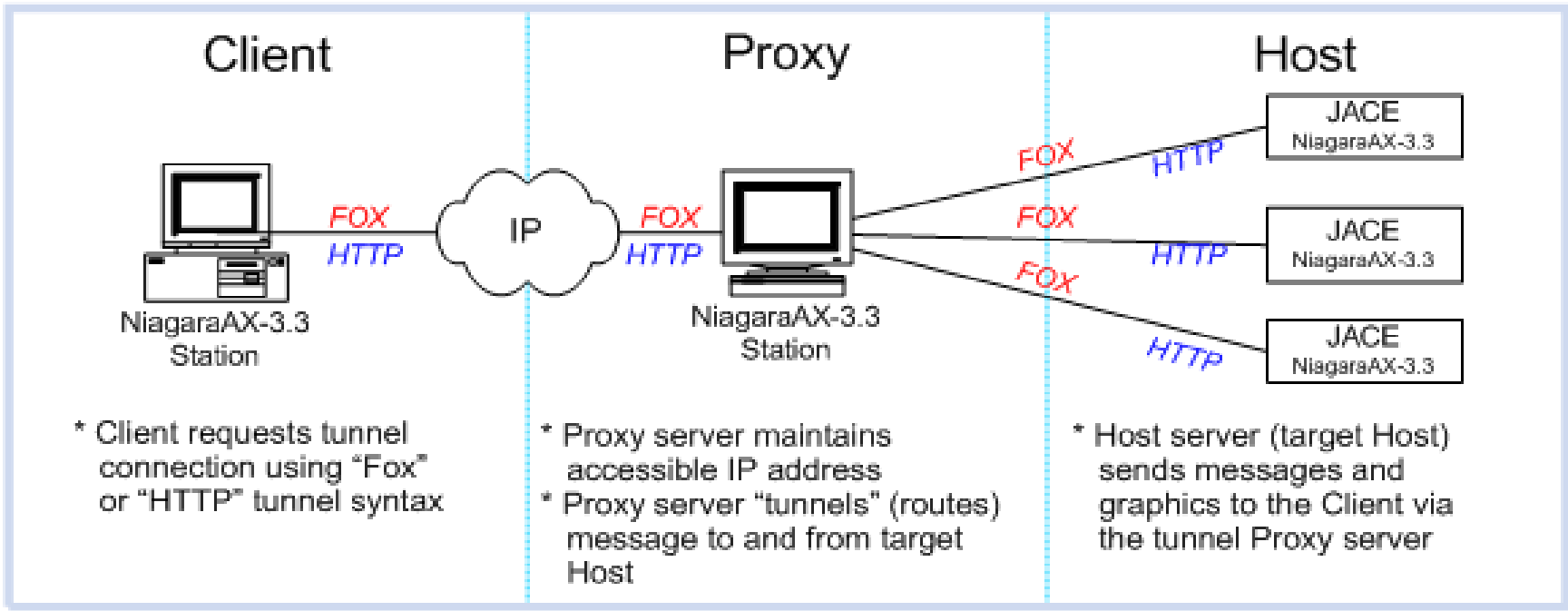
- NiagaraAX-3.4 provides AxSupervisor software that is targeted for a specific Linux-based platform:
  - an Intel-based PC platform running the operating system of **Red Hat Enterprise Linux 5**.
  - NiagaraAX installation on this platform is done as user using the supplied install script. This results in a user and group added, where almost all of the installed software files use niagarad as both owner/group.

# Licensing Requirements

- With this upgrade, the software checks the license to see if it is licensed for release 3.4. This requires you to have entered an order for an upgrade with a valid purchase order number *before* upgrading the JACE or Supervisor license. When you install the 3.4 upgrade on a Supervisor or JACE, the software will attempt to contact the AX licensing server to get an updated license. In most cases, the request will be granted quickly assuming you have ordered the upgrade or have an existing maintenance agreement for the requested platform. If not, the station on that platform will not run until a valid Rev 3.4 license is installed. Be aware that upgrading and then attempting to "go back" to the earlier release is not expressly supported.

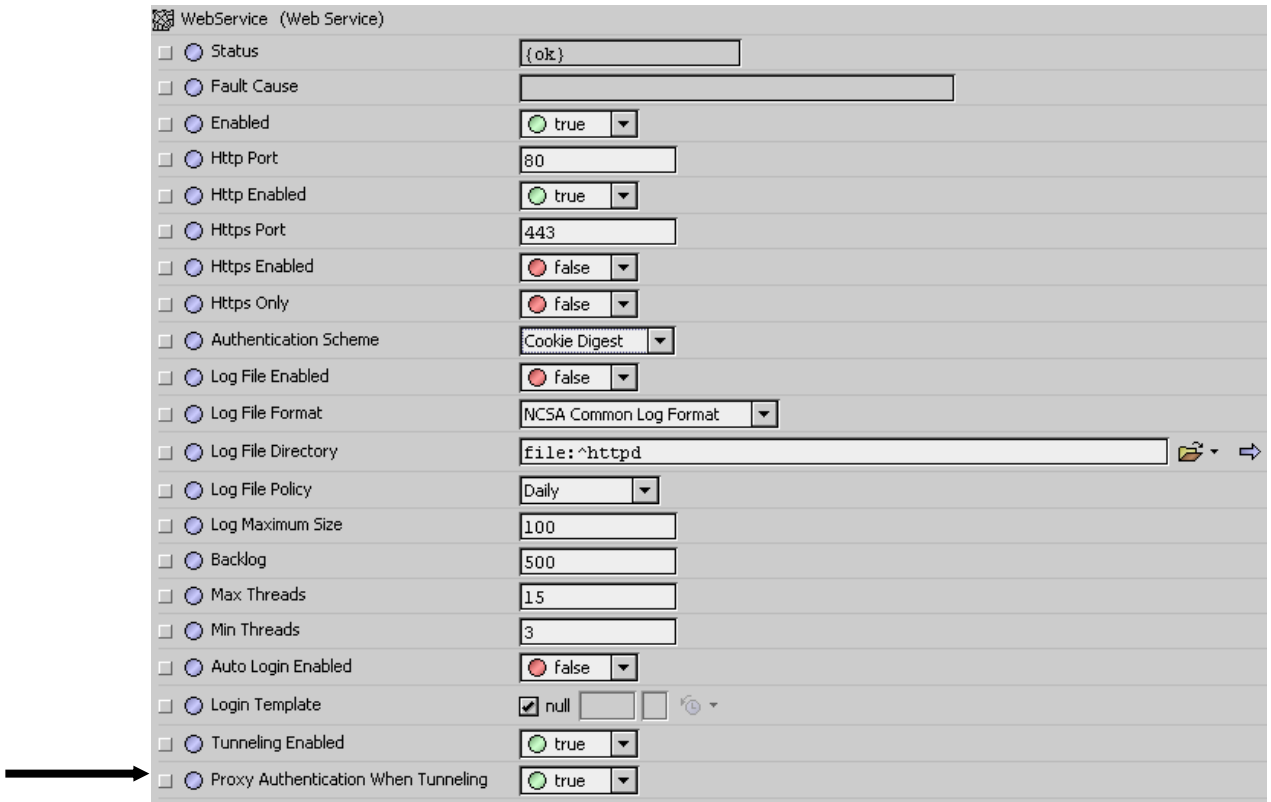
# Fox and HTTP Tunneling

- Using NiagaraAX-3.3 a client can establish a workbench connection to one or more JACE hosts using a "tunnel" connection that is established using a NiagaraAX-3.3 Web Supervisor proxy station.



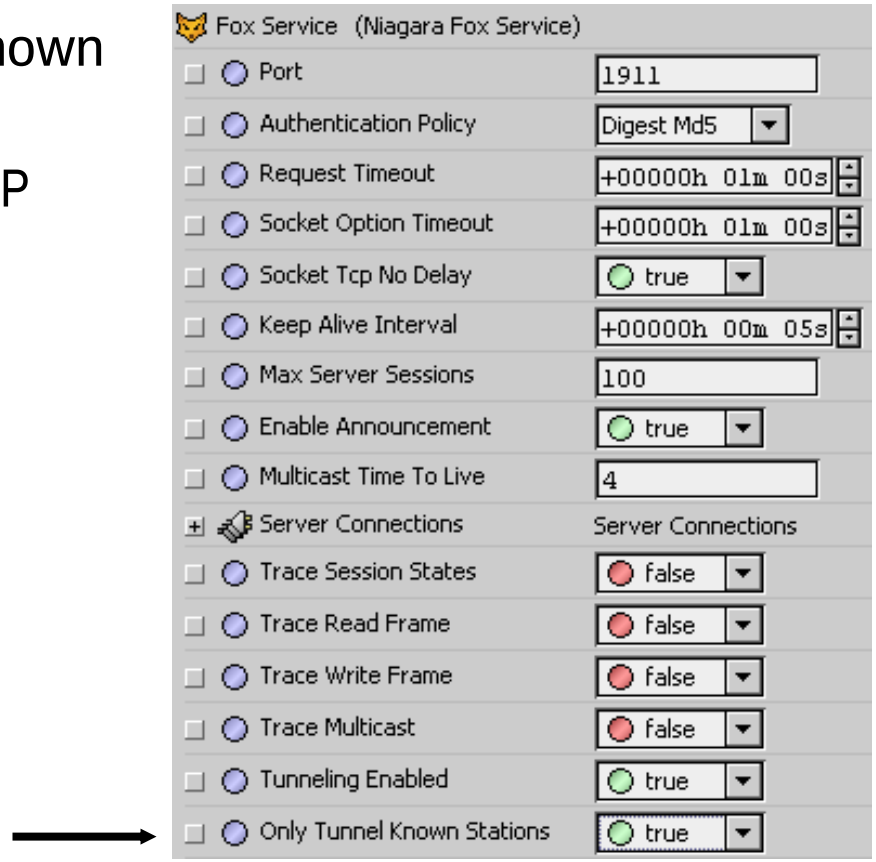
# Fox and HTTP Tunneling

- Option to force authentication at proxy during http tunneling.



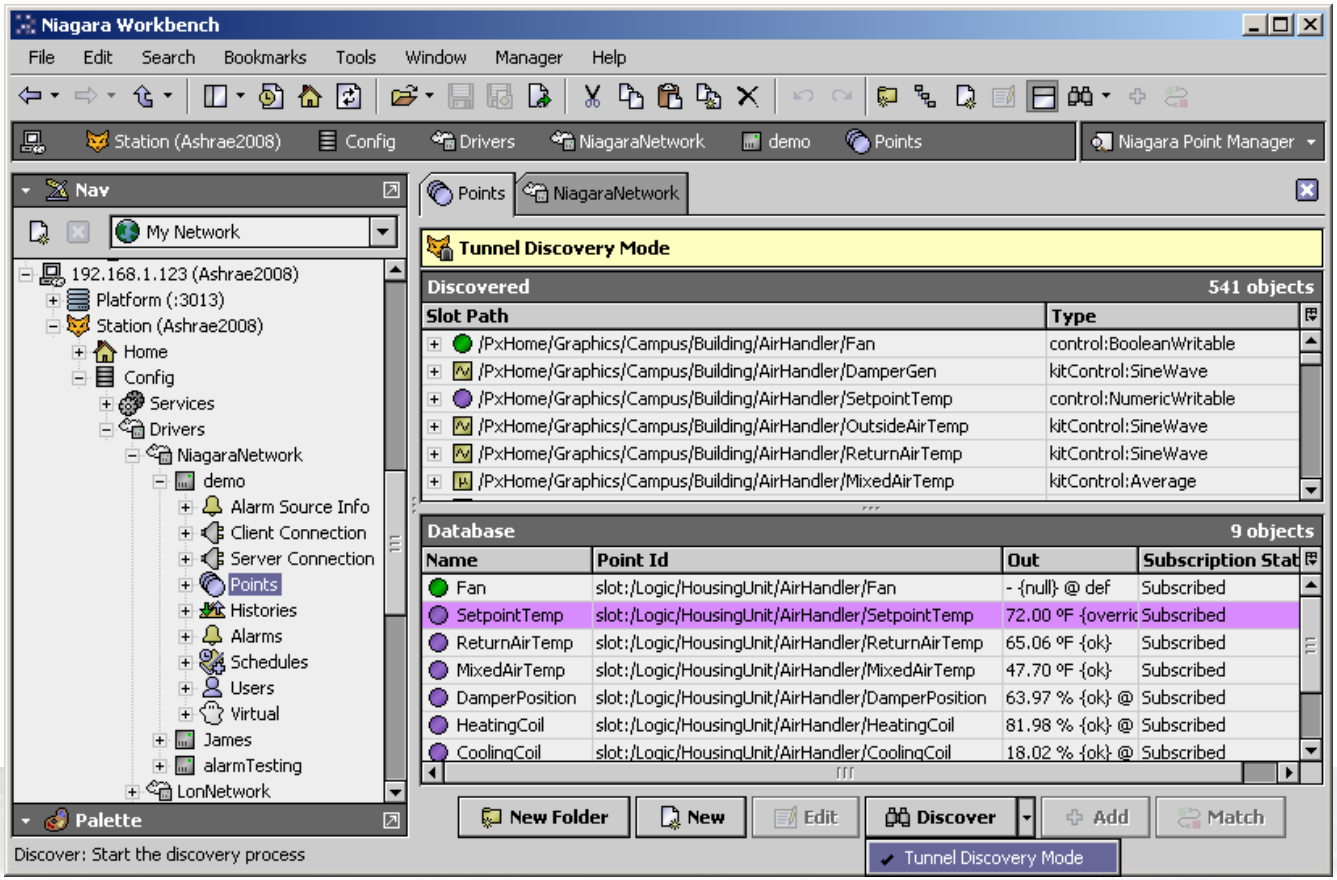
# Fox and HTTP Tunneling

- Provide option to tunnel to known niagara stations only
- Use station name in place of IP address.



# Tunnel Niagara Point Discovery

- Provide option to use fox tunneling for niagara network point discovery

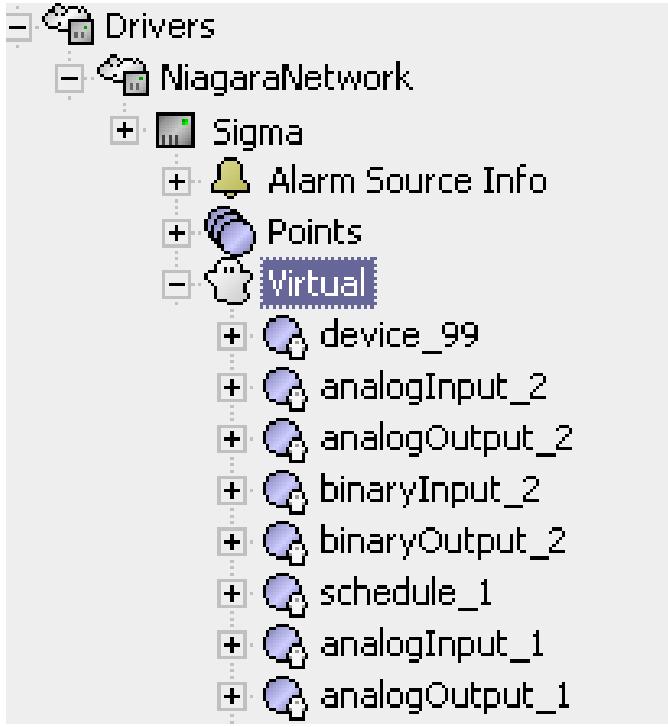


# Drivers and Station Features

- New Niagara Virtual Points
- BACnet BTL Certified
- Weather Service Enhancements
- New On-demand Histories
- Miscellaneous other stuff

# Niagara Virtual Points

- Virtual points were introduced in NiagaraAX-3.2 for the BACnet driver and enhanced in NiagaraAX-3.4.
- Virtual points provide a way to monitor applications where you don't need to view histories or alarms and you don't need to link station logic in or out of the application.
- Virtual points provide the advantage of not permanently using database space.
- Add ability to categorize virtual components.



# BACnet BTL Certified

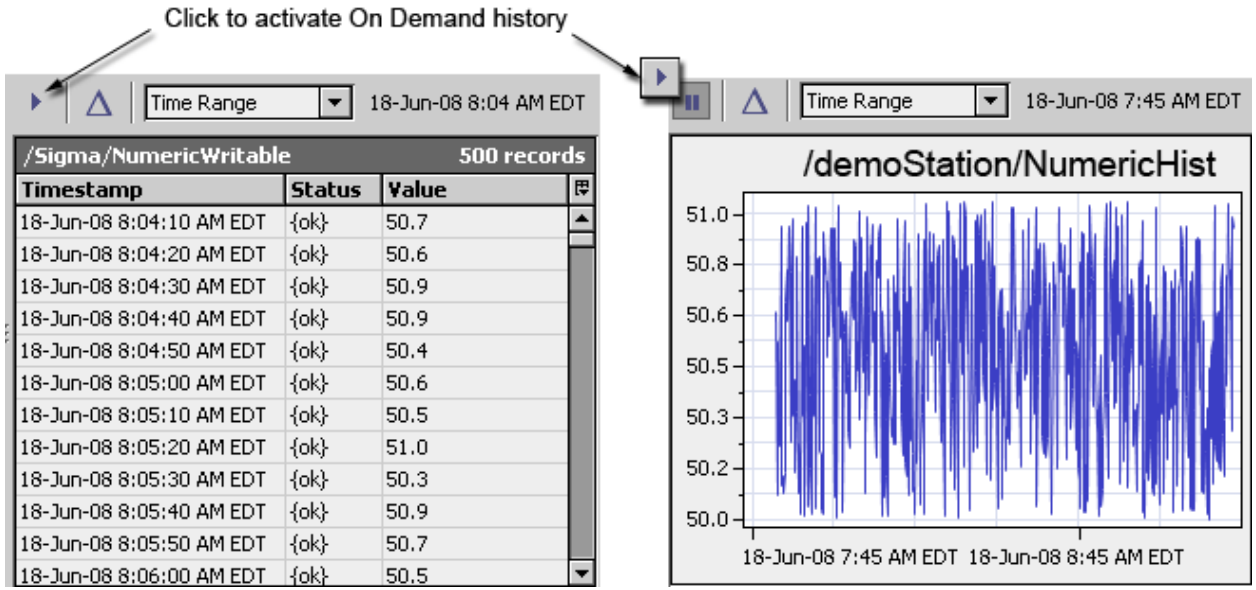
- If you haven't already heard, Tridium has successfully passed the requirements of the BTL requirements for the JACE as a BACnet™ Building Controller BIBB (profile B-BC). An announcement was made in June on this and a copy of that announcement can be found on Niagara-Central. This listing applies to all JACE products and the BACnet International website has links to the product catalog covered by the listing as long as Release 3.2.20 is used on the JACE. You will start to see the BTL logo on datasheets and on product labels soon.

# Weather Service Updates

- Weather service sunDown property updates real time
- New weather summary slot on bforecast
- Improved public api for weather service allows for custom weather providers
- Dedicated thread for weather service

# On Demand Histories

- The On Demand history feature enables your local history sources and Niagara History imports to be "polled" for live data when displaying a history chart or history table views.
- This feature works in addition to and does not replace a standard polling schedule.



# Other stuff

- Niagara network worker thread pooling enhancements.
- Add extractXif to local lon device
- Program objects and robots now support inner classes
- New history table exporters include historyId and range
- Web services cookie digest authentication now uses more secure sha-1 instead of md5 authentication.
- Alarm classes may now be in sub folders beneath the alarm service.
- Pass through binding for px and pop-up binding (modal)
- New kitControl components digital input demux, raise / lower

# JACE-5R-AX

- Lower Installation Cost
- Smaller in footprint!
- Ideally suited for:
  - Rack mount applications
  - Data Centers

# JACE-5R-AX (continued)

- Same processor boards as JACE-545-AX-EM
  - 250Mhz Motorola RISC processor
  - 256MB Ram, 128 MB flash
  - 2 RS232 ports
  - 4 RS485 ports
- Powered by 24 VAC or 24 VDC in lieu of Line Voltage
- Rack Mount metal packaging
- New Software bundle:
  - Web UI included
  - Niagara Connectivity included
  - BACnet optional

# JACE-5R-AX Applications

- Customers with rack mounted building equipment
  - Look for savings by utilizing existing equipment racks typically found in security, CCTV, audio, fire monitoring equipment, lighting control and industrial applications
  - IT equipment rooms – many new servers are being installed in racks – a great controlled environment to mount a JACE-5R!
  - Light commercial, telecom, datacenters, schools, universities, high rise office complexes, and government/military facilities are key candidates
- Localities with high cost electrical labor that allow open wiring
  - Check local wiring codes to see if open wiring for low voltage 24 VAC or 24 VDC power can be used
  - Check local union/non-union installation professionals – in many instances high cost electricians are not required for running low voltage power

# Frequently Asked Questions

- What documentation resources are available for Release 3.4?
  - Niagara-Central Release notes
  - Knowledgebase Articles and on-line build 3.4 help
  - This TridiumTALK presentation
- When will Release 3.4 start shipping from the factory?
  - Late September 2008

- Where can I get more details about the JACE-5R?
  - A complete product launch has been sent to OEM and channel partners. The launch package includes Technical Data Brief, Datasheet, FAQs, Selling tools, and What's New documentation.
  - Contact your channel partner for specific details and pricing.

# Question and Answer Session

- Feel free to type your questions into the chat window.
- Feel free to speak up for further discussion.
- Please introduce yourself, company name, and where you are calling from.

# More Information

- See Release 3.4 online “help on context” for more information
- Refer to NiagaraAX Drivers Guide and NiagaraAX BACnet Guide for more information about virtual points.
- Refer to the "Win64-based AxSupervisor notes" section in the NiagaraAX Platform Guide for more information on 64-bit OS support.
- Refer to the NiagaraAX Engineering Note “Linux AXSupervisor Notes” For more information on Redhat Linux implementation.

# Thank you!

- We would like your feedback on today's TridiumTalk
- If you have any further questions, comments or topic suggestions, please email them to SalesSupport@tridium.com

James Johnson

Scott Muench

Gil Rockwell