



# Niagara 4.10

## Features Overview

# Niagara Framework: Always Evolving – 4.10

Niagara 4.10 brings exciting new features that continue to evolve Niagara's key tenets of visualization, rapid deployment, security, Edge, connectivity, certification and IT compliance.



## Visualization

System DB Support for Tag Based PX  
UI Performance Enhancements  
Video Surveillance Viewer  
HTML5 Tag Manager



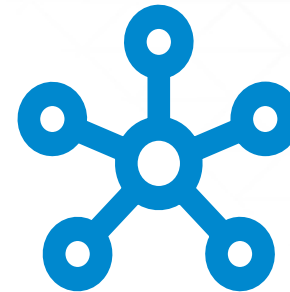
## Deployment

Edge Tools Updates  
Bulk Certificate Signing Tool



## Security

Critical Support/Enhancements



## Connectivity

MQTT – Google Auth  
Edge Licensing Scheme

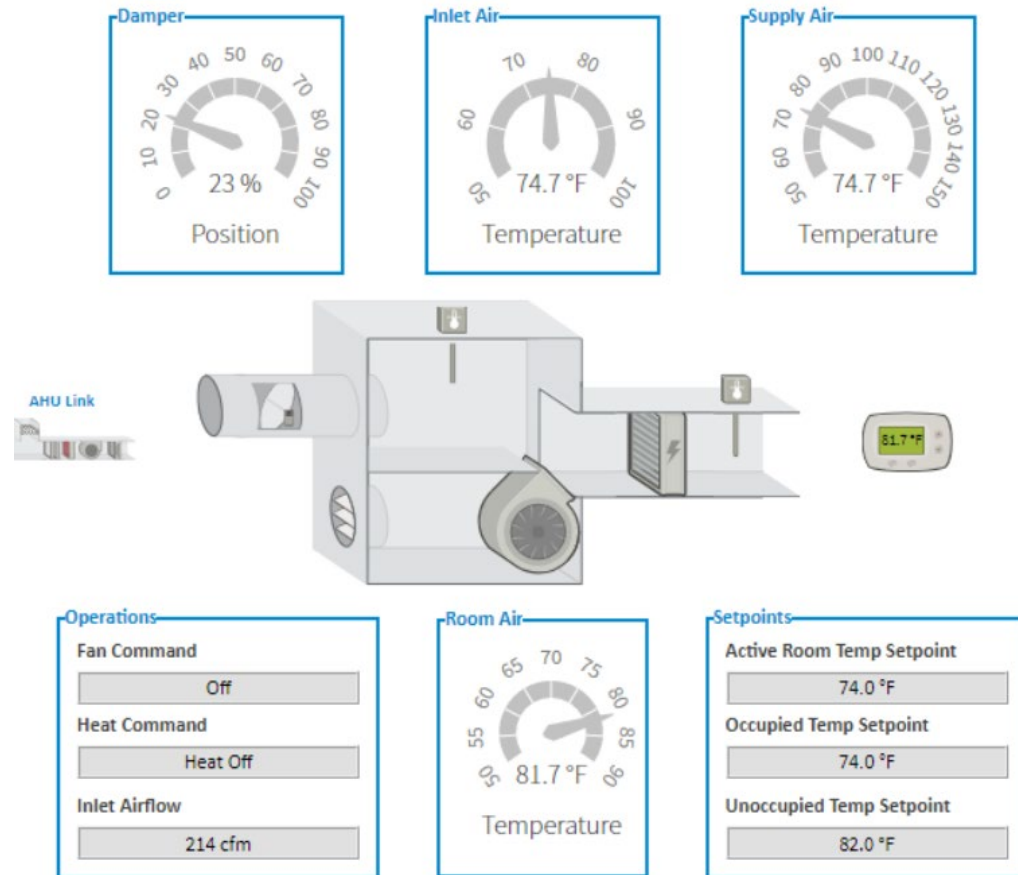


## Certification & Compliance

Long Term Supported Release

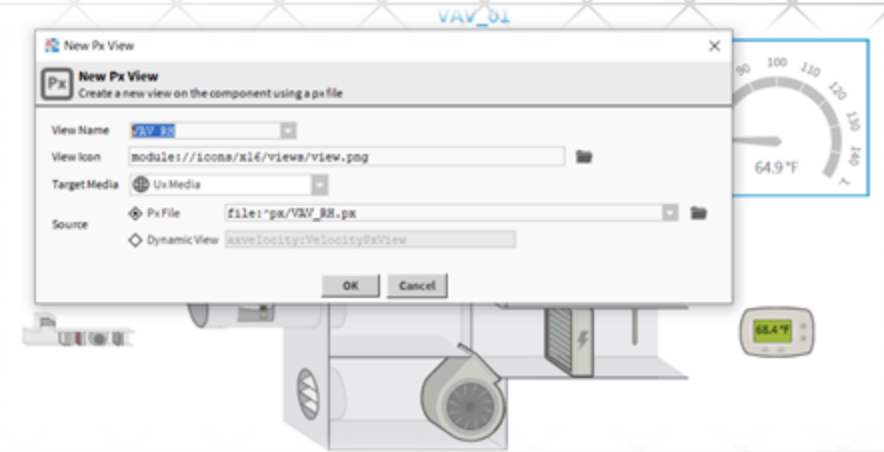


# Enhanced Virtual Graphics with Tag Based Visualization



- Time spent re-creating graphics for a common application is money wasted
  - In Niagara 4.10, Tag Based Graphics can now be used with **SystemDB and Virtuals**
  - Create local graphics based on tags once, and then reuse throughout your entire enterprise portfolio, thereby saving time and reducing the chance of graphics being out of sync
- Tags and metadata are the future of building management
  - Conform with the latest building design specifications by using a graphical user interface (GUI) based entirely on tags

# Introducing a Cutting-Edge and Performant UI – UxMedia



- Enables an improved end user experience
  - **Faster graphics load time** by removing the rendering and layout from the JACE and shifting it to the browser
  - UxMedia widgets provides **immediate feedback** upon value changes
- Fosters an enriched modern developer environment
  - Utilize rich sets of open-source development tools to enable a **native HTML5 and JavaScript UI** that is more flexible and adaptable to future cloud-based solutions
  - **UI development process is more efficient** since evaluating widget changes does not require a module rebuild and a station restart - just hit refresh in the browser to try out the new behavior!
  - **Instantaneously convert existing PX Graphics** to utilize UxMedia via the PxMediaMigrator and the browser-native Audition Mode

# Video Surveillance Viewer

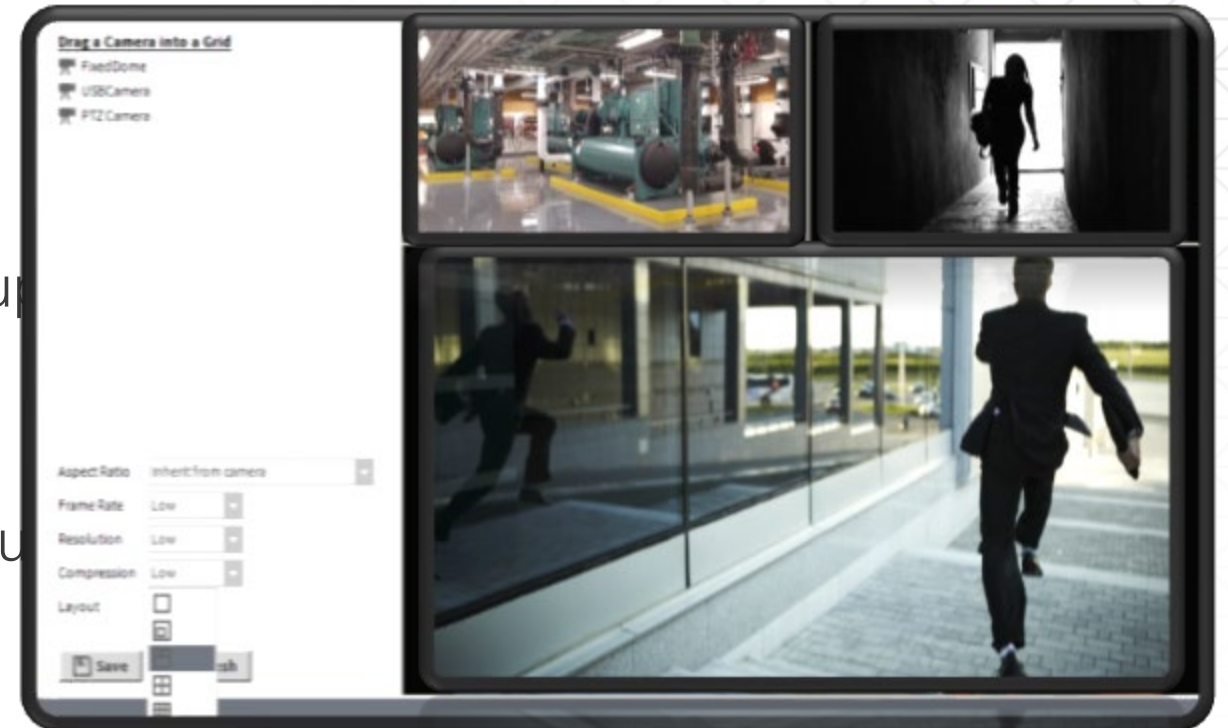


## HTML5 Surveillance Viewer

- Select Video Layout
- Drag-drop cameras onto your screen
- Save your view for future use.
- Allows operators to quickly display group


## Axis Camera Discovery

- New labor-saving feature that scans your



# HTML5 Tag Manager

- Provides an enhanced tagging workflow and improved user experience, which quickly helps you get the job done right
  - Enables the bulk tagging of components via an enriched HTML5 Browser Interface
  - Drag-n-drop functionality
  - Seamlessly view direct and implied tags
  - Export all **direct and implied** component tags to a spreadsheet for templating and ongoing management
  - Integration with the Niagara Search Service
  - Added as a default view on all station components for enhanced flexibility
- Harness the power of tagging in your Niagara stations
  - Enables the analysis of large quantities of disparate data
  - Provides essential insight into your building systems and equipment operation
  - Eliminates the inherent issues associated with bespoke point naming schemas
  - Conformity with Division 25 and the prospective ASHRAE Standard 223P



selected Components 9 objects

Name	Location
VAV_07	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_07
VAV_06	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_06
VAV_08	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_08
VAV_09	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_09
VAV_02	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_02
VAV_03	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_03
VAV_04	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_04
VAV_01	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_01
VAV_05	slot:/Drivers/NiagaraNetwork/MainStreetStation/Floor_01/points/VAV_05

Remove Component

Available Tags Haystack Show All

Tag	Tag Type
Tags	
absorption	Marker
ac	Marker
active	Marker
ahu	Marker
air	Marker
airCooled	Marker
angle	Marker

Showing tags on: VAV\_07 ☒ Direct ☐ Implied 7 objects

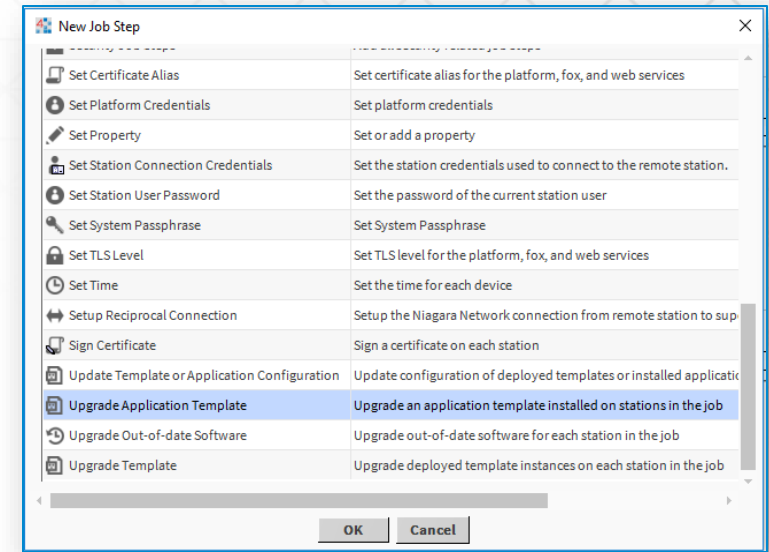
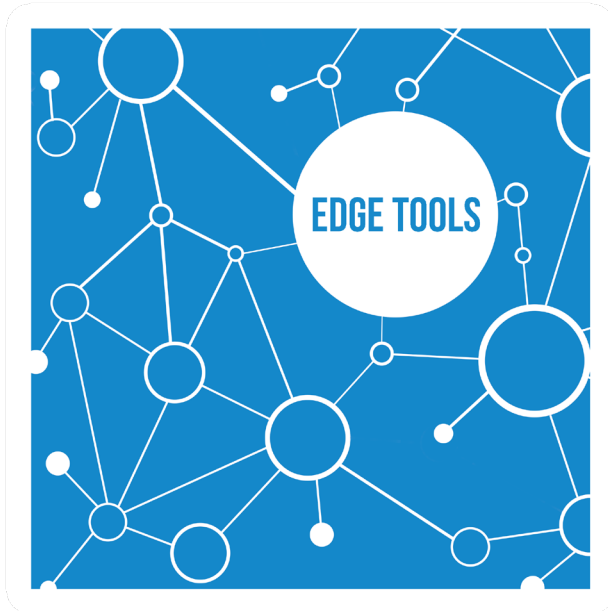
Tag Id	Tag Name	Value
hsequip	equip	Marker
hsvav	vav	Marker
hsparell	parallel	Marker
hsfanPowered	fanPowered	Marker
hselecReheat	elecReheat	Marker
hssingleDuct	singleDuct	Marker
hspressureDependent	pressureDependent	Marker

Edit Add Delete Tags





# Facilitating Niagara at the Edge



Reduce time spent installing, commissioning, and configuring multiple Niagara devices with application templates and provisioning. The latest updates to Edge Tools include:

- ❑ New provisioning steps
- ❑ The ability to upgrade or reconfigure installed application templates
- ❑ Flexibility in defining and configuring peer device and/or station proxies when installing an application template
- ❑ Ability to capture and reuse the as-built configuration of an application template



# Facilitating Niagara at the Edge

New **Supervisor Edge Licensing Scheme** for Niagara Network connections  
Allows you to connect **10 times more Edge devices** to a Supervisor for the same price.

Today

1 Niagara Network Connection = 1 Edge device



4.10

1 Niagara Network Connection = 10 Edge devices



powered by  
**niagara**  
framework®

- \* Applies to 150 points-based license or less for Edge 10 and OEM devices 'powered by Niagara framework' - not applicable to JACE
- \* If devices are upgraded to >150 points, then licenses revert to full connection

**TRIDIUM**



# Bulk Certificate Signing Tool



CA Alias:  CA Password:

Save As:  Extension:  Filename Format:

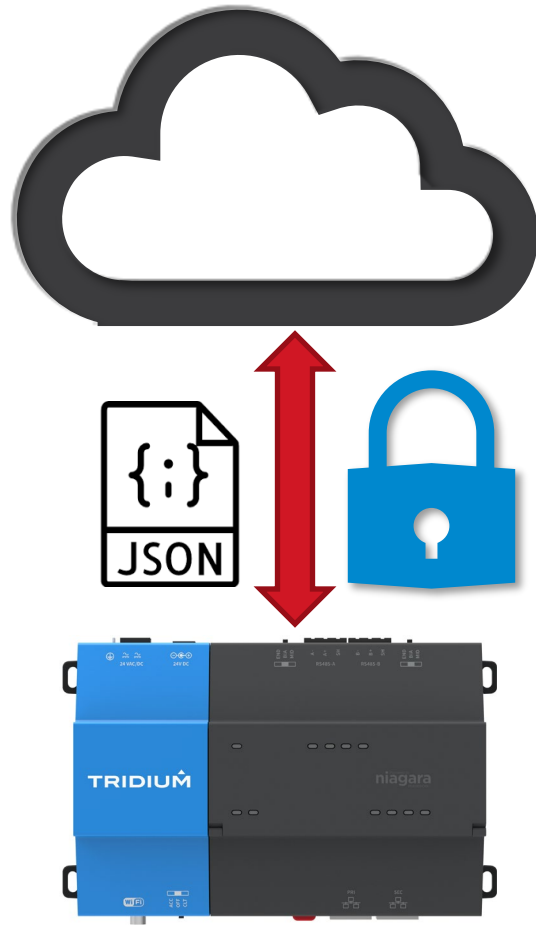
Certificate Signing Request Manager

Filename	Subject	Subject D N	Not Before	Not After	Extensions
VAV_01.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_02.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_03.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_04.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_05.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_06.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_07.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_08.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder
VAV_09.pem	servercert	CN=servercert,O=Tridium\, Inc.,C=US	02-Nov-20 5:09 PM EST	02-Nov-22 6:09 PM EDT	Certificate Extension Folder

- Significantly reduces the time spent signing multiple certificate signing requests
  - Workbench Tool provides the native simultaneous bulk signing of certificates with the same CA
  - Critical Enabler for BACnet/SC
- No need for a 3rd party signed certificate converter to generate browser compatible formats
  - Provides the ability to generate a signed certificate in PKCS7 format
  - Simplifies the process of generating signed certificates essential for ensuring secure Browsers access



# Enabling Cloud Connectivity



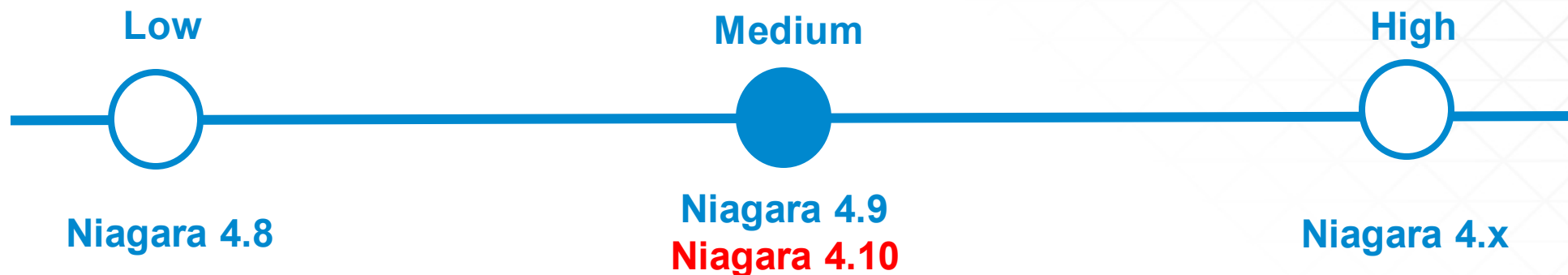
Reduce the time and complexity of integrating Niagara with cloud solutions with updated connectivity options.

- Updates to Niagara MQTT driver to support Google Authentication (JWT).
- Utilize the JSON Toolkit, introduced in Niagara 4.9, to construct bespoke messages into required formats for cloud communication.



# Securing Niagara - 3<sup>rd</sup> Party Module Signing

## Default Verification Mode by Version



Verification Mode	Description
Low	Modules that are unsigned, untrusted, or have expired certificates will cause warnings but still function. Error if signed module modified after it was signed. Can be increased to Medium or High.
Medium	All modules must be signed by valid, trusted certificate (may be self-signed). Can be decreased to Low or increased to High
High	All modules must be signed with CA Certificate. Can be decreased to Medium.





# Supported Infrastructure

Keeping pace with advancing infrastructure to enable more efficient, long term support.

## Supported OS/Browser/DB

OS, Browser, DB	Version
Red Hat Enterprise Linux	7.7, 8.1
Windows Server	10 (64bit), 2016, 2019
VMWare ESXi	6.7
Oracle Database	19c, 18c ... 12.2/12.1
MySQL Database	8
MS SQL Server Database	2016, 2017, 2019
Browsers (Current Rev)	Chrome, FireFox, Microsoft Edge
Mobile Browsers	Safari (iOS 12, 13), Chrome (8, 9, 10)
Niagara SystemDB	Orient v3

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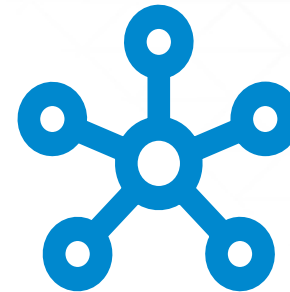
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