Niagara 4.13 Features

The following new features and functionalities are available for testing in Niagara 4.13:

- **Multi-Tiered SystemDb:** Create Niagara Network architectures of any layout to adopt complete framework solutions. Query an entire Niagara system of any size from a single location. Expedite configuration of global, regional, and local supervisors through virtual Px views or hierarchies. Do all this and more with the new SystemDb features:
  - Reachable Stations
    - Enabled the Niagara network to identify all available station-to-station connections, mapping routes across a multi-tiered Niagara network from top to bottom
    - Improved the nspace ord scheme to resolve to virtuals found along the reachable stations route
  - Multi-tiered System Indexing
    - Expanding upon the introduction of the SystemDb in 4.6 where all subordinate-station, entities (a component's ord identifier, its tags, and its relations) could be indexed and stored, the service can now reach the subordinate's subordinate-station and beyond
  - Multi-tiered Virtual Px Support
    - Optimized ord binding translation to resolve virtual Px views of components along the reachable stations route
    - Augmented Px file on-demand import to retrieve Px files in a multi-tiered Niagara network
- **HTML5 Niagara Network Station Manager View:** Offers improved user experience with drag-n-drop function in HTML view. Access the Station Manager view from a browser running on the local (or remote with VPN) network for added flexibility. Enhanced workflow efficiency eliminates the module and version dependency guessing game: open a browser, login, and go! The HTML5 Niagara Network Station Manager view includes the following new features:
  - Device Database Pane
  - Niagara Network Device Discovery Pane
  - Trace Descendants, Edit, Match and New Commands
  - Hyperlink to Certificate Manager

- **Certificate Manager Enhancements and HTML5 View:** Provide access to Niagara's Certificate Management for the IT network admin persona through just a browser eliminating the need for Workbench. Supports Elliptic Curve Certificate-type creation and the leveraging of smaller and stronger keys, keeping with digital signature standards.
    - Context-sensitive Subject Descriptors aid in the setup/configuration of a certificate – similar to the Security Dashboard feature
    - HTML5 Interface
    - Supports Elliptic Curve (EC) Certificates Creation
    - Robust Certificate Extension Support - Add extensions a la carte:
        - Extensions: Key Usage, SAN, Extended Key Usage, Basic Constraints, CRL Distribution Points
            - Basic Constraints - Supports CAs or Entity
            - Subject Alternative Name (SAN) - Supports a variety of identity types, including email, DNS name, directory name, uniform resource identifier (URI), IP address, registered ID
- **Subscription Licensing:** Subscription-based products can be purchased using OpEx instead of CapEx for purchasing flexibility.
- **Containerized Niagara:** Containerized Niagara offers simplified deployment of Niagara in cloud-based environments and for third-party hardware. OEMs can add their own applications as required prior to deployment. For OEMs using a container management system, simplified container management and updates facilities ease remote deployment and updating of Niagara on connected devices. Containerized Niagara offers the following new features:
    - Niagara Framework supplied in a Docker container, Linux NPSDK
    - Support for AMD_x86 and Arm64 architecture
        - Can provide custom support for different architectures
    - Subscription-based – purchase using OPex v. CAPex – allows for purchasing flexibility
- **Haystack 4 Support:** Haystack 4 represents the latest update to the Haystack Tag Dictionary. Tagging enables the analysis of large quantities of disparate data and provides essential insight into your building systems and equipment operations. Tagging also eliminates the inherent issues associated with bespoke point naming schemas. Conforms with Division 25 and the prospective ASHRAE Standard 223P.
    - Tag Dictionary Support
        - Dictionary primarily uses the defs.json and protos.json files produced by Project Haystack to generate the dictionary's tags, tag groups, relations, and tag rules
            - As new versions of these files are released, deployed dictionaries should be updatable in-place and without a module update from Tridium
        - An additional, customizable configuration file supplies tag rules that unlock some tagging convenience features in Niagara Framework
    - Migration
        - For stations already tagged in Haystack 3, a new migration action will add Haystack 4 items that are equivalent to the Haystack 3 versions

- **Modern Authentication Support for Email Service:** Email authentication support includes the following new features:
    - Maintain good security posture using preferred authentication by major email providers: Microsoft (365/Exchange) and Gmail
        - Outgoing email accounts are utilized to send out reports, charts, and alarms from a station through the smtp transport
        - Incoming email accounts are utilized to receive alarm acknowledgements to a station through the pop3 or imap transport
    - OAuth2, Client Credential Flow authentication for unattended email integration
    - Security Dashboard Card to monitor email service security best practices
- **Edge Tools Updates:** Reduces time spent installing, commissioning, and configuring multiple Niagara devices. The latest updates to Edge Tools include:
    - Enhanced Provisioning Job Steps
        - Bulk Deployment enhancements of (all) templates includes a new property for adding comments in Excel
            - Relations can either be CSV in single or in multiple rows
            - Also enables the ability to ignore rows in a template
            - Improved blank row detection - can now skip over blank rows and continue the search
        - Bulk Deployment of component templates offers the ability to specify multiple components for relations (Comma separated values) in template config spreadsheet.
    - Certain Provisioning job steps can now be edited prior to running the job, including:
        - SAML Authentication Scheme Setup
        - Install App Template
        - Deploy Template (Device, Component, Station)
        - Export App Template
        - Update Niagara Network Connections
        - Copy Supervisor File
        - Copy Local File
- **Template Improvements:** Reduces time spent installing, commissioning, and configuring multiple Niagara devices with templates.
    - Enhance template organization capabilities by allowing user to create sub-folders for storing templates
- **Unattended Installation:** Run a Niagara installer for Windows or Linux without the need for user input.
    - For both Windows and Linux: new properties file to construct installation choices prior to execution via the command line
- **SysLog Integration:** Collect all Niagara logs in a centralized location and meet security requirements for integrating standard IT tools for analyzing log files**.**
    - Syslog Platform Service
        - Direct a Niagara host to send the following logs to a 3rd party syslog server:
            - Platform, Station, and Workbench Logs
            - Station and Security Audits
    - Security Dashboard Card to monitor Syslog Service security best practices

- **Updated OS and Enterprise Applications:** In Niagara 4.13, support has been added for several new operating systems and enterprise applications including:
    - Windows 11
    - RHEL v9
    - Ubuntu 22.04
    - Windows Server 2022
- **Video Driver Framework**: Integrate live streams from industry standard cameras into the Niagara Framework to provide in HTML5 browser viewing
    - Display Real Time Streaming Protocol (RTSP) in a browser using ffmpeg transcoding to HTTP Live Streaming (HLS)
    - Additional browser support for Pan, Tilt, Zoom (PTZ) cameras with the addition of Pan Tilt Joystick, Zoom Slider, Mouse Down Button, and Video Multistream Pane Web Widgets
- **Enterprise Security**: Optimized workflow for Join and Replication processes, and enhanced the logs and debug in the process to provide clear feedback to the user on associated errors and workflow statuses
    - Join Process
        - Grouping the remote and local station instructions, hints, paragraph, and segregating the elements for better usability
        - Auto filling the station parameters and values in add, edit, remote and discovered station dialogs
        - Optimize user sync manager with default configuration under Niagara Network for supervisor, subordinate, and peer
    - Replication Process
        - Enhanced the console logs for manual and auto replication from supervisor to one or more subordinates
        - Job summary for replication is now displayed to provide more information about the feedback, data and tables that are processed as well as debug statuses
- **Niagara Analytics:** Visualize energy usage performance with an established baseline displayed on an Analytics Web Chart to derive energy savings opportunities
    - Customize a web chart or dashboard by adding an additional time series to represent a baseline to a dataset
    - Configurable settings such as: node color, time-period, baseline time range, and align day of the week
    - Updated documentation across the product to enable easier application design
    - Large collection of general hardening and outstanding defect clean up

Please reach out to tridiumbetatest@tridium.com for any questions, to report any issues or to start testing Niagara 4.13.