



niagara data serviceTM

PART OF THE NIAGARA CLOUD SUITETM

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niagara
cloud
SUITE™
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niagara
data service™
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& Pricing**



niagara cloud SUITE™

Niagara Cloud Suite is a scalable cloud-based solution that provides secure, remote building management services in accordance with Tridium's model of open and extensible integration among devices, services, and applications.

PREREQUISITES & HOSTING:

- Niagara Framework® Supported Versions
- Active Software Maintenance Agreement
- Hosted on  Microsoft Azure

COMMITMENT TO 'OPEN' RESTS ON 5 TENETS



Niagara Cloud Suite enables Niagara Framework to meet/exceed Niagara Community demands along each of its Five Dimensions of Growth & Innovation

DEPLOYMENT EASE



VISUALIZING DATA



INTEROPERABILITY & CONNECTIVITY



CYBER DEFENSE



COMPLIANCE



Niagara Data Service supports and advances Niagara along every dimension.

NIAGARA CLOUD SUITE IS A KEY ENABLER

For Cloud Backups
(Baseline & Scheduled)

niagara
data service™

- **NEW:** Alarms Management UI
- **NEW:** Alarms Service API
- Contextualized Data
- Cloud Historian
- Live Read/Write
- 3rd-Party App Access via API

niagara
recover™

niagara
remote™

For Remote Engineering
& Monitoring

3rd-Party
Apps

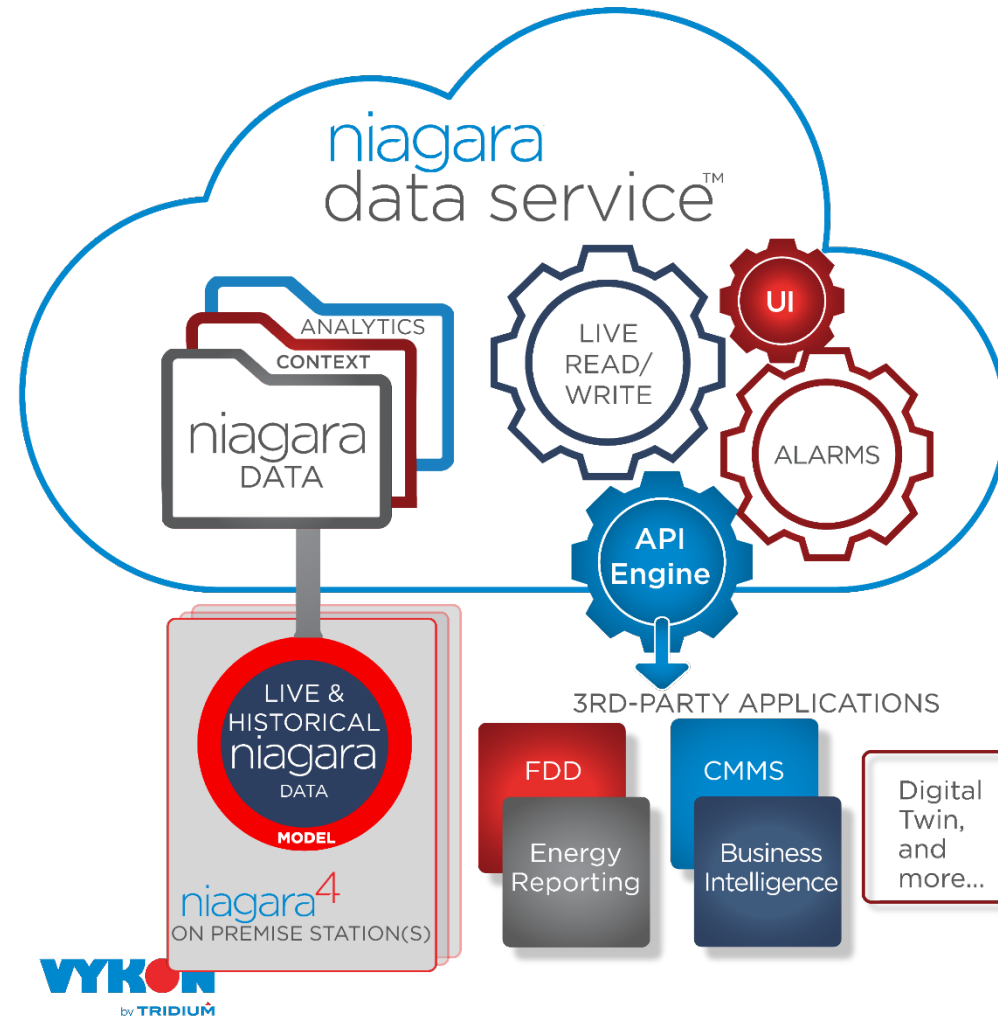
customer
clouds

Designed to simplify your
journey to the cloud

Designed for cyber
security and protection

FEATURES/BENEFITS

- **No Add-On Gateways**
 - Cyber Defense Advantage
 - IT Friendly
- **Clean, Contextualized Data**
 - Preserves Investment in Tags
 - Saves Time/Fewer Errors
- **Exportable Data Model**
 - Populate BMS Overlay Dashboards & Analytics
- **READ-WRITE via API**
 - Enable Seamless Workflows with BMS Overlay Apps
- **Alarms Management UI**
 - Manage Alarms from within Niagara Cloud
- **Alarms Service via API**
 - Enable BMS Overlay Apps to Query Alarm Database



niagara data service™



API Architecture: Enables easy connection to 3rd-party applications



**Contextualized Data for Trend Analysis
— Supports Data Interoperability**



Live Read & Write of Data via API



Alarms Management

NOTABLE FEATURE #1: API Architecture



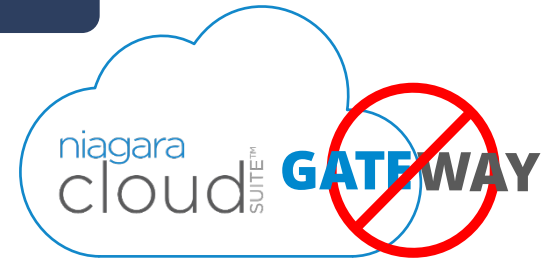
KEY BENEFITS:

- **Built-in APIs support secure extraction and import of Niagara data to customer-preferred BMS overlays (e.g. Automated FDD, Tenant Amenity, energy modeling, digital twin, etc.)**
- **One cloud storage location allowing for multiple third-parties to access Niagara fully contextualized data. Preserves data ownership.**
- **Predefined JSON payloads for cloud export. Saves time. Makes it scalable. Reduces errors.**



CYBER DEFENSE BENEFIT

- **No need for another Gateway;
Addresses most Common IT
Objection to Smart Building Tech**



NOTABLE FEATURE #2: Contextualized Data for Trend Analysis



KEY BENEFITS:

Eases Data Normalization and Integration for all Downstream applications

- **Upload, store, analyze Niagara histories with model data**

Flexibility & Performance

- **View histories on-demand from anywhere**
- **Increase performance of on-prem Niagara devices by seamlessly archiving data to Cloud**



COMPLIANCE BENEFIT:

Meet Data Ownership Requirements

- **Copy of data can be stored locally and managed as archive, up to user's discretion. Tridium does not own the end user's data**

NOTABLE FEATURE #3: Live Read & Write of Data via API

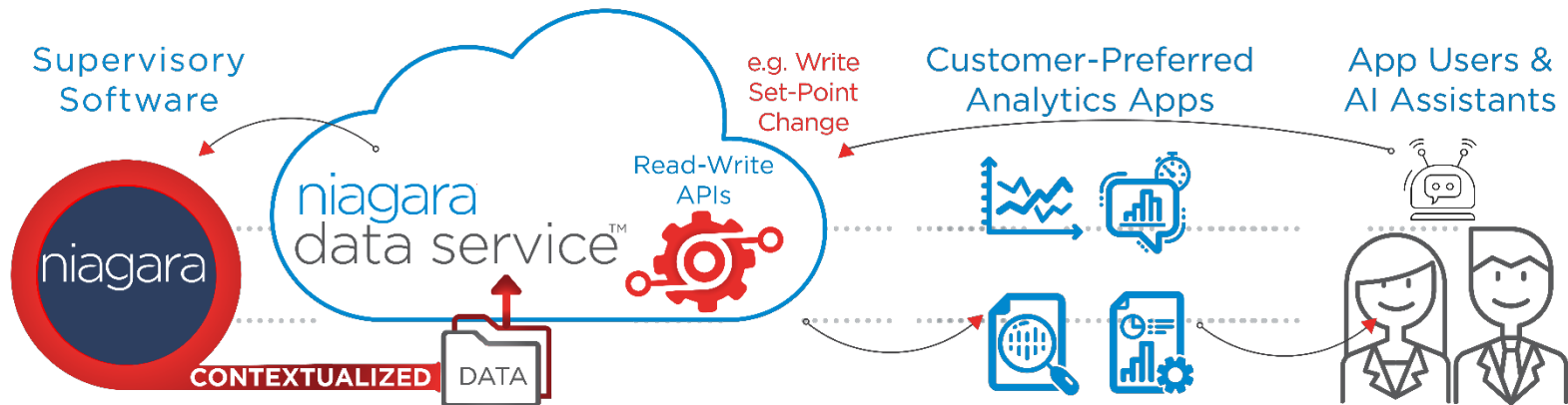


KEY BENEFITS:

Developers are empowered to seamlessly integrate with the Niagara platform in real time via these APIs:

- Gain unparalleled flexibility and speed when building custom applications, automating workflows, or enhancing existing features
- Receive and analyze live data in the app overlay and push changes in near real-time to Niagara supervisory control
- Program a cloud-hosted overlay app to adjust set-points etc. in response to observed conditions

INTERACTIVE REALTIME DATA



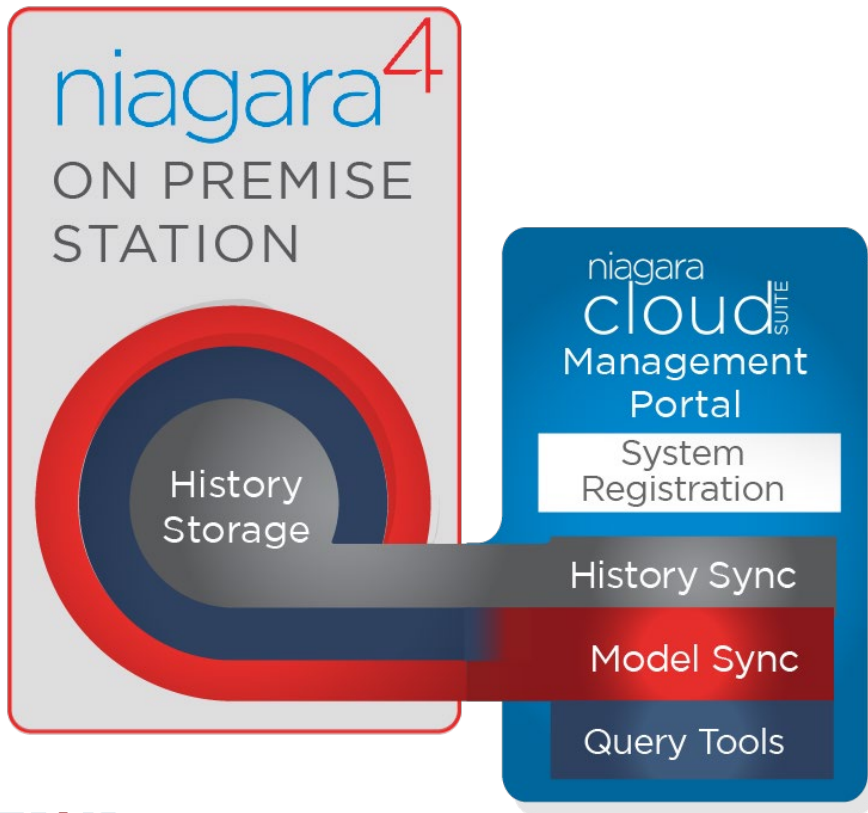
Instant Data Access via Read-Write API:

- **Retrieve live data on-demand**

Dynamic updates:

- **Push changes directly to your Niagara system, eliminating delays and manual updates.**

USER TESTIMONIAL



"By pushing operational data from Niagara to the cloud, Tridium has simplified the acquisition and normalization process allowing us to seamlessly integrate our AI-based intelligent building solutions in a fraction of the time."

Jeff Kimmel
CEO of Elipsa

NOTABLE FEATURE #4: Alarms Management



KEY BENEFITS:

New UI + API

NEW USER INTERFACE
















- **View detailed information about alarms for individual device, all existing devices, or by project**
- **Add notes to an alarm**
- **Export device alarm information**
- **Filter alarms by:**
 - **Devices**
 - **Source and state of source**
 - **Acknowledgment (Ack State, Ack Required, Ack Time)**
 - **Alarm Information (Alarm Class, Alarm Transition)**
 - **Priority (High, Medium, Low)**
 - **Time (Normal Time)**
 - **User**

ALARMS SERVICE API

- **Query alarms database for alarm histories, alarm states, and alarm counts.**

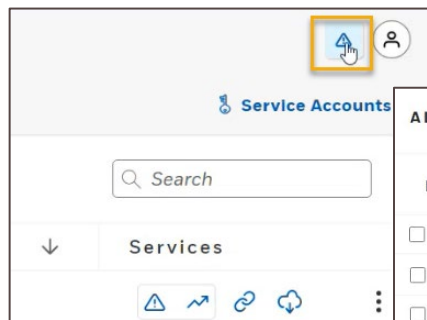
NEW! ALARMS MANAGEMENT USER INTERFACE

ALARMS BY DEVICE

DEVICES					Search
Device	Host ID	Project	Location	Services	
VM_DeviceOne	Win-545E-2B92-FEF8...	New project	Richmond	    	
VM_Device_Alarm	Win-545E-2B92-FEF8...	New project	Richmond	    	
va51j9	Tst-EDDD-740B-4639...	Project 1	Richmond	    	

- Detailed alarm information
- Alarm notes
- Export device alarm information
- Filter alarms

VIEW ALL ALARMS



ALARMS									Filter	Grid
Filters: Duration : Today										
<input type="checkbox"/>	Priority	Device	Source	Status	Timestamp	Alarm Class	Ack Sta			
<input type="checkbox"/>	LOW	va51j9	EnumWritable	Fault	25 Jul 2024, 7:21 PM	defaultAlarmClass	unacked			
<input type="checkbox"/>	LOW	va51j9	EnumWritable	Fault	25 Jul 2024, 7:09 PM	defaultAlarmClass	unacked			
<input type="checkbox"/>	LOW	va51j9	EnumWritable	Fault	25 Jul 2024, 6:56 PM	defaultAlarmClass	unacked			

NEW! ALARMS MANAGEMENT API

QUERY ALARMS DATABASE

Alarms Service API 1.0 OAS 3.0
/api/v1/alarms/v3/api-docs

Servers

https://www.qa.niagara-cloud.com/api/v1/alarms - Generated server url

Authorize

alarm-history-controller

POST

/customers/{customerId}/alarms:search

Query alarms by customerId.

▼

🔒

alarm-state-controller

GET

/customers/{customerId}/devices/{deviceUuid}/alarms/state

Query alarm states by customerId, deviceUuid and, optionally, sourceId

▼

🔒

GET

/customers/{customerId}/devices/{deviceUuid}/alarms/count

Query alarm counts by customerId, deviceUuid and, optionally, sourceId

▼

🔒

ALARM HISTORIES: Provides access to all the alarm records uploaded to the cloud, including those that may no longer exist on the originating stations due to the limited space on a device.

ALARM STATES: Displays the last reported alarm record values for each individual alarm source.

ALARM COUNTS: Reports the number of alarm records, grouped by acknowledgment state (acked, unacked, ack pending) that the device reported last.

SUMMARY

Easy integration of a Niagara network with the Niagara Cloud and archived historical data

Automatically detects and sends all historical data OR user can pick and choose which histories to send

Contextualized by the Niagara data model. Tagged data example: 72 [RTU1, degrees, Fahrenheit, Richmond, VA, Outside Air, Building 51]

Automatic configuration of Niagara Archive History Provider

3rd Party applications can access Niagara Data Service via cloud (API)

niagara
cloud SUITE™

NIAGARA DATA SERVICE ORDERING INFORMATION

Part Number	Volume
NCS-NDS-GOLD	600 GB
NCS-NDS-SILVER	300 GB
NCS-NDS-BASIC	150 GB

Based on query volume (Egress)

Should the annual data egress limit be exceeded, data overages are allowed at the list price/GB per month.

MAJOR NIAGARA PLATFORM EVOLUTION VIA CLOUD

DEPLOYMENT EASE



- **Removes Budget Obstacles**
 - SaaS: Pay-as-you-Go
 - OpEx, not CapEx
- **Flexibility & Productivity**
 - For the SI
 - For the end-user

INTEROPERABILITY



- **Moves and stores Niagara Histories = Trend Data Enriched with Tagging**
 - Contextualized data is ready for visualization, analytics and ML/AI applications
- **Live read and write of data allow for fast retrieval & updates/override**

CONNECTIVITY



- **API-First Architecture**
- **Connects to Any Customer-Selected BMS Overlay Software or Business App**
- **End-customer investment in data is protected when switching overlays**

CYBER DEFENSE



- **No Add-on Gateways Needed**

COMPLIANCE



- **Supports standards**
- **Preserves customer's ownership of data and investment in data engineering**
- **Supports partner collaborations**
- **Keeps Future Growth Paths *Open***



THANK YOU

To learn more about how to purchase and start using the Niagara Data Service, please contact your Tridium account manager or Niagara partner.