Niagara Data Service - Read/Write APIs

August 8, 2024

Q&A

1. **The term API gets thrown around a lot not just for Niagara Cloud but for many other integrations. How does a typical Systems Integrator add this skillset to their workforce? Tridium and many of the OEM's do not appear to offer any level of training for using API's. Are the plans in the future for formal training relating to API integrations and/or practical use of the HTTP Client driver?**

   "Using APIs" is typically something that a person or company with a software developer skillset can do. Many integrators eventually choose to add software developers to their team who would be able to use APIs to build their offerings. With Niagara Cloud Suite, we are using the APIs to provide the UI that you see in NCS. These same APIs are often usable by a third-party graphics or analytics package like Grafana or PowerBI or Splunk. So, depending on your needs, you may not even need to build this skill, just configure your UI package. If you want to train existing team members, there are a number of "how to use APIs" training modules available on YouTube, etc. But that's a great idea for a future training, or maybe a TridiumTalk, on how to use HTTP Client driver to exercise the NCS APIs.

   The HTTP Client driver might be a useful exercise, but probably less useful, because it's pulling data simply back into Niagara. What Kevin is showing now is "using the APIs" in Grafana, and this was a low-code implementation, basically populating the dashboard with widgets and configuring them. So, if you are looking for a low-code option, this kind of approach may be an option for you.

2. **In terms of building management system (BMS) integration, which protocols does Niagara Framework currently support natively or through drivers? I'm particularly interested in the availability of BACnet, Modbus, and KNX.**

   The integration of protocols into Niagara is all through drivers, as the remote data is normalized into the Niagara Framework object model. We support BACnet, Modbus, and KNX, as well as quite a few other drivers. In addition, there is an extensible driver framework upon which any driver can be built, if it's not available from Tridium directly.

   You can find more information on our drivers' page at
   https://www.tridium.com/us/en/Products/niagara-drivers

   The list of drivers from Tridium can be found here:
   https://www.tridium.com/content/dam/tridium/en/documents/document-lists/drivers/2024-0007-Niagara-Included-Drivers.pdf.

3. **Does the NCS API provide web hooks for event-driven updates or is it request-only?**

   The API supports request-only interactions because it is designed to handle data retrieval and updates based on client-initiated requests. This approach ensures that clients have control over when and how they access the data.

4. I noticed the mention of AI assistants, is that a feature that will become available? For 3rd party integrations, are there any current/future implementations with OpenAI's GPT APIs, or would we need to develop middleware so that these applications can communicate with each other?

We are evaluating the options for providing an AI integration for NCS, both internally, and whether we could enable partner implementation with GPT APIs and the like. AI is receiving a lot of interest in our organization, so I expect you will see something from us soon. Currently you may need to develop middleware, especially if you have specific application needs.

5. Regarding remote access and management with Niagara Framework, is HTTPS the only supported protocol for secure connections? Additionally, does the framework primarily rely on a web browser interface for interaction, or are there other client applications available, similar to the Siemens Desigo CC setup?

We use AMQPS/WS in NCS communication as well, and can support MQTTS/WS, although it is not currently used in NCS. Niagara stations are configured either with a browser, or with our Niagara Workbench client. The Workbench client is typically required for commissioning and setup of the JACE hardware platform.

6. Do these API's only work with Cloud stations?

When the Niagara device transmits data to the cloud via Cloudlink, you can use the NCS APIs to query this data. Ensure that you have an NCS subscription if you plan to send data. Nicole explained the process for obtaining NCS subscriptions during the TridiumTalk.