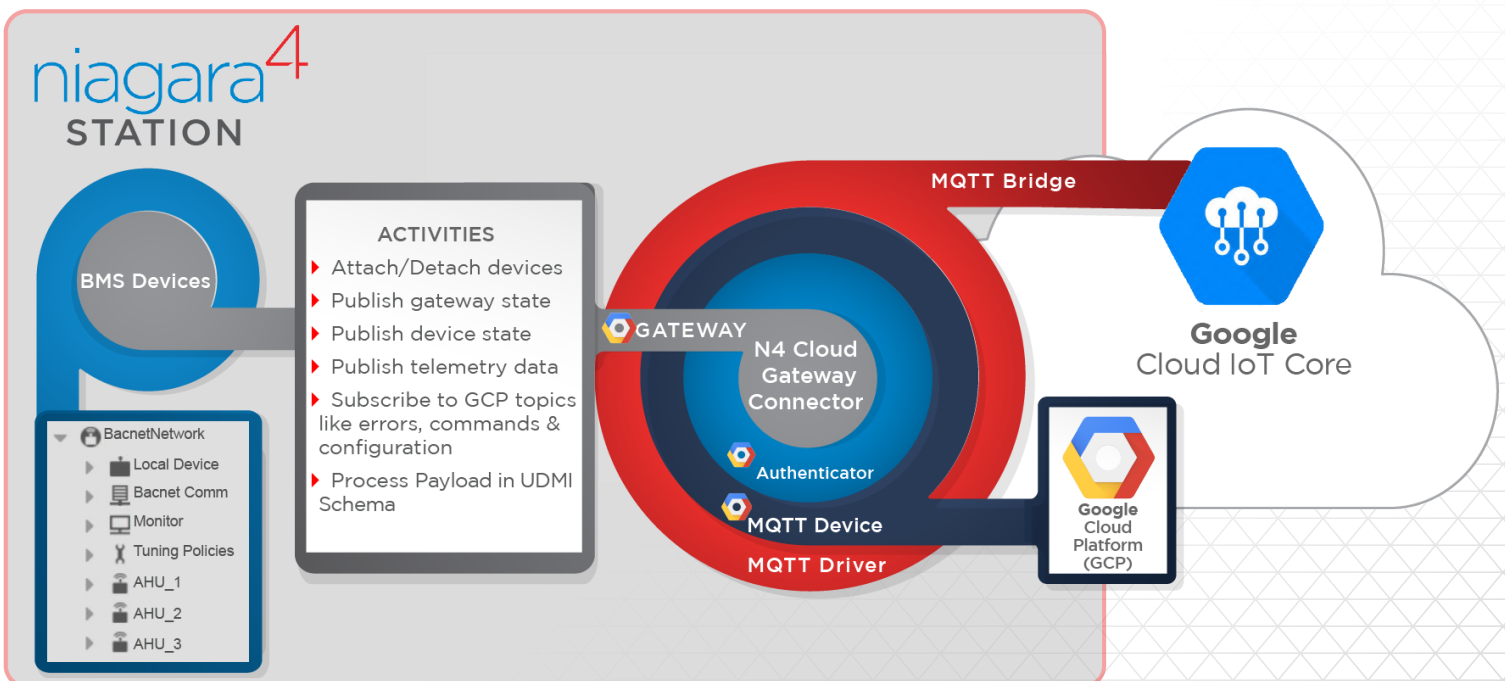# niagara⁴
Cloud Gateway Connector to Google Cloud Platform

PRODUCT DEFINITION

Tridium Professional Services offers a software connector for Niagara Framework® users to integrate data into the Google Cloud Platform (GCP) via MQTT protocol. The Niagara 4 Cloud Gateway Connector to the Google Cloud Platform enables easy and cyber-secure connection and ingestion of data into a Google Cloud IoT core from any number of globally-dispersed devices under supervision of Niagara Framework®.

Niagara 4 Cloud Gateway Connector enables users to bind devices from within a Niagara network to a Google Cloud Platform (GCP) Gateway and to subscribe and publish to select topics, such as device state data and events. This connector integrates directly to a user-defined project on Google's Cloud IoT Core, a repository for collecting, processing, analyzing, and visualizing IoT data. It supports the payload message format UDMI (Universal Device Management Interface) Schema and Pub/Sub messaging via an MQTT driver. Once GCP has ingested data from an IoT Core in UDMI format it is ready for further processing by Google Cloud data analytics services.

The Niagara 4 Cloud Gateway Connector demonstrates the openness and easy extensibility of Niagara Framework® to the managed services of major cloud providers, including their analytics and machine-learning services.

FEATURES

Once a user has set up a Cloud IoT Core in GCP, Niagara 4 Cloud Gateway Connector facilitates setting up a GCP Gateway within a Niagara station. The resulting set of features include:

- **MQTT Bridge**: MQTT (Message Queue Telemetry Transport) is a publish/subscribe (pub/sub) messaging protocol that is increasingly popular for IoT communications. UDMI schema provides a high-level specification for the payload.
- **Device Manager:** A GCP Device Manager is provided to monitor communications activity and device health, to update device configurations, and to manage credentials and authentication.
- **Full-Stack Security**: In addition to all the cyber defenses native to Niagara Framework, data from devices and points communicated across the GCP gateway are protected by GCP security features such as asymmetric key authentication over TLS 1.2 and CA signed certificates.
- **Easy Integration with Google Analytics and ML Services:** Niagara Framework users can integrate with downstream Google data analytics and machine-learning (ML) tools.

ORDERING INFO

Part number	Description
DR-S-GCP	Supervisor-level Niagara 4 Cloud Gateway Connector
DR-GCP	JACE-level Niagara 4 Cloud Gateway Connector

* Niagara 4 Cloud Gateway Connector requires JSON Toolkit and an active Niagara Software Maintenance Agreement (SMA). This is to help safeguard data at the network edge from cyber threats and is another aspect of Tridium's 'Secure by Default' policy regarding all Niagara Framework® offerings.

The Niagara 4 Cloud Gateway Connector is not included in the Niagara core software and must be downloaded from Software downloads in Niagara Licensing.

Building and Training ML Models Using Niagara Data within Google Cloud Platform
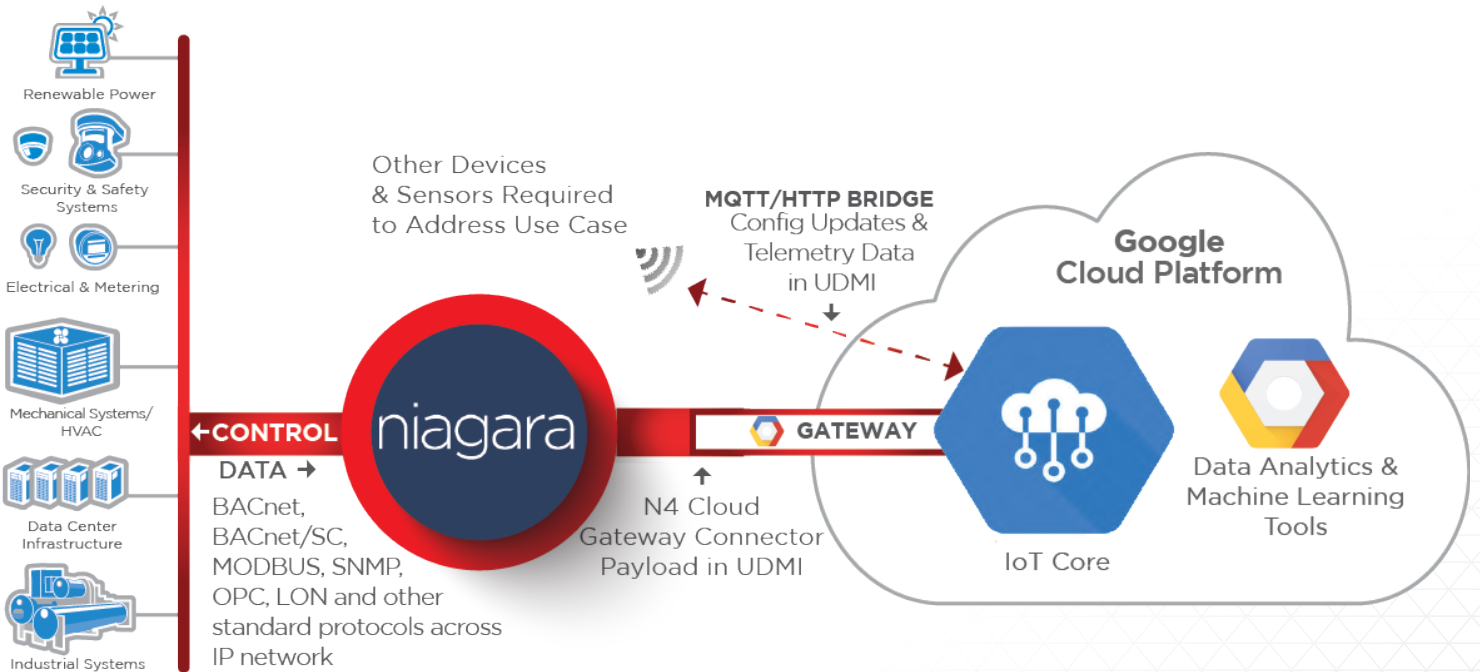
To learn more about how to purchase and start using the Niagara 4 Cloud Gateway Connector to the Google Cloud Platform, please contact your Tridium account manager or Niagara partner.

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