Resource Data Management (RDM) Driver for Tridium Niagara

User Guide

baudrate.io

niagara4

February 23, 2026

Contents

1 Introduction **2**

2 Requirements **2**

3 Quick Start **2**

4 RDM Network **3**

5 Device Discovery **4**

6 Point Discovery **4**

7 Reading and Writing Points **5**

8 Limitations **5**

9 FAQ **5**

9.1 I cannot discover any devices 5

9.2 I cannot write to points 5

9.3 Why does each device need a separate network? 6

9.4 Device shows offline after adding 6

1 Introduction

Resource Data Management (RDM)[1] is a manufacturer of control and monitoring systems, commonly used in refrigeration, HVAC, and energy management applications. RDM devices are IP-enabled and support a proprietary web-based communication protocol. The Baudrate RDM driver for Tridium Niagara enables seamless integration of RDM devices into Niagara stations, supporting device discovery, point discovery, and point read/write operations.

Each RDM device operates independently with its own IP address and web service endpoint. Therefore, each RDM device must be added as a separate **network** in the Niagara station.

This guide outlines the installation and configuration of the Baudrate RDM driver, as well as instructions for discovering devices and integrating points into the Niagara framework.

RDM Network architecture

Figure 1: RDM Network architecture

2 Requirements

- Niagara-powered device with software v4.8 or later, such as JACE, Supervisor, or any OEM version
- RDM driver module and a valid license
- IP network connectivity to RDM device
- Device must have HTTP service enabled and accessible on port 80 or custom port
- Username and password configured on the RDM device if write operations are required

3 Quick Start

1. Copy `rdm-rt.jar` to both JACE and Workbench `modules` folders
2. Restart Workbench and station (if running)
3. In the Niagara station, add a new **RDM Network**
4. Enter the IP address and port of the RDM device under **RDM Parameters**. Note that default IP for RDM devices is 10.1.2.75. Ensure your network settings are in the same subnet.
5. (Optional) enter username and password of the RDM device under **RDM Parameters**
6. Enter a valid license key under the **License** property
7. Open the **RDM Network** and click **Discover**
8. Select and add discovered devices to the station

[1] All trademarks or registered trademarks are the property of their respective owners

9. For each device, open the **Points** extension and click **Discover**
10. Select points and add them to the station
11. Read and write to points using standard Niagara proxy extensions

4 RDM Network

Each RDM device must be added to a separate **RDM Network** container in Niagara, as each device is addressed by its own IP. The **RDM Network** includes the following properties:

- **License** – the code that allows the driver to run on your host.
- **RDM Parameters / Ip Address** – IP address of the RDM device. Note that the default IP for RDM devices is 10.1.2.75. Ensure your network settings are in the same subnet.
- **RDM Parameters / Port** – HTTP port of the device (default is 80).
- **RDM Parameters / Auth** – optional username and password if the device requires authentication. Note that the password is usually required only for write functions.
- **RDM Parameters / Https** – whether to use HTTPS (default is false).

In most cases only **License** and **RDM Parameters / Ip Address** values need to be changed.

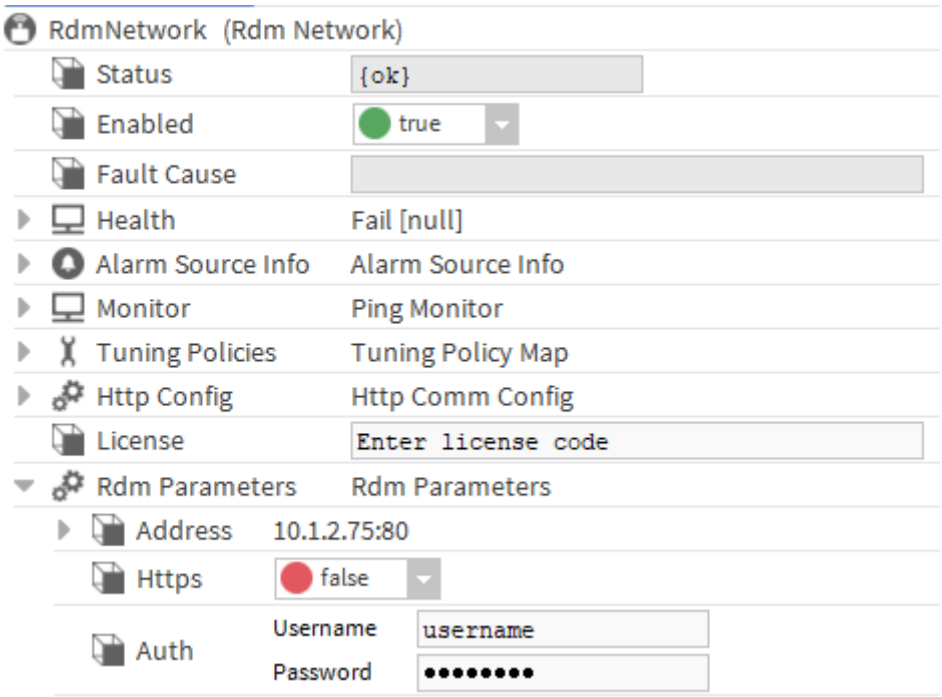

Figure 2: RDM Network properties

5 Device Discovery

To discover devices within a given **RDM Network**, right-click the network and select **Discover**. The driver sends a `GetSlaveListRequest` and receives a list of devices with ID, name, value, and state.

Each discovered device will appear as a **RDM Device** in the station with the following properties:

- **Id** – Device identifier (used internally).
- **Value** – Status or data summary string.
- **State** – Communication state (e.g., Online, Offline).
- **Points** – Extension that holds discoverable points.
- **Poll Frequency** – Frequency for polling values: Fast, Normal, or Slow.
- **Poll Scheduler** – specifies polling rates for periodic data reading:
  - Fast Rate: 5 seconds
  - Normal Rate: 10 seconds
  - Slow Rate: 30 seconds

Device discovery

Figure 3: Device discovery

6 Point Discovery

Each RDM device may expose multiple points, which can be read and written via the driver. Points are typically temperature sensors, digital inputs, setpoints, or status indicators.

To discover points:

1. Open the **Points** extension under the RDM Device
2. Right-click and select **Discover**
3. The driver sends a `GetSlaveRequest` and retrieves all available data items
4. Select desired points and add them to the station

Each point will be added with a **Proxy Extension** and updated according to the configured **Poll Frequency**.

Point discovery

Figure 4: Point discovery

7 Reading and Writing Points

All discovered points can be read automatically by Niagara's polling engine and updated in real-time. Points that support writing (such as setpoints or output commands) can be written to directly via their proxy extensions. Ensure that the username and password are configured under RDM Parameters in the RDM Network, especially for write operations.

- Read-only points update based on poll interval
- Writable points accept user input and write to device
- Write operations are sent via HTTP POST with authentication if required

The driver ensures that all communication with RDM devices follows proper protocol and handles retries, timeouts, and response parsing.

8 Limitations

- Each RDM device must be added as a separate **RDM Network**
- The driver does not support schedules, histories, or alarms at the moment
- Devices must respond to RDM web service endpoints on `/cgi-bin/cgi.cgi?WebService`

9 FAQ

9.1 I cannot discover any devices

- Verify the IP address and port in **RDM Parameters** are correct.
- Check network connectivity: ping the RDM device from the Niagara host.
- Ensure the device's web service endpoint is accessible by opening `http://ipAddress:port/cgi-bin/cgi.cgi?WebService` in a browser.
- Check that the license is valid.

9.2 I cannot write to points

- Ensure username and password are configured under **RDM Parameters / Auth**.
- Verify the RDM device requires authentication for write operations.
- Check that the point is a writable type (e.g., setpoint, output command).

9.3 Why does each device need a separate network?

Each RDM device has its own IP address and web service endpoint. The driver communicates with each device independently via HTTP, so each device requires its own **RDM Network** instance in Niagara.

9.4 Device shows offline after adding

- Check network connectivity between the Niagara host and the RDM device.
- Verify the device is powered and the HTTP service is running.
- Ensure the IP address is correct and the Niagara host is on the same subnet (default RDM IP is 10.1.2.75).