tyrrell products ltd

NEXUDUS

niagara4

Nexudus Space Management for Tridium Niagara 4

Technical Guide

Date	20/03/2024
Revision	1.0

INTRODUCTION

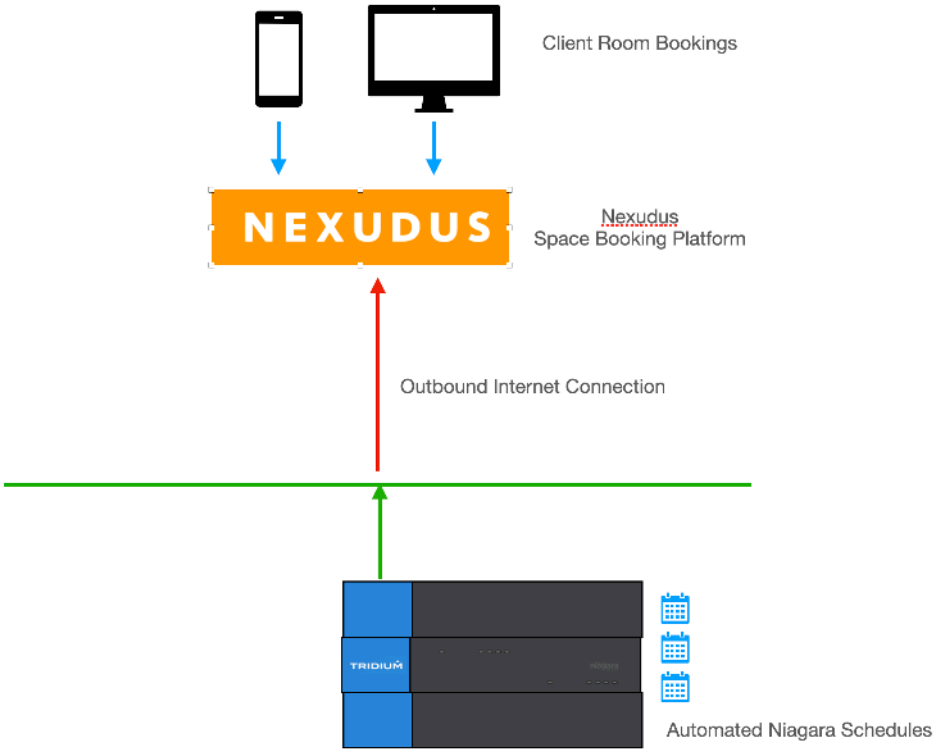
The Nexudus Service allows access to the room / space scheduling data available within the Nexus Cloud Dashboard to automatically generate Niagara Boolean Schedules. The interface allows room / space occupancy books to be periodically subscribed and the local Niagara Boolean Schedule updated automatically. The Niagara Boolean Schedule will be configured with 'Special Events' reflecting each booking data & times.

The Niagara Schedule can then be used to further integrate systems within a building to achieve optimal energy efficiency. For example:

- Lighting Control
- Air Conditioning Control
- Heating Control
- General Energy Reduction.

The Nexudus system should be fully configured and working before starting the Niagara integration.

The Niagara device (Controller / Web Supervisor) will require an outbound internet connection to connect the Nexudus cloud.



LICENSING & SOFTWARE MAINTENANCE

The Nexudus Service is licensed based on the number of Room Schedules being imported to a Niagara Station.

You will need to provide your Niagara 4 Host ID as part of your purchase.

Once the license has been generated you can re-import your niagara license files from the Platform > License Manager providing you have an internet connection, alternatively you can be emailed a copy of the new license files.

The Nexudus Service includes a software maintenance feature. Every new purchase of the Service will support the current release of Niagara 4 and the next release of Niagara 4, any subsequent upgrades will require a software maintenance license to be purchased.

As an example the current release of Niagara 4 is N4.13, a new Service purchase will cover you for N4.13 and a future upgrade to N4.14. Any further upgrades, for example to N4.15 or above, will require a software maintenance license to be updated. The software maintenance license would then cover you for the now current release of Niagara 4 (as an example N4.16). You can upgrade from any previous release with a single software maintenance purchase.

Ensure the target Host License Manager is up to date with a Tyrrell.license and Tyrrell.certifcate containing the required license features.

Any questions or queries in relation to this item should be sent to sales@tyrrellproducts.com

Nexudus License Packs:

Product Code	Description
Nexudus010	Nexudus Cloud Service With 10x Room Schedules
Nexudus025	Nexudus Cloud Service With 25x Room Schedules
Nexudus050	Nexudus Cloud Service With 50x Room Schedules
Nexudus100	Nexudus Cloud Service With 100x Room Schedules
Nexudus250	Nexudus Cloud Service With 250x Room Schedules
Nexudus-Domain-UPG	Nexudus Cloud Service Upgrade 1x Domain Space
Nexudus025-UPG	Nexudus Cloud Service Upgrade 25x Room Schedules
Nexudus050-UPG	Nexudus Cloud Service Upgrade 50x Room Schedules
Nexudus-NUPG	Nexudus Cloud Service Niagara Version Upgrade

NEXUDUS SERVICE INSTALLATION

The Nexudus Cloud Service supports Niagara 4.10 and above.

NOTE:
If your installation is running an an older version of the Niagara software then it must be upgraded to meet the above requirements to run this Service.

Any future updates to the Nexudus Cloud Service will be available for the current release and Long Term Support (LTS) release of Niagara 4. All other releases will become legacy and unsupported.

Niagara 4 Installation:
You will need the version specific JAR files for your Niagara 4 installation. These can be downloaded from the Customer Portal or alternatively contact support.

To install the Service copy the below JARS to the following directory

- nexudus-rt.jar
- nexudus-wb.jar

c:\niagara\niagara 4.x.xx\modules

Once the files have been put into the correct directory close your workbench, and relaunch. Any running Stations on the local machine will have to be re-started to make use of the Nexudus Cloud Service.

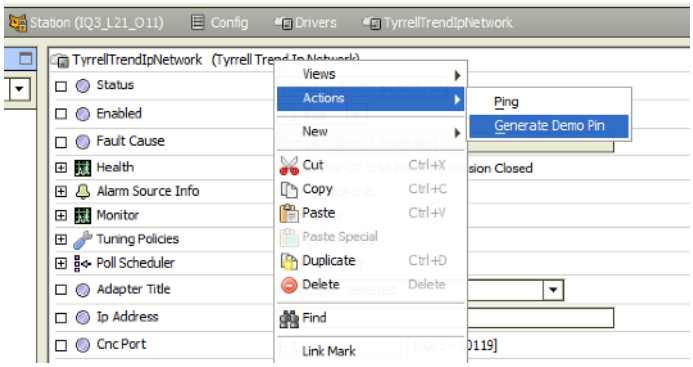
The Nexudus Cloud Service is now ready to use in a local station or to commission / update a N4 based controller. To install the Service on a controller use the Commissioning Wizard on the platform of the target device.

DEMO MODE

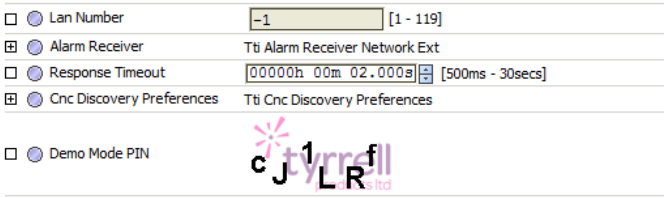
In addition to permanent licenses the driver also supports a two hour demonstration mode.

To activate this mode follow the below steps -

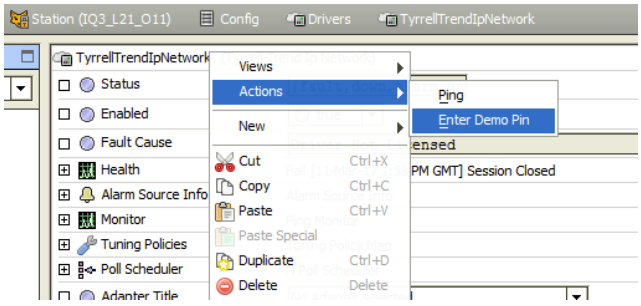
- Insert a new Nexudus Service (see the following section).
- Go into the property sheet of the Service.
- Right click on the ***Service > Actions > Generate Demo PIN***



- An image will appear at the bottom of the property sheet with a demo PIN



- Right click on the ***Service > Actions > Enter Demo PIN***



- Enter the PIN exactly as it is shown in the image
- When entered correctly a pop up box will appear with instructions.
- Restart the station to complete the activation of the demo mode.
- After two hours the demo mode will expire, repeat the above steps to re-activate the demo mode.

PRE REQUISITES

Before proceeding you should ensure the following:

- Nexudus Account is fully configured.
- You have obtained the Nexudus Cloud API connection details.
  These details are site specific to your account and will be required to configure the interface.

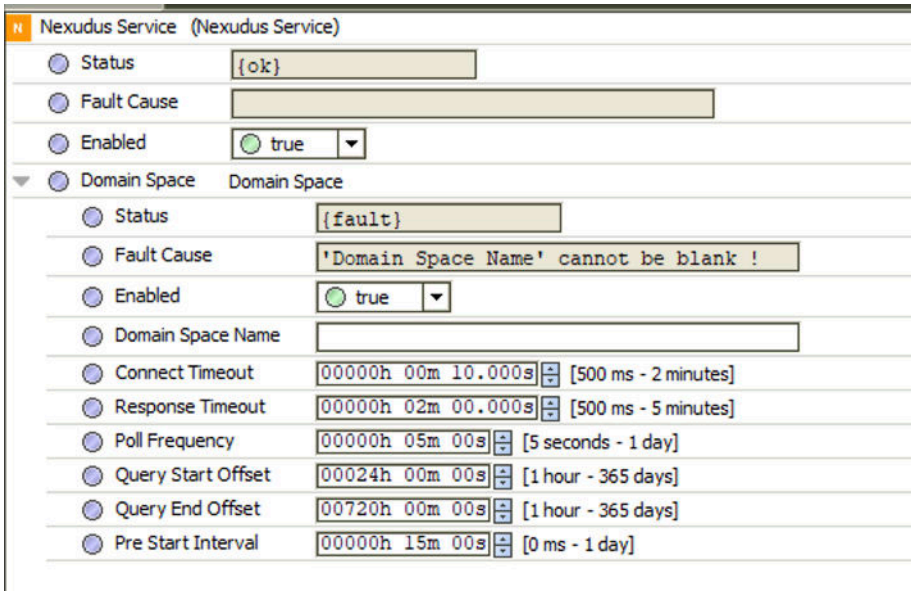
SERVICE CONFIGURATION

Connect to the Niagara station where you intend to configure the Nexudus Cloud Service.

Expand **Config > Services** container and add a new **Nexudus** Service, this can alternatively be dragged in from the **Nexudus Palette.**

Navigate to the AX Property Sheet view of the Service.

From the **Nexudus Palette** add a **Domain Space** component. There will typically only be one Domain Space per integration.



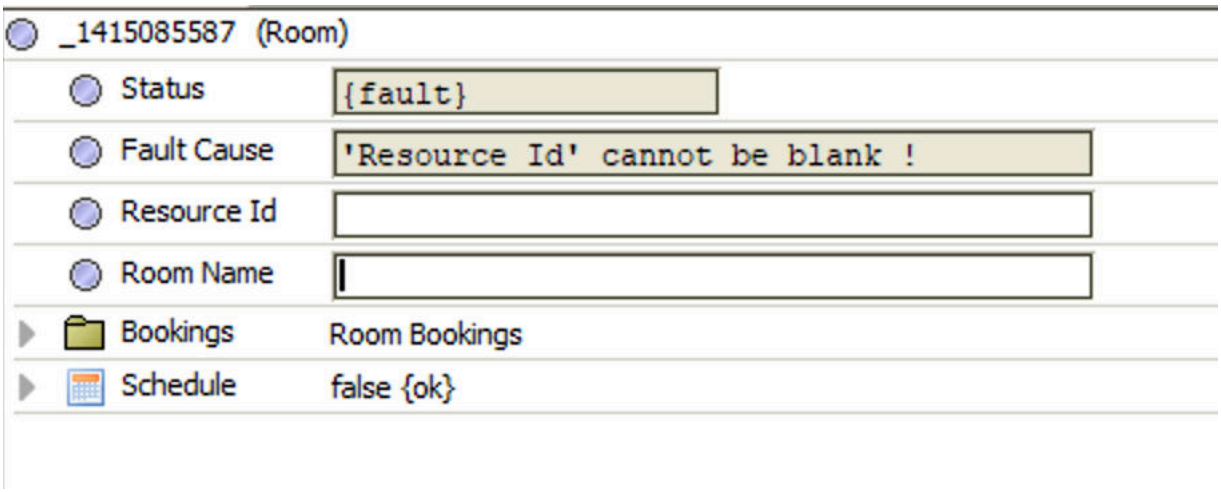
PROPERTY	DESCRIPTION
Domain Space Name	Account Name Of The Nexudus Account
Poll Frequency	Frequency To Request / Update Bookings The Domain Space Supports a Manual Poll Action
Query Start Offset	Time Before Now To Request FROM Default is 24 hours ago.
Query End Offset	Time After Now To Request TO Default is 30 Days Ahead.
Pre Start Interval	Schedule Pre Start Time. If a booking start a 09:00 and the Pre Start Time is 15 minutes the schedule will start at 08:45. This could be considered a ‘warm up’ time.

ROOM COMPONENT

Once the Domain Space Name has been entered the Service will come out of fault and enter a normal & healthy state.

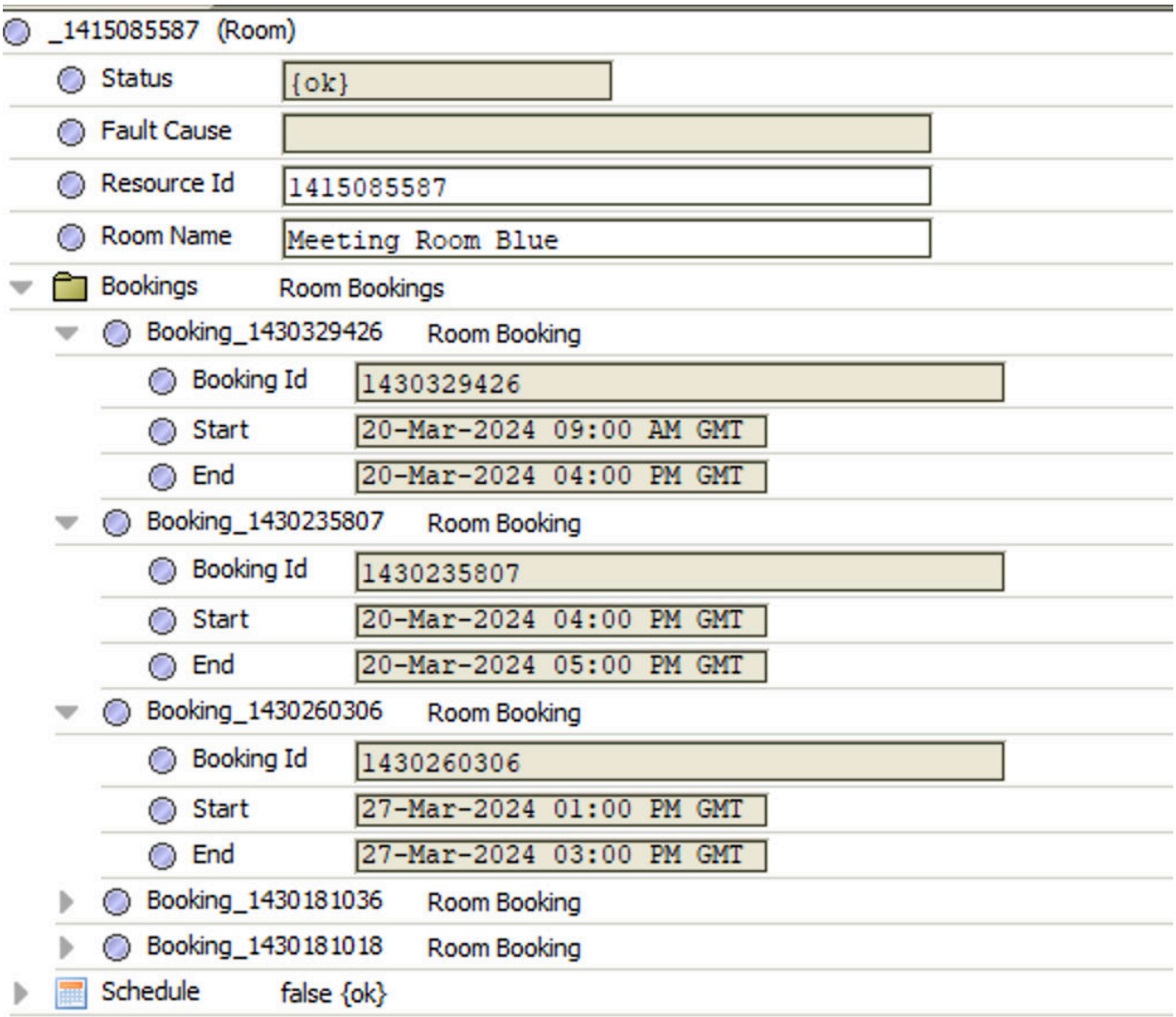
Next you will need to add a **Room** component under the Domain Space. You will need one Room component for each meeting Room / Space you intend to subscribe.

When adding the component you can apply a name to describe the space.



PROPERTY	DESCRIPTION
Resource ID	ID of the Room / Space Subscription Obtain from Cloud Platform.
Room Name	Description of the Room / Space (e.g. Meeting Room / Hot Desk 9)
Bookings	This folder will populate with entries at the next polling interval.
Schedule	The Schedule will be automatically generated based on the data in the Bookings folder.

Example of a Subscribed Room / Space

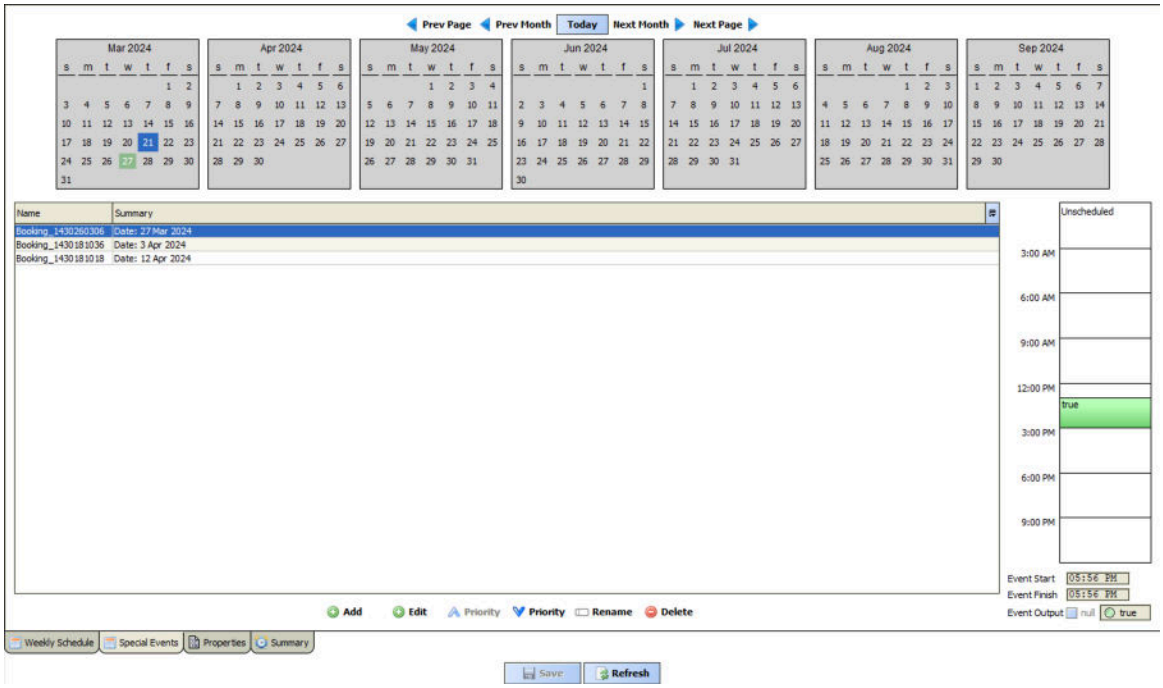


ROOM SCHEDULE

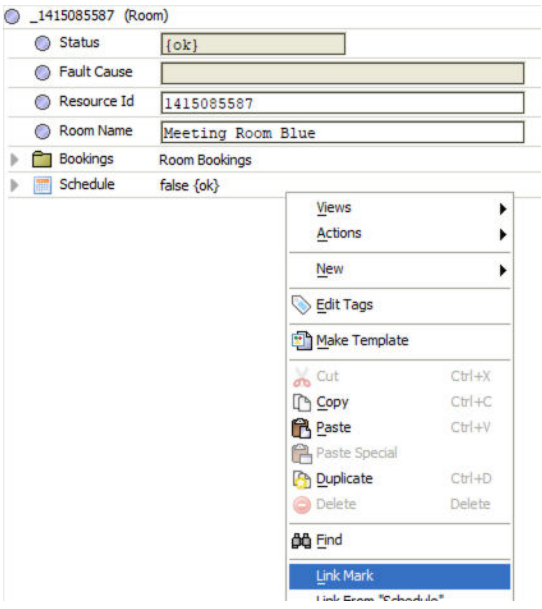
Navigate into the Schedule and review the **Special Events** Tab.

All Subscribed Events, based on the defined FROM - TO time frames (dates) will be shown with their specific occupation times.

The schedule will start 15 minutes (based on the Pre Start Interval setting) before the Room / Space is due to become occupied. This time allows HVAC Plant etc to run and prior to the space becoming occupied.



You can then **Link Mark** the **Schedule** to pass the **Out Value** to other parts of your Niagara Station.



REVISION HISTORY

REVISION	DESCRIPTION
1.0	Draft Release For Approval