Xovis 3D Sensor Integration

for Tridium Niagara 4

Technical Guide

Date   20/04/2022

Revision   1.0

TYRRELL PRODUCTS LTD

TYRRELL PRODUCTS LTD

INTRODUCTION

The Xovis driver allows access to the data reported by your Xovis 3D sensors. Supported devices include:

- PC2S
- PC2R
- PC3
- PC2R Outdoor
- PC3 Outdoor

The Xovis devices should be commissioned with Firmware Version 5.0 and above. All Xovis devices should be powered and have have been fully configured including calibration, creation of scenes & associated logics.

The Xovis driver allows for the easy integration of devices and discovery of the configured data points within logics (in / out, counts etc) and the associated geomatic scenes (lines & zones). Data points can include occupancy count, persons in / out of zone, gender in / out of a zone. Please note that certain features will be dependent on the license features added to the sensing device (i.e. gender recognition).

Schematic:
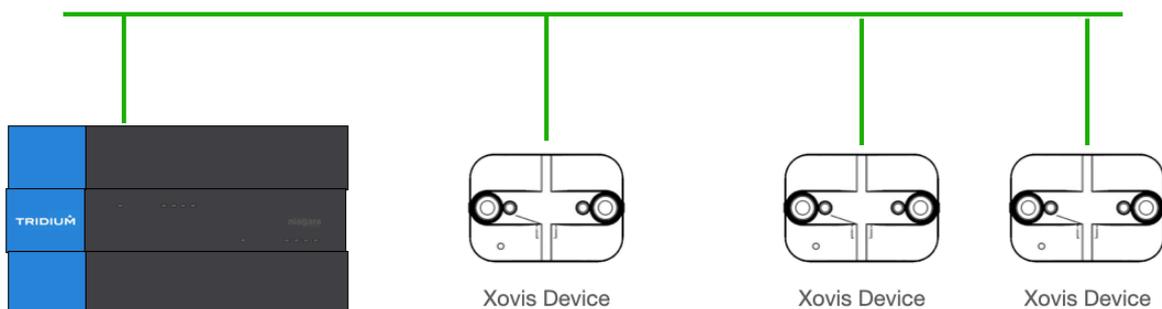
LICENSING & SOFTWARE MAINTENANCE

The Xovis driver is licensed based on the number of Xovis Devices being imported to a Niagara Station.

You will need to provide your Niagara 4 Host ID as part of your purchase. If you are expanding your system in the future you will need to ensure that your Xovis driver has been expanded to cover the number of new Xovis devices being added.

You will need to ensure that your Niagara Station (JACE or Web Supervisor) has adequate Tridium Global Capacity points for the Xovis devices you will be adding to the system.

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 Xovis driver includes a software maintenance feature. Every new purchase of the driver 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 N4.11, a new driver purchase will cover you for N4.11 and a future upgrade to N4.12. Any further upgrades, for example to N4.13 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 N4.13) and the next release of Niagara 4 (as an example N4.14). 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 should be sent to sales@tyrrellproducts.com

TYRRELL PRODUCTS LTD

Xovis License Packs:

Product Code	Description
Xovis001	Xovis Driver For 1x Xovis Device
Xovis010	Xovis Driver For 10x Xovis Devices
Xovis025	Xovis Driver For 25x Xovis Devices
Xovis050	Xovis Driver For 50x Xovis Devices
Xovis100	Xovis Driver For 100x Xovis Devices
Xovis001-UPG	Xovis Driver Upgrade 1x Xovis Device
Xovis005-UPG	Xovis Driver Upgrade 5x Xovis Devices
Xovis010-UPG	Xovis Driver Upgrade 10x Xovis Devices
Xovis010-NUPG	Xovis Driver 10x Devices Niagara Version Upgrade
Xovis025-NUPG	Xovis Driver 25x Devices Niagara Version Upgrade
Xovis050-NUPG	Xovis Driver 50x Devices Niagara Version Upgrade
Xovis100-NUPG	Xovis Driver 100x Devices Niagara Version Upgrade

The driver will also consume Global Capacity points from the Tridium license, this will be one global capacity point per metric in each logic / zone. A logic / zone may offer multiple points depending on how it is configured in the Xovis sensor:

- ‣ Occupancy Level
- ‣ Logic / Zone In
- ‣ Logic / Zone Out
- ‣ Logic / Zone Male In
- ‣ Logic / Zone Male Out
- ‣ Logic / Zone Female In
- ‣ Logic / Zone Female Out

XOVIS DRIVER INSTALLATION

The Xovis driver 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 driver.

Any future updates to the Xovis driver will be available for the current release and previous Niagara 4 release. 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 driver copy the below JARS to the following directory
> ‣ Xovis-rt.jar
> ‣ Xovis-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 Xovis driver.

The Xovis driver is now ready to use in a local station or to commission / update a JACE. To install the driver on a JACE use the Commissioning Wizard on the platform of the target device.

PRE REQUISITES

Before proceeding you should ensure the following:

- ▸ All Xovis devices are online.

- ▸ All Xovis devices are running Firmware Version 5.0 (or above)

- ▸ All Xovis devices have been configured with their required Zones & Logics.

- ▸ You have the admin account details for all Xovis devices.

DRIVER CONFIGURATION

Connect to the Niagara station where you intend to configure the Xovis driver.

The devices within the driver are configurable, the driver itself doesn't not require any initial configuration.

If licensed correctly then the driver will be in a normal & healthy state.
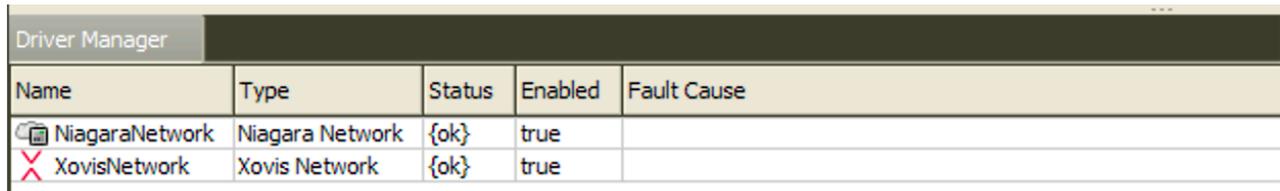
Name	Type	Status	Enabled	Fault Cause
NiagaraNetwork	Niagara Network	{ok}	true	
XovisNetwork	Xovis Network	{ok}	true	

Driver Manager

If there are any faults then the licensing issue should be correct and the Station restarted before proceeding.

ADDING SENSORS

Navigate to the **Xovis Network** and the DeviceManager View will be presented.

The Driver supports automatic discovery of Xovis Sensors, or alternatively a sensor can be added to the network manually.

Press the **Discover** button and a prompt will appear asking for the specific network adaptor to be selected and the target IP range to be defined.

If you Xovis sensors are in the 192.168.1.xxx range then the Search IP Address should be set to **192.1681.** the last octet of the IP should be missed of (defining the entire range).
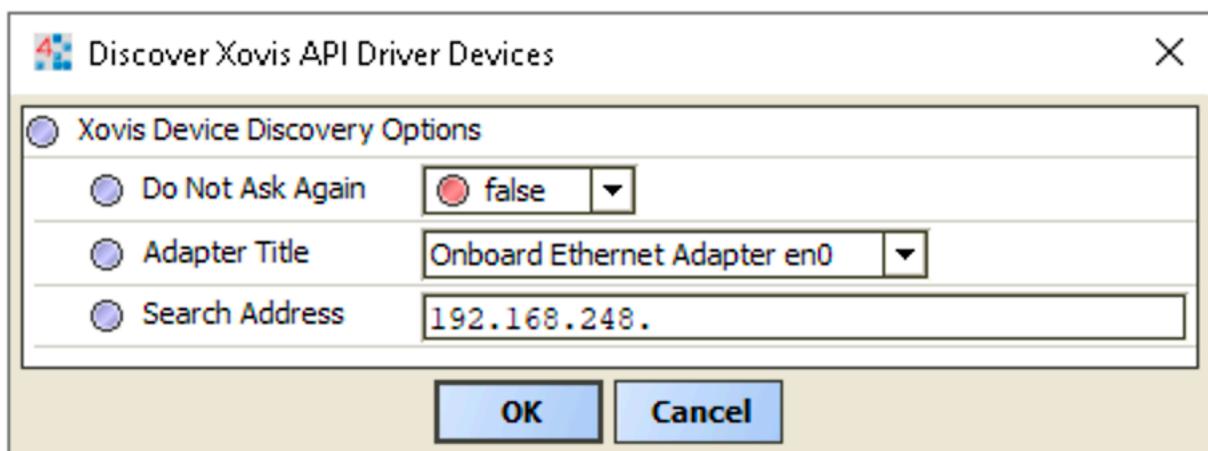
The discovery will then run and check for Xovis devices. This will take approximately 30 - 60 seconds to complete. The discovered devices will appear in the results window.

Add the required Device(s) to the Xovis database.

.

When adding a device you will need to provide details such as the admin account credentials.

It is strongly recommend to only use the HTTPS connection.

Once the device has been added via the HTTPS connection it will initially go into a Fault State.

The Xovis devices certificate will need to be approved in the **Hosts Certificate Management** tool.

Navigate to the Host **Platform > Certificate Management** > **Allowed Hosts**.

Within the **Allowed Hosts** tab approve the Xovis certificate, each Xovis Sensor can be identified by its MAC address. Once selected the **Approve** button should be pressed, ensuring it has a Green Shield icon next to it.

Return to the **Xovis Network** and again **Ping** the new device. Providing the entered credentials are correct the device will come online.

This process will need to be repeated fro every Xovis device being added to the Station.

ADDING POINTS

Within each Xovis device there is a **Points** container with a **Point Manager** view. The available points can be discovered from the device.

The number of available points will vary depending on the **Zones & Logics** that have been configured within the device.

NOTE: Changing a Zone and / or Logic name may require further action to be taken once the change has been committed.

A re-discover and **Match** action should fix any errors that have been introduced.

Name	Display Name	Type	Out	Tuning Policy Name	Logic Id	Count Id
● Zoney McZone Face_in		Numeric Point	158 {ok}	defaultPolicy	-1	-1
● Zoney McZone Face_out		Numeric Point	151 {ok}	defaultPolicy	-1	-1
● Zoney_OCC_balance		Numeric Point	1 {ok}	defaultPolicy	-1	-1
● Office_Line_fw-male		Numeric Point	0 {ok}	defaultPolicy	-1	-1
● Office_Line_bw-male		Numeric Point	0 {ok}	defaultPolicy	-1	-1
● Office_Line_fw-female		Numeric Point	0 {ok}	defaultPolicy	-1	-1
● Office_Line_bw-female		Numeric Point	0 {ok}	defaultPolicy	-1	-1
● Office_Line_fw		Numeric Point	59 {ok}	defaultPolicy	-1	-1
● Office_Line_bw		Numeric Point	57 {ok}	defaultPolicy	-1	-1

NOTE: certain features within the Xovis device may require additional software licenses to be purchased, such as Gender Recognition.

POLL SCHEDULER

Each Xovis Device has an assigned polling frequency, by default this will be **Normal** but can be adjusted to either Fast / Normal / Slow speeds.

The polling frequencies of the Poll Scheduler can be adjusted from the **AX Property Sheet** of the **Xovis Network**.

Thew default settings are:

- ‣ Fast - 1 min

- ‣ Normal - 5 min

- ‣ Slow - 15 min

These settings should be adjusted a tuned to achieve the desired performance / update frequency.

TYRRELL PRODUCTS LTD

REVISION HISTORY

REVISION	DESCRIPTION
1.0	Draft Release For Approval