Onyxx® LX Niagara Tool

Onyxx® LX Niagara Tool

Table of Contents

Product Documentation

This document is part of the overall Lynxspring Onyxx LX documentation library. A comprehensive collection of technical content related to Niagara software is provided online at https://docs.niagara-community.com. The information in this document is written primarily for system integrators. Readers should have some knowledge and proficiency with Niagara software, as well as experience working with JENEsys PC-series and JENEsys Edge IoT controllers.

Document Content

This guide provides information about Onyxx LX's Niagara Tool for configuring Onyxx LX devices in Niagara, and has the following sections:

Overview

Explanation of what the tool is, what it does and the benefits of using it.

Frequently Asked Questions

A curation of mindful questions relating to use cases.

Illustrations

3 visual examples of the 3 kinds of licenses.

Prerequisites

List of software and resources needed.

Installation

Steps to set up the software.

Software Representation

Description and illustration of the Bp Bz Bw Device Manager.

Licensing

Details on licensing requirements and procedure.

Niagara Tool Overview

When Onyxx LX BACnet MS/TP application-specific controllers (ASCs) are included in a Niagara system, you have 2 options to configure them – Onyxx LX User Interface (UI), and Niagara. Onyxx LX UI is freeware created for designing, configuring, balancing, commissioning, and visualizing typical small commercial building HVAC systems using Onyxx LX controllers. It's uncomplicated, intuitive, and a quick way to view and prepare devices using BACnet Objects. When Onyxx LX devices are added to the database of a BACnet network of a Niagara Station, their configuration parameters are available to the Niagara user as BACnet Objects. Niagara displays BACnet Objects in a data table (see Figure E) and offers a Wire Sheet view of them to organize how they're used in the Station. Designers use the Onyxx LX Application Guides to create the operation sequences with the Points their application requires.

The Onyxx LX Niagara Tool is a Niagara module (JAR file) that can be installed on any type of Niagara host – controller, Workbench (ProBuilder), or server (Supervisor) to bring the simple and intuitive configuration experience of Onyxx LX UI to Niagara. While configuration parameters of Onyxx LX devices are discoverable BACnet Objects that can be set using any BACnet browser, the LX UI has always been the easiest way to do so.

Named "BpBzBw-rt.jar," this module adds special views for configuration sections just like in Onyxx LX UI, i.e., Fan, Heating, Cooling, etc., to any Onyxx LX device added to the BACnet network in the host's Niagara Station. These views are used to configure the application's BACnet Objects for each controller depending on the available sequence desired. The LX Niagara Tool allows an application technician to configure Onyxx LX devices over Niagara's IP infrastructure, making Niagara programming and Onyxx LX configuring available in one place, and in less time.

The "BpBzBw-rt.jar" is digitally signed to meet requirements in Niagara. The module palette includes a "BpBzBwService" that imports the license for the Niagara host. Licenses for Niagara controllers and Niagara servers (Supervisors) are perpetual and never expire. Licenses for Niagara Workbenches (JENEsys ProBuilder) expire annually and are renewable. Licenses are bought separately.

Licenses

Part Number	Niagara Host
OLX-S-LX	JENEsys Edge or JENEsys PC controller
OLX-ENG-LX	JENEsys ProBuilder (Niagara Workbench)
OLX-SUP-LX	JENEsys Supervisor (Niagara PC server)

Frequently Asked Questions

Why do I even need this tool?
You don't need it. You may want it though. Onyxx LX devices are BACnet MS/TP ASCs, configurable with Onyxx LX UI, or any BACnet browser. This tool brings the configuration experience of Onyxx LX UI to a Niagara Station. If you'll already be using Niagara on the same project, it's something to consider using.

Does every Onyxx LX controller need to be licensed?
No, Onyxx LX devices aren't licensed. The LX Niagara Tool is a Niagara JAR file used in Niagara hosts only – JENEsys Edge controller; JENEsys PC controller; JENEsys Supervisor.

So, every JACE needs a license for this?
No. Only 1 controller per MS/TP network intended to be configured using Niagara. Remember, Onyxx LX UI can be used from any laptop connected to an MS/TP trunk. Onyxx LX UI is freeware without licenses. You'd use part number OLX-S-LX for the perpetual license.

Should I license my team's laptops for the tool?
It's not necessary. Though doing so would enable any of your technicians to configure Onyxx LX devices in a Niagara Station running (locally) on their laptop with a physical connection to the MS/TP network. You'd use part number OLX-ENG-LX for the annual license.

What's the use case for licensing a Supervisor for it?
This *(part number OLX-SUP-LX)* is just another possibility available.
Example: A Supervisor with a physical connection to the MS/TP trunk is intended to be used as the primary point for viewing and servicing the serial network.

Can the license be transferred from 1 controller to another?
Yes. Contact licensing@cochranesupply.com.

Can I access the LX Niagara tool from a web server?
No. The LX Niagara Tool isn't a web-based graphical user interface (GUI). Rather, it's a Niagara module that reproduces Onyxx LX UI's configuration layout within the BACnet network container of a Station.

Can I use the LX Niagara Tool in Embedded Workbench?
Yes, if the Niagara User's "Default Web Profile > Type" = 'Default Wb Web Profile,' and you're using Tridium Web Launcher as the web client. This Java-based view is Niagara's only way of displaying Driver Manager views to a client.

Frequently Asked Questions (cont.)

Which license is for which Niagara host?

Part Number	Niagara Host
OLX-S-LX	JENEsys Edge or JENEsys PC controller
OLX-ENG-LX	JENEsys ProBuilder (Niagara Workbench)
OLX-SUP-LX	JENEsys Supervisor (Niagara PC server)

Is the Niagara module included in JENEsys ProBuilder?
No. The JAR file can be downloaded from our website at:
https://resources.lynxspring.com/onyxx-lx

Where are the graphics that Onyxx LX UI has?
Only the configuration Input Fields, Sections, and View Tabs are replicated by the LX Niagara Tool. Onyxx LX's automatic graphics stay limited to Onyxx LX UI. You can certainly use Niagara's extensive graphics options as you like.

Illustrations

In Figure A, the LX Niagara Tool (JAR file) is installed on a JENEsys Edge 534. The Controller License *(part number OLX-S-LX)* is added to the Niagara Station's (BpBzBw) Service. Now the same views in Onyxx LX User Interface (UI) are accessible in JENEsys ProBuilder as special views of Onyxx LX devices in the BACnet network of this JENEsys Edge 534's Niagara Station. This makes configuring an Onyxx LX device in Niagara more intuitive than working with a list of their BACnet points.

Figure A

OLX-S-LX controller license for a JENEsys Edge 534
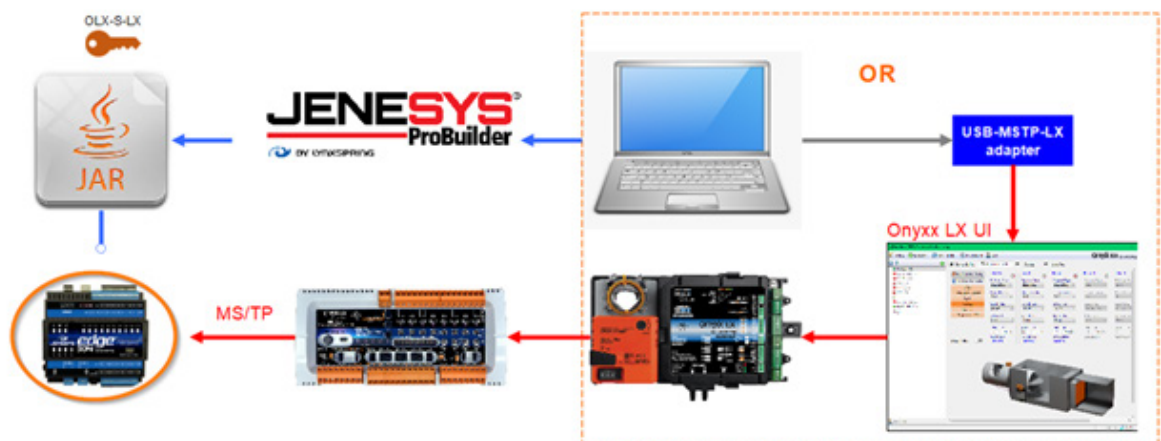
In Figure B, the LX Niagara Tool (JAR file) is installed on a JENEsys PC 8000. The Controller License *(part number OLX-S-LX)* is added to the Niagara Station's (BpBzBw) Service. Now the same views in Onyxx LX User Interface (UI) are accessible in JENEsys ProBuilder as special views of Onyxx LX devices in the BACnet network of this JENEsys PC 8000's Niagara Station. Configuring connected Onyxx LX devices in Niagara is now easier and faster.

Figure B

OLX-S-LX controller license for a JENEsys PC 8000

In Figure C, the LX Niagara Tool (JAR file) is installed on a computer hosting a Niagara Station. The Supervisor License *(part number OLX-SUP-LX)* is added to the Niagara Station's (BpBzBw) Service. A physical connection to the MS/TP network must be made. This can be done by way of an RS-485 to USB adapter/converter, or a BACnet IP router. Now the same views in Onyxx LX User Interface (UI) are accessible in JENEsys ProBuilder as special views of Onyxx LX devices in the BACnet network of this JENEsys Supervisor's Niagara Station.

Figure C

OLX-SUP-LX PC license for a JENEsys Niagara Supervisor

5

In Figure D, the Niagara LX Tool (JAR file) is installed on a laptop hosting Workbench (JENEsys ProBuilder). The Engineering License *(part number OLX-ENG-LX)* is added to the Niagara Station's (BpBzBw) Service. A physical connection to the MS/TP network must be made. This can be done by way of an RS-485 to USB adapter/converter, or a BACnet IP router. Now the same views in Onyxx LX User Interface (UI) are accessible in JENEsys ProBuilder as special views of Onyxx LX devices in the BACnet network of this JENEsys ProBuilder's Niagara Station.

Figure D

OLX-ENG-LX PC license for a JENEsys Niagara Supervisor

Prerequisites

- JENEsys Windows PC Server (Supervisor), JENEsys PC-8000, JENEsys Edge 534/514/414
- TCP/IP connection for Niagara
- Niagara 4 Workbench/JENEsys ProBuilder 4.7.110 and newer (4.10.1 as of the date of this document)
- A running Niagara Station with a properly configured BACnet Network and MS/TP port
- BACnet MS/TP connection (baud rate 9600, 19200, 38400, or 76800) for Onyxx LX devices
- BpBzBw JAR file and license
- Onyxx LX [model] Application Guide

Installation

1. **Get the tool**

   Go to https://resources.lynxspring.com/onyxx-lx/519-onyxx-lx-user-interface and use the **Onyxx LX Niagara Tool** link to download the LX Niagara Tool and unzip the file.

2. **Get a license**

   Request an LX Niagara Tool license by sending the Host ID of the Niagara controller or PC-based Supervisor with purchase order to dallassales@cochranesupply.com. The Host ID can be found on the Platform Administration view of a Platform connection.

3. **Install the module**

   With JENEsys ProBuilder closed, move or paste the "BpBzBw" module into your Niagara modules folder typically at: C:\JENEsys\JENEsys-ProBuilder-N4.n.n.n\modules and launch JENEsys ProBuilder.

4. **Niagara host type**

   If installing the module on a Niagara Server [(Supervisor) *see note in Licensing section*], skip to Step 5. If installing the module onto a Niagara controller, do so using JENEsys ProBuilder's Software Manager.

5. **Add the service**

   Add the "BpBzBwService" from the BpBzBw palette to the Station's Services container.

6. **Import the license**

   Add the module's license via the double-chevron in the AX Property Sheet View of the BpBzBwService and click Save.

Software Representation

The Onyxx LX Niagara Tool adds a default view (Bp Bz Bw Device Manager) of the BACnet Network in the Niagara Station.
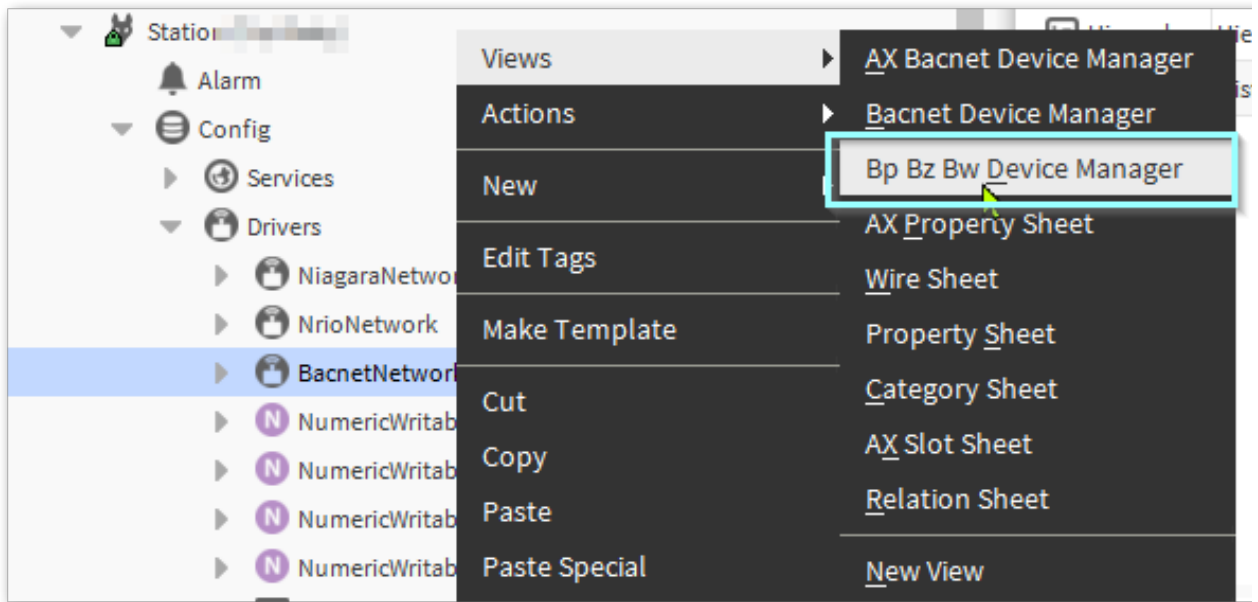
Use this view (or the other 2 BACnet Device Manager views) to discover and add Onyxx LX devices to the BACnet Network Database if not already done so.

Right-click on an Onyxx LX device in the Database and select the configuration section wanted.
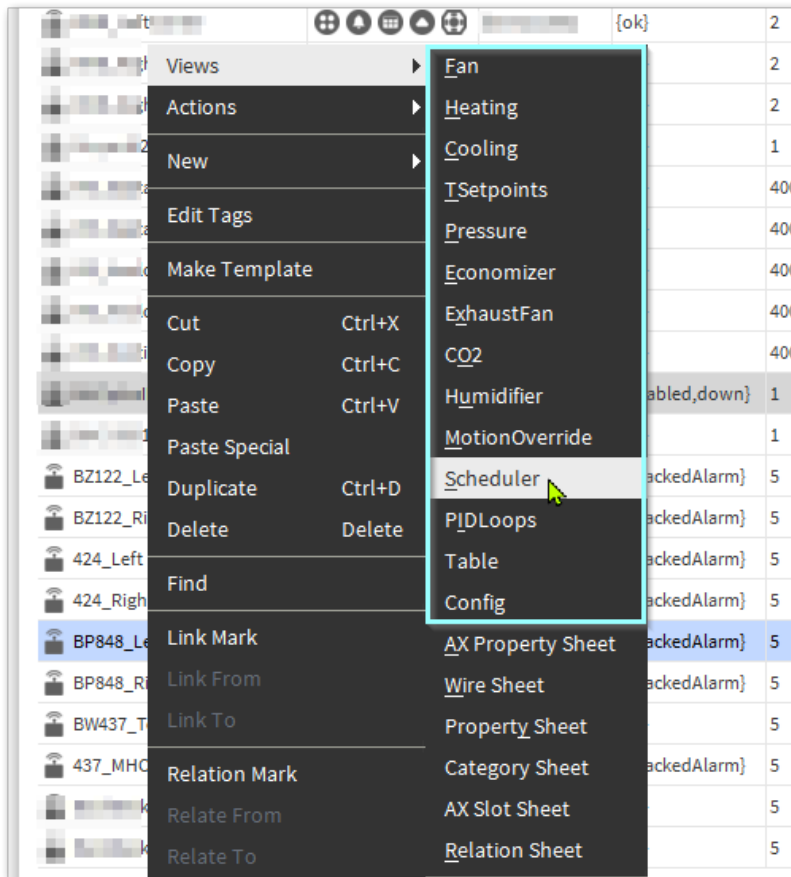
Navigate among this list of views or by the sub-menu displayed within each view.

NOTE: Configuration changes made in these views MUST BE SAVED before they are sent to the Onyxx LX controller.

Licensing

The Onyxx LX Niagara Tool's license is independent of Niagara's. There are no restrictions of device limits and point counts.

To buy an LX Niagara Tool license, send the Host ID of the Niagara controller, Niagara Workbench (JENEsys ProBuilder), or Niagara server (Supervisor) with purchase order to dallassales@cochranesupply.com. Note that a PC-based Supervisor can only satisfy the prerequisites by way of a Station running locally with an RS-485 connection (via a suitable RS-485 to USB adapter/converter, or BACnet IP router).

The Host ID can be found on the Platform Administration view of a Platform connection.

Embracing open software and hardware platforms, Lynxspring develops, manufactures, distributes, and supports edge-to-enterprise solutions and IoT technology that create smarter buildings, smart equipment, and smart applications. The company's technologies and solutions provide the connectivity, control, integration, interoperability, data access and management and analytics enabling users to extract insight, value, and outcomes from operational data.

Lynxspring Professional Services provides comprehensive building automation controls, integration, and application services for all types of buildings, single facility and multi-building environments, new systems, or legacy systems.

Today, Lynxspring's solutions are deployed in millions of square feet of commercial settings in the United States and internationally.

More information about Lynxspring is available at:
https://www.lynxspring.com.