



Debian to Helixx OS Conversion Process

Introduction

This document describes and illustrates how to use Lynxspring's conversion file to convert the operating system of a JENEsys Edge 534 for N4 from Debian to Helixx. Lynxspring's Helixx OS is more trustworthy, has better memory management, and enables more advanced technology and more results than its predecessor. While Helixx is not necessary for legacy JENEsys Edge 534s to perform well, it is our chosen OS for future development and is a requisite to run Niagara 4.10.1 on a JENEsys Edge 534 for N4.

PLEASE NOTE:

- **Debian to Helixx conversion is not available for a JENEsys Edge 534-AX, JENEsys Edge 534-4G LTE or JENEsys Edge 534 with Monnit currently.**

Main Functional Deliveries

The primary objective is to provide a method for converting the operating system of a JENEsys Edge 534 for N4 from Debian to Helixx.

Process Description

Installing the conversion file will replace the Debian OS on a JENEsys Edge 534 for N4 with Helixx and a base image of Niagara 4.2. The controller must then be commissioned in Niagara 4.7.110; 4.9.1 or; 4.10.1 and the 'RunOnyxUpdates' action launched. Stations installed prior to the conversion will persist, as will some (see Step 4) user settings.

Conversion Steps

1. With ProBuilder 4.7.110 or 4.9.1 closed, place the 'os-conversion-Lynxspring-edge534-n4.dist' file into: C:\JENEsys\JENEsys-ProBuilder-N4.9.1.30\cleanDist.
2. Verify the OS version of the JENEsys Edge 534 for N4 in the Platform Administration view of a Platform connection. If the Debian OS (displayed as "linux(7)") is installed, proceed with the remaining steps.

Platform Administration

View Details	Baja Version	Tridium 4.9.1.30
User Accounts	Daemon Version	4.9.1.30
System Passphrase	System Home	/opt/niagara
Change HTTP Port	User Home	/home/niagara
Change TLS Settings	Host	192.168.1.124
Change Date/Time	Daemon HTTP Port	3011
Advanced Options	Daemon HTTPS Port	5011
Change Output Settings	Host ID	Lyx-LSM5-0007-3116-0094
View Daemon Output	Model	JENE-EG534-N4
Configure Runtime Profiles	Product	534-N4
Configure NRE Memory	Local Date	11-Nov-21
Backup	Local Time	15:55 Central Standard Time
Commissioning	Local Time Zone	America/Chicago (-6/-5)
Reboot	Operating System	linux(7)
	Niagara Runtime	nre-core-Lynxspring-linux-armhf-JENE-EG534-N4 (4.9.1.30.0.36)
	Architecture	armhf
	Enabled Runtime Profiles	rt,ux,wb
	Java Virtual Machine	Lynxspring-java-linux-armhf-JENE-EG534-N4 (Oracle Corporation 1.8.0.202.1)
	Niagara Stations Enabled	enabled
	Number of CPUs	1
	Current CPU Usage	10%
	Overall CPU Usage	10%
	Filesystem	
		Total Free
	/	3,610,232 KB 1,368,524 KB
	/home/niagara	3,610,232 KB 1,368,524 KB
	Physical RAM	Total Free
		499,120 KB 78,252 KB
	Other Parts	None

3. Using the Distribution File Installer, install the 'os-conversion-Lynxspring-edge534-n4.dist' file from the /C:/JENEsys/JENEsys-ProBuilder-[N4.7.110 or N4.9.1.30]/cleanDist directory.

/C:/JENEsys/JENEsys-ProBuilder-N4.9.1.30/cleanDist

5 distribution files were found in directory "/C:/JENEsys/JENEsys-ProBuilder-N4.9.1.30/cleanDist"

File	Version	Status	Description
nre-clean-Lynxspring-edge534-n4.dist	Lynxspring1.13	Modified	WARNING: restores unit to empty N4.2 state - removes station data
os-conversion-Lynxspring-edge534-n4.dist	Lynxspring1.17	Modified	Convert operating system to Helix1.1.8
tridium-qnx65-n41-titan-am335x-clean.dist	Tridium 4.1.27.28.1	Different target platform	WARNING: restores unit to empty N4.1 state - removes station data
tridium-qnx7-n4-edge10-clean.dist	Tridium 4.9.1.30	Different target platform	WARNING: restores unit to empty N4.7 state - removes station data
tridium-qnx7-n49u1-titan-am335x-clean.dist	Tridium 4.9.1.30	Different target platform	WARNING: restores unit to empty N4.9U1 state - removes station data

The conversion process will take about 5 minutes in which the device will reboot a total of 4 times. When ready, the heartbeat LED will blink slowly to indicate the platform is running.

- The controller is now running Niagara 4.2 and Helixx 1.n.n version. Licenses, User Accounts, TCP/IP configuration, and any previously installed Station persist. Runtime Profiles, Modules, and user-installed Certificates are reset and will need reconfiguration.

Platform Administration

- View Details
- User Accounts
- System Passphrase
- Change HTTP Port
- Change TLS Settings
- Change Date/Time
- Advanced Options
- Change Output Settings
- View Daemon Output
- Configure Runtime Profiles
- Backup
- Commissioning
- Reboot

Baja Version

Daemon Version 4.2.36.34

System Home /opt/niagara

User Home /home/niagara

Host 192.168.7.2 (OnyxXdemo)

Daemon HTTP Port 3011

Daemon HTTPS Port 5011

Host ID Lyx-LSM5-0007-3116-0094

Model JENE-EG534-N4

Product JENE-EG534-N4

Local Date 12-Nov-21

Local Time 20:58 Central Standard Time

Local Time Zone America/Chicago (-6/-5)

Operating System Linux (1.1.8)

Niagara Runtime nre-core-Lynxpring-linux-armhf-JENE-EG534-N4 (4.2.36.34.38)

Architecture armhf

Enabled Runtime Profiles rt

Java Virtual Machine Lynxpring-azul-zre-compact3-JENE-EG534-N4 (Azul Systems, Inc. 1.8.0.202.152.0)

Niagara Stations Enabled enabled

Number of CPUs 1

Current CPU Usage 3%

Overall CPU Usage 26%

Filesystem

	Total	Free
/	499,656 KB	361,496 KB
/home/niagara	1,998,672 KB	1,992,316 KB

Physical RAM

Total	Free
505,388 KB	405,132 KB

Other Parts None

- Commission the JENEsys Edge 534 for N4 using 4.7.110; 4.9.1; or 4.10.1, following the 2-part process described in the instructions of the desired Onyx Driver package, available on our [partner site](#). If a Station was installed prior to the conversion, ensure it will meet all the Platform dependencies by selecting Verify Software in the Application Director view of a Platform connection.
- After commissioning and the controller reboots, users must delete the current SSL certificate in the User Key Store of the Certificate Manager view of a Platform connection and click reset to create a new one.

Additional Information

- Do not remove power during the conversion process. If power is lost, the controller's flash memory will likely be corrupted and require reimaging.
- The conversion process takes longer than commissioning.
- The JENEsys Edge 534-4G LTE and JENEsys Edge 534 with Monnit do not support Helixx conversion currently. If a conversion distribution is installed on either, it will restore it to Niagara 4.2, but will not perform the conversion.

Considerations

After OS conversion and/or upgrading to 4.10.1, some Niagara tasks have been observed to be functioning differently than usual. The following table shows those noted items and their workarounds. Please consider them as you proceed with the conversion and upgrade while we work to enhance them.

Issue	Cause	Workaround 1	Workaround 2
Station fails if left on device during OS update	OS update restores device to its 4.2 base image, thus invalidating version-dependent Station elements	Click on Verify Software in Application Director	Copy Station before OS update, add during commissioning to 4.10.1, let Software Manager guide in meeting dependencies
Cannot change Platform password in User Accounts		Create a New User	Delete original User and recreate
Date/Time off by 6 hours		To avoid interruptions to histories/alarms, commission without Station, correct time, add Station	Correct time
Tridium self-signed SSL certificate created in 'User Key Store' after OS update invalidates		Delete and reset certificate after commissioning in 4.10.1	