

Dell Networking OS Conversion Guide for the N20xx/N30xx Series

From Version 6.3.x.x to 9.11.x.x and from Version 9.11.x.x to Version 6.3.x.x

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

Copyright © 2017 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

Contents

1 About this Guide.....	4
Before you Begin.....	5
Finding your Digital Product on Dell Digital Locker.....	5
2 Convert a Dell N20xx or N30xx series Switch to a Port Extender.....	6
Upgrading the Device to the Latest Dell Networking OS Version 6.3.x.x.....	6
Installing Dell Networking OS 9.11.x.x on the Device.....	7
3 Convert an N-series Port Extender to a Dell N20xx or N30xx Switch.....	9
Converting an N-series Port Extender to Dell N20xx or N30xx-series Switch.....	9

About this Guide

This document provides instructions for converting a Dell N20xx or N30xx series platform to a Rapid Access Node (RAN) so that you can use it as a port extender (PE) with a C9010 switch. Conversely, the document also provides instructions to revert a converted port extender to an N20xx or an N30xx-series switch.

You can either use a Dell N20xx or N30xx as a switch or a PE for the C9010 switch. You can use the N20xx/N30xx series devices as a switch if you use Dell Networking OS version 6.3.x.x. If you would like to use a N20xx/N30xx series device as a PE for the C9010, install Dell Networking OS version 9.11.0.0 or later.

NOTE: When you convert an N20xx or N30xx switch into a port extender, the conversion package installs Dell Networking OS version 9.11.0.0. If you have already converted the N20xx or N30xx switch into a port extender with Dell Networking OS version 9.11(0.0) and would like to install a newer software version, or convert it back to an N20xx or N30xx switch, refer to the latest *Dell Networking C9010, C1048P, and N20xx/N30xx-series Release Notes* before proceeding.

For complete information about N20xx and N30xx-series installation and configuration, see these documents:

Table 1. N20xx/N30xx Documentation

Information	Documentation
Hardware installation, power-up, and initial software configuration instructions	<i>Dell Networking N20xx/N30xx Getting Started Guide</i>
Software configuration	<ul style="list-style-type: none"> • <i>Dell Networking Configuration Guide for the C9000 Series</i> (for Dell Networking OS 9.11(0.0) or later) • <i>Dell Networking N-Series User Guide</i> (for Dell Networking OS version 6.3.x.x)
Command line interface	<ul style="list-style-type: none"> • <i>Dell Networking Command-Line Reference Guide for the C9000 Series</i> (for Dell Networking OS 9.11(0.0) or later) • <i>Dell Networking CLI Reference Guide</i> (for Dell Networking OS version 6.3.x.x)
Latest updates	<i>Dell Networking C9010, C1048P, and N20xx/N30xx-series Release Notes</i>

Topics:

- [Before you Begin](#)
- [Finding your Digital Product on Dell Digital Locker](#)

Before you Begin

Before you begin, ensure that you perform the following actions:

- Before proceeding, upgrade the C9010 to Dell Networking OS version 9.11(0.0) or later.
- Before converting the N20xx or N30xx switch to a port extender, upgrade the N20xx or N30xx switch to Dell Networking OS version 6.3.0.16 or later.
- If you convert an N-series port extender back to a Dell N20xx or N30xx switch, connect the PE to the C9010 as you can only perform the conversion on the C9010 console.
- You do not have to use the license file for conversion on the switch.

Finding your Digital Product on Dell Digital Locker

After you purchase the license for conversion, you can download the conversion kit from Dell Digital Locker at <http://www.dell.com/support/licensing>. To download the conversion kit, perform these steps:

- 1 Log in to the Dell Digital Locker using your credentials.
- 2 In the search box, enter `Rapid Access Node Conv Lic, CK` and click `Submit`.
- 3 Click the `Rapid Access Node Conv Lic, CK` link that appears under `Product Name`. The product information page opens.
- 4 In the `HARDWAREID` field, enter the Service Tag of the N20xx or N30xx switch and click `Submit`.

This step binds the conversion kit license with the N20xx or N30xx switch.

For information about creating a Dell My Account, see [My Account FAQs](#). For information about using the Dell Digital Locker, see <https://www.dell.com/support/software/Default/QuickStartGuide>.

- Use the `NSeriesRANsw.tgz` file to convert an N20xx or N30xx series switch to a port extender.
- Use the `NSeriesRANtoOS6conversion.tgz` file to convert a port extender back to an N20xx or N30xx series switch.
- If you receive a device through RMA, unassign your license from the old Service Tag and assign the same license to the new Service Tag on Dell Digital Locker. After assigning the license to your new device, download the conversion script.

Convert a Dell N20xx or N30xx series Switch to a Port Extender

Converting a Dell N20xx or N30xx-series switch to a port extender is a two-step process.

- 1 Upgrade the device to the latest Dell Networking OS version 6.3.x.x.
- 2 Install the Dell Networking OS version 9.11.0.0 on the device.

NOTE: Dell Networking recommends upgrading the C9010 to the latest Dell Networking OS version before converting an N20xx or N30xx device to a PE.

Topics:

- [Upgrading the Device to the Latest Dell Networking OS Version 6.3.x.x](#)
- [Installing Dell Networking OS 9.11.x.x on the Device](#)

Upgrading the Device to the Latest Dell Networking OS Version 6.3.x.x

If the device is running a version earlier than Dell Networking OS version 6.3.0.16, follow these steps to upgrade the device to the Dell Networking OS version 6.3.0.16 or later.

NOTE: Before upgrading, ensure that the N20xx or N30xx system has connectivity to the TFTP, FTP, or any other server where the image file resides.

- 1 Copy the N3000_N2000v6.3.0.16.stk image into the device as a backup image.

```
console#copy tftp://10.16.127.35/N3000_N2000v6.3.0.16.stk backup
Transfer Mode..... TFTP
Server IP Address..... 10.16.127.35
Source File Path..... ./
Source Filename..... N3000_N2000v6.3.0.16.stk
Data Type..... Code
Destination Filename..... backup
```

```
Management access will be blocked for the duration of the transfer
Are you sure you want to start? (y/n) y
```

```
File transfer in progress. Management access will be blocked for the duration of the
transfer. please wait...
TFTP Code transfer starting...
29042223 bytes transferred...
File contents are valid. Copying file to flash...
Attempting to send the STK file to other units in the stack...
STK file transfer operation successful. All units updated code.
```

- 2 Enable the new software so that it loads after the next reload.

```
console#boot system backup
Activating image backup ..
```

```
console#show version
```

```
Machine Description..... Dell Networking Switch
System Model ID..... N3024P
Machine Type..... Dell Networking N3024P
Serial Number..... CN0C3M5M2829856B0126A03
Manufacturer..... 0xbc00
Burned In MAC Address..... F8B1.5682.DD45
System Object ID..... 1.3.6.1.4.1.674.10895.3059
SOC Version..... BCM56342_A0
HW Version..... 5
CPLD Version..... 13
```

```
unit active      backup      current-active  next-active
-----
1      6.1.1.7      6.3.0.16      6.1.1.7      6.3.0.16
```

3 Reload the device.

```
console#reload
Management switch has unsaved changes.
Are you sure you want to continue? (y/n) y
```

```
console#show version
```

```
Machine Description..... Dell Networking Switch
System Model ID..... N3024P
Machine Type..... Dell Networking N3024P
Serial Number..... CN0C3M5M2829856B0126A03
Manufacturer..... 0xbc00
Burned In MAC Address..... F8B1.5682.DD45
System Object ID..... 1.3.6.1.4.1.674.10895.3059
SOC Version..... BCM56342_A0
HW Version..... 5
CPLD Version..... 13
```

```
unit active      backup      current-active  next-active
-----
1      6.1.1.7      6.3.0.16      6.3.0.16      6.3.0.16
```

After reloading the device, the system boots into the software.

Installing Dell Networking OS 9.11.x.x on the Device

After upgrading the system to the latest version of Dell Networking OS version 6.3.x.x, follow this procedure to install Dell Networking OS version 9.11.x.x on the device:

① NOTE: Dell Networking recommends backing up your startup-config before installing Dell Networking OS 9.11.x.x. If you install Dell Networking OS version 6.3.x.x later, you can use the backup file to restore the system to the earlier configuration.

1 Copy the NSeriesRANsw.tgz package to the device.

① NOTE: Before copying the NSeriesRANsw.tgz file to the device, make sure that the local file system has about 100 MB of free space. If copying the file requires even more space, delete unnecessary files.

If you are using Dell Networking OS 6.3.0.18:

```
console#copy ftp://username@10.16.127.36/NSeriesRANsw.tgz application NSeriesRANsw.tgz
Remote Password:*****
```

```
Transfer Mode..... FTP
Server IP Address..... 10.16.127.36
Source File Path..... ./
Source Filename..... NSeriesRANsw.tgz
Data Type..... Application
Downloads application file
```

Management access will be blocked for the duration of the transfer
Are you sure you want to start? (y/n) y

If you are using Dell Networking OS 6.3.1.x:

```
console#copy ftp://username@10.16.127.36/NSeriesRANsw.tgz application
Remote Password:*****
```

```
Transfer Mode..... FTP
Server IP Address..... 10.16.127.36
Source File Path..... ./
Source Filename..... NSeriesRANsw.tgz
Data Type..... Application
Downloads application file
```

Management access will be blocked for the duration of the transfer
Are you sure you want to start? (y/n) y

NOTE: Because Dell Networking OS version 6.3.x.x does not support copying files larger than 32MB using TFTP, use file transfer protocol (FTP).

- 2 Install the NSeriesRANsw application.

```
console(config)#application install NSeriesRANsw
```

The following command output shows the installed applications:

```
console(config)#do show application
```

OpEN application table contains 3 entries.

Name	StartOnBoot	AutoRestart	CPU Sharing	Max Memory
SupportAssist	Yes	Yes	0	0
hiveagent	Yes	No	0	0
NSeriesRANsw	No	No	0	0

```
console(config)#exit
console#
```

- 3 Start the NSeriesRANsw application

CAUTION: Do not power cycle the system after you start the NSeriesRANsw application.

```
console#application start NSeriesRANsw
```

Application started.

After you start the NSeriesRANsw application, the system restarts and launches a series of conversion procedures that eventually installs Dell Networking OS Version 9.11.x.x on the system. Some of the conversion procedures may take several minutes to complete. Please do not power cycle the system when the conversion procedures are in progress. After successful installation, the system boots into Dell Networking version 9.11.x.x and displays the Dell> prompt on the console. You can use the show version command to verify the version of the installed software.

After you install Dell Networking OS version 9.11.x.x, you can connect the device to a C9010 as a port extender.

Convert an N-series Port Extender to a Dell N20xx or N30xx Switch

You can convert an N-series port extender back to a Dell N20xx or N30xx switch with Dell Networking OS version 6.3.x.x.

You can convert only one PE at a time using the `upgrade system-image-os6`. If you have a PE stack setup, Dell Networking recommends the following order of conversion to avoid unnecessary stack membership reelections:

- 1 Convert all member units.
- 2 Convert the standby unit.
- 3 Convert the master unit.

NOTE: You can only convert an N-series port extender back to a Dell N20xx or N30xx switch if it is connected to a C9010 switch.

Converting an N-series Port Extender to Dell N20xx or N30xx-series Switch

Use the following procedure to convert an N-series port extender to Dell N20xx or N30xx-series Switch.

- On the C9010 device, use the following commands.

```
upgrade system-image-os6 pe pe-id stack-unit stack-unit-number
```

NOTE: The system does not display the `upgrade system-image-os6` command if you use the Dell Networking OS help with a `?` or autocomplete if you press the Tab key. Enter the command manually. If you have a VLT setup, use the `upgrade system-image-os6` command from the VLT Primary node.

```
DELL#upgrade system-image-os6 pe 11 stack-unit 0
tftp://10.16.127.146/NSeriesRANtoOS6conversion.tgz
```

```
*****
* Warning - Converting Port Extender with OS6 system image should be *
* attempted only when necessary. Proceed with caution ! *
* OS9 to OS6 conversion will begin only after OS6 image upgrade *
* is successful for the requested port extender. Port Extender *
* will be offline during OS6 upgrade. *
* It takes about 15 to 20 mins for OS6 conversion to complete. *
* PLEASE DO NOT POWER CYCLE the Port Extender during conversion !!! *
*****
```

```
Proceed to upgrade PE(11/0) with OS6 system image? [confirm yes/no]:y
01:05:40 : Discarded 1 pkts. Expected block num : 51. Received block num: 50
01:05:43 : Discarded 1 pkts. Expected block num : 65. Received block num: 64
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
43501745 bytes successfully copied
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
%STKUNIT0-M:CP %DOWNLOAD-6-UPGRADE: Upgrade request received from
Controlling Bridge.
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

!!
PE (11/0) Image upgraded successfully.

The system reboots and installs Dell Networking OS version 6.3.0.16. After installation, the system displays the `console>` prompt on the console.

Verify if the installation is successful.

```
console>show version
```

```
Machine Description..... Dell Networking Switch  
System Model ID..... N3024  
Machine Type..... Dell Networking N3024  
Serial Number..... CN0PDJ932829862J0001A05  
Manufacturer..... 0xbc00  
Burned In MAC Address..... F8B1.562B.8DA3  
System Object ID..... 1.3.6.1.4.1.674.10895.3057  
SOC Version..... BCM56342_A0  
HW Version..... 5  
CPLD Version..... 13  
Image File..... N3000_N2000v6.3.0.16  
Software Capability..... ACCESS ROUTER
```