

ONIE – Manually Loading DNOS on a Switch

A Dell Deployment Guide

Dell Networking Sales Engineering
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Revisions

Date	Description	Authors
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1 ONIE - How to manually load DNOS on a switch

The Dell Open Networking switches have the ability to run different switch Operating Systems software/firmware. Either provided by Dell or one of several Dell partners (Cumulus Networks, Big Switch, IP Infusion, Pluribus Networks). The Dell Open Networking switches are equipped with a boot loader and OS installer that will load/install the switch OS. This boot software is called ONIE (Open Networking Installation Environment). You will need to obtain the software image from the vendor with appropriate license key to install it on the switch.

Note: Connect to the serial console port with the following settings:

- 115200 baud rate
- No parity
- 8 data bits
- 1 stop bit
- No flow control

Download the Dell ON OS9 software from the Dell Force10 Networks page using the following link:
<https://www.force10networks.com/CSPortal20/Software/SSeriesDownloads.aspx>

Download the Dell ON OS10 software from the Dell Force10 Networks page using the following link:
<https://www.force10networks.com/CSPortal20/Software/OS10Software.aspx>

Select the ONIE version of the firmware, as the following table shows:

FTOS for S-Series S3048-ON Platform						
Feature Release	End of Maintenance (EoM) Date	End of Support	Next Scheduled Release	Available Releases	Software (Md5Checksum)	Release Notes
9.9.0.0P9	Dec 2016	June 2018	To Be Announced	9.9.0.0P9	FTOS-SG-9.9.0.0P9.bin MD5Sum: 47fe9261d7177a5817836919872e5fd7 SHA256Sum: c33e2128e7f5191f5797ef06c20ba28e9fb30788e3a69084f6631e7278677aa1	Release Notes
9.9	Mar 2017	Sep 2018	To Be Announced	9.9.0.0	FTOS-SG-9.9.0.0.bin MD5Sum: 5ab116fcc32533eee69a80d6b71a6d75 SHA256Sum: 5ab116fcc32533eee69a80d6b71a6d75 ONIE-FTOS-SG-9.9.0.0.bin MD5Sum: ef6e95744a0000000000000000000000 SHA256Sum: 542c7326c6db5959812a24bd4232cf6133e5117df963349d8f02c1bc007993e6	Release Notes

Figure 1 ONIE version of the firmware

An FTP or TFTP server will be needed to provide the software to the switch.

When the switch is powered on it is pre-configured to auto-boot and look for a provisioning server. To manually install the software, you will hit the F2 key multiple times to interrupt the process. This will bring you to the ONIE boot option menu. Quickly arrow down to ONIE: Rescue and hit enter.

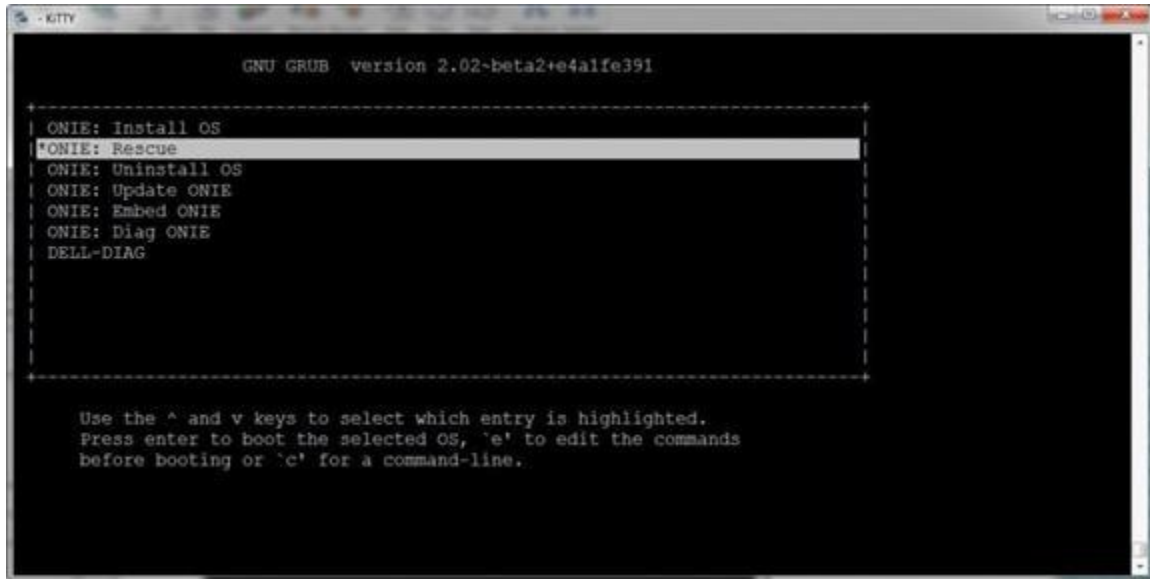


Figure 2 ONIE Rescue

This will leave the system at a prompt.

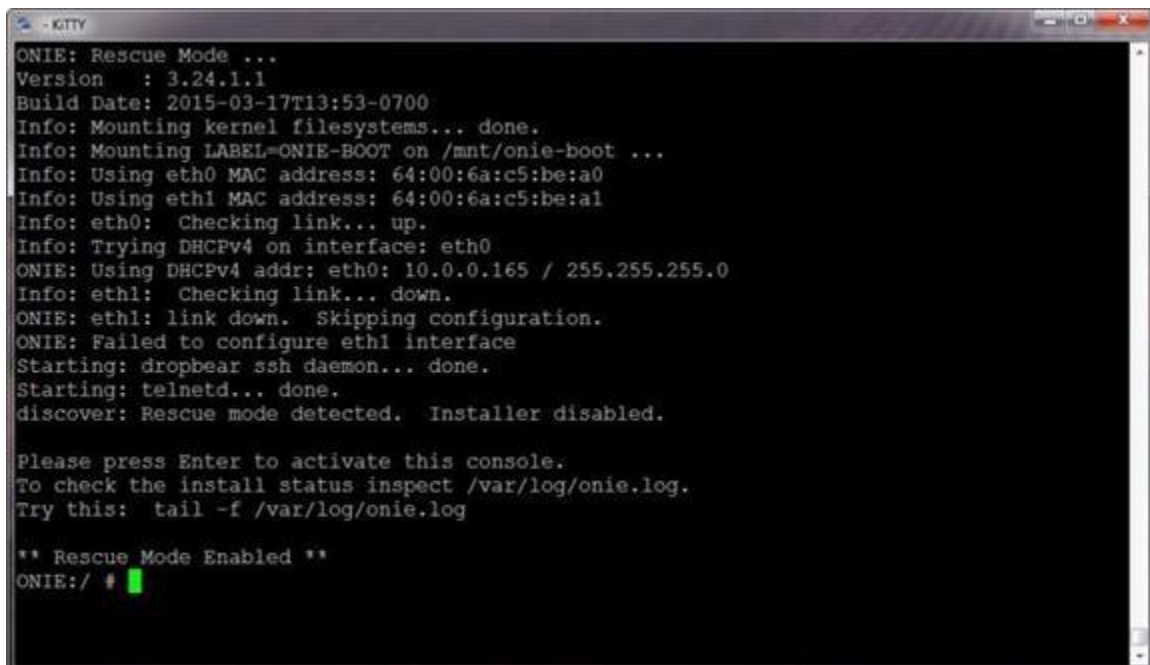


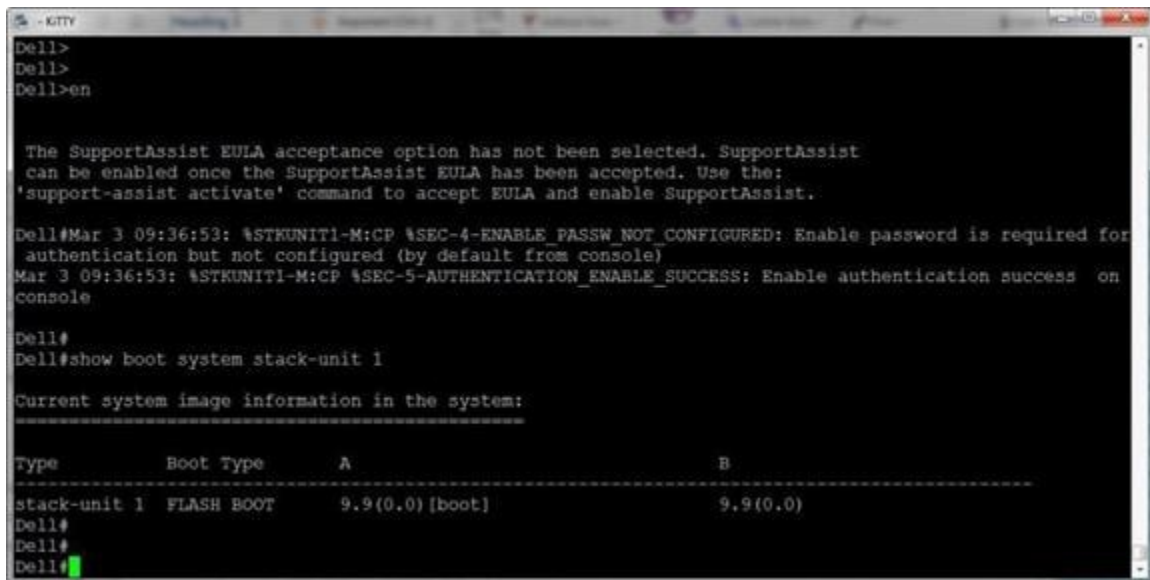
Figure 3 ONIE prompt

Using the IP address of your FTP/TFTP server and the OS software file name, enter the command:

```
onie-nos-install tftp://10.0.0.223/ONIE-FTOS-SG-9.9.0.0.bin
```

The switch will then download the OS, install it and reboot. During the installation, it will partition the switches memory to accommodate storage for the new OS files.

DNOS may boot with Bare Metal Provisioning (BMP) enabled. You can interrupt this process by hitting "A" At this time it will boot normally to the normal DNOS interface.



```
Dell>
Dell>
Dell>en

The SupportAssist EULA acceptance option has not been selected. SupportAssist
can be enabled once the SupportAssist EULA has been accepted. Use the:
'support-assist activate' command to accept EULA and enable SupportAssist.

Dell#Mar 3 09:36:53: %STKUNIT1-M:CP %SEC-4-ENABLE_PASSW_NOT_CONFIGURED: Enable password is required for
authentication but not configured (by default from console)
Mar 3 09:36:53: %STKUNIT1-M:CP %SEC-5-AUTHENTICATION_ENABLE_SUCCESS: Enable authentication success on
console

Dell#
Dell#show boot system stack-unit 1

Current system image information in the system:
=====
Type          Boot Type      A                      B
-----
stack-unit 1  FLASH BOOT    9.9(0.0) [boot]       9.9(0.0)
Dell#
Dell#
Dell#
```

Figure 4 show boot system stack-unit 1

Run the command: `show boot system stack-unit 1` to see what firmware is loaded in each partition. You can then upgrade the switch's firmware normally from here on out.

2 Changing OS on a Dell ON switch:

If you want to uninstall the switch's current OS and install another you will need to be connected via the serial connection. Reboot the switch and hit ESC key to get to the GRUB prompt. You will then arrow down to ONIE and hit enter. This will start the ONIE boot menu.



Figure 5 GRUB prompt

Arrow down and select ONIE: Uninstall OS and hit enter. This process will take several minutes to delete the partitions that were previously created and put the switch back in a default state.

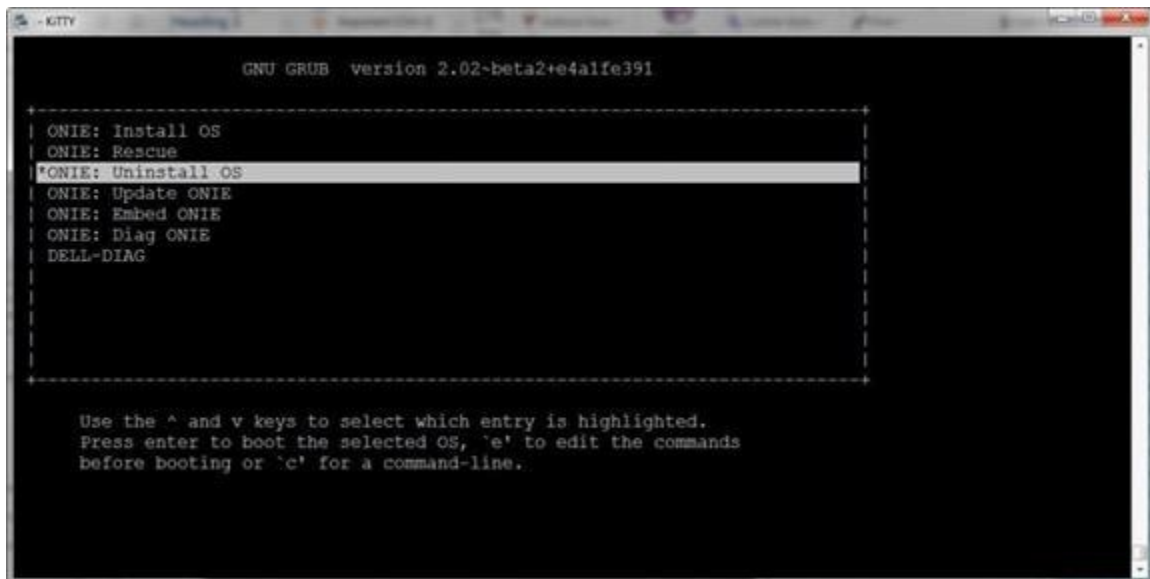


Figure 6 ONIE boot menu

3 Other notes

While in ONIE Rescue mode, you can use the following commands for additional information:

- `onie-syseeprom` to find the serial number and Dell Service Tag information for the switch.
- `onie-sysinfo-v` – onie version on switch, to find out what software is loaded on the switch currently