

Topic
VxRail Restricted Procedures
Selections
Select the VxRail Appliance Model: VxRail E660/E660F/E660N Select a procedure: Rapid Appliance Self Recovery (RASR) Factory Image Upgrade Procedure (Remote Capable - Dell platforms only) Select the Version you wish to upgrade the RASR Image to: v7.0.482 Do you want to include the RASR Reset Procedure?: Yes

Generated:

February 29, 2024 5:00 PM GMT

REPORT PROBLEMS

If you find any errors in this procedure or have comments regarding this application, send email to SolVeFeedback@dell.com

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Preliminary Activity Tasks

This section may contain tasks that you must complete before performing this procedure.

Read, understand, and perform these tasks

1. Table 1 lists tasks, cautions, warnings, notes, and/or knowledgebase (KB) solutions that you need to be aware of before performing this activity. Read, understand, and when necessary perform any tasks contained in this table and any tasks contained in any associated knowledgebase solution.

Table 1 List of cautions, warnings, notes, and/or KB solutions related to this activity

[530869](#): VxRail: Intel Youngsville SSD may stop prepossessing when FW less than DL63

[528536](#): VxRail: vSAN license and deployment guidance; caution do not use 4.7.X (and above) RASR package for purchases at 4.5.X and below

[504087](#): VxRail: How to find the version on RASR image

[525386](#): VxRail: iDRAC doesn't get updated when performing RASR with devices connected to other USB ports on the node

- VxRail 7.0.320 and later releases contain resolutions for two of the VMware vSAN issues detailed in VMware Proactive Customer Advisory issued in June 2022: KB 88870 <https://kb.vmware.com/s/article/88870>. One issue is not yet resolved by VMware and requires the workaround described in KB 88870. The Dell VxRail: VxRail Response to VMware Proactive Customer Advisory for June 2022 contains more information <https://www.dell.com/support/kbdoc/EN-US/000201082>.

-
2. This is a link to the top trending service topics. These topics may or not be related to this activity. This is merely a proactive attempt to make you aware of any KB articles that may be associated with this product.

Note: There may not be any top trending service topics for this product at any given time.

[VxRail Appliance Top Service Topics](#)

VxRail v7.0.405 or later RASR Factory Image Upgrade from ISO

Note: Screenshots in this document might defer depending on the RASR.

Summary:

This procedure describes the steps to upgrade the RASR image on VxRail Dell appliance (node) to the VxRail v7.0.405 or later release versions. This procedure requires the node to be power-cycled. If this RASR image upgrade is run on a currently running cluster, the cluster might be impacted. This procedure contains the following steps:

1. Upgrade the RASR image on the node using ISO.
2. Start the RASR Re-Image process.

Note: This procedure does NOT update drive firmware. Drive firmware can only be updated manually or using LCM. Update the drive firmware according to the recommend firmware documented in the [VxRail 7.x Support Matrix](#).

Note: Using this procedure to downgrade nodes is NOT supported.

Note: DISCONNECT the external data storage before performing the RASR procedure, or the data in the external storage might be lost after RASR.

Note: Log in to iDRAC with the default username *root* and password *calvin*. See Appendix B to change iDRAC account if it is not default account.

Note: Clear all jobs in iDRAC before executing Factory Reset with installing DUPs. See Appendix C to clear all jobs in iDRAC

Supported Models

This procedure supports the following VxRail models:

13G Models	14G Models	15G Models	16G Models
E460, E460F	D560, D560F	E660, E660F, E660N	VE-660
P470, P470F		E665, E665F, E665N	VP-760
S470		P670F, P670N	
V470, V470F		P675F, P675N	
		S670	
		V670F	
		VD-4510c, VD-4520c	

System requirements

- VxRail RASR ISO upgrade image for version 7.0.360 or later (available for download from <https://www.dell.com/support/home/en-us/product-support/>).
- Access to iDRAC

Task 1: RASR Reset using RASR ISO

1. [] From the iDRAC UI, click **Configuration > Virtual Media > Remote File Share 1**.
2. [] Enter the **Image File Path**, **User Name**, and **Password**.
3. [] Click **Connect**.

The screenshot shows the Dell iDRAC Configuration page. The top navigation bar includes Dashboard, System, Storage, Configuration (highlighted), Maintenance, and iDRAC Settings. The Configuration page has sub-tabs: Power Management, Virtual Console, Virtual Media (highlighted), Licenses, System Settings, Asset Tracking, BIOS Settings, and Server Configuration Profile. Under Virtual Media, there is a section for Attached Media with settings: Enabled (Enabled), Attach Mode (AutoAttach), Max Sessions (1), Active Sessions (0), Virtual Media Encryption (Enabled), Floppy Emulation (Disabled), Boot Once (Disabled), and Connection Status (Not Connected). Below this is the Remote File Share 1 section. It contains a form with the following fields: Image File Path* (//remote ip/Users/user1/DownloadsRASR-v1.1.26_VX-8.0.010_b3.iso), Domain Name (empty), User Name (user1), Password (masked with asterisks), Expired or invalid certificate action (Yes), Server Certificate (A valid certificate is not loaded), and Connection Status (Not Connected). There are buttons for Apply, Discard, Upload, and Connect.

Figure 1 Launch virtual console.

4. [] Click **Next Boot** to confirm that **Virtual CD/DVD/ISO** has been selected.

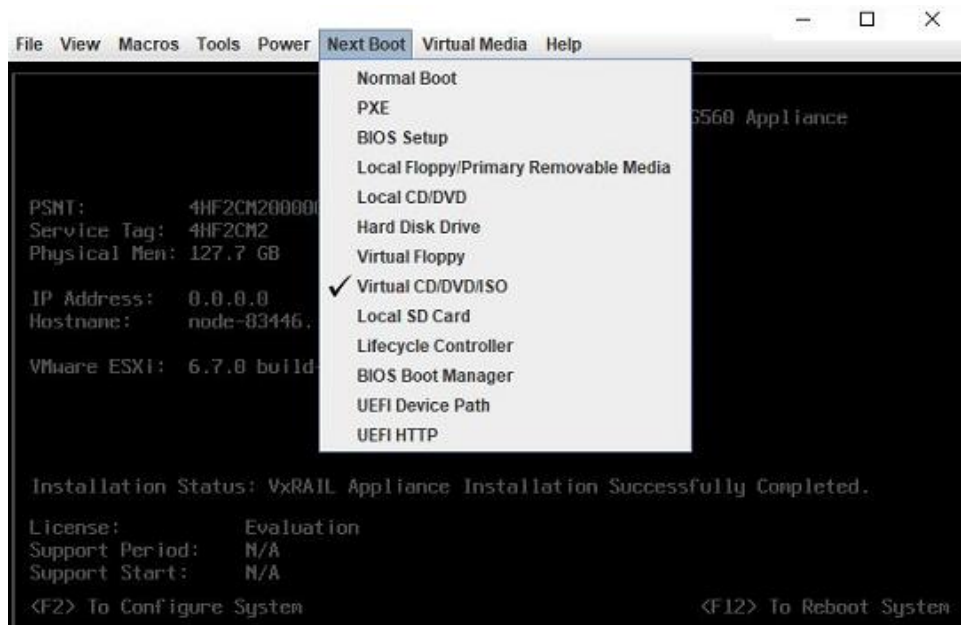


Figure 2 Next Boot.

5. [] Click **Power** and select **Reset System (warm boot)**.

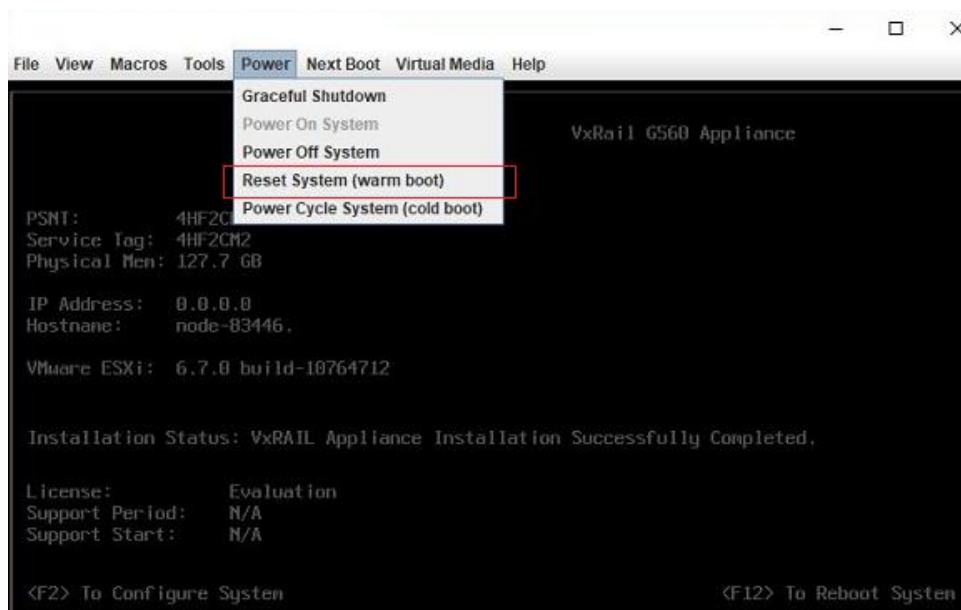


Figure 3 Reset System.

6. [] Click **Yes** to continue and reboot the system to the RASR Update Utility menu.

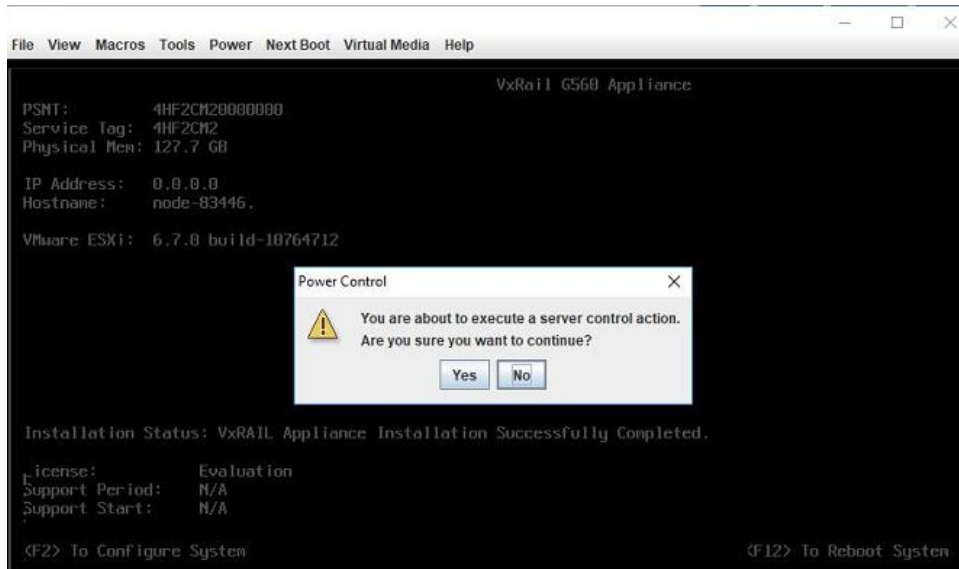


Figure 4 System Reboot.

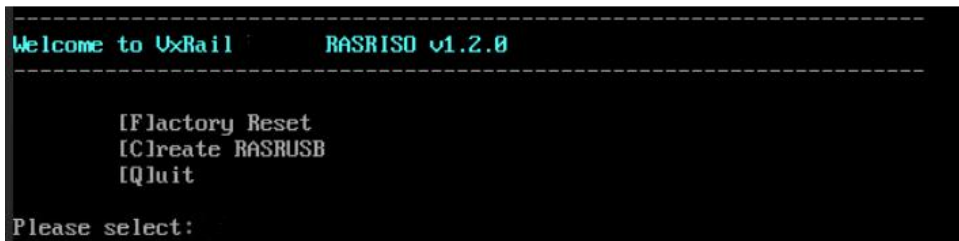


Figure 5 RASR Update Utility.

7. [] Type **F** to select Factory Reset, and then type **Y** to continue.

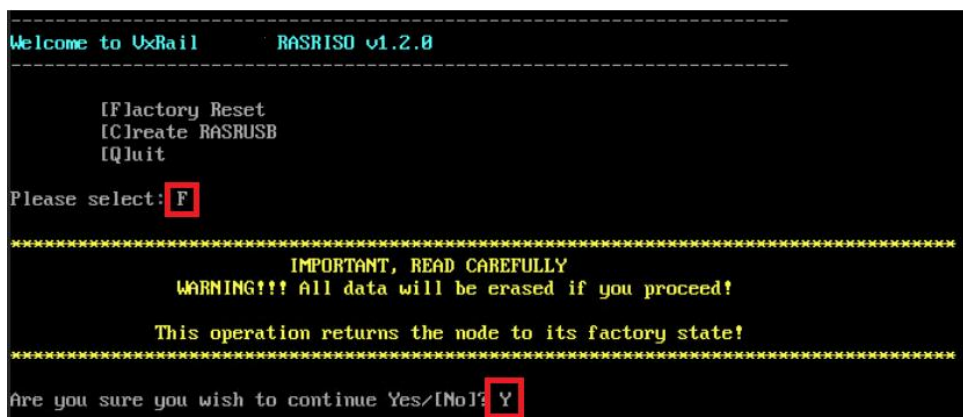


Figure 6 Factory Reset.

```
-----
Welcome to UxRail SETUP RASR-FIP v1.0
-----

IFactory Reset
ICreate RASRUSB
IQuit

Please select: F

*****
                IMPORTANT, READ CAREFULLY
            WARNING!!! All data will be erased if you proceed!
*****

                This operation returns the node to its factory state!
*****

Are you sure you wish to continue Yes/[No]? Y
```

Figure 7 Factory reset.

8. [] Ensure that all external storage devices are disconnected correctly to prevent the potential risks of data corruption. If yes, type **Disconnected** to continue. Press any key to exit Factory Reset.

Note: See KB [000021277](https://www.dell.com/support/kbarticle/000021277) for more details about how to disconnect external storage devices.

```
-----
Welcome to UxRail SETUP RASR-FIP v1.0
-----

IFactory Reset
ICreate RASRUSB
IQuit

Please select: F

*****
                IMPORTANT, READ CAREFULLY
            WARNING!!! All data will be erased if you proceed!
*****

                This operation returns the node to its factory state!
*****

Are you sure you wish to continue Yes/[No]? Y

*****
                CAUTION!!!
*****

This operation may erase any external storage device if attached!

Please disconnect all external storage devices from this node prior to proceeding.
                (i.e. - FC, iSCSI, et al.)
*****

Are you sure all external storage devices are disconnected from the node?
Type Disconnected for Yes, or press any key for No: Disconnected
```

Figure 8 Confirm that external storage devices are disconnected.

9. [] Type **Y** if you want to automatically update the DUPs or **N** to skip upgrading the DUPs.

If **Y** was selected, RASR will create a partition and copy the DUPs and stage the system for Factory Reset. If there are multiple DUPs a restart is required. RASR will perform the restart, boot back up, and continue installing. Once all the DUPs are processed, RASR will erase the boot entry and all its contents, boot to the OS partition and continue on with the Factory Reset process.

If **N** was selected, only factory install will be performed. (Skip to Step 13)

Note: Entering **Y** will perform a rolling DUP upgrade and all upgradable DUPs will be installed.

```

Welcome to UEFI Shell RASR-FIP v1.0
-----

[Factory Reset
[Create RASRUSB
[Quit

Please select: F

*****
IMPORTANT, READ CAREFULLY
WARNING!!! All data will be erased if you proceed!
*****

This operation returns the node to its factory state!
*****

Are you sure you wish to continue Yes/[No]? Y

*****
CAUTION!!!
*****

This operation may erase any external storage device if attached!

Please disconnect all external storage devices from this node prior to proceeding.
(i.e. - FC, iSCSI, et al.)
*****

Are you sure all external storage devices are disconnected from the node?
Type Disconnected for Yes, or press any key for No: Disconnected
[InitializeRacadm] Waiting for racadm to initialize... Attempt 1 out of 6.
[rasrSecureBootToggleLogic] Secureboot response: False and logic is:Factory

Initiating Factory Reset...
[CheckForDups] Scanning system for dups.
DUPS were detected, do you want install them? [Y/N]: Y

```

Figure 9 Install DUPS

10. [] Factory Reset completes and displays the message: *Factory install Prototype (FIP) successfully completed*. Press **Enter** to continue and return to the RASR Update Utility menu.

```

SAS-Non-RAID_Firmware_Y0WY1_LN_16.17.00.05_A07_01.BIN'
[FIPCopyReleaseFiles] '/mnt/RASR/dups/14g/SAS-RAID_Firmware_MTPW6_LN64_2.5.13.3022_A06.BIN' to
'/mnt/fip/tmp/RASR/dups/14g/SAS-RAID_Firmware_MTPW6_LN64_2.5.13.3022_A06.BIN'
[FIPCopyReleaseFiles] '/mnt/RASR/dups/14g/zziDRAC-w-LC_Fw_KTC95_LN_4.10.10.10_A00.BIN' to
'/mnt/fip/tmp/RASR/dups/14g/zziDRAC-w-LC_Fw_KTC95_LN_4.10.10.10_A00.BIN'

-----
Processing Section [TEMP_DISK1]
-----

[FIPMakeTempDisk] Creating Temp Disk : 'TEMP_DISK1'...
[FIPCreateTempDisk] Located disk model: 'DELLBOSS VD' on Disk: sda
Each PTN will be 79339
[FIPCreateTempDisk] Creating FAT16 Temp partition 'ESXTMP1' on Disk '/dev/sda'
[FIPMountTempPtn] Mount temp disk 'TEMP_DISK1' '2'
[FIPCreateTempDisk] Creating FAT16 Temp partition 'ESXTMP2' on Disk '/dev/sda'
[FIPMountTempPtn] Mount temp disk 'TEMP_DISK1' '3'
[FIPCreateTempDisk] Creating FAT16 Temp partition 'ESXTMP3' on Disk '/dev/sda'
[FIPMountTempPtn] Mount temp disk 'TEMP_DISK1' '4'
[FIPCreateTempDisk] Creating FAT16 Temp partition 'ESXTMP4' on Disk '/dev/sda'
[FIPMountTempPtn] Mount temp disk 'TEMP_DISK1' '5'
[FIPCreateTempDisk] Creating FAT16 Temp partition 'ESXTMP5' on Disk '/dev/sda'
[FIPMountTempPtn] Mount temp disk 'TEMP_DISK1' '6'

-----
Processing Section [TEMP_FILES1]
-----

[FIPLoadTempFiles] Copying 'gmyud_esxtmp.tar.00' to '/mnt/fip/temp_disk1/3/'
[FIPLoadTempFiles] Copying 'gmyud_esxtmp.tar.01' to '/mnt/fip/temp_disk1/4/'
[FIPLoadTempFiles] Copying 'gmyud_esxtmp.tar.02' to '/mnt/fip/temp_disk1/5/'
[FIPLoadTempFiles] Copying 'gmyud_esxtmp.tar.03' to '/mnt/fip/temp_disk1/6/'
[FIPLoadTempFiles] Copying 'gmyud_esxtmp.tar.04' to '/mnt/fip/temp_disk1/7/'
[FIPLoadTempFiles] Copying 'dell_gcf.xml' to '/mnt/fip/temp_disk1/2/'
[FIPLoadTempFiles] Copying 'fru17.bin' to '/mnt/fip/temp_disk1/2/'

-----
Processing Section [ESX]
-----

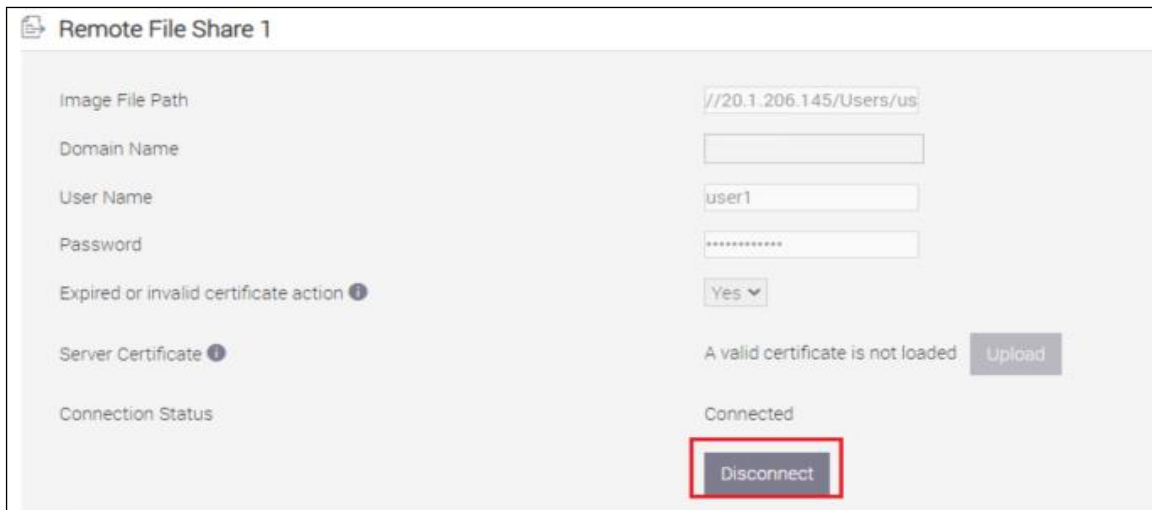
[FIPInstallOS] Installing ESX OS
[FIPExtractZip] Extracting 'y3of5_esx_image.tar' to '/mnt/fip/tmp/ESX'...
[FIPAddESXModule] Adding module 'fk7n0_d1_ks.tar' to '/mnt/fip/tmp/ESX/boot.cfg'
[FIPAddESXModule] Adding module 'fk7n0_ft.tar' to '/mnt/fip/tmp/ESX/boot.cfg'
[FIPAddESXModule] Adding module 'fk7n0_vx.tar' to '/mnt/fip/tmp/ESX/boot.cfg'
[FIPAddESXModule] Adding module 'gmyud_is.tar' to '/mnt/fip/tmp/ESX/boot.cfg'
[FIPAddESXModule] Adding module 'yu14x_pt.tar' to '/mnt/fip/tmp/ESX/boot.cfg'

*****
Factory Install Prototype (FIP) successfully completed!
*****
Press Enter to Continue...

```

Figure 10 Factory Install Prototype successfully completed.

11. [] Disconnect virtual media by selecting **Virtual Media** and then **Disconnect Virtual Media**.



Remote File Share 1

Image File Path: //20.1.206.145/Users/us

Domain Name:

User Name: user1

Password:

Expired or invalid certificate action: Yes

Server Certificate: A valid certificate is not loaded Upload

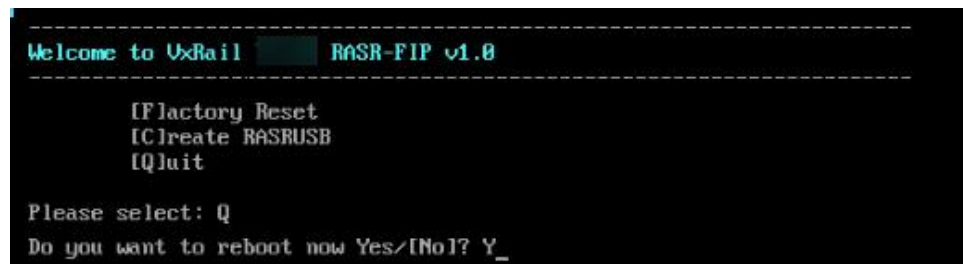
Connection Status: Connected

Disconnect

Figure 11 Disconnect virtual media.

12. [] Enter **Q** to quit and **Yes** to reboot the system.

Note: Refer to Appendix C for instructions on clearing all jobs in iDRAC before upgrading firmware.



```
-----
Welcome to UxRail RASR-FIP v1.0
-----

[F]actory Reset
[C]reate RASRUSB
[Q]uit

Please select: Q
Do you want to reboot now Yes/[No]? Y_
```

Figure 12 Confirm reboot.

13. [] RASR will perform a rolling DUP upgrade if DUPs were detected.

```

[ExamineDupsl] /mnt/RASR/dups/14g/BIOS_5KNGY_LN_1.5.6.BIN is not compatible.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/BIOS_J2XG5_LN_1.5.6.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/BIOS_J2XG5_LN_1.5.6.BIN is being added to the upgrade list.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/CPLD_Firmware_PC8N3_LN_1.0.6.A00.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/CPLD_Firmware_PC8N3_LN_1.0.6.A00.BIN is not compatible.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/CPLD_Firmware_FN8CW_LN_1.0.2.A00.01.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/CPLD_Firmware_FN8CW_LN_1.0.2.A00.01.BIN is not compatible.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/CPLD_Firmware_FH8XR_LN_1.0.7.A00.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/CPLD_Firmware_FH8XR_LN_1.0.7.A00.BIN is being added to the upgrade list.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/Firmware_9N8WP_LN_4.27.A00-00.02.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/Firmware_9N8WP_LN_4.27.A00-00.02.BIN is not compatible.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/Network_Firmware_3W5Y5_LN_10.0.9.A00.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/Network_Firmware_3W5Y5_LN_10.0.9.A00.BIN is being added to the upgrade list.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/Network_Firmware_X31PR_LN64_20.00.04.04.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/Network_Firmware_X31PR_LN64_20.00.04.04.BIN is not compatible.
[ExamineDupsl] Examining /mnt/RASR/dups/14g/SAS-RAID_Firmware_MKUB2_LN64_2.5.13.3016.A04.BIN.
[ExamineDupsl] /mnt/RASR/dups/14g/SAS-RAID_Firmware_MKUB2_LN64_2.5.13.3016.A04.BIN is not compatible.

The following DUP(s) are compatible with the system
/mnt/RASR/dups/14g/BIOS_J2XG5_LN_1.5.6.BIN
/mnt/RASR/dups/14g/CPLD_Firmware_FH8XR_LN_1.0.7.A00.BIN
/mnt/RASR/dups/14g/Firmware_MKUB2_LN64_2.5.13.3016.A04.BIN
/mnt/RASR/dups/14g/SAS-Non-RAID_Firmware_88TG4_LN_16.17.00.03.A06.01.BIN
/mnt/RASR/dups/14g/with-Lifecycle-Controller_Firmware_FDMU1_LN_3.21.26.22.A00.BIN

The following DUP(s) are available to upgrade system
/mnt/RASR/dups/14g/BIOS_J2XG5_LN_1.5.6.BIN
/mnt/RASR/dups/14g/CPLD_Firmware_FH8XR_LN_1.0.7.A00.BIN
/mnt/RASR/dups/14g/Firmware_MKUB2_LN64_2.5.13.3016.A04.BIN
/mnt/RASR/dups/14g/Network_Firmware_3W5Y5_LN_10.0.9.A00.BIN
/mnt/RASR/dups/14g/Network_Firmware_MF9U_LN_10.0.9.A00.BIN
/mnt/RASR/dups/14g/SAS-Non-RAID_Firmware_88TG4_LN_16.17.00.03.A06.01.BIN
/mnt/RASR/dups/14g/with-Lifecycle-Controller_Firmware_FDMU1_LN_3.21.26.22.A00.BIN

The following DUP(s) are available to downgrade system

The following DUP(s) are not compatible with the system
/mnt/RASR/dups/14g/BIOS_5KNGY_LN_1.5.6.BIN
/mnt/RASR/dups/14g/CPLD_Firmware_FN8CW_LN_1.0.2.A00.01.BIN
/mnt/RASR/dups/14g/CPLD_Firmware_PC8N3_LN_1.0.6.A00.BIN
/mnt/RASR/dups/14g/Firmware_9N8WP_LN_4.27.A00-00.02.BIN
/mnt/RASR/dups/14g/Firmware_PP61J_LN_2.25.A00-00.BIN
/mnt/RASR/dups/14g/Network_Firmware_X31PR_LN64_20.00.04.04.BIN
/mnt/RASR/dups/14g/SAS-Non-RAID_Firmware_88TG4_LN_16.17.00.03.A06.01.BIN
/mnt/RASR/dups/14g/SAS-RAID_Firmware_MKUB2_LN64_2.5.13.3016.A04.BIN

```

Figure 13 Rolling DUP upgrade process.

14. [] The node boots into the ESXi Installer. The factory reset is completed once the ESXi screen Installation Status reports *VxRail Appliance Installation Successfully Completed*. This automated reset process will take approximately one hour to complete with multiple reboots.

Note: If you are upgrading the RASR image for an entire cluster, repeat this procedure for each node in the cluster.



Figure 14 Installation completed successfully.

Appendix A: Gathering RASR Update Utility Logs

The logs are stored in a directory on the RASR device you have booted from except for RASR ISO.

When booted from the IDSDM or USB disk, the logs are stored at:

`/mnt/RASR/systems/<service tag>/logs/`

When booted from RASR ISO, the logs are stored at:

`/tmp/systems/<service tag>/logs/`

Note: Log files contain useful information about all invocations of RASR. If an error occurs while using RASR, collect all available logs which include the individual RASR.log files, for debugging by engineering.

Appendix B: Change iDRAC username and password

1. [] Open iDRAC web UI. Select **iDRAC Settings > Users** and click **Local Users**.

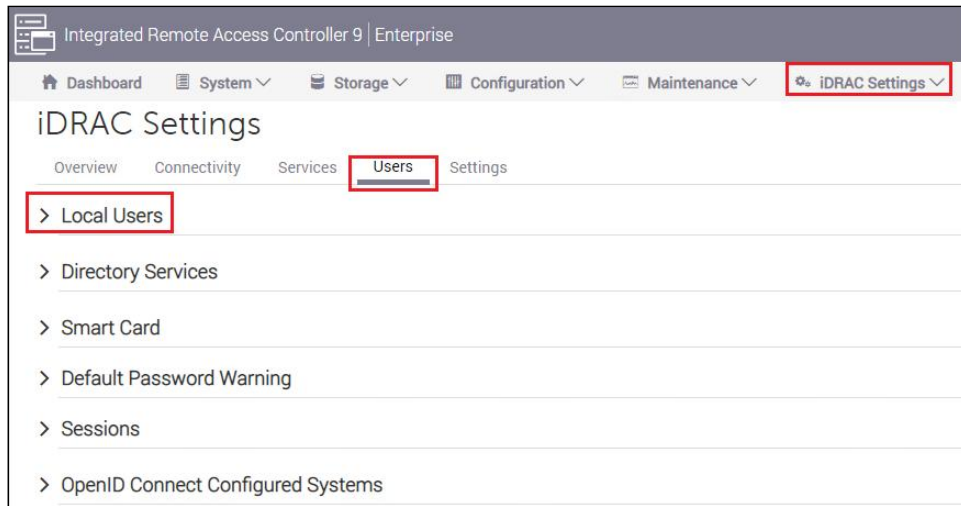


Figure 15 iDRAC settings.

2. [] Select **ID 2**, the iDRAC account, and click **Edit**.

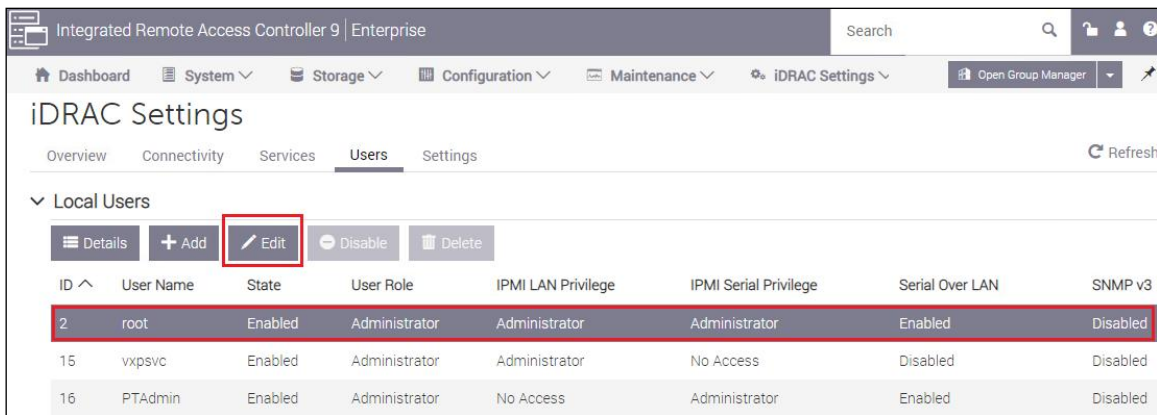


Figure 16 Edit iDRAC settings.

3. [] Modify the username and password. Set the iDRAC default username to *root* and the password to *calvin*.

The screenshot shows a web-based configuration window titled "Edit User". It has three tabs: "User Configuration" (selected), "SSH Key Configurations", and "Smart Card Configuration". The "User Account Settings" section contains the following fields and options:

- ID: 2
- User Name*: root
- Password*: [masked]
- Confirm Password*: [masked]
- User Privileges:
 - User Role: Administrator (dropdown)
 - Permissions (all checked):
 - Login to iDRAC
 - Clear Logs
 - Access Virtual Media
 - Configure iDRAC
 - Control and Configure System
 - Test Alerts
 - Configure Users
 - Access Virtual Console
 - Execute Debug Commands

At the bottom right are "Close" and "Save" buttons.

Figure 17 User account settings.

4. [] Click **Save** and **OK**.

Appendix C: Clear all jobs in iDRAC

1. [] Open iDRAC web UI. Select **Maintenance** > **Job Queue**

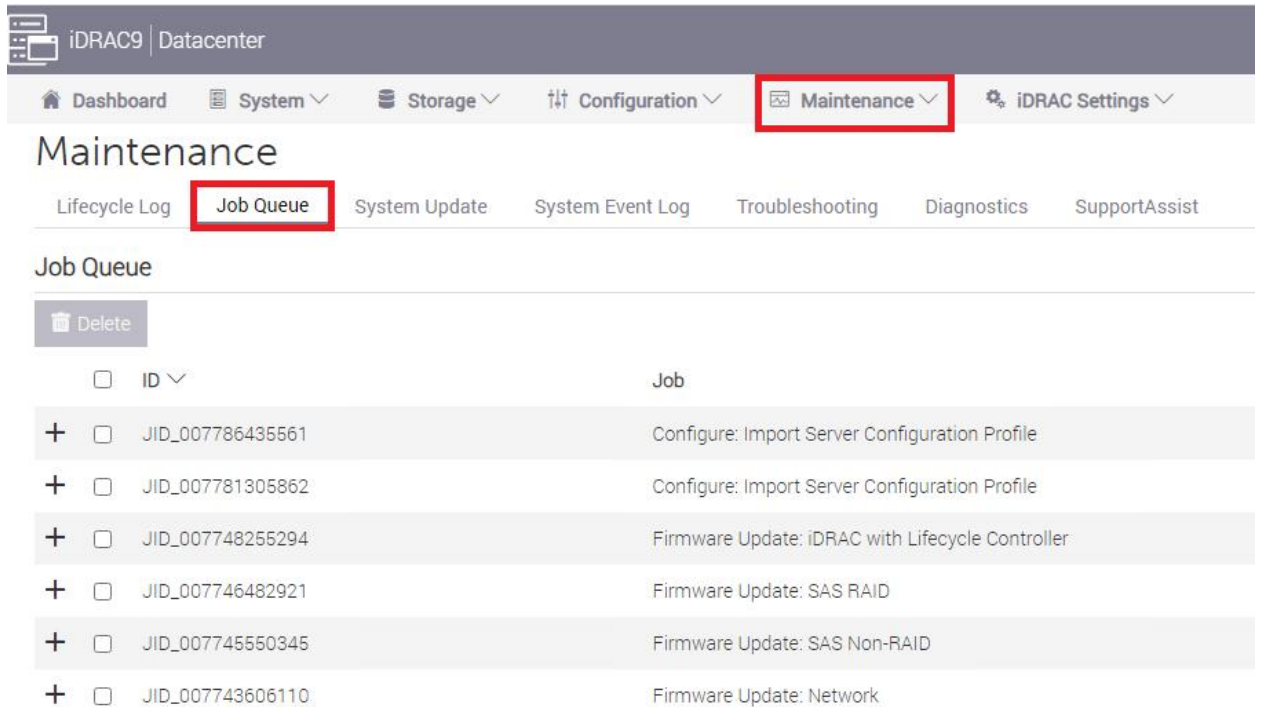


Figure 18 Maintenance

2. [] Select **all jobs** and click **Delete**.

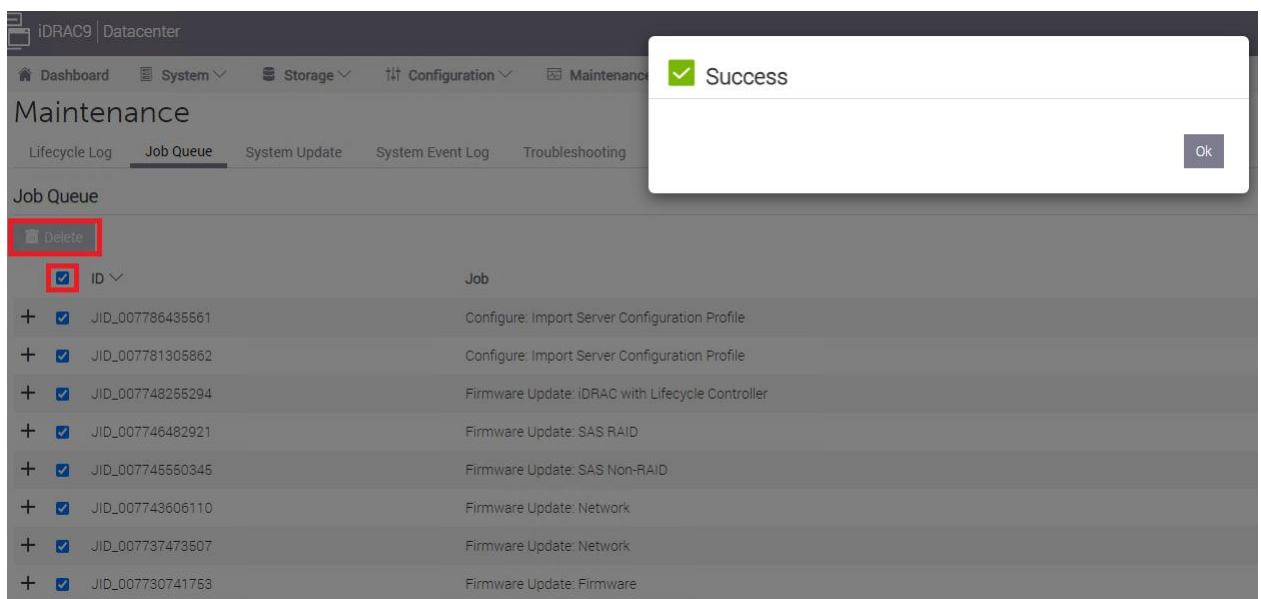


Figure 19 Clear Jobs

