



Preparing Linux guest operating systems for transition

ONTAP 7-Mode Transition

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If have 7-Mode LUNs mapped as physical compatible RDM (PTRDM) to Linux virtual machines (VMs) for the boot device, there are steps you must perform to prepare your Linux VMs for transition.

- For copy-based transitions, perform these steps before initiating the Storage Cutover operation in the 7-Mode Transition Tool (7MTT).
- For copy-free transitions, perform these steps before initiating the Export & Halt 7-Mode Systems operation in the 7MTT.

Steps

1. Obtain the SCSI device serial numbers:

```
cat /boot/grub/menu.lst
```

In the following example, 360a9800032466879362b45777447462d-part2 and 360a9800032466879362b45777447462d-part1 are SCSI device numbers:

```
# cat /boot/grub/menu.lst
...
kernel /boot/vmlinuz-3.0.13-0.27-default root=/dev/disk/by-id/scsi-
360a9800032466879362b45777447462d-part2 resume=/dev/disk/by-id/scsi-
360a9800032466879362b45777447462d-part1
```

2. Determine the mapping between the SCSI device serial numbers and SCSI devices/partitions:

```
# ls -l /dev/disk/by-id
```

The following example shows how the relationship mapping is displayed. The SCSI devices/partitions are displayed following the SCSI device/partition serial numbers. In this example, `../sda`, `../sda1`, and `../sda2` are SCSI devices/partitions.

```
lrwxrwxrwx 1 root root 9 Oct 27 06:54 scsi-
360a9800032466879362b45777447462d -> ../sda
  lrwxrwxrwx 1 root root 10 Oct 27 05:09 scsi-
360a9800032466879362b45777447462d-part1 -> ../sda1
  lrwxrwxrwx 1 root root 10 Oct 27 02:21 scsi-
360a9800032466879362b45777447462d-part2 -> ../sda2
```

3. Determine the mapping between the SCSI device paths and the UUIDs:

```
ls -l /dev/disk/by-uuid
```

The following example shows how the relationship mapping is displayed. In this example, `33d43a8b-`

`cfae-4ac4-9355-36b479cfa524` is the UUID for SCSI device/partition `sda2`, `603e01f8-7873-440a-9182-878abff17143` is the UUID for SCSI device/partition `sdb`, and `c50b757b-0817-4c19-8291-0d14938f7f0f` is the UUID for SCSI device/partition `sda1`.

```
lrwxrwxrwx 1 root root 10 Oct 27 02:21 33d43a8b-cfae-4ac4-9355-36b479cfa524 -> ../../sda2
lrwxrwxrwx 1 root root 9 Oct 27 06:54 603e01f8-7873-440a-9182-878abff17143 -> ../../sdb
lrwxrwxrwx 1 root root 10 Oct 27 05:09 c50b757b-0817-4c19-8291-0d14938f7f0f -> ../../sda1
```

4. Use the UUID to update the device reference in the grub boot `menu.lst` file by matching it with the SCSI device path and SCSI serial number.

```
#blkid
/dev/sda1: UUID="c50b757b-0817-4c19-8291-0d14938f7f0f" TYPE="swap"
/dev/sda2: UUID="33d43a8b-cfae-4ac4-9355-36b479cfa524" TYPE="ext3"
/dev/sdb: UUID="603e01f8-7873-440a-9182-878abff17143" SEC_TYPE="ext2"
TYPE="ext3"
```

5. Use the UUID you just retrieved to update the device reference in the grub boot `menu.lst` file.

The following example shows the `menu.lst` file after it has been updated:

```
# Modified by YaST2. Last modification on Fri Oct 17 02:08:40 EDT 2014
default 0
timeout 8
##YaST - generic_mbr
gfxmenu (hd0,1)/boot/message
##YaST - activate
###Don't change this comment - YaST2 identifier: Original name: linux###
title SUSE Linux Enterprise Server 11 SP2 - 3.0.13-0.27
root (hd0,1)
kernel /boot/vmlinuz-3.0.13-0.27-default root=/dev/disk/by-uuid/e5127cdf-8b30-418e-b0b2-35727161ef41 resume=/dev/disk/by-uuid/d9133964-d2d1-4e29-b064-7316c5ca5566
splash=silent crashkernel=128M-:64M showopts vga=0x314
initrd /boot/initrd-3.0.13-0.27-default
```

6. Update the `/etc/fstab` file:

- a. Use the UUID you just retrieved to update the device reference in the `/etc/fstab` file.

The following example shows an `/etc/fstab` file with a SCSI serial number:

```
/dev/disk/by-id/scsi-360a9800032466879362b45777447462d-part1 swap
swap
defaults 0 0
/dev/disk/by-id/scsi-360a9800032466879362b45777447462d-part2 / ext3
acl,user_xattr 1 1
proc /proc proc defaults 0 0
sysfs /sys sysfs noauto 0 0
debugfs /sys/kernel/debug debugfs noauto 0 0
devpts /dev/pts devpts mode=0620,gid=5 0 0
```

- b. Replace the reference to the SCSI serial number with the UUID.

The following example shows an `/etc/fstab` file that has been updated to replace the SCSI serial number with the UUID:

```
cat /etc/fstab
UUID="c50b757b-0817-4c19-8291-0d14938f7f0f swap swap defaults
0 0
UUID="33d43a8b-cfae-4ac4-9355-36b479cfa524 / ext3 acl,user_xattr
1 1
proc /proc proc defaults 0 0
sysfs /sys sysfs noauto 0 0
debugfs /sys/kernel/debug debugfs noauto 0 0
devpts /dev/pts devpts mode=0620,gid=5 0 0
```

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