

# Upgrading to D10IPM30 NonStop Clusters Software

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Use these instructions to upgrade the NonStop Clusters software from version D10IPM20 to D10IPM30.

To remove the IPM, see Removing the IPM on page 12.

For additional information, refer to the *NonStop Clusters for SCO UnixWare System Administrator's Guide*.

## Upgrading from D10IPM20 to D10IPM30

Use these instructions to upgrade from NonStop Clusters version D10IPM20 to D10IPM30:

- Preparing for Upgrading on page 2
- Upgrading to D10IPM30 on page 6

Perform these procedures on node 1 only.



## ***Preparing for Upgrading***

To prepare for installation, perform the following procedures on node 1:

- Verify that Node 1 Controls Root
- Verify Mounted File Systems on page 4
- Backing Up Files on page 5

### ***Verify that Node 1 Controls Root***

Verify that node 1 has control of the root file system. Enter the following command:

where /

A message indicating that the root file system is on node 1 appears. If this message does not appear, force the cluster to fail over to node 1.



To force a failover, follow these steps:

1. Run the following command to be sure that node 1 is completely up:

```
ptn -v
```

The following output is displayed if the node is up:

```
node: 1 status: UP
```

If node 1 is not up, reboot it, or perform whatever steps are necessary to bring it up as a dependent node in the currently running cluster configuration.

2. Once node 1 is up, cycle the power on the current root node (usually node 2 if node 1 is not the root node). As node 2 goes down, the cluster automatically fails over to node 1. A message appears on node 1 indicating that the failover is complete.
3. When failover to node 1 completes, reboot node 2 to bring it back up as a dependent node.



### **Verify Mounted File Systems**

1. Verify that `/stand` slices are mounted for each node in the cluster. Enter the following command:

```
ptn -v
```

The preceding command shows all the running nodes in the cluster.

2. Verify that the `/stand/nodenum` file system is mounted and the files in that file system are accessible for each node in the cluster. Enter the following command:

```
mount
```

The output is similar to the following:

```
/stand/1 on /dev/dsk/n1c0b0t0d0sa read/write on Sun Apr 5 10:37:15 1998  
/stand/2 on /dev/dsk/n2c0b0t0d0sa read/write on Sun Apr 5 10:21:08 1998  
/stand/3 on /dev/dsk/n3c0b0t0d0sa read/write on Sun Apr 5 09:33:10 1998
```

3. Compare the nodes in the `mount` output with the nodes in the `ptn` output. Mount any `/stand` file systems necessary.
4. Continue with the following section.



## ***Backing Up Files***

Before performing the non-destructive installation of NonStop Clusters, back up the following files:

- /etc/tnc/load\_level/migrate\_commands
- /etc/tnc/load\_level/rexec\_commands
- /etc/tnc/load\_level/parameters
- /etc/vfstab
- /stand/[1-6]/boot

Name the copies using the following format:

*filename*.D10IPM30

For example, enter commands similar to the following:

```
cp /etc/tnc/load_level/migrate_commands \  
/etc/tnc/load_level/migrate_commands.D10IPM30
```

When you have completed the preceding preparation tasks, continue with the following procedure.



## ***Upgrading to D10IPM30***

Your system must be using NonStop Clusters version D10IPM20 before you can upgrade to D10IPM30. To upgrade the system, perform the following procedures on node 1:

- Upgrade the NonStop Clusters Software
- Merge Customer-Modifiable Files on page 7

Pay particular attention to the instructions for merging customer-modifiable files and resolving backed up file conflicts. Performing the procedures incorrectly can result in an unbootable system.

### ***Upgrade the NonStop Clusters Software***

Use the following instructions to upgrade your system:

1. Insert the NonStop Clusters D10IPM30 CD into the CD-ROM drive of node 1.
2. Change to the root directory. Enter the following command:

```
cd /
```

3. Install the software package. Enter the following command:

```
pkgadd -d cdrom1 -q D10IPM30
```



Press the Enter key when prompted to insert the CD-ROM. This package is an update to the D10IPM20 version, so no additional prompts appear that require responses.

4. When the package installation completes, add the release-specific information with the following command:

```
pkgadd -d cdrom1 -q D10I30doc
```

5. Continue the installation by merging in any local changes made to files that are updated by the new software. See the following section.

### ***Merge Customer-Modifiable Files***

You may have changed customer-modifiable files to suit your site. Because the new software installs new copies of customer-modifiable files, it saves the previous versions so you can merge the changes into the new the files. The previous versions have a *.n* extension, where *n* is the number of the previously installed version or a zero (0).

Check the following directories for files with *.n* extensions:

- /etc/conf/init.d



- /etc/conf/mtune.d
- /etc/conf/sassign.d

Check each of the directories listed. If you made no changes to customer-modifiable files and have no need to merge the previous and new versions, remove the *.n* files.

If you changed a customer-modifiable file to suit your site, merge the changes from the previous version, which now has the *.n* extension, to the new version that has no *.n* extension. When you have re-created your site-specific changes in the new version of the customer-modifiable file, remove the corresponding *.n* file. Remember that *n* is the number of the previous release or a zero.

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**▲ Warning** You must remove all *filename.n* files or the kernel will not rebuild, and the system will not boot. Remember that *n* is the number of the previous release or a zero.

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Complete the installation procedure by resolving any conflicts between the files you backed up in Backing Up Files on page 5 and the newly installed versions. Use the following procedure.

### ***Resolve Backed Up File Conflicts***

For each file that you backed up in Backing Up Files on page 5, examine the newly installed version. Resolve any conflicts between the current version and the `.D10IPM30` backup version. Delete the backup version when you have completed any necessary changes to the newly installed version.

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**▲ Warning** You must remove all `filename.D10IPM30` files or the kernel will not rebuild, and the system will not boot.

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### ***Rebuild the Kernel***

After you have performed the upgrade, merged any customer-modifiable file changes, and resolved conflicts with the backed up files, you must rebuild the kernel.

Use the following procedure:

1. Change to the root directory. Enter the following command:

```
cd /
```

2. Rebuild the kernel. Enter the following command:

```
/etc/conf/bin/idbuild -B
```

You may see the following message, which you can ignore:

```
UX:init: ERROR: Command is respawning too  
rapidly.
```

If any other error messages occur during the kernel build, be sure you have removed all files with a `.n` or `.D10IPM30` extension according to Merge Customer-Modifiable Files on



page 7 and Resolve Backed Up File Conflicts on page 9.  
Remember that  $n$  is the number of the previous release or a zero.

3. Execute the `idbuild` command until you receive no errors.

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▲ **Warning** If the `idbuild` operation failed, the cluster will not reboot.

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### ***Reboot the Cluster***

After you have rebuilt the kernel without errors, reboot the cluster. Enter the following command:

```
shutdown -y -g0 -i6
```

After the system reboots, you may want to make a new dependent node boot floppy to use should a dependent node fail. Use steps 1 and 2 of the Installing NonStop Clusters on Dependent Nodes procedure on page B-12 of the *NonStop*

*Clusters for SCO UnixWare System Administrator's Guide* that came with your system. Store the dependent node boot floppy in a safe and easily accessible location for emergency use.

### **Removing the IPM**

When you need to remove the upgraded software from your system, use the following procedure on node 1:

1. Verify that node 1 has control of the root file system. Enter the following command:

```
where /
```

A message indicating that the root file system is on node 1 appears. If this message does not appear, force the cluster to fail over to node 1.

2. Change to the root directory. Enter the following command:

```
cd /
```

3. Remove the software. Enter the following command:

```
pkgrm D10IPM30
```



4. When the package removal command has completed, reboot the cluster. Enter the following command:

```
shutdown -y -g0 -i6
```



