

This README contains instructions for loading this patch, for determining if a kernel rebuild and system reboot are required, and for configuring this patch. The patch should be applied from the root process. The patched cdfs.mod is delivered in the patch tar file as /sys/BINARY/cdfs.mod.patch.

The steps for loading and configuring the patch will differ depending on whether a kernel rebuild and reboot is required, and whether the patch is being applied to a TruCluster system.

For V4.0* based cluster systems this patch must be individually loaded and configured on each cluster member. For V5.* based TruCluster systems, this patch can be loaded once, but it also must be configured on each cluster member.

Loading the patch:

Load this patch by moving the patched cdfs.mod to its proper location and by rebuilding /genvmunix. Use the following commands.

```
# cp /sys/BINARY/cdfs.mod /sys/BINARY/cdfs.mod.pre_patch
# mv /sys/BINARY/cdfs.mod.patch /sys/BINARY/cdfs.mod
# chown bin.bin /sys/BINARY/cdfs.mod
# chmod 644 /sys/BINARY/cdfs.mod
```

Rebuild /genvmunix.

```
# doconfig -a -c GENERIC
# cp /sys/GENERIC/vmunix /genvmunix
```

Note, time can be saved on cluster systems by performing the /genvmunix rebuild once and copying the resulting /genvmunix to each cluster member.

The loading portion of this patch is now complete.

This patch can be applied to a running system and the corrected behavior will take effect immediately. However depending on how the /vmunix kernel is configured, it may be necessary to rebuild a new /vmunix kernel and to reboot the system to have the patch be permanent.

Determining if a kernel rebuild is required:

To determine if a kernel rebuild is required, perform the following command.

```
# nm /vmunix | grep -c cdfs_tounixdate
```

If the output is a '0', then a /vmunix kernel rebuild and system reboot is not required. Proceed to OPTION 2.

If the output is a '1', then the a /vmunix kernel rebuild and system reboot will be required to make the patch permanent. Proceed to OPTION 3.

For the most direct method of installing this patch, proceed to OPTION 1.

OPTION 1: The most direct method to install this patch.

The most direct method for installing this patch is to rebuild /vmunix and reboot. Here are the steps:

Rebuild /vmunix. Use doconfig with the -c option and specify the existing config file name. The config file name is usually the name of the system, in uppercase letters.

```
# doconfig -c <config-file-name>
```

When the doconfig command completes, it will list a vmunix file that must be copied to /vmunix.

Reboot the system.

The patch is now permanently installed.

OPTION 2: Installing this patch when a kernel rebuild and reboot is not required.

This option shows how to install the patch on a system where a kernel rebuild and reboot is not required for the patch to be permanently applied.

Prepare to load the patch:

Loading the patch first requires that all cdfs file systems are unmounted and the cdfs kernel option is unconfigured.

First unmount all cdfs file systems.

```
# umount -Av -t cdfs
```

Verify all cdfs file systems have been unmounted. The output of the following mount command should not show any file systems still mounted.

```
# mount -e -t cdfs
```

Second, unconfigure the cdfs kernel subsystem, making sure it was first configured.

```
# sysconfig -c cdfs >> /tmp/cdfs_patch.out  
# sysconfig -u cdfs >> /tmp/cdfs_patch.out
```

Configure the patch with the following command:

```
# sysconfig -c cdfs
```

The patch is now installed on the running kernel.

OPTION 3: Installing the patch on a system where a kernel rebuild and reboot are required.

This option shows how to install the patch on a system where a kernel rebuild and reboot is required for the patch to be permanently applied.

If the system can be rebooted immediately, then proceed to OPTION 1.

If the system cannot be rebooted immediately but the corrected behavior from the patch is needed and a planned reboot will occur at a later time, then:

Perform OPTION 2 to have the patch applied to the running system.

At the time of the next reboot, run doconfig to generate a new /vmunix kernel and reboot the system. Use doconfig with the -c option and specify the existing config file name. The config file name is usually the name of the system, in uppercase letters.

```
# doconfig -c <config-file-name>
```

The patch is permanently installed once the new kernel is copied to /vmunix and the system is rebooted.

**** Note **:**

Do not copy the new rebuilt kernel to /vmunix until the system is ready to be rebooted.