

[Previous](#)[Search](#)[Next](#)[TA Home](#)

19/60

---

# I cannot access my SCSI tape drive with the device nodes /dev/rct0, /dev/xct0, or /dev/nrct0.

---

## Keywords

mkdev tape ct install cartridge scsi openserver 5.0.5 5.0.4 5.0.2 5.0.0 v5  
remove required sdevice.d mdevice kernel link device node dev rct0 xct0 nrct0  
rStp0 nrStp0 xStp0

## Release

SCO OpenServer Enterprise System Release 5.0.0, 5.0.2, 5.0.4, 5.0.5  
SCO OpenServer Host System Release 5.0.0, 5.0.2, 5.0.4, 5.0.5  
SCO OpenServer Desktop System Release 5.0.0, 5.0.2, 5.0.4, 5.0.5

## Hardware

SCSI tape drive

## Problem

Any commands attempting to access a SCSI **tape** device using the device nodes /dev/rct0, /dev/xct0, or /dev/nrct0 fail. Some examples may include:

```
# tape status
tape: can't open '/dev/xct0': No such device

# tar cvf /dev/rct0 /etc/hosts
tar: cannot open: /dev/rct0
```

However, if you use the SCSI device nodes (/dev/rStp0, /dev/nrStp0, or /dev/xStp0), the commands execute properly.

You may have also noticed the following message while running [mkdev\(ADM\)](#) **tape** to configure your SCSI **tape drive**:

```
The presence of a Cartridge Tape Drive has been detected. The
Cartridge Tape Drive must use the default devices to function
properly. Therefore, SCSI devices will be created without default
```

device links.

## Cause

As the above message indicates, the cause of this type of problem is that the ct driver is linked into the kernel which reserves the /dev/\*ct0 device nodes to be used for that device.

## Solution

You can confirm this by checking whether the ct driver is turned on in the file /etc/conf/sdevice.d/ct. If the second field is a Y, this is the case.

```
# cat /etc/conf/sdevice.d/ct
ct      Y      1      5      0      0      0      0      0      0
```

You can also see this via the following listings:

```
# ls -la /dev/*ct0
crw-rw-rw-  2 root    root      10, 32 Dec 26 04:58 /dev/erct0
crw-rw-rw-  4 root    root      10,  8 Dec 26 04:58 /dev/nrct0
crw-rw-rw-  4 root    root      10,  0 Dec 26 04:58 /dev/rct0
crw-rw-rw-  1 root    root     10,128 Dec 26 04:58 /dev/xct0
```

```
# ls -la /dev/*Stp0
crw-rw-rw-  2 root    root      46,  8 Dec 26 14:21 /dev/nrStp0
crw-rw-rw-  2 root    root      46,  0 Dec 26 14:21 /dev/rStp0

crw-rw-rw-  2 root    root     46,128 Dec 26 14:21 /dev/xStp0
```

You can see that the \*ct0 devices are using a major device number of 10 while the \*Stp0 devices are using 46.

If there is no ct device on your system, you need to remove the ct driver from the kernel. The recommended way to do this is by using [mkdev\(ADM\) tape](#) as shown below:

```
# mkdev tape
```

**Tape Drive** Configuration Program

1. Configure a SCSI or Enhanced IDE **tape drive**
2. Configure a different type of **tape drive**

Select an option or enter q to quit:

**Select 2.**

**Tape Drive** Configuration Program

1. Install a **Tape Drive**
2. Remove a **Tape Drive**
3. Change default **Tape Drive**

Select an option or enter q to quit:

**Select 2.**

**Tape Drive** Removal Menu

1. Remove Cartridge **Tape Drive**
2. Remove Mini-Cartridge **Tape Drive**
3. Remove Qic-40 or Qic-80 **Tape Drive**
4. Remove Compaq CPQS **Tape Drive**

Select an option or enter q to return to the main menu:

**Select 1.**

Updating system files to effect removal of driver ...

System files have been updated.

Removing default **tape** devices.

Cartridge **Tape** Driver and associated devices have been removed.

In /etc/default/boot:  
No current boot string.

Enter new string, "rm" to remove string,  
or enter q to leave current string as is:

**Enter q.**

**Tape Drive** Configuration Program

1. Install a **Tape Drive**
2. Remove a **Tape Drive**
3. Change default **Tape Drive**

Select an option or enter q to quit:

**Enter q.**

**Tape Drive** Configuration Program

1. Configure a SCSI or Enhanced IDE **tape drive**
2. Configure a different type of **tape drive**

Select an option or enter q to quit:

Enter q.

You must create a new kernel to effect the driver change you specified.

Do you wish to create a new kernel now? (y/n)

Enter y.

Now that the ct driver is removed from the kernel, you need to run `mkdev tape` again to remove and re-add your SCSI tape drive.

If you are trying to remove a SCSI **tape** on OpenServer 5.0.4, you may have trouble with relinking the kernel if you try to relink prior to re-adding the **tape drive**. See [Technical Article 105776](#), "Kernel relink fails after all SCSI tapes are removed from the link kit."

**IMPORTANT NOTE:** Failure to remove and re-add the SCSI **tape drive** will prevent the correct device nodes from being created.

## Notes

When the ct driver is configured, the "r" flag (required device) is added to the third field of its entry in `/etc/conf/cf.d/mdevice`. This prevents disabling the ct driver by means of changing the "Y" to an "N" in the file `/etc/conf/sdevice.d/ct`. If for some reason `mkdev tape` cannot be used to remove the ct driver, you can edit `/etc/conf/cf.d/mdevice` and remove the "r" from the third field of the ct line. This will allow the driver to be disabled in `/etc/conf/sdevice.d/ct`.

## See Also

[Technical Article 105776](#), "Kernel relink fails after all SCSI tapes are removed from the link kit."

Manual pages: [cartridge\(HW\)](#), [mkdev\(ADM\)](#), [tape\(HW\)](#), [mdevice\(F\)](#)

---

TA110725 created on 28 December 1999 , last updated on 18 January 2000

---

Please click this box if this article solved your problem

[Previous](#) [Search](#) [Next](#) [TA Home](#)

Suggestions for improving the content of this article.



1998 The Santa  
Cruz Operation, Inc.

We appreciate your continued interest in improving the quality of SCO's technical library and welcome your input regarding this technical article. Suggestions submitted from this form will be forwarded to the Documentation department. If you are looking for technical help beyond that provided in the current article, please contact [SCO Support Services](#).

All Rights Reserved.