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# ConvexOS Tape System V11.5 Installation Procedures



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## ConvexOS Tape System V11.5 Installation Procedures

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# Overview

This document contains instructions for installing ConvexOS Tape System V11.5. Installing this software should take about one hour.

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## Contents of this release

The media distribution for this release consists of at least one 6250-bpi, installsw(8) format magnetic tape. Included with the tape should be a list of products on the tape.

If you are missing any of these items, contact the CONVEX Technical Assistance Center or a CONVEX field representative.

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## Prerequisites

Your system must be running ConvexOS and Utilities V11.5 or greater to install this software. Please refer to the ConvexOS installation document for instructions.

You should ensure that there is at least 9.5 megabytes of free space in the /usr partition and 1 megabyte of free space in the /tmp partition.

You should perform the installation while the system is in single-user mode.

If you have a StorageTek 4400 Automated Cartridge System, you must be running Release 3.0 or greater of Automated Cartridge System Library Server (ACSL).

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## Install notes

The installation script displays informative messages about the progress of the installation. If the procedure encounters a problem and cannot continue, you are notified with an error message. If it is obvious how to correct the problem (e.g., you are not installing this software as root), make the correction and restart the installation process. If a problem is not correctable, contact the CONVEX Technical Assistance Center for further information.

Your tpconfig(8) database, /usr/lib/tape/config.db, opreq(1) configuration file, /usr/lib/opreq/.opreqrc and tape device to silo tape drive map file, /usr/convex/robot/config/silodrivelist are preserved. The installed release is saved in tar(1) format in /usr/lib/tape/tape.preV11.5.

1. Connect the tape drive to the system.  
 2. Verify the connection.  
 3. Initialize the tape drive.  
 4. Create a tape backup.  
 5. Restore data from the tape.

SECTION 6  
 ConvexOS Tape System Installation Procedures

This section describes the installation and configuration of the ConvexOS Tape System.

The first step is to connect the tape drive to the system. This is done by inserting the tape drive into the appropriate slot on the system board.

After the tape drive is connected, the next step is to initialize it. This is done by running the `init` command.

Once the tape drive is initialized, you can create a tape backup. This is done by running the `backup` command.

Finally, you can restore data from the tape. This is done by running the `restore` command.

For more information, see the ConvexOS Tape System User's Guide.

The ConvexOS Tape System is a powerful tool for backing up and restoring data.

This section provides a detailed overview of the installation and configuration process.

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# Product Installation

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## Installation summary

This section summarizes the ConvexOS Tape System V11.5 installation procedure:

- Step 1** Determine that you have met the prerequisites, have all of the necessary information and have the required disk space for installation.
- Step 2** Put the system in single-user mode.
- Step 3** Use `installsw(8)` to install the tape utilities off of the release tape.
- Step 4** Boot to multi-user mode.

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## Halting ConvexOS

Bring the system to single-user mode before installing this product.

- Step 1** Log in as the superuser on the system console.
- Step 2** Put the system in single-user mode using the `shutdown(8)` command, as shown below.

```
# /etc/shutdown +5 "to install tape system V11.5"
```

- Step 3** Warning message are printed to the screen for approximately five minutes. The terminating message and system prompt then appear.

```
erase ^H, Kill ^U, intr ^C
#
```

- Step 4** Unmount the file systems.

```
erase ^H, Kill ^U, intr ^C
# /etc/umount -a
```

### Caution

Obtain full backups of the `/usr` file systems before you begin installation. This ensures against loss of valuable files if problems arise during installation.

To do this, complete the following procedure:

- Step 1** Mount a scratch tape and back up the `/usr` file system. In the example `/dev/rmt20` is used. See the `dump(8)` man page for more information.

```
# /etc/dump 0fG /dev/rmt20 /usr
```

**Step 2** Remove and label the tape.

## Installing products

To install the ConvexOS Tape System, follow the instructions in the remainder of this section. Installation takes approximately 30 minutes. An example of the installation can be found in the next section.

**Step 1** Mount all local file systems.

```
# /etc/mount -at 4.2
```

**Step 1** Verify that there is 9.5 megabytes of free space in the /usr partition and 1 megabyte of free space in the /tmp partition.

```
# df /usr /tmp
Filesystem      kbytes    used    avail  capacity  Mounted on
/dev/du0e       275970    217952  30420   88%       /usr
/dev/du3a       45978     21438  19942   52%       /tmp
```

**Step 2** Mount the tape containing ConvexOS Tape System V11.5. /dev/rmt20 is again used as an example.

**Step 3** Invoke the installsw(8) utility.

```
# cd /
# /etc/installsw -i -d /dev/rmt20
```

**Step 4** When prompted for the type of installation, enter local as shown below.

```
Choose the type of installation you want to perform:

LOCAL          --> install on this machine
REMOTE         --> install on a remote machine
ABORT          --> abort installation

Enter you selection now --> local
```

**Step 5** After environment set up, enter install at prompt.

```
Do you wish to install or de-install convexOS Tape System?
install
```

**Step 6** Since man pages were installed, you will be asked when to run makewhatis.

```
makewhatis should be run on the newly installed man pages.
Please select one of the following options:

1 Run makewhatis now (in foreground)
2 Run makewhatis now (in background)
3 Don't run makewhatis
4 Save the makewhatis command file to run later

Select [3]? 3
```



ConvexOS (Convex) Manual  
Part 1: Installation and Configuration

Chapter 1: Introduction

1.1 Overview

1.2 Objectives

1.3 Scope

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part 1 of 2  
part 2 of 2  
part 3 of 2  
part 4 of 2  
part 5 of 2

1.4 Installation

1.5 Configuration

1.6 Troubleshooting

1.7 Appendix A: Glossary

1.8 Appendix B: Index

1.9 Appendix C: License

1.10 Appendix D: Contact

1.11 Appendix E: Acknowledgments

1.12 Appendix F: Revision History

1.13 Appendix G: Copyright

1.14 Appendix H: Disclaimer

1.15

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# Example Installation

```
# /etc/shutdown +5 "to install ConvexOS Tape System"
Shutdown at 14:45 (in 5 minutes) [pid 3013]

/* shutdown messages deleted */

erase ^H, kill ^U, intr ^C
# /etc/umount -a
# cd /

# /etc/dump 0fG /dev/rmt20 /usr

/* dump output deleted */

# /etc/mount -at 4.2
# df /usr /tmp
Filesystem  kbytes    used   avail  capacity  Mounted on
/dev/du0e   275970    217952 30420   88%       /usr
/dev/du3a   45978     21438 19942   52%       /tmp
# installsw -i -d /dev/rmt20
Tape device is /dev/rmt20

** Installsw Header File From Tape **

Copyright 1996 CONVEX Computer Corp.
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CREATED ON Thu August 29 14:30:12 CDT 1996
710-014115-003 ConvexOS Tape System, release 11.5 4

Choose the type of installation you want to perform:

LOCAL      --> install on this machine
REMOTE     --> install on a remote machine
ABORT      --> abort installation

Enter your selection now --> local
Setting up installation environment. Please wait ....

ConvexOS Tape System, V11.5

Number of files in distribution:      4
File offset from beginning of media:  3
Relocatable?                          no
```

De-installable? no  
Unattended installation support? no  
Configurable? no  
Activation key required? no  
Sysgen required? no

Do you wish to install or de-install ConvexOS Tape System? **install**

Beginning product installation/de-installation ...

installing ConvexOs v11.5

-----  
--- Production ConvexOS Tape System V11.5  
--- installation commencing Mon Sep 9 15:18:55 CDT 1996.  
-----

--- Performing consistency check.  
--- Checking prerequisites.  
--- Checking disk space requirements.  
--- Saving tpconfig database in /tmp/snapshot.29942.  
--- Saving old tape system in usr/lib/tape/tape.pr11.5.  
--- Extracting ConvexOS Tape System V11.5 into /  
from /dev/rmt20.  
--- Checking installation. Output saved in /tmp/tape.verify.29942.  
--- Rebuilding tpconfig database. Output saved in /tmp/tape.tpconfig.29942  
--- Restoring /opregrc. New version found in /opregrc.11.5.  
--- Removing old tape products and patches from /usr/lib/gip/etc/VDB.  
--- Updating the version database for /tape.  
--- Adding message to /etc/motd.  
--- ConvexOS Tape System V11.5 installed.  
--- Installation complete Mon Sep 9 15:31:05 CDT 1996.

Product summary:  
ConvexOS Tape System no warnings, no errors

Beginning product configuration.  
makewhatis should be run on the newly installed man pages. Please select one of the following options:

- 1 Run makewhatis in foreground
- 2 Run makewhatis in background  
(Not valid for remote installation)
- 3 Do not run makewhatis
- 4 Save the makewhatis command file to run later

Select [3]? **3**

Processing of installation media complete.  
Master Rewinding tape

# Configuration

This section describes the steps you need to take to configure the new `tpdaemon`.

- Step 1** If you don't have STK silo, go to Step 7.
- Step 2** Map the tape devices to silo tape drives: the file `/usr/convex/robot/config/silodrivelist` maps the silo tape drives' special device files to silo drive coordinates. The file is a simple ASCII file. You must update the file before using ACS tape commands. There is an example file, `/usr/convex/robot/config/silodrivelist.11.5`.
- Step 3** If the Convex has multiple interfaces and the Sun workstation controlling the silo is not on the primary interface, then add the interface name that's connected to the Sun to the file `/usr/convex/robot/config/siloresphost`. For example, the Convex has both `fddi` (*convex-f*) and `ethernet` (*convex-e*) interfaces and `fddi` is the Convex's primary interface, but `ethernet` is used to connect to the Sun, then add `convex-e` to the `siloresphost` file.
- Step 4** Add the following lines to `/etc/rc.local` to start the `silodaemon(8)`. Replace `silohost` with the name of the workstation that controls the silo.

```
if [ -f /usr/convex/robot/bin/silodaemon ]; then
  /usr/convex/robot/bin/silodaemon -h silohost &
fi
```

- Step 5** Add an entry to `/etc/services` identifying the port number that the `ssi` daemon monitors.

```
silodaemon 50004/tcp #silodaemon port
```

- Step 6** For more information on silo configuration, please refer to the Convex STK silo ACS documents.

- Step 7** Use `tpconfig(8)` to set up devices for `tpdaemon` as in previous releases.

- Step 8** Check `/etc/rc.std` to make sure there is a line to start `tpdaemon`.

```
if [ -f /usr/lib/tape/tpdaemon ]; then
  /usr/lib/tape/tpdaemon & echo -n "tpdaemon"
fi
```

# Table 10-3

Table 10-3	
Description	Reference
<p>1. The system is installed on a tape drive.</p>	<p>1. ConvexOS Installation Manual</p> <p>2. ConvexOS Reference Manual</p> <p>3. ConvexOS System Manual</p> <p>4. ConvexOS User Manual</p> <p>5. ConvexOS Administration Manual</p> <p>6. ConvexOS Troubleshooting Manual</p>
<p>2. The system is installed on a hard disk.</p>	<p>1. ConvexOS Installation Manual</p> <p>2. ConvexOS Reference Manual</p> <p>3. ConvexOS System Manual</p> <p>4. ConvexOS User Manual</p> <p>5. ConvexOS Administration Manual</p> <p>6. ConvexOS Troubleshooting Manual</p>
<p>3. The system is installed on a network.</p>	<p>1. ConvexOS Installation Manual</p> <p>2. ConvexOS Reference Manual</p> <p>3. ConvexOS System Manual</p> <p>4. ConvexOS User Manual</p> <p>5. ConvexOS Administration Manual</p> <p>6. ConvexOS Troubleshooting Manual</p>
<p>4. The system is installed on a CD-ROM.</p>	<p>1. ConvexOS Installation Manual</p> <p>2. ConvexOS Reference Manual</p> <p>3. ConvexOS System Manual</p> <p>4. ConvexOS User Manual</p> <p>5. ConvexOS Administration Manual</p> <p>6. ConvexOS Troubleshooting Manual</p>

# Installation Tape Contents

Table 1 install files

Filename	Description/Purpose
/usr/adm/log/tapelog	syslog debug file
/bin/mt /usr/convex/stacker /usr/convex/tpmount /usr/convex/tpwait /usr/convex/tplabel /usr/convex/tpunlabel /usr/convex/tpattr /usr/convex/tplist /usr/convex/tpinit /usr/convex/tpswitchvol /usr/convex/tpqueue /usr/convex/tpunmount	tape system user commands
/usr/convex/tpconfig /usr/convex/opreq /usr/lib/opreq/.opreqrc /usr/lib/opreq/opreq_daemon /usr/lib/opreq/share.mem /usr/lib/tape/tpd_debug /usr/convex/robot/bin/silodaemon /usr/convex/robot/bin/siloeject /usr/convex/robot/bin/silodismount /usr/convex/robot/bin/siloenter /usr/convex/robot/bin/silomount /usr/convex/robot/bin/siloquery /usr/convex/robot/config/silodrivelist /usr/convex/robot/config/siloresphost /usr/lib/tape/ansidaemon /usr/lib/tape/ibmdaemon /usr/lib/tape/nldaemon /usr/lib/tape/config.db /usr/lib/tape/stkdaemon /usr/lib/tape/tpdaemon /usr/lib/tape/tpdCleanup	tape system administrator commands, configuration files and daemons
/usr/lib/libtape.a	programmer's library
/usr/lib/verify/tape_V11.5	verify database

**Table 1** install files

Filename	Description/Purpose
/usr/man/man1/opreq.1 /usr/man/man1/tpattr.1 /usr/man/man1/tpinit.1 /usr/man/man1/tplabel.1 /usr/man/man1/tplist.1 /usr/man/man1/tpmount.1 /usr/man/man1/tpqueue.1 /usr/man/man1/tpswitchvol.1 /usr/man/man1/tpunlabel.1 /usr/man/man1/tpunmount.1 /usr/man/man1/tpwait.1 /usr/man/man3/tape.3 /usr/man/man5/tp-acct.5 /usr/man/man8/ansidaemon.8 /usr/man/man8/ibmdaemon.8 /usr/man/man8/nldaemon.8 /usr/man/man8/opreq_daemon.8 /usr/man/man8/silodismount.8 /usr/man/man8/siloeject.8 /usr/man/man8/siloenter.8 /usr/man/man8/silomount.8 /usr/man/man8/siloquery.8 /usr/man/man8/stacker.8 /usr/man/man8/stkdaemon.8 /usr/man/man8/tpconfig.8 /usr/man/man8/tpdaemon.8	man pages