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# **CONVEX CXwindows V3.1 Installation Procedures**

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# Installation Procedures for CONVEX CXwindows V3.1

This document explains how to install CONVEX CXwindows V3.1. The distribution media for this release is an `installsw` format magnetic tape. The installation should take about 30 minutes.

A detailed description of the contents of this release can be found in the *CONVEX CXwindows V3.1 Release Notice*.

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## Prerequisites

Before you install CONVEX CXwindows V3.1, your system must already be running these software packages:

- ConvexOS V10.0 or a later release of the CONVEX operating system software.

If you do not know what operating system your system is running, you can run the command `vers /vmunix` to find the version number.

- ConvexOS Utilities V10.0 or a later release of the CONVEX system utilities software.
- ConvexOS Internet Services V10.0 or a later release of the CONVEX networking utilities.
- CONVEX C Compiler V5.0 or a later release of the compiler.

In addition to the software listed above, if you want to use CONVEX PEX -based (PEX stands for the PHIGS Extension to X) applications, your system must also have the following hardware:

- IEEE floating point hardware.

If you do not know if your system has IEEE floating point hardware, you can run the command `getsysinfo`. If `getsysinfo` indicates `ieee_supported`, your system has the appropriate hardware.

Your CONVEX system **must** have IEEE floating point hardware. Your system does not have to use IEEE as the default floating point mode, but your system must have IEEE hardware installed.

- A color PEX display device networked to your CONVEX system.

You can use CONVEX PEX with any X Window System Version 11 Release 5 compliant PEX server.

CONVEX PEX-based applications will not work on systems without IEEE floating-point hardware.

If you do not have all of the necessary components, contact the CONVEX Technical Assistance Center (TAC) for information on obtaining upgrades.

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## Corequisites

CONVEX CXwindows will operate with CONVEX COVUEnet V2.1 or later releases of CONVEX COVUEnet. CONVEX CXwindows V3.1 will not work with CONVEX COVUEnet releases prior to CONVEX COVUEnet V2.1.

If you are running an older versions of CONVEX COVUEnet, please contact your CONVEX sales representative for information on upgrading your software.

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## Installing CONVEX CXwindows

Installing CONVEX CXwindows is non-intrusive and does not require the system to be taken to single-user mode; however, you will need superuser access.

The following instructions refer to a TAPEHOST system and a TARGETHOST system.

- If you are installing on a system with a local tape drive, TARGETHOST and TAPEHOST are the same system.
- If you are installing on a system that does not have a local tape drive, TARGETHOST is the system where you want to install CONVEX CXwindows and TAPEHOST is the CONVEX network node that has a tape drive.

The installation procedure displays informative messages about the progress of the installation. You may ignore them.

If the installation procedure encounters a problem and cannot continue, you will be notified with an error message. If it is obvious how to correct the problem (e.g., you are not logged on as the superuser), make the correction and restart the installation. If you cannot determine or fix the problem, contact the TAC for assistance.

To install CONVEX CXwindows, read the remainder of this document first and then perform the steps below.

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### Step-by-step instructions

#### **Step 1: Select a directory for installing CONVEX CXwindows.**

On the TARGETHOST, select an empty directory for installing CONVEX CXwindows (or make a new one using `mkdir`) and verify that you have sufficient disk space for the installation.

The standard installation of CONVEX CXwindows V3.1 requires 83 megabytes of disk space. The optional contributed software installation requires another 64 megabytes of disk space. A complete installation requires a total of 147 megabytes of disk space. Use the `df` command to ensure that the directory you have chosen has enough free space.

The installation procedure will automatically build symbolic links from `/usr` to the partition you selected.

#### **Step 2: Log in as the superuser.**

Log in as the superuser on the system console of the TAPEHOST.

#### **Step 3: Mount the release tape on tape unit 0.**

Mount the release tape on tape unit 0 of the TAPEHOST. If you are using a DAT tape drive, replace the occurrences of `rmt20` in the following discussion with `rdat0n`.

To allocate the tape drive, enter the command (convex# is the command line prompt):

```
convex# /usr/convex/tpmount -R -a /dev/rmt20
```

#### **Step 4: Start the installation procedure.**

To start the installation procedure, enter the command:

```
convex# /etc/installsw -i
```

**Note:** If you are planning to install both the standard and contributed product components and you want them installed in a single unified directory structure, specify the same installation directory for both when prompted by the installation script. The contributed component installation is already rooted in an unsupported directory. Specifying an unsupported path component when prompted for the contributed installation directory will cause the actual directory path to contain unsupported/unsupported components, which is probably not what is intended.

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### **Sample local installation**

The following text is a typescript of a local installation. Your session will be similar; details like host names, prompt symbols, and warning messages may vary.

```
Tape device is /dev/rmt20
```

```
** Installsw Header File From Tape **
```

```
Copyright 1993 CONVEX Computer Corp.  
All rights are reserved.  
CREATED ON Thu Jun 24 14:26:40 CDT 1993  
710-005615-010 CXwindows, release 3.1 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. Hang on...  
tar: blocksize = 65536 blocking = 64  
This tape contains only release 3.1 of CXwindows.
```

```
Do you wish to install or de-install it? install  
[Installing CXwindows v3.1]  
Do you want to install anyway? yes
```

This installation procedure consists of two parts. Part 1 will install all standard, supported CXwindows clients, libraries, etc. Part 2 will optionally allow for the installation of a contributed unsupported directory containing various clients that have been built on the CONVEX.

The standard installation procedure installs approximately 82500 kbytes of executables, man pages, libraries, and data files into a directory of your choice. You can find out the free space by using the 'df' command.

The contributed installation procedure installs approximately 63500 kbytes of executables, man pages, libraries, and data files into a directory of your choice. Again, you can find out the free space by using the 'df' command.

The installation procedure then creates a symbolic link named /usr/X11 and links it to the directory you've created. It is possible to choose /usr/X11 as the installation directory, if /usr has enough free space. In this case, no symbolic links will be created, and the files will be installed.

What directory should be used? **/richardh/X11**

/richardh/X11 does not exist. Creating it now...

mkdir /richardh/X11 755  
absolute pathname = /richardh/X11

\*\*\*\*\*

\*  
\* This release of Convex CXwindows V3.1 contains on-line  
\* release notices. Refer to the 3.1 Release Notice  
\* for further details.  
\*

\*\*\*\*\*

Saving files in = /tmp/X11.29148  
Reading tape into /richardh/X11...  
Do you wish to install the contributed, unsupported  
directory? **yes**

What directory should be used? **/richardh/X11**  
absolute pathname = /richardh/X11  
Reading unsupported tape image into /richardh/X11...  
Done reading tape.

\*\*\*\*\*

\*  
\* Convex CXwindows 3.1 installed. Look in /usr/doc for  
\* on-line copies of new release notices. Use lpr(1) to print  
\* hard copies.  
\*

\*\*\*\*\*

Restoring previous X release into /usr/X11/priorX  
Restoring local app-defaults  
Restoring non-default xdm directories

Do you wish to install xdm config into the standard  
directory (Local files have been saved into  
/usr/X11/priorX)? **yes**

```
Restoring local uid files to /usr/lib/X11/uid.  
Installing uil for specific machine mode.  
Linking unsupported directory to /usr/X11/unsupported...  
Adding /usr/X11/unsupported to verify database...  
Adding /usr/X11 to verify database...
```

```
---- CONVEX CXwindows Release 3.1  
---- installation completed.  
---- Adding message to /etc/motd
```

Processing of installation media complete.

Trace file may be found in telemann:/tmp/install466script.

## Step 5: Unmount the release tape.

Unmount the release tape on tape unit 0 of the TAPEHOST.

To deallocate the tape drive, enter the command (convex# is the command line prompt):

```
convex# /usr/convex/tpummount -k -s TAPE
```

---

## Notes

As part of the installation process, the portions of the previous version of CONVEX CXwindows, which will be saved in priorX, are copied into a temporary directory. If a particular file is not found, an error message from the cp command will be observed. These can be ignored. The previous version is then removed. If a particular file is not found, an error message from the rm command will be observed. These too can be ignored.

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## Installing the xdm and fs daemons

The xdm daemon manages a collection of remote X displays. xdm is designed to provide services similar to that provided by init, getty, and login on character terminals: prompting for login and password and authenticating the user and running a "session".

The fs daemon is the X Window System font server. It supplies fonts to R5 compliant X Window System display servers.

Both daemons are usually run by a system administrator and started in the /etc/rc.local boot file. If you want to run these daemons, add commands similar to the following to your /etc/rc.local file:

```
if [ -f /usr/lib/X11/xdm/xdm-config ]; then  
    /usr/bin/X11/xdm -config /usr/lib/X11/xdm/xdm-config &  
    /bin/echo "Started xdm." > /dev/console  
fi  
if [ -f /usr/bin/X11/fs ]; then  
    /usr/bin/X11/fs -port 7000 &  
    /bin/echo "Started X font server." > /dev/console
```





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