

**Installation Procedure**  
**CONVEX CXdb V2.0**  
Document No. 710-014930-009

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December 1992

**CONVEX Computer Corporation**  
Richardson, Texas USA

*Installation Procedure Notice, CONVEX CXdb V2.0*

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# Installing CONVEX CXdb V2.0

## Product Prerequisites

The following products (at the indicated revisions) are required to install and use CXdb V2.0.

- CONVEX FORTRAN V8.0
- CONVEX C V4.3 or V5.0
- ConvexOS V10.0, V10.1, or V10.2

## CXdb & X Windows

While it is preferable that CXwindows be in place for use with CXdb, it is not required. The CXdb installation procedure installs a version of *xterm* on those systems without CXwindows. The *xterm* and the *app-defaults* file for CXdb allow you to run CXdb in X mode on any X server. You need to obtain a version of the *XKeysymDB*, which is available from most any X server.

## Structure of this Release

All components of CXdb are installed in a single base directory. By default, the base directory is */usr/lib/cxdb*, but it can be specified as any directory at installation time. The CXdb installation is self-contained. This means that the *cxdb* executable is stamped with the directory path in which it was installed. This allows CXdb to locate any associated components, like online help files, regardless of where CXdb has been installed.

Once the product is installed, symbolic links can be made from the standard installation locations, such as */usr/convex/cxdb*, to the corresponding component in the base directory.

## Contents of this Release

The base directory consists of the following components:

- .cxdbinit:** Is the default system-wide initialization file for CXdb.
- X11:** Contains components related to X. This includes an *app-defaults* file, *Cxdb*, for CXdb. It also includes an *xterm* for installation on systems without CXwindows. This will allow users who have X-window based terminals or workstations to use CXdb's X-window capabilities.
- aliases:** Contains the alias files to set up *gdb* and *csd* compatibility modes.
- bin:** Contains the *cxdb* executable and the *cxdbserver* executable used for remote debugging.
- doc:** Contains the online version of the Release Notice.
- help:** Contains the online help pages and the text of the online tutorial.
- man:** Contains the man page for *cxdb*.
- misc:** Contains several scripts to aid in the installation of CXdb.
- tutorial:** Contains source files and executables used in the tutorial.
- verify:** Contains the verify database used to insure correct installation of all installed files.

## Linking to Standard Locations

Once CXdb has been loaded from tape, relevant components in CXdb can be optionally linked into the standard locations in */usr* at installation time. Additionally, the script *misc/linkfiles* can be used to reinstate all links. The links made by the *misc/linkfiles* script are listed below. Relative pathnames are relative to the base directory in which CXdb was installed.

- */usr/convex/cxdb* is linked to *bin/cxdb*.
- */usr/convex/cxdbserver* is linked to *bin/cxdbserver*.
- */usr/man/man1/cxdb.1* is linked to *man/cxdb.1*.
- */usr/doc/vV2.0cxdb.relnotes* is linked to *doc/cxdb.relnotes*.
- */usr/lib/verify/cxdb\_XV2.0* is linked to *verify/cxdb*.
- */usr/X11/lib/app-defaults/Cxdb* is linked to *X11/Cxdb*.
- */usr/X11/bin/xterm* is linked to *X11/xterm*, if *xterm* has not already been installed.

## Installation Procedure

To install CXdb, you will need 1300 Kbytes in the base directory. The installation script will check this automatically for you.

The installation procedure will *not* save CXdb components from previous installations. If you do not want to overwrite previous components, install CXdb in another directory.

Follow these steps to install CXdb:

1. Mount the CXdb *installsw* tape.
2. Log in as root.
3. Make sure you are running under the C shell (csh).
4. Make sure you have "." in the environment variable PATH.
5. Run the */etc/installsw* script as shown in the *Example Installation* section below. *installsw* must be run on a machine with a tape drive, but the actual installation may be on any machine in the same cluster.
6. The installation script will prompt you for:
  - The directory in which to install CXdb. Default is */usr/lib/cxdb*. If necessary, the installation script will make a directory for the last component of the path.
  - Activation keys. CXdb is protected by a serial number and requires an activation key to enable it. If you enter the wrong activation key, you will be queried again during the installation.
  - Whether or not you want to instantiate the symbolic links listed in the *Linking to Standard Locations* section above.
  - Whether or not you want to delete old components from earlier versions of CXdb.

Note that all prompts which contain an entry in square brackets “[ ]” provide a default answer of the text within the brackets. Just press RETURN to accept the default response.

7. To enable remote debugging, see the (next) section on *Enabling Remote Debugging*.
8. You are now finished with the installation.

## Enabling Remote Debugging

CXdb supports remote debugging (debugging a process that is running on a remote host). To enable the remote CXdb server, you must add it to the service name database in */etc/services*. The standard entry is:

```
cxdb_server    20002/tcp          # CXdb remote server
```

In addition to defining the CXdb server, you must configure *inetd* for the CXdb remote server. To do this,

add the following line to */etc/inetd.conf*:

```
cxdb_server  stream tcp  nowait root  /usr/convex/cxdbserver  cxdbserver
```

Once this entry is added to */etc/inetd.conf*, you must send a SIGHUP signal to the inetd daemon to have it reread the configuration file.

## Enabling Unique Core Files

Unique core files are an optional feature that allows customer sites to send CXdb (not application) core images back to CONVEX for analysis. This enables the CONVEX development team to properly diagnose many of the problems that may occur. Without this option, CXdb core images will often be overwritten immediately by application core images.

To enable unique core file names, perform the following operations:

- Add the entry `tune cpu enable_unique_core = 1` to the file */mnt/os/bootcmd.local* on the SPU.
- Reboot the system.

## Example Installation

An example installation is listed below. It is only an illustration and may not exactly reflect the output you will see. User input appears in a bold font.

```
> tpmount -a /dev/rmt20 (user input)
Tape device /dev/rmt20 allocated.
> /etc/installsw -i -d /dev/rmt20 (user input)
Tape device is /dev/rmt20
```

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

```
Copyright 1992 CONVEX Computer Corp.
All rights are reserved.
CREATED ON Thu Nov 12 22:13:34 CDT 1992
710-008215-008 CXdb, release 2.0
```

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 --> l (user input)
```

```
Setting up installation environment. Hang on...
tar: blocksize = 65536 blocking = 64
This tape contains only release 2.0 of CXdb.
```

```
Do you wish to install or de-install it? i (user input)
[Installing CXdb v2.0]
Directory in which to install cxdb subdirectory [/usr/lib/cxdb]? (user input)
```

```
CXdb requires an activation key.
What are your activation keys? 61576-95222-7773 (user input)
```

Do you want to make links to components within the cxdb directory [y]? (user input)

Do you want to delete old components of cxdb [y]? (user input)

Unless there are errors, the install will be done in ~5 minutes.

Removing existing components, please wait...

Deleting: /usr/lib/cxdb/.cxdbinit

Deleting: /usr/lib/cxdb/X11

Deleting: /usr/lib/cxdb/aliases

Deleting: /usr/lib/cxdb/bin

Deleting: /usr/lib/cxdb/doc

Deleting: /usr/lib/cxdb/help

Deleting: /usr/lib/cxdb/man

Deleting: /usr/lib/cxdb/misc

Deleting: /usr/lib/cxdb/tutorial

Deleting: /usr/lib/cxdb/verify

Done.

Reading tape...

Reading logical tape 0: .cxdbinit...Done.

Reading logical tape 1: X11...Done.

Reading logical tape 2: aliases...Done.

Reading logical tape 3: bin...Done.

Reading logical tape 4: doc...Done.

Reading logical tape 5: help...Done.

Reading logical tape 6: man...Done.

Reading logical tape 7: misc...Done.

Reading logical tape 8: tutorial...Done.

Reading logical tape 9: verify...Done.

Done Reading tape

Activating executable /usr/lib/cxdb/bin/cxdb, please wait...Done.

Now testing activation of cxdb, please wait...Done.

Marking cxdb executable with path of installed directory...

Verifying files were installed correctly, please wait...

Done.

Making links to CXdb files in /usr/lib/cxdb/cxdb.

Making link for: /usr/convex/cxdb

Making link for: /usr/convex/cxdbserver

Making link for: /usr/man/man1/cxdb.1

Making link for: /usr/doc/vcxdb.relnotes

Making link for: /usr/lib/verify/cxdb\_X

Making link for: /usr/X11/lib/app-defaults/Cxdb

Done.

cxdb v2.0 installation complete.

Done processing install tape

