DEC OSF/1

Release Notes

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About This Document

This document contains release notes for DEC OSF/1 V1.2.

Audience

The release notes are for the person who installs the product and for anyone using the product following installation.

Organization

This document contains the following chapters:

Chapter 1	Discusses installation and startup
Chapter 2	Contains processor–specific information
Chapter 3	Contains information about base operating system software
Chapter 4	Contains information about worksystem software
Chapter 5	Discusses errors and omissions in DEC OSF/1 manuals and reference pages

Related Documents

You should have the following documentation available:

- The hardware documentation for your system
- The online reference pages
- The manuals that ship with this release

Conventions

The following conventions are used in this guide:

%	A percent sign represents the C shell system prompt. A dollar
$	sign represents the system prompt for the Bourne and Korn shells.

`#`	A number sign represents the superuser prompt.
`% cat`	Boldface type in interactive examples indicates typed user input.
file	Italic (slanted) type indicates variable values, placeholders, and function argument names.
[|] **{ | }**	In syntax definitions, brackets indicate items that are optional and braces indicate items that are required. Vertical bars separating items inside brackets or braces indicate that you choose one item from among those listed.
. . .	In syntax definitions, a horizontal ellipsis indicates that the preceding item can be repeated one or more times.
`cat`(1)	A cross-reference to a reference page includes the appropriate section number in parentheses. For example, `cat`(1) indicates that you can find information on the `cat` command in Section 1 of the reference pages.
Ctrl/*x*	This symbol indicates that you hold down the first named key while pressing the key or mouse button that follows the slash. In examples, this key combination is enclosed in a box (for example, Ctrl/C).

Installation Notes 1

The following notes apply to the installation of DEC OSF/1 V1.2. For installation notes specific to individual processors, see Chapter 2, *Processor-Specific Notes;* for information specific to setting up a workstation, see Chapter 4.

Note

Do not attempt to install DEC OSF/1 V1.2 without first reading the notes appropriate to your processor in Chapter 2, *Processor-Specific Notes.* Failure to read these notes may result in serious installation problems.

1.1 Disk Space Required for Installation

Table 1-1 describes disk space in terms of the kilobytes (KB) that are required to install each DEC OSF/1 subset. Use the `df -k` command to determine free disk space in kilobytes (1024-byte units). By default, the `df` command displays free space in blocks (512-byte units).

Table 1-1: DEC OSF/1 V1.2 Subset Names and Sizes

Subset	root Size (Kbytes)	/usr Size (Kbytes)	/var Size (Kbytes)	Total (Kbytes)
OSFACCT120	1.879	423.712	0.361	425.952
OSFAFM120	—	902.731	—	902.731
OSFBASE120	7158.760	19866.700	66.776	27092.200
OSFBASE121	278.528	1583.660	—	1862.190
OSFBIN120	—	28805.200	—	28805.200
OSFBIN121	—	705.248	—	705.248
OSFBINCOM120	0.033	6128.440	—	6128.470
OSFBINCOM121	—	63.422	—	63.422
OSFCDAPGMR120	—	2413.490	—	2413.490
OSFCLINET120	842.246	3325.260	0.512	4168.020

Table 1-1: (continued)

Subset	root Size (Kbytes)	/usr Size (Kbytes)	/var Size (Kbytes)	Total (Kbytes)
OSFCLINET121	—	73.728	—	73.728
OSFCMPLRS120	—	12683.900	—	12683.900
OSFDCMT120	—	473.530	—	473.530
OSFDCMTEXT120	—	1317.590	—	1317.590
OSFDECW120	—	6739.630	—	6739.630
OSFDFARTL330120	—	1592.170	—	1592.170
OSFDPSFONT120	—	2214.170	—	2214.170
OSFEMACS120	—	14212.900	—	14212.900
OSFEMACS121	—	2032.620	—	2032.620
OSFEMACSRC120	—	7873.830	—	7873.830
OSFEXER120	—	1236.990	—	1236.990
OSFFONT120	—	1861.020	—	1861.020
OSFFONT15120	—	2328.270	—	2328.270
OSFHWBASE120	1074.830	819.020	15.574	1909.420
OSFHWBIN120	—	23648.600	—	23648.600
OSFHWBIN121	—	2127.050	—	2127.050
OSFINET120	294.223	868.256	175.479	1337.960
OSFKTOOLS120	77.120	168.171	2170.170	2415.460
OSFLAT120	3.538	412.985	—	416.523
OSFLEARN120	—	654.273	—	654.273
OSFLVM120	—	3053.780	—	3053.780
OSFMANOP120	—	2504.140	—	2504.140
OSFMANOP121	—	35.091	—	35.091
OSFMANOS120	—	4913.060	—	4913.060
OSFMANOS121	—	72.058	—	72.058
OSFMANRT120	—	114.431	—	114.431
OSFMANWOP120	—	3335.310	—	3335.310
OSFMANWOS120	—	972.261	—	972.261
OSFMANWOS121	—	7.329	—	7.329
OSFMH120	—	6820.940	—	6820.940
OSFMITFONT120	—	7054.480	—	7054.480
OSFNFS120	10.148	450.552	—	460.700

Table 1-1: (continued)

Subset	root Size (Kbytes)	/usr Size (Kbytes)	/var Size (Kbytes)	Total (Kbytes)
OSFNFS121	6.093	114.688	—	120.781
OSFOTMBASE100120	—	161.368	—	161.368
OSFPGMR120	—	12678.900	—	12678.900
OSFPGMR121	—	1745.930	—	1745.930
OSFPRINT120	15.961	1097.990	0.512	1114.460
OSFRCS120	—	947.399	—	947.399
OSFRCSSRC120	—	883.029	—	883.029
OSFRIS120	—	30.564	33.792	64.356
OSFRIS121	—	27.312	—	27.312
OSFRTBIN120	—	31790.500	—	31790.500
OSFRTBIN121	—	734.328	—	734.328
OSFRTDEV120	—	114.236	—	114.236
OSFRTHWBIN120	—	24247.700	—	24247.700
OSFRTHWBIN121	—	2199.790	—	2199.790
OSFSCCS120	—	710.088	—	710.088
OSFSER120	—	6787.950	—	6787.950
OSFSER121	—	134.712	—	134.712
OSFSVID2120	5.854	308.266	—	314.120
OSFUUCP120	2.469	3238.980	7.680	3249.130
OSFVET120	—	1154.540	—	1154.540
OSFX11120	—	15799.900	—	15799.900
OSFX11121	—	76.315	—	76.315
OSFXCDADEV120	—	796.431	—	796.431
OSFXDEV120	—	21553.000	—	21553.000
OSFXMAIL120	—	706.510	—	706.510
OSFXMIT120	—	4092.150	—	4092.150
OSFXVET120	—	330.183	—	330.183
TOTALS	9771.680	309353.000	2470.860	321595.000

Processor-Specific Notes 2

This chapter discusses processor–specific notes related to DEC OSF/1 V1.2 software. The following processors are discussed:

- DEC 3000
- DEC 4000
- DEC 7000

2.1 DEC 4000 Processor

The following notes apply to the DEC 4000 processor.

2.1.1 Do Not Set the Date Using the DEC 4000 Console date Command

DEC OSF/1 V1.2 and the DEC 4000 console firmware store different date representations in the system watch chip. As a result, dates set with the DEC OSF/1 V1.2 `date` command will always be displayed as a date in the year 1970 by the DEC 4000 console, and dates set using the DEC 4000 console `date` command will cause DEC OSF/1 V1.2 to report that the clock gained approximately 22 years.

Therefore, do not set the date using the DEC 4000 console `date` command and ignore the date presented by the DEC 4000 console in the full-screen system powerup display.

When rebooting DEC OSF/1 V1.2 after running another version of the operating system, check and reset the date.

When rebooting using a different DEC OSF/1 V1.2 root partition, check and reset the date.

2.1.2 Cannot Install With a TLZ06 Tape Drive Connected

You cannot install DEC OSF/1 V1.2 with a TLZ06 tape drive connected to your system. To work around this problem, follow these steps:

1. Disconnect the TLZ06 tape drive from your system.

2. Install DEC OSF/1 V1.2.
3. After the installation is complete, reattach the TLZ06 tape drive to your system and reconfigure your kernel.

   To reconfigure your kernel, enter the following command, replacing the italic *MACHINE_NAME* with the name of your machine in capital letters or if you are running Realtime, with the name of your Realtime configuration file:

   ```
   # doconfig -c MACHINE_NAME
   ```

   The `doconfig` command allows you to edit the configuration file. The following prompt appears immediately after you invoke the `doconfig` command with the `-c` option:

   ```
   Do you want to edit the configuration file (y/n) [n]?
   ```

   Answer `no` to this prompt.

   The `doconfig` program then displays the following message as it begins to rebuild your kernel:

   ```
   *** PERFORMING SYSTEM CONFIGURATION ***
      .
      .
      .
   ```

4. Make a backup copy of your kernel and then move the new kernel to `root` by entering the following commands, replacing the italic *MACHINE_NAME* with the name of your machine in capital letters, or if you are running Realtime, with the name of your Realtime configuration file:

   ```
   # mv /vmunix /vmunix.orig
   # mv /sys/MACHINE_NAME/vmunix /
   ```

5. To bring in the new kernel, reboot your system by entering the following command:

   ```
   # shutdown -r now
   ```

Base System Software Notes 3

This chapter discusses issues and known problems with the base operating system and, when possible, provides solutions or workarounds to the problems.

The following topics are discussed in this chapter:

- Commands and Utilities
- Functions and System Calls
- System Administration
- Network and Communications
- Programming Environment

3.1 Commands and Utilities

The following sections discuss issues and known problems with commands and utilities.

3.1.1 Loaders/Stackers Support for dd, cpio, tar, dump

If you are using stackers or loader storage devices, you must manually change the cartridge. When the utility has finished filling the cartridge, it will prompt you for the next cartridge. It will not automatically select the next cartridge for you.

3.1.2 Commands That Examine Kernel Crash Dumps Fail

Any command, such as `ps`, `vmstat`, `netstat`, `iostat`, `nfsstat`, and `ipcs`, which examines kernel crash dumps to report statistics, does not work on DEC OSF/1 V1.2.

To work around this problem you can use `kdbx`, the front-end kernel `dbx` script, which can dump these statistics.

3.2 Functions and System Calls

The following sections discuss issues and know problems with functions and system calls.

3.2.1 setjmp and longjmp Do Not Work in Multi–threaded Environment

The `setjmp` and `longjmp` functions do not work correctly in a multi–threaded environment. To work around this problem, use `_setjmp` and `_longjmp` instead.

3.3 System Administration

The following sections discuss issues and known problems with system administration tasks.

3.3.1 Possible Data Corruption When Using ULTRIX disks on DEC OSF/1 V1.2

If a partition is created on a ULTRIX disk that does not contain an `a` or `c` partition the disk will not have a partition table on the drive. This happens when–on an ULTRIX system–the default partition table is used to create a file system. When that drive is subsequently mounted on an ULTRIX system and the disk driver finds no valid partition information, it uses the default partition information for that drive that matches the partition on the drive.

However, when that same drive is mounted on a DEC OSF/1 V1.2 system, because the default partition sizes and layouts are different in DEC OSF/1 V1.2 than ULTRIX, when the disk driver for DEC OSF/1 V1.2 finds no valid partition on the drive, it uses the default DEC OSF/1 V1.2 partitions, which results in data corruption.

To avoid this problem, ensure that disks that will be shared on ULTRIX and DEC OSF/1 V1.2 systems have either an `a` or `c` partition. On an ULTRIX system, use the `chpt` command. On a DEC OSF/1 V1.2 system, use the `disklabel` command.

3.4 Networking

The following notes apply to network and communications software.

3.4.1 Local Area Transport

The following notes apply to Local Area Transport (LAT).

3.4.1.1 Low Dynamic Rating Values Displayed by latcp

The dynamic rating values displayed by the `latcp` utility on the host and by the `show services` and `show node` commands on a terminal server appear to be lower than expected, given the load on the host system.

3.4.1.2 The latcp Command Does Not Work When 512 gettys Are Spawned

When 512 gettys have been spawned on LAT `ttys`, the `latcp` command will not function properly.

To avoid this problem, only spawn a maximum of 511 LAT `gettys`.

3.4.1.3 The Ability of LAT to Remotely Modify a Server's Port Dose Not Work

LAT's ability to remotely modify a terminal server's port characteristics does not work. Using the `stty` command or an `ioctl` system call will not change the port's characteristics. There is no workaround to this problem.

3.4.1.4 The -Q Option Does Not Disable Queueing

Queueing is not disabled on an application port when the `-Q` option is specified. Connection requests will always be queued at the server when the server port or service is busy.

To work around this problem, wait until the server's port or service is available before attempting a connection.

3.4.1.5 When getty Entry is Stopped the Device Cannot Be Reused

When a `getty` entry for LAT is killed with the `kill -9` command, and the `close()` system call is not issued, the device cannot be reused.

3.4.2 Pseudoterminal Name Space Expansion

Sometime in the future the `pty` name space will be changing to a hierarchical name space to allow further scaling of the number of `ptys`. Therefore, it is strongly encouraged that applications use the `openpty(3m)` interface because `openpty(3m)` hides the details of the `pty` name space.

3.5 Programming Environment

The following sections discuss issues and known problems with the programming environment.

3.5.1 cc

The following notes apply to the C compiler (`cc`).

3.5.1.1 Known Problems with the Compiler

The following problems with the compiler are known to exist:

- Bitfields greater than 32 bits – The compiler does not correctly handle bitfields declared as either long or unsigned long. There are also problems initializing int and unsigned int bit fields which are mixed with long or unsigned long bit fields when the initializer is specified in the declarations.
- Spurious Warning Messages – The following program, taken directly from footnote 52 in the ANSI C Standard Draft and considered a valid integral constant expression, generates a warning message that can be ignored:

```
% more t.c
static int i = 2 || 1/0;
% cc -std1 t.c
/usr/lib/cmplrs/cc/cfe: Warning: t.c, line 1: Divided by zero (3.3.5)
static int i = 2 || 1/0;
```

  If your programs generate this warning message, ignore it.

- Incomplete Types in sizeof Does Not Generate a Error – The following program compiles without error, but should generate an error message because the operand in `sizeof` is an incomplete type:

```
typedef struct S {
  char a[30];
  char b[sizeof(struct S)];
  char c[sizeof(struct S)];
} T;


static int j = sizeof(T);

        .verstamp       10 0
        .data
        .align  3
        .align  0
$$3:
        .long   120 : 1
```

- Compiler Does Not Allocate Array Storage – For the following program, the compiler generates a length of zero for the array, rather than 3:

```
extern struct foo zerocommon[3];

struct foo {
  unsigned long bar;
}

struct foo zerocommon[3];
```

3.5.2 ld

The following notes apply to the linker.

3.5.2.1 Very Large Applications May Overflow the .got Section

Some very large applications may overflow the `.got` section when built `-call_shared`. This is caused by an excessive number of external symbols referenced within the executable.

When this happens, the linker will emit this type of message:

```
gp relocation out-of-range for small data or bss by,
  %0x000000000000f439 in the positive direction,
  %0x000000000000fa00 in the negative direction,
```

To work around this problem, try relinking `-non_shared`. Relinking the application without shared libraries (that is, `-non_shared`) should solve this problem if there were no unresolved symbols.

3.5.2.2 Undefined Linker-Defined Symbols

If the linker finds undefined user symbols that are not normally reserved for the linker, it will report the linker reserved symbols as also being undefined.

This is normal behavior. The linker will only resolve linker defined symbols when all other symbols have been defined.

3.5.2.3 Problem Linking libc.a into A Call Shared Executable

If you try to link `libc.a` instead of `libc.so` into a call shared executable, you will get the following unresolved symbols:

```
ld:
Unresolved:
__exc_add_pc_range_table
__exc_remove_pc_range_table
__exc_add_gp_range
__exc_remove_gp_range
```

To work around this problem, add the following arguments to your link line,

which will cause all of the necessary symbols to be called into the executable:

```
-u __exc_add_gp_range
```

3.5.3 dbx

The following note applies to dbx.

3.5.3.1 Using the run Subcommand While Debugging a Core File

Using the run subcommand—or using other subcommands that are run–related—while debugging a core file, may cause dbx to produce a series of error messages like the following:

```
can't write to process
process state anomaly
signal Trace/BPT trap
```

To work around this problem, use the run subcommand from a new dbx session that does not specify a core file.

Worksystem Software Notes 4

This chapter describes important user, system administration, and programming restrictions associated with DEC OSF/1 V1.2 workstation software.

4.1 X Clients

The following notes apply to X clients

4.1.1 dxpaint

The following notes pertain to the `dxpaint` client.

4.1.1.1 Cut and Copy Do Not Work

The `dxpaint` client will crash when cutting or copying a section.

4.1.1.2 Missing Slash (/) in Print Dialog

The slash (/) between the current directory and the filename is missing in the default value for the Filename field. It must be entered manually.

4.1.1.3 Save As Dialog Box May Move Behind Picture

The `Save As` dialog box sometimes moves under the main window, partially or completely obscuring it. You must move the main window to uncover it.

4.1.1.4 No Help Available in Exit Dialog

The dialog box that appears when you exit `dxpaint` without first saving changes will not provide help when the `Help` button is pressed.

4.1.2 dxsession

The following notes apply to `dxsession.`

4.1.2.1 Shift Lock and Caps Lock

Switching between Shift Lock and Caps Lock does not work.

4.1.2.2 Auto Repeat Setting Does Not Work

The Auto Repeat setting in the Customize Keyboard dialog is ignored by `dxsession.`

4.1.2.3 Mouse Double Click Timeout Does Not Work

The `Mouse Double Click Timeout` setting in the `Customize Pointer` dialog is ignored by `dxsession`.

4.1.2.4 dxkeycaps Does Not Display International Characters

When international characters are assigned to keys with `dxkeycaps`, they are not displayed in the keycaps window. They are, however, set correctly.

4.1.2.5 No Help Available in dxkeycaps

The `Help` button on the `dxkeycaps` main window does not work.

4.1.3 dxterm

The following notes apply to `dxterm`.

4.1.3.1 ReGIS is Not Supported

Since `ReGIS` is not supported in DEC OSF/1 V1.2, if `ReGIS` commands are sent to a `dxterm`, the `ReGIS` start-up sequence is ignored, and all subsequent `ReGIS` commands are displayed in the `dxterm` in plain text.

4.1.3.2 Killing a dxterm with CTRL-C

If a `dxterm` is started from the command line and is killed using CTRL-C, the `dxterm` will not go away until it receives another X event. To supply this X event, move the pointer into the `dxterm` window (if autofocus is being used) or by clicking on the window.

4.1.3.3 XON/XOFF Flow Control

To prevent the Ctrl-S key from stopping the output in a `dxterm`, you must do the following:

- Disable the Ctrl-Q, Ctrl-S = Hold option in the Keyboard Options dialog box.

- Disable XON/XOFF at the terminal driver level by issuing the following command:

  ```
  % stty -ixon -ixoff -ixany
  ```

4.1.4 Linkworks and LinkBase Lock Error

While running `Linkworks`, if you receive the following error, `Linkworks` detected a problem with the NFS lock daemons on either your system or the NFS server:

```
LinkBase Lock Error
```

To correct this problem you can do the following:

1. If you have `root` privilege on your system, kill and restart the `rpc.lockd`.
2. If, after killing and restarting the `rpc.lockd` on your system the problem still persists, you can do one of the following:
   a. On your system, define the `LWK_PERSONAL` environment variable to point to a linkbase on a local device.
   b. Contact the System Administrator of the NFS server and have him kill and restart the `rpc.lockd` on the NFS server.

4.1.5 mwm

The following notes pertain to the Motif Window Manager (`mwm`).

4.1.5.1 Bitmap Depths for Icons Should Not Be Greater Than 1

Icons with bitmaps of depth greater than 1 are not supported. The Window Manager reports a warning only if the `Mwm*ICCCMCompliant` resource is set to True and it attempts to display the icon. This resource is turned off by default.

4.1.5.2 Active Icon Titles in Icon Box May Be Clipped

If the icon box is displayed vertically with only one column, then when an icon is selected, the active icon label is clipped on the right side.

4.1.5.3 Multiline Icon Titles Are Not Centered

The window manager does not center all the lines of a multiline icon title.

4.1.5.4 Icon Titles Are Truncated

The text for inactive icons is truncated to the size of icons. There are two methods to view the complete text for an icon:

- Make the icon active.
- Use the Icon Options menu to change the width of the icon.

4.1.5.5 Keyboard Accelerator for Icon's Window Menu

If you bring up the Window menu on an icon by highlighting the icon and then pressing F4, the Window menu is not posted and may not work properly.

4.1.5.6 Using Next Window on a Multiscreen System

On a multiscreen system, if you continuously cycle the windows using Ctrl+MB1 or by selecting Next Window, eventually the cycling does not work properly.

4.1.5.7 Customizing Monochrome Monitors

The `mwm` window manager does not support full customization of color-related resources for monochrome monitors in the Options dialog boxes. In order to change the colors, you might need to modify the pixmap resources by directly editing the `Mwm_bw` resource file. For example to change the color of the active window's title background, you must change the `Mwm*activeBackgroundPixmap` resource, choosing such values as 25_foreground, 50_foreground, 75_foreground, and unspecified pixmap.

In addition, by default, the title text is created with white background. To use the same color as the rest of the title, set the `Mwm*cleanText` resource to FALSE.

4.1.5.8 Customizing Icon Placement and the Icon Box

If you customize the icon placement of your applications by specifying the `iconX` and `iconY` resources in the application's resource file, the placement is ignored if you are using an icon box.

4.1.5.9 Customizing the Icon Box Color on Monochrome Systems

Customizing the icon box background color on monochrome monitors does not work properly. To change the color of the icon box, you must first add

the following line to your Mwm_bw file:

```
Mwm*iconbox*backgroundPixmap: unspecified_pixmap
```

4.1.5.10 mwm Error Messages

Due to internal errors, the mwm error messages and warnings from f.exec functions are not displayed on the console window. As a workaround, you can modify the way mwm is started from the session manager by following these steps:

1. In the session manager Options menu, select Customize Window.
2. Click on Other from the window manager section.
3. Delete the text next to Other and then click on OK.
4. In the session manager Options menu, select Application Definitions. If a menu item Mwm exists, then Select Cancel and skip the next two steps.
5. Create a Menu item Mwm first clicking on the box beneath Menu Item and then typing the following line in the activated box:

   ```
   /usr/bin/mwm -multiscreen
   ```

6. Click on OK to confirm your modifications.
7. In the session manager, select Automatic Startup.
8. Move the scroll bar in the box entitled select item to add until mwm appears.
9. Click on mwm to add it to the list of applications that will be automatically started.
10. Click on OK to confirm your modifications.
11. In the session manager option menu, select Save Current Settings.
12. End the session.

The mwm window manager will then be started like other applications and mwm error messages will be displayed to the console window.

4.1.5.11 mwm Help on Multiple-screen Systems

If you have a system with several screens, mwm help may not come up properly on all the screens.

4.1.5.12 No Notification of Window Resizing/Movement

You will not receive notification as you move or resize windows if the windows are created from one of the `root` window menus.

4.2 Windows Programming

The following notes apply to windows programming.

4.2.0.1 Xos.h Is for Digital Use Only

The file `/usr/include/X11/Xos.h`, although shipped with this release, is for Digital use only and should not be used or relied on by customers.

4.2.0.2 LockDisplay and UnlockDisplay Macros Are Not Usable

The X Window System programming manuals mention the use of the `LockDisplay` and `UnlockDisplay` macros for writing multithreaded X clients that access buffers of the display structure. These macros are often used when writing Xlib extensions to the core X11 protocol.

The `LockDisplay` and `UnlockDisplay` macros are included in DEC OSF/1 software but the macros are not usable as shipped.

4.2.0.3 Svn Widget Interface Change

The datatype of the tag parameter of the Svn widget functions has been changed from unsigned int to XtPointer. This allows the tag item to hold any type of data, and is upwards compatible with current code. The following functions have been changed:

DXmSvnAddEntries - tags[] parameter datatype changed to XtPointer*
DXmSvnGetComponentNumber - tag parameter datatype changed to XtPointer
DXmSvnGetComponentTag - return value changed to XtPointer
DXmSvnGetDisplayed - tags[] parameter datatype changed to XtPointer*
DXmSvnGetEntryNumber - tag parameter datatype changed to XtPointer
DXmSvnGetEntryTag - return value changed to XtPointer
DXmSvnGetHighlighted - tags[] parameter datatype changed to XtPointer*
DXmSvnGetSelections - tags[] parameter datatype changed to XtPointer*
DXmSvnInsertComponent - tag parameter datatype changed to XtPointer
DXmSvnMapPosition - tag parameter datatype changed to XtPointer*
DXmSvnSetComponentTag - tag parameter datatype changed to XtPointer
DXmSvnSetEntry - tag parameter datatype changed to XtPointer
DXmSvnSetEntryTag - tag parameter datatype changed to XtPointer

4.2.0.4 Link Order for Motif Clients

When linking Motif clients, the `Xm` library must precede the `Xt` library as follows:

```
% cc map.c -lXm -lXt -lX11
```

Placing the `Xt` library before the `Xm` library will cause the client application to link without error but not run.

4.2.0.5 Display PostScript Clients and Lost Events

In some situations, clients using Display PostScript libraries directly, or indirectly with calls to `libdvr`, lose events. The events are lost because Xlib calls a status-event handling function, which in turn calls other Xlib functions; however, Xlib is not guaranteed to be re–entrant. To work around this problem, use the following two functions provided by Adobe:

```
XDPSSetEventDelivery
XDPSDispatchEvent
```

Note that since this workaround is on the client–side, it must be applied to all clients using DPS, as well as the library.

For more information about these functions, see the *Programmer's Supplement to the Client Library* which you can find as a PostScript file named `DPS.Xsupplement.ps` in `/usr/share/doclib/dps`.

When using this workaround, please note the following:

- Always call `XDPSDispatchEvent` before calling `XtDispatchEvent`.
- Never use `XtAppProcessEvent` to handle X events.
- Avoid the use of `XtAppMainLoop` and `XtMainLoop` since this implementation includes a call to `XtDispatchEvent`.

  Instead, use a loop which calls `XDPSDispatchEvent` prior to `XtDispatchEvent`.

4.2.0.6 DECnet Transport for Client/Server Connections

The X Server, libraries, and various clients are able to utilize a DECnet transport mechanism for client/server connections if an appropriate DECnet product is installed on the system (or on both systems if the client and server are running on different systems). If DECnet is not installed, attempts to establish such connections by a DECnet transport will fail.

Clients and libraries which directly execute calls to DECnet functions such as `getnodename`, `dnet_addr`, and `dnet_conn` are built with `libdnet_stub.so` in their link editor (`ld`) command. So too, the loadable X server includes `libdnet_stub.so` in its list of shared libraries

to be loaded.

Clients which are to be built fully-static and include `LibX11.a` or `libXmu.a` must also incorporate `libdnet_stub.a` (if they will not be using DECnet transport) or `libdnet.a` as included in the DECnet product (if they will be using DECnet transport). Inclusion of one of the `libdnet` libraries is required to resolve function calls from within `libX11` or `libXmu` modules. If it is not a requirement that the client be fully static but the client is using `libX11.a` or `libXmu.a` for some other reason, `libdnet_stub.so` can be included in the `ld` command information and the client can then be used whether or not DECnet is installed.

Xservers which are to be built fully-static and include `libos.a` must also incorporate `libdnet_stub.a` (if not to be using DECnet transport) or `libdnet.a` (if to be capable of using DECnet transport). If it is not required that the client be fully static, `libdnet_stub.so` can be included in the `ld` command information. The resultant X server will access this shared library and be useable whether or not DECnet is installed.

4.2.0.7 The ADD_STYLE_NAME Field of an XLFD Font Name

The ADD_STYLE_NAME (ASN) property of an X bitmap screen font, and the corresponding field in an XLFD name, is used to supply additional distinguishing information about a font. It is often used with those typefaces that cannot be differentiated soley on the basis of the FAMILY_NAME, WEIGHT_NAME, SLANT, and SETWIDTH_NAME properties and corresponding fields in the XLFD font name.

For example, in the first grouping of XLFD patterns below, the ASN values of "" (null) and "No. 2" differentiate Trade Gothic[1] Bold from Trade Gothic No. 2 Bold. In the second group, all four members of the Industria[1] family are differentiated from each other by a non-null ASN value.

```
-Adobe-Trade Gothic-Bold-R-Normal--*-*-*-*-P-*-ISO8859-1
-Adobe-Trade Gothic-Bold-R-Normal-No. 2-*-*-*-*-P-*-ISO8859-1

-Adobe-Industria-Medium-R-Normal-Inline-*-*-*-*-P-*-ISO8859-1
-Adobe-Industria-Medium-R-Normal-Inline A-*-*-*-*-P-*-ISO8859-1
-Adobe-Industria-Medium-R-Normal-Solid-*-*-*-*-P-*-ISO8859-1
-Adobe-Industria-Medium-R-Normal-Solid A-*-*-*-*-P-*-ISO8859-1
```

While XLFD font names with null ASN values currently predominate, software developers are cautioned to consider this field when selecting or displaying available fonts.

---

[1] Trade Gothic and Industria are trademarks of Linotype-Hell AG and/or its subsidiaries.

Documentation Notes 5

This chapter discusses issues pertaining to the DEC OSF/1 V1.2 documentation. DEC OSF/1 V1.2.

5.1 Loadable Driver References

References to loadable drivers in the *Guide to Programming Support Tools*, the *Guide to System Administration*, and the *Guide to Writing Device Drivers* are purely informational, since loadable drivers are not supported in DEC OSF/1 V1.2.

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