

XDS Release 3.0 Addendum

This document contains a correction to the *X Display Station Release 3.0 Update Guide*, as well as information on Release 2.8 bug corrections, and Release 3.0 outstanding bugs.

Remote Configuration Model Types

On page 18 of the *XDS Release 3.0 Update Guide*, the second paragraph under the heading "Remote Configuration File Specification" contains a list of MachineModel types for all XDS models. Please use the following MachineModel identifiers (in bold type) instead of those in the guide:

X14ES	X-14/ES
X15	X-15
X19	X-19 (1152 x 900 resolution)
X19ORIG	X-19 (1024 x 800 resolution)
X19TURBO	X-19 Turbo
XTC2	Color Xbase/10
XTC3	Color Xbase/11 & Xbase/12

Bugs Fixed for Release 3.0

The following Release 2.8 software bugs have been fixed for Release 3.0:

- Wildcard characters (*) in remote configuration files were not handled correctly, resulting in bogus error messages. Field separators (.) were required, as in these examples:

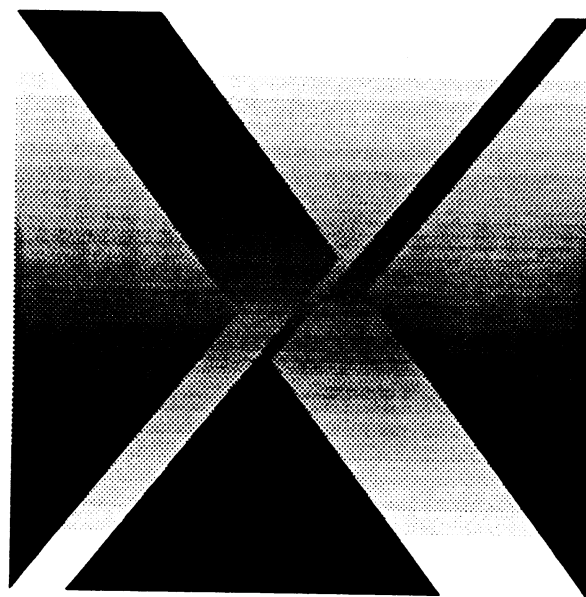
```
Visual.*.Keyelick  
*.*.Keyelick
```

For 3.0, the field separators are not required, as shown here:

```
Visual*Keyelick  
*Keyelick
```

- X clients can no longer ring the bell when **Audible Bell** in the **Configure Keyboard/Mouse** menu is set to **Off**.
- TFTP errors during the boot process were not flushed. Consequently, the boot command seemed to fail silently, and an error message was displayed after the next successful command. This has been corrected.

**X DISPLAY STATION
RELEASE 3.0
UPDATE GUIDE**



VISUAL
T E C H N O L O G Y

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Table of Contents

Introduction.....	5
Network Special Keywords	5
The Configure Network Services Menu	6
XDS Local Name	7
TCP Maximum Packet Size	7
TCP Maximum Window Size	7
NFS Authentication Mode	7
The Font Management Menu	8
Edit Font Host List	8
Edit Font Path List	8
The Configure Auto-Connection Menu	8
Auto-Connection Mode	9
Edit Connection Host List	9
XDMCP Callout Mode	9
XDMCP Host Selection Mode	10
XDMCP Retry after Connect Failure	11
XDMCP Connect Timeout	11
XDMCP Check for Dead Session	11
XDMCP Session Check Interval	11
XDMCP UDP Port	11
The Configure Keyboard/Mouse Menu	12
Modifier to Access XDS Special Keys	12
Special Key Mapping	13
Keyboard Language Mapping.....	13
Keypad Mode	13
The Configure X Server Features Menu	14
Pre-X11R4 Bug Compatibility	14
Old DECwindows Compatibility	15
X Protocol Error Reporting	15
Verbose Messages	15
The Remote Configuration Menu.....	15
Edit Boot Host List	15
Auto-Load Keyboard Mapping	16
Edit Keyboard Map List	16
Load Keyboard Map Now	17
Remote Configuration File Specification	18
Keyboard Map File Specification	22

Introduction

This supplement to Visual's *X Display Station User's Guide* describes XDS software Release 3.0, which is fully compliant with the MIT X.V11R4 server specification. XDS Release 3.0 includes support for:

- The X Display Manager Control Protocol (XDMCP), which controls the user's X terminal login session from startup to shutdown.
- The SHAPE extension, which permits windows to be of any shape. (A clock or a control button, for example, might be round rather than rectangular.)
- The MIT-MAGIC-COOKIE-1 security extension, which, when used in conjunction with XDMCP, permits only users with the MIT-MAGIC-COOKIE-1 authorization code to establish any new XDS connections.
- Optimized wide lines and arcs, which includes enhanced user specification for line widths and endcaps.
- Optimized software cursors.
- Optimized server region code.
- Real window save-unders.
- Input extension support, so alternate input devices can generate standardized events.

In addition, a default ISO standard 8859.1 international font, stored in ROM, can be used in the XDS setup windows, XDS connection window, and X windows. This is also one of the standard fonts selectable in XDS setup mode through the **Configure Font Management Menu** and the **Configure Connection Menu**.

You should already be familiar with the XDS installation and configuration procedures described in the *X Display Station User's Guide*. Only new XDS Release 3.0 features are covered in this document.

Network Special Keywords

Unless you have supplied a specific Internet Protocol (IP) address, the XDS knows only its hardware address, not its IP address, when it starts up.

The XDS works only if it knows its IP address. If you don't specify an IP address, or if you use 0, the XDS sends out Reverse Address Resolution Protocol (RARP) and Bootstrap (BOOTP) requests on the network to learn its IP address from a network host. This host matches the XDS hardware address with the corresponding XDS IP address.

For the XDS hardware address to correspond to an IP address, the XDS hardware address *must* be entered in the RARP or BOOTP data bases on the servers. The network administrator who maintains these data bases should be notified of the XDS hardware address.

Two network special keywords can be used in place of any network host name in the XDS setup and connection windows:

- **BROADCAST** – The XDS replaces this keyword with the IP broadcast address. You can set this address using the **Configure Ethernet Menu**, or the XDS can set it automatically.
- **BOOTPHOST** – The XDS replaces this keyword, wherever in the XDS setup menus it is used, with the IP address of the host that responds successfully to the XDS BOOTP request.

NOTICE:

The XDS issues a BOOTP request only if you have not set the IP address of the XDS using the Boot ROM or Configure Ethernet Menu. If you manually set this IP address, references to BOOTPHOST in the setup menus cannot be resolved.

The Configure Network Services Menu

Three new items have been added to the **Network Services Menu**, and **NFS Authentication Mode** has been moved here from the **Font Management Menu**:

CONFIGURE NETWORK SERVICES	
To change an item, highlight it and press the left mouse button or RETURN. Press the right mouse button or ESC to return to the Setup Window.	
XDS Local Name	unknown
Edit Local IP Namelist	
Edit IEN116/UDP Nameserver List	
Edit Domain Nameserver List	
Nameserver Request Timeout (seconds)	10
Domain Name	
Default Router (none if proxy ARP)	
TCP Maximum Packet Size	1460
TCP Maximum Window Size	3072
4.2 Compatibility Mode	On
UDP Checksumming	On
ARP Dally (seconds)	3
NFS Authentication Mode	AUTH_UNIX name=LOCALNAME
HELP	
Return to Setup Window	

Figure 1 The Configure Network Services Menu

XDS Local Name

This allows you to assign an alphabetic name which maps to the unique IP address of the XDS. The XDS then uses this Local Name in the **NFS Authentication Mode** item, described below. The default name is "unknown".

TCP Maximum Packet Size

This is the maximum size, in *bytes*, of the TCP packet the XDS generates. This is useful if your network routers or bridges do not send TCP commands to tell XDS terminals to use smaller packet sizes.

The default is **1460** bytes.

TCP Maximum Window Size

This is the maximum size, in *bytes*, of the XDS buffer for unacknowledged packets. This item is for use with hosts that have problems with large window sizes.

The default is **3072** bytes.

NOTICE:

If the XDS determines that the host it is talking to needs a lower packet size or window size, then that lower value will be used. This is decided on a host-by-host basis.

NFS Authentication Mode

This item has been moved here from the **Font Management Menu**. The options are:

AUTH_NONE - Select this option to have the XDS provide no authentication information in its requests over NFS.

AUTH_UNIX name = LOCALNAME - Select this option to have the XDS provide unique information about its identity in requests over NFS, using the name you set in the XDS Local Name item above.

AUTH_UNIX name = xds - Select this option to have the XDS provide information about its general identity in requests over NFS. The NFS server looks up "xds" to verify that it matches the XDS IP addresses.

The Font Management Menu

The **NFS Authentication Mode** item (which now controls all NFS access to the host) has been moved from the **Font Management Menu** to the **Network Services Menu**. Two other items have been revised:

Edit Font Host List

The default setting is now the "BOOTPHOST" keyword (see the "Network Special Keywords" section above.)

Edit Font Path List

The font path list now defaults to:

```
/usr/lib/X11/Visual/fonts/misc
/usr/lib/X11/Visual/fonts/100dpi
/usr/lib/X11/Visual/fonts/75dpi
```

The Configure Auto-Connection Menu

Visual has made several enhancements to the Auto-Connection Menu to support the X Display Manager Control Protocol (XDMCP) specified in X.V11R4.

CONFIGURE AUTO CONNECTION	
To change an item, highlight it and press the left mouse button or RETURN. Press the right mouse button or ESC to return to the Setup Window.	
Auto connection Mode	XDMCP
Edit Connection Host List	
XDMCP Callout Mode	Direct
XDMCP Host Selection Mode	First Willing
XDMCP Retry after Connect Failure	Yes
XDMCP Connect Timeout (seconds)	4
XDMCP Check for Dead Session	Yes
XDMCP Session Check Interval (min)	3
XDMCP UDP Port	177
XDSXDM Request Timeout (seconds)	60
XDSXDM Daemon UDP Port	6558
HELP Return to Setup Window	

Figure 2 The Configure Auto-Connection Menu

Auto-Connection Mode

XDMCP - This is the X Display Manager Control Protocol supported by X.V11R4. Whereas XDSXDM makes the host connection exclusively on a first-come-first-served basis, XDMCP provides a greater variety of query requests and X display manager connection schemes. These are fully described under "XDMCP Callout Mode" below.

XDSXDM - This is an early X Display Manager (XDM) protocol Visual added to X.V11R3. When XDSXDM is selected, the XDS attempts to connect to a daemon version of the XDM which runs on a host. The XDS issues an "X Login Request" to each host in the Connection Host List and establishes a connection with the first host that responds. This selection is *not* compatible with the X.V11R4 XDMCP protocol.

Only the above XDMCP and XDSXDM selections bring you directly to an X Display Manager login window whenever you log out of a current X windows session, reboot, or power-up the terminal.

Telnet on Reboot - With this item selected, the XDS automatically brings up the Connection Window whenever you power-up or reboot the terminal using the Reset Terminal (reboot) item on the System Window. If there is a host in the Connection Host List, the command line will contain the string "telnet *hostname*". To actually initiate the telnet session, just press the ENTER key. If you'd rather connect to a different host than the default, simply backspace over the host name and type in another.

Telnet on Logout - With this item selected, the XDS brings up the Connection Window not only on power-up and reboot, but also whenever you log out of your last X client connection, or when you select the Close All Connections (logout) item in the System Window.

Disabled - When selected, the XDS makes no attempt to connect to anything at reboot, power-up, or server reset (logout).

Auto-Connection Mode is a toggle item. The default is **XDMCP**.

Edit Connection Host List

The default setting is now the "BOOTPHOST" keyword (see the "Network Special Keywords" section above.)

XDMCP Callout Mode

This item indicates the type of XDMCP connection request made by the XDS. In each case, the XDS sends a query to determine if a host is willing to provide the terminal with X display management services.