

Xyplex Release Notes
Xyplex X.25 Gateway, Version 1.3.2
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The Xyplex X.25 Gateway links devices on an Ethernet™ local area network (LAN) to an X.25 packet-switched network (PSN). It converts data from a TCP/IP or LAT® session into X.25 packets and converts X.25 packets into data for a TCP/IP or LAT session. These *Release Notes* cover Xyplex X.25 Gateway Software, Version 1.3.2 (hereafter referred to as V1.3.2). They also include New Features and Problems Fixed from X.25 Gateway Software, Version 1.3 and Version 1.3.1 (referred to as V1.3 and V1.3.1).

These Release Notes provide the following information about V1.3.1 and V1.3:

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Note: V1.3.2 of the X.25 Gateway incorporates V5.1 of Multi-Protocol software. If you do not have the current Multi-Protocol documentation set, Xyplex recommends that you obtain a copy of this documentation. It describes the many features in V5.1 that are not described in the V4.0 documentation set, including the Point-to-Point protocol (PPP), Verbose Accounting, the UNIX daemons, the UNIX-Like Interface (ULI), and Nested Menus. To order a copy of the TCP/IP-LAT Communications Server documentation set, call your Xyplex sales representative.

1 New Features in the X.25 Gateway V1.3.2

V1.3.2 incorporates new enhancements and problem fixes. See the section Problems Fixed in V1.3.2 for a list of these problem fixes.

Accounting with TCP The X.25 Gateway sends accounting data to UNIX hosts using the Transmission Control Protocol (TCP), rather than the User Datagram Protocol (UDP). TCP is a connection-oriented protocol that uses an acknowledge scheme for message delivery, so that the sender can determine if the receiver has successfully received sent data. (UDP is a connectionless protocol that does not guarantee delivery.)

RNR on a PVC The X.25 Gateway can send a Receive-Not-Ready (RNR) message on a PVC. This allows the X.25 Gateway to queue data that arrives from the X.25 network when the LAN connection is down, and then deliver it when the LAN connection is reestablished.

2 New Features in the X.25 Gateway V1.3.1

New Field in the X.25 Port Characteristics Display The SHOW/LIST X25 PORT CHARACTERISTICS display includes a new field: Active Profile. This field appears when an active LAT, TELNET, or X.25 service includes a PAD profile that overrides the default inbound or outbound profile on the local X.25 Gateway PAD. The field displays the profile from the service. (A remote profile from a connection partner will override the profile in a local service.) The field does not appear when the default profiles are in use. Figure 1 is an example of a Show Port X.25 Characteristics display showing CRT_NOE in the Active Profile field.

Virtual Port:	5
Conn. Action Type:	Autoconnect
Permanent SVC:	DISABLED
PVC LCN:	N/A
Packet Size:	128 128
Window Size:	2 2
Throughput Class:	9699 9699
Reverse Charging:	DISABLED
Fast Select:	DISABLED
NUI:	
RPOA Select:	
Connect Action	
Default Inbound Profile:	HOST
Default Outbound Profile:	CRT
Active Profile:	CRT_NOE
Call Facilities Enabled:	

Figure 1. A Show Port Characteristics display with the Active Profile Field

New Telnet Echo Modes V1.3.1 includes a new port Telnet echo mode: NOECHO. In addition, X.25 V1.3 included two new Telnet echo modes: CHARACTER and LINE. With the port Telnet echo mode set to NOECHO, the X.25 Gateway will not initiate the echo negotiation with the Telnet partner. The X.25 Gateway will negotiate if the Telnet partner initiates echo negotiation. If the Telnet partner does not initiate echo negotiation, the X.25 Gateway does not echo during the connection.

With CHARACTER mode enabled, the X.25 Gateway initiates remote Echo and Suppress Go Ahead when it makes the connection to the Telnet device. With LINE mode enabled, the X.25 Gateway refuses Remote Echo and rejects Suppress Go Ahead when it makes a connection to a Telnet device. See the Telnet documentation for more information about these options.

Other port Telnet echo modes are LOCAL, REMOTE, PASSIVE and DISABLED. The following command enables this option: DEFINE/SET PORT TELNET ECHO MODE

3 New Features in the X.25 Gateway V1.3

Support for TCP/IP-LAT V5.1 The X.25 Gateway incorporates V5.1 of TCP/IP-LAT software, and supports most of the features and protocols in this version. See the current TCP/IP-LAT documentation set for a full description of the features in V5.1. Section 6 of these Release Notes lists the Communications Server features and protocols that the X.25 Gateway does not support.

New X.25 Manual The X.25 Gateway documentation set includes *The Xyplex X.25 Gateway Commands Reference Guide* in addition to the manual *Managing the Xyplex X.25 Gateway* and the *X.25 Gateway Commands Mini Reference*. The commands reference manual includes all the DEFINE/SET [SERVER] X25 commands previously in the manager's guide.

Support for the Point-to-Point Protocol (PPP) V1.3 includes support for the Point-to-Point Protocol. See the V5.1 TCP/IP-LAT documentation set for a full description of how to enable and configure PPP.

Support for 80 local services The X.25 Gateway supports up to 80 local services, rather than 40.

MAXserver 6800 Support This version supports the MAXserver 6800, and includes flash card support.

New PORT DISCONNECT command With this new command, you can specify that the X.25 Gateway disconnect the LAN session when a user clears an X.25 virtual circuit made from the PAD prompt. To specify this feature, use the following command:

DEFINE/SET SERVER X25 PORT *port-list* DISCONNECT ENABLED/DISABLED

This feature is disabled by default.

Making calls from the PAD prompt You can make calls to X.25 addresses from the PAD prompt with the X.25 address only, without the CALL command. For example, to call the address 1234567 from the PAD prompt, you can enter either of these command lines:

* call 1234567

* 1234567

Outbound only Permanent Virtual Circuits (PVCs) PVCs can have an outbound direction. When you define or set a PVC as outbound, the X.25 Gateway ignores any incoming data from the X.25 network until a user on the LAN makes a connection to the virtual port assigned to the PVC. The command that specifies outbound PVCs is the following:

```
DEFINE SERVER X25 PORT port-list PVC DIRECTION OUTBOUND | DISABLED
```

Where OUTBOUND indicates that the ports you specify are outbound PVCs only. If you disable this feature, the ports support PVCs which can initiate and receive calls.

New X.25 Screen A MONITOR SERVER X25 PORT *port-list* | ALL SUMMARY command is available in addition to the SHOW and LIST versions of this command.

New Port Connect Action The X.25 Gateway supports a port connect action which associates an X.25 address with one or more virtual ports. When you connect to the port, the X.25 Gateway automatically calls the X.25 address you associated with the port. Using this port connect action allows you to connect to a virtual port and call an X.25 address directly from a device on the network, rather than through a LAT or Telnet service. The following command specifies this feature:

```
DEFINE/SET SERVER X25 PORT port-list CONNECT ACTION "address"
```

where *address* is a network destination where you want to make a connection. Enclose the address in quotes. (If you specify a connect action in a LAT or Telnet service associated with the ports, it will override the port connect action.)

New Account log formats The status messages for X.25 entries in the account log can include the address of the caller who establishes a virtual circuit and the address of the caller that terminates the virtual circuit. To include these addresses in the log, follow these procedures:

- Enable Verbose accounting mode with the following command:

```
DEFINE SERVER VERBOSE ACCOUNTING ENABLED
```

See Chapter 10 of the V5.1 *TCP/IP-LAT Software Management Guide* for more information about Verbose accounting mode.

- Specify the X.25 address of the X.25 Gateway, if you have not already done so. Most implementations require that you specify an X.25 address other than the default, which is 1. The PSN administration usually assigns this address. The command which specifies the X.25 address is the following:

```
DEFINE SERVER X.25 ADDRESS "address-string"
```

Chapter 2 and Chapter 6 of the manual *Managing the Xyplex X.25 Gateway* describe this command in detail.

- Enable the X.25 Calling Address parameter. This parameter specifies that a call request packet from the X.25 Gateway includes the X.25 address. The command which specifies the Calling Address Parameter is the following:

```
DEFINE SERVER X25 CALLING ADDRESS ENABLED/DISABLED
```

Chapter 6 of the manual *Managing the Xyplex X.25 Gateway* describes this command in detail.

Initialize the X.25 Gateway after you have entered DEFINE commands to update the parameter file.

Change in the X.25 Command Interface The keyword SERVER is optional with X.25 commands. For example, prior to V1.3 you needed to enter DEFINE SERVER X25 WELCOME "*text-string*" to change the welcome message on the X.25 Gateway. You can now enter DEFINE X25 WELCOME "text-string" .

Additional keyword in X25 display commands The commands SHOW/LIST [SERVER] X25 CHARACTERISTICS, SHOW/MONITOR [SERVER] X25 COUNTERS, and SHOW/MONITOR [SERVER] X.25 STATUS have a second occurrence of the keyword SERVER, although both occurrences of the keyword are optional. The syntax for these commands follows this form: SHOW/MONITOR [SERVER] X.25 [SERVER] STATUS. See the *Xyplex X.25 Gateway Commands Reference Guide* for more details about these commands.

Improved Performance for rotary domain lists The X.25 Gateway waits 3 seconds between call attempts, rather than 30 seconds, when searching through a rotary domain-name list. This reduces the length of time necessary to make Telnet connections when using an Internet rotary.

4 Notes and Restrictions for the X.25 Gateway V1.3.2

Warning

Save the old parameter file **Versions 1.2.2 and greater of the X.25 Gateway are NOT backward compatible with previous versions. Because of this, Xyplex recommends that you back up your current parameter file, in the event that you need to revert to V1.2.1 or earlier.**

When upgrading the X.25 Gateway software from a previous version, the software automatically coverts the parameter file from the old version to the new version. *You cannot use converted parameter files with previous releases of X.25 Gateway software.* For this reason, Xyplex recommends that you make a backup copy of the Version 1.0, 1.1, 1.2, 1.2.1, or 1.2.2 compatible parameter files prior to installing V1.3 so that you can revert to the previous release if necessary. For example, use the COPY utility to copy parameter files stored at a VMS host system.

This example uses an X.25 Gateway named X00A699.

1. Make sure that the X.25 Gateway is up and running with the current software.
2. Rename the .bck and .prm files. You could use the names .prm.old and .bck.old, for example.
3. Copy the default parameter file to the original filename (x00a699.prm and x00a699.bck)
4. Issue a CHECK PARAMETER SERVER command on the X.25 Gateway. The parameters will be written over the default parameter file.

PARAM.SYS file for the 6800 X.25 Gateway A 6800 in a Network 9000 chassis with a flash card loads default parameters from the PARAM.SYS file on the card the first time you initialize it, if it cannot find a parameter file on the network. After the 6800 successfully stores a nondefault parameter file on any parameter server, it deletes the PARAM.SYS file. If the 6800 stores a nondefault parameter file on the local memory card, it creates a nondefault parameter file with a name based on its Ethernet address before it deletes the PARAM.SYS file.

If you want to load default parameters on the 6800 at some future time, follow these steps:

- Delete the parameter file on the memory card with the Ethernet-based name of the 6800.
- Delete all nondefault parameter files for the 6800 on network parameter servers.
- Recreate the PARAM.SYS file on the flash card. To do this, copy the DEFAULTS.SYS file in the /PARAM directory of the flash card into the PARAM.SYS file in the same directory with the COPY command. The following is an example of this command:

```
Xyplex>> copy "/PARAM/DEFAULTS.SYS" "/PARAM/PARAM.SYS"
```

Enabling the X.25 Protocol on the 6800 X.25 Gateway If you have a 6800 X.25 Gateway, and you have loaded the X.25 Gateway load image for the first time or have upgraded to a V1.3 load image from an earlier version, you must enable the X.25 protocol. It is not enabled by default on the 6800 as it is on the 6025 and 6625 platforms.

You need a software password or "key" to enable the X.25 protocol on the 6800 X.25 Gateway. Contact your Xyplex sales representative if you do not have a key. The following command enables the X.25 protocol:

```
Xyplex>> define server protocol x25 enabled  
X25 Password>> xxxx
```

After you enable the protocol, and the parameter file has been updated, initialize the X.25 Gateway for the change to take effect.

PPP Port limitation The X.25 Gateway can support up to 40 concurrent Point-to-Point Protocol (PPP) ports. It cannot support more than 40 concurrent PPP ports.

Improving Performance with X.3 PAD Parameters The settings of certain X.3 parameters can have a significant effect on the performance of the X.25 Gateway. Incorrect parameter settings can also prevent connections. If the performance of the X.25 Gateway appears to be slow, or you cannot make a connection through a virtual port, check the parameter settings of the PAD at that port with the Show Server X25 Port Alternate Characteristics display. The parameters appear at the bottom of the display. Chapter 6 of the manual *Managing the Xyplex X.25 Gateway* includes information about parameters that can affect performance.

Calls to Remote Printers If you create a service that calls a remote printer that is attached to another X.25 Gateway, Xyplex recommends that you associate the service with ports that are configured as PVCs or PSVCs. This prevents data loss when the virtual circuit is cleared. The manual *Managing the Xyplex X.25 Gateway* has more information about making calls to remote printers.

Clearing PVCs If you clear a PVC from the PAD prompt with a CLR command, you cannot reconnect the PVC unless you initialize the X.25 Gateway link.

Host Requirements for Loading with TFTP To support loading of Xyplex units with TFTP, a UNIX host must provide support for a home directory for the TFTP daemon.

The Password Feature You can disable the password feature on port 0. However, certain programs, such as TSM, Scriptor, and Controlpoint, require a password. These programs will not function properly if you disable the password feature on port 0.

SNMP Support SNMP support is available for Communications Server characteristics on the X.25 Gateway, but not for X.25-specific characteristics.

The primary gateway address Setting the primary gateway address from SNMP (*ipGatewayAddress1* in the Xyplex Internet MIB), will not return a response. Setting this location clears the arp table, and the return packet cannot find the address of the requesting client.

The Bootstrap Server MIB Objects in the named table of the Xyplex Bootstrap Server MIB must use Ethernet addresses only. The object ID *namedIdentificationType* can only be "ethernetAddress" and *namedIdentification* must have a length of six bytes.

RFC1316, Definitions of Managed Objects for Character Stream Devices Ports described by the RFC1316, with values of "dynamic" and "remote" for the Object ID *charAdminOrigin*, show one active session when they are in listening state. This is consistent with the SHOW PORT STATUS display.

SNMP SETs When you use SNMP SET processing on Xyplex port security objects, you must have the set values for all five objects in the same physical record, and the record cannot contain any other set values. For example, the following list shows the content of a single physical record that performs SNMP set processing on one entry in the port security table:

```
snmpset -h 123.109.61.12 1.3.6.1.4.1.33.10.9.5.1.3.1 IPAddr 1.1.1.1 \
1.3.6.1.4.1.33.10.9.5.1.4.1 IPAddr 255.0.0.0 \
1.3.6.1.4.1.33.10.9.5.1.5.1 Integer 2 \
1.3.6.1.4.1.33.10.9.5.1.6.1 Integer 1 \
1.4.6.1.4.1.33.10.9.5.1.7.1 OctetString "1111111111111111"
```

Keyboard fields Keyboard fields that you specify as "none" for the null case, such as the port Backward Switch character, are all set as zero or a null string (not the string "none") when you set them with SNMP.

SNMP GET and SET processing and X.25 Gateway databases SNMP GET processing reads the operational database, while SNMP SET processing modifies both the operational database and the permanent database. Because of this, you may want to keep all ports Non-privileged or Secure if the unit is managed by SNMP. This reduces the chance that the permanent and operational databases will become unsynchronized. In the case of tables with a variable number of entries, such as local services or domain names, this can be particularly significant.

The port security table and the menu table are accessed by an index number that may or may not point to the same data item in the two databases.

Variable length keys The domain name table, and the Tn3270 keymap, screenmap, and language translation tables, all use a key of a variable length string followed by a secondary index. To gain access to an object in one of these tables, you must specify the length as the first digit of the primary key. For example, to set the *Cursorright* object in the ANSI Tn3270 Keymap table (object ID *Tn3270KeyCharacterSequence*), you would use the following:

```
snmpset -h del1800 1.2.6.1.33.10.7.5.1.4.4.65.78.83.73.6 OctetString "12"
lgst A N S I
```

New objects in the domain table To add a new object in the domain name table, use SNMP SET processing on the *nameAddress* object with the value of the new name, *nameName* in the key. The address field of the key must match the new value being set, such as in the following example:

```
snmpset -h del400 1.3.6.1.4.1.33.10.4.6.1.2.4.97.98.99.100.11.22.33.44 \
IPAddr 11.22.33.44
```

In this example, the new name is abcd (97.98.99.100), and the new address is 11.22.33.44.

IP Routing Table (MIB II) V1.3 does not support GET and SET operations on the IP Routing table of the IP group of MIB II.

Notes on Local and Remote Parameter Loading/Storage

Local and Remote Parameter Loading/Storage The MAXserver 6025 X.25 Gateway can load and store its parameters locally, or through a remote host called a parameter server. Local parameter storage refers to storage within the unit itself. Remote parameter storage refers to storage on a LAN host.

You can use the DEFINE/SET PARAMETER SERVER command to specify the node names and addresses of remote parameter servers, where the X.25 Gateway can store parameters. You cannot DEFINE the local parameter server; you can only SET it. To SET the local parameter server, you specify the X.25 Gateway's node name and its Ethernet address.

Do not use the unit's Internet address, since it is not permanent like the Ethernet address. If you attempt to SET a parameter server, using the X.25 Gateway's node name followed by an Internet address, the X.25 Gateway will display an error message.

You use the ROM Configuration menu to configure an MX6025 X.25 Gateway to load parameters from REMOTE or LOCAL. You can configure either value, but not both.

Concurrent Local and Remote Parameter Storage. You can configure a MAXserver 6025 to store parameters locally and at remote parameter server(s). This enables you to keep a backup copy of the unit's parameters at remote parameter server(s).

If a 6025 is configured to load parameters locally, and you DEFINE or SET one or more remote parameter servers, the X.25 Gateway will store its parameters locally *and* at the remote parameter server. The unit will continue to load locally, however. Similarly, if the 6025 is configured to load parameters remotely, and you SET the local parameter server, the 6025 stores its parameters at the remote parameter server and locally. In this case, the unit continues to load from the remote parameter server only.

Clearing/Purging a Parameter Server. If two or more entries in the list of parameter servers have the same name, and you use the CLEAR or PURGE PARAMETER SERVER command to eliminate one, the X.25 Gateway will remove the first one it finds in the list. This is because the CLEAR/PURGE PARAMETER SERVER command uses a name, not an address, to identify the entry to be removed.

You cannot CLEAR or PURGE the local parameter server from the list of parameter servers. You can only remove it with the ROM Configuration menu. The manual *Getting started with the MAXserver 6025 X.25 Gateway* describes the ROM Configuration menu. However, you can CLEAR all remote parameters servers.

Performance Impact of SNMP Getnext Processing. Intense use of SNMP Getnext processing may degrade X.25 Gateway performance under some conditions. This has happened during tests with other Xyplex equipment.

MAXview Scriptor Restrictions. You cannot use MAXview Scriptor to manage the Menu prompt or Menu continue prompt of a Communications server. Also, you cannot use Scriptor to manage a Script Server.

Discarding data on a Telnet device If an X.25 Gateway is configured to translate from X.25 to Telnet, the Telnet device may lose data if the X.25 virtual circuit is cleared. This occurs because the Gateway issues a Reset when it receives the clear, and this can cause the Telnet device to discard the data in its buffers. This is unlikely to occur unless you are using IP printing. This will not occur if you use PVCs or PSVCs.

Tn3270 Transparent Graphics screen mode The X.25 Gateway supports Tn3270 transparent graphics mode. However, Xyplex has not been able to test this feature with all possible applications, and therefore cannot guarantee that it will work with every application. For example, Tn3270 graphics screen mode does not work with Yale's PCTERM application on a PC running the host file transfer program PCTTRANS.

Newline Characters in Scripts You must include a blank space between the #echo and the \n in a script for the Newline character to take effect: Use #echo \n *not* #echo\n. If you do not include the space, the X.25 Gateway ignores the Newline character.

Running Scripts on the X.25 Gateway If you are downloading scripts from a script server through port 1 on the X.25 Gateway, set the baud rate for that port to 9600 bps. Otherwise, this can cause an overrun condition.

The PAD help display The PAD help display, which appears when you enter the HELP command from the PAD prompt, lists several command options that the X.25 Gateway does not support. The help text shows options for the CALL command and the CLEAR command, for example, that are not available on the X.25 Gateway. See The *Xyplex X.25 Gateway Commands Reference Guide* for information about PAD commands and options.

5 Known Problems in the X.25 Gateway V1.3.2

Except for the last problem, **Converting from remote to local parameter loading on an MX6025**, the following problems affect all X.25 Gateway hardware platforms: the 6625 card, the 6025 standalone unit, and both the MAXserver and Network 9000 version of the 6800 card.

Problem	Comments/Workaround
Enabling PPP on a Dynamic Port You cannot enable PPP with the SET command on a port if a Permanent Virtual Circuit is established on that port, and the PORT ACCESS is set to DYNAMIC.	You can enable PPP with the DEFINE command on a port under these conditions. Log out the port for the DEFINE command to take effect.
Incorrect X.25 Port State The Port State field of the Monitor X25 Port Status display shows AUTOCONNECTING as the port state after an X.25 to LAN session has been established through an X.25 service associated with the virtual port.	The port state X25 TO LAN SESSION appears after the first data comes across the line.
Failed calls on ports with nondefault packet sizes If you disable the Level 3 flow control parameter negotiation facility, you cannot make calls through ports where you have specified nondefault packet sizes. The Gateway does not cause the nondefault packet sizes to revert back to the default size when you disable this facility.	To avoid this condition, do not disable the Level 3 flow control parameter negotiation facility if you have specified nondefault packet sizes on virtual ports, <i>or</i> reset the packet size to the default (128) on all virtual ports if you disable this Level 3 facility. The DEFINE/SET [SERVER] X25 PORT <i>[port-list ALL]</i> <i>[facility value]</i> command specifies per-call facilities on individual virtual ports. The DEFINE [SERVER] X25 LEVEL_3 FLOW CONTROL PARAMETER NEGOTIATION ENABLED/DISABLED command specifies the status of this facility.
Using SET to change the default inbound profile Using the SET command to change the default inbound profile on a virtual port does not change the profile.	Use the DEFINE command: DEFINE X25 PORT <i>port-list</i> DEFAULT INBOUND PROFILE " <i>profile-name</i> ."
Specifying the range of LCNs for PVCs The X.25 Gateway allows you to specify a value for the highest PVC logical channel number that overlaps the range of logical channel numbers for switched virtual circuits. These ranges need to be separate, or calls will fail.	Be sure that the value you specify for the highest LCN does not overlap with the range of LCNs you specified for SVCs. The manual <i>Managing the X.25 Gateway</i> describes how to assign LCN numbers to PVCs and SVCs.

Problem	Comments/Workaround
CPU utilization on PPP ports If PPP is enabled on a port, the port utilizes 100 % of the CPU, even when PPP is idle. The SHOW/MONITOR SERVER STATUS screen will show 100 % CPU used in the Current field.	The CPU is available for other functions and processes on the X.25 Gateway even through it appears not to be. This problem does not affect the performance of other features and processes.
Converting from remote to local parameter loading on an MX6025 By default, an MX6025 loads and stores parameters locally, on diskette. If you convert to remote parameter loading and storing, however, you must follow a specific procedure to allow the MX6025 to store parameters locally again. This procedure ensures that the MX6025 is first on the list of available parameter servers.	Clear each remote parameter server entry from the list of available parameter servers with the CLEAR and PURGE PARAMETER SERVER commands. Use the DEFINE and SET PARAMETER SERVER commands to specify the MX6025 as the parameter server. You can then DEFINE or SET any remote parameter servers that you want to use. Finally, change parameter loading from remote to local through the ROM Configuration Menu.

6 Problems Fixed

Problems Fixed in V1.3.2

Double Xyplex prompts The X.25 Gateway displayed two `Xyplex>` prompts after it executed a script file. It now displays one prompt.

Using the TEST command in a script The X.25 Gateway shut down during script execution when a TEST command occurred in the script. The X.25 Gateway now executes the TEST command in a script and operates normally.

Upgrading Parameters The X.25 Gateway parameter file lost the Port Prompt and the Port Idle Timeout parameters when users upgraded from V1.2.2 to V1.3. The X.25 Gateway now updates all parameters during software upgrades.

PPP with VJ Compression over X.25 Certain applications compress PPP packets that exceed the maximum allowable Ethernet packet size when decompressed. The X.25 Gateway shut down when the extra long decompressed packet overwrote the head of the next packet in memory. The X.25 Gateway now discards incoming PPP packets that would be too long on expansion, and lets the application readjust downward its maximum packet size.

Bad PPP Packets A bad PPP packet caused the X.25 Gateway to shut down when the gateway attempted to send a Protocol Reject message. The X.25 Gateway handles bad PPP packets properly in this revision.

Incorrect Error Messages If you created two services with same X.25 address (SET SERVICE test1 X25 ENABLED ADDRESS 123456, followed by SET SERVICE test2 X25 ENABLED ADDRESS 123456), the interface returned the following incorrect error message: "Xyplex -764- Card format unsuccessful." The interface now returns the correct message: "Xyplex -834- WARNING -X25 address collides with another service."

X.29 Read Parameter Messages The X.25 Gateway was not properly responding to an X.29 Read Parameter message that contained National (not CCITT defined) parameters. It now responds properly to these Read Parameters messages.

Overflowing Buffer Space If a meta character such as 0xFF was input over the WAN link when only one byte of space was available in the input buffer, the X.25 Gateway would hang and then shut down. This could happen if PPP were enabled on a PC, but PPP had not been enabled on the X.25 Gateway. The X.25 Gateway now handles this situation and operates normally.

Forwarding a PAD Prompt The X.25 Gateway forwarded a PAD prompt to an IP host when it should not have done so. The port had a remote profile that changed Parameter 2 (Echo) to 0 (disable echo). The X.25 Gateway no longer forwards the PAD prompt under these conditions.

Duplicate Accounting Entries The X.25 Gateway entered duplicate X.25 disconnect verbose accounting entries in the accounting log. This occurred under certain circumstances, such as when the WAN side of a connection terminated and a Clear request could not be sent out. The X.25 Gateway now logs the correct number of disconnect entries in the verbose account log.

Running out of Packet Buffers while Running PPP The X.25 Gateway crashed if it ran out of packet buffers while running the Point-to-Point Protocol (PPP). V1.3.2 allows the X.25 Gateway to continue operating normally if it runs out of packet buffers. The X.25 Gateway increments the Packet Buffer Failures count on the Show Server Alternate Status display if this occurs.

Running with LAT Disabled X.25 Gateway would shut down abnormally when a user issued a CLEAR SERVICE command while running with LAT disabled. The X.25 Gateway now continues to operate normally when a user issues this command with LAT disabled.

This fix also affected a problem with the SHOW SERVICE command. This command had listed the full characteristics of the service instead of a one-line summary if LAT was disabled. Now the SHOW SERVICE command displays the one-line summary of each service even if LAT is disabled.

Prior to this fix, the default service was LAT, even with LAT disabled. With 1.3.2, no default service type exists if LAT is disabled. You must specify X25 ENABLED with the DEFINE SERVICE command to create an X.25 service. If LAT is disabled, you cannot create a LAT service

User Login and Logout Messages V1.3.2 logs user login and logout occurrences as priority 5 in the verbose account log.

Connecting to a Port In V1.3.2, the X.25 Gateway clears the PAD's session output queue count when connecting to or disconnecting from a port. This fixes a problem that caused the X.25 Gateway to "hang" after every 30-40 connections to a port.

Problems Fixed in V1.3.1

SLIP Problems The X.25 Gateway did not function properly while running SLIP due to several problems, including one which caused the X.25 Gateway to shutdown abnormally when the number of characters in a SLIP sequence on a serial line exceeded 1450. The X.25 Gateway now runs normally while running SLIP.

Upgrading to V1.3 while running SLIP Upgrading to V1.3 from an earlier version of X.25 Gateway software while running SLIP caused the X.25 Gateway to crash if a SLIP port had a SLIP address set to 0.0.0.0 and a remote SLIP address set to any address (*x.x.x.x*). The crash message was CRASH_BAD_PACKET_FREE. You can upgrade to V1.3.1 while running SLIP under these conditions and the X.25 Gateway operates normally.

Using the Menu Feature Selecting an option from the menu created by the Communications Server Menu feature caused the X.25 Gateway to shut down abnormally. The X.25 Gateway now operates normally with the Communications Server Menu feature (see DEFINE SERVER MENU command).

SNMP Trap Clients The X.25 WAN link did not come up if the X.25 Gateway attempted to send an SNMP trap message to an unreachable SNMP trap client while the WAN link changed states. This condition only occurred if you had enabled SNMP, defined an SNMP trap client, and that trap client was unreachable. The availability of an SNMP trap client no longer affects the status of the WAN Link.

Nondefault listen addresses Ports with nondefault listen addresses did not function properly after the X.25 Gateway was upgraded to V1.3 from a previous revision. Users could connect to the ports with either the default or the nondefault listen address. In V1.3.1, users can only connect to the nondefault listen address, if one has been assigned.

Running PPP with Chameleon® or Distinct® applications The Point-to-Point Protocol (PPP) running on the X.25 Gateway transmitted protocol reject packets on the PPP link when one or both of the PCs on the link was running the Chameleon or Distinct software applications. PPP no longer issues reject packets with these applications.

Port Break Disabled Parameter Customers using V1.3 the X.25 Gateway could not make connections when the port BREAK parameter was set to DISABLED (DEFINE/SET PORT *port-list* BREAK [DISABLED/LOCAL/REMOTE] command). This was because V1.3 did not send a PAD BREAK INDICATION MSG when the user hit the <Break> key, and instead sent a Level 3 packet with the data byte FE (meta break character).

The X.25 Gateway now sends a PAD BREAK INDICATION MSG to the WAN link if the port break parameter is set to either LOCAL or DISABLED. This version sends Level 3 packet with the data byte FE only if the port break character is set to REMOTE.

Domain Name Table entries When searching through the domain name table, the X.25 Gateway was skipping some entries when two or more entries of the same name existed in the table. The X.25 Gateway now searches every entry in the table, including all those with the same name.

Compressed PPP packets greater than 1500 bytes The X.25 Gateway shut down abnormally when it processed a compressed PPP packet greater than 1500 bytes. V1.3.1 discards compressed packets of this size and operates normally.

X.25 Gateway as a Domain Name server The X.25 Gateway could run out of packet buffers under these conditions: It was acting as a domain name server and it received a domain-name query for a nonexistent domain name. For each query with a nonexistent domain name, the X.25 Gateway lost a packet buffer. The X.25 Gateway now frees up the packet which is allocated for the domain name response if no domain name is found.

Problems Fixed V1.3

The Xyplex Bootstrap Server MIB The Xyplex Bootstrap server MIB had returned incorrect data for some objects in previous versions, particularly objects in the eventTable. This MIB now returns the correct data.

Using the accounting feature on the X.25 gateway In previous versions, the X.25 Gateway sometimes did not function correctly when sending information to the account log. It now functions normally when sending information to the account log.

Port numbers and entry numbers in the account log The account log for the X.25 Gateway sometimes displayed incorrect port numbers and entry numbers for X.25 sessions. The account log now displays the correct port numbers and entry numbers.

Logging accounting data on a VAX from an X.25 Gateway The last line of the account log disappeared when a user displayed the log on a VAX using the LOGOUT/FULL command. This occurred if the terminal type of the X.25 Gateway virtual port was set to ANSI. The last line of the account log now remains on the screen when a user issues this command.

Specifying a port-list in X.25 commands The command interface required that users enter an individual port number, rather than a port list, in the DEFINE [SERVER] X25 PORT PVC DISABLED, and DEFINE [SERVER] X25 PORT PVC DIRECTION OUTBOUND | DISABLED. Users can now enter a port list in these commands.

PVC outbound direction PVCs remained bi-directional after a user specified that they be outbound-only with the DEFINE [SERVER] X25 PORT *port-list* PVC DIRECTION OUTBOUND command. This command now causes PVCs to be outbound-only.

PVC direction display The Port Characteristics display did not indicate that a PVC was outbound-only if it had been defined this way with the DEFINE [SERVER] X25 PORT PVC DIRECTION OUTBOUND command. The SHOW/LIST [SERVER] X25 PORT CHARACTERISTICS display now indicates that the PVC is outbound in the PVC LCN: field.

CPU utilization display The SHOW/MONITOR SERVER STATUS display showed inaccurate data in the % CPU Used: field. This field now displays the correct percentage of processing time.

SHOW SERVICE CHARACTERISTICS display This display sometimes did not list services which had been defined on both the local X.25 Gateway and on a remote device on the network. This display now lists these services .

7 Documentation Overview

With the exception of some installation manuals, you order documentation separately from software and hardware.

The MAXserver 6025 Standalone unit includes this manual:

- *Getting Started with the 6025 MAXserver X.25 Gateway*, which describes how to install the hardware and load the software from a diskette.

The 6625 X.25 Gateway card includes this documentation:

- *Hardware Installation and Maintenance Notes- MAXserver 6625 Gateway Card*, which covers installation and maintenance procedures for the MAXserver hardware, as well as the cabling options associated with this hardware.

The MAXserver 6800 X.25 Gateway card includes this documentation:

- *Getting Started with the MAXserver 6800 Remote Router Card*, which describes how to install the hardware and load the software from a flash memory card.

The Network 9000 6800 X.25 Gateway card includes this documentation:

- *Getting Started with the Network 9000 WAN Processor 6800*, which describes how to install the hardware and load the software from a flash memory card.

If you order a 6625 X.25 Gateway card, you also receive one of the following manuals, depending on the type of TCP/IP-LAT software kit you receive:

- *A Software Installation Guide, for UNIX Hosts* which describes procedures that you use to install Xyplex software on UNIX hosts. This guide is only supplied with UNIX software kits.
- *A Software Installation Guide, for VMS Hosts* which describes procedures that you use to install Xyplex software on VAX/VMS hosts. This guide is only supplied with VMS software kits.
- *A Software Installation Guide, for Xyplex Loader Kits* which describes procedures that you use to install Xyplex software on Xyplex loaders. This manual also explains how Xyplex loaders function as load servers, parameter servers, and dump servers for other Xyplex products.

You can order this documentation with the X.25 Gateway:

- *Managing the Xyplex X.25 Gateway*, which describes the X.25 Gateway product, how to define and set characteristics for basic use, and how to create services that send and receive virtual calls. This manual also includes the *Xyplex X.25 Gateway Mini Reference* which lists all X.25 Gateway commands and variables, including the Xyplex commands, the PAD commands, and the PAD parameters.
- *The X.25 Gateway Commands Reference Guide*, which includes Xyplex X.25 Gateway DEFINE/SET [SERVER] X25 commands.
- *A TCP/IP-LAT Commands Reference Guide*, which describes all of the TCP/IP-LAT commands that you use with the X.25 Gateway to control and monitor the Communications Server features. These includes how to connect and manage sessions, configure ports, and create services.

- A *TCP/IP-LAT Software Management Guide* which describes procedures that you use to manage TCP/IP-LAT software.
- *Using the TCP/IP-LAT Terminal Server*, which is a getting-started guide for first-time terminal server users and nontechnical users. This guide contains introductory information about the terminal server and the commands available at secure ports. You can order this manual separately from the rest of the 4.0 documentation set with the part number MX-420-0556.

8 Unsupported Access Server Features and Protocols

V1.3.2 of the X.25 Gateway supports most of the V5.1 of Multi-Protocol Access Server features and protocols on virtual ports and port 1, the asynchronous management port. In addition, the X.25 Gateway does not support some of the Access Server V5.2.x features that are described in the current Multi-Protocol Documentation set.

This section lists the V5.1 features and protocols that the X.25 Gateway does not support on virtual ports, or that it supports on port 1 only.

V5.1 features not supported on virtual ports or port 1: **the LPD daemon, Eventlog, the APGEN utility, PRT3270, the Xremote protocol, the Xprinter protocol.**

V5.1 features supported on port 1 only: **Dialback support for modems, Dialup, Script serving, Autobaud, Access control, Character size, DSRWAIT, DSRLOGOUT, DCD timeout, modem control, the Multisessions protocol, Remote modification.**

Simultaneous local and remote parameter storage is supported on the 6025 X.25 and the 6800 X.25 Gateways; not the 6625 card.

End of Release Notes