



READ ME FIRST!!

X25PAD APPLICATION

PRODUCT / RELEASE NOTES

RELEASE 25.3

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IMPORTANT !!

USER DOCUMENTATION IS AVAILABLE AT OUR WEB SITE.

Documentation:	http://www.trdcusa.com
Sales:	sales@trdcusa.com

1 INTRODUCTION

These release notes highlight the product features, modifications, known caveats and any special considerations for the **X25PAD Application** product. For detailed information on this product, reference the **X25PAD Application** User's Manual.

2 PRODUCT FEATURES

The DT-6XXX **X25PAD** application eliminates the need, complexity, and expense of specialized (B)X.25 equipment in an IP network by allowing an (B)X.25 device, such as a network element console, to be connected to a synchronous port anywhere in the IP network but treated as an IP endpoint. An operations system host communicates via IP to the DT-6XXX that is running the **X25PAD** application. The application provides all the termination/mediation of the (B)X.25 used by the network element. The host does not need to know that the ultimate endpoint is a (B)X.25 entity.

Consult the **X25PAD Application** User's manual for a complete enumeration of the features.

3 SPECIAL NOTES

- This build must be installed on a DT-6061 with infrastructure release 16.0 or higher. On the DT-6160, or DT-6260, any of the infrastructure releases shall suffice.
- Starting with release 25.1; the maximum number of VCs has been set to **sixteen** so that all thirty instances are usable on a DT-6061 without memory exhaustion. Should more VCs per instance be required, please contact the author for a custom version of the X25PAD application.

4 RELEASE CHANGES

4.1 RELEASE 25.3 ERRATA

Should the OA&M console receive a duplicate connection; the duplicate is not disconnected properly. This errata corrects the problem and the original operation is preserved.

4.2 RELEASE 25.2 ERRATA

- The LAPB link idle timer was introduced in release 24.1 to take appropriate action when the device vanishes from network error or otherwise. This release modifies the action of the LAPB link idle timer such that an errant device does not introduce an un-necessary link timeout. The operation and intent of the original feature is preserved.

4.3 RELEASE 25.1 ERRATA

- The maximum number of Virtual Circuits per instance has been reduced to sixteen (16). The default number of Virtual Circuits per instance is eight (8). This allows the **DT-6061** to utilize all thirty instances for X25PAD even with the AMA changes included in this release.
- Packet sizes of 512 and 1024 bytes may now be specified for (B)X.25 VCs.

Syntax:

pad <vc#> vcpkt=<128 | 256 | 512 | 1024 >

The larger packet sizes were added in order to comply with GR-385 (the replacement for TR-TSY-000385) that is used for AMATPS processing of billing data.

- Support added for Optional Facility Throughput class specification on SVC virtual circuits. At least one AMA device has been identified that requires explicit throughput class negotiation. All of the X.25 specification throughput classes are supported. These are 75 through 48000 BPS. Unless needed, this option should always be set to **NONE**. The syntax of the option is as follows:

Syntax: vc <VC#> [svctclass=< NONE | Throughput >]

- The X.25 Optional Facility for SVC window sizes is corrected. This is an optional feature of a SVC call request and is generally only used during extended address negotiation; and now for throughput class negotiation. Previously, it would advertise the LAPB window for both transmit and receive. It now correctly specifies the administered VC transmission window for TX and the entire LAPB window for RX.
- The X.25 Optional Facility for SVC packet sizes has been enhanced to include 512 and 1024 packet sizes. Generally, large packet sizes are only used on PVC connections. This change would only be relevant for CCITT interfaces where extended addressing is used; or now when the throughput class is negotiated.
- Four forwarding groups were added to the **pad <VC#> fwd=<>** option for an X.25 VC. These are:
 - GRP1 --> Forwards on ESC, BEL, ENQ, NAK.
 - GRP2 --> Forwards on DEL, CAN, DC2
 - GRP3 --> Forwards on ETX, EOT

- GRP4 --> Forwards on HT, LF, VT, FF.
- The FWD VC option allows multiple forwarding conditions to be applied. Setting a forwarding condition aggregates into the **pad <VC#> fwd=<>** option. In order to clear, the forwarding condition of NONE is used (e.g. pad 1 padfwd=none).

4.4 RELEASE 24.1 ERRATA

- When a circuit is permanently flow controlled by an X.25 device via the RNR mechanism, a disconnect from the TCP peer for that VC would not clear the VC for a new connection until the flow control is released. It has been found that this could cause a deadlock on devices that require a PVC RESET to clear themselves. The correction is to allow a replacement TCP connection during such a situation. The replacement connection issues the PVC RESET and the problem subsequently corrects itself.
- TCP probes have been added for all connections.
- The peer to peer probes have been removed as their function are now handled more efficiently with the TCP probes.
- An IDLE TIMER for the LAPB link is established. Should a timeout period elapse (currently at 30+ seconds) with no data or status received from the X.25 line; the link is probed. If found dead; the link is restarted and all TCP endpoints are disconnected.

4.5 RELEASE 23.2 ERRATA

- The X25PAD application can now be used in instances numbered 31 through 48 of a DT-6260. Previously, it could only be used in the first thirty instances.
- For the PAD interface, messages of any size can now be sent. Previously, the flow control would allow only messages of a maximum size of window size times packet size or less to be sent.
- Some minor changes in the X.25 LAPB initialization were made.
- A PVC setup timer was added to guarantee a minimum time to wait for the reset confirmation, which is not guaranteed. It was possible to send data prior to the confirmation that may (depending on the NE) lose some data.

4.6 RELEASE 23.1 ERRATA

- The BX.25 session layer API software previously distributed separately has now been moved into the X25PAD software. The host based API is now simplified and is distributed as source. To invoke the session layer service, a new option has been added to the services parameter **svc** of the **VC** command: **sess**

Syntax:

vc <vc#> [svc=< PAD | PASS | MACSTAR | RBP | ISO | BIN | SESS >]

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- Labels can now be up to 60 characters in length and contain spaces and special characters. Labels must be included in double quotes.

Syntax:

`label [<doubled quoted string> | none]`

An existing label will be carried forward upon upgrade to this release.

4.7 RELEASES PRIOR TO 23.1

Contact support@trdcusa.com with any specific questions on releases prior to 23.1.

5 INSTALLATION ADDENDUM

5.1 OBTAINING INFORMATION FROM TELECOMP R&D

Load modules for all the TeleComp R&D products are obtained by sending email to support@trdcusa.com. All other documentation, including release notes, user manuals, “white-papers”, etc. can be accessed on the TeleComp R&D web site and downloaded for your use.

To insure that the correct version of the binary load modules have been retrieved and has not been corrupted during the transmission process, the UNIX[®] **sum** command can be used.

On some hosts, the “-s” flag must be used with the **sum** command. On X86 linux hosts, the **-sysv** flag must be used with the **sum** command.

Key-in **sum** < name of load module file>.

The values returned must match the numbers shown below:

For example:

Key-in: **sum -sysv x25pad.dt6.25.3**

Response: **17389 257 x25pad.dt6.25.3**

5.2 SOFTWARE REGISTRATION

One key is needed for each different application resident on a DT-6xxx, regardless of the number of instances of that application on this particular DT-6xxx.

Using the DT-6061 serial console, run the **regapp** command to register the X25PAD application. Changing either the release level or the version level requires that a new key be obtained and the re-registration of the particular software entity.

The hardware information needed for the key generation process, which is the *MAC* address and *hardware serial number* of the DT-6XXX, can be obtained before the new **x25pad** is installed by running the **vfy mod** command. This information, together with the X25PAD release should be sent to keys@trdcusa.com via email. The application key will likewise be returned via email.

5.3 SPECIAL CONSIDERATIONS FOR DUPLEX OPERATION

Note that in a duplex operation, the platform and applications must be registered on the **standby** also. The keys are different because the **standby** has a different MAC address and hardware serial number than the **active**. Therefore, it is necessary to also obtain the MAC address and hardware serial number on the standby for key generation. **Switchover** will not work properly if the software on the **standby** is not registered.

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6 DOCUMENTATION

The current version of the **X25PAD** User manual, and this release letter, may be downloaded from the support area of <http://www.trdcusa.com>.

7 HARDWARE WARRANTY

The warranty period for hardware shall be ninety (90) days from the date of shipment from TeleComp R&D or a designated manufacturer. Replacements and repairs are guaranteed for the longer of the remaining original warranty period or 30 days.

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