

AIXLink/X.25 Version 1.1.5

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AIXLink/X.25 Version 1.1.5

Release Notes

Memorandum to: Licensees of AIXLink/X.25 Version 1.1.5 (*)

Subject: AIXLink/X.25 Version 1.1.5

Date: 16 Nov 1998

Release Notes Version: 1.1

Enclosed is information about AIXLink/X.25 Version 1.1.5. **Read this information before installing AIXLink/X.25 Version 1.1.5.**

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[AIXLink/X.25 Version 1.1.5](#)

The following information applies to AIXLink/X.25 Version 1.1.5 or later.

[Prerequisites](#)

The AIXLink/X.25 LPP Version 1.1.5 requires a minimum base release of AIX version 4.1.5, 4.2.1, or 4.3.1.

In addition, if the following filesets are installed on the system, then they must be at the following levels or higher before the AIXlink/X.25 LPP will install.

On a system running AIX version 4.1.5:

- bos.rte.tty must be at 4.1.5.20 or higher
- bos.rte.mp must be at 4.1.5.9 or higher
- bos.rte.up must be at 4.1.5.8 or higher

On a system running AIX version 4.2.1:

- bos.rte.tty must be at 4.2.1.13 or higher
- devices.sys.pci.rte must be at 4.2.1.1 or higher

If using the IBM ARTIC960Hx 4-Port PCI Adapter or the IBM ARTIC960 MCA Adapter, the **devices.artic960.rte** fileset must be at 1.3.1. This same image is used on AIX version 4.1.5, 4.2.1, and 4.3.1.

Note: The **devices.artic960** version 1.3.1.0 image is shipped with the AIXlink/X.25 version 1.1.5. Therefore, if the **devices.artic960.rte** fileset is already installed on the system at a lower level, it will be automatically upgraded when the AIXLink/X.25 Version 1.1.5 is applied to the system.

[Packaging Information](#)

The following packages are available on this media.

Base X.25 Functionality (sx25 and sx25.lc)

The **sx25** package provides the base X.25 function, including the protocol stack, device drivers, and adapter microcode. It also includes support for TCP/IP, NPI, DLPI, COMIO, SNMP, and PAD. The number of virtual circuits allowed per system is based on the license purchased.

The **sx25.lc** package also provides the same base X.25 functionality as the **sx25** package. However, it only supports a maximum of 4 virtual circuits per system.

Filesets included in these packages:

- **sx25.rte** AIXlink/X.25 Run-Time Environment

This fileset provides the base X.25 device drivers, configuration methods, and applications necessary to use the other AIXlink/X.25 options. This fileset must be installed. All other filesets in this package prereq this fileset.

- **sx25.npi** AIXlink/X.25 NPI and DLPI Support.

This fileset provides the device driver necessary to run NPI applications.

Requires that the **sx25.rte** fileset be installed before or with this fileset.

- **sx25.comio** AIXlink/X.25 COMIO Compatibility Support and Applications.

This fileset provides the device driver and applications for the COMIO compatibility interface. This interface provides compatibility with the AIX Version 3 base X.25 product.

Requires that the **sx25.rte** fileset be installed before or with this fileset.

- **sx25.tcpip** AIXlink/X.25 TCP/IP Support

This fileset provides support for the TCP/IP protocol, running over X.25.

Requires that the **sx25.rte** fileset be installed before or with this fileset.

- **sx25.pad** AIXlink/X.25 Triple-X (PAD)

This fileset provides PAD software, supporting the X.3, X.28, and X.29 standards.

Requires that the **sx25.rte** fileset be installed before or with this fileset.

- **sx25.server** AIXlink/X.25 Server Support

This fileset provides an increased number of available virtual circuits base on the customer licensing agreement. This fileset is only part of the **sx25** package and it must be installed in order to get more than 4 virtual circuits available on the system.

Requires that the **sx25.rte** fileset be installed before or with this fileset.

AIXlink/X.25 Application Development Toolkit (sx25.adt)

This package provides libraries, include files and sample programs that can be used in developing NPI, DLPI, and COMIO applications for X.25.

Filesets included in this package:

- **sx25.adt.rte** AIXlink/X.25 Application Development Toolkit-Run Time Environment

This fileset provides include files, libraries, and sample programs for base X.25 program development. All other filesets in this package prereq this fileset.

Requires the **sx25.rte** fileset be installed before or with this fileset.

- **sx25.adt.npi** AIXlink/X.25 Application Development Toolkit-NPI/DLPI

This fileset provides include files, libraries and sample programs for NPI and DLPI program development. Requires the **sx25.npi** fileset.

Requires the **sx25.adt.rte** and **sx25.npi** filesets be installed before or with this fileset.

- **sx25.adt.comio** AIXlink/X.25 Application Development Toolkit-COMIO

This fileset provides include files, libraries, and sample programs for COMIO compatibility program development.

Requires the **sx25.adt.rte** and **sx25.comio** filesets be installed before or with this fileset.

X.25 User Guide - HTML format (sx25.html.en_US)

This package contains the HTML documentation on using, managing, and programming the AIXlink/X.25 Version 1.1.5 LPP for AIX version 4. This fileset can be installed on AIX 4.1.5, 4.2.1, or 4.3.1 or higher. No requisite software is required to install this package.

Note: See the sections of this document entitled **Documentation Overview** and **Installing and Accessing HTML Documentation** for more information about this package.

X.25 User Guide - Hypertext format (sx25.info.en_US)

This package contains the InfoExplorer documentation on using, managing, and programming the AIXlink/X.25 LPP for AIX version 4. These packages requires the bos.info.[lang].nav Navigation Database fileset. For more information on how to install and use the documentation, please refer to the sections of the document entitled **Documentation Overview** and **Installing and Accessing the InfoExplorer Database**.

Note: This package contains information that is valid for the **1.1.3** version of the AIXlink/X.25 LPP only. This documentation will not be updated. For the most up to date version of documentation on the AIXlink/X.25 LPP, please use the HTML version.

Approximate Disk Space Required For Each of the Packages

- **sx25** or **sx25.lc** : 6.4 MB of disk space, if the entire package is installed.
 - **sx25.adt** : 1.1 MB of disk space, if the entire package is installed.
 - **sx25.html.en_US** : 6 MB of disk space
 - **sx25.info.en_US** : 2.2 MB of disk space
-

Migration to AIXlink/X.25 Version 1.1.5

Before migrating the AIXlink/X.25 LPP software to version 1.1.5, please stop all applications using the X.25 software and remove all ports and drivers down to the "Defined" state.

In addition, although migrating the AIXlink/X.25 LPP software to version 1.1.5 will retain your configuration, we recommend that you backup the configuration, using the **backupx25** command.

Once the software migration is complete, please reconfigure the X.25 drivers and ports to the "Available" state and restart your applications. This reloads all the latest code into the system.

IBM ARTIC960Hx 4-Port Selectable PCI Adapter

Support for the IBM ARTIC960Hx 4-Port Selectable PCI Adapter is new in AIXlink/X.25 Version 1.1.5.

Hardware Description

The IBM ARTIC960Hx 4-Port Selectable PCI Adapter consists of three components: a base ARTIC960Hx adapter with at least 8 MB of memory, a 4-Port selectable daughter card, and a cable assembly with the desired electrical interface. The available electrical interfaces are V.24/EIA-232, X.21, and V.35/V.36. The AIXlink/X.25 LPP supports speeds up to 2Mbps on the V.35/V.36 and X.21 electrical interfaces. The V.24/EIA-232 electrical interface is only supported at speeds up to 19.2 Kbps.

Prerequisites

In order to use the IBM ARTIC960Hx 4-Port Selectable PCI adapter, you must have the **devices.artic960.rte** fileset installed at the 1.3.1.0 level. This fileset is shipped as part of the **devices.artic960** image which is included on the CD that is shipped with the adapter. In addition, this image is included on the AIXlink/X.25 LPP media for your convenience.

Note: If this fileset is already installed on the system, this fileset is automatically migrated to the 1.3.1.0 level when you install/migrate the AIXLink/X.25 LPP to version 1.1.5. If the fileset is not already installed on the system, the installation of the AIXlink/X.25 LPP is not automatically installed on the system for you.

Configuration

The configuration of AIXlink/X.25 LPP ports over the IBM ARTIC960Hx 4-Port Selectable PCI adapter is similar to the configuration of AIXlink/X.25 LPP ports over the IBM ARTIC960 MCA adapter.

- First, the **ddriciop** driver must be configured over each of the IBM ARTIC960Hx 4-Port Selectable PCI adapters to be used for X.25 communications. This driver is automatically configured when **cfgmgr** is run, if the **devices.artic960.rte** fileset is installed on the system. If for some reason the device driver is not configured available on the adapter, configure it using the **smitty ddricphx_dd** fastpath.
- Once the **ddriciop** driver is configured over the appropriate adapter, configure the AIXlink/X.25 LPP **twd** device driver over that adapter. The fastpath through SMIT to the appropriate screens is **smitty hx25str_dd**
- Now, the AIXLink/X.25 LPP ports (**sx25a#**) can be configured over the **twd** driver.

Restrictions

- The AIXlink/X.25 LPP still has the restriction that it only supports up to eight adapters in a system. This means, at most, eight IBM ARTIC960Hx 4-Port Selectable PCI adapters can be configured to use the AIXlink/X.25 LPP in a given system. If any IBM 2-Port Multiprotocol PCI Adapters or IBM Co-Processor/1 ISA Adapters are configured to use the AIXlink/X.25 LPP in a given system, then the number of IBM ARTIC960Hx 4-Port Selectable PCI adapters that can be used, is reduced by that much.
- The IBM ARTIC960Hx 4-Port Selectable PCI Adapter does not physically support signal 125 (Ring Indicate). Therefore, this adapter can not be used to received incoming calls, using the direct V25bis (108.1) method. When using dialup modems, the V25bis addressed mode (108.2) MUST be used to receive incoming calls.
- The **devices.artic960add.rte** fileset is not compatible with running the AIXlink/X.25 LPP over the IBM ARTIC960Hx 4-Port Selectable PCI Adapter. If this fileset is installed on the system, it automatically configures a **ric960add** device driver over each **ddriciop** device driver in the system, when **cfgmgr** is run. Adding AIXlink/X.25 LPP ports on to adapters with this device driver configured will fail. Therefore, the **devices.artic960add.rte** fileset may not be installed on the system, if use of the AIXlink/X.25 LPP over the IBM ARTIC960Hx 4-Port Selectable PCI adapter is desired.

lsx25 command output

The output from the **lsx25** command for the IBM ARTIC960Hx 4-Port Selectable PCI adapter is in the short format only. Please refer to the *AIXLink/X.25 LPP Users Guide* for more information on this command and its output.

x25mon Comand Enhancements

The **t** flag was added to the **x25mon** command to show timer expirations on the specified line. In order

to use this flag, you must specify the **c** flag and either the **f** flag or the **p** flag or both.

For instance, to show timer expirations at the frame layer on port sx25a0, use the following command.

```
x25mon -n sx25a0 -fct
```

To show timer expirations at both the frame layer and the packet layer on the sx25a0 port, use the following command.

```
x25mon -n sx25a0 -fpct
```

If the **t** flag is used, the frame layer timer expirations appears as frame control (FC) messages and the packet layer timer expirations appears as packet control (PC) messages in the x25mon output.

Documentation Overview

AIXLink/X.25 version 1.1.5 installs and runs on AIX 4.1.5, AIX 4.2.1, and AIX 4.3.1. The installation media contains an InfoExplorer database and HTML documentation. The InfoExplorer database contains the AIXLink/X.25 version 1.1.3 documentation. The HTML documentation contains the updates for the AIXLink/X.25 version 1.1.5. Both sets of documentation install on all three AIX releases. However, the following restrictions apply.

On AIX 4.1.5 and AIX 4.2.1 systems, the HTML documentation has no search facility. In addition, the "man" pages reference the InfoExplorer information only.

On AIX 4.3.1 systems, the HTML documentation has search facilities. However, "man" pages for the AIXLink/X.25 LPP are not available. In addition, the InfoExplorer database for the AIXLink/X.25 LPP can be installed. However, the InfoExplorer application is not shipped as part of the base AIX 4.3.1. It must be purchased separately.

Installing and Accessing the InfoExplorer Database

The installation media contains a single InfoExplorer database, level 4.2.1.0, that installs on AIX 4.1.5, AIX 4.2.1, or 4.3.0 and higher.

If you are installing the AIXLink/X.25 database as an individual package (rather than doing an install all or install all_licensed), this is the procedure:

1. Install the bos.rte.man fileset (containing a prerequisite APAR) on your system:
 - o If your system is at the 4.1 level, install bos.rte.man 4.1.4.2
 - o If your system is at the 4.2 level, install bos.rte.man 4.2.0.1

Note: If the fileset is not available on your install media, you can download the appropriate APAR electronically (see "Electronic Fix Distribution Instructions" below). If your system is at the 4.1 level, you need to download APAR IX60563. If your system is at the 4.2 level, you need to download APAR IX61013.

2. Download (see "Electronic Fix Distribution Instructions" below) and install the following APAR:
 - o IX62598
3. Install the following InfoExplorer database:

4.2.1.0 X.25 User Guides - U.S. English

Accessing the InfoExplorer database for your LP

To access the InfoExplorer database for your LP once it is installed, type at the command line:

```
info -l x25
```

The LP database is searchable from the AIX InfoExplorer Library.

Electronic Fix Distribution Instructions

Fixes are orderable when available and may be downloaded electronically through several available interfaces. For full details, check the *AIX Version 4.1.5 Release Notes* "Appendix B, Electronic Fix Distribution for AIX" or the *AIX Version 4.2 Release Notes* "Appendix A, Electronic Fix Distribution for AIX," or open your Web browser and connect to this URL:

<http://service.software.ibm.com>

Installing and Accessing HTML Documentation

If you are installing the AIXLink/X.25 HTML documentation as an individual package (rather than doing an install all or install all_licensed), this is the procedure:

1. Install the sx25.html.en_US package for 4.3.0.0 X.25 User Guides - U. S. English

To access the HTML documentation from your WEB browser connect to the following URL.

```
/usr/share/man/info/en_US/a_doc_lib/aixlnk25/x25usrgd/toc.htm
```

Footnotes:

(*) IBM is a registered trademark of International Business Machines Corporation.

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