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Technical Data
SNA/X.25 Link/iX

For HP 3000 Series 900
Computer Systems
Product Number
30298A
SNA/X.25 Link/iX allows standardization on a single X.25 backbone network for multivendor communications, specifically, HP 3000–to–HP 3000 and HP 3000–to–IBM communications.

SNA/X.25 Link/iX is a software product that enables HP SNA Services to be supported over an X.25 network. The HP 3000 Series 900 system running SNA/X.25 Link/iX

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communicates with IBM systems via an HP Model 45 Plus Multiprotocol X.25 Switch as a host PAD or via IBM X.25 NCP Packet Switching Interface (NPSI). SNA/X.25 Link/iX allows communications between an HP 3000 and an IBM system to occur simultaneously with NS traffic to another HP 3000 over a single X.25 link.

SNA/X.25 Link/iX requires the installation and use of the X.25/iX Network Link hardware and software components. X.25/iX Network Link provides access to public or private X.25 packet–switching networks.

Benefits and Features

With SNA/X.25 Link/iX, network costs are reduced and management and control of the network is simplified with the following features:

┤   A single link is shared by both NS and SNA services.
┤   An HP 3000 Series 900 system accesses multiple hosts with one card, one access line, one X.25 connection.
┤   All HP SNA Services (LU 6.2 API/iX, NRJE/iX, IMF/iX, DHCF/iX) are supported.
┤   Connections may be established via permanent virtual circuits (PVC) or switched (incoming and outgoing) virtual circuits (SVC).
┤   Error codes, tracing records, and logging records are provided to facilitate troubleshooting and diagnosis of problems.
┤   Packet sizes of 4096 bytes are supported at a maximum line speed of 64 Kbps.
┤   Configuration is consistent with HP network products ¬ via NMMGR.

Functional Description

SNA/X.25 Link/iX allows an HP 3000 Series 900 computer to communicate to an IBM system over a public or private X.25 network. SNA/X.25 Link/iX is a psuedo–link product that supports a link–level protocol (QLLC) but does not actually control the hardware. The true link level product that operates in conjunction with SNA/X.25 Link/iX is the X.25/iX Network Link.

SNA/X.25 Link/iX supports the Qualified Logical Link Control (QLLC) protocol. QLLC is a special protocol developed by IBM to resolve the differences between SDLC and X.25. It uses qualified X.25 packets to send link control messages in a format similar to SDLC link control messages.

SNA/X.25 Link/iX enables the HP SNA Services (LU 6.2 API, NRJE, IMF, DHCF) running on an HP 3000 to communicate with an IBM system through an IBM 37xx communications controller running NPSI. Alternatively, an HP Model 45 Plus Multiprotocol X.25 Switching Node

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can be used as an SNA/SDLC PAD, eliminating the need for NPSI.

SNA/X.25 Link/iX supports the simultaneous operation of two or more SNA services. With an SNA service, SNA/X.25 Link/iX allows the HP 3000 to appear as a Node Type 2.0 (T2.0) device. Depending upon the SNA service, SNA/X.25 Link/iX can support several logical unit types that include LU 1, LU 2, LU 3, and LU 6.2.

SNA/X.25 Link/iX encapsulates SNA data inside X.25 packets on the HP 3000. These packets are sent to the X.25/iX Network Link to access the X.25 network. The destination IBM communications controller or the HP Model 45 Plus removes the X.25 packet information, and the original SNA data is sent to the IBM host.

Product Requirements

HP Hardware and Software Requirements

-| An HP 3000 Series 900 computer system running MPE XL Release 2.2 or MPE iX Release 4.0 or later operating system.
-| The X.25/iX Network Link hardware and software components.
-| An HP Model 45 Plus Multiprotocol X.25 Switch or IBM NPSI.
-| A block mode terminal supported by VPLUS for Node Management configuration.
-| One or more HP SNA Services (LU 6.2 API, NRJE, IMF, DHCF)

Host Hardware and Software Requirements

┤   An IBM System/370 compatible host (ie, Model 370, 308x, 43xx) with an IBM 37xx communications controller. The following software must be running on the host and communications controller:

–   MVS/SP, MVS/XA, MVS/ESA, VSE or VM
–   ACF/NCP Network Control Program
–   ACF/VTAM Telecommunications Access Method
–   NPSI NCP Packet Switching Interface (Version 2 Release 1 or later for the IBM 3725, and Version 3 or later for the IBM 3745) or an HP Model 45 Plus Multiprotocol X.25 Switch

Installation and Configuration Policy

The customer is responsible for loading the SNA/X.25 Link/iX software onto the system.

Hewlett–Packard will perform minimum configuration of SNA/X.25 Link/iX in order to verify minimum product functionality. This activity is included in the product purchase price.

Customer Responsibility

Prior to having HP personnel Onsite to perform minimum configuration of SNA/X.25 Link/iX, the customer is responsible for the following:

┤ Providing HP with the information necessary to complete the Network Implementation and Support Plan (NISP) including:

– system configurations
– logical network map identifying relevant traffic flow
– physical network map identifying relevant network hardware components.

┤ Verifying that the necessary host mainframe software is installed and configured to support SNA/X.25 Link/iX.

The customer should contact their HP Sales Representative for typical host parameter values or consult the ⸬HP SNA Products: ACF/NCP and ACF/VTAM Guide▓ (5958–8543) for details.

┤ Verifying that the DTC/X.25 Network Access option (P/N HP 2340A #310, 2345A #3XX, 2343D, 2346D, 2346E, J2070A #1CX, J2070A #1CW, or J2079A) is installed, configured, and verified to include accommodation for the installation of SNA/X.25 Link/iX.

┤ Verifying that the X.25/iX System Access product (P/N HP 36939A) is installed, configured, and validated for proper operation prior to the installation of SNA/X.25 Link/iX.

┤ Updating the HP 3000 system to the proper release level and installing the SNA/X.25 Link/iX software using AUTOINST. Refer to the HP 3000 Installation and Update Manual (36123–90001).

┤ Verifying that all of the necessary software modules have been successfully installed by AUTOINST and are at the correct version levels using the NMMAINT.PUB.SYS utility.

┤ Performing full system backups as necessary, and ensuring that the HP 3000 system and personnel with HP 3000 system management knowledge are available when HP is Onsite to complete the installation/minimum configuration of SNA/X.25 Link/iX.

The customer is also responsible for completing the configuration in order to fully integrate SNA/X.25 Link/iX into the existing customer network after HP has completed the minimum configuration of SNA/X.25 Link/iX.

HP Responsibility

Following the installation of SNA/X.25 Link/iX, HP is responsible for the following:

- Confirming that all of the necessary software modules have been installed and are at the correct version level.
- Configuring the SNA/X.25 Link/iX product to a minimum configuration (1 PU and 1 LU) necessary to verify software and hardware functionality.
- Verifying the SNA/X.25 Link/iX configuration by issuing the SNACONTROL STATUS command and ensuring that the PU activates when the SNA/X.25 Link/iX subsystem is started.

These steps complete HP's portion of the installation and minimum configuration of SNA/X.25 Link/iX.

Additional Implementation Assistance

For implementation needs that go beyond installation, the customer can either provide self–support or can purchase additional services from HP. These services include Network Startup and HP ConsultLine. In addition, the customer can also purchase service from HP on a time–and–materials basis.

Network Startup includes implementation scheduling and coordination assistance, network configuration and verification testing, and network documentation.

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Ordering Information

HP 30298A SNA/X.25 Link/iX License to use

Must order **one** User License Option. The User License Option must align with the MPE iX License. Upgrade credits may be used where applicable.

User License Options:

OAF   20-user license
UCY   40-user license
UA9   64-user license
UBD   100-user license
UCN   160-user license
UAT   Unlimited user license

Upgrade Credit Options:

UD8   Credit for 20-user license
UCZ   Credit for 40-user license
UB9   Credit for 64-user license
UD9   Credit for 100-user license
UDV   Credit for 160-user license
UBP   Credit for Unlimited user license
0CD   Credit for Processor Option 310
0GJ   Credit for Processor Option 315
0CE   Credit for Processor Option 320
0CF   Credit for Processor Option 330
0GL   Credit for Processor Option 335
0GM   Credit for Processor Option 340
UEK   Credit for Processor Option 350

In order to receive the upgrade credit, customers must select, on the same order, the upgrade credit option that pertains to their current processor/user license option in addition to the new user license option.

Support Products

HP offers a spectrum of support service products to help plan, implement, operate, and manage your multivendor network throughout the network lifecycle.

For more information, contact your HP Sales Representative, or refer to the HP data sheets in this Guide for the specific support services.

Documentation

30291–61000 SNA Link/iX Node Manager's Guide
5958–8542 HP SNA Products: Manager's Guide
5958–8543 HP SNA Products: ACF/VTAM and ACF/NCP Guide

Related Products

Reference data sheets in this Guide for the following related products:

- X.25/iX Network Link (P/N 2340A #310, 2345A #3XX, 2343D, 2346D/E, J2079A, J2070A #1CX, J2070A #1CW, 36939A)
- HP Model 45 Plus Multiprotocol X.25 Switch (P/N J2000B, J2001B)
- SNA DHCF/iX (P/N 36935A)
- SNA IMF/iX (P/N 30293A)
- SNA NRJE/iX (P/N 30292A)
- LU 6.2 API/iX (P/N 30294A)