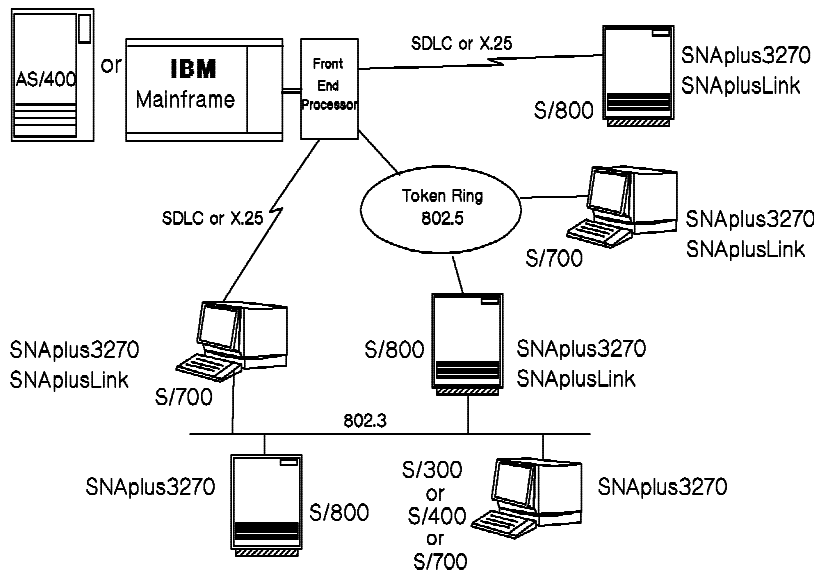# HP-UX SNAplus3270

Technical Data

For HP 9000 Series 300, 400, 700, and 800 Computer Systems Product Numbers J2233A, J2227A, J2221A

HP-UX SNAplus3270 allows interactive communications between an HP 9000 Series 300, 400, 700 or 800 and an IBM System/370-compatible mainframe or an IBM peer system such as the AS/400 using SNA 3270 protocols, handling 8-bit data streams. HP terminals, monitors, and printers on the HP 9000 running SNAplus3270 emulate the functions of IBM 3278

terminals and 3287 printers. SNAplus3270 provides additional functionality beyond emulation to include features such as file transfer, HLLAPI application programming interface, Motif graphical user interface and multiple session support.

The HP-UX SNAplus3270 is available in two configurations: stand-alone and client/server.

The stand-alone configuration provides access to IBM mainframes or peer systems for a single HP-UX computer which has its own HP-UX SNAplusLink. The client/server configuration permits access to the IBM system from multiple HP-UX computers on an Ethernet or Token Ring LAN. These computers generally use a single HP 9000 computer with SNAplusLink as a gateway to access the IBM system.

The SNAplusLink provides the major features of an IBM 3174 and 3274 cluster control unit and the lower four levels of SNA. Physical Unit Type 2 and PU 2.1 (PU2, PU2.1) are emulated, Logical Unit Types 0, 1, 2, 3 and 6.2 (LU0, LU1, LU2, LU3, and LU6.2) are supported. When used with HP-UX SNAplusLink, SNAplus3270 allows access to 3270 applications on the mainframe such as TSO, CMS, and CICS.

Features

- Allows HP 9000 Series 300, 400, 700 or 800 system monitors, terminals, and printers to emulate the major features of IBM 3278 terminals and 3287 printers. Terminal access can be through the standard HP-UX supported options (asynchronous or bit-mapped display) or through PCs running AdvanceLink's terminal emulator. Terminal access can also be through workstation's X-Windows environments by running a terminal emulator such as HPTerm.
- PC3270 file transfer enables interactive file transfers of 8-bit data streams on the HP 9000 to IBM systems running TSO, CICS, or CMS.
- Up to 10 sessions and hot key capability through windows environments enables the user to control multiple host sessions on the same monitor.
- Escape to UNIX® shell provides terminal users with the ability to access other HP-UX programs while maintaining the 3270 session in the background.
- Supports IBM's Response Time Monitor (RTM) which allows users to display statistics on how quickly the IBM host is responding to requests for data.
- Supports NetView 3270 User Alerts for communicating with the host operator.

- HLLAPI (High-Level Language Application Programming Interface) provides a programmable interface for automating data transfer operations and repetitive tasks, such as automating startup of host 3270 applications.
- Motif graphical user interface
- Motif interface provides seven colors: red, blue, green, yellow, pink, white and turquoise
- Highlight attributes: normal, intense, blinking, reverse video, and underlined
- Keyboard remapping with view, swap and disable key assignments.
- International language support variants of EBCDIC
- Background operation of the ASCII version of the 3270 emulation program enables host printing, HLLAPI applications and command-line file transfers.
- Type-ahead of keystrokes that will be required after the host has responded.
- Keystroke record and replay to start up host application, log on, or perform any standard initialization
- File pull-down menu to open, create, save style files, setup multiple style files, and control host sessions.

Functional Specifications

When used with HP-UX SNAplusLink, SNAplus3270 emulates a 3174 or 3274 cluster controller and 3278 Model 2, 3, 4, and 5 displays or 3278 Model printers. Some of the functionality of SNAplus3270 includes:

- All printers and terminals supported by the HP 9000 Series 300, 400, 700, and 800 running HP-UX are supported by SNAplus3270. (See Technical Reference Guide, HP Vectra PCs, Monitors, and Terminals for specific terminals.)
- Local screen print, screen logging to disk, 3287 printer output redirection to printer, file or user program.
- IND$FILE for file transfer to CICS, VM/CMS or MVS/TSO.
- HLLAPI allows C language application programs to be written to communicate with the IBM system.

Features Not Supported

For the 3278 Model 2, 3, 4, and 5 displays: test key, keyclick; extended attributes: programmed symbols, alt character sets, multiple partition, 16 bit addressing; encryption. For the 3287 Model 1 printer: PA1, PA2.

Product Requirements

Environment	SNAplus3270 Models 300, 400	SNAplus3270 Models 700,	SNAplus3270 Model 800
Models	3xx, 4xx	7xx	8x7, 890/1-2, 890/3-4
Operating System		HP-UX 9.0 or later	
STREAMS/UX	J2231A	J2232A	J2237A
SNAplusLink	Not available	J2226A	J2220A
LAN/9000		Bundled with HP 9000 systems	
Token Ring/9000	Not available	J2165A	J2166A
Disk Space	3 MBytes	6.9 MBytes	4.6 MBytes
Memory Space	1.6 MBytes	1.6 MBytes	1.6 MBytes
IBM Host	IBM System/370 or compatible mainframe (Series 30xx or 43xx) in an SNA environment, ACF/VTAM and ACF/NCP TSO, CMS, or CICS		
IBM Mini	AS/400		

Customer Installation Responsibility

Installation of these products requires knowledge in several overlapping areas. The staff engineer responsible for this task must have strong knowledge of (or have direct contact with staff with strong knowledge of): SNA networks, application environments, and HP-UX system administration.

Installation requires basic SNA knowledge. This includes knowledge of interface nodes, network routers, NAUs, PUs, LUs, link types, IBM hardware and software.

The installer must understand why the SNAplus products are being installed, how the users are going to use SNAplus and how SNAplus fits into the network solution.

Installation of SNAplus requires a thorough user-level knowledge of HP-UX commands. In addition, the installer must be familiar with:
– running update on an HP-UX system
– running SAM (in order to add users)
– the HP-UX file system, privilege groups, and real-time features
– running LAN and PSI diagnostics on an HP-UX system
– HP-UX kernel configuration

Customers who cannot compose a team with this skill set should purchase HP Installation and Network Startup services.

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.

Ordering Information

HP-UX SNAplus3270 includes right-to-use license and software. For Series 300, 400, and 700, customer must specify software version option and a media option, and for the Series 800, a processor option.

HP-UX SNAplus3270 requires HP STREAMS/UX for Series 300, 400, 700, and 800 running HP-UX 9.0.

J2233A HP-UX SNAplus3270 for Series 300/400

AA0	¼-inch Linus Cartridge
AAU	CD ROM
APB	Software version HP-UX 8.0
APH	Software version HP-UX 9.0
0B0	Delete Manuals
0BD	HP-UX SNAplus3270 HLLAPI Programmer's Guide, version HP-UX 8.0 (J2221-61001)
0BG	HP-UX SNAplus3270 HLLAPI Programmer's Guide, version HP-UX 9.0 (J2221-61014)

J2227A HP-UX SNAplus3270 for Series 700

AAH	Digital Audio Tape (DAT)
AAU	CD ROM
APF	Software version HP-UX 8.07
APH	Software version HP-UX 9.0
0B0	Delete Manuals

0BD	HP-UX SNAplus3270 HLLAPI Programmer's Guide, version HP-UX 8.0 (J2221-61001)
0BG	HP-UX SNAplus3270 HLLAPI Programmer's Guide, version HP-UX 9.0 (J2221-61014)

J2221A HP-UX SNAplus3270 for Series 800

Media options

AA0	¼-inch Linus Cartridge
AA1	1600 bpi Magnetic Tape
AAH	Digital Audio Tape (DAT)
AA4	QIC Cartridge Tape
AAU	CD ROM
0BD	HP-UX SNAplus3270 HLLAPI Programmer's Guide, version HP-UX 8.0 (J2221-61001)
0BG	HP-UX SNAplus3270 HLLAPI Programmer's Guide, version HP-UX 9.0 (J2221-61014)

Processor options

AH0	807/817
AEL	827/837
AE5	847/857
AE6	867/877
AEN	887/897
AEP	890/1-2
AH1	890/3-4

HP-UX SNAplus3270 requires previous installation of HP-UX SNAplusLink (J2220A or J2226A) on the stand-alone or server system.

The software which the customer orders contains both the stand-alone and client/server configuration software. During installation, the customer chooses which configuration is required.

Upgrade options are available for Series 800 SNAplus products. Please consult the HP 9000 price guide for details.

Note: A copy of HP-UX SNAplus3270 must be ordered for each HP-UX system which is to communicate with the IBM mainframe through the server.

Documentation for HP-UX 9.0

J2221-61012 HP-UX SNAPlus3270/3179G Administrator's Guide
J2221-61013 HP-UX SNAPlus3270 User's Guide
J2220-61021 HP-UX SNAPlus Installation Guide
J2220-61025 HP SNA Products Remote System Configuration Guide

Documentation for HP-UX 8.0

J2220-61001 HP-UX SNAplus Installation Guide
J2220-61002 Getting to Know SNAP-IX
J2220-61003 SNAP-IX User Interface Guide
J2220-61004 SNAP-IX Management Guide
J2220-61005 SNAP-IX Configuration Guide
J2220-61006 SNAP-IX Glossary
J2220-61007 SNAP-IX Diagnostics Guide

J2221-61000 SNAP-IX UNIX
3270 User's Guide
J2220-61025 HP SNA Products
Remote System Configuration
Guide

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 Representative, or
refer to the HP data sheets for
specific support services.

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