

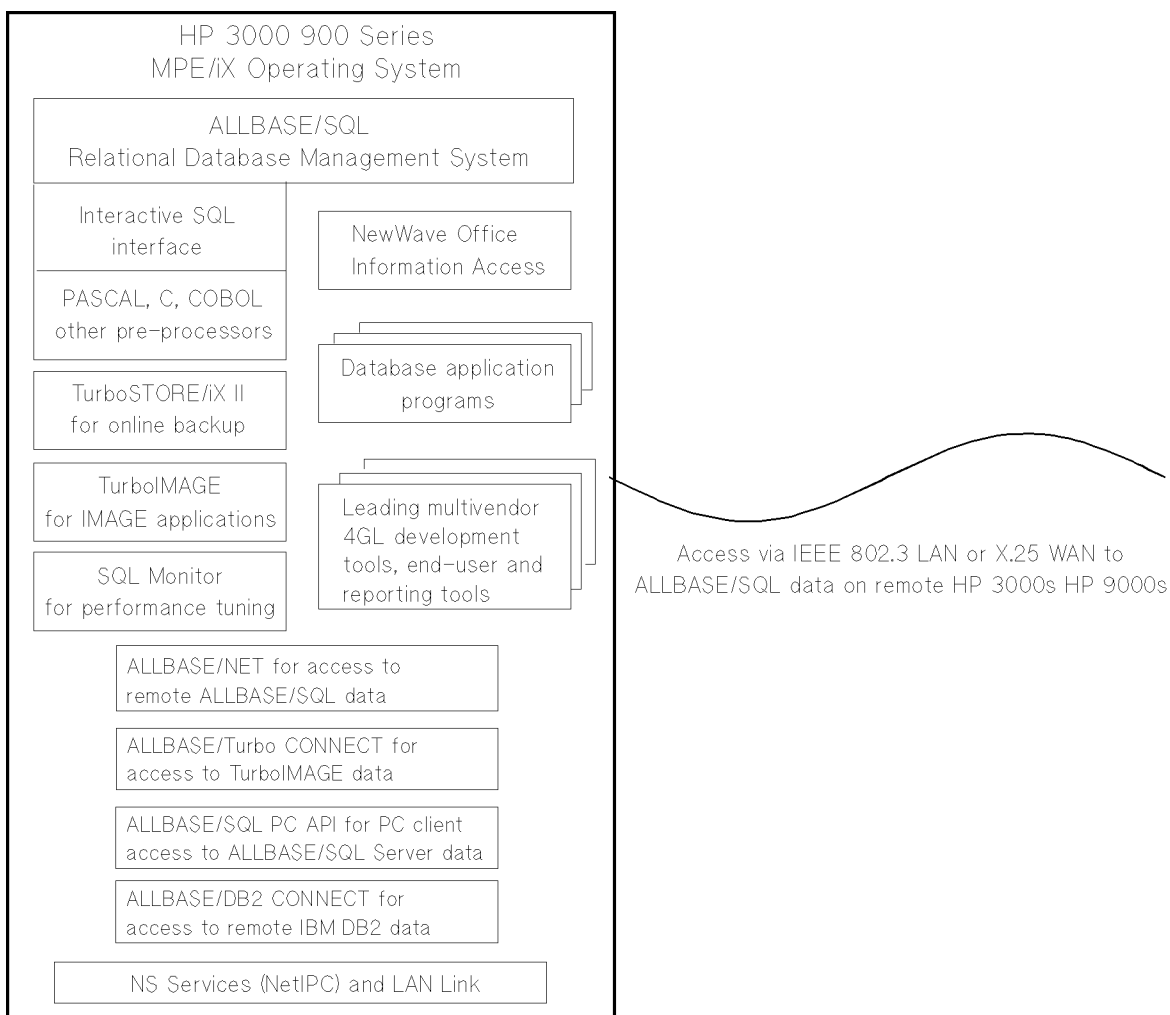
Miscellaneous Configuration Information

HP ALLBASE/SQL

ALLBASE/SQL Configuration Guidelines

ALLBASE/SQL is HP's relational database management system (RDBMS) on the HP 3000 900 Series family of systems. It offers OLTP customers the best performing RDBMS on PA-RISC for mission critical applications, interoperability with other vendors' database and tools offerings, and superior data integrity and supportability.

ALLBASE/SQL on the HP 3000 requires the MPE/iX operating system.




HP ALLBASE/SQL Database on HP 3000 900 Series Systems

Beyond MPE/iX, the software requirements for ALLBASE/SQL depend on the extensions used to interoperate with other software components in a heterogeneous environment. Table 1 outlines these requirements for the following products: ALLBASE/NET, ALLBASE/Turbo CONNECT, and ALLBASE/DB2 CONNECT.

Software Requirements for Extensions to ALLBASE/SQL

Product	Software Requirements on HP 3000	Other Software Requirements
ALLBASE/NET 30604A	ALLBASE/SQL NS Services	
ALLBASE/Turbo CONNECT	ALLBASE/SQL TurboIMAGE	
ALLBASE/DB2 CONNECT	ALLBASE/SQL LU 6.2 SNA Link (includes PSI card)	IBM software on IBM Mainframe: MVS, DB2, CICS, VTAM Gupta Technologies, Inc. software on IBM mainframe: SQL Host (Hardware: IBM 37x5/37x0 SNA communications hardware; modem)
ALLBASE/SQL PC API B2463A	ALLBASE/SQL A.E1.16 or later MPE/iX 3.0 or later ALLBASE/NET A.E1.16 or later	4GL Tools (Development: - Gupta SQL Windows or - PowerSoft PowerBuilder Networking: - TCP/IC ARPA/LAN Manager or - Novell Netware (NS)

Note  ALLBASE/SQL requires 3-4 Mbytes of RAM and 8 Mbytes of disk space. See the ALLBASE/SQL Database Administration Guide (36217-90005) for additional requirements based on the particular applications being run.

For guidance on selecting terminals, disks, magnetic tape units and printers, see Chapter 6 on Peripherals.

Site Preparation Data

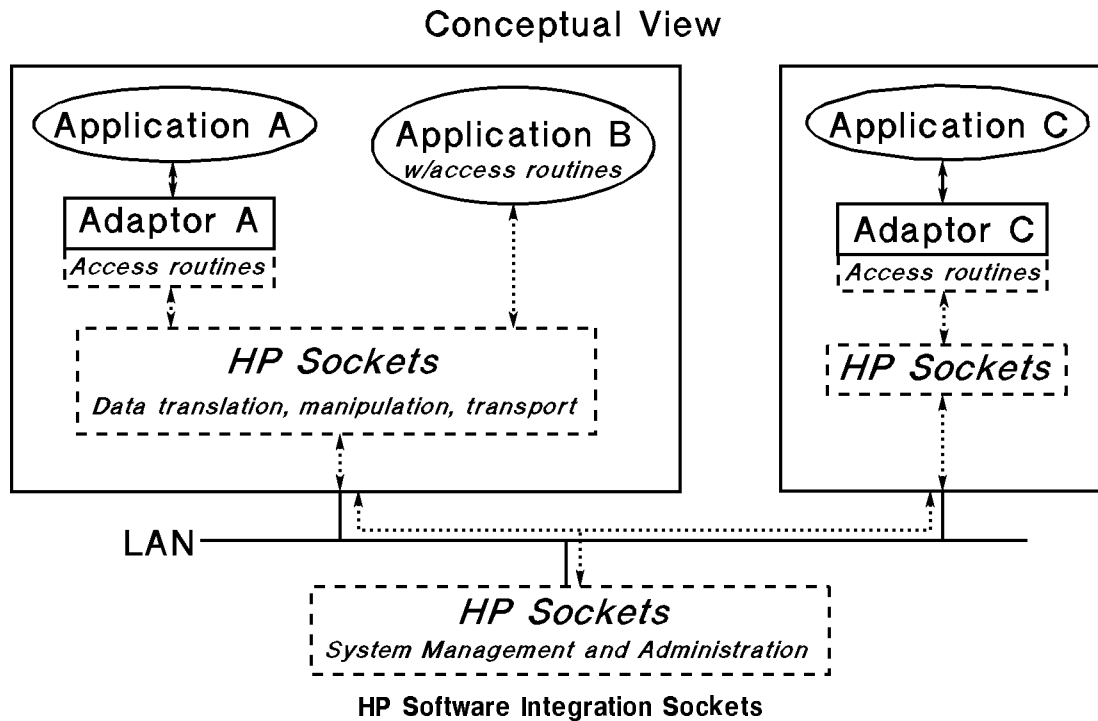
The site preparation information for the 900 Series family of business computers can be found in the following manuals:

	Manual	Part Number
Series 980/100, 980/200, 980/300, 980/400	Site Preparation and Requirements Guide for the HP 3000 Series 950 Family	30190-90007
Disk drives	Disk Product Specification and Site Environmental Requirements	5955-3456
Series 9x7	CE Installation and Configuration Guide	A1707-90008
Corporate Business Systems 990 and 992	Site Preparation and Requirements Guide for the Corporate Business Systems 990 and 992	A1809-90002

HP Software Integration Sockets/XL

HP Sockets is a software tool that enables the seamless integration of existing or new applications. This integration is accomplished with little-to-no modification of the applications. It resolves differences in applications at the data level by providing data manipulation, translation, and record reformatting. It also provides for location transparency of the applications. HP Sockets Access Routine Library helps resolve the problems of data access. Data access adaptors may be written in Cobol, C, Pascal, or Fortran.

HP Sockets is supported on MPE/iX and HP-UX. A gateway to IBM/MVS via TCP/IP is also available with the HP Sockets/UX product.



The conceptual view of HP Sockets showing its components is shown in the figure above.

Required products for HP Sockets/XL:

- HP 3000 900 Series running MPE/iX 2.2 or later
- Minimum 24 Mbytes main memory
- 92616A HP Software Integration Sockets (no options required)
- 36923A ThinLAN 3000/XL Link
- 36920A NS 3000/XL Network Services
- 31506A HP C Compiler (needed for compilation and adaptor development; minimum one per LAN environment)

■ 30026A LIB C (minimum one per LAN environment)

■ System Management and Administration Console -

The current version of HP Sockets/XL requires an HP 9000 on a LAN with the HP 3000 for system management and administration. Future releases of HP Sockets/XL will support this functionality on the HP 3000 900 Series. The System Management and Administration Console consists of:

- HP 9000 Series 300, 400, or 800 running HP-UX 7.0 or later**
- 8 Mbytes of main memory minimum
- 7 Mbytes of disk space for /usr directory minimum (if HP 9000 applications will also be integrated with HP 3000 applications, 7 Mbytes will also be needed for each /usr node).
- 92568A HP Software Integration Sockets/UX with Option UAU License to use on one HP 9000 *and* Option AA0 Cartridge tape media option *or* Option AA1 1600 bpi tape media option *or* Option AAH DAT/DDS cartridge media option
- 36967A LAN for Series 800 *or* 98171A LAN/9000 for Series 300/400 not already equipped with a LAN port

*** HP-UX 8.0 systems also require B2412A C Compiler for Series 800 or B2371A C Compiler for Series 300/400.*

Note that HP Sockets has no relation to UNIX network ARPA sockets.

SPU Switchover/XL

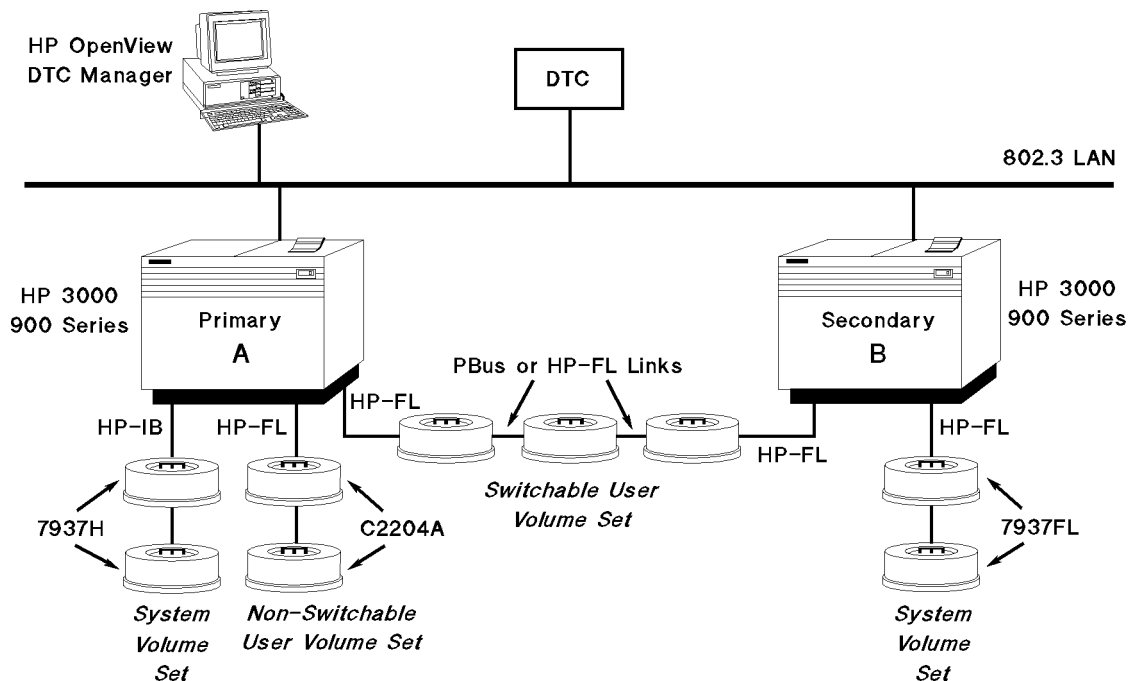
Product Overview

SPU Switchover/XL automatically detects system failures and allows the system operator to initiate switchover between a pair of processors. A key part of the switchover process is the full recovery of user data (including flat files, TurboIMAGE, ALLBASE/SQL and third party databases). In typical situations, this switchover can be accomplished in less than 30 minutes. In this manner, the product enables customers to avoid down time due to scheduled system maintenance or hardware failures.

Hardware Configuration

SPU Switchover/XL is configured to run on a pair of HP 3000 Series 9xx processors. Any combination of Series 9xx processors can be used. When configuring a switchover pair, special consideration must be given to balancing the processing load between the two systems. In a switchover configuration, applications can be running on both the primary and secondary systems. After switchover, applications on the primary are switched over onto the secondary. In this situation, the increased workload on the secondary system can result in degraded system performance.

Hardware configuration for SPU Switchover/XL is shown in the following figure. In the configuration shown one processor (shown here as system “A”) is designated as the primary and the other (system “B”) is designated as the secondary. Both machines must have system volume sets. In a switchover configuration, there must be at least one user volume set which is connected to both the primary and secondary systems. In addition, either system can have non-switchable user volume sets. Note that for the purpose of determining maximum disk configurations, drives in switchable user volume sets must be considered as belonging to both the primary and secondary systems.



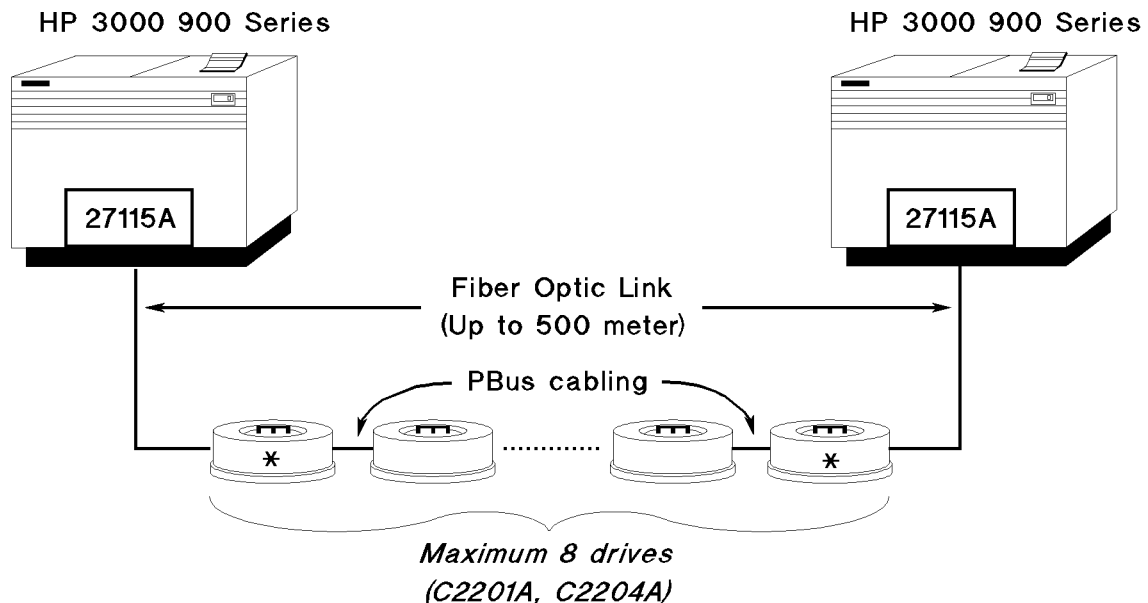
An additional restriction is that all the disk drives in the chain connected between the two systems must be configured as members of a switchable volume set. In the example shown, all three disk drives must be part of a switchable set. Because of this restriction, disk drives in switchable user volume set(s) must be connected to separate HP-FL adapter cards. Disk drives for switchable and non-switchable user volume sets cannot be connected to the same HP-FL adapter card.

The use of the HP Openview DTC Manager product (D2355A) is required in the hardware configuration. The Openview DTC Manager facilitates the re-establishment of terminal and serial printer connections from the primary to the secondary system after switchover.

In a switchover configuration, only the switchable user volume set(s) can be switched between systems. Disk drives in the switchable volume set(s) must contain all the critical user data and applications that are intended to be switched between the two systems. It is not possible to switch data contained in system volumes or non-switchable user volumes between the two systems.

System volume disk drives for each processor can be connected via either HP-IB or HP-FL. Similarly, non-switchable user volume sets (those that are local to a single system) can be connected via either HP-IB or HP-FL. As noted above, disk drives in switchable user volume sets must be connected via HP-FL.

All switchable volume sets must consist of at least one chain made up of 2-8 fiber optic based disk drives (either 7937FL, C2201A, or C2204A). Disk drives in a chain need not all be of the same type. Both ends of the chain for a switchable volume set must be connected via a fiber optic link to a HP-FL device adapter card in the primary and secondary systems. Disk drives that are not at the ends of a chain can be connected by P-bus or HP-FL links.



* Must be standard C2201A, C2204A

Note

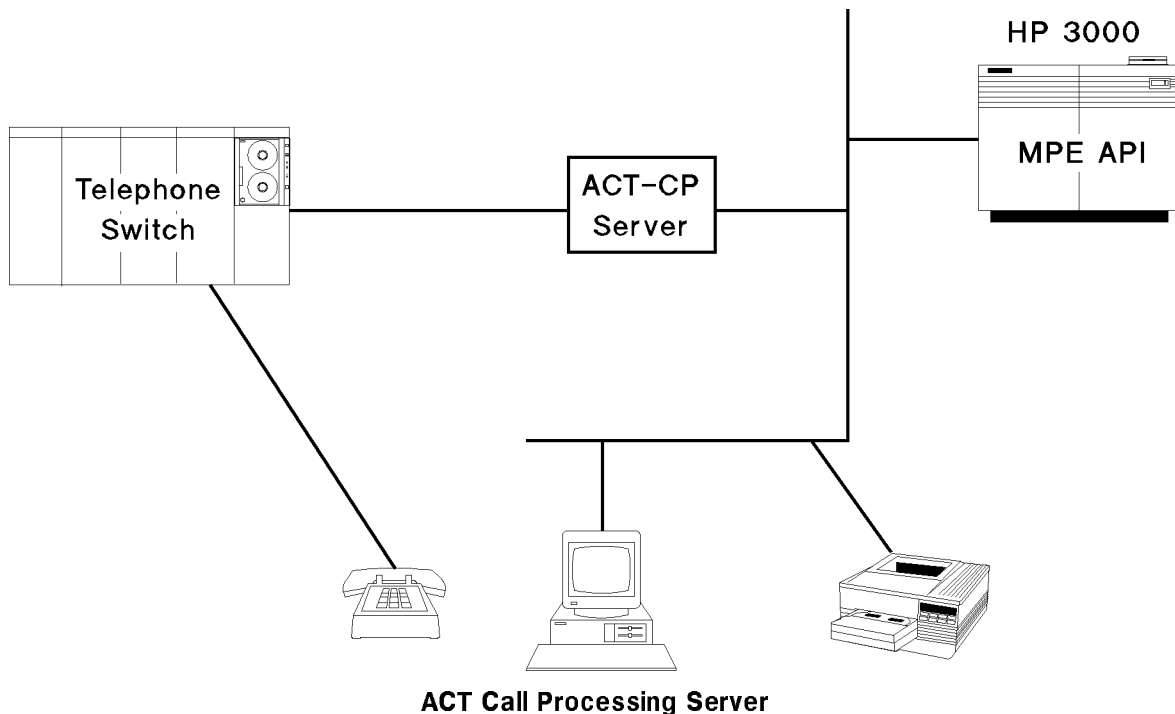
Care must be taken when ordering C220x drives for a switchover configuration. C220x drives can be ordered with option 1BG which deletes fiber optic circuitry. Drives ordered with this option cannot be field upgradeable to the fiber optic interface. At a minimum, the two C220x drives at the end of a chain must be installed with the fiber optic interface. Detailed information is provided in Chapter 5.

Software Configuration

Only one software license is needed for SPU Switchover/XL to run on a pair of HP 3000 900 Series systems. The SPU Switchover product requires MPE/iX 3.0 or a subsequent release. Note that both processors in a pair must have the same operating system software release revision. Additional information on software setup and configuration is provided in the SPU Switchover/XL User's Guide (36378-90001).

Applied Computerized Telephony (ACT)

Applied Computerized Telephony (ACT) interfaces with a telephone switch to integrate voice and data technologies. An application using the ACT APIs (Application Programming Interfaces) uses information passed from the telephone switch. An application can identify the caller (by their calling number) or the purpose of their call (from the telephone number that was called) and automatically deliver caller and data specific to the purpose of the call to a terminal or workstation.



ACT Products

ACT Call Processing (ACT-CP) requires two products, an ACT-CP Server and an ACT-CP API.

The ACT-CP Server is a preconfigured bundle (hardware and software) that is customer installable. There are two types of ACT-CP Servers:

- 32044A option 101 - Interfaces with a Northern Telecom PBX (except SL-100)
- 32045A option 101 - Interfaces with a Northern Telecom Central Office switch (DMS100) and SL-100 PBX

The ACT-CP Server communicates with the APIs over a ThinLAN connection, so you will need to insure that the HP 3000 has a LAN link connection. Because ACT utilizes standard TCP/IP sockets / NETIPC, upper level networking services are not required.

ACT Components

HP 32044A opt. 101	ACT Call Processing Server for Northern Telecom Meridian PBX Preconfigured server
HP 32045A opt. 101	ACT Call Processing Server for Northern Telecom DMS100 Central Office Preconfigured server
HP 32077A opt. 310 opt. 315 opt. 320 opt. 330 opt. 335 opt. 340 opt. 350	HP 3000 ACT Call Processing API for Tier 1 SPUs for Tier 2 SPUs for Tier 3 SPUs for Tier 4 SPUs for Tier 5 SPUs for Tier 6 SPUs for Tier 7 SPUs

ACT Support

Since ACT will always interoperate with telephone switch and a multi-vendor environment, support is extremely important. Support for ACT can be divided into two categories: required and highly recommended.

Required

Hardware Support:

- ACT Server hardware
- An active HP hardware support contract on the computer system for the APIs

Software Update Service:

- ACT Server software - H2089A + S00
- An active HP software update service on the computer system for the APIs

Service Level:

- ACT Server Response Line support
 - #101 Northern Telecom PBX (H2087A + H00)

or

 - ACT Basic Line
 - #101 Northern Telecom PBX (H2088A + L00)
- ACT API Response Line for HP 3000 APIs (H2087A + H00)
 - #200 Low-end MPE/iX
 - #201 Midrange MPE/iX
 - #202 High-end MPE/iX

Highly Recommended

Installation:

- ACT Server - 32044A + 17A
- HP 3000 API - 32077A + 17A

Multivendor Network Support (NetAssure):

- ACT Server - 32044A + 16B
- Northern Telecom PBX - 50052P

Consulting:

- ACT Assessment - HP ConsultLine H2355A Module N
- ACT Project Management - HP ConsultLine H2355A Module 9
- Application Assistance - HP ConsultLine H2405A Module N

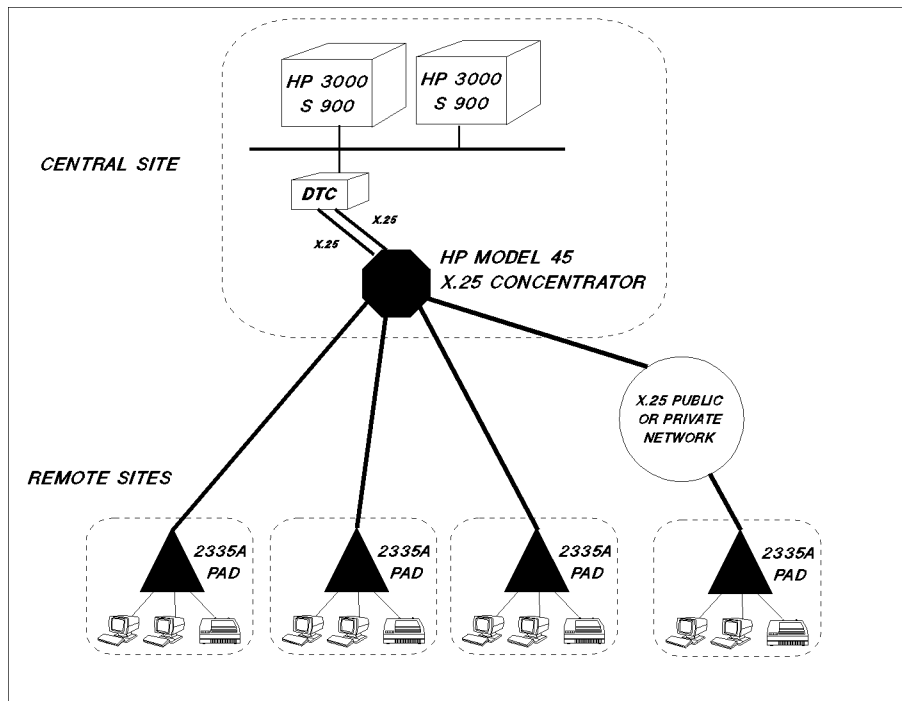
X.25 Access Communication

Introduction

The HP X.25 Access products family includes includes cost-effective, entry-level products such as the HP 2335A Asynchronous PAD and the HP Model 45 X.25 Multiprotocol concentrator which are used to concentrate remote/distributed site access to HP 3000 systems central site.

The X.25 Access products allow:

- Remote Terminal access to HP 3000 systems
- Concentration of multiple X.25 access lines in one location
- Integration of HP and IBM systems on one access point
- Turn-key solution to interconnect dispersed sites



Configuration Choices

The HP 2335A X.25 Multiplexer and the HP Model 45 X.25 Multiprotocol concentrator allow the following features :

- Remote Terminal access to HP 3000 systems
- Concentration of multiple X.25 access lines in one location
- Integration of HP and IBM systems on one access point
- Turn-key solution to interconnect dispersed sites

Both 2335A and Model 45 are performance products that can typically fully use the physical line bandwidth at speeds up to 64 Kilobits-per-second. The HP Model 45 is a high performance X.25 concentrator which is able to switch up to 1000 data packets per second.

X.25 Access Networking Products for HP 3000 Systems

Communication Product	For HP 3000 Model	Product Number	Capabilities
X.25 PAD and Stat Mux	All	2335A	Connection of terminals and printers to public and private X.25 networks
4 modem connect ports	All	Option 123	
Cable	All	40220A	Cable between HP 2335A and ATP/DTC printer ports
Cable	All	40221A	Cable between HP 2335A and ATP/DTC terminal ports
Model 45 Desktop (up to 8 ports)	All	J2000A	Concentrate multiple X.25 connections into a central HP 3000 system. It includes X.25, Asynchronous and SNA/SDLC. One extra J2000A can be added.
Model 45 Tower (up to 20 ports)	All	J2001A	Concentrate multiple X.25 connections into a central HP 3000 system. It includes X.25, Asynchronous and SNA/SDLC. Up to 4 extra J2001A can be added.
Model 45 additional 4 port card	All	J2004A	Additional 4 port card (includes X.25, Asynchronous and SNA/SDLC software)
Monitor/KB package (optional)	All	J2007A	Monitor/keyboard package for network management of Model 45
Model 45 cable	All	J2008A	Quadrivial cable - 4 DTC connectors
Model 45 cable	All	J2009A	Quadrivial cable - 2 DTE + 2 DCE connectors
Model 45 cable	All	J2010A	Quadrivial cable - 4 DCE connectors
Model 45 cable	All	J2011A	Quadrivial cable - 3 DTE + 1 DCE connectors
Model 45 cable	All	J2012A	Quadrivial cable - 1 DTE + 3 DCE connectors

For further technical information, please refer to the HP Networking communications Specification Guide (Product-Number 2335A/J2000A/J2001A).

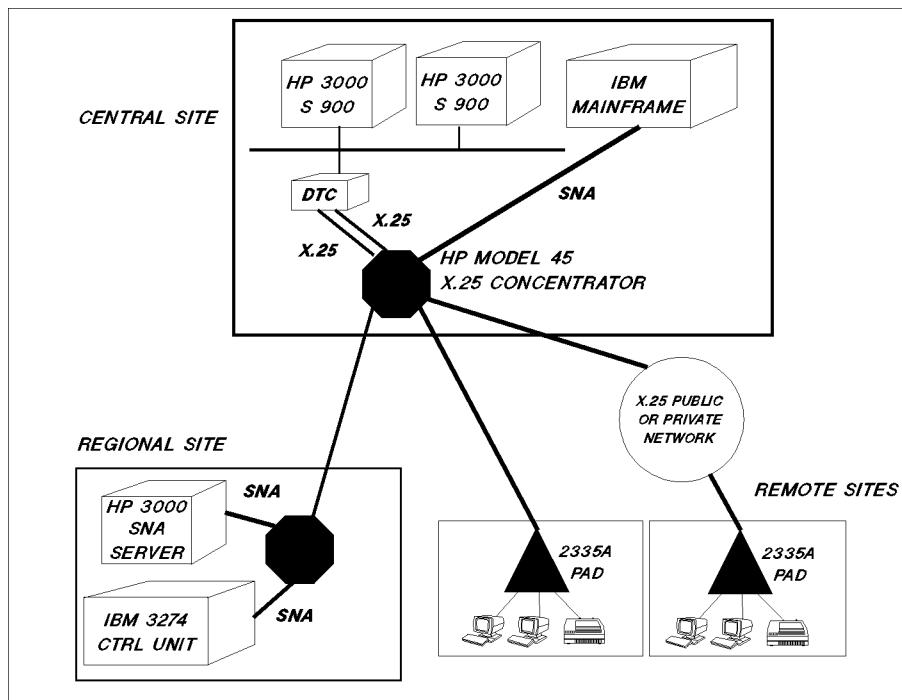
IBM Access communication

Introduction

Many HP customers are also IBM customers. This is the reason why HP offers IBM communication facilities on HP systems to connect them to IBM mainframes (HP LU 6.2 API, HP SNA/XL, IMF, . . .) over point-to-point dedicated leased lines using the IBM SNA/SDLC or IBM Bisynch communication protocols.

Among these customers, many of them want to be able to interconnect different sites - with multiple devices (HP systems, IBM mainframes, IBM controllers, DEC systems or other systems/mainframes) at each site - over one single communication infrastructure that will reduce the number of dedicated leased line costs and increase the control of the communication infrastructure by reducing the amount of communication equipment.

The HP Model 45 as a Multiprotocol PAD is, in this case, the perfect low-cost solution to concentrate and transport the data coming from multiple IBM and HP systems into one or multiple locations.



For further technical information, please refer to the HP Networking Communications Specification Guide (Product-Number J2000A/J2001A).

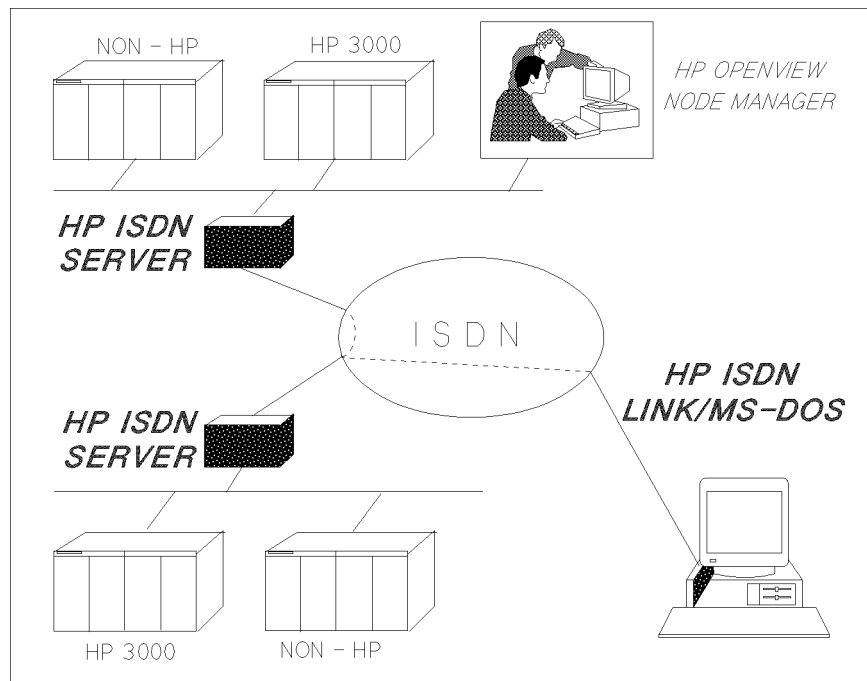
ISDN Communication

Introduction

The new HP ISDN product family is another living example of Hewlett-Packard's commitment to open, standard-based, wide-area communication. It includes the HP ISDN Server and HP ISDN Link/MS-DOS products. It allows HP 3000s and non-HP systems located in widely dispersed locations to transfer data over ISDN as if they were on the same LAN.

The HP ISDN Server (J2101A) allows for cost-effective interconnection of remote LAN's over an ISDN network, in a transparent way, for any application running on top of the standard TCP-IP protocol. The HP ISDN Server can host up to three Basic Rate Interface cards for a maximum total throughput of 384 kbps.

The HP ISDN Link/MS-DOS (J2102A) allows for integration of remote, stand-alone PC's to a central LAN and for access to HP3000 systems or non-HP computers connected to this LAN through an HP ISDN server.



The telephone-like tariff structure of ISDN services makes the HP ISDN products very attractive for TCP-IP based applications that require LAN-to-LAN or PC-to-LAN large file transfers. Such applications include: image management, batch file transfers, ARPA FTP services,....

Typical customer environment includes at least 2 or 3 of the following characteristics:

- Multiple, geographically dispersed sites with LAN-to-LAN connectivity needs
- Standalone, remote PC's needing access to central hosts or servers for file/database transfers
- On-demand, high transmission bandwidth requirements for infrequent file transfers

■ TCP-IP, multivendor based computing environments

For further technical information for ISDN products, please refer to the HP Networking Communications Specification Guide (Product-Number J2101A/J21021A/J2103A).