HP FTAM 3000/XL

Technical Data

Product Numbers
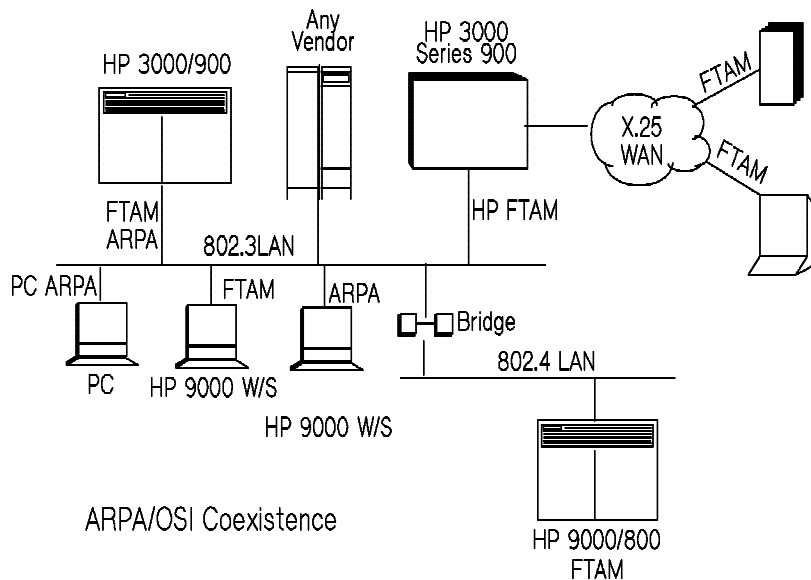**36972A HP FTAM**
36971A HP OTS

HP FTAM 3000/XL is a software product that implements the International Standards Organization (ISO) File Transfer, Access, and Management Standard (ISO 8571). It provides true multivendor file system interoperability for HP 3000 Series 900 computers, permitting transfer or management of any defined data type between HP 3000 Series 900 systems and diverse OSI end systems, regardless of their hardware platform or operating system.

Examples of applications that can benefit from FTAM include: distributed database manage-ment, shared data/centralized file storage, document retrieval and update (libraries, auto registration, etc). FTAM is particularly useful for applications such as large accounting, payroll, or inventory control systems that must transfer large amounts of structured data between heterogeneous end systems over local or wide area networks.

HP FTAM 3000/XL meets basic distributed file system requirements defined in industry and regional OSI profiles, including the U.S. Government OSI Profile (GOSIP) specification. FTAM can coexist on existing TCP/IP networks and provide file system connectivity to a much wider range of systems, including PCs and proprietary systems, than can be connected with current file transfer protocols.

ARPA/OSI Coexistence

Features and Benefits

- Standards compliant FTAM implementation on HP 3000 Series 900 systems for international, multivendor file transfer capability.
  - Reduces costs and personnel requirements by eliminating network gateways and file conversion software required to interconnect today's non-standard file systems.
  - Adds flexibility and functionality to current file transfer protocols.
  - Provides a wide range of price/performance computing options.
- Interactive User Interface (modeled after the ARPA FTP interface).
  - Reduces learning time.
- NS/ARPA/OSI Coexistence and Transition.
  - Protects customer's network and software investments.
  - Users can add initial OSI products to existing networks and "gracefully" evolve to full OSI.
  - Best network foundation for growth to distributed computing.
- Support for U.S. and International Networking Standards (802.3 LAN, X.25 WAN)
  - Increases international competitiveness.
  - Worldwide network interoperability for multinational corporations.
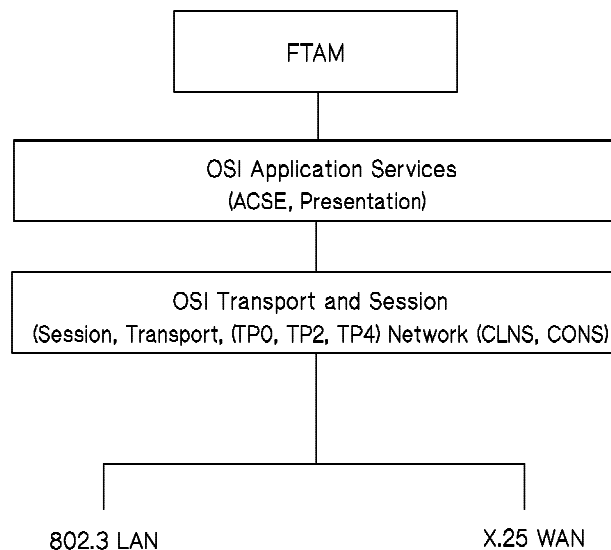
Functional Description

HP FTAM 3000/XL provides file service between HP 3000 Series 900 systems and heterogeneous systems on an OSI network. It expands and improves on the capabilities of existing file transfer protocols like ARPA File Transfer Protocol (FTP) and the NS NFT (Network File Transfer) service. FTAM file services include:

- Text and Binary file transfer
- File Management
  - Create/delete file
  - Read/change file attributes

FTAM uses the concept of a virtual filestore to allow transfer of files between very different systems. Real file systems on local hosts are mapped to the FTAM Virtual File Store (VFS) and multivendor file transfer occurs between the common VFS

on OSI end systems. FTAM is a two-party file transfer protocol. There is a controller of file activity (Initiator) that directs the action and a Responder that responds to the Initiator. FTAM uses OSI Application Services (Layer 7), specifically the Association Control Service Element (ACSE), to establish and break associations (virtual connections) between Initiator and Responder. OSI Presentation Services (Layer 6) are used to map real system data syntax (ASCII, EBCDIC, etc) to and from the Abstract Syntax Notation (ASN.1) used by OSI.

HP FTAM 3000/XL operates over HP OSI Transport and Session (OTS) on top of either local (802.3) or wide (X.25) area network links. OTS allows the user to configure for operation over OSI Transport Classes TP0, TP2, or TP4. Classes TP0

```
                    +------------------+
                    |       FTAM       |
                    +------------------+
                             |
    +--------------------------------------------------+
    |            OSI Application Services              |
    |             (ACSE, Presentation)                 |
    +--------------------------------------------------+
                             |
    +--------------------------------------------------+
    |            OSI Transport and Session             |
    | (Session, Transport, (TP0, TP2, TP4) Network (CLNS, CONS) |
    +--------------------------------------------------+
            |                               |
        802.3 LAN                       X.25 WAN
```

and TP2 provide the lowest level of functionality (no error control) for OSI connections over reliable, connection-oriented environments (public/private X.25 networks, Teletex networks, etc). Class TP4 provides fully reliable transport service for unreliable, connectionless network environments (GOSIP LAN or GOSIP WAN).

The interactive user interface commands resemble those of the ARPA File Transfer Protocol (FTP) service providing commands including OPEN CONNECTION, PUT, GET, and DELETE. A complete list of interactive commands, including descriptions and usage examples, is provided in the FTAM/XL User's Guide supplied with the HP FTAM 3000/XL product.

HP FTAM 3000/XL is compliant with U.S. GOSIP Version 1 (FIPS 146), European (CEN/CENELEC), and Pacific regional (INTAP,POSI) OSI profile requirements for a limited-purpose FTAM. It provides the following functions:

Implementation Profiles:
- T1 (Simple File Transfer)
- T2 (Positional File Transfer)
- M1 (Management File Store)

Document Types:
- FTAM-1 (Unstructured Text)
- FTAM-2 (Sequential Text)
- FTAM-3 (Unstructured Binary)

File Management:
- Delete file
- Read attributes of file
- Rename file

HP FTAM 3000/XL is designed to coexist on existing networks with TCP/IP and ARPA or NS services.

HP 3000 Series 900 systems can be configured to support OSI, ARPA, and NS services. In this configuration, TCP/IP and OSI protocol stacks share existing 802.3 or X.25 network connections, allowing users to take advantage of new OSI U.S. GOSIP Version 1.0 (FIPS 146), Stable Implementors Agreements Version 3, Edition 1 (NIST Phase 2) capabilities while continuing to use existing NS/ARPA network services. The HP 3000 Series 900 system, configured with both protocol stacks, can act as an FTAM server allowing non-OSI hosts to log on using NS/ARPA services and initiate FTAM connections to any other local or remote OSI host.

Standards Conformance

Customer Site Requirements

An 802.3 LAN or X.25 WAN is required at the customer site to make effective use of HP FTAM 3000/XL distributed file systems capabilities.

Configuration Information

Product Requirements

The HP OTS 3000/XL product and either the ThinLAN 3000/XL Link or DTC X.25 XL Network Link and X.25 XL System Access products are required for network operation of FTAM.

The HP FTAM 3000/XL product includes the software and manuals. The HP FTAM 3000/XL manual set includes the FTAM User's Guide, OSI/XL Configuration and Startup Guide, and OSI/XL Operations and Maintenance Guide.

ISO:	-8571	FTAM Protocols
	-8824/8825	Abstract Syntax Notation-1(ASN-1)
	-8649/8650	Association Control Service Element (ACSE)
	-8822/8823	Presentation Protocols
	-8326/8327	Session Protocols

Profiles:	FTAM	NIST
Simple File Transfer		T1
Positional File Transfer		T2
Filestore Management		M1

OSI Stack

TP4/CLNS/802.3
TP0, 2, 4/CONS/X.25

Processor Requirements

- HP 3000 Series 900 system with the ThinLAN 3000/XL Link or DTC X.25 link or both
- HP 3000 Series 900 Operating System Version 3.0 or later

Ordering Information

FTAM 36972A HP FTAM 3000/XL right-to-Use

Processor Options:

310	For Tier 1 SPU, one RTU sublicense
315	For Tier 2 SPU, one RTU sublicense
320	For Tier 3 SPU, one RTU sublicense
330	For Tier 4 SPU, one RTU sublicense
335	For Tier 5 SPU, one RTU sublicense
340	For Tier 6 SPU, one RTU sublicense
350	For Tier 7 SPU, one RTU sublicense

OTS 36971A HP OTS 3000/XL RIght-to-Use

Processor Options:

310	For Series 920, 922LX
315	For Series 922RX
320	For Series 922, 932, 925, 925LX
330	For Series 935, 948
335	For Series 949
340	For Series 950, 955, 958, 960
350	For Series 980

Note: A processor option must be ordered for both FTAM and OTS.

Processor Upgrades

Upgrade credit is given to customers upgrading within the HP 3000 Series 900 family. To order an upgrade, order the FTAM and OTS product with the new processor option, and one of the following upgrade credit options:

0CD	For Processor Option 310
0GJ	For Processor Option 315
0CE	For Processor Option 320
0CF	For Processor Option 330
0GL	For Processor Option 335
0GM	For Processor Option 340

Documentation

36972-61001 HP FTAM 3000/XL User's Guide
36971-61001 Installing, Configuring, and Starting OSI/XL Network Manager's Guide
36971-61002 OSI/XL Operations and Maintenance Guide

Installation and Support

Customers purchasing HP FTAM 3000/XL must assume the responsibilities listed below. HP can provide expert assistance in all of them, but support of these activities is not included in the HP 36972A and HP 36971A products.

1. Installation of appropriate LAN or X.25 networks (cables, repeaters, connectors, etc). The establishment of link-level communications between the HP 3000 and other systems on the network is the customer's responsibility.

2. Designation of one person in the customer's organization as Network Manager. This person will assume responsibility for configuration and updates of the customer's systems, and will serve as focal point for Hewlett-Packard's support of the network.

3. Installation of HP FTAM 3000/XL.

   Hewlett-Packard strongly recommends that the customer purchase support services for HP FTAM 3000/XL and related hardware and software products.

   Support of FTAM also depends on the troubleshooting facilities provided in underlying stack and link components. The combined FTAM/OTS/Link product set provides a complete toolset for effective management of HP FTAM 3000/XL nodes within an OSI multivendor network. The HP FTAM/OTS product set includes a complete set of utilities for diagnostic capabilities for communications problem resolution.