Developing IP Networks in an ATM Environment

Technical Data

HP Education Services: Your Key to Higher Productivity

Class Overview

Campus and corporate intranets are becoming immensely popular for a number of reasons. The need for increased performance on these intranets and the addition of other services is pushing many network designers and developers toward ATM technology. The effective combination of IP and ATM, however, is a significant challenge and requires a thorough understanding of both technologies and how they can work together.

Course Features

What You Will Learn:

- helps you understand how to maximize the benefits of both ATM and IP
- presents the basics of implementing IP over NBMA based on IETF work in progress
- illustrates typical implementation strategies through case studies and demonstrations
- examines in-depth Internet Engineering Task Force (IETF) standards, request for comment (RFCs), and Internet drafts (IDs) pertinent to implementing IP over NBMA

Specifications

Course Length
2 days

Audience
Network designers and managers involved in developing IP networks in an ATM environment will benefit from attending.

Prerequisites
Fundamentals of ATM (H7211B opt. 100) or an understanding of Frame Relay technology.

Delivery Method
Dedicated

Format
Course content is 80% lecture and 20% hands-on labs to familiarize the students with LAN's on ATM and their applications.

Ordering Information

To order Developing IP Networks in an ATM Environment (H7211B opt. 202) course in the U.S. call 1-800-HPCLASS (800-472-5277).

HP's Customer Registration Center can provide you with price, scheduling and enrollment information about dedicated delivery or customizing a course for your specific needs.

Classroom Training Benefits

Experienced HP Instructors
Learn from an experienced HP instructor who is a specialist in using and applying test instrumentation to optimize and troubleshoot ATM and LAN networks.

Available at HP Classroom or Your Site
Classes can be arranged at one of HP's many learning facilities located across the country. Or , save travel expenses and time by organizing a dedicated class at your location.

Extensive Hands-on Practice
HP classroom training is characterized by extensive hands-on experience and interactive class discussion. HP classroom training pays off immediately because it is geared to real-world solutions.

Comprehensive Student Materials
Copies of course materials are provided for future reference on the job.

Course Number: H7211B opt. 202 (Dedicated)

Developing IP Networks in an ATM Evironment (H7211B opt. 202)

Course Agenda

Background
What is IP?
- Its inception
- Current deployment
- Protocol specifics

What is the IETF?
- Its inception
- The standards process

ATM LAN
- What is an ATM LAN?
- Logical IP subnets

Multi-protocol over ATM (RFC 1483)
- Purpose of RFC 1483
- IEEE 802.2 LLC/SNAP
- LLC/SNAP code points
- Bridged LAN

Classical IP over ATM (RFC 1577)
- Purpose of RFC 1577
- AAL5 service specific convergence sub-layer (SSCS)
- LLC/SNAP versus virtual circuit multiplexing

ATMARP
- ATMARP client
- ATMARP servers
- Protocol specifics

Next Hop Routing Protocol (NHRP)
- Purpose of NHRP
- NHRP clients
- NHRP servers
- Protocol specifics
  - client
  - server
  - message set
- Future enhancements

Multicast Address Resolution Service (MARS)
- Purpose of MARS
- MARS clients
- MARS servers
- Protocol specifics
  - client
  - server
  - message set
- MultiCast Server (MCS)
- Future enhancements

Server Cache Synchronization Protocol (SCSP)
- Purpose of SCSP
- Implementations
- Protocol specifics
- IP testing and TCP/IP performance analysis
- Installation and maintenance
- Interoperability
- Sources of performance impediments
  - connection setup
  - encapsulation
  - ATM impairments
- Characterization of performance
- Parameter tuning

The Future
- Tag switching
- IPv6
- IP over SONET

Region Sales Headquarters:

United States:
Hewlett-Packard Company
Test and Measurement Organization
5301 Stevens Creek Blvd.
Bldg. 51L-SC
Santa Clara, CA 95052-8059
(408) 246-4300

Canada:
Hewlett-Packard Ltd.
5150 Spectrum Way
Mississauga, Ontario L4W 5G1
(905) 206-4725

European Headquarters:
Hewlett-Packard S.A.
150, Route du Nant d'Avril
1217 Meyrin 2 - Geneva, Switzerland
(41) 22/780 8111

Japan:
Hewlett-Packard Japan Ltd.
NAF Bldg.
3-8-20 Takaido-higasi
Suginami-ku
Tokyo 168
(03) 3335-8111

Latin America:
Latin America Region Headquarters
Monte Pelvoux No. 111
Lomas de Chapultepec
11000 Mexico, D.F. Mexico
(525) 202 0155

Australia/New Zealand:
Hewlett-Packard Australia Ltd.
31-41 Joseph Street, Blackburn
Victoria 3130, Melbourne, Australia
(03) 895-2895

Far East:
Hewlett-Packard Asia Ltd.
17-21/F Shell Tower, Times Square
1 Matheson Street, Causeway Bay
Hong Kong
(852) 2506-9285

Technical information in this document is subject to change without notice.

Copyright Hewlett-Packard Company 1997. All Rights Reserved. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under copyright laws.

Printed in USA 5/97

Publication Number 5965-6700E

Course Number: H7211B opt. 202 (Dedicated)