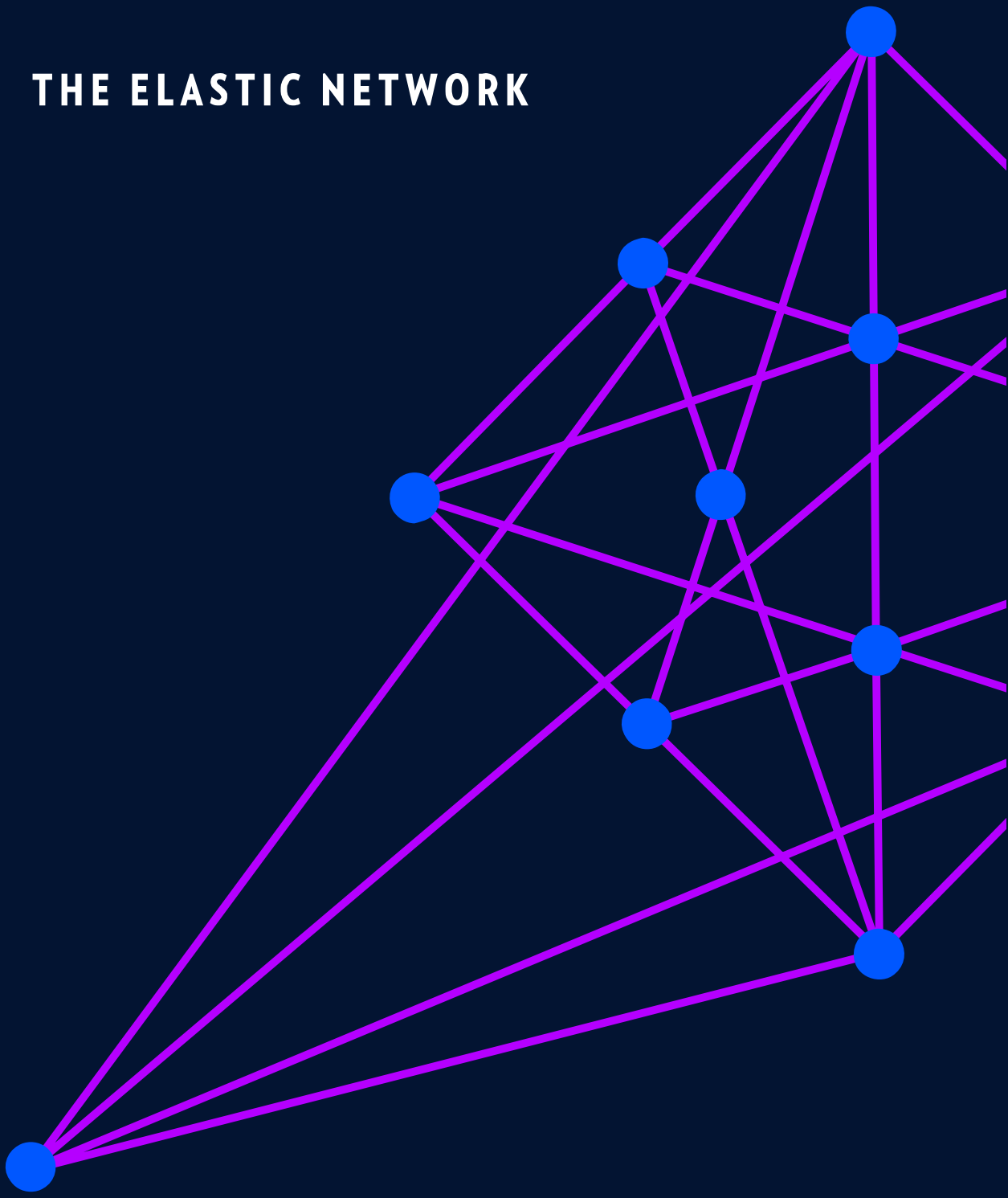
ECI THE ELASTIC NETWORK



ECI TRAINING SERVICES

Course Catalog

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About us

In today's competitive market, businesses and individuals must acquire knowledge of leading-edge tools to stay ahead. By learning the latest technologies, all companies and their personnel gain the expertise needed to attain this goal.

ECI Training Services (ETS) is responsible for training company personnel as well as a broad spectrum of ECI customers.

We offer excellent training for people like you on the complete range of ECI hardware products and dedicated software.

We offer tailor-made training courses and workshops, which provide in-depth instruction in the operation, maintenance, and troubleshooting of our network systems and components.

The courses and workshops are held either at our training centers, or at the customer premises, depending on the requirements of each session.

Our resources also extend to online training sessions, as well as self-learning movies on our Intranet site regarding global subjects such as the technologies themselves.

Our instructors are all certified with many years of industry and teaching experience. Recognized as industry experts, they lecture worldwide and are able to deliver courses in many languages such as English, Spanish, French, Russian, German and Chinese, as well as a bevy of other languages.

Training Course Types

ECI Training Services offers the customer two training course types.

Frontal Courses

A frontal course is the traditional way to train. This type of training is offered in any ECI training center in the world or at the customer premises.
At the ECI training centers worldwide, we offer the customer rich high tech learning environments including labs containing physical equipment and multiple management stations for intensive hands-on practice. At the customer site, training can be done using a local lab or if one is not available, one can be provided using a high-speed internet connection to a remote connection to the HQ labs.

These types of courses are limited to up to eight participants and can be catalog courses or "tailored" courses. Catalog courses are courses chosen from this catalog while tailored courses are courses that are built specifically to address the customer's needs.

Remote Courses

A remote course is a course done using an internet video/audio connection, where you have the trainer on one side and on the other, up to 20 participants sitting near their own PCs.

In this type of training, presentations can be given as well as demonstrations on the management system. Communication is done using audio and video means and the participants are able to ask questions using microphones.

This type of course is recommended for short updates that take up to 6 hours, split into two 3 hour sessions. It requires a fast internet connection, headphones and a microphone. Such sessions are always "tailored" to meet specific needs.

Prerequisites When Performing Courses at the Customer's Site

For Theoretical Sessions or the Theoretical Parts of Management Sessions:

- Projectors supporting resolution of at least 768X1024 pixels
- Whiteboard or flipchart, with markers

For Management Sessions:

Apollo

Using a local lab for network management courses:

- An NMS server with appropriate STMS
- 4 PCs connected to the management station to be used as clients
- At least 2 to 3 elements connected to the management station.
- No live traffic

Using a remote lab for network management courses:

- 4 PCs connected to an unfirewalled high speed internet connection, to be used as clients.

For installation courses at the customer's site:

- At least 2 elements not carrying live traffic.

Neptune

Using a local lab for network management courses:

- An NMS server with appropriate EMS-APT
- 4 PCs connected to the management station to be used as clients
- At least 2 to 3 elements connected to the management station.
- No live traffic

Using a remote lab for network management courses:

- 4 PCs connected to an unfirewalled high speed internet connection, to be used as clients.

For installation courses at the customer's site:

- At least 2 elements not carrying live traffic.

LightInsight Courses

Using a local lab for network management courses:

- An NMS server with appropriate EMS`s
- 4 PCs connected to the management station to be used as clients
- At least 2 to 3 elements connected to the management station.

Using a remote lab for network management courses:

- 4 PCs connected to an unfirewalled high speed internet connection, to be used as clients.

Remote Lab Service

For our customers, we offer a fully equipped remote lab that can be used for practicing network management.

The lab is physically located at ECI`s central office but can be remotely accessed from anywhere in the world.

The lab can be used in order to let new network operators experience the system, tryout complex operations or to let more seasoned operators try out a new version or a new card.

This service can also be extremely useful when wanting to practice in a lab environment and not on the live network where traffic could be affected.

Recommended Course Path for New Customers:

Apollo

	OTN Transport (no- fabric)	OTN Transport (with- fabric)
Technology	WDM_OTN	WDM_OTN
Introduction & Initial Configuration	APOL01	APOL01
Operation & Management	APOL02	APOL02 APOL03
Optical Switching (ASON/ WSON)	APOL05	APOL04 APOL05
Advanced Workshop	APOL_AD_01 APOL_AD_02 APOL_AD_03 APOL_AD_04 NMS_AD_01	APOL_AD_01 APOL_AD_02 APOL_AD_03 APOL_AD_04 NMS_AD_01

Neptune

	SDH/ Ethernet (L2) **without** MPLS	SDH/ Ethernet (L2) **with** MPLS-TP	Ethernet **with** IP/MPLS
Technology	SDH01/ DATA01	SDH01/ DATA01	DATA01
Introduction & Initial Configuration	NPT01	NPT01	NPT_IP_01
Traffic Provisioning	NPT02	NPT03	NPT_IP_02
Additional Services (CES/ IPTV)	NPT04/ NPT05	NPT04/ NPT05	NPT04/ NPT05
Advanced Workshop	NPT_AD_01 NPT_AD_02 NPT_AD_03 NPT_AD_04 NPT_AD_05 NMS_AD_01	NPT_AD_01 NPT_AD_02 NPT_AD_03 NPT_AD_04 NPT_AD_05 NMS_AD_01	NPT_IP_03 NPT_IP_04 NPT_AD_01 NPT_AD_02 NPT_AD_03

Technologies: Course List

Course Name: Introduction to WDM and OTN technologies

Duration: 3 days Course code: WDM_OTN

Course Content:

- WDM: Frequency, wavelength, diffraction. matter properties: absorption, emission, scattering, reflection, refraction
- Electromagnetic spectrum: bands (visible, x-ray, infra-red, etc.) and uses
- Laser concepts: types, characteristics, implementation
  Optical fiber concepts.
  Optical communication via optical fibers.
  Measurements, photodiodes, capacities (rates, limits), signal characteristics (intensity (amplitude), phase, polarization), noise, OSNR, attenuation, dispersion, nonlinear phenomena, optical modulation
- Fix & Flex Grid, High baud rate
- OTN: Technology(standards), architecture, hierarchy, (OPU, ODU, OTU) packet structure and overhead, types of FECs, OTN capacities (ODU0, ODU1, ODU2/2e/2f, ODU3/3e, ODU-flex, ODU4,

  ODUC2, etc...)

Goals:

Upon completion of this course, participants will be able to:

- Understand the theory of WDM technology and components
- Understand the theory of OTN technology

Target Audience:

- For a basic understanding of optical communication without any prior background in the field
- Experienced field engineers who wish to refresh or clarify the basic concepts of optical communication

Prerequisites:

- Basic knowledge of telecommunications

Notes:

- Material in this course is a prerequisite for all Apollo courses
- This course does not include how to manage OTN and DWDM through NMS or EMS

Course Name: Ethernet/IP/MPLS

Duration: 3 days Course code: DATA01

Course Content:

This course covers IP protocols and technologies:

- OSI model (7 layers model)
- Binary and hexadecimal number systems
- Ethernet (standard, frame structure)
- Switching (principles of Ethernet switching)
- Virtual LAN
- ICMP (protocols, applications)
- ARP
- Sub-netting (principles and calculations)
- Spanning Tree Protocol
- IP (protocols, IP header)
- Routing (principles of IP routing)
- TCP/UDP
- Network Address Translation
- Ethernet CFM
- MPLS overview
- Distance vector/ Link state protocol
- Routing information base (RIB) and Forward information base (FIB) knowledge

Goals:

Upon completion of the course, participants will be able to:

- Understand how a data network is built
- Understand how IP, Ethernet and MPLS protocols work

Target Audience:

For basic technological background to start the Neptune training program

Prerequisites:

- Technical background

Notes:

- Material in this course is a prerequisite for all Neptune courses (except for pure SDH implementation)

Course Name: SDH

Duration: 3 days Course code: SDH01

Course Content:

This course covers SDH technology:

- SDH signaling
- DCC
- Cross connect concept
- Multiplexing hierarchy
- Important OH bytes
- EoS principals

Goals:

Upon completion of the course, the participants will be able to:

- Understand how SDH network is built.
- Understand how SDH technology works

Target Audience:

- Anyone wishing to start the Neptune training program and lacks sufficient technological background.

Prerequisites:

- Technical background

Notes:

- Material in this course is a prerequisite for all Neptune courses(with SDH implementation)

Apollo:
Course List

Specific shelf types and cards may be added or omitted from the course upon request (except for fabric cards). Please inform your training POC what you wish to add/omit when ordering the course.

Course Name: Apollo Introduction and Initial configuration

Duration: 3 days Course code: APOL01

Course Content:

- Apollo shelf overview
- Apollo shelf power consumption
- Common cards and modules
- NVM loader
- Initial configuration via LCT and CLI
- DCN configuration
- Plug & Play Tool (LCT)
- NE DB backup via LCT or CLI

Goals:

Upon completion of the course, the participants will be able to:

- Perform initial configuration of various Apollo shelves via LCT and CLI
- Perform NE DB backup
- Perform basic local troubleshooting

Target Audience:

- Field engineers, support teams

Prerequisites:

- Basic knowledge in telecommunications

Notes:

- This course is not a management course
- This course does not include link tune-up , NMS and STMS
- The course covers both Apollo 9600 and 9900 products

  In case only one of them is required the course can be shortened by 1 day

Course Name: Apollo OTN Transport Operation

Duration: 5-6 days Course code: APOL02

Course Content:

- Apollo shelves
- Apollo shelf power consumption
- Common cards and modules overview
- DWDM, and photonic cards and modules overview
- LightSOFT - Introduction
- Light Pulse Overview
- STMS – Introduction
- WDM card configuration via STMS
- GCC and OSC Overview
- Optical links and trails using LightSOFT
- Hardware and Y-Protection Overview
- ONCP
- Physical construction of a WDM optical link
- Optical link calibration using OSA
- Network Monitoring and Alarms
- Encryption technology Overview
- Encryption Configuration

Goals:

Upon completion of the course, the participants will be able to:

- Configure Apollo cards using the ECI network management systems
- Configure encryption on the Apollo Interface cards
- Create optical links & trails
- Physically build and monitor an Apollo WDM optical network

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Introduction to WDM and OTN technologies - [WDM_OTN]

Notes:

- This course does not include ODU-XC functionality and ASON/WSON. For those functionalities, please refer to the relevant courses below.
- This course does not include initial configuration. For this, please refer to the Apollo Introduction and Initial Configuration course [APOL01]

Course Name: Apollo OTN switching operation

Duration: 3-5 days (see notes) Course code: APOL03

Course Content:

- Apollo shelves with ODU-XC capability
- Fabric overview
- FIO TIO and HIO card overview
- OTN Link and Trail creation via NMS
- Physical construction of OTN optical link
- OTN link tune-up using OPM and OSA
- Light Packet
- Network monitoring and alarms

Goals:

Upon completion of this course, participants will be able to:

- Configure the Apollo OTN – FIO cards using the ECI Network Management System
- Create OTN links & trails via NMS
- Physically build and monitor an Apollo OTN network

Target Audience:

- NOC personnel, field engineers

Prerequisites:

- Introduction to WDM and OTN technologies [WDM_OTN]

Notes:

- This course does not include ASON or WSON overviews or configuration
- This course does not include initial configuration. For this, refer to the course - Apollo Introduction and Initial configuration [APOL01]
- 4 days – standalone course,
  3 days – in conjunction with the course - Apollo OTN Transport operation [APOL02]
- The course covers either Apollo 9600 or 9900 products
  In case both are is required, the course duration will be extended by one day

Course Name: Apollo ASON

Duration: 2 days Course code: APOL04

Course Content:

- ASON theory
- ASON configuration
- ASON topology setup
- Maintenance ASON Network

Goals:

Upon completion of the course, the participants will be able to:

- Create ASON Network
- Perform Maintenance for ASON network

Target Audience:

- NOC personnel, field engineers

Prerequisites:

- WDM and OTN course [WDM_OTN]
- Apollo OTN switching operation course [APOL03]

Notes:

- This course does not include ASON and WSON overview and configuration
- This course does not include OTN switching. For this, please refer to the course - Apollo OTN switching operation [APOL03]

Course Name: Apollo WSON

Duration: 2 days Course code: APOL05

Course Content:

- ROADM overview
- WSON theory
- WSON topology setup
- Maintenance of WSON Network

Goals:

Upon completion of the course, the participants will be able to:

- Create a WSON Network
- Perform maintenance for a WSON network

Target Audience:

- NOC personnel, field engineers

Prerequisites:

- WDM and OTN course [WDM_OTN]
- Apollo OTN transport operation course [APOL02]

Course Name: Apollo Advanced Protection Workshop

Duration: 2 days Course code: APOL_AD_01

Course Content:

- Optical protection (OLP, OMSP, Multi-route)
- Hardware protection
- ODU protection

Goals:

Upon completion of the course, the participants will be able to:

- Create the above protection mechanisms
- Monitor and operate protection mechanisms

Target Audience:

- NOC personnel, field engineers

Prerequisites:

- WDM and OTN course [WDM_OTN]
- Apollo OTN switching operation course [APOL03]

Notes:

- This course does not include ASON/WSON. For this, please refer to the Apollo ASON [APOL04] and Apollo WSON [APOL05] courses

Course Name: Apollo Planning Concepts workshop

Duration: 3 days Course code: APOL_AD_02

Course Content:

- Optical Link Planning Concepts
  - Amplification
  - Dispersion compensation
  - Regeneration
  - FEC
  - Equalization
  - OTDR
- Optical network planning concepts
  - Network planning considerations – the traffic table
  - Using FOADMs, 2 degree ROADMs and multi degree ROADMs
  - Colorless, directionless, and contention-less sites
- Service planning
  - Cost-effective service planning in OTN transport networks (not fabric-based)
  - Cost-effective service planning in OTN switching networks (fabric-based)

Goals:

Upon completion of this course, participants will be able to:

- Understand the optical phenomena that dictate how optical links are designed
- Understand how optical parameters are measured and compensated for
- Understand network and service planning concepts

Target Audience:

- Planning personnel, network engineers

Prerequisites:

- Apollo OTN transport course [APOL02]
- Apollo OTN switching course [APOL03]

Notes:

- This course is built as a workshop and consists of many exercises that let the participant face real-world planning challenges

- This course gives the participants tools to understand the underlying concepts of network planning design, however it does not certify them to design optical networks independently

Course Name: Apollo Advanced Optical Network Maintenance

Duration: 4 days Course code: APOL_AD_03

Course Content:

- The effect of OSNR, PMD, attenuation, chromatic dispersion, BR and nonlinear effects on optical links
- Analyzing optical links
- Optimal troubleshooting processes in optical network
- Maintenance principles in optical networks
- Optical link case studies
- Advanced optical layer operation in LightSOFT

Goals:

Upon completion of the course, the participants will be able to:

- Understand the different optical phenomena and their effect on network performance
- Analyze an optical link using LightSOFT tools
- Perform troubleshooting optimally, to gain long-term network stability
- Preform optical network routine maintenance
- Work with advanced LightSOFT features in a correct and efficient manner

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Apollo OTN transport course [APOL02]
- Apollo OTN switching course [APOL03]

Course Name: Apollo Advanced DCN Planning Workshop

Duration: 3 days Course code: APOL_AD_04

Course Content:

- Routing introduction
- OSPF
- ShadeTree CLI overview
- DCN modes configuration
- Overview of various DCN scenarios and configuration (including 3rd party equipment)
- DCN protection(VRRP, gateway protection) overview, and configuration

Goals:

Upon completion of the course, the participants will be able to:

- Understand and configure OSPF protocol and features via CLI and LCT/STMS
- Plan and configure various DCN solutions
- Plan and configure efficient DCN protection

Target Audience:

- Planners and network engineers who seek more tools and enhanced knowledge of DCN planning

Prerequisites:

- Apollo introduction and initial configuration course [APOL01]
- Apollo OTN transport course [APOL02]

Course Name: NMS Advanced Feature Workshop

Duration: 1 day Course code: NMS_AD_01

Course Content:

- PMH
- SNMP
- Alarm forwarder

Goals:

Upon completion of the course, the participants will be able to:

- Understand and configure NMS optional features in the network.

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Apollo OTN transport course [APOL02]
- Apollo OTN switching course [APOL03]

Notes:

- This course is intended for personnel with NMS familiarity and operational experience.

Neptune: Course List

Please note that various cards may be added or omitted from the course, if requested. Please inform your training POC what you wish to add/omit when ordering the course.

How to Choose the Right Neptune Course?

	SDH/ Ethernet (L2) **without** MPLS	SDH/ Ethernet (L2) **with** MPLS-TP	Ethernet **with** IP/MPLS
Technology	SDH01/ DATA01	SDH01/ DATA01	DATA01
Introduction & Initial Configuration	NPT01	NPT01	NPT_IP_01
Traffic Provisioning	NPT02	NPT03	NPT_IP_02
Additional Services (CES/ IPTV)	NPT04/ NPT05	NPT04/ NPT05	NPT04/ NPT05
Advanced Workshop	NPT_AD_01 NPT_AD_02 NPT_AD_03 NPT_AD_04 NPT_AD_05 NMS_AD_01	NPT_AD_01 NPT_AD_02 NPT_AD_03 NPT_AD_04 NPT_AD_05 NMS_AD_01	NPT_IP_03 NPT_IP_04 NPT_AD_01 NPT_AD_02 NPT_AD_03

The NPT section consists out of 5 parts: Technology, Initial configuration, Layer 2/MPLS, Additional Services and Advanced Workshops

Build your own program according to your needs:
Our modular approach means that training can be delivered in any combination of modules or technology that suits you, we offer you the opportunity to build your own training.
This gives you the flexibility you need to focus on your specific needs on the basis of the existing training modules

How does it work?
Each training module varies in time and topics.

In order to build the best training course for your needs you just need to select the training modules that interest you.

For example: you have a network consisting of Neptune NEs with MPLS-TP services and you would like to know how to install and operate the network.
In addition, you would like to know about security features and CES.

The following modules will be chosen:

NPT Introduction and Initial Configuration - 5 days
+
Course Name: NPT-Network Management-MPLS - 3 days
+
Advanced Security Workshop for NPT - 1 day
+
NPT CES - 1 day

Total of 10 training days

IP Technology Training Path

For new employees, without Neptune background, we recommend getting the NPT_IP_01 course in order to get familiar with the Neptune family and know how to perform initial configuration of the product.
The second step would be to take NPT_IP_02. In this course IP/MPLS concepts and configurations will be discussed.
Following these two courses, one or both of the advanced courses may be taken: NPT_IP_03 for advanced topics and CES and NPT_IP_04 for advanced IPv6 and NetConf.

Course Name: Neptune Introduction and Initial Configuration

Duration: 3 days Course code: NPT01

Course Content:

This course covers Neptune functionality including:

- Product introduction
- Neptune shelves
- Cards and modules
- LCT-APT
- DCN
- Commissioning

Goals:

Upon completion of the course, the participants will be able to:

- Describe the different Neptune chassis and cards.
- Configure the Neptune locally using LCT software.

Target Audience:

- Those who wish to get acquainted with the Neptune product line
- Field personnel who want to be familiar with the products and cards and know how to connect to the device locally
- NOC personnel for whom this course serves as an introduction to the equipment, and a prerequisite to the management course

Prerequisites:

- Basic knowledge of telecommunications

Notes:

- This course is not a management course
- For NOC personnel and network engineers, this course should be supplemented by a management course such as Neptune-Network management-L2 [NPT02] or Neptune-Network management-MPLS [NPT03]

Course Name: Neptune-Network Management-L2

Duration: 4 days Course code: NPT02

Course Content:

This course teaches how to remotely manage an ECI network composed of Neptunes.

Topics include:

- EMS-APT Introduction
- EMS-APT Element Configuration
- EMS-APT Card internals
- LightSOFT - Main Window, Groups, Element types
- LightSOFT - Fault and Alarm Management
- LightSOFT – L2 Data Services
- Performance Monitoring

Goals:

Upon completion of the course, the participants will be able to:

- Operate an L2 network composed of Neptune products with EMS-APT and LightSOFT

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Ethernet/IP/MPLS [DATA01] and/or SDH [SDH01] course

Notes:

- This course does not include MPLS

Course Name: Neptune-Network Management-MPLS

Duration: 5 days Course code: NPT03

Course Content:

This course teaches how to remotely manage an ECI network composed of Neptunes.

- EMS-APT Introduction
- EMS-APT Element configuration
- EMS-APT Card internals
- LightSOFT - Main Window, Groups, Element types
- LightSOFT - Fault and Alarm Management
- LightSOFT - Tunnel creation and management
- LightSOFT - Traffic protection mechanisms
- LightSOFT - Data trails and Services

Goals:

Upon completion of the course, the participants will be able to:

- Operate an MPLS network composed of Neptune products with EMS-APT and LightSOFT

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Ethernet/IP/MPLS [DATA01] and/or SDH [SDH01] course

Course Name: Neptune CES

Duration: 1 day Course code: NPT04

Course Content:

- CES theory
- CES configuration
- Synchronization concept and configuration

Goals:

Upon completion of the course, the participants will be able to:

- Configure CES cards
- Create and operate a CES service - end-to-end

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Neptune-Network Management-L2 [NPT02] or Neptune-Network Management-MPLS [NPT03] course

Notes:

- This course is intended for personnel with previous knowledge and operational experience with the Neptune platform and wish to implement CES, supporting hardware in their networks

Course Name: IPTV Implementation for Neptune

Duration: 2 days Course code: NPT05

Course Content:

- IPTV theory
- IPTV configuration

Goals:

Upon completion of the course, the participants will be able to:

- Configure and understand - IPTV services

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Neptune-Network Management-L2 [NPT02] or Neptune-Network Management-MPLS [NPT03] course

Notes:

- This course is intended for personnel that have knowledge and operational experience with the Neptune platform and wish to implement an IPTV application

Course Name: Advanced Security Workshop for Neptune

Duration: 1 day Course code: NPT_AD_01

Course Content:

- Security features in EMS and NMS
- Secure NE mode
- Secured communication

Goals:

Upon completion of the course, the participants will be able to:

- Understand the impact of the security features on the network and configure the security features

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Neptune-Network Mangement-L2 [NPT02] or Neptune-Network-Management-MPLS [NPT03] course

Notes:

- This course is intended for personnel that have knowledge and operational experience with Neptune

Course Name: Neptune Advanced PM Workshop

Duration: 2 days Course code: NPT_AD_02

Course Content:

- CFM
- RFC tests

Goals:

Upon completion of the course, the participants will be able to:

- Understand and configure tests to measure the performance of the network

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Neptune-Network Management-L2 [NPT02] or Neptune-Network-Management-MPLS [NPT03] course

Notes:

- This course is intended for personnel that have knowledge and operational experience with Neptune

Course Name: Troubleshooting Neptune

Duration:2 day Course code: NPT_AD_03

Course Content:

- Troubleshooting
- Performance Monitoring
- Alarm Management
- Traffic tests (using TE)

Goals:

Upon completion of the course, the participants will be able to:

- Identify and troubleshoot common problems
- Monitor, edit, and troubleshoot the network via the NMS
- Perform basic traffic tests using Test-Equipment, ensuring traffic can flow through the network

Target Audience:

- NOC personnel, support teams, field engineers

Prerequisites:

- Neptune Introduction and Initial Configuration [NPT01] course

Notes:

- This course is intended for personnel that have prior knowledge and operational experience with the Neptune

Course Name: QoS for Neptune - Advanced Workshop

Duration: 2 days Course code: NPT_AD_04

Course Content:

- Neptune QoS mechanism
- QoS algorithms
- Policers, schedulers, shapers
- CoS mapping
- Color Blind/Color Aware
- CAC

Goals:

Upon completion of the course, the participants will be able to:

- Understand, plan, and configure QoS features in an Neptune network

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Neptune-Network Management-L2 [NPT02] or Neptune-Network Management-MPLS [NPT03] course

Notes:

- This course is intended for NOC personnel with knowledge and operational experience with Neptune

Course Name: DCN Planning Advanced Workshop

Duration: 2 days Course code: NPT_AD_05

Course Content:

- Routing introduction
- OSPF
- DCN modes configuration
- Overview of various DCN scenarios and configurations (including 3rd party equipment)
- DCN protection (VRRP, Gateway protection) overview and configuration

Goals:

Upon completion of the course, the participants will be able to:

- Understand and configure OSPF protocol and features via LCT/EMS-APT
- Plan and configure various DCN solutions
- Plan and configure efficient DCN protection

Target Audience:

- Planners and network engineers for expanding toolset and knowledge of DCN planning

Prerequisites:

- Neptune-Network Management-L2 [NPT02] or Neptune-Network Management-MPLS [NPT03] course

Notes:

- This course is intended for NOC personnel that have knowledge and operational experience with Neptune

Course Name: NMS Advanced Feature Workshop

Duration: 1 day Course code: NMS_AD_01

Course Content:

- PMH
- SNMP
- Alarm forwarder

Goals:

Upon completion of the course, the participants will be able to:

- Understand and configure NMS optional features in the network

Target Audience:

- NOC personnel, network engineers

Prerequisites:

- Neptune-Network Management-L2 [NPT02] or Neptune-Network Management-MPLS [NPT03] course

Notes:

- This course is intended for personnel that have knowledge and operational experience with the NMS

Course Name: NPTi Introduction and Initial Configuration

Duration: 3 days Course code: NPT_IP_01

Course Content:

This course covers NPTi (Neptune with IP capabilities) functionality including:

- LCT
- NPTi Hardware
- Cards and modules
- First Installation
- DCN

Goals:

Upon completion of this course, participants will be able to:

- Describe the different NPTi chassis and cards
- Configure the NPTi locally using LCT software

Target Audience:

- Those who wish to get acquainted with the NPTi product line
- Field personnel who want to be familiar with the products and cards and know how to connect to the device locally
- NOC personnel for whom this course serves as an introduction to the equipment, and a prerequisite to the management course

Prerequisites:

- Ethernet/IP/MPLS [DATA01] or equivalent knowledge
- Basic knowledge of telecommunications

Notes:

- This course is not a management course
- For NOC personnel and network engineers, this course should be supplemented by a management course such as Neptune-Network management-L2 [NPT_IP_02] or Neptune-Network management-MPLS [NPT_IP_03]

Course Name: NPTi-Network Management-L3

Duration: 5 days Course code: NPT_IP_02

Course Content:

This course teaches how to remotely manage an ECI network composed of NPTi products.

Topics include:

- MPLS-IP
- IGP
- Protection mechanism
- LDP
- BGP
- BFD
- Services:
  - L2VPN
  - L3VPN

Goals:

Upon completion of this course, participants will be able to:

- Operate an MPLS-IP network composed of Neptune products with EMS-APT and LightSOFT
- Describe MPLS-IP network and services
- Describe IGP basic concepts
- Describe BGP basics
- Describe the LDP neighbor discovery mechanism and session establishment process
- Able to understand and describe BFD
- Configure BGP MPLS VPN on a network that consists of NPT
- Select suitable MPLS-IP VPN implementation modes for different MPLS L2VPN and L3VPN applications

Target Audience:

- NOC personnel
- Network administrators
- Network and/or System engineers
- Network Engineers, Designers and Administrators

Prerequisites:

- Ethernet/IP/MPLS [DATA01] or equivalent knowledge

Course Name: NPTi- Advanced Networking–L3

Duration: 4 days Course code: NPT_IP_03

Course Content:

The course is appropriate for those who are ready to advance their skills on complex network solutions.

Topics include:

- CES
- Timing Methods
- Pseudo Wire Redundancy
- Advanced BGP
- Introduction to IPv6

Goals:

Upon completion of this course, participants will be able to:

- Describe why there is a need to upgrade IPv4 to IPv6
- Describe the constitution of an IPv6 address and IPv6 packets
- Able to understand, describe and configure
  - Pseudo Wire Redundancy
  - CES
  - Timing Methods
  - Advanced BGP

Target Audience:

- NOC personnel
- Network administrators
- Network and/or System engineers
- Network Engineers, Designers and Administrators

Prerequisites:

- Ethernet/IP/MPLS [DATA01]
- L3 [NPT_IP_02] course

Course Name: NPTi- Advanced Networking–L3

Duration: 4 days Course code: NPT_IP_04

Course Content:

The course is appropriate for those who are ready to advance their skills on complex network solutions.

Topics include:

- IPv6
  - Segment routing
  - L3-ACL
  - NDP and ICMP
  - IPv6:- NDP and ICMP
  - IPV6- MLD/PIM
  - IPV6:- ISIS
  - IPV6- VRRP
- BGP ECMP and Multi-path
- 6VPE
- NetConf
- OSPFv3

Goals:

Upon completion of this course, participants will be able to understand, describe and configure:

- What is IPv6
- IPv6 Addressing Models
- Protocols background

Target Audience:

- NOC personnel
- Network administrators
- Network and/or System engineers
- Network Engineers, Designers and Administrators

Prerequisites:

- Ethernet/IP/MPLS [DATA01] or equivalent knowledge
- L3 [NPT_IP_02] course

LightInsight: Course List

Please note that various shelf types and cards may be added or omitted from the course upon request. Please inform your training POC what you wish to add/omit when ordering the course.

Course Name: LightInsight Operation

Duration: 1 day Course code:LAPP01

Course Content:

- LightInsight General Overview
- LightInsight Modules and Dashboards
- LightInsight Report Generation

Goals:

Upon completion of the course, the participants will be able to:

- Describe the architecture of LightInsight
- Describe the modules available in LightInsight
- Use LightInsight predefined reports
- Create LightInsight customized reports using filters and calculated values
- Create LightInsight agents

Target Audience:

- Network Engineers that wish to be able to properly use LightInsight

Prerequisites:

- Basic knowledge in data communications
- Neptune-Network Management-L2 [NPT02] or Neptune-Network Management-MPLS [NPT03] course or Apollo OTN switching operation [APOL03]

  Participants should be proficient in the relevant technologies and products

ECI THE ELASTIC NETWORK

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