ENG-410 - Overview of MPLS Technology

Description

This Virtual Classroom Training will provide participants with an overview and understanding of the key concepts pertaining to the MultiProtocol Label Switching (MPLS) technology.

Neotelis' Virtual Classroom Training offers live, real-time training sessions led by an expert trainer on a web-based videoconferencing platform. The course offers the benefits of Neotelis' Face-to-Face Training at a distance and without the need to travel to a training location.

The number of participants to a Virtual Classroom Training is limited to allow for maximum interaction with the trainer and between participants during the live sessions.

The Virtual Classroom Training '*Overview of MPLS Technology*' runs for a total of 6 hours and consists of 3 live virtual classroom sessions of 2 hours each, run over one week. Off-line activities are also included in the training course between the live sessions to increase participant learning and retention.

At the end of the training course, participants will have acquired the skills to:

- **Understand what an MPLS network consists of and how the pieces fit together**
- **Understand the difference between Layer 2 and Layer 3 MPLS Virtual Private Networks (VPNs) and under what circumstances one should use each type**

Objectives

- Describe Internet Protocol (IP) routing and its associated challenges
- Identify the compelling reasons why MPLS is a technology to adopt in today's environment, and how it can help benefit network service providers
- Provide a conceptual definition of MPLS
- List the components of a MPLS network, and show how they all fit together
- Explain what a Label Switched Path (LSP) is, why it is used, and how it is built

- Define the concept of traffic engineering and how to implement it in a MPLS network
- Differentiate between MPLS Virtual Private Networks (VPNs) and when to use each type

Topics

*Note: the course structure may be subject to change as trainings are updated on a regular basis.

IP data network review

- Basic concepts
- Routing tutorial

Why MPLS?
- The paradigm shift
- Limitations of current networks
- Network service provider challenges
- Drivers for MPLS

MPLS concepts
- MPLS definition
- MPLS architecture and components
- MPLS terminology

LSP: the MPLS virtual path
- What is a virtual path and how to create it
- Label Distribution Protocol (LDP): the signaling protocol that helps make it happen

MPLS traffic engineering
- What is traffic engineering?
- Creating LSPs that adhere to specified constraints
- Constraint-based Routing Label Distribution Protocol (CR-LDP) and Resource reSerVation Protocol (RSVP): the signaling protocols that helps make it happen

MPLS VPNs
- Layer 3 (L3) VPNs
- Layer 2 (L2) VPNs

Target audience

- Non-technical personnel in sales, customer care, or any other role, interested in acquiring a overview understanding of the MPLS technology
- Managers or executives looking to complement their skill-set by gaining a better understanding of the MPLS technology

Methodology

Neotelis Virtual Classroom Trainings combine real-time (live) Virtual Classroom sessions on a web-based videoconferencing platform with an expert trainer and off-line activities in-between live sessions. Presentations, workshops, case studies, and discussions on real-life situations faced by participants, as well as videos, whiteboards, quizzes and questionnaires are all used to engage participants and enhance their learning experience.

The training material is designed to provide practical tools which can be immediately applied in a work environment, and the complete material is provided to all participants for future reference and follow-up action plans.

Access to Neotelis Virtual Classroom Trainings requires a computer, a webcam, a headset and microphone and a stable internet connection.

Location

About Neotelis

Neotelis provides training, consulting, conferences and publications to the telecommunications industry worldwide. Its team of senior experts has trained thousands of executives and managers working for operators, regulators, policy-makers and governments in over 120 countries around the world.

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