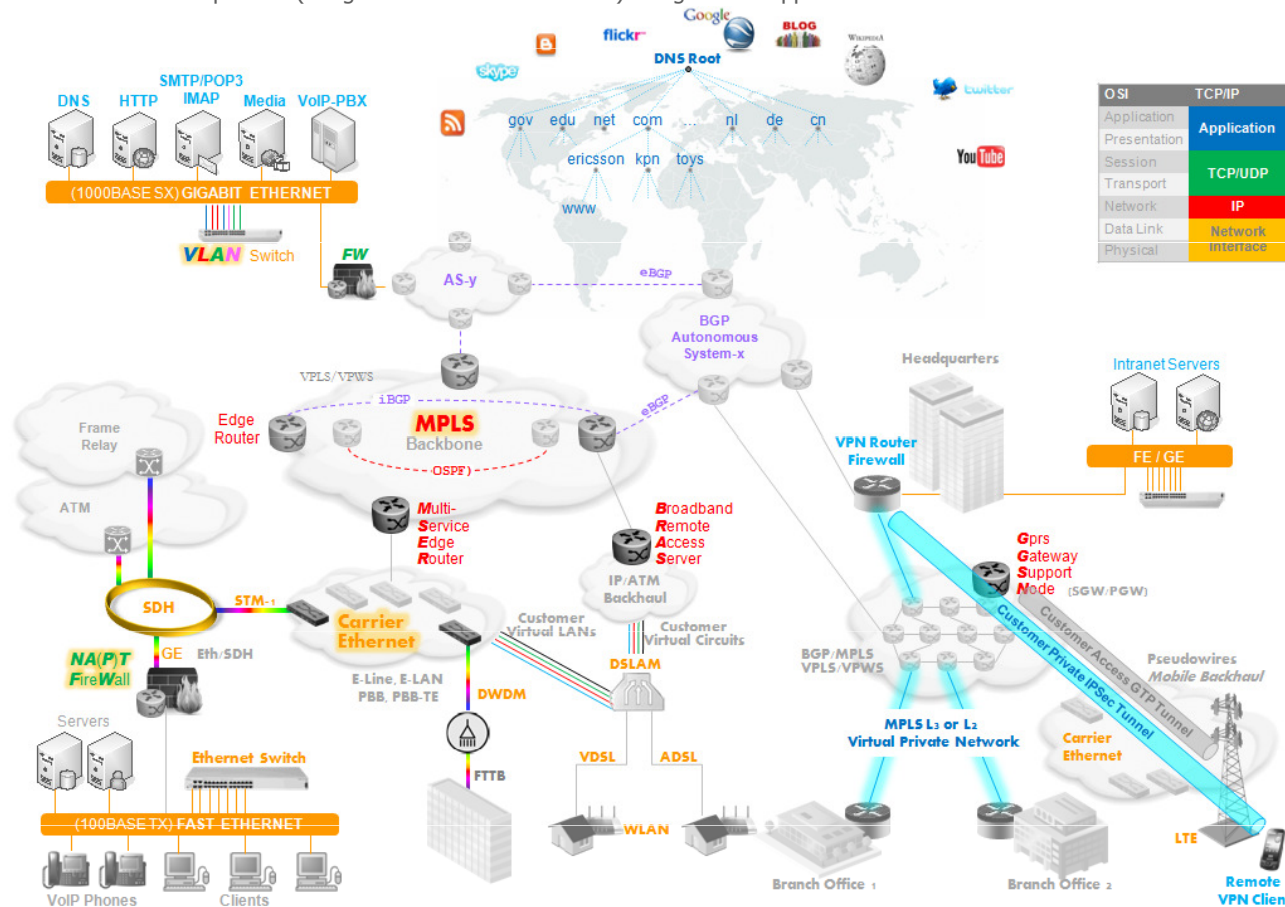


Modern IP Networking

An understandable overview of TCP/IP-based technologies in the era of Multiservice Networks
2 Days

Business Value

You will get a good understanding of the well-established IP networking technologies and solid insight into the most current developments (in eg. Carrier Ethernet & MPLS) designed to support Multiservice IP networks.



Who should attend

The course is designed for anyone who wants to get an intelligent, yet easy-to-understand and fun introduction to technical concepts normally comprehended only by IP-specialists. The course is intended for both non-technical and technical professionals (with little IP background).

Presentation/Documentation/Exercises

Instructor presentation with the Futurenetz active learning tools (mixed media). Powerpoint usage is minimized in order to keep you alert and focused. You'll have a text-/work-book in which you fill out pre-printed graphics with information during lecture. Some interesting exercises are also included.

Content Summary

- The Internet over the clouds**
Practical understanding of the Internet infrastructure
 Making sense of the new Infocommunications Industry
 How big is the Internet? Interesting and surprising statistics
 How to find your private and public IP-addresses
 How fast can you reach China? Lessons from PINGING other computers
 Tracing and visualizing traffic as it travels across the globe
 What are IP Backbones, Internet Exchanges, ISPs and Peering
 The facts about the workings of DNS
 How URLs identify resources
 Client-Server Communication: HTTP, SMTP and DNS
- The Pillars of Internetworking**
Routing, Switching, IP Addressing and other networking mechanics
 Where the TCP/IP Stack lives
 IP and TCP explained as different types of Postal Service
 What do IP Routers do and how
 What you need to know about Ethernet (MAC, ARP, Hubs, Switches, FE, GE)
 Why do we use IP Subnetting and Supernetting
 The brains of Routers: IP Routing Protocols (RIP and OSPF)
 Accessing the Internet: xDSL, WLAN, 3G and the role of DHCP
 What's the connection between NA(P)T and Firewalls
 Understanding Network Security, DMZ & Remote Access
 Traffic Separation with VLANs & IP Tunneling (VPN & GPRS/LTE examples)
 BGP: the Internet Routing Protocol (AS & the global Routing Table)
- The Era of Multiservice Networking**
Modern IP technologies and network consolidation
 Understanding physical layers (E1, SDH, DWDM)
 Label-based switching networks (ATM, Frame Relay)
 Why is there a push for converged IP networks
 Understanding MPLS networks (LSPs, Traffic Engineering and QoS)
 Comparison of L2 and L3 VPNS for traffic separation
 What are BGP/MPLS L3 VPNS and why are they so big
 Carrier Ethernet as L2 VPN and consolidation of the access/aggregation layers
 E-Line, E-LAN, Q-in-Q, MAC-in-MAC, PBB-TE
 MPLS Pseudowire emulation for converged networks
 VPLS, VPWS, and MPLS-TP
 Mobile and DSLAM Backhaul

Contact

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