

TRACK 1 - IPv4/IPv6 ROUTING WORKSHOP

Synopsis:

This technical workshop is made up of lectures and hands-on lab exercise to teach design issues to build routing infrastructure, classifications and how to choose different routing protocols, Internet routing architecture design principles, OSPF, BGP, BGP traffic engineering and scaling tools i.e. Local Pref, MED, AS path prepend, communities, Route reflector, peer group etc. Presentation cover detail protocol level operation an industry best current practise for both service provider and enterprise network.

The course also includes intense practical work based on IPv4 as well as IPv6 and Cisco IOS router configuration commands.

Target Audience:

Mid level to senior technical and design staff of ISP, network operators or enterprise, who are involved in day-to-day network operation and planning function.

Pre-requisites:

It is assumed that the workshop participants know how to use a router command line interface, do basic router configuration and have a working knowledge of an IGP (OSPF or ISIS) and BGP fundamentals. The lab exercises use Cisco IOS, JunOS and/or Huawei configuration syntax.

Course Outline:

- IPv6 Address Structure
- Routing Lab Topology Overview
- Operation of OSPF Routing Protocol
- Lab Exercise on Basic Router and OSPF Dynamic Routing Configuration
- Basic BGP operation
- BGP Attributes and Path Selection Process
- BGP traffic engineering tools i.e. Local Pref, MED, AS path prepend, communities etc.



- BGP Scaling Techniques i.e. Route reflector, peer group
- Lab Exercise on iBGP, RR, Peer group etc.
- Internet Exchange [IX] Policy Overview and Configuration requirement, Route server etc.

Other requirements

Hardware: It is a requirement that participants bring their own laptop computers with Wifi (b/g/n) and administrative access to system to practice the lessons learned during the workshops.

Software: SSH Client, Telnet Client

Maximum number of attendees: 28 delegates for this workshop