

## IPv6 Overview

IPv6 deployment, long postponed, is now a pressing issue. IPv4 addresses, the Internet lifeblood, have almost all been distributed. Carriers, Service Providers and Enterprises must now embrace IPv6. This 3 hour workshop outlines the key IPv6 details.

### Who would benefit from this course?

Those in technical and non-technical roles associated with the IT sector. Course participants may include network operators, service providers, application developers, engineers and those involved with telecoms regulation.

### Outline

In September 2012, RIPE, the European Internet Registry announced they were on to their final /8 IPv4 address block (the last 16 million). Migration to IPv6, long postponed due to lack of a business case, is now unavoidable. This 3 hour workshop outlines the key IPv6 technical components.

The workshop first outlines IPv6 development and the ICANN role, then briefly reviews IPv4 addresses and protocols. The remaining IPv4 address stocks and how they will be administered are then discussed. The key IPv6 features are then outlined, followed by an examination of IPv6 address structure and functions.

IPv6 configuration mechanisms are then outlined, followed by an overview of the key IPv6 protocols. IPv6 transition mechanisms and issues are then outlined. The workshop concludes with an overview of IPv6 operation over MPLS.

### Course Objectives

Participants completing this course should be able to:

- Outline the role of ICANN and IANA in IP address management
- Describe key IPv4 features, and the remaining IPv4 address stocks
- Understand IPv6 address formats, and the role of the different IPv6 address types
- Describe IPv6 configuration mechanisms, and how they differ (and improve upon) IPv4 ones
- Outline the key IPv6 protocols
- List the IPv6 transition mechanisms and describe how they work
- Outline key issues for service providers and consumers arising from IPv6 transition