



...Connectons la prochaine génération(\*)



(\*) *Impact IPv6* est un projet initié par le [Chapitre Cameroun](#) de l'Internet Society et subventionné par l'[Internet Society](#)

## IPV6 FUNDAMENTALS WORKSHOP

03 – 05 avril 2012

**Institut de la Gouvernance Numérique Universitaire (IGNU) de Yaoundé**

Sis entre l'Ecole Nationale Supérieure Polytechnique et le CHU (Melen)

### Target Audience:

**Network engineers, Systems Administrators** who are comfortable with implementing and managing IPv4 networks.

### Pre-requisites:

- IPv4 Addressing and subnetting.
- The OSI model and the various protocols that operate at each layer.
- Intra-domain routing and OSPF.
- How to use the command line interfaces of key routing platforms (e.g Cisco IOS)

**Duration:** 3 days

**Contribution to the training fees:** Fcfa 100 000 (ISP). Scholarship available (\*).

**Venue:** IGNU

**Contact:** [info@isoc-cameroon.org](mailto:info@isoc-cameroon.org)

**Language and training materials:** English and French

## TRAINING PROGRAMME

- IPv4 Exhaustion and the case for IPv6 ["Why A New IP?"]
- Why NAT is Not a Sustainable Solution to IPv4 Exhaustion
- IPv6: Fact|Reality vs Fiction/Myth
- Understanding IPv6 Addressing
  - Global Unicast Unique Local Addresses
  - Link Local
  - Multicast Addresses
  - How IPv6 Addresses are Allocated.
- IPv6 Address Planning
- IPv6 from an IPv4 Perspective
  - Neighbour Discovery
  - ICMPv6 Messages Used by ND
  - IPv4 vs IPv6: Head-to-Head
    - Packet Structure
    - Duplicate Address Detection
    - Finding out neighbour's L2 addresses
    - Host Configuration [Windows, Linux/Unix]
    - Automatic Address assignment - Stateless Address Configuration and DHCPv6
    - FQDN-to-IP Address Resolution: DNS
    - Subnetting in IPv6
- Fundamentals of Routing in IPv6
  - Static routing
  - Intra-domain routing with OSPFv3

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Avec le soutien technique et logistique de :



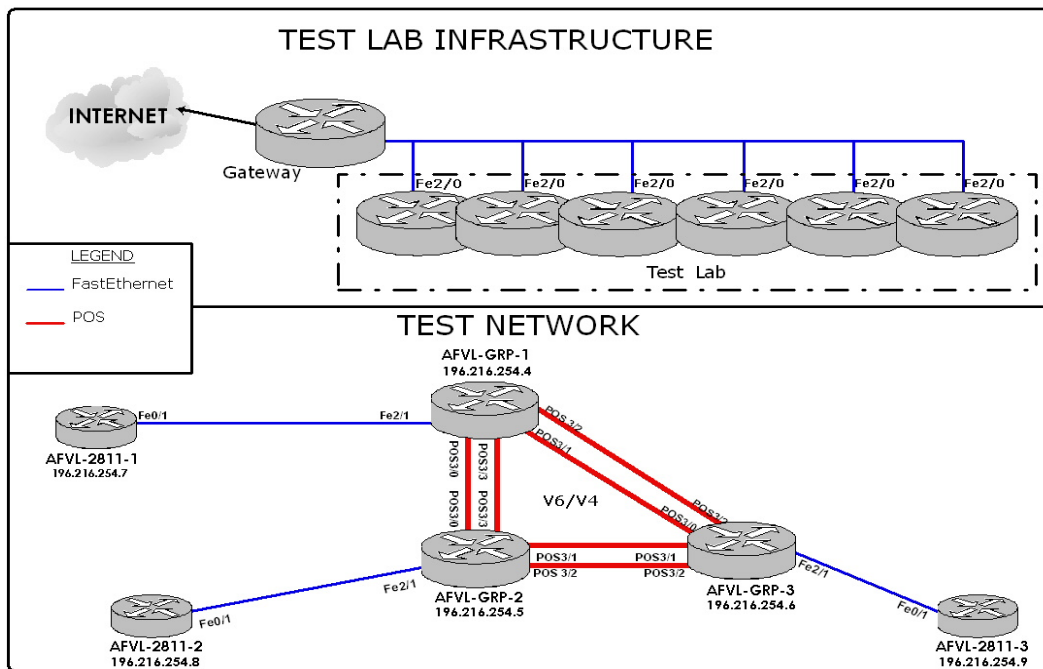


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- Inter-domain routing with BGPv4
- Transition Mechanisms
  - The problem that transition mechanisms solve.
  - Configuring manual tunnels.
  - Configuring 6to4 Automatic tunnels.
  - Overview of other translation techniques
- IPv6 Equipment & Software Buyers' Guide
- Labs/Exercises
  - Configuring IPv6 clients (Windows, Mac OS X, Linux/Unix)
    - Static Configuration
    - Automatic Configuration
    - Testing IPv6 connectivity with ping6 and traceroute6
  - Routing
    - Enabling IPv6 routing and configuring IPv6 addresses
    - Configuring static routing
    - Inter-domain routing with OSPFv3
  - Transition Techniques
    - Manual tunnels
    - Automatic 6to4 tunnels.



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