



# Deploying IPv6 & services

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# Overview

- What to achieve ?
- Before to deploy anything ...
  - Check list
- Services configuration
- Conclusion & recommenadations



# Introduction

- Deploy or not IPv6 ?
  - That's not a must
    - Some companies won't be concerned (?)
  - What are the reasons and the goals to configure IPv6 ?
    - Address space needs, end-to-end connectivity, experiments, ...
  - Define “your” strategy
    - Depending on your goals, the nature of the organization / company and its background ...



# What steps to complete ?

- Prerequisites
  - Understand -a bit- IPv6 protocols
  - Answer the following questions
    - Why ?
    - For who ?
    - With who and what ?
  - Propose a strategy for the company
    - What services for what users/customers ?
    - Communicate on your project inside the company
    - Plan the training for the staff



# Step-2

- Preliminaries
  - Inventory
    - Equipments
    - Applications/services
    - Staff
  - Design the network
    - Choose a topology (BB, access)
    - Take into account the existing situation,
    - The services to install



# Step-3

- Technical
  - Create an addressing plan
    - LIR / ISP ?
      - Where to get a prefix block ?
      - Who to provide address blocks ?
    - Forsee possible evolutions
    - Think prefix aggregation
    - Static addresses vs auto-configuration



# Step-4

- Technical ...
  - What about the routing plan ?
    - IGP & EGP
    - routing policy
      - In the BB, with the users, with external peers



# Step-5

- IPv4/IPv6 coexistence
  - What needs ?
    - Servers, customers ?
  - Which mechs choose ?
    - Encapsulation
      - Static vs dynamic tunnels
      - MPLS
    - Header translation
    - ...





# Step-6

- Security
  - Revisit the existing security design
  - Apply the same policy for both versions of IP
    - Ipv6 filtering # ipv4 filtering
  - Don't weaken the ipv4 network when configuring IPv6
  - Security tools & logs



# Step-7

- Managing the ipv6 network
  - Install/ configure a couple of tools
  - Or tune the existing tools to be ipv6 capable
  - Control IPv6 traffic, check network equipment
  - ...



# Step-8

- Configure ipv6 on the servers
  - Network services
    - DNS (starting point ?)
    - HTTP, SMTP, ...
  - Users services
- Run tests !



# Step-9

- First start
  - Pilote phase with volunteers or clever users
  - Add your NOC in this test phase
  - Log and control all events
  - How long this phase should last ?
    - Depends on the kind of the tests, the users demand ...



# Step-10

- Last tunings
  - Revisit steps 1 to 9
  - Adjust security policy
  - Add more/tune the network monitoring tools
  - Register the IP resources to your RIR
  - Schedule when to start the production service
- Write down your march to IPv6
  - Publish it



# Conclusion ...

- ... & recommendations
  - Get a clear idea of your goals/ objectives
  - Make an inventory of existing/ missing means
  - Progress step-by-step
    - Take notes of every step
    - Schedule tests then pilote phase ...
  - Find a way to share your experience





Questions ?

