Practical Tips to Start IPv6 Deployment

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True Story: Deploying IPv6 In a Big Network

- Worked for XS4ALL from 2007-2010
  - One of the larger Dutch Internet providers
  - Approx. 250.000 DSL subscribers
  - Now also the leading IPv6 provider in Netherlands
- Introducing IPv6 took the bigger part of 3 years
  - Getting numerous issues fixed in equipment and software
  - Gradually introducing the service to customers from initial pilot to standard delivery on new installations
- Preparations for this started back in 1999!
  - Started at the very early beginning of IPv6

Act Now, But at Your Own Pace

- Deploying IPv6 is not done over night
- It takes time to prepare and implement
  - One step at a time
  - Gain experience
  - Building trust and confidence
- You don’t have to switch off IPv4
  - You will be adding IPv6 to your services

Make the Plan

- Get the necessary training and education
- Create an inventory of services and equipment
- Replace and rebuild what is needed
- Switch on IPv6 and job done

- The real trick is sorting the priorities
  - You might change things around
  - You might not want to do it all
  - Short cut dependencies

Create a Training Area or Testbed

- Just attending a training course won't cut it
  - You need a place where you can practice
  - Developments go really fast, so you need to keep up
  - **The best way to learn is by doing it**
- Find or create a place where it is safe to make mistakes, because you will make them
  - Showing a working example makes it easier to convince others that there will be no harm done
  - Boost your own confidence
- This place can also be at home

Get Connected via a Tunnel

- If you want to practice, you need IPv6 connectivity
  - This is prone to several dependencies
- Basic connectivity can be arranged via tunnels
  - No longer depend on your upstream or ISP
  - Suitable for small scale tests and learning purposes
    - Eventually need to switch to ‘native’
- Use tunnel brokers such as SIXXS or Hurricane Electric
  - HE can also provide BGP at later stages
  - There are others available
    - Saudi Arabian regulator introduced their own service

Stop Wasting Money

- Almost all IPv4-only hardware and software has an alternative that also supports IPv6
  - In the long run this will save you time and money
  - Introducing IPv4-only at this stage will only make it worse
- Alter your purchasing procedures and demand IPv6
  - This is something you can do today
  - Don’t forget your internal software development
    - And refer to the previous slide about testbeds

Don’t Reinvent the Wheel

- You are not the only one deploying IPv6
  - And certainly not the first!
- Make use of other people’s experience
  - Websites such as http://labs.ripe.net
  - Mailing lists such as ipv6-wg@ripe.net
  - Meetings such as this one
- Share your experience and knowledge
  - Lots of people who are happy to help you

Home Work Assignment

Tonight at the dinner
ask at least one IPv6-related question

Questions?