

Migration to IPv6: critical and urgent

GEN6 Final Workshop

Experience in IPv6-transition for existing eGovernment infrastructure

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European Commission, DG CONNECT, Experimental Platforms



Two IPv6 Communications were tabled with priorities and action plans:

"Next Generation Internet-priorities for action in migrating to the new Internet protocol IPv6" (COM/2002/96) in 2002

"Advancing the Internet, Action Plan for the deployment of IPv6 in Europe" (COM/2008/313) in 2008

Digital Agenda for Europe Communication of 2010, the Commission enjoined Member States to make eGovernment services interoperable by supporting IPv6.

IPv6 projects

- IoT/M2M

- SPITFIRE – spitfire-project.eu

- IoT6 - www.iot6.eu



- Cloud

- BonFIRE - www.bonfire-project.eu



- eGov

- GEN6 – www.gen6-project.eu



- 5G

In all of them, IPv6 has a major role to play!

GEN6 - Governments enabled with IPv6 –

www.gen6-project.eu

"The aim is to stimulate the upgrade of eGovernment infrastructures, and services of public interest to IPv6".

- National pilots in Germany, Turkey, Greece, Slovenia, Spain, Luxembourg and cross border pilots.
- IPv6 Monitoring in Czech Republic and Portugal.

Commission actions

- Two **studies** were launched with the objective of monitoring IPv6 take-up.
- The Commission has introduced a specific indicator - **IPv6 readiness** – in the Digital Agenda Scoreboard
- [http://digital-agenda-data.eu/charts/see-the-evolution-of-an-indicator-and-compare-countries#chart={"indicator-group":"internet-usage","indicator":"AAAA_cov","breakdown":"IM_websites","unit-measure":"pc_websites","ref-area":\["ES"\]}](http://digital-agenda-data.eu/charts/see-the-evolution-of-an-indicator-and-compare-countries#chart={)
- This was directly fed by the **IPv6 Observatory** (www.ipv6observatory.eu) established in the context of the study SMART 2011/0059 on IPv6 Monitoring.

Provide

- Best Practices
- Roadmaps
- Benchmarks

to potential interested parties, to facilitate deployment and in particular transition from IPv4

Trends of IPv6 adoption

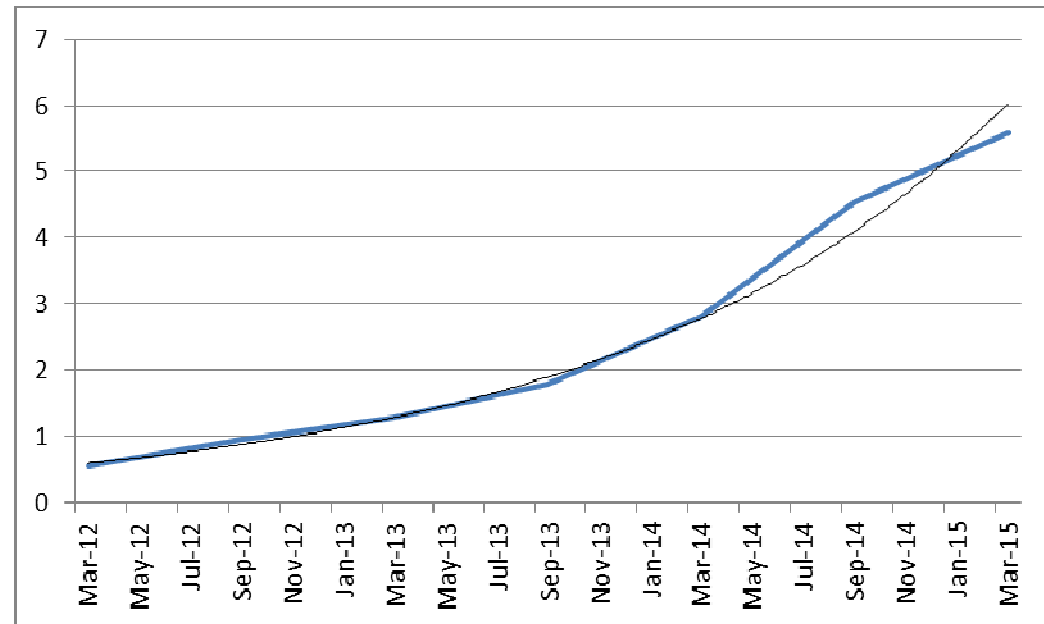
- Google figures show that the worldwide IPv6 traffic has more than doubled every 8 months

5.58% Mar 15

2.81% Mar 14

1.28% Mar 13

0.56% Mar 12



The need for end-to-end Experimentation

- The heterogeneity of the "**all-IP scenarios**" implies that none of the many players involved will be able to understand the "whole network"
 - complex and variable
- Need for **hands-on and large-scale, end-to-end** experiments with the different "components", wireless and fixed, public and private, and with "realistic" **applications**



IPv6 is spreading too slowly...



**IPv6 is critical and
needs to be deployed urgently!**

In Conclusion...



- IPv6 has started taking-up, doubling its penetration every 7⁺ months, but a lot remains to be done
 - the level of preparedness varies across Europe
 - the same with the level of commitment of operators
- Companies, and in particular SMEs, are not ready; nor are Governments in general, not even many Universities...
- We need to accelerate deployment of IPv6 in order to be able to fully exploit the potential of IoT/M2M, Cloud and eventually of 5G – as well as of the European experimental facilities



Thanks for your attention !

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Experimental Platforms

Net Futures

DG CONNECT

European Commission



cordis.europa.eu/fp7/ict/fire