

GOVERNMENTS ENABLED WITH IPv6

A Project Overview

The GEN6 Project





Project Data

- ICT PSP call 2011
 - Pilot Type B
 - ***Theme 4: ICT for Innovative government and public services***
 - 4.3: Piloting IPv6 upgrade for eGovernment services in Europe
 - From 2012-01-01 to 2014-12-31
 - Funded by

European Commission Directorate General for Communications Networks, Content & Technology. Short: **DG CONNECT**.

<http://www.gen6-project.eu>

http://ec.europa.eu/information_society/policy/ipv6/index_en.htm



Project Members

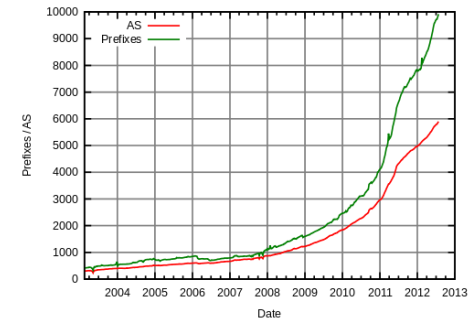
- Active partners
 - Germany: Devoteam, Fraunhofer, Citkomm
 - Spain: UMU, MINHAP, MINETUR
 - Turkey: TUBITAK ULAKBIM, TURKSAT
 - Luxembourg: UL
 - Slovenia: ULFE
 - Netherlands: TNO
 - Greece: GRNET, CTI
 - Cyprus: INTELEN
 - Czech Republic: CZNIC
- Observer
 - Netherlands: Gemeente Alkmaar
 - Czech Republic: MoIT, MVCR
 - Spain: Consulintel

The GEN6 Project



- IPv6 is on its way!
 - v4 addresses only in small quantities available
 - Provider are changing to IPv6 in "quiet mode"
 - IPv6 World Days are drawing attention to IPv6
- The implementation process
- National Roadmaps
 - USA (Gov), India, Malaysia, Uganda, Thailand,
- But where are the success stories from governments?

IPv6 prefixes and AS





Project Objectives

- GEN6 will provide general guidelines for planning and transition steps.
 - IPv6 networks topologies and addressing types
 - IPv6 addressing technologies and addressing plans for Governments
 - IPv6 transition technologies and support
 - IPv6 deployment support
- The outcome of the pilots will provide additional documentation based on transition experience in the fields of:
 - network equipment (switches, router, firewalls, load balancers, ...)
 - network provider access points (CPE, fibre, xDSL, ...)
 - middleware and technologies like webserver, portals, databases
- Self Assessment

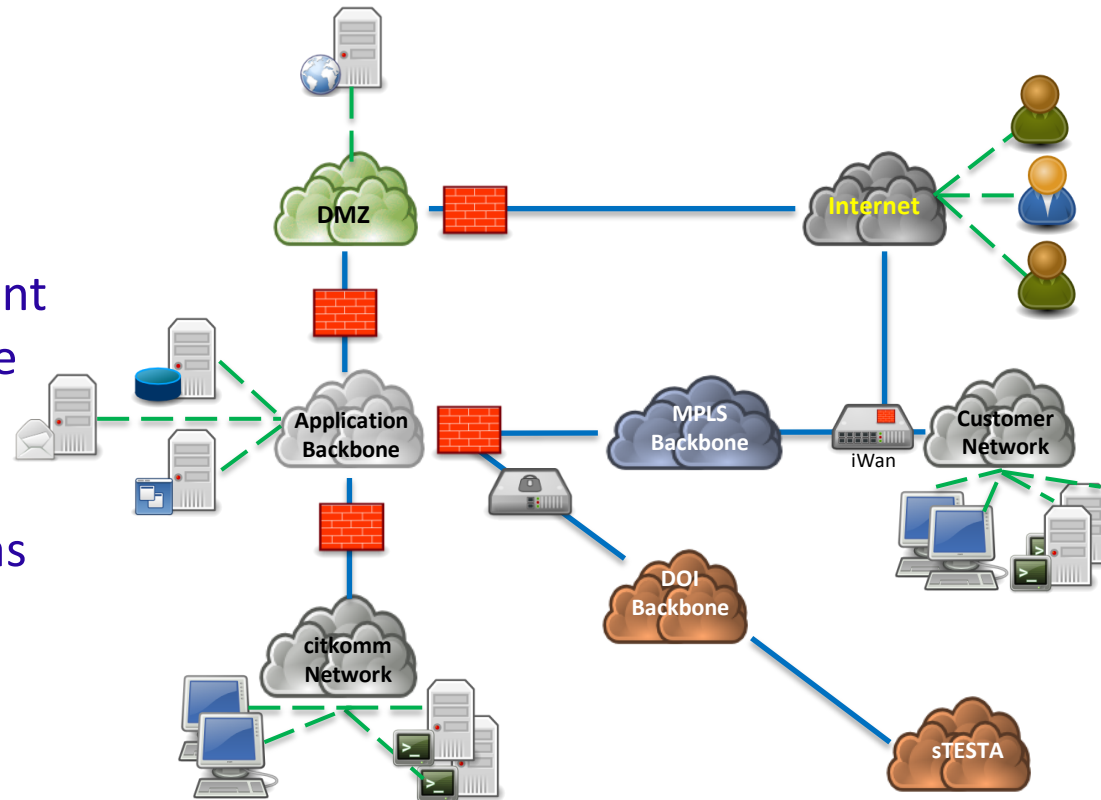
Project National Pilots

- Different national pilots, some of them replicated in a complementary way in different countries, considering different existing approaches with IPv4:
 - IPv6 upgrade of eGovernment Network Infrastructures, e-Identification, Services and Applications (Germany, Spain and Turkey)
 - IPv6 upgrade of Secure Cloud Services (Luxembourg)
 - IPv6 upgrade of Energy Efficiency in School Networks (Greece)
 - IPv6 upgrade of Emergency Response Environments (Slovenia)

Germany – Data Center Transition

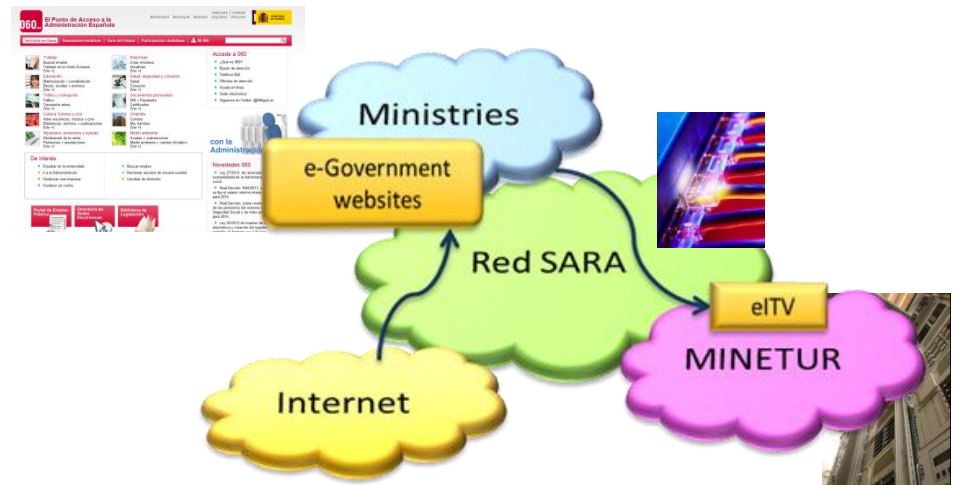
- Enabling a municipal datacenter's network and infrastructure for IPv6
- Infrastructure shall be implemented under the address space de.government and will be connected to the DOI network

- (1) Transition of the network as fundamental part of the backbone infrastructure
- (2) Transition of productive servers and other relevant systems



Spain– e-Government Services Transition

- Aims to foster the IPv6-readiness of e-Government services
- Takes advantage of Red SARA, the network that connects all Spanish Public Administrations, as well as the shared services that Red SARA provides
- 3 complementary action lines
 - Upgrade of Red SARA so that it can transport IPv6 natively, allowing IPv6 communications between administrative units
 - Transition mechanism for offering IPv6 access to public online services, with a shared service approach based on the existing IPv6 Internet connection provided by Red SARA
 - Upgrade to native IPv6 of one the e-Government existing applications (eITV, related to the process of registering a motor vehicle)



Turkey – Citizen Service Portal Transition

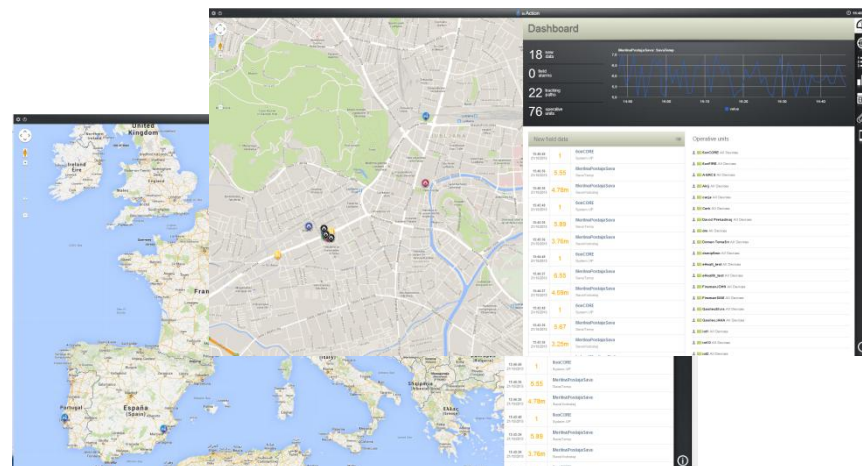
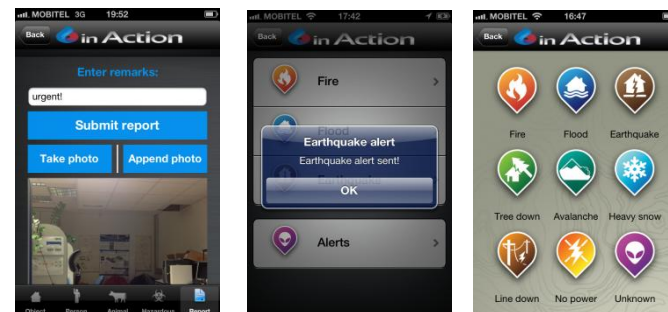
- Enabling IPv6 in e-Government Gateway (EGG) Portal
- Backend IPv6 support
 - Making necessary **software updates** (i.e. applications, operating systems) on services that are already on EGG.
 - Making necessary **hardware upgrades** where necessary.
 - Integrating new public services that are **not yet part of the EGG** over IPv6.



Slovenia – PPDR communications and intervention management solution

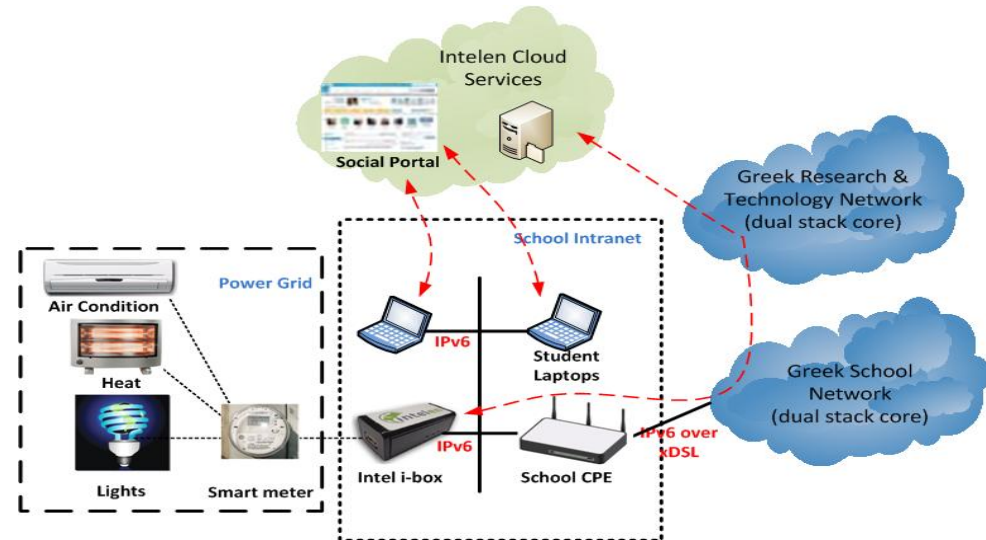
6inACTION is an advanced compact mobile solution designed to provide first responders with reliable communications and IoT-driven situation surveillance and intervention management services in emergency situations.

www.6inaction.net



Greece – Energy Efficiency at School on IPv6

- The Energy Efficiency pilot aims to influence the behavior of the local school communities by providing real-time services over IPv6-enabled grids.
 - Increasing the energy awareness of the school communities
 - Reducing the energy consumption and consequently the CO2 footprint of the participating school buildings by at least 10%
 - Giving a sign that IPv6 technology can be a “green” enabler

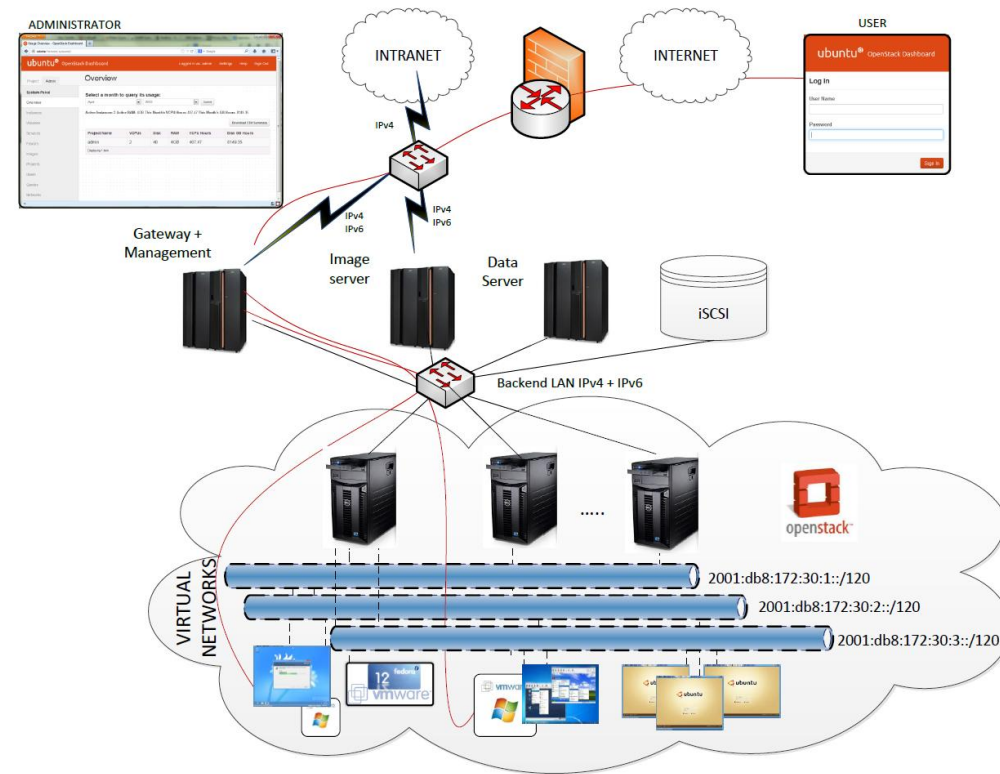


- Correlate energy consumption with environmental measurements from temperature sensors and weather stations over IPv6 in collaboration with the University of Murcia.

Luxembourg – Secure Government Clouds on IPv6

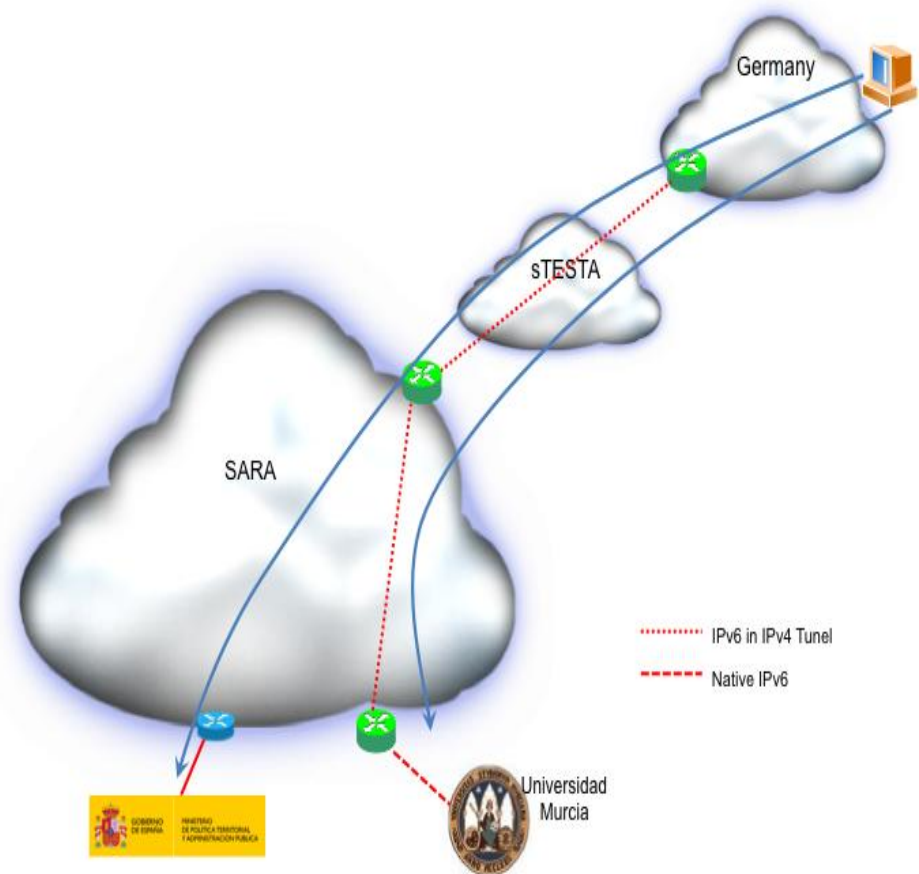
Cloud technologies are being adopted by governments around the world, and IPv6 is here to stay. It is important to know what changes the transition to IPv6 triggers in the cloud network and how the security configuration of such a system can change.

Our pilot is based on an open source cloud distribution used in a government setting, and examines its IPv6 support.



Project Cross-Border Pilots

- Interconnection of national government backbones and European networks like sTESTA, in order to ensure a wider IPv6 readiness and interoperation for European cross-border services.
- Evaluate and collaborate with the national networks in order to make IPv6 enable the PEPs (Pan European Proxy Service) entities that are being used on STORK and STORK2.0 and that now are a key component of the end user authentication process based on national ID on several services around Europe (see for example the ECAS access system).
- Public Safety Networks exploiting the greater benefits brought in to this critical sector by IPv6 features (such as “on the fly networking”).



IPv6-readiness for cross-border services

Objectives

- Design and provide end to end IPv6 connectivity for eGovernment services considering the different situations that actually concur on the LSP STORK2.0, SEMIRAMIS, eCODEX, EUCARIS, etc).and operational services like the ones corresponding to ISA (Interoperability Solutions for Administrations)
- This IPv6 readiness should be based in a set of interoperability networking scenarios taking into account scenarios based on sTESTA taking into account operational eGovernment service already use it.



Project Dissemination

- Communication activities and road shows to ensure the dissemination in public administrations and other relevant stakeholders (targeted to experts and public authorities).
- Events organized together with the EC
- Publications, internet presence (web site, Facebook, twitter) and presentations with special focus on eGovernment events, as well as clustering activities.
- Deliverables
- Leaflets and Booklets for quick or more details on our work



Project Information

- Website:
 - www.gen6-project.eu/
- LinkedIn:
 - www.linkedin.com/groups/Governments-enabled-thru-IPv6-4243531
- Twitter:
 - twitter.com/genv6
- Google+:
 - plus.google.com/109365524704933447667
- Facebook:
 - www.facebook.com/groups/353359468011864
- Slideshare:
 - www.slideshare.net/GEN6