

## GEN6: Governments ENabled with IPv6

### Encouraging the transition to IPv6 in European public administrations

The shortage of IPv4 Internet addresses, which became evident with **depletion of the IPv4 Internet address repository managed by IANA**, forces the actors involved in the development of the information society to get ready for the deployment of IPv6, whose addressing space is virtually unlimited, as a means to ensure the continuity of services.

Aware of the active role public administrations play in the introduction of technology innovations, the EU identified the need for public administrations to lead the transition to IPv6, one of the priorities in the **E-Government Action Plan 2011-2015**: ‘administrations will need to take action to upgrade IPv6-relevant e-Government infrastructure (portals, websites, applications, etc.) and online services of public interest.’ As a matter of fact, it was necessary to underscore the role public administrations should play in the transition to IPv6, in view of the little impact that previous action by the EC had had<sup>1</sup>.

**The boost given by the EC to the transition to IPv6 in public administrations is also present in the EU Competitiveness and Innovation Framework Programme - CIP<sup>2</sup>.** Spanning seven years, from 2007 to 2013, it is structured in three specific programmes, the Information and Communication Technologies Policy Support Programme – ICT-PSP being one of them. One of the objectives is the **preparation of public administrations for the move to IPv6** within theme 4, ‘ICT for innovative

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<sup>1</sup> See ‘Action Plan for the deployment of Internet Protocol version 6 (IPv6) in Europe,’ European Commission, May 2008, COM(2008) 313.

<sup>2</sup> Adopted on 24 October 2006 by Decision No. 1639/2006/EC of the European Parliament and of the Council.



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government and public services.’ The programme urges companies and institutions in member states to participate, within a framework of public-private cooperation, in a project to update e-government infrastructure and public services to IPv6.

In line with this, the Governments Enabled with IPv6<sup>3</sup> – **GEN6 international project** was launched in January 2012, with participants from Germany, Luxembourg, Netherlands, Slovenia, Spain, Czech Republic, Greece, Cyprus and Turkey. This programme is aimed at boosting the deployment of IPv6 in Europe through a series of pioneering transition experiences of public administrations in various countries and the subsequent transfer to the EU as a whole.

The pioneering experiences will be realised through a series of national and cross-border complementary pilot projects to test the use of IPv6 in the existing infrastructure of EU public administrations, which are expected to be a catalyst for widespread deployment. The pilot projects will cover such areas as e-government (making several websites accessible through IPv6 at the national and local levels), secure public services in the cloud, energy efficiency in schools and emergency response systems.

In addition, the pilot projects will result in guidelines, methods, tools and best practices to disseminate the knowledge of IPv6 and enable the transition from IPv4 to IPv6, especially with regard to Internet topology, transition technology, training and deployment support.

Given their key role in the Development Plan for the Introduction of the IPv6 Protocol in Spain, the Ministry of the Treasury and Public Administration and the Ministry of Industry, Energy and Tourism are members of the GEN6 consortium. The other Spanish partners are the University of Murcia and the firm Consulintel (total Spanish share 25%).

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<sup>3</sup> For further information on the project, visit its website at <http://www.gen6.eu/home>.



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**Spain's participation** will focus on the initiatives required to update the **Public Administration Network Addressing Plan** to IPv6, making it possible for the entities in the SARA Network (connecting public administrations in Spain) to communicate using the new protocol. **In addition, two pilot projects will be carried out, one with national scope and the other with a cross-border character.**

The **project with national scope** will have two main goals. On the one hand, it will **make several public administration websites accessible through IPv6** using the owning institutions' connection to the SARA Network and **updating the Network's infrastructure to be the IPv6 Internet gateway**. On the other, **connectivity scenarios between IPv4 and IPv6 environments** will be created **within the SARA Network**, which means updating some of the services provided by the Ministry of Industry, Energy and Tourism to other public entities through the Network and making them available in IPv6, and making sure they can be used by these entities irrespective of whether they connect through IPv4 or IPv6.

As to the **cross-border pilot project**, it will focus on showing the viability of IPv6 to transfer information to and from other member states for **cross-border e-government services now being provided through IPv4 and the sTESTA network**, connecting EU institutions and member states.

Although the deployment of IPv6 is still quite limited, the future of the Internet is associated to the transition to this protocol. GEN6 will make a significant contribution to its deployment while boosting e-government infrastructure at the European level.