6DEPLOY: IPv6 Deployment Support Project Overview

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The PDF files are available from www.6deploy.org

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Contribs & updates

Martin Potts, MARTEL	11/2008
Bernard Tuy, RENATER	10/2008
Martin Potts, MARTEL	10/2008

Introduction

6DISS is over …

A lot of experience was gained during that 30-month project

….. and much documentation was produced

- Should you have any technical question related to IPv6 … look first at http://www.6diss.org – you will probably find the answer

This new project "6DEPLOY" has been set up to share the experience in a practical way

Key Data

13 Partners:

- Martel (Co-ordinator)
- Industry/Commercial:
  - Cisco, Consulintel
- NRENs:
  - RENATER, GRNET, FCCN, NIIFI/HUNGARNET, UNINETT, BREN
- RIRs:
  - AfriNIC, LACNIC (strong associations also with RIPE and APNIC)
- Universities:
  - UCL, Soton-ECS

Key Data

Duration: 1st May 2008, for 30 months

EC Funding: €1M

Objectives (1)

6DEPLOY exploits the experiences from 6NET, EURO6IX, 6DISS and GÉANT regarding the building of pan-European platforms for IPv6 in core, access and enterprise networks.

Network services such as Mobility, Multicast, DNS, routing, monitoring and management, and an increasing number of applications are now available. Transition strategies have been developed and validated. This experience will now be transferred.

Objectives (2)

Specifically, 6DEPLOY will:

- organize workshops for the e-Infrastructure community and give practical advice and hands-on support for deploying it in their environments
- work on deployments in Europe and in developing countries; exchanging experiences and best practices
- improve the competitiveness of European industry by informing about experiences from IPv6 deployments in other regions
- gain expertise with which to support *more-commercial* deployments in European industries (e.g. Emergency Services, Health, Broadcast, Transport, Schools, Environment, Gaming, …)

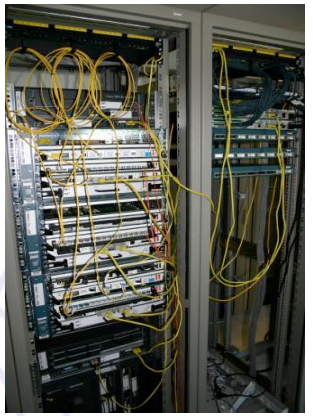
Objectives (3)

- help to build consensus between European researchers, by enabling and exploiting synergy among related projects (e.g. GÉANT-2, SEEREN-2, SEE-GRID, EUMEDCONNECT, CLARA, ALICE)
- encourage - and enhance the effectiveness of - the coordination between National and pan-European e-Infrastructure initiatives, by being a focal point for IPv6 activities, giving IPv6 training and supporting IPv6 deployments
- open up the EC FP7 ICT programme to the participation of International Cooperation Partner Countries in Africa, Asia and Latin America, by involving organisations which influence e-Infrastructures on their continents

Objectives (4)

- improve scientific cooperation between Europe and the target regions (Africa, Asia and Latin America,) by exchanging knowledge and experiences through direct practical support for deployment, training events, etc.
- support interoperability and standards, by informing of the latest IPv6 standards, equipment hardware and software releases, and IPv6 policies (RIRs)

Technical Approach 1: Workshops



Expertise & material from previous EC projects

Personal expertise & Cookbooks from:
- GÉANT
- 6NET
- Euro6IX
- 6DISS

Training workshops
Training trainers

In conjunction with:
- AfriNIC/AfNOG
- LACNIC
- RIPE-NCC
- APNIC
- ARIN

Remote testbeds
E-learning course
Helpdesk

Support (1)

Support (2)

On-site support for IPv6 deployments

All infrastructures:
- Research
- Education
- Commercial

Technical Approach 1: Workshops

Training will be given in each of the targeted RIR regions (AfriNIC, LACNIC and APNIC) once or twice per year.

Training will also be given to European industries and to FP7 projects.

Workshops will be aligned as far as possible with parallel events. e.g. AfriNIC, LACNIC, APNIC, AfNOG, APRICOT, ISOC meetings and similar operator and Internet Registries events, national/regional IPv6 Task Force meetings, other conferences, etc.

Technical Approach 1: Workshops

In order to ensure the impact of the 6DEPLOY training is effective, the participants should be deployers of the technology in e-Infrastructures (e.g. research establishments, Universities and NRENs) and industry. i.e. people who will collectively determine the rate of deployment of IPv6.

Technical Approach 2: Material

Module Topics		
IPv6 Introduction	IPv6 Mobility	IPv6 Routing protocols
IPv6 Protocol	IPv6 Multicast	IPv6 - IPv4 Co-existence
IPv6 Addressing	IPv6 DNS	IPv6 DHCP
IPv6 Addressing case studies	IPv6 Associated protocols	Equipment configuration
IPv6 Network Management	IPv6 and cellular networks	IPv6 and DSL
IPv6 Autoconfiguration	IPv6 Security	Deployment scenarios
IPv6 and sensor networks	IPv6 QoS	"How to" guide for developers

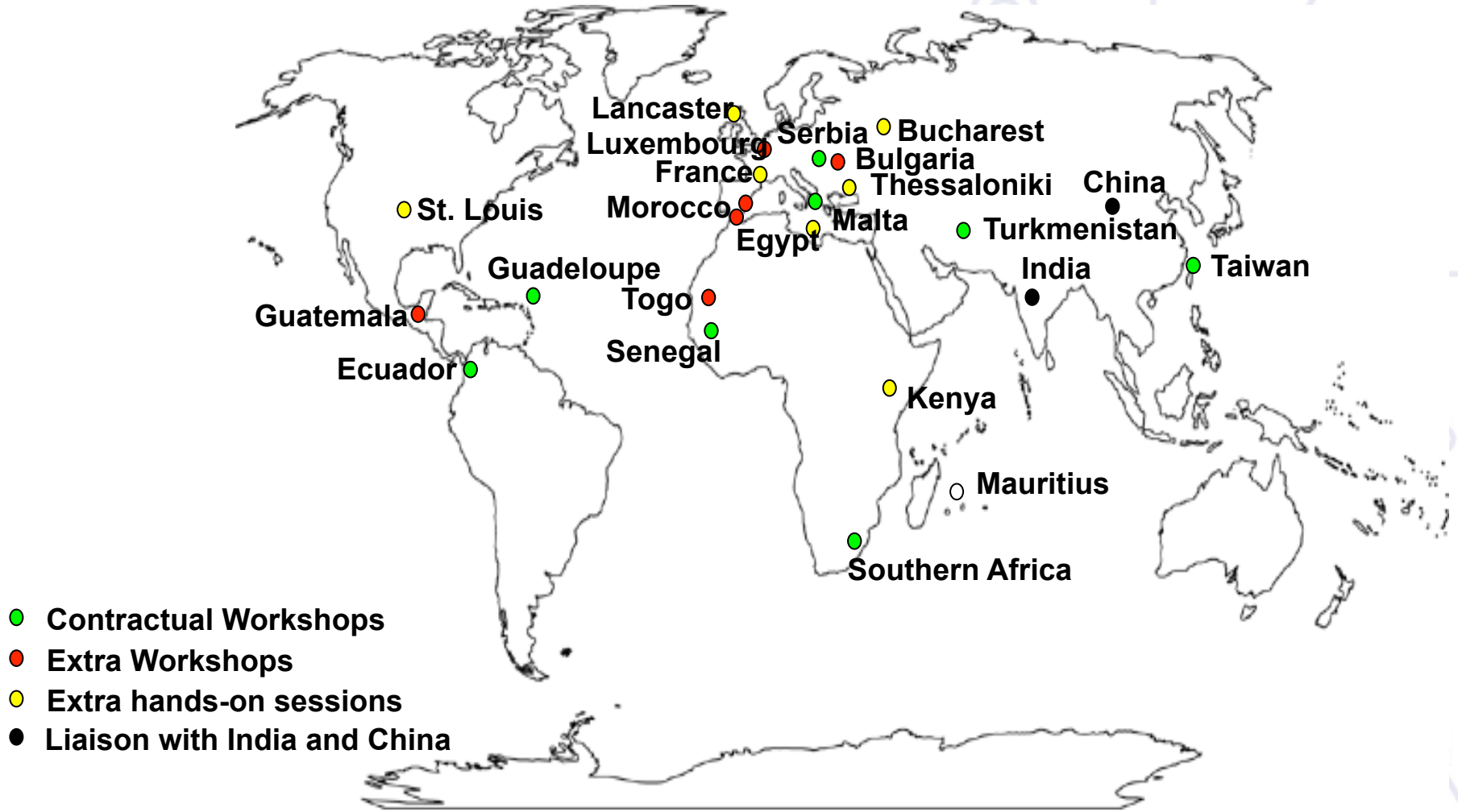
Technical Approach 2: Material

Documentation of IPv6 Deployment Use Cases in (for example):

- School Networks
- Campus Networks
- Large-scale commercial ISPs
- Telecentres
- Public safety

"World Tour Programme"

Contacts made in 6DISS



"World Tour Programme"

6DEPLOY Workshops done so far:

- Salvador / Bahia, Brazil (May 2008) in conjunction with the LACNIC XI meeting
- Nairobi (June 2008) - used 3 remote testbeds (in Paris and Sofia (from 6DEPLOY) and Brisbane (from APNIC))
- Maputo (August 2008) - specifically requested to be in Portuguese
- Haiti (August 2008)

Conclusion

6DEPLOY will achieve part of the work

There is room for lots of other initiatives

Cooperation, sharing info, etc. is a must

If you're planning an event with a bit of IPv6 info, training, …

- Don't hesitate to get in touch with us

Contact : helpdesk@6deploy.org

IPv6 Workshop

Name of Workshop

Location, Date

Outline

Workshop objectives

What *you* can expect

What *we* expect

6DEPLOY project and resources

How the session will be run and organized

Workshop Objectives

To introduce IPv6 concepts and differences from IPv4

The contents include:

- Basic IPv6 protocol operation
- Core IPv6 services and IPv4/IPv6 co-existence mechanisms
- IPv6 routing
- IPv6 deployment – getting up and running

To give you hands-on (Cisco, XP, Linux, …) experience

To enable you to go home and get IPv6-connected!

What *you* can expect – Day #1

IPv6 basics

"Transition" mechanism basics

Enabling IPv6 on hosts and local routers

Applications

- DNS
- Web

=> Lab work

What *you* can expect – Day #2

Routing

General discussion. Be prepared to present:

- your network topology
- your plans to deploy IPv6
- your questions / issues

Security

=> Lab work

What *you* can expect – Day #3

Managing IPv6 networks

=> Lab work

Case studies

Feedback questionnaire

What *we* can expect

Provide us with your experience and your needs to go ahead in IPv6 deployment

Ask ("good") questions at any time

Take the chance to gain a solid experience in the lab sessions (hands-on)

Remain in contact afterwards … and be informed of all the initiatives related to IPv6 in your region

Fill in the feedback questionnaire …


6deploy
Questions ...