

AFNIC

IPv6 activities in a TLD registry

IPv6 Summit

What is AFNIC?

- **AFNIC is the only structure able to delegate domain names in .fr (France), .re (Reunion Island) and .tf (French Southern Territories).**
- **AFNIC is a not-for profit organization which was set up in 1998:**
 - it was managing more than 600,000 domain names on June 30th,
 - more than 1,000 registrars are members of the association,
 - it employs 40 people for a 2005 annual budget of 4,7 M€,
 - Website : www.afnic.fr
- **AFNIC is in charge of ccTLDs connected to the French national territory:**
 - *.fr* for France, *.re* for Reunion Island, *.tf* for French Southern Territories, but also Mayotte Island, Wallis and Futuna Islands, Saint-Pierre and Miquelon.

AFNIC in a nutshell

- **An open and inclusive structure.**
- **Committed to general interest.**
- **With an aim of helping to develop the Information Society.**

Our Principles

- **To be a not-for-profit organization**
- **To provide a neutral platform for concertation among stakeholders**
- **To protect the specific interests of each stakeholder and to seek for consensus between them**
- **To provide a high-quality service level to our clients and to internet users**
- **To act in respect with our principles of equity and non discrimination**

Three main missions

- **Technical missions:**
 - to delegate *.fr* and *.re* domain names marketed by registrars,
 - to ensure *.fr* and *.re* domains accessibility from every point of the Internet,
 - to keep the Whois database up-to-date.
- **General interest missions:**
 - to ensure the continuity of French national territory on the Internet,
 - to be a resource center for French public institutions for registry services.
- **Scientific missions:**
 - to foresee Internet evolutions,
 - to promote cooperation with other countries in our fields of expertise.

Our core aims

- **To deliver Registry services in the French Internet space.**
- **To fuel governance for our services by bringing together the local Internet community.**
- **To contribute to the development of the information society in France and at an international level.**

IPv6 Activities at AFNIC

IPv6 at AFNIC: Reasons & Motivation

- **Technical reasons for AFNIC's Network:**
 - as a Networking actor, AFNIC must master IPv6 technology and progressively integrate it in its network.
- **Technical/political reasons for the “French Internet”:**
 - the DNS is among the most critical IP applications → Support of IPv6 in the DNS is a requirement for the Internet-v6 deployment,
 - since its creation, AFNIC has embraced IPv6 technology in order to facilitate its deployment in France.

IPv6 at AFNIC: Implementation & Early Deployment

- **1996-2000: Participation in G6 activities**
 - INRIA among the early G6 members in 1996. The French NIC (formerly “NIC-France”), part of INRIA at that time, offered its DNS expertise to the G6 community,
 - the French NIC became AFNIC, a French association founded in 1998. Support for IPv6 and its related activities have been increasing since then.
- **2000: Started an IPv6 testbed**
 - a test platform made and interconnected with the G6bone,
 - experimentation of IPv6-enabled network services: DNS, Web, ...
- **2001: Started basic IPv6 deployment**
 - interconnected with the Renater2 pre-production network (“IPv6 pilot”)
 - *native* IPv6 support made for a *.fr* official secondary DNS server (ns3)

IPv6 at AFNIC: Validation & Full Deployment

- **2002-2003: Evaluation and integration in production**
 - native interconnection with Renater3 production network,
 - progressive support of IPv6 in production (dual-stack) for basic network services: DNS, FTP, SSH, ...
 - active participation in the IETF interoperability activities
 - standardization of DNS extensions to support IPv6 (RFC 3596: AAAA, ip6.arpa)
 - **October 2003:** IPv6 full support in the daily *.fr* et *.re* Registries operations along with the migration to the new version (IPv6-enabled) of the well-known ZoneCheck utility:
<http://www.afnic.fr/actu/nouvelles/international/CP20030915>

IPv6 at AFNIC: Just carry on!

- **2004 → today: Increasing involvement, more results**
- **July 2004:** The *.fr* was among the first 3 TLD (with *.jp* and *.kr*) whose DNS IPv6 addresses were registered in the root zone:
<http://www.afnic.fr/actu/nouvelles/international/CP20040722>
- assisted IANA in writing procedures for TLD delegation with IPv6 support: <http://www.iana.org/procedures/delegation-data.html>
- IPv6 expertise, documentation and training support for the French and other TLDs communities (e.g. AFNIC's "Collège international")
- active participation in IPv6 and DNS related topics within IETF and RIPE communities.

Thank you for your attention

Challenges of IPv6 deployment, IDATE

http://www.telecom.gouv.fr/fonds_documentaire/rapports/ipv6.pdf