

IPv6 .kr DNS Deployment Plan

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Contents

- ◆ Background
- ◆ Goals
- ◆ Strategy
- ◆ Main Tasks
- ◆ Schedule
- ◆ Output

Background

- ❑ Korean government plan for commercial IPv6 deployment by 2005
- ❑ Increasing needs for early introduction of .kr DNS that is a basis for IPv4 and IPv6 application services
- ❑ KRNIC plan for IPv6 .kr DNS based on experiences in IPv4 .kr DNS

Goals

- ❑ Establishment of IPv6 .kr DNS IPv6 Address Query Service
 - Establishment and deployment of additional registration system for AAAA type RR to perform IPv6 address query for domain name
 - Establishment and deployment of PTR RR registration system under IP6.arpa zone to perform domain query for IPv6 address
- ❑ Establishment of IPv4/IPv6 Dual Network for .kr DNS
 - Establishment of DNS network that accept both IPv4/IPv6 packets
 - Deployment of IPv4/IPv6 dual-stack on DNS server
- ❑ Commencement of IPv6 .kr DNS Trial Service
 - IPv6 DNS trial service that support IPv6 based application services in connection with KOREAv6

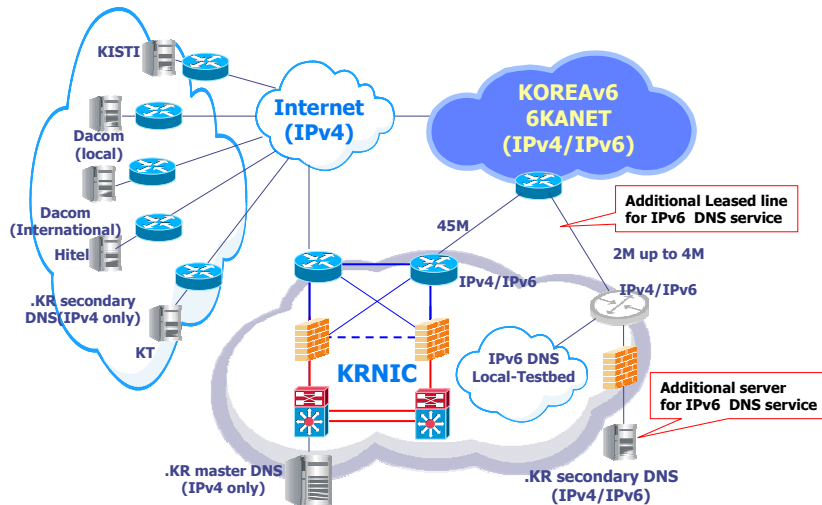
Strategy

- Establishment and operation of separate IPv6 .kr secondary DNS keeping stability in IPv4 .kr DNS service
- Cooperation inbetween departments inside KRNIC for systematic IPv6 .kr DNS introduction and service commencement
 - > IP Address Management Team
 - > Domain Tech Team
 - > International Root DNS Center
- Cooperation with organization outside KRNIC for IPv6 .kr DNS trial service and service expansion
 - > NCA
 - > ETRI

Main Task No. 1

- ✓ Establishment of IPv6 .kr DNS & Trial Service Network
 - Establishment of dual-network for IPv4/IPv6 .kr DNS
 - Internal test with equipments for .kr DNS IPv6 address query service
 - Connection with KOREAv6 that is IPv6 based test network
 - Additional configuration for separate IPv4/IPv6 dual-stack router & security function
 - Consideration to upgrade the bandwidth of leased line according to future IPv6 DNS traffic

Main Task No.1 - IPv6 .kr DNS Topology



Main Task No. 2

- ✓ Upgrade of Domain Registration System
- Upgrading domain registration system for IPv6 name server information registration
- Adding IPv6 address search function in Whois search

Main Task No. 3

- ✓ IPv6 .kr DNS Trial Service
 - Sharing knowledge for DNS configuration & operation by running Q&A portal site
 - Research for new technology such as EDNS0 & Dynamic Update to overcome 512 byte UDP packet limit

Schedule

- January : IPv6 .kr DNS deployment plan
- Feb. - Mar. : IPv6 Network / IPv6 .kr DNS
- Aug. : Domain Registration System Upgrade
- Jun. - Dec. : IPv6 .kr DNS Trial Service
- Jul. - Aug. : Trial Service Expansion
- Aug. - Sep. : IPv6 DNS Portal Site
- Sep. - Nov. : IPv6 DNS operation guideline

Output

- ❑ IPv6 .kr DNS and Network
- ❑ Portal Site for sharing IPv6 DNS technology
 - Providing know-how to establish IPv6 DNS and references
 - Q&A board to share knowledge for DNS configuration & operation
- ❑ DNS operation guidelines for operator
 - Solutions for potential problems on DNS
 - Proper DNS configuration & operational information

Thanks 😊