KRNIC Updates

Aug 2008
KRNIC of NIDA
ip-all@nida.or.kr

NIDA
National Internet Development
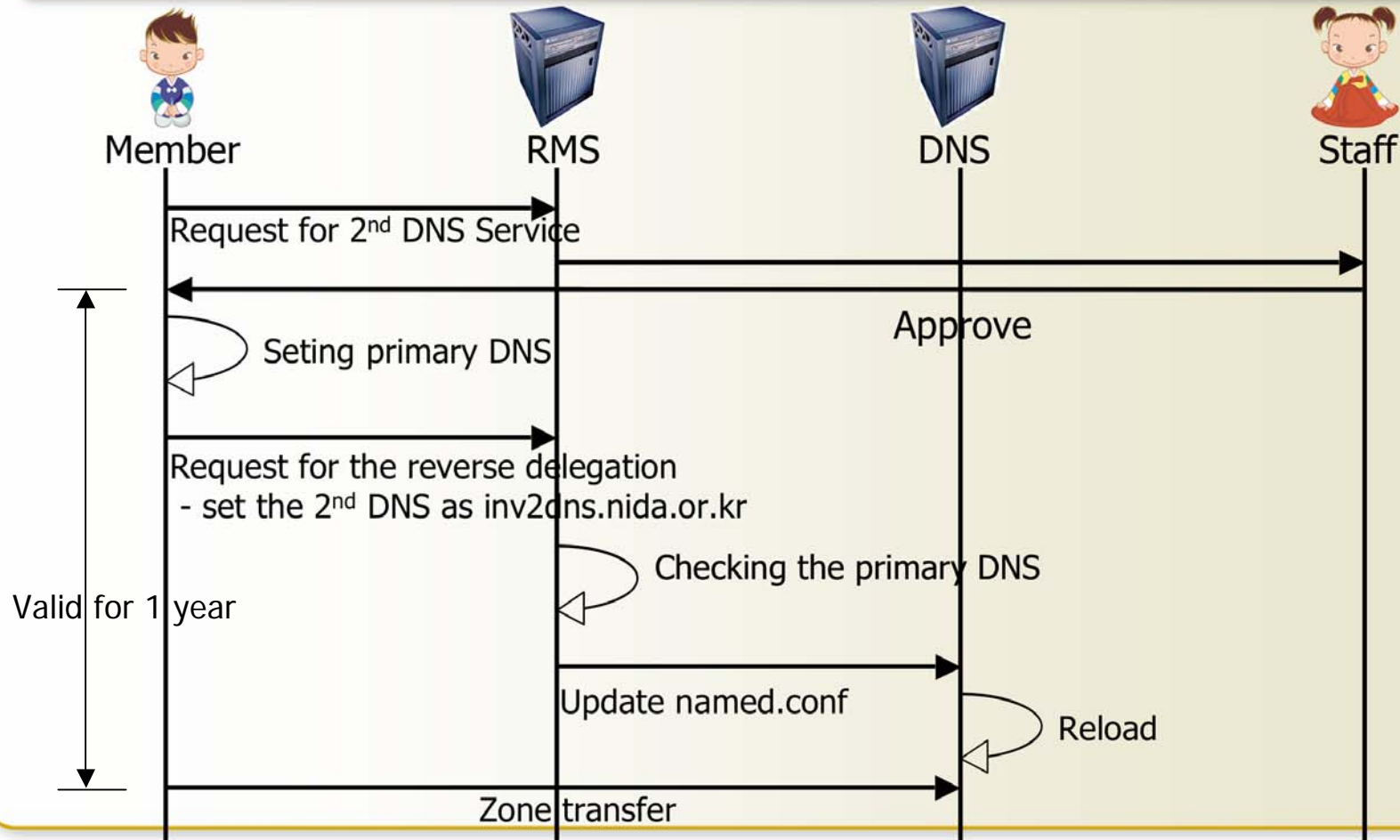Agency of Korea

System improvement

Secondary Reverse DNS

- To work as a secondary reverse DNS f or small-size KRNIC members who run single reverse DNS

- inv2dns.nida.or.kr

- As of Aug. 19th
  - used by 10 KRNIC members
  - Runs 201 reverse zones

- Features
  - Valid for 1 year
  - Should build their own 2nd DNS within 1 year
  - Used only for reverse DNS
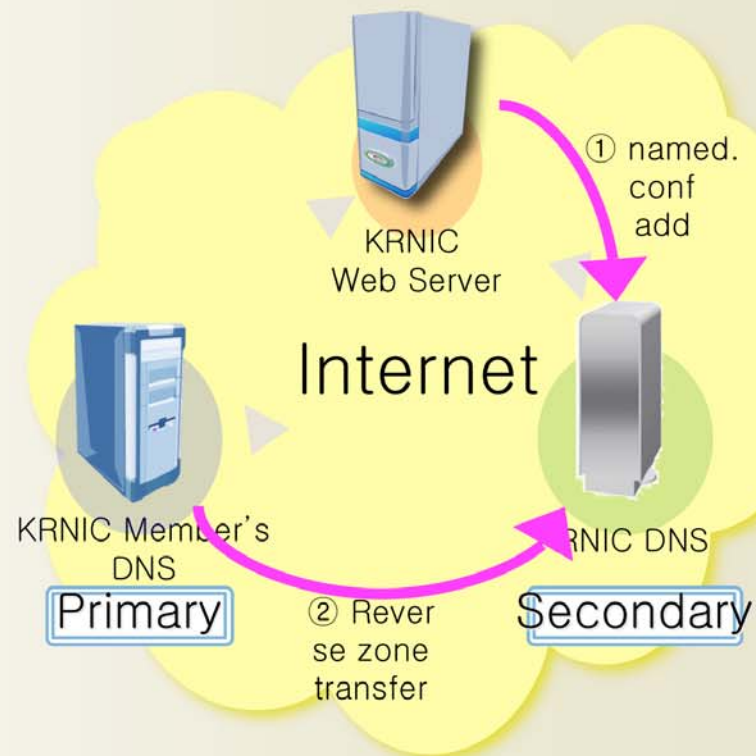
KRNIC Web Server

① named. conf add

Internet

KRNIC Member's DNS

Primary

② Rever se zone transfer

RNIC DNS

Secondary

System improvement

Secondary Reverse DNS

Member	RMS	DNS	Staff

Request for 2nd DNS Service

Approve

Seting primary DNS

Request for the reverse delegation
 - set the 2nd DNS as inv2dns.nida.or.kr

Checking the primary DNS

Valid for 1 year

Update named.conf

Reload

Zone transfer

System improvement

Secondary Reverse DNS

- Members don't know how to set primary & secondary DNS relation
  - When KRNIC approves the request for the 2nd DNS Service, KRNIC sends to the member a guideline for how to configure DNSes.

```
예시 2)
- named.conf 파일에 추가(※ 인버스 도메인 존 별로 설정할 경우)
    zone "xxx.xxx.xxx.in-addr.arpa" {
     type master;
     file "인버스 존 파일명";
     allow-transfer { 219.253.23.165; };  ->  추가할 부분(진흥원 2차 DNS의 IP주소)
    };
```
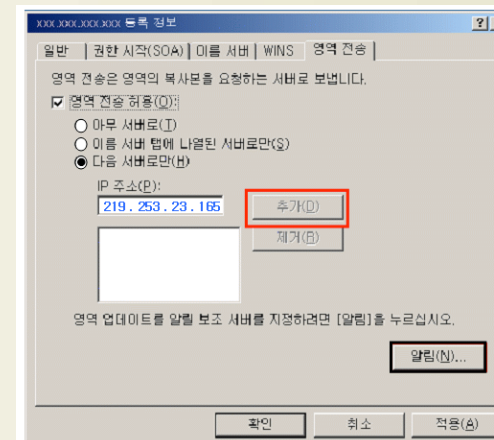

- KRNIC network operators are reluctant to add additional DNS
  - They worry about the DDoS attack aimed to the DNS.
  - Add Additional Leased Line (HANANET, 2Mbps) and built the DNS in separate network.

System improvement

XML/REST based DNS Web Service

- XML interface for APNIC members to update their reverse DNS records

```
$TTL 43200
115.144.in-addr.arpa.   IN      NS      b.dns.kr.
115.144.in-addr.arpa.   IN      NS      c.dns.kr.
115.144.in-addr.arpa.   IN      NS      d.dns.kr.
115.144.in-addr.arpa.   IN      NS      e.dns.kr.
115.144.in-addr.arpa.   IN      NS      f.dns.kr.
115.144.in-addr.arpa.   IN      NS      g.dns.kr.

KRNIC. 115.144.in-addr.arpa.    IN      TXT  "Generated at Fri May
11:07 2006 with 6 NS Records."
```

```
Name : 144.115.in-addr.arpa
IP Version : ipv4
Authorithy : APNIC
Version : 1.0
Revision : 0
Published : 0
Modified :
HREF : https://test-services.apnic.net/services/rdns/ipv4/115/144
NServer 1 : b.dns.kr
NServer 2 : c.dns.kr
NServer 3 : d.dns.kr
NServer 4 : e.dns.kr
NServer 5 : f.dns.kr
NServer 6 : g.dns.kr
Contact 1 : HM127-AP(technical)
Contact 2 : HM127-AP(administrative)
Manager : Unknown
```

System improvement

XML/REST based DNS Web Service

- Monitoring System for the reverse domains is needed
  - Monitor the each DNS in the delegation path (APNIC, ARIN, KRNIC DNSes)
  - Listen to the situation of each DNS and Reverse Domain
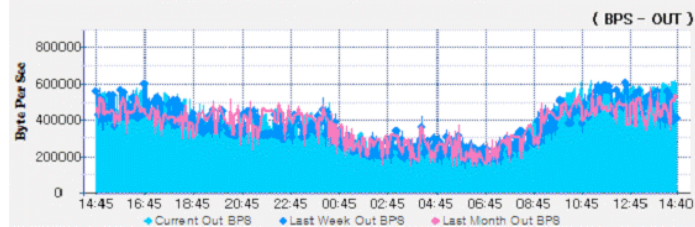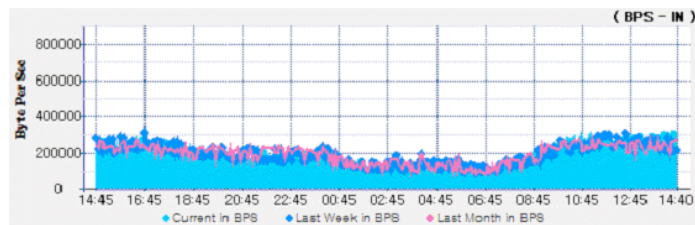
구분	In Bound				Out Bound				TOTAL
	MIN	MAX	AVG	CUR	MIN	MAX	AVG	CUR	
금 일	81,449	329,546	206,077	311,027	161,908	627,733	401,712	593,692	904,719
전 주	86,013	310,304	187,433	211,544	165,910	605,942	363,672	410,177	621,721
전 월	83,957	279,391	192,247	268,811	161,138	532,849	372,461	518,423	787,234

순위	Source IP TOP 10 IP 주소	질의수	순위	Target Domain TOP 10 URL주소	질의수
1	66.249.73.17	4506	1	207.246.117.123.in-addr.arpa	5820
2	70.84.138.226	4000	2	c.dns.kr	5565
3	208.69.34.8	3369	3	green.crossmedia.co.kr	4883
4	208.69.34.6	3038	4	b.dns.kr	4762
5	208.69.34.10	3015	5	f.dns.kr	4318
6	208.69.34.4	2669	6	e.dns.kr	4281
7	168.126.63.121	2564	7	d.dns.kr	4276
8	202.131.30.16	2193	8	g.dns.kr	4188
9	202.131.30.17	2142	9	nis.dacom.co.kr	4087
10	164.124.101.54	2019	10	227.15.117.123.in-addr.arpa	4032