

DNSSEC deployment in .JP

DNSSEC Workshop, ICANN41

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Japanese background

- Deploying new technology requires documents written in their own language
 - But most of DNSSEC materials are in English
- There are a thousands of ISPs and hundreds of JP registrars in Japan
 - They offer various DNS services
 - Their cooperation is required for successful DNSSEC deployment
 - But hard to contact and conduct all of them

What we did

- Enough announcement
 - Technical explanation documents (in Japanese)
 - Roll out schedule
 - DNSSEC parameters
 - JP DPS(DNSSEC Practice Statement)
- Enough technical evaluation
 - With ISPs, Vendors, JP Registrars
 - They did their evaluations for their works

Technical evaluation

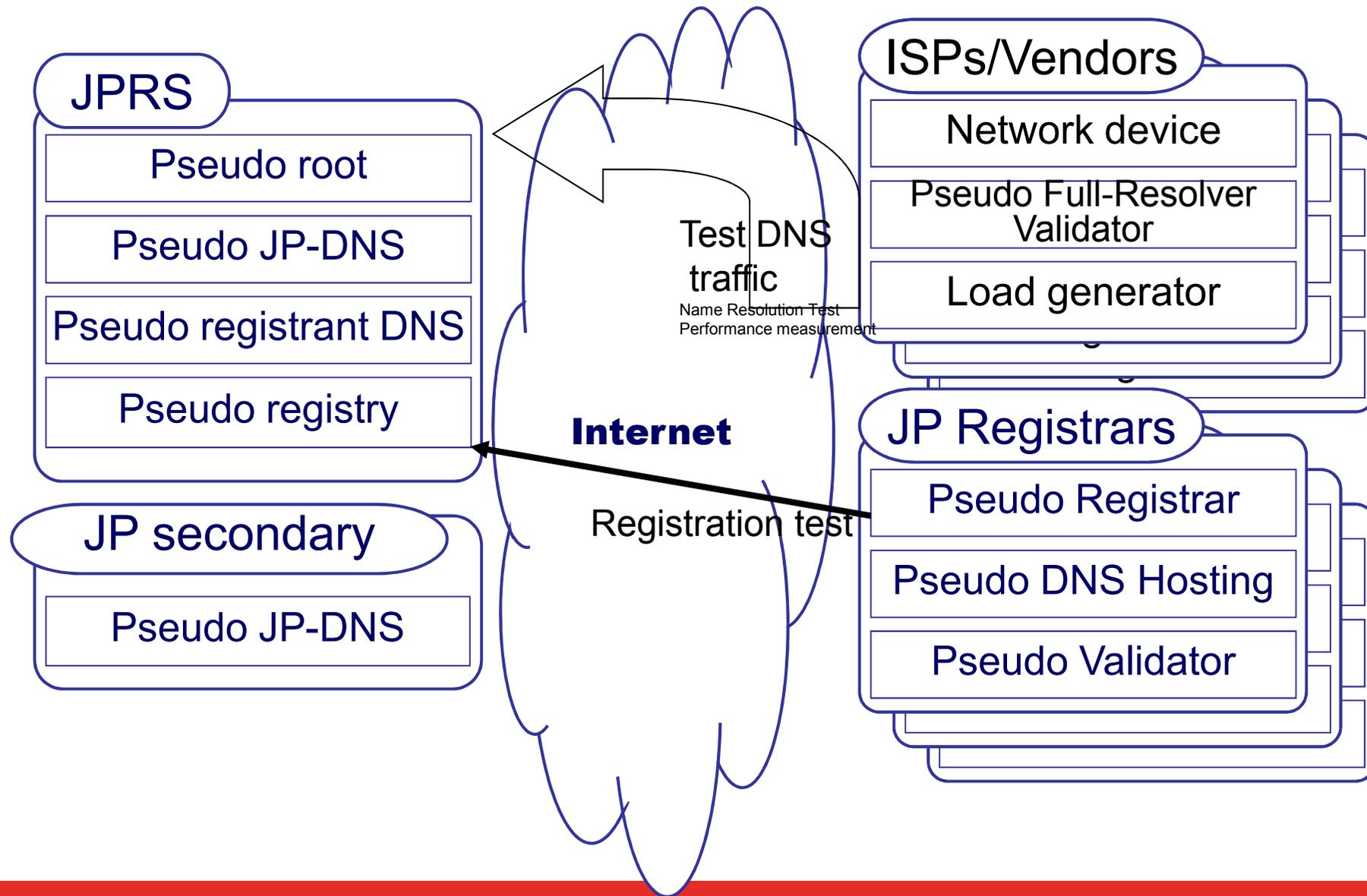
- Two activities
 - Technical Evaluation by JPRS and participants
 - Conducted by JPRS
 - DNSSEC Japan
 - a community initiative
 - JPRS is a member of DNSSEC Japan

Technical Evaluation by JPRS

- JPRS did DNSSEC Technical Evaluation with some participants before implementing DNSSEC in JP TLD
 - 2009/11 to 2010/11
- Purpose
 - To collect, share and publish DNSSEC operational practices
 - Major ISPs, Hardware vendors and JP registrars will implement DNSSEC easily
- What were done
 - JPRS called for participation in technical evaluation activity to some major ISPs, Hardware vendors and JP registrars
 - JPRS offered DNSSEC testbed
 - JPRS conducted monthly information exchange meetings among participants

	Step1/2	Step3/4	Step5	Step6
	2009/11-2010/2	2010/3-2010/6	2010/7-2010/11	2010/8-2011/3
Descrip tion	<ul style="list-style-type: none"> •Fundamental function test •Behavior check of zone transfer 	<ul style="list-style-type: none"> •Behavior and load check of Full-Resolver / Validator DNS servers •Behavior check of network devices •Listing of check items of ISPs/HW vendors 	<ul style="list-style-type: none"> •Behavior check of DS registration •Accumulation of operation experiences 	<p>Joint evaluation with DNSSEC Japan</p>
Particip ants	JPRS JP DNS operators	JPRS JP DNS operators <u>ISPs</u> <u>Hardware vendors</u>	JPRS JP DNS operators ISPs Hardware vendors <u>JP Registrars</u>	

Evaluation Environment



Result of Technical Evaluation

- Participants and JPRS had published four documents
 - DNSSEC function check instruction
 - DNSSEC performance check instruction
 - DNSSEC technical evaluation report, function and performance check edition
 - DNSSEC technical evaluation report, operation design edition
- Reports are at <http://jprs.jp/dnssec/>
 - Japanese language only
 - English translation is on going
- Participants and JPRS made DNSSEC presentations at local meetings
 - Japan Network Operators Group (JANOG) meeting, July 2010
 - Internet week 2010, Nov. 2010
- Now many stakeholders started or are planning DNSSEC service

DNSSEC Japan -a community initiative -

- DNSSEC Japan has formed at 24 Nov 2009
- “DNSSEC Japan” is
 - A forum for domain name registries, registrars, registrants and relevant parties such as DNS and network operators
 - with the aim of introducing and deploying DNSSEC
- Objectives
 - to sort out and discuss issues in relation to deployment and operation of DNSSEC
 - to enhance technical capability of participants and sharing of technical expertise
 - to conduct outreach activities such as providing relevant tools and giving technical commentaries

Result of DNSSEC Japan

- Published DNSSEC documents in Japanese
- Held DNSSEC Forum meeting twice
- Members are well learned DNSSEC

- Schedule
 - 24 Nov 2009 Formed
 - July 2010 First workshop
 - March 2011 Conclusion of main activities
 - Apr 2011 Second workshop
 - Now DNSSEC promotion activity

- Member organizations: 36 (June 1 2011)
- Web <http://dnssec.jp/>

DNSSEC introduction process

2009-07-09 First Announcement

DNSSEC introduction schedule: Target was by the end of 2010

2009-11-24 “DNSSEC Japan” was formed

2009-12-01 “Technical Evaluation” started

2010-07-21 Schedule announce: Month of signing and DS registration

2010-08-30 Published DNSSEC parameters for JP zone

2010-09-06 Schedule announce: Date of signing and DS registration

2010-09-29 JP DNS servers and JP registry system come to
DNSSEC ready (HW, SW, NW)

2010-10-17 Start signing of JP zone

2010-11-30 “Technical Evaluation” finished

2010-12-10 JP DS was registered in Root zone

2011-01-14 Published JP DPS (DNSSEC Practice Statement)

2011-01-16 DNSSEC service roll out: started DS registration

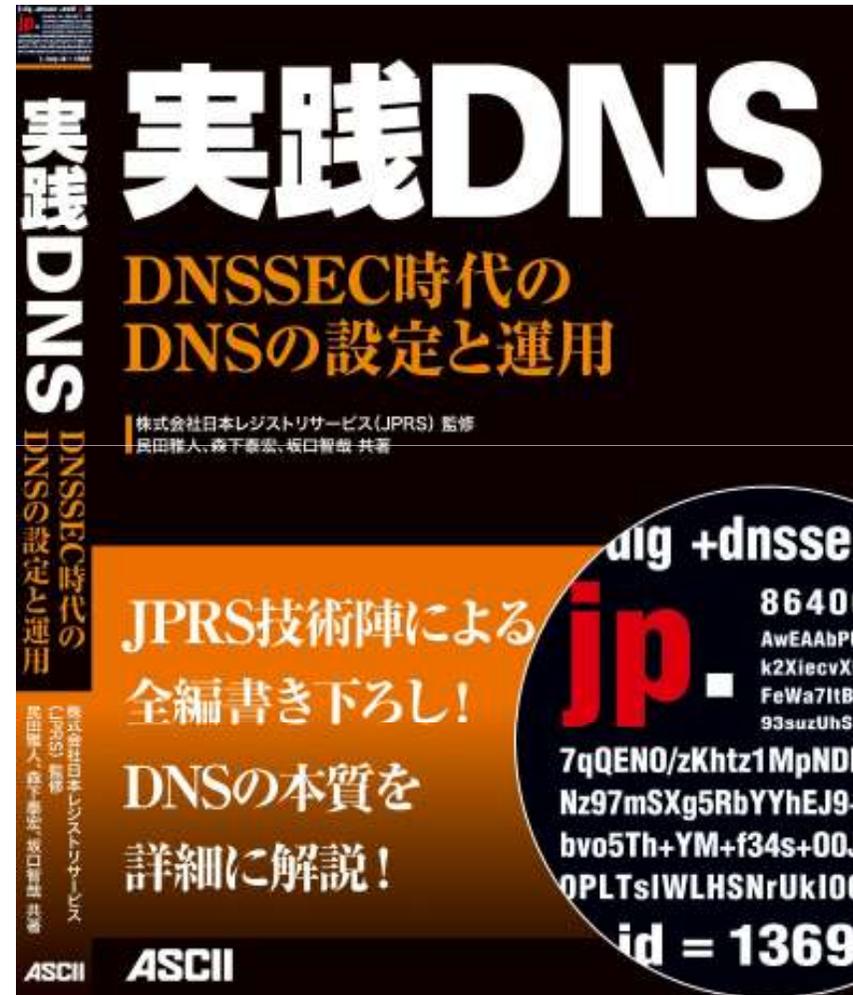
14 JP registrars registered about 270 DS (as of Feb 2 2011)

20 JP registrars registered about 323 DS (as of June 8 2011)

2011-05-27 DNS/DNSSEC book was published (Japanese)

A DNS book, “実践DNS”

- “実践DNS” means “Practice DNS”.
- Newly published on this May
- Authored by JPRS employees
- Explains daily DNS operations with DNSSEC



Conclusion

- Documents written in own language are important
- Joint evaluation with stakeholders is important
 - They become DNSSEC experts