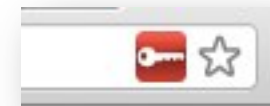
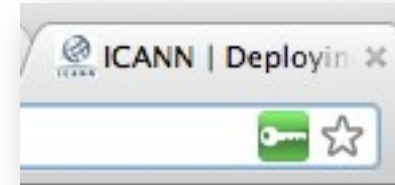


Challenges and Opportunities in DNSSEC Deployment and Usage

Dan York
Senior Content Strategist
Internet Society

What Should The End User Experience Be?



DNSSEC-Validating Resolvers

comcastvoices
a place for conversations with Comcast

Home Archives Media Gallery

10 JAN **Comcast Completes DNSSEC Deployment**
Posted by [Jason Livingood](#), Vice President, Internet Systems, in [Network](#)

I am pleased to announce that Comcast, the largest ISP in the U.S., is the first major U.S. ISP to have fully implemented Domain Name System Security Extensions (DNSSEC) on its network. As part of our ongoing efforts to protect our customers, DNSSEC is now automatically enabled for all Comcast customers using Constant Guard™ from Xfinity.

We have worked hard to be a leader with our DNSSEC deployment. As a result, all Comcast customers of our Xfinity Internet service are using DNSSEC-validating

DNS resolver

- Use system settings
- CZ.NIC's validating resolvers
- OARC's validating resolvers
- Custom resolver:



Application Developer Libraries

DNSSEC Developer Libraries

At the current time we are aware of the following libraries for developers seeking to add DNSSEC support to their applications:

C

- [ldns](#) from NLnet Labs
- [libval](#) from the DNSSEC-Tools Project
- [libunbound](#), a component of the [Unbound DNS resolver](#) that can be used in other applications

Erlang

- [dns_erlang](#)

Go

- [godns](#)

Java

- [dnsjava](#)
- [DNSSEC4J](#) (based on the DNSSEC primitives in dnsjava)

Perl

- [Net::DNS](#) and [Net::DNS::SEC](#)
- [Perl modules from the DNSSEC-Tools Project](#)

Python

- [dnspython](#) – available at [dnspython.org](#) and on [Github](#)
- [python-dnssec](#)
- [PyUnbound](#) – a python wrapper for the libunbound library (mentioned above under C)

Ruby

- [dnruby](#)

Source: www.internetsociety.org/deploy360/resources/dnssec-developer-libraries/

Domain Name Registrars

Deploying DNSSEC

Share

Registrars that support end user DNSSEC management, including entry of DS records

Last updated: 3 Feb 2012

Registrar	Accepts DS records for	Notes
GoDaddy (US)	.com, .net, .biz, .us, .org, .eu, .se, .co.uk, .me.uk, .org.uk, .co, .com.co, .net.co, .nom.co	Also supports DS record entries for domains you may host elsewhere. (1) (2)
NamesBeyond (US)	.org	(1) (2)
DYN (US)	.org, .se	(1) (2)
DK-Hostmaster (DK)		A list of <u>DNSSEC</u> DS supported domains could not be located on the site.
GKG (US)	.net, .us, .biz, .org	Also supports DS record entries for domains you may host elsewhere. (2)
Binero (SE)	.se, .eu	All domains are automatically signed. (1) (2)
Registro (BR)	.br	(1) (2)
NAME (US)	.us, .org, .biz	(2)
OVH (FR)	.eu	

Notes: (1) Provides DNSSEC signing services. (2) UI supports DNSSEC.

The list does not constitute an endorsement of any particular registrar. This is being provided for informational purposes to track the adoption of DNSSEC and provide information for users who may have questions about which registrars support DNSSEC.

Source: www.icann.org/en/news/in-focus/dnssec/deployment

User Experience at the Registrar / DNS Hosting?

Secondary DNS | **DNSSEC** | Vanity Nameservers

DNSSEC Settings

5 DNSSEC domains available. [Buy more.](#)

Enabled:
 On
 Off

Domain Status: Unsigned

Email key change notifications to:

Save [Cancel](#)

Add Delegation Signer Record

Key Tag:

Algorithm: 3 - DSA/SHA-1

Digest Type: 1 - SHA-1

Digest:

Add Key **Cancel**

Dyn | DynECT Managed DNS

Overview | Manage DNS | Add-Ons | Manage Account | View Reports | Support

dnssec-test-dyn.com

Serial: 1, [zone notes](#)

Simple Editor | Services | **Zone Options** | Quick Tasks | Zone Reports

General | **DNSSEC** | Freeze Zone

Zone Signing Keys

Encryption Method	Key Expiration	Key Size
RSA/SHA-1	1 month from now	1,024 bit

Key Signing Keys

Encryption Method	Key Expiration	Key Size
RSA/SHA-1	1 year from now	2,048 bit

Notifications

Contact: billing (Dan York)

Send notifications:

- When a key is created
- When a key expires
- Weeks before a key expires

Add DNSSEC

Awareness of DNSSEC Information

NLnet
DNSSEC HOWTO
NLnetLabs | Projects | Publications | Support

NIST
National Institute of
Standards and Technology
Technology Administration
U.S. Department of Commerce

Special Publication 800-81r1
Sponsored by the Department
of Homeland Security

Ofcom

MC / 080:DNSSEC
Deployment Study

DNSSEC HOWTO, a tutorial in disguise

Olaf Kolkman
Revision 134

July 4, 2009

Download the most recent PDF release from:
http://www.nlnetlabs.nl/dnssec_howto/dnssec_howto.pdf

Secure Domain Name System (DNS) Deployment Guide

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Improving the security of the Internet's naming infrastructure



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nd Technology

dramouli

Deploying DNSSEC
Good practices guide
January 10

Good practices guide for deploying DNSSEC

enisa
European Network
and Information
Security Agency

We have Wiki!

Posted by [Mark Feldman](#) in [Uncategorized](#) on February 24, 2012

We try to keep ourselves and you informed about all things related to the deployment of DNSSEC, but we can't do it alone. We also publish useful information from a variety of points of view, and we try to bring those to the attention of the community. One source of information that is often overlooked in these blog posts and web sites is you. We appreciate the information you provide. Deploying DNSSEC is on the leading edge (yes, it is).

Our solution, which hasn't been given the spotlight it deserves, is to create a Wiki account, and help us document the DNSSEC

DNSSEC-Tools

Is your domain secure?

Sign Your Zone | Tutorials | Install

Internet Society Deploy360 Programme

Internet Society | Deploy360 Programme

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DNSSEC

Secure your domain names from attackers...

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Welcome!
The Internet Society Deploy360 Programme is a new initiative that provides real-world IPv6, DNSSEC, etc. deployment information. Deploy360 aims to bridge the gap between the IETF standards process and final adoption of those standards by the global operations community. Deploy360 creates and promotes resources that are easy to understand and quickly actionable by the very IT professionals responsible for the implementation of new technologies and standards like IPv6 and DNSSEC. Something missing from this site? [Contact us](#) and we'll either find it or create it.

IPv6

- IPv6 Basics
- Tutorials and Online Training
- Case Studies

[Find out more...](#)

DNSSEC

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- Tutorials and Videos
- Whitepapers

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Want to Understand DNSSEC?
Watch this video interview...

ICANN Publishes List of Domain Registrars Supporting

Can You Help Us With:

- Case Studies?
- Tutorials?
- Videos?
- Whitepapers?
- Tools?

How Can We Help You?

www.internetsociety.org/deploy360/

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www.internetsociety.org/deploy360/

Thank You!