

The DNSSEC Deployment/ Operational Guideline for Corporate Executives and Operators in Japan

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2024/11/13 ICANN81 DNSSEC and Security Workshop



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Overview of the Project

- FY 2024 Survey on the Introduction and Promotion of Network Security Technologies in ISPs
 - Ministry of Internal Affairs and Communications (MIC)
 - NTT Communications Corp.
 - Mitsubishi Research Institute, Inc. (MRI)
 - Japan Network Information Center (JPNIC)
- Survey, experiment, and create guidelines with experts from business and academic sectors
 - RPKI (Routing security)
 - **DNSSEC (DNS security)**
 - DMARC (Email security)



Philosophy of "Three Confirmations"

To deploy DNSSEC in your organization, you need the "Three Confirmations" ...

1. That you can reap the expected benefits
2. That you can continue normal operational processes as before
3. That you can handle any problems that arise



Experiment Example

Who?

- Participants from across the nation
 - 25 organizations in total (2023, single-year result)

How?

- Three courses
 - **"Hands-on"**: hands-on style, basic setup and operation
 - **"Experiment"**: normal and under-attack operation in a virtual environment
 - **"Installation"**: deployment support provided and report on participants' actual environments



Creating the Draft Guideline

Aims

- Easy to understand but practical
- **Continuously maintained** by experts from the business sector
- Engineers, operators, and executives as target readers

Features

- **Three-stage maturity model** for easy planning
- Requirements and recommendations classified based on **RFC2119**
- Philosophy of **"Three Confirmations"**



The Draft Guideline

[PDF published on MIC Website](#) (Japanese version only)

The presenter is NEITHER an author NOR an editor.

Chapters

- Preface: expected readers and terminology
- 1: Importance and life-cycle management of domain names
- 2: DNSSEC on full resolvers
- 3: DNSSEC on authoritative servers
- 4: Registrants, registry/registrar/reseller



1: Importance and Life-Cycle Management of Domain Names

1.1: What are domain names? What is this guideline for? (for business owners)

1.2: Importance of domain names

1.3: Protection of domain names

1.4: Registration and life-cycle management

1.5: Why DNSSEC?



2/3: DNSSEC on Full Resolvers / Authoritative Servers

- 1: Basics
- 2: Requirements
- 3: Preparation
- 4: Implementation
- 5: Operation
- 6: Troubleshooting
- 7: Know-how
- 8: References



4: Registrants and Registry/Registrar/Reseller

4.1: Registry/Registrar/Reseller

4.2: Registrants

▶▶▶ From What I See

Broad Readers

- Business owners
- Security engineers
- Infrastructure engineers

Designed to be Updated

- Built by experts
- Published by government officials
- Maintained by the business sector

Localization



Comments Welcomed!

- Is it convincing?
- Is the "Three Confirmations" philosophy perfect?
- Is anything essential missing?