

The future of DNSSEC cryptographic recommendations

AKA draft-ietf-dnsop-rfc8624-~~bis~~

replacement

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RFC8624 reminder: algorithm implementation recommendations

- **Algorithm definitions** published in **various documents**
- Added to the various IANA tables
- **RFC with the recommendations** only sporadically updated

3. Algorithm Selection
2024-07-rfc8624-bis

3.1. DNSKEY Algorithms

The following table lists the implementation recommendations for DNSKEY algorithms [DNSKEY-IANA].

Number	Mnemonics	Recommendations	DNSSEC Signing	DNSSEC Validation
1	RSAMD5	• All algorithm definitions published in various documents	MUST NOT	MUST NOT
3	DSA	• Added to the various IANA tables	MUST NOT	MUST NOT
5	RSASHA1	• Occasional updates to the recommendations gets updated	NOT RECOMMENDED	MUST
6	DSA-NSEC3-SHA1		MUST NOT	MUST NOT
7	RSASHA1-NSEC3-SHA1		NOT RECOMMENDED	MUST

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Adds ~~3~~ 6 columns to existing tables:

IANA Table	Column added
Domain Security Algorithm Numbers	Use for DNSSEC Signing
	Use for DNSSEC Validation
	Implement for DNSSEC Signing
	Implement for DNSSEC Validation
Digest Algorithms	Use for DNSSEC Delegations
	Implement for DNSSEC Delegations

Changes from recent list discussions

=====			
N	Mnemonics		Use for DNSSEC Signing
=====			
8	RSASHA256		MUST

13	ECDSAP256SHA256		MUST

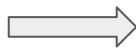
MUST you use both algorithms?

Changes from recent list discussions

=====			
N	Mnemonics		Use for DNSSEC Signing
=====			
8	RSASHA256		RECOMMENDED

13	ECDSAP256SHA256		RECOMMENDED

MUST you use both algorithms?

No, so... MUST  RECOMMENDED

“When there are multiple RECOMMENDED algorithms in the "use" column, operators should choose the best algorithm according to local policy.”

Recent list discussions

How does this document interact with the proposed algorithm phasing document?

[draft-crocker-dnsop-dnssec-algorithm-lifecycle](#)

Answer: dnsop-rfc8624-bis may be the building block for the other

TL;DR:

- Algorithm changes should allow for any/all combinations when needed
- Potential future phasing will require/recommend column value combinations

Next Steps

Last call for final changes/suggestions?

- `draft-ietf-dnsop-rfc8624-bis`
- `draft-ietf-dnsop-must-not-sha1`
- `draft-ietf-dnsop-must-not-gost`

Note: the two algorithm update documents haven't changed recently