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Revised IANA Considerations for DNSSEC
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Abstract

This document changes the review requirements needed to get DNSSEC algorithms and resource records added to IANA registries. It updates [RFC 6014](#), which did not include hash algorithms for DS records or NSEC3 parameters in the change to all registries requiring RFCs, not standards, for inclusion in the IANA registries.

Status of This Memo

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[1.](#) Introduction

DNSSEC is primarily described in [[RFC4033](#)], [[RFC4034](#)], and [[RFC4035](#)]. DNSSEC in common uses two resource records beyond those defined in [RFC 4034](#), namely DS [[RFC3658](#)] and NSEC3 [[RFC5155](#)].

[[RFC8126](#)] describes the requirements for listing in the myriad IANA registries. [[RFC6014](#)] updated the requirements for how DNSSEC cryptographic algorithm identifiers in the IANA registries are allocated, reducing the requirements from being "Standards Action" to "RFC Required".

The IANA registry requirements for hash algorithms for DS records and for the hash algorithms used in NSEC3 are still "Standards Action". This document updates [RFC 6014](#) to bring the requirements for DS records and NSEC3 hash algorithms in line with the rest of the DNSSEC cryptographic algorithms, .

[2.](#) IANA Considerations

In the "Domain Name System Security (DNSSEC) NextSECure3 (NSEC3) Parameters" registry, the registration procedure for "DNSSEC NSEC3 Flags", "DNSSEC NSEC3 Hash Algorithms", and "DNSSEC NSEC3PARAM Flags" are changed from "Standards Action" to "RFC Required".

In the "Delegation Signer (DS) Resource Record (RR) Type Digest Algorithms" registry, the registration procedure for "Digest Algorithms" is changed from "Standards Action" to "RFC Required".

[3.](#) Security Considerations

Changing the requirements for getting security algorithms added to IANA registries as described in this document will make it easier to get good algorithms added to the registries, and will make it easier to get bad algorithms added to the registries. It is impossible to weigh the security impact of those two changes.

4. Normative References

- [RFC3658] Gudmundsson, O., "Delegation Signer (DS) Resource Record (RR)", [RFC 3658](#), DOI 10.17487/RFC3658, December 2003, <<https://www.rfc-editor.org/info/rfc3658>>.
- [RFC4033] Arends, R., Austein, R., Larson, M., Massey, D., and S. Rose, "DNS Security Introduction and Requirements", [RFC 4033](#), DOI 10.17487/RFC4033, March 2005, <<https://www.rfc-editor.org/info/rfc4033>>.
- [RFC4034] Arends, R., Austein, R., Larson, M., Massey, D., and S. Rose, "Resource Records for the DNS Security Extensions", [RFC 4034](#), DOI 10.17487/RFC4034, March 2005, <<https://www.rfc-editor.org/info/rfc4034>>.
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- [RFC5155] Laurie, B., Sisson, G., Arends, R., and D. Blacka, "DNS Security (DNSSEC) Hashed Authenticated Denial of Existence", [RFC 5155](#), DOI 10.17487/RFC5155, March 2008, <<https://www.rfc-editor.org/info/rfc5155>>.
- [RFC6014] Hoffman, P., "Cryptographic Algorithm Identifier Allocation for DNSSEC", [RFC 6014](#), DOI 10.17487/RFC6014, November 2010, <<https://www.rfc-editor.org/info/rfc6014>>.
- [RFC8126] Cotton, M., Leiba, B., and T. Narten, "Guidelines for Writing an IANA Considerations Section in RFCs", [BCP 26](#), [RFC 8126](#), DOI 10.17487/RFC8126, June 2017, <<https://www.rfc-editor.org/info/rfc8126>>.

Appendix A. Other Options for Requirements Level

During an early discussion in the DNSOP Working Group, it was proposed that the requirements for registry allocation for DS resource records be "Specification Required". This would reduce the work required of specification authors, and of the RFC Editor, while still requiring review by an expert reviewer and a long-lived specification.

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IANA revisions for DNSSEC

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