

Network Working Group
Internet-Draft
Intended status: Informational
Expires: 26 December 2025

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24 June 2025

DNS Resolver Information Key for DELEG
draft-fobser-resinfo-deleg-00

Abstract

This document specifies a DNS Resolver Information Key to inform DNS clients of DELEG support.

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1. Introduction

The Extensible Delegation for DNS [I-D.draft-ietf-deleg] specifies the DELEG record type that is authoritative in the parent zone of a zone cut. To prevent downgrade attacks, [I-D.draft-ietf-deleg] introduces a new DNSKEY flag.

A Validating Stub Resolver that is DELEG aware has to know if the Recursive Resolver it uses is DELEG aware. A DELEG aware Recursive Resolver using a Forwarder has to know if the Forwarder is DELEG aware.

[RFC9606] specifies a DNS resource record (RR) type RESINFO to allow resolvers to publish information about their capabilities and policies. This can be used to inform DNS clients that DELEG is supported by the DNS resolver.

1.1. Requirements Notation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

2. deleg Resolver Information Key

deleg: The presence of this key indicates that the DNS resolver supports DELEG.

A resolver which supports [RFC9606] SHOULD add the deleg key if it supports [I-D.draft-ietf-deleg].

Note that, per the rules for the keys defined in Section 6.4 of [RFC6763], if there is no '=' in a key, then it is a boolean attribute, simply identified as being present, with no value.

3. Security Considerations

The security considerations of [RFC9606] apply.

4. IANA Considerations

The IANA is requested to add the key "deleg", with the description of "The presence of the key indicates that DELEG is supported.", and a reference to this document.

Name	Description	Reference
deleg	The presence of the key indicates that DELEG is supported.	RFC EDITOR: THIS DOCUMENT

Table 1

5. Normative References

- [I-D.draft-ietf-deleg]
April, T., paek, P., Weber, R., and Lawrence,
"Extensible Delegation for DNS", Work in Progress,
Internet-Draft, draft-ietf-deleg-00, 6 May 2025,
<<https://datatracker.ietf.org/doc/html/draft-ietf-deleg-00>>.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/rfc/rfc2119>>.
- [RFC6763] Cheshire, S. and M. Krochmal, "DNS-Based Service Discovery", RFC 6763, DOI 10.17487/RFC6763, February 2013, <<https://www.rfc-editor.org/rfc/rfc6763>>.
- [RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/rfc/rfc8174>>.
- [RFC9606] Reddy.K, T. and M. Boucadair, "DNS Resolver Information", RFC 9606, DOI 10.17487/RFC9606, June 2024, <<https://www.rfc-editor.org/rfc/rfc9606>>.

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