

Network Working Group
Request for Comments: 2535
Obsoletes: 2065
Updates: 2181, 1035, 1034
Category: Standards Track

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March 1999

Domain Name System Security Extensions

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

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Abstract

Extensions to the Domain Name System (DNS) are described that provide data integrity and authentication to security aware resolvers and applications through the use of cryptographic digital signatures. These digital signatures are included in secured zones as resource records. Security can also be provided through non-security aware DNS servers in some cases.

The extensions provide for the storage of authenticated public keys in the DNS. This storage of keys can support general public key distribution services as well as DNS security. The stored keys enable security aware resolvers to learn the authenticating key of zones in addition to those for which they are initially configured. Keys associated with DNS names can be retrieved to support other protocols. Provision is made for a variety of key types and algorithms.

In addition, the security extensions provide for the optional authentication of DNS protocol transactions and requests.

This document incorporates feedback on RFC 2065 from early implementers and potential users.

VIRNETX EXHIBIT 2024
Apple v. Virnetx

Acknowledgments

The significant contributions and suggestions of the following persons (in alphabetic order) to DNS security are gratefully acknowledged:

James M. Galvin
 John Gilmore
 Olafur Gudmundsson
 Charlie Kaufman
 Edward Lewis
 Thomas Narten
 Radia J. Perlman
 Jeffrey I. Schiller
 Steven (Xunhua) Wang
 Brian Wellington

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