



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 2005



## 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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