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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.

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Table of Contents

Abstract.....	1
Acknowledgments.....	2
1. Overview of Contents.....	4
2. Overview of the DNS Extensions.....	5
2.1 Services Not Provided.....	5
2.2 Key Distribution.....	5
2.3 Data Origin Authentication and Integrity.....	6
2.3.1 The SIG Resource Record.....	7
2.3.2 Authenticating Name and Type Non-existence.....	7
2.3.3 Special Considerations With Time-to-Live.....	7
2.3.4 Special Considerations at Delegation Points.....	8
2.3.5 Special Considerations with CNAME.....	8
2.3.6 Signers Other Than The Zone.....	9
2.4 DNS Transaction and Request Authentication.....	9
3. The KEY Resource Record.....	10
3.1 KEY RDATA format.....	10
3.1.1 Object Types, DNS Names, and Keys.....	11
3.1.2 The KEY RR Flag Field.....	11
3.1.3 The Protocol Octet.....	13
3.2 The KEY Algorithm Number Specification.....	14
3.3 Interaction of Flags, Algorithm, and Protocol Bytes...15	
3.4 Determination of Zone Secure/Unsecured Status.....	15
3.5 KEY RRs in the Construction of Responses.....	17
4. The SIG Resource Record.....	17
4.1 SIG RDATA Format.....	17
4.1.1 Type Covered Field.....	18
4.1.2 Algorithm Number Field.....	18
4.1.3 Labels Field.....	18
4.1.4 Original TTL Field.....	19

4.1.5 Signature Expiration and Inception Fields.....	19
4.1.6 Key Tag Field.....	20
4.1.7 Signer's Name Field.....	20
4.1.8 Signature Field.....	20
4.1.8.1 Calculating Transaction and Request SIGs.....	21
4.2 SIG RRs in the Construction of Responses.....	21
4.3 Processing Responses and SIG RRs.....	22
4.4 Signature Lifetime, Expiration, TTLs, and Validity....	23
5. Non-existent Names and Types.....	24
5.1 The NXT Resource Record.....	24
5.2 NXT RDATA Format.....	25
5.3 Additional Complexity Due to Wildcards.....	26
5.4 Example.....	26
5.5 Special Considerations at Delegation Points.....	27
5.6 Zone Transfers.....	27
5.6.1 Full Zone Transfers.....	28
5.6.2 Incremental Zone Transfers.....	28
6. How to Resolve Securely and the AD and CD Bits.....	29
6.1 The AD and CD Header Bits.....	29
6.2 Staticly Configured Keys.....	31
6.3 Chaining Through The DNS.....	31
6.3.1 Chaining Through KEYS.....	31
6.3.2 Conflicting Data.....	33
6.4 Secure Time.....	33
7. ASCII Representation of Security RRs.....	34
7.1 Presentation of KEY RRs.....	34
7.2 Presentation of SIG RRs.....	35
7.3 Presentation of NXT RRs.....	36
8. Canonical Form and Order of Resource Records.....	36
8.1 Canonical RR Form.....	36
8.2 Canonical DNS Name Order.....	37
8.3 Canonical RR Ordering Within An RRset.....	37
8.4 Canonical Ordering of RR Types.....	37
9. Conformance.....	37
9.1 Server Conformance.....	37
9.2 Resolver Conformance.....	38
10. Security Considerations.....	38
11. IANA Considerations.....	39
References.....	39
Author's Address.....	41
Appendix A: Base 64 Encoding.....	42
Appendix B: Changes from RFC 2065.....	44
Appendix C: Key Tag Calculation.....	46
Full Copyright Statement.....	47

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