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Domain Name System Media Types

Status of This Memo

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Abstract

This document registers the media types application/dns and text/dns in accordance with RFC 2048. The application/dns media type is used to identify data on the detached Domain Name System (DNS) format described in RFC 2540. The text/dns media type is used to identify master files as described in RFC 1035.

Table of Contents

1. Introduction

Domain Name System (DNS) [1] information is traditionally stored in text files, so-called master files or zone files. The format is described in section 5 of RFC 1035 [2].

DNS data can also be stored in a "detached" format, intended for archiving purposes, described in RFC 2540 [4].

This document registers MIME media types for the two data formats, with the registration procedures described in RFC 2048 [3].

2. MIME Type Registration of application/dns

To: ietf-types@iana.org
Subject: Registration of MIME media type application/dns

MIME media type name: application

MIME subtype name: dns

Required parameters: None.

Optional parameters: None.

Encoding considerations: The data format is binary, and data must be transfered unmodified. Using encodings intended for textual parts is not recommended.

Security considerations: This media type identifies content as being detached DNS information, as documented in RFC 2540 [4]. This data may be security relevant as per RFC 2538 [7] or may be secured information as per RFC 2535 [6]. Securing the content further may be done with standard techniques, such as OpenPGP [5] or CMS [9], but this is outside of the scope here. Further security assessments are not available at this point.

Interoperability considerations: The encoding of detached DNS information is, unlike textual master files, well defined. No further interoperability considerations are known.

Published specification: The format of data that could be tagged with this media type is documented in RFC 2540 [4].

Applications that use this media type: DNS-related software, including software storing and using certificates stored in DNS.

Additional information:
Magic number(s): None.
File extension(s): Unknown.
Macintosh File Type Code(s): Unknown.

Person & email address to contact for further information:

Simon Josefsson simon@josefsson.org

Intended usage: LIMITED USE

Author/change controller: simon@josefsson.org

3. MIME Type Registration of text/dns

To: ietf-types@iana.org
Subject: Registration of MIME media type text/dns

MIME media type name: text

MIME subtype name: dns

Required parameters: None.

Optional parameters: None.

Encoding considerations: The data is textual and should be transfered in a line-oriented mode. Text literals may contain CRLF within the text. Binary transport is possible between systems that use the same end-of-line conventions. Master files are in general ASCII, but non-ASCII octet values may occur and are treated as opaque values by DNS software (compare RFC 1035, section 5). The master file format permits encoding arbitrary octet values by using the "\DDD" encoding. The use of "\DDD" encoding can be more reliable than transporting non-ASCII through MIME transports, if data passes through a gateway that re-encodes the character data.

Security considerations: This media type identifies content as being DNS information in "master file" format, as documented in RFC 1035 [2]. The DNS data may be security relevant as per to RFC 2538 [7], or may be secured information as per to RFC 2535 [6]. Securing the content further may be done with standard techniques, such as OpenPGP [5] or CMS [9], but this is outside of the scope here. Further security assessments are not available at this point.

Interoperability considerations: There are interoperability concerns with master files, due to the widespread use of vendor-specific extensions. Non-ASCII comments within master files may have been encoded in locally chosen character sets, which may be difficult to transport interoperably. Non-ASCII data in general can become corrupted by re-encoding gateways. To achieve interoperability, one can use the master file format described in the specification and the "\DDD" encoding for non-ASCII octets. Further interoperability issues with unrecognized RR types exist, which may be handled as discussed in section 5 of RFC 3597 [8].

Published specification: The format of data that could be tagged with this MIME type is documented in RFC 1035 [2].

Applications that use this media type: DNS-related software, including software storing and using certificates stored in DNS.

Additional information:
Magic number(s): None.
File extension(s): 'soa' and 'zone' are known to be used.
Macintosh file type code(s): Unknown.

Person & email address to contact for further information:

Simon Josefsson simon@josefsson.org

Intended usage: LIMITED USE

Author/change controller: simon@josefsson.org

4. Security Considerations

Security considerations are discussed in the security considerations clauses of the MIME registrations in sections 2 and 3.

5. IANA Considerations

The IANA has registered the MIME media types application/dns and text/dns by using the registration templates in sections 2 and 3, as per the procedure described in RFC 2048 [3].

6. Acknowledgements

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Normative References

[1] Mockapetris, P., "Domain names - concepts and facilities", STD 13, RFC 1034, November 1987.

[2] Mockapetris, P., "Domain names - implementation and specification", STD 13, RFC 1035, November 1987.

[3] Freed, N., Klensin, J., and J. Postel, "Multipurpose Internet Mail Extensions (MIME) Part Four: Registration Procedures", BCP 13, RFC 2048, November 1996.

[4] Eastlake 3rd, D., "Detached Domain Name System (DNS) Information", RFC 2540, March 1999.

Informative References

[5] Callas, J., Donnerhacke, L., Finney, H., and R. Thayer, "OpenPGP Message Format", RFC 2440, November 1998.

[6] Eastlake 3rd, D., "Domain Name System Security Extensions", RFC 2535, March 1999.

[7] Eastlake 3rd, D. and O. Gudmundsson, "Storing Certificates in the Domain Name System (DNS)", RFC 2538, March 1999.

[8] Gustafsson, A., "Handling of Unknown DNS Resource Record (RR) Types", RFC 3597, September 2003.

[9] Housley, R., "Cryptographic Message Syntax (CMS)", RFC 3852, July 2004.

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