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ADEM - Distribution and Discovery over DNS
draft-linker-diem-adem-dns-00

Abstract

TODO Abstract

About This Document

This note is to be removed before publishing as an RFC.

The latest revision of this draft can be found at https://adem-wg.github.io/adem-dns-spec/draft-linker-diem-adem-dns.html. Status information for this document may be found at https://datatracker.ietf.org/doc/draft-linker-diem-adem-dns/.

Discussion of this document takes place on the Digital Emblems Working Group mailing list (mailto:diem@ietf.org), which is archived at https://mailarchive.ietf.org/arch/browse/diem. Subscribe at https://www.ietf.org/mailman/listinfo/diem/.

Source for this draft and an issue tracker can be found at https://github.com/adem-wg/adem-dns-spec.

Status of This Memo

Table of Contents

1. Introduction

The ADEM Core Specification specifies how a set of _tokens_, encoded as JSON Web Signatures (JWSs) [RFC7515], can be used as a digital emblem to signal that digital assets enjoy specific protections under International Humanitarian Law (IHL). This document describes a DNS-based distribution and discovery for ADEM tokens.

2. Conventions and Definitions

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.

3. DNS Distribution

Given a set of tokens containing exactly one emblem and zero or more associated endorsements, issuers can distribute this set via DNS TXT records [RFC1035], as follows.

For each such set, issuers MAY choose a unique _identifier_ string. If multiple sets of tokens are associated with a given domain name, issuers SHOULD choose such a string.

Each token is distributed as its own TXT record, which includes a key and a value. The value encodes the token in JWT compact serialization.

Each record’s key MUST be formatted as:

key := "adem" ["-" identifier]

identifier := CHARACTER-NO-HYPEN+

record := key "=" value

CHARACTER-NO-HYPEN is any printable ASCII character as specified in [RFC0020] except for "-". If present, identifier MUST coincide with the string identifying the token’s set.

4. Security Considerations

TODO Security

5. IANA Considerations

This document has no IANA actions.

6. References

6.1. Normative References

[RFC0020] Cerf, V., "ASCII format for network interchange", STD 80, RFC 20, DOI 10.17487/RFC0020, October 1969, <https://www.rfc-editor.org/rfc/rfc20>.

[RFC1035] Mockapetris, P., "Domain names - implementation and specification", STD 13, RFC 1035, DOI 10.17487/RFC1035, November 1987, <https://www.rfc-editor.org/rfc/rfc1035>.

[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>.

[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>.

6.2. Informative References

[RFC7515] Jones, M., Bradley, J., and N. Sakimura, "JSON Web Signature (JWS)", RFC 7515, DOI 10.17487/RFC7515, May 2015, <https://www.rfc-editor.org/rfc/rfc7515>.

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