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JWK Thumbprint URI

Abstract

This specification registers a family of URIs that represent JSON Web Key (JWK) Thumbprint values. JWK Thumbprints are defined in RFC 7638.

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1. Introduction

JSON Web Key (JWK) Thumbprints [[RFC7638](#)] are a URL-safe representation of a hash value over a JSON Web Key (JWK). This specification defines a URI prefix indicating that the portion of the URI following the prefix is a JWK Thumbprint. This enables JWK Thumbprints to be communicated in contexts requiring URIs, including in specific JSON Web Token (JWT) [[RFC7519](#)] claims.

2. Requirements Notation and Conventions

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. JWK Thumbprint URI

The following URI prefix is defined to indicate that the portion of the URI following the prefix is a JWK Thumbprint:

```
*urn:ietf:params:oauth:jwk-thumbprint
```

The prefix is followed by a colon and a JWK Thumbprint value to form a URI representing a JWK Thumbprint.

3.1. Example JWK Thumbprint URI

Section 3.1 of [[RFC7638](#)] contains the following example JWK Thumbprint value:

```
NzbLsXh8uDCCd-6MNwXF4W_7noWZFZAfHkxZsRGC9Xs
```

A complete JWK Thumbprint URI using the above JWK Thumbprint is:

urn:ietf:params:oauth:jwk-thumbprint:NzbLsXh8uDCcd-6MNwXF4W_7nowXFZAfH

4. Security Considerations

The security considerations of [RFC7638] also apply when using this specification.

5. IANA Considerations

5.1. OAuth URI Registration

This specification registers the following value in the IANA "OAuth URI" registry [IANA.OAuth.Parameters] established by [RFC6755].

5.1.1. Registry Contents

- *URN: urn:ietf:params:oauth:jwk-thumbprint
- *Common Name: JWK Thumbprint URI
- *Change controller: IESG
- *Specification Document: [[this specification]]

6. References

6.1. Normative References

[IANA.OAuth.Parameters] IANA, "OAuth Parameters", <<http://www.iana.org/assignments/oauth-parameters>>.

[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/info/rfc2119>>.

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6.2. Informative References

- [RFC6755] Campbell, B. and H. Tschofenig, "An IETF URN Sub-
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- [SIOPv2] Yasuda, K., Jones, M. B., and T. Looker, "Self-Issued
OpenID Provider v2", 12 September 2021, <[https://
openid.net/specs/openid-connect-self-issued-v2-1_0.html](https://openid.net/specs/openid-connect-self-issued-v2-1_0.html)>.

Appendix A. Acknowledgements

Use cases for this specification were developed in the OpenID
Connect Working Group of the OpenID Foundation. Specifically, its
use is planned in future versions of the [SIOPv2] specification.

The following individuals also contributed to this specification:
John Bradley and Adam Lemmon.

Appendix B. Document History

[[to be removed by the RFC Editor before publication as an RFC]]

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