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CoRE Target Attribute Registry

Abstract

The Constrained RESTful Environments (CoRE) specifications apply Web technologies to constrained environments. One important such technology is Web Linking [RFC8288], which CoRE uses as the basis for a number of discovery protocols, such as the Link Format [RFC6690] in CoAP's Resource Discovery Protocol (Section 7 of [RFC7252]) and the Resource Directory [RFC9176].

Web Links can have Target Attributes, the names of which are not generally coordinated by the Web Linking specification (Section 2.2 of [RFC8288]). This short note introduces an IANA registry for coordinating names of Target Attributes when used in Constrained RESTful Environments.

About This Document

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

Status information for this document may be found at https://datatracker.ietf.org/doc/draft-bormann-core-target-attr/.

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

Source for this draft and an issue tracker can be found at https://github.com/cabo/core-target-attr.

Status of This Memo

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This Internet-Draft will expire on 10 May 2023.

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1. Introduction

(Please see abstract.)

The original Web Linking specification Section 3 of [RFC5988] did not attempt to coordinate names of target attributes except for providing common target attributes for use in the Link HTTP header. The current revision of that specification clarifies (Section 2.2 of [RFC8288]):

> This specification does not attempt to coordinate the name of target attributes, their cardinality, or use. Those creating and maintaining serialisations **SHOULD** coordinate their target attributes to avoid conflicts in semantics or syntax and **MAY** define their own registries of target attributes.

This short note introduces an IANA registry for coordinating names of Target Attributes when used in Constrained RESTful Environments.

With a registry now available, registration of target attributes is strongly encouraged. The incentive is that an unregistered attribute name might be registered with a different meaning at any time. (See also Section 2, Paragraph 2.)

1.1. Terminology

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.

2. IANA Considerations

This specification defines a new sub-registry for Target Attributes in the CoRE Parameters registry [IANA.core-parameters], with the policy "expert review" (Section 4.5 of [BCP26]).

The expert is instructed to be frugal in the allocation of very short target attribute names, keeping them in reserve for applications that are likely to enjoy wide use and can make good use of their shortness. The expert is also instructed to direct the registrant to provide a specification (Section 4.6 of [BCP26]), but can make exceptions, for instance when a specification is not available at the time of registration but is likely forthcoming. If the expert becomes aware of target attributes that are deployed and in use, they may also initiate a registration on their own if they deem such a registration can avert potential future collisions.

Each entry in the registry must include:

Attribute Name:
: a lower case ASCII [STD90] string that starts with a letter and can contain digits and hyphen-minus characters afterwards ([a-z] [-a-z0-9]*). (Note that [RFC8288] requires target attribute names to be interpreted in a case-insensitive way; the restriction to

lower case here ensures that they are registered in a predictable form).

Brief description:
a brief description

Change Controller:
(see Section 2.3 of [BCP26])

Reference:
a reference document that provides a description of the target attribute, including the semantics for when the target attribute appears more than once in a link.

Initial entries in this sub-registry are as listed in Table 1:

Attribute Name	Brief description	Change Controller	Reference
href	reserved (not useful as target attribute name)	IESG	[RFC6690]
anchor	reserved (not useful as target attribute name)	IESG	[RFC6690]
rel	reserved (not useful as target attribute name)	IESG	[RFC6690]
rev	reserved (not useful as target attribute name)	IESG	[RFC6690]
hreflang	(Web Linking)	IESG	[RFC8288]
media	(Web Linking)	IESG	[RFC8288]
title	(Web Linking)	IESG	[RFC8288]
type	(Web Linking)	IESG	[RFC8288]
rt	resource type	IESG	Section 3.1 of [RFC6690]
if	interface description	IESG	Section 3.2 of [RFC6690]
sz	maximum size estimate	IESG	Section 3.3 of [RFC6690]
ct		IESG	Section 7.2.1 of [RFC7252]

Attribute Name	Brief description	Change Controller	Reference
	Content-Format hint		
obs	observable resource	IESG	Section 6 of [RFC7641]
hct	HTTP-CoAP URI mapping template	IESG	Section 5 of [RFC8075]
osc	hint: resource only accessible using OSCORE	IESG	Section 9 of [RFC8613]
method	A supported authentication method for EDHOC	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
csuite	A supported cipher suite for EDHOC	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
cred_t	A supported type of authentication credential for EDHOC	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
idcred_t	A supported type of authentication credential identifier for EDHOC	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
ead_1	A supported EDHOC EAD_1 item	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
ead_2	A supported EDHOC EAD_2 item	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
ead_3	A supported EDHOC EAD_3 item	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
ead_4	A supported EDHOC EAD_4 item	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
comb_req	Hint: support for the EDHOC+OSCORE request	IESG	Section 6 of [I-D.ietf-core-oscore-edhoc]
sec-gp		IESG	

Attribute Name	Brief description	Change Controller	Reference
	Name of the security group that can be joined through this resource		Section 2.1 of [I-D.tiloca-core-oscore-discovery]
app-gp	Name of an application group associated with a security group	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
hkdf	The HKDF algorithm to use	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
cred_fmt	The format of authentication credential to use	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
sign_enc_alg	The encryption algorithm to use for encrypting signed messages	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
sign_alg	The signature algorithm to use	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
sign_alg_crv	The elliptic curve of the used signature algorithm	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
sign_key_kty	The key type of the used signing keys	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
sign_key_crv	The curve of the used signing keys	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
alg	The encryption algorithm to use for encrypting non-signed messages	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
ecdh_alg	The ECDH algorithm to use	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]

Attribute Name	Brief description	Change Controller	Reference
ecdh_alg_crv	The elliptic curve of the used ECDH algorithm	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
ecdh_key_kty	The key type of the used ECDH keys	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
ecdh_key_crv	The curve of the used ECDH keys	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
det_hash_alg	The hash algorithm to use for computing deterministic requests	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]
rekeying_scheme	The rekeying scheme used to distribute new keying material	IESG	Section 2.1 of [I-D.tiloca-core-oscore-discovery]

Table 1: Initial Entries in the Target Attributes Registry

A number of names are reserved as they are used for parameters in links other than target attributes, a further set is predefined in [RFC8288].

3. Security considerations

The security considerations of [RFC8288] apply, as do those of the discovery specifications [RFC6690], [RFC7252], and [RFC9176].

4. References

4.1. Normative References

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TBD

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