Credential Engine Overview

Credential Engine's mission is to bring transparency and literacy to all credentials in the marketplace. To fulfill that mission, we have built a cloud-based Credential Registry, which is designed to house common, searchable, and comparable information about all credentials – from diplomas, badges, and certificates to licenses, certifications and degrees of all types and levels. By using this Registry, students, credentialing bodies, employers, and more will have access to critical credentialing data needed to make decisions about both education and career. In order to maximize the data's utility, it must meet both minimum data standards, and be kept current. The easiest and most efficient way to ensure the data's integrity and utility is for all organizations that provide credentials to describe those credentials on their websites using the Credential Transparency Description Language (CTDL) in JSON-Linked Data format.

Structured Linked Data

Structured data is machine-readable and used by search engines to understand the content of web pages. Linked Data is a type of structured data that links between systems via the Web. When data is both structured and linked, it becomes a powerful tool that search engines and other systems can leverage. Linked Data is at the foundation of the Semantic Web, which is all about: (a) making meaningful links between data points understandable to humans and machines alike; and (b) providing the means for inferring new data from existing data.

There are several ways to express Linked Data including JSON-LD. Google provides an excellent explanation of structured data and how search engines can take advantage of it (and in turn, how websites that make use of it benefit from doing so). Google prefers JSON-LD over other formats for expressing structured linked data. Unlike RDFa, using JSON-LD maintains a clean separation between the data and your page's markup.

Embedding CTDL Formatted As Linked Data In Your Website

The Credential Engine's Credential Transparency Description Language (CTDL) is a set of terms, or "schema" used to describe information regarding Credentials, Competency Frameworks, and Quality Assurance. Think of it as a dictionary. The CTDL is structured using RDF principles, allowing diverse systems to communicate about Credentials even if those systems use different schemas internally.

Systems that can express their information via the CTDL on their web pages will benefit by having that information be more deeply understood by search engines and other systems. The best way to embed this information is via JSON-LD. A JSON-LD representation of the CTDL data is used within the Credential Engine's Credential Registry, and the Credential Engine will soon be able to crawl and understand web pages that use the CTDL. In the near future, semantic search engines will also be able to understand this data. Currently, a World Wide Web Consortium Community Group is working on a proposal to include credential descriptions with Schema.org. Schema.org is the largest Linked Data schema in the world and is used by the major search engines such as Google, Yahoo, Bing, and Yandex.

Credentialing organizations can see their data in the CTDL by mapping it to the "format" endpoint of the Credential Registry Assistant API. This can be done for testing and validation/verification while developing a system that outputs CTDL directly, or you can continue to use the API to handle rendering the CTDL data for your system.

Example of Credential Description via CTDL JSON-LD

A simple example of Credential data, using the CTDL, written in JSON-LD, and embedded in a web page would look like this:

```
<script type="application/ld+json">
    {
        "@context": "http://credreg.net/ctdl/schema/context/json",
        "@id": "http://credentialengineregistry.org/resources/ce-c5abf83d-
    6ab4-4711-80ad-68b3a560fb71",
        "@type": "ceterms:Certificate",
        "ceterms:name": "My Credential Name",
        "ceterms:description": "This is some text that describes my
    credential.",
        "ceterms:subjectWebpage": "http://www.credreg.net/credential/1234",
        "ceterms:ctid": "ce-c5abf83d-6ab4-4711-80ad-68b3a560fb71",
        "ceterms:credentialStatusType": [
            {
                "@type": "ceterms:CredentialAlignmentObject",
                "ceterms:targetNodeName": "Active",
                "ceterms:targetNode": "credentialStat:Active"
            }
        ]
    }
</script>
```

Contact Credential Engine

To learn more about formatting your credential data using the CTDL in JSON-LD, please send an email to info@credentialengine.org.

To start publishing information about your credentials to the Credential Registry, and to set up your organization's account, go to www.credentialengine.org/accounts.

And to learn more about Credential Engine, the Credential Registry, and the CTDL, please visit www.credentialengine.org.