



Credential Transparency Description Language (CTDL)

What is the Credential Transparency Description Language?

The Credential Transparency Description Language (CTDL) is a schema (a type of mini-language that people and systems can use to understand each other even if their data comes from different sources) that anyone can use to share information about credentialing data. The CTDL not only provides a common and unified way of describing information in the Credential Registry, it also is an open language that can be used on the Web. This powerful feature makes it dramatically easier for students, businesses, researchers, and automated systems to discover, understand, and compare information about credentials from a variety of sources.

How Does the CTDL Work?

Like a dictionary, [the CTDL](#) is comprised of nouns (classes) and verbs (properties) that allows it to make simple statements, which, in aggregate, enable rich description of credential-related resources including credentialing organizations and specific subclasses of credentials such as degrees, certificates, certifications, and digital badges. Credentials are related (linked) to other entities in the credentialing ecosystem such as assessments, learning opportunities, requirements, costs, and conceptual frameworks (e.g., competencies, classifications of occupations, and instructional programs). It will also support labor market outcomes, education and career pathways, and employer preferences.

How is the Credential Transparency Description Language Maintained?

The CTDL is managed by Credential Engine through policies to ensure long-term persistence. It is expanded and maintained through the guidance and consensus of five voluntary Advisory Committees (Technical, Quality Assurance, Higher Education, Certification and Licensure, and Business), comprised of experts and practitioners in their fields.

Is the CTDL Proprietary?

The CTDL is openly available to anyone to use through a Creative Commons Attribution 4.0 International License. Credential Engine reflects the 2013 [Open Data Policy](#) to provide data in open, machine-readable formats. By creating data that is open, transparent, and accountable, Credential Engine mirrors the standards of OMB-Circular [A-130](#).

How Does CTDL Work with Other Data Standards?

The CTDL is also consistent with certain federal policies and programs on open data and the use of standards, including the [Open Data Policy](#), Office of Management and Budget (OMB) Circulars [A-119](#) and [A-130](#), and the [Federal](#) and [Defense](#) Standardization Programs.¹

Credential Engine harmonizes with widely used international standards for the web such as [Schema.org](#) and [Open Badges](#). Credential Engine also works in partnership with international standards bodies such as [PESC](#), [IMS Global](#), and the [HR Open Standards Consortium](#) to improve standards and data interoperability.

The CTDL is modeled on the [\(W3C\) Linked Data specifications and best practices](#) guiding principles and

¹ This represents Credential Engine's current interpretation and understanding of the federal regulations and guidelines highlighted in this fact sheet, and are undergoing a review.

earns five stars in the [W3C 5-Star](#) deployment scheme for Open Linked Data.

W3C Guiding Principles	W3C 5-Star Open Data Deployment Scheme
<ul style="list-style-type: none"> • Uniform Resource Identifiers (URI) - Provide globally unique identifiers as names for all resources that are relevant to the credentialing marketplace. • HTTP URIs - Use HTTP protocols with these names so that people can look up these names and know who is the originator and authoritative sources of these resources. • Data and Metadata Documentation - Provide clear guidance so people can make the most effective use of the resources. • Linking Resources - Provide links to other related resources on the web for further discovery of information and to improve the potential power of the global web of data. 	<ul style="list-style-type: none"> • 1 Star – Make your data available in any form on the web with an open license. • 2 Stars – Your data is structured and machine-readable. • 3 Stars – Your data doesn't use proprietary formats (e.g., uses CSV rather than Excel). • 4 Stars – Your data uses only open standards from W3C (RDF, SPARQL) and identifies things with URI. • 5 Stars – Your data is linked to other people's data to provide context.

Where is the CTDL Used?

- **In the Credential Registry**
This web-based Registry acts as central location to collect, maintain, and connect up-to-date information on credentials in the marketplace. All credentials in the Registry have been voluntarily submitted by the organization that offers those credentials.
- **With the Open Applications Marketplace**
The open apps marketplace allows organizations to build customized applications that use the Registry's data—which is stored in the common CTDL format—to access credentialing information. Apps will serve a wide variety of audiences, including students and workers, veterans, career and guidance counselors, employers, educators, and policy makers.
- **On the Open Web**
The CTDL is accessible on the open web and, once adopted by [Schema.org](#) as the standard for describing, searching, and comparing credentials on the Internet, all credential data posted to the web will be able to be more easily and efficiently discovered by search engines as well as used to populate the Credential Registry.

How Can Organizations Use the CTDL?

The CTDL is available for any organization to use within their own systems for interoperability and to output Linked Data. Using the CTDL to publish to the Credential Registry is voluntary. Publishing options include manual entry, bulk upload, using an Application Programming Interface (API), or allowing data to be directly "harvested" from an organization's website. To publish to the Registry using any of the publishing options, credentialing and quality assurance organizations can create an account through the [Credential Engine accounts website](#).



To learn more, please visit www.credentialengine.org and www.credreg.net or contact info@credentialengine.org

Last Updated 10/03/18 Download this Fact Sheet

