Updates to the European Digital Credential Infrastructure

EDC Release 1.8

June 2023 marks a time for the new release of the European Digital Credential for Learning (EDC) infrastructure (version 1.8). This release includes major changes that will improve the interoperability of EDC with other existing initiatives. We include below an overview of the major changes and invite you to **join our Webinar on the 28th of June at 14.00** for a more detailed dive into the new changes. You can register for the webinar here.

As of 1 June, the new version of the EDC infrastructure is available in the Online Credential Builder, the Issuer, and the Viewer. After a final security review, the open-source code will be made available on Github and the Docker images will be updated.

Should you already require access to the new versions, please get in touch at EMPL-ELM-SUPPORT@ec.europa.eu.

From XML to JSON-LD

Previously, the native format of EDC was XML. From now on, EDCs created in the Online Credential Builder or built with your own tools using the upcoming version of the open-source code, will have a JSON-LD format, in line with the international W3C "verifiable Credential" standards. The EDC Issuer and Viewer now support the awarding and visualization of JSON-LD credentials, and further allow the conversion of old XML credentials to the new JSON-LD format.

The XML format, while aligned with W3C standards, was in practice not accepted by all JSON LD native systems. With this implementation, we are achieving **full compatibility with international standards**, and credentials can be accepted by any compliant wallet. The change to JSON-LD credentials also incorporates the **new JADES signature standard** allowing for signing credentials.

Release of ELM v.3

In early May 2023, the European Commission launched the new version (v3) of the **European Learning Model (ELM)**. This new version is a stable, long-term support version of the data model, allowing for the documentation of learning data and the creation and issuance of digitally-signed credentials. All new credentials issued via the Online Credential Builder will now be ELM v.3 compliant.

To ensure backwards compatibility:

1. All old XML credentials stored in Europass wallets have been automatically converted to ELM v3, while EDCs stored locally can also be converted in the EDC Viewer
2. While transitioning to ELM v.3, implementers using their own tools and/or APIs to issue EDCs in ELM v.2 format can continue their practices for a few months, pending the security check of the new version of the code. We encourage implementers to get in touch with us to address any concerns.

ELM v.3 incorporates many (over 200) of the numerous change requests received from implementers over the last two years, including:

- Establishing one stable comprehensive model on ontology that is used by specific Application Profiles (such as Learning Opportunities and Qualification [LOQ], European Digital Credentials for Learning [EDC] and Accreditation [AMS])
- Introducing a new Application Profile focusing on Person Identity [PID]
- Translation of the data model from English to 28 other Europass languages
- Full alignment with the ELMO data model to support Erasmus+ student mobility with ELM compliant electronic documents.
- Extension and fine-tuning of the model to accommodate real life use cases, resulting in the increase of ELM properties from 331 to 487.'

Mapping ELM v.3 to ELMO

To support its use in higher education settings, the ELM has incorporated most of the ELMO data model since its inception. Now, after a series of targeted of strategic and technical consultation meetings between representatives both initiatives, ELM v.3 is fully mapped to ELMO 1.8. The mapping table is available on Github, and it will be used by the DC4EU project to create a converter.

Improvements of the Mandated Issue

The EDC infrastructure allows learning providers to mandate another organisation to seal and send credentials on their behalf (e.g. in some EU countries, the Ministry of Education officially issues qualifications on behalf of universities and/or Vocational Education and Training institutions). The new, upgraded feature allows awarding bodies and their mandated partners to specify the formal conditions of their mandating agreement, and embed evidence of their agreement in the credential itself. Thanks to these improvements, the mandated issue can be safely used by a wider range of organisations, including allowing smaller and non-formal learning providers who may not be in position to acquire their own e-Seal.

Automatic extension of the validity of credentials

Until now, the validity of EDCs has been tied to the validity of the e-Seal used to seal and issue them. The new release includes a mechanism for the automatic extension of the validity of the credentials to ensure the continued validity of credentials past the expiry date of the e-Seal.

In practice this means that EDCs that might have expired 3-5 years after their issuing date will continue to be verifiable for decades

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You will be able to the new EDC infrastructure (once published) on Github. For any questions regarding the ELM or its uses, you can get in touch with us at EMPL-ELM-SUPPORT@ec.europa.eu.