

CATENA-X
STANDARD



CX - 0051 Summary Credential v.1.0.0

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ABOUT THIS DOCUMENT & MOTIVATION

Catena-X is the first open and collaborative data ecosystem. The goal is to provide an environment for the creation, operation, and joint use of end-to-end data chains along the entire automotive value chain. All partners are on an equal ground, have sovereign control over their data and no lock-in effects occur. This situation provides a sustainable solution for the digitalization of supply chains, especially for medium-sized and small companies, and supports the cooperation and collaboration of market participants and competitors.

The ever-growing Catena-X ecosystem will enable enormous amounts of data to be integrated and collaboratively harnessed. To ensure that these complex data volumes can be sent, received, and processed smoothly across all stages of the value chain, one language for all players: common standards. The standards of the Catena-X data ecosystem define how the exchange of data and information in our network works. They are the basis for ensuring that the technologies, components, and processes used are developed and operated according to uniform rules.

Common standards create added value for all partners: Within our network, data flows more smoothly through interfaces. In addition, we avoid cumbersome individual IT solutions for sharing data with other partners. In the field of international standardization, Catena-X follows the proven international standardization institutions: ISO/IEC/ITU and CEN-CENELC/ETSI.

For users and data providers, implementation of standards will reduce the costs that would arise from adapting different systems. In addition, no important data is lost. On the contrary, it even becomes easier to collect data across companies. For operators and developers, standards will create a framework that provides reliable orientation and planning security.

The following document describes one of the standards used in the Catena-X ecosystem and the requirements needed to implement it. Here, it serves as main resource to illustrate the following data model. It contains information starting from the format of the model, up to the conceptual and physical model. The standardisation of the data model will enable faster information sharing and homogeneity throughout the entire Catena-X ecosystem.

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ABSTRACT

The Summary Credential is a Verifiable Credential collecting multiple attributes of a participant. The following represents the technical documentation for the Summary Credential in the Platform Capability Identity and Access Management. This standard documentation defines the structure of the Summary Credential.

1. INTRODUCTION

1.1 AUDIENCE & SCOPE

This section is non-normative

List for which roles the standard is relevant. Possible options, please delete the roles for which the standard isn't relevant.

- Core Service Provider
- Data Provider / Consumer
- Onboarding Service Provider
- Consulting Services Provider

This document focuses on the schema of the Summary Credential based on the W3C Standard for Verifiable Credentials [W3C Verifiable Credential Data Model v1.1] (<https://www.w3.org/TR/vc-data-model/>).

This document is relevant for core service providers who maintain the issuance of verifiable credentials for specific company attributes.

It is also relevant for onboarding service providers as they need to be able to issue verifiable credentials of specific attributes describing the onboarded participant.

For Data Provider it is relevant due to the fact that data provision and consumption can have an access control that is based on the roles as attribute of the consuming participant. On the other hand a Data Consumer must be able to validate the identity and role of the providing participant.

1.2 CONTEXT

This section is non-normative

The Summary Credential is issued by the Onboarding Service Provider to the Wallet of the participant and is exchanged by the connectors as a Verifiable Presentation in the course of data exchange. As the mentioned attributes include also use case specific roles, it is used to manage access to the requested data.

According to the roles a participant has in a specific data exchange scenario, different data sets are accessible for this participant as a Data Consumer. For a Data Provider the knowledge of the use case specific -or data exchange scenario specific- roles a Data Consumer has is a key feature for managing access to specific data. Based on the role of the Data Consumer the Data Provider is able to grant or deny access to the requested data. As the data exchange is done using the connector this access management is part the policies interpreted by the connector.

1.3 ARCHITECTURE OVERVIEW

This section is non-normative

This section is not applicable for this standards in this version.

1.4 CONFORMANCE

As well as sections marked as non-normative, all authoring guidelines, diagrams, examples, and notes in this specification are non-normative. Everything else in this specification is normative.

The key words **MAY**, **MUST**, **MUST NOT**, **OPTIONAL**, **RECOMMENDED**, **REQUIRED**, **SHOULD** and **SHOULD NOT** 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.

1.5 PROOF OF CONFORMITY

This section is non-normative

All participants and their solutions will need to proof, that they are conform with the Catena-X standards. To validate that the standards are applied correctly, Catena-X employs Conformity Assessment Bodies (CABs).

All Core Service Providers providing the issuance of a Summary Credential must ensure that this credential follows the structure described in section [2.2 SUMMARY CREDENTIAL STRUCTURE](#) and contain the appropriate fields (described in section [2.3 SUMMARY CREDENTIAL FIELD DETAILS](#) of this document) for the participant the Summary Credential is issued for.

To validate these criteria of conformance to the Summary Credential please collect the following cocuments:

- Arch42 Documentation explaining the architecture, process flows and data structures of the implementation.
- The validation / control process of the participant roles.

Hand this documentation to the conformity assessment body

1.6 EXAMPLES

This section is not applicable for this standards in this version.

1.7 TERMINOLOGY

This section is non-normative

Additional terminology used in this standard can be looked up in the glossary on the association homepage.

2. Summary Credential

This section is normative

2.1 Summary Credential Content

The Summary Credential is a single credential including several attributes of the described participant. It is used as a certificate of the existence of verifiable credentials for the included attributes.

The attributes that can be listed in the summary credentials **if applicable to the participant** are the following:

- "MembershipCredential";
- "DismantlerCredential";
- "PcfCredential";
- "SustainabilityCredential";
- "QualityCredential";
- "TraceabilityCredential";
- "BehaviorTwinCredential";
- "BpnCredential"

2.2 Summary Credential Structure

The structure of the summary credential is as follows:

```
{
  "@context": [
    "https://w3id.org/2023/catenax/credentials/summary/v1"
  ],
  "id": "<credential uid>",
  "type": [
    "VerifiableCredential",
    "SummaryCredential"
  ],
  "issuer": "<did:web:issuer>",
  "issuanceDate": "2023-06-02T12:00:00Z",
  "expirationDate": "2022-06-16T18:56:59Z",
  "credentialSubject": {
    "id": "<did:web:subject>",
    "holderIdentifier": "<BPN>",
    "items": [
      "MembershipCredential",
      "DismantlerCredential",
      "PcfCredential",
      "SustainabilityCredential",
      "QualityCredential",
      "TraceabilityCredential",
      "BehaviorTwinCredential",
      "BpnCredential"
    ]
  }
}
```

```
  ],
  "contractTemplates": "https://public.catena-x.org/contracts/"
}
```

2.3 Summary Credential Field Details

"id": The unique identifier of the credential.

"type": The type of the Verifiable Credential. In this case "VerifiableCredential", "SummaryCredential"

"issuer": The did of the issuer of this credential. In this case the core service provider or the onboarding service provider

"issuanceDate": Date of issuance

"expirationDate": Date of expiration

"credentialSubject": Data about the participant the credential is issued for

"id": The did of the participant

"holderIdentifier": The Business Partner Number of the participant

"items": The list of available Verifiable Credentials for the participant. This can be from the following list:

"MembershipCredential",

"DismantlerCredential",

"PcfCredential",

"SustainabilityCredential",

"QualityCredential",

"TraceabilityCredential",

"BehaviorTwinCredential",

"BpnCredential"

"contractTemplates": The ULR of the location of the Framework Agreements described in CX-0020 and mentioned in the credentialSubject

3 REFERENCES

3.1 NORMATIVE REFERENCES

This section is not applicable for this standard in this version.

3.2 NON-NORMATIVE REFERENCES

This section is non-normative

This section is not applicable for this standard in this version.

3.3 REFERENCE IMPLEMENTATIONS

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ANNEXES

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TABLES

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