

CATENA-X
STANDARD



CX - 0050 Framework Agreement Credential v.1.0.0

Contact: standardisierung@catena-x.net

Table of Contents

CX - 0050 Framework Agreement Credential v.1.0.0

Table of Contents

ABOUT THIS DOCUMENT & MOTIVATION

DISCLAIMER & LIABILITY

REVISIONS & UPDATE

COPYRIGHT & TRADEMARKS

ABSTRACT

1. INTRODUCTION

1.1 AUDIENCE & SCOPE

1.2 CONTEXT

1.3 ARCHITECTURE OVERVIEW

1.4 CONFORMANCE

1.5 PROOF OF CONFORMITY

2. Framework Agreement Credential

2.1 Framework Agreement Credential Content

2.2 Framework Agreement Credential Structure

2.3 Framework Agreement Credential Field Details

2.4 Framework Agreement Credential Collection

2.4.1 Behavior Twin Use Case Credential

2.4.2 PCF Use Case Credential

2.4.3 Sustainability Use Case Credential

2.4.4 Quality Use Case Credential

2.4.5 Resiliency Use Case Credential

2.4.6 Traceability Use Case Credential

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.

DISCLAIMER & LIABILITY

The present document and its contents are provided "AS-IS" with no warranties whatsoever.

The information contained in this document is believed to be accurate and complete as of the date of publication, but may contain errors, mistakes or omissions.

The Catena-X Automotive Network e.V. ("Catena-X") makes no express or implied warranty with respect to the present document and its contents, including any warranty of title, ownership, merchantability, or fitness for a particular purpose or use. In particular, Catena-X does not make any representation or warranty, and does not assume any liability, that the contents of the document or their use (i) are technically accurate or sufficient, (ii) conform to any law, regulation and/or regulatory requirement, or (iii) do not infringe third-party intellectual property or other rights.

No investigation regarding the essentiality of any patents or other intellectual property rights has been carried out by Catena-X or its members, and Catena-X does not make any representation or warranty, and does not assume any liability, as to the non-infringement of any intellectual property rights which are, or may be, or may become, essential to the use of the present document or its contents.

Catena-X and its members are subject to the IP Regulations of the Association Catena-X Automotive Network e.V. which govern the handling of intellectual property rights in relation to the creation, exploitation and publication of technical documentation, specifications, and standards by [Catena-X](#).

Neither Catena-X nor any of its members will be liable for any errors or omissions in this document, or for any damages resulting from use of the document or its contents, or reliance on its accuracy or completeness. In no event shall Catena-X or any of its members be held liable for any indirect, incidental or consequential damages, including loss of profits. Any liability of Catena-X or any of its members, including liability for any intellectual property rights or for non-compliance with laws or regulations, relating to the use of the document or its contents, is expressly disclaimed.

REVISIONS & UPDATE

The present document may be subject to revision or change of status. Catena-X reserves the right to adopt any changes or updates to the present document as it deems necessary or appropriate.

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be copied or modified without the prior written authorization of Catena-X. In case of any existing or perceived difference in contents between any versions and/or in print, the prevailing version of the present document is the one made publicly available by Catena-X in PDF format.

If you find any errors in the present document, please send your comments to: standardisierung@catena-x.net

COPYRIGHT & TRADEMARKS

Any and all rights to the present document or parts of it, including but not limited under copyright law, are owned by Catena-X and its licensors.

The contents of this document shall not be copied, modified, distributed, displayed, made publicly available or otherwise be publicly communicated, in whole or in part, for any purposes, without the prior authorization by Catena-X, and nothing herein confers any right or license to do so.

The present document may include trademarks or trade names which are registered by their owners. Catena-X claims no ownership of these except for any which are indicated as being the property of Catena-X, and conveys no right to use or reproduce any such trademark or trade name contained herein. Mention of any third-party trademarks in the present document does not constitute an endorsement by Catena-X of products, services or organizations associated with those trademarks.

“CATENA-X” is a trademark owned by Catena-X registered for its benefit and the benefit of its members. Using or reproducing this trademark or the trade name of Catena-X is expressly prohibited. No express or implied license to any intellectual property rights in the present document or parts thereof, or relating to the use of its contents, or mentioned in the present document is granted herein. The copyright and the foregoing restrictions extend to reproduction in all media. © Catena-X Automotive Network e.V. All rights reserved.

ABSTRACT

The Framework Agreement Credential is a Verifiable Credential which confirms that a participant has signed a use case specific framework agreement. The following represents the technical documentation for the Framework Agreement Credential in the Platform Capability Identity and Access Management. This standard documentation defines the structure of the Framework Agreement Credential.

1. INTRODUCTION

1.1 AUDIENCE & SCOPE

This section is non-normative

This document focuses on the schema of the Framework Agreement 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.

For Data Provider it is relevant in case they are providing data in the context of a use case for which a Framework Agreement is negotiated and confirmed for the data exchange.

For the Data Consumer it is relevant to be able to present the approval to a use case specific Framework Agreement to be able to consume data in the context of this specific use case.

1.2 CONTEXT

This section is non-normative

The Framework Agreement Credential is issued by the Core Service Provider to the Wallet of the participant and is exchanged by the connectors in the course of data exchange. It is an attribute of the participants which approves to another participant that a Framework Agreement for a specific use case is signed.

A use case framework agreement defines the conditions for data exchange in a particular use case. Having signed this framework agreement is approved by a verifiable credential issued to the signing participant. This is done by the core service provider after an appropriate check of the approval of the participant to the framework agreement. The exchange of this

credential allows participants to validate each other that they have agreed to the conditions defined in the framework agreement.

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 prove, 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 Use Case Framework Agreement Credentials must ensure that these credentials follow the structure described in section [2.2 FRAMEWORK AGREEMENT CREDENTIAL STRUCTURE](#) and contain the data according to the linked verifiable credentials of the collection in section section [2.4 FRAMEWORK AGREEMENT CREDENTIAL COLLECTION](#)

All Core Service Providers providing the issuance of Use Case Framework Agreement credentials must ensure that the Use Case Framework Agreements have been signed correctly by the participants.

To validate these criteria of conformance to the Use Case Framework Agreements please collect the following documents:

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

Hand this documentation to the conformity assessment body

2. Framework Agreement Credential

This section is normative

2.1 Framework Agreement Credential Content

The Framework Agreement Credential is a verifiable credential proving that the holder of the credential has signed a framework agreement.

It contains the name of the use case framework agreement, a link to framework agreement document and the version of the use case agreement document.

2.2 Framework Agreement Credential Structure

The structure of the use case framework agreement credential is as follows:

```
{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://w3id.org/security/suites/jws-2020/v1",
    "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
  ],
  "id": "UUID",
  "issuer": "<did of OpCo>",
  "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
  "issuanceDate": "somedate",
  "expirationDate": "somedate",
  "credentialSubject": {
    "id": "<did>",
    "holderIdentifier": "<BPN>",
    "type": "<AGREEMENT-TYPE>",
    "contractTemplate": "<URL OF AGREEMENT/CONTRACT TEMPLATE>",
    "contractVersion": "<VERSION OF THE AGREEMENT TEMPLATE>"
  }
}
```

2.3 Framework Agreement Credential Field Details

"id": The unique id 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

"type": The identifier of the use case the framework agreement was signed for

"contractTemplate": The link to a framework agreement including the version of the agreement fitting to use case or dat exchange scenario the summary credential is issued for

"contractVersion": "1.0.0": The version of the framework agreement which was signed by the participant.

2.4 Framework Agreement Credential Collection

2.4.1 Behavior Twin Use Case Credential

Agreement Type: **BehaviorTwinCredential**

Content:

```
{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://w3id.org/security/suites/jws-2020/v1",
    "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
  ],
}
```

```

    "id": "UUID",
    "issuer": "<did of OpCo>",
    "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
    "issuanceDate": "somedate",
    "expirationDate": "somedate",
    "credentialSubject": {
      "id": "<did>",
      "holderIdentifier": "BPN",
      "type": "BehaviorTwinCredential",
      "contractTemplate": "https://public.catena-x.org/contracts/behavior_twin.v1.pdf",
      "contractVersion": "1.0.0"
    }
  }
}

```

2.4.2 PCF Use Case Credential

Type: **PcfCredential**

Content:

```

{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://www.w3.org/2018/credentials/examples/v1",
    "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
  ],
  "id": "UUID",
  "issuer": "<issuerDID>",
  "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
  "issuanceDate": "2021-06-16T18:56:59Z",
  "expirationDate": "2022-06-16T18:56:59Z",
  "credentialSubject": {
    "id": "<did>",
    "holderIdentifier": "<BPN>",
    "type": "PcfCredential",
    "contractTemplate": "https://public.catena-x.org/contracts/pcf.v1.pdf",
    "contractVersion": "1.0.0"
  }
}

```

2.4.3 Sustainability Use Case Credential

Type: **SustainabilityCredential**

Content:

```

{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://w3id.org/security/suites/jws-2020/v1",

```

```

      "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
    ],
    "id": "UUID",
    "issuer": "<issuerDID>",
    "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
    "issuanceDate": "2021-06-16T18:56:59Z",
    "expirationDate": "2022-06-16T18:56:59Z",
    "credentialSubject": {
      "id": "<did>",
      "holderIdentifier": "BPN of holder",
      "type": "SustainabilityCredential",
      "contractTemplate": "https://public.catena-x.org/contracts/sustainability.v1.pdf",
      "contractVersion": "1.0.0"
    }
  }
}

```

2.4.4 Quality Use Case Credential

Type: **QualityCredential**

Content:

```

{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://w3id.org/security/suites/jws-2020/v1",
    "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
  ],
  "id": "UUID",
  "issuer": "<issuerDID>",
  "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
  "issuanceDate": "2021-06-16T18:56:59Z",
  "expirationDate": "2022-06-16T18:56:59Z",
  "credentialSubject": {
    "id": "<did>",
    "holderIdentifier": "BPN of holder",
    "type": "QualityCredential",
    "contractTemplate": "https://public.catena-x.org/contracts/quality.v1.pdf",
    "contractVersion": "1.0.0"
  }
}

```

2.4.5 Resiliency Use Case Credential

Type: **ResiliencyCredential**

Content:


```

{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://w3id.org/security/suites/jws-2020/v1",
    "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
  ],
  "id": "UUID",
  "issuer": "<issuerDID>",
  "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
  "issuanceDate": "2021-06-16T18:56:59Z",
  "expirationDate": "2022-06-16T18:56:59Z",
  "credentialSubject": {
    "id": "<did>",
    "holderIdentifier": "BPN of holder",
    "type": "ResiliencyCredential",
    "contractTemplate": "https://public.catenax.org/contracts/resiliency.v1.pdf",
    "contractVersion": "1.0.0"
  }
}

```

2.4.6 Traceability Use Case Credential

Type: **TraceabilityCredential**

Content:

```

{
  "@context": [
    "https://www.w3.org/2018/credentials/v1",
    "https://w3id.org/security/suites/jws-2020/v1",
    "https://raw.githubusercontent.com/catenax-ng/product-core-schemas/main/UseCaseVC"
  ],
  "id": "UUID",
  "issuer": "<issuerDID>",
  "type": ["VerifiableCredential", "UseCaseFrameworkCondition"],
  "issuanceDate": "2021-06-16T18:56:59Z",
  "expirationDate": "2022-06-16T18:56:59Z",
  "credentialSubject": {
    "id": "<did>",
    "holderIdentifier": "<BPN>",
    "type": "TraceabilityCredential",
    "contractTemplate": "https://public.catenax.org/contracts/traceability.v1.pdf",
    "contractVersion": "1.0.0",
  }
}

```