

**CATENA-X**  
STANDARD



**CX - 0006 Registration and initial onboarding v.1.1.2**

Contact: [standardisierung@catena-x.net](mailto:standardisierung@catena-x.net)

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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

To become a participant of Catena-X, each applicant must go through a registration process. Registration is a mandatory requirement for all further activities within the Catena-X network. The registration process, along with other services, provide the foundation of trust for the Catena-X network.

## 1. Introduction

To become a participant of Catena-X, each applicant must go through a registration process. Registration is a mandatory requirement for all further activities within the Catena-X network. The registration process, along with other services, provide the foundation of trust for the Catena-X network.

The document deals with the initial registration process which is the initial mandatory step for new Catena-X network participants.

### 1.1 Audience & Scope

*This section is non-normative*

This standard is relevant for the following roles:

- Core Service Provider
- Onboarding Service Provider

### 1.2 Context

*This section is non-normative*

### 1.3 Architecture Overview

*This section is non-normative*

Figure 1 shows a high-level view of a section of Catena-X. It consists of the following building blocks:

Catena-X Core Services – Basic services, like for example discovery services, used by all participants of Catena-X. The core services are standardized by the Catena-X consortium.

Participants environments – A participant can offer and consume data. For this, he needs an Eclipse Dataspace Connector as well as corresponding prosumer applications. The applications are provided by Catena-X application providers.

The Gaia-X Digital Clearing House (GXDCH) consists of a notarization service and a compliance service and can be operated by another party. GXDCH is a Gaia-X component and must therefore comply with the corresponding Gaia-X standards. GXDCH on the one hand verifies the legitimacy of Catena-X participants and on the other hand it ensures the creation of Gaia-X compliant self-descriptions.



Figure 1 High-level view of a section of Catena-X

## 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 conform with the Catena-X standards. To validate that the standards are applied correctly, Catena-X employs Conformity Assessment Bodies (CABs).

Core service providers and onboarding service providers implementing their own registration solution MUST demonstrate compliance by:

Providing documentation of the registration process implemented.

Proofing that the registration process includes all the mandatory steps as defined in Chapter 3

Proofing that the registration process implemented delivers the mandatory results as detailed in Chapter 3.

## 2. Scope of the Implementation

### 2.1 constraints and limitations

The registration process described in this document serves as reference for future implementations and is shown in Figure 2. Successful registration is a mandatory prerequisite for any subsequent activity – such as creating or consuming offers – on Catena-X.

### 3. Process

#### 3.1 Contextual description

To become a participant of Catena-X, each applicant must go through a registration process. Registration is a mandatory requirement for all further activities within the Catena-X network. The registration process, along with other services, provide the foundation of trust for the Catena-X network.

#### 3.2 Actors and Roles

Actors	
The to be onboarded company	The company that wants to register to Catena-X
Core Service Provider	Core Service Providers run core services that enable the basic functionality of the Catena-X data space (e.g., Identity Provider, Marketplace). They can also act as an onboarding service provider.
Onboarding service provider	Onboarding Service Providers enable data provider/consumer to be registered to the Catena-X network.

#### 3.3 Process Representation



Figure 2: Catena-X Registration Process

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##### Initial Contact - non normative

Catena-X follows an invitation-based registration process. Companies can contact Catena-X in one of the following ways:

- A current member of Catena-X proposes another company as a candidate
- Candidates are approached at trade fairs or other events
- Companies contacting Catena-X via the Catena-X homepage

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##### Invite

An onboarding service provider **MAY** send an invitation mail to the previously identified contact person of the company to be invited. The mail grants temporary access to the registration tool of onboarding service provider.

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##### Insert Company Data

The to be onboarded company **MUST** provide the company details required:

- Company Name
- Street + House number/Postbox
- Postal Code (depending on country)
- City
- Country
- Unique Identifier (based on country - see Upload excerpt from commercial register or equivalent for more information)
- Region / State (optional - depending on country)

This can be done either manually or partially automatically if the master data for the company is already contained in BPDM which is the central business partner directory of Catena-X. At least the data necessary for creating a business partner entry in BPDM must be provided. For additional information refer to BPM-001 Business Partner Number and BPM-002 Issuing Agency.

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### Select company role inside the Catena-X network

The to be onboarded company **MUST** be able to select at least one of the following roles:

#### Active Participant

The participant role is covering the data provider, data consumer or app user scenario. As participant you are an active member of the network with enabled services to participate as contributor and user.

#### App Provider

The App Provider is a company which is providing application software via the CX marketplace. As app provider you can participate and use the developer hub, release and offer applications to the network and manage your applications.

#### Service Provider

The Service Provider is able to offer 3rd party services, such as dataspace service offerings to CX Members. CX members can subscribe for those services.

There may be other roles in the future.

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### Agree to terms and conditions

The to be onboarded company **MUST** accept the framework agreement, which consists of the operator terms, dataspace terms and CX terms (depending on the selected company role).

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### Proof of conformity

Each application or service provider **MUST** be able to proof conformity with relevant standards for the selected company role. Conformity is assessed by an external conformity assessment body (CAB). The to be onboarded company **MUST** first complete the conformity assessment and need to be enabled to provide the certificate of conformity as part of the registration application.

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### Upload excerpt from commercial register or equivalent

Each company to be onboarded **MUST** be enabled to provide proof of identity in the form of an extract from the commercial register or equivalent (depending on the legal entity location of the to be onboarded company).

Catena-X **SHOULD** support the following identifiers specified by Gaia-X Trust Framework 22.10 (<http://docs.gaia-x.eu/policy-rules-committee/trust-framework/22.10/participant/>).

Identifier	Comment	Example
local	The state issued company number	HRB 123456 (German commercial registration number)
VAT ID	The VAT identification number	DE 123456789 (German VAT ID)
LEI Code	Unique LEI number as defined by <a href="https://www.gleif.org">https://www.gleif.org</a> .	123400789abcde123420 (20 digit alpha numeric code)
EORI	The Economic Operators Registration and Identification number (EORI)	DE1234567891234567

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## Submit registration

Onboarding service providers and core service providers **MUST** provide a mechanism for submitting the registration and triggering subsequent activities.

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### Validation of request and creation of the Catena-X access

Onboarding service providers / core service providers **MUST** perform a four eyes check of the registration company application.

Onboarding service providers / core service providers **MUST** review the proof of conformity of the registering company. In order to avoid duplicates, onboarding service providers / core service providers **MUST** check whether the company to be onboarded is already registered.

Onboarding service providers / core service providers **MUST** ensure that a Business Partner Number (BPN) exists or is created and linked to the company being registered.

Onboarding service providers / core service providers **MUST** ensure that a Managed Identity Wallet is created for the company to be onboarded. The BPN **MUST** be stored in the Managed Identity Wallet as a verifiable credential and serves as a unique ID.

Onboarding service providers / core service providers **MUST** ensure that a company compliance check is executed by an official Gaia-X Digital Clearing House (GXDCH). In alignment with onboarding service providers / core service providers, GXDCH issues verifiable credentials.

Onboarding service providers / core service providers **MUST** ensure the creation of a Self-Description (SD) of the Legal Person as part of the application verification process. The SD **MUST** be stored in a central location and **MUST** be in line with the GAIA-X standards/guidelines.

Only when all checks have been successfully passed, the onboarding service providers / core service providers **MUST** provide access to the services. If one or several application validation steps have not been passed, the onboarding service providers / core service providers **MUST** reject the registration or defer it for revision.

Onboarding service providers / core service providers **MUST** provide feedback (success/rejection/revision) to the to be registered company.

## 3.5 Technical Integration

Onboarding service providers / core service providers **MUST** provide onboarding companies with information on the step required to complete technical onboarding (integration of corporate identity provider, connector registration, technical user creation, etc.).

Onboarding service providers / core service providers **MAY** support with the technical onboarding (integration of corporate identity provider, connector registration, technical user creation, etc.).

## 4. Onboarding Service Provider

An Onboarding Service Provider helps companies register at Catena-X for the first time. The motivation for this may be that an onboarding service provider wants to make it easier for its own customers to get onboarded to Catena-X, or to make the Catena-X onboarding process smoother in general. The to be onboarded company only interacts with the Onboarding Service Provider for registration.

This chapter describes how to enrol on Catena-X with the help of an Onboarding Service Provider.

### 4.1 How to become an Onboarding Service Provider

The Onboarding Service Provider **MUST** fulfill the conformance criterias defined in CX – 0008 RELEVANT STANDARDS FOR CONFORMITY ASSESSMENT



The Onboarding Service Provider **MUST** implement a registration process that complies with the registration process defined in this document.

Core Service Provider and Onboarding Service Provider **MUST** have a contractual relationship which considers / respects / includes Catena-X standards, principles and data processing. To enable the Onboarding Service Provider to act on behalf of the Core Service Provider.

The Core Service Provider **MUST** validate the Onboarding Service Provider trustability and validate the implemented data security processes. For example

Sensitive data - such as access credentials - **MUST** be secured using state-of-the-art methods.

Registration tools provided by the onboarding service **MUST** be secured against security vulnerabilities.

The Core Service Provider **MUST** provide Onboarding Service Providers secure access to the registration API.

## 4.2 Onboarding to Catena-X with an Onboarding Service Provider

The sequence diagram below depicts an exemplary registration flow through an Onboarding Service Provider.

```
@startuml
title "Exemplary registration flow using a Onboarding Service Provider"

"To be onboarded company" -> "Onboarding Service Provider" : 1.) Register at Onboarding Service Provider
"To be onboarded company" -> "Onboarding Service Provider" : 2.) Requests registration at Catena-X and agrees to submit data to the Core Service Provider
"Onboarding Service Provider" -> "Core Service Provider" : 3.) POST registration/network/partnerRegistration
"Core Service Provider" -> "To be onboarded company" : 4.) Email to confirm Terms & Conditions and finally submit the registration
"To be onboarded company" -> "Core Service Provider" : 5.) Confirm Terms & Conditions and offically submit the registration request
"Core Service Provider" -> "Onboarding Service Provider" : 6.) POST back registration status ("Submitted" or validation error")
"Core Service Provider" -> "Core Service Provider" : 7.) Internal validation and processing of registration request
"Core Service Provider" -> "Onboarding Service Provider" : 8.) POST back registration status ("Approved", "Decline", "Error")
"Core Service Provider" -> "To be onboarded company" : 9.) Send back registration status ("Approved", "Decline", "Error") - including instructions how to access Catena-X

@enduml
```

### Who may register with Catena-X using an Onboarding Service Provider

The Onboarding Service Provider **SHOULD** only allow companies that add value to Catena-X to register for Catena-X. There are no defined rules for this, so it is up to the provider to decide. The Core Service Provider is free to refuse registration requests to Catena-X.

### The Onboarding Service Provider is no longer offering the services

In the event that the Onboarding Service Provider ceases to provide its service, the Onboarding Service Provider and the Core Service Provider **MUST** agree on and apply a migration process allowing to follow audit regulations and to enable all customers to remain actively in the dataspace.

### Offboarding from Catena-X using an Onboarding Service Provider

The Onboarding Service Provider **MUST** provide an offboarding service that complies with the Catena-X offboarding standard (currently under development).

## 5. Normative References

### 5.1 CX-Standards

CX - 0010 BUSINESS PARTNER NUMBER (BPN)

CX - 0011 ISSUING AGENCY

CX - 0013 IDENTITY OF MEMBER COMPANIES

CX - 0009 CATENA-X REGISTRATION API

### 5.2 Common Standards

Gaia-X Trust Framework

(<https://gaia-x.gitlab.io/policy-rules-committee/trust-framework/>)

Gaia-X Framework (<https://docs.gaia-x.eu/framework/>)

GXDCH (<https://gaia-x.eu/gxdch/>)