Gaia-X Glossary - main version (76c86129)

Description	Gaia-X specification to build trusted decentralised digital ecosystems.
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I. About

1 Gaia-X Glossary

This is the glossary for Gaia-X references. The terms derive mainly from Gaia-X deliverables and documents. Where relevant, also terms from external sources are reported.

2 Editorial Information

2.1 Publisher

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2.4 Other format

For convenience a PDF version of this document is generated here.

2.5 Copyright notice

II. Glossary

3 Accreditation

Accreditation is the third-party attestation related to a conformity assessment body, conveying formal demonstration of its competence, impartiality and consistent operation in performing specific conformity assessment activities.

3.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

3.2 See Also

- Attestation
- conformity assessment body

4 Application portability

Application Portability refers to the porting of customer or third party executable code from one cloud service to another, public or private.

4.1 References

- Gaia-X Policy Rules Conformity Document 23.10
- ISO/IEC 19941:2017

5 Attestation

Issue of a statement, based on a decision, that fulfilment of specified requirements has been demonstrated.

5.1 Additional Information

- The resulting statement, referred to in this document as a “statement of conformity”, is intended to convey the assurance that the specified requirements have been fulfilled. Such an assurance does not, of itself, provide contractual or other legal guarantees.
- First-party attestation and third-party attestation are distinguished by the terms declaration, certification and accreditation, but there is no corresponding term applicable to second-party attestation.

5.2 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

6 CAP Ontology

The Eclipse Conformity Assessment Profile (CAP) Ontology provides a standardized framework for expressing and verifying conformity assessment policies, leveraging verifiable credentials and aligning with ISO/IEC 17000:2020 standards.

6.1 Additional Information

By defining key concepts such as certifications, attestations, evidence, and requirements, CAP enhances interoperability and trust in data sharing ecosystems.

6.2 References

Gaia-X Architecture Document 25.11

6.3 See Also

- Conformity Assessment
- Verifiable Credential

7 Catalogue

A catalogue provides mechanisms to publish Data Product Descriptions (metadata) and support search or query of the descriptions.

7.1 Additional Information

A catalogue may be realized as a centralized or decentralized service, but the capability can also be realized as a distributed functionality.

7.2 References

Gaia-X Architecture Document 25.11

8 Certification

Certification is the third-party attestation related to an object of conformity assessment, with the exception of accreditation.

8.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

8.2 See Also

- Attestation
- Conformity Assessment
- Accreditation

9 Claim

A claim is a statement about a subject. A subject is a thing about which claims can be made. Claims are expressed using subject-property-value relationships.

9.1 References

W3C, Verifiable Credentials Data Model v2.0

10 Cloud Service Customer

Cloud Service Customer or Customer is the participant who consumes a Service Offering from a cloud Service Provider.

10.1 References

Gaia-X Compliance Document 25.10

10.2 See Also

- Service Offering
- Cloud Service Provider

11 Cloud Service Provider

Cloud Service Provider (CSP) or Provider is the participant who provides cloud Service Offerings in the Gaia-X ecosystem.

11.1 References

Gaia-X Compliance Document 25.10

11.2 See Also

- Service Offering
- Gaia-X Ecosystem

12 Conformity Assessment Body (CAB)

Conformity Assessment Body (CAB) is a body that performs conformity assessment activities, excluding accreditation.

12.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

12.2 See Also

- Conformity Assessment
- Accreditation

13 Conformity Assessment Scheme

A Conformity Assessment Scheme is a set of rules and procedures that describe the objects of conformity assessment, identifies the specified requirements and provides the methodology for performing conformity assessment.

13.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

13.2 See Also

- Conformity Assessment
- Object of Conformity Assessment

14 Conformity Assessment

Conformity Assessment is a demonstration that specified requirements (need or expectation that is stated) are fulfilled.

14.1 References

- ISO/IEC 17000:2020
- Gaia-X Archtitecture Document 25.11

14.2 See Also

Conformity Assessment Body

15 Consumer Policy

Consumer Policy describes a consumer’s restriction on a requested Resource.

15.1 Reference

Gaia-X Architecture Document 25.11

15.2 See Also

- Consumer
- Resource
- Policy

16 Consumer

Consumer is a participant who searches service offerings and consumes service instances in the Gaia-X Ecosystem to enable digital offerings for end users.

16.1 References

Gaia-X Architecture Document 25.11

16.2 See Also

- Participant
- Service Offerings
- Service Instances
- Gaia-X Ecosystem
- End-Users

17 Contract Policy

Contract Policies that are interoperable to have a clear and unambiguous basis for a contract between the participants.

17.1 Additional Information

Contract policies should be machine and human readable. They have to contain access and usage policies. ODRL is used as a Policy Definition Language for this purpose.

17.2 References

Gaia-X Data Exchange Document 25.07

17.3 See Also

ODRL

18 Credential

A set of one or more claims made by the same entity.

18.1 References

- W3C, Verifiable Credentials Data Model v2.0
- Gaia-X Architecture Document 25.11

18.2 See Also

- Claim
- entity

19 Cross-Ecosystem Interoperability

Cross-Ecosystem Interoperability is the ability of participants to seamlessly access and/or exchange data across two or more ecosystems. It addresses the governance, business and technical frameworks to interconnect multiple ecosystem instances seamlessly.

19.1 References

- DSSC Glossary
- Gaia-X Architecture Document 25.11

20 Customer Data

In the context of the definition of Gaia-X Policy Rules and Labelling Criteria for Cloud Services, the term is used for all customer provided or generated data, both personal and non-personal data, as processed by a Provider.

20.1 References

Gaia-X Policy Compliance Document 24.11

21 Data Access Contract

The Data Access Contract is a Ricardian contract: a contract at law that is both human-readable and machine-readable, cryptographically signed and rendered tamper-proof, and electronically linked to the subject of the contract, i.e. the data. The parties can (optionally) request this contract to be notarized in a federated Data Access Contract Store.

21.1 References

- Gaia-X Data Exchange Document 25.07

21.2 See Also

- Data

22 Data Access Logging Services

Data Access Logging Services are optional services that provide evidence that data has been (a) actually accessed (i.e. provided and received) and (b) that the Data Usage Agreement was enforced before access.

22.1 References

Gaia-X Data Exchange Document 25.07

23 Data Access Logging

Data Access Logging ensures that data transactions can be logged throughout their lifecycle, providing an audit trail for accountability, compliance and dispute resolution.

23.1 References

Gaia-X Data Exchange Document 25.07

23.2 See Also

- Data
- Data Transaction

24 Data Access Protocols

Data Access Protocols are required to exchange data between Participants and to enable Data Access.

24.1 References

Gaia-X Data Exchange Document 25.07

25 Data Consumer

A participant that receives data in the form of a data product. The data is used for query, analysis, reporting or any other data processing.

25.1 References

- Data Exchange Document 23.10
- Gaia-X Architecture Document 24.04

25.2 See Also

Data Product

26 Data Exchange Services

A set of services that provides features enabling a Data Exchange, such as and not limited to: policy negotiation for access control and usage control, exchange traceability, service protocol negotiation, data access, data tiering, access enforcement, usage enforcement.

26.1 References

- Data Exchange Document 23.10
- Gaia-X Architecture Document 24.04

27 Data License

Data License defines the usage policies for all data in the data product. Data Licenses contain a set of constraints related to the authorized or forbidden usage of the data in the Data Product.

27.1 References

Gaia-X Data Exchange Document 25.07

27.2 See Also

- Data Product Description
- Data Product

28 Data Portability

This refers to the porting of data (structured or unstructured) from one cloud service to another, public or private.

28.1 References

Gaia-X Compliance Document 25.10

28.2 See Also

Data

29 Data Product Catalogue Services

Data Product Catalogue Services are mandatory services that provide mechanisms to publish Data Product Descriptions (inc. metadata) and support search.

29.1 References

Gaia-X Data Exchange Document 25.07

30 Data Producer

A natural or legal participant who furnishes data to a data product provider.

30.1 References

- Data Exchange Document 23.10
- Gaia-X Architecture Document 24.04

30.2 See Also

- Participant
- Data Product Provider

31 Data Product Description

Data Product Descriptions contain the Metadata describing the data (scope, format, quality, etc.) using an ontology which is defined by the ecosystem and contains information describing the contractual and operational aspects of the Service Offering (cost and billing, technical means, service level agreement, etc.).

31.1 References

Gaia-X Data Exchange Document 25.07

31.2 See Also

- Data
- Data Product

32 Data Product

Data are furnished by Data Producers to Data Providers who compose them into a Data Product to be used by Data Consumers. A Data Product is described by a Data Product Description, which must be a valid Gaia-X Credential and is stored in a (searchable) Federated Data Catalogue.

32.1 References

Gaia-X Architecture Document 25.05

32.2 See Also

- Data Producer
- Data Provider
- Data Product Description

33 Data Products Catalogue

A Data Products Catalogue is a structured and a standardized registry of data products that is made available within an ecosystem. It allows data providers to publish, describe, and manage their offerings, and enables data consumers to discover, assess, and access data products that meet their needs.

33.1 References

Gaia-X Data Exchange Document 25.07

33.2 See Also

- Data Product
- Data Provider

34 Data Provider

Data are furnished by Data Producers (who are either data owners or data controllers in the GDPR sense, or data holders in the Data Act sense) to Data Providers who compose these data into a Data Product to be used by Data Consumers.

34.1 References

Gaia-X Architecture Document 24.04

34.2 See Also

- Data Producer
- Data Consumers

35 Data Rights Holder

A natural or legal participant (not necessarily a Gaia-X participant) who own usage rights for some data. It can be a data subject as per GDPR for personal data or a primary owner of non-personal data (i.e. not liable to GDPR).

35.1 References

Gaia-X Data Exchange Document 25.07

36 Data Space

Interoperable framework, based on common governance principles, standards, practices and enabling services, that enables trusted data transactions between participants.

36.1 References

- DSSC Glossary
- Gaia-X Architecture Document 25.11

37 Data Transaction

Result of an agreement between a data provider and a data user with the purpose of exchanging, accessing and using data, in return for monetary or non-monetary compensation.

37.1 Additional Information

- “Data exchange“ and “data access” terms are used in order to describe different mechanisms, like actual transfer of data or situations where data does not move but where access is provided to different stakeholders.
- Data transactions do not necessarily imply a commercial relationship.
- Each data transaction is unique and must be treated independently of other data transactions.

37.2 References

CEN/WS TDT Part 1

37.3 See Also

Data Provider

38 Data Usage Agreement Services

Data Usage Agreement Services are mandatory services that provide mechanisms to notarize/revoke Data Usage Agreements (DUA), to check their status, their validity (i.e. check that the signatory is really holding rights on the data) and their applicability (i.e. that the Data Access Prerequisites are fulfilled).

38.1 References

Gaia-X Data Exchange Document 25.07

39 Data Usage Agreement (DUA)

The Data Usage Agreement enables Data Rights Holders to control by whom, how and when their data is used (data sovereignty) and it gives the Data Consumer the formal authorization to use the data in accordance with the constraints specified by the Data Rights Holder.

39.1 References

Gaia-X Data Exchange Document 25.07

39.2 See Also

- Data Rights Holder
- Data Consumer

40 Data Usage Contract

Before using a data product, the data consumer negotiates and co-signs a Data Usage Contract (DUC) with the Data Provider. This Data Usage Contract is based on the data product description and includes the service configuration element and mutually agreed and enforceable Terms of Usage, resulting from potential negotiations.

40.1 References

Gaia-X Architecture Document 25.XX - ongoing version

40.2 See Also

- Data Product
- Data Consumer
- Data Product Description

41 Data

Data means any digital representation of acts, facts or information and any compilation of such acts, facts or information.

41.1 References

- Gaia-X Architecture Document 25.11

42 DCAT (Data Product Catalogue)

The Data Product Catalogue (DCAT) Services are mandatory services that publish Data Product Descriptions (inc. metadata) and support search; uses DCAT as core protocol for Data Product description.

42.1 References

Gaia-X Architecture Document 25.11

42.2 See Also

Data Product Description

43 Decentralised Identifiers (DIDs)

Decentralized Identifiers (DIDs) are URIs that enable verifiable, self-sovereign digital identity without requiring a single centralised registry or authority, although they may be anchored in distributed or decentralised registries.

43.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

44 Declaration

First-party attestation.

44.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

44.2 See Also

Attestation

45 Digital Ecosystem

A digital ecosystem is a non-hierarchical organisational structure of a multilateral set of partners (or, equivalently, participants) that interact digitally in order for one or more focal value propositions to materialise.

45.1 References

Gaia-X Architecture Document 25.11

46 Digital Identity

Digital identity consists of the digital attributes and credentials that an entity (such as a person, organisation, or service) uses for authentication, authorisation, and trusted access to resources.

46.1 Additional Information

A digital identity may be represented by one or more verifiable credentials issued by trusted parties, encoding claims about the identity subject.

46.2 References

Gaia-X Identity, and Credential Access Management Document 25.11

47 DSBA (Data Spaces Business Alliance)

The Data Spaces Business Alliance (DSBA) accelerates business transformation in the data economy. It’s the first initiative of its kind, uniting industry players to realize a data-driven future in which organizations and individuals can unlock the full value of their data.

The Data Spaces Business Alliance are Gaia-X European Association for Data and Cloud AISBL, the Big Data Value Association (BDVA), FIWARE Foundation, and the International Data Spaces Association (IDSA).

47.1 References

https://data-spaces-business-alliance.eu/

48 Data Space Support Center (DSSC)

The Data Spaces Support Centre (DSSC) is an initiative funded by the European Commission under the Digital Europe Programme. Its primary objective is to facilitate the development of common European data spaces that collectively establish a sovereign, interoperable, and trustworthy data-sharing environment.

48.1 References

Gaia-X Architecture Document 25.11

49 DUA Notary

A Data Usage Agreement (DUA) Notary is a specialization of a Notary validating the existence of a legally binding (e.g., signed by both parties, not revoked) Data Usage Agreement (DUA) between a Data Producer and a Data Consumer.

49.1 References

Gaia-X Architecture Document 25.11

49.2 See Also

- Data Producer
- Data Consumer

50 Enabling services

federation-s# Enabling services

Enabling Services facilitate the operation of ecosystems. There are multiple technologies, products and implementations of each of the enabling services available.

50.1 References

Gaia-X Architecture Document 25.11

50.2 See Also

Ecosystems

51 Entity

Entity is an item relevant for the purpose of operation of a domain that has recognizably distinct existence.

51.1 Additional Information

An entity can have a physical or a logical embodiment.

51.2 References

- ISO/IEC 24760-1:2019
- Gaia-X Architecture Document 25.11

52 Equivalence CAB

Equivalence CAB is an identified entity approved by Gaia-X to verify that one or more issued certifications cover the entirety of a given criteria scope.

52.1 References

Gaia-X Compliance Document 25.10

53 Evidence

Evidence can be included by an issuer to provide the verifier with additional supporting information in a verifiable credential.

53.1 Additional Information

This could be used by the verifier to establish the confidence with which it relies on the claims in the verifiable credential. It is expected that the credentials issued by the notaries contain the evidence of the validation process.

53.2 References

- W3C, Verifiable Credentials Data Model v2.0
- Gaia-X Architecture Document 25.11

53.3 See Also

- Issuer
- verifier
- verifiable credential
- Notaries

54 Example Standard

Example standards shall provide for possibilities how criteria may be implemented.

54.1 Additional Information

Implementation as provided by such standards is not mandatory, and it is required to comply with any such standards. Gaia-X will provide additional notes, if significant differences are identified. Example Standards shall especially help in evaluating conformity with Gaia-X, as Example Standards can be considered “implementation guidance”.

54.2 References

Gaia-X Compliance Document 25.10

55 Federated Catalogues

The goal of the Federated Catalogue is to: - enable Consumers to find best-matching offerings and to monitor them for relevant changes in the offerings. - enable Producers to promote their offerings while keeping full control of the level of visibility and privacy of their offerings. - enable Service Composition by including and publishing Service Descriptions, conformant to the Gaia-X Schema, that contain structured service attributes required to compose services. - avoid a gravity effect with a lock-out and lock-in effect around a handful of catalogue instances.

55.1 References

Gaia-X Architecture Document 24.04

55.2 See Also

Offerings

56 Gaia-X Architecture Document

The Gaia-X Architecture Document also known as Architecture Document is a Gaia-X deliverable that explains the core elements that compose the Gaia-X Trust Framework and defines how they relate to each other at the functional level in the Gaia-X model.

56.1 References

Gaia-X Architecture Document 24.04

56.2 See Also

Gaia-X deliverable

57 Gaia-X Cloud Service Offering

Gaia-X Cloud Service Offering is a specific subset of a service offering as defined in the Gaia-X Compliance Criteria for Cloud Services.

57.1 References

Gaia-X Compliance Document 25.10

58 Gaia-X Compliance Service

The service takes as input the Verifiable Presentations provided by the participants, checks them against the SHACL Shapes available in the Gaia-X Registry and performs other consistency checks based on the Gaia-X Policy Rules. The service returns a Verifiable Credential, the “Gaia-X Compliance Credential” with a Gaia-X signature, as a proof that the input provided has passed all the verifications.

58.1 References

Gaia-X Architecture Document 24.04

58.2 See Also

- Verifiable Presentation
- Verifiable Credential

59 Gaia-X Compliance

Gaia-X Compliance addresses legal and organisational interoperability (of trust).

59.1 References

Gaia-X Architecture Document 25.11

60 Gaia-X Core Engine

Gaia-X Core Engine ensures Gaia-X technical compatibility, hosting local compliance engines (called “local (compliance) extensions”), and providing means (proxys) to access remote compliance extensions.

60.1 References

Gaia-X Architecture Document 25.11

61 Gaia-X Credential

A Gaia-X credential is a verifiable credential (VC) using the Gaia-X Ontology which is available via the Gaia-X Registry. A holder can put several Gaia-X credentials together to build a verifiable presentation.

61.1 References

Gaia-X Architecture Document 24.04

61.2 See Also

- Verifiable Credential (VC)
- Gaia-X Ontology
- Gaia-X Registry
- holder
- Verifiable Presentation (VP)

62 Gaia-X Data & Services Business Committee (DSBC)

The Data & Services Business Committee (DSBC) collects, shares, and aligns needs and achievements between national Hubs, Ecosystems, Gaia-X Lighthouses & projects, and Service Providers to support the creation of Data Spaces and accelerate Gaia-X market adoption.

62.1 References

Gaia-X website

63 Gaia-X Data Exchange Document

The Gaia-X Data Exchange document, also known as the Data Exchange Services specifications is a Gaia-X deliverable that provides specifications for Data Exchange Services, including high level architecture and key requirements for data value, trust and compliance.

63.1 References

- Gaia-X Framework

63.2 See Also

- Gaia-X deliverable
- Data Exchange Services

64 Gaia-X Deliverables

Gaia-X delivers: - Specifications - Code - Labels

64.1 References

Gaia-X website

65 Gaia-X Ecosystem

The Gaia-X Ecosystem is the virtual set of participants and Service Offerings following the Gaia-X Compliance requirements.

65.1 References

Gaia-X Compliance Document 25.10

66 Gaia-X Framework

The Gaia-X Framework provides an overall view of the Gaia-X Association pillars and deliverables, highlighting the elements that are mandatory to be Gaia-X Compliant and Gaia-X Technical Compatible.

66.1 References

Gaia-X Framework

66.2 See Also

Deliverables

67 Gaia-X Hub

Gaia-X Hubs bundle user interests across Europe to facilitate the creation of European Data Spaces. They gather use cases, requirements, and standards, to support the Gaia-X Association in setting up and establishing a sovereign data-infrastructure via a common Gaia-X architecture as well as policy rules, standards and Federated Services. Gaia-X Hubs are the central contact points for interested parties in each country, and grassroots supporters of the Gaia-X project.

67.1 References

Gaia-X website

68 Gaia-X Identity, Credential and Access Management (ICAM) Document

The Gaia-X Identity, Credential and Access Management (ICAM) document, also known as ICAM specifications is a Gaia-X deliverable aimed at describing the components for “Authorization & Authentication” which shall deliver core functionalities for authorization, access management and authentication as well as services around it to Gaia-X participants with the purpose to join the trustful environment of the ecosystem.

68.1 References

- Gaia-X Framework

68.2 See Also

- Gaia-X deliverable
- Participants
- Ecosystem

69 Gaia-X Label

A Gaia-X Label is a machine readable, structured and signed document issued by the accredited Gaia-X Compliance services in case of a valid verification and validation of the criteria for a specific assessment scheme.

69.1 References

Gaia-X Compliance Document 25.10

70 Gaia-X Lighthouse projects

Projects aiming to create a data exchange platform built on transparency, trust, and openness. They target multiple industries and are the front-runners implementing the Gaia-X Framework.

70.1 References

Gaia-X website

71 Gaia-X Member

A Gaia-X member is a member of the international non-profit organization, Gaia-X.

71.1 References

Gaia-X website

71.2 See Also

Gaia-X

72 Gaia-X Metaregistry

Gaia-X Metaregistry exposes metadata characterizing different ecosystems, their respective trust services, and the verifiable credentials associated with these services.

72.1 References

Gaia-X Architecture Document 25.11

73 Gaia-X Notary - LRN (Legal Registration Number)

The Gaia-X Legal Registration Number (LRN) notarization service serves a crucial role in validating legal registration numbers. Its primary function is to verify the authenticity and existence of the registration numbers provided and subsequently issue signed Verifiable Credentials.

73.1 References

Gaia-X Architecture Document 25.11

73.2 See Also

Verifable Credential

74 Gaia-X Notary

Gaia-X Notary must be a Gaia-X participant capable of translating an unsigned evidence to a signed machine readable evidence. For signing, the Gaia-X Notary must use a cryptographic material issued by a Trust Anchor.

74.1 References

Gaia-X Compliance Document 25.11

75 Gaia-X Ontology

An ontology is a formal, explicit specification of a shared conceptualisation (Gruber,1993).

In Gaia-X case, it means to create models that are understandable by an algorithm so one can automate rules with a computer. The models are developed by Gaia-X members under the Technical Committee.

75.1 References

- Gaia-X Compliance Document 24.06
- Gaia-X Ontology

76 Gaia-X Open Source Software Community

The Gaia-X Open-Source Software (OSS) Community aims to engage and grow the Gaia-X developer community through outreach, onboarding, software development and the organization of the Gaia-X hackathon event.

76.1 References

Gaia-X Open-Source Software Community - Gitlab repository

77 Gaia-X Participant

A Gaia-X Participant is a legal or natural person that participate to the Gaia-X ecosytem (consumer, producer, federator, operator, intermediary) and who fullfills conformity level defined in this document and verified by the Gaia-X Participant credential.

77.1 References

Gaia-X Compliance Document 25.10

78 Gaia-X Policy Rules Committee (PRC)

The Policy Rules Committee (PRC) aims to translate the guiding principles of the Gaia-X initiative, e.g., transparency, data protection, cyber security, portability, and openness, into High-Level Objectives to safeguard the added value of the Gaia-X ecosystem. Furthermore, the PRC has the role to monitor, integrate and define the relationship with EU regulations and external standards.

78.1 References

Gaia-X website

78.2 See Also

- Policy
- Gaia-X Ecosystem

79 Gaia-X Policy Rules

The Policy Rules or Gaia-X Policy Rules define high-level objectives safeguarding the added value and principles of the Gaia-X ecosystem.

79.1 References

Gaia-X Compliance Document 25.10

79.2 See Also

Gaia-X Ecosystem

80 Gaia-X Power of Attorney

Gaia-X Power of Attorney is a machine readable, structured and signed document that comprises some attributes explained in the Compliance Document.

80.1 References

Gaia-X Compliance Document 25.10

81 Gaia-X Registry

The Gaia-X Registry is one of the mandatory components to perform compliance checks. It acts as the source of truth for the ecosystem and stores the files used by the compliance engine.

81.1 References

Gaia-X Architecture Document 25.11

82 Gaia-X Schema

The Gaia-X members define the Schema for Gaia-X credentials. It is used as the vocabulary of the claims about credential subjects and must be available in the form of SHACL shapes (cf. the W3C Shapes Constraint Language SHACL). The defined version of the Gaia-X Schema is maintained and made available through the Gaia-X Registry.

82.1 References

- Gaia-X Architecture Document 25.11
- https://www.w3.org/TR/vc-data-model-2.0/#data-schemas

82.2 See Also

- Gaia-X Credential
- Claim
- Gaia-X Registry

83 Gaia-X Service Offering Compliance Process

A way to prove and validate that the underlying accountable service provider meets the minimal interoperability, transparency and identifies standards of the Gaia-X ecosystem.

83.1 References

Gaia-X Compliance Document

84 Gaia-X Standard Compliance

The Gaia-X Standard Compliance level defines the minimal set of requirements to be able to participate in the Gaia-X ecosystem.

84.1 Additional Information

The optional Label levels define additional criteria and conformance-ensuring measures such as certificates, to achieve additional levels of assurance and trust.

84.2 References

Gaia-X Compliance Document 25.10

84.3 See Also

Gaia-X Ecosystem

85 Gaia-X Technical Committee

The Gaia-X Technical Committee defines and implements the technological vision of Gaia-X. It plans, develops, and is accountable for the Gaia-X technology roadmap and its contributors. It further communicates the Gaia-X technological vision and its related objectives to establish trust and credibility with members and third parties.

85.1 References

Gaia-X website

86 Gaia-X Technical Compatibility Specifications

The Gaia-X Technical Compatibility specifications define the use and combination of standards to automate compliance verification, perform Policy reasoning, and manage Identity, Credentials, and Access. They also address the discoverability of Catalogues and Registries.

86.1 References

Gaia-X Architecture Document 25.05

87 Gaia-X Technical Compliance

Gaia-X Technical Compliance addresses semantic and technical interoperability (of trust).

87.1 References

Gaia-X Architecture Document 25.11

88 Gaia-X Trust Framework

The Gaia-X Trust Framework comprises the technical and organizational standards and open-source software for its operationalization, allowing the establishment of trust in digital ecosystems. It comprises two complementary elements: Gaia-X Technical Compatibility & Gaia-X Compliance.

88.1 References

Gaia-X Architecture Document 25.11

89 Gaia-X

The Gaia-X European Association for Data and Cloud (AISBL) also known as Gaia-X Association was established as a private not-for-profit Association in 2021. Gaia-X brings together a broad range of organisations (large companies and SMEs, developers and users of technology, industrial players, and members of academia) around one common goal: to boost the European data economy by enabling the creation of common data spaces, in full alignment with the objectives of the EU’s Data Strategy. To this end, Gaia-X focuses on building a common standard for an open, transparent, and secure digital ecosystem that will serve as the basis for a new model of data infrastructure guaranteeing safe and trustworthy data exchange.

89.1 References

http://www.ejustice.just.fgov.be/tsv_pdf/2021/02/08/21017239.pdf

90 Gap CAB

Gap CAB is an identified entity approved by Gaia-X to issue a certification for a scope identified as not covered by an “Equivalence CAB”.

90.1 References

Gaia-X Compliance Document 25.10

91 Governance Authority

An ecosystem or data space Governance Authority (GA) is the body of a particular data space or ecosystem, consisting of participants, that is committed to the governance framework for the data space or ecosystem, and is responsible for developing, maintaining, operating and enforcing the governance framework.

91.1 References

- DSSC Glossary
- Gaia-X Architecture Document 25.11

92 GXDCH (Gaia-X Digital Clearing House)

The Gaia-X Digital Clearing House (GXDGH) is the mechanism adopted by the Gaia-X Association to provide running software to assert compliance without becoming a host or a point of centralisation for the ecosystem.

92.1 References

Gaia-X Architecture Document 25.11

92.2 See Also

Gaia-X

93 Holder

A role an entity might perform by possessing one or more verifiable credentials and generating verifiable presentations from them.

93.1 References

W3C, Verifiable Credentials Data Model v2.0

93.2 See Also

- Verifiable Credentials
- verifiable presentations

94 Identifier

An identifier is a unique attribute that is part of the Participant’s Identity.

94.1 References

- Gaia-X Architecture Document 25.11
- W3C Decentralized Identifiers

94.2 See Also

Gaia-X Participant

95 Identity

An Identity is composed of a unique identifier and an attribute or set of attributes that uniquely describe an entity within a given context. Gaia-X uses existing Identities and does not maintain them directly.

95.1 References

Gaia-X Architecture Document 25.11

95.2 See Also

Identifier

96 Instantiated Virtual Resource

An Instantiated Virtual Resource represents an instance of a virtual resource. It is equivalent to a service instance and is characterized by endpoints and access rights.

96.1 References

Gaia-X Architecture Document 25.11

96.2 See Also

- Virtual Resource
- Service Instance

97 Issuer

A role an entity can perform by asserting claims about one or more subjects, creating a verifiable credential from these claims, and transmitting the verifiable credential to a holder.

97.1 References

W3C, Verifiable Credentials Data Model v2.0

97.2 See Also

- Claim
- Verifiable credential
- Holder

98 Keypair

A private key and its corresponding public key; a key pair is used with an asymmetric-key (public-key) algorithm.

98.1 References

NIST - Recommendation for Cryptographic Key Generation

99 Knowledge graph

The Gaia-X credentials are the building blocks of a decentralized machine-readable knowledge graph of claims, each credential carrying a tamper-proof and authenticable part of the information of that graph.

99.1 References

Gaia-X Architecture Document 24.04

99.2 See Also

- Gaia-X Credentials
- Claims

100 Label levels

Gaia-X distinguishes 3 levels of Labels, starting from Label Level 1 (the lowest), up to Label Level 3 (the highest), which represent different degrees of compliance with regard to the goals of transparency, autonomy, data protection, security, interoperability, portability, sustainability, and European Control.

100.1 References

Gaia-X Compliance Document 25.10

101 Legal Person Party Credential

Legal Person Party Credential is issued by a Legal Person Participant to entitle another legal person (usually one of his users) to interact with other Relying Parties belonging to other Participants on its behalf.

101.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

102 LinkML

LinkML is a modeling language designed to define data schemas that can be used across a wide range of formats and technologies. It enables the creation of a single, platform-independent source of truth that can be automatically transformed into multiple serializations, including JSON-LD, OWL, SHACL, Python, and TypeScript.

102.1 References

Gaia-X Architecture Document 25.11

103 Management Plane

Management Plane specifies additional rules and embodiments or enforcement of these rules.

103.1 References

Gaia-X Architecture Document 25.11

104 Membership Party Credential

Membership Party Credential is issued by a LegalParticipant that runs an ecosystem to another Participant in order to attest his Membership status.

104.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

105 Metadata

Data about other data, documents, or set of data that describes their content, context, structure, data format, provenance, and/or rights attached to them.

105.1 References

Gaia-X Data Exchange Document 23.10

105.2 See Also

Data

106 Natural Person Party Credential

Natural Person Party Credential is issued by a Participant to entitle a natural person (usually one of his users/employees) to interact with other Relying Parties belonging to other Participants.

106.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

107 NIST planes

The three planes Trust plane, Management plane, and Usage plane. They represent three levels of interoperability, as described in the NIST Cloud Federation Reference Architecture.

107.1 References

- NIST Cloud Federation Reference Architecture
- Gaia-X Architecture Document 23.10

108 Notary

Notaries are entities approved by the Governance Authority, which perform validation based on objective evidence from Trusted Data Sources, digitalizing an assessment previously made. The Notaries convert “non machine-readable” proofs into “machine-readable” proofs, i.e., verifiable credentials.

108.1 References

- Gaia-X Architecture Document 25.11
- Gaia-X Compliance Document 25.10

108.2 See Also

- Governance Authority
- Verifiable Credential

109 Object of Conformity Assessment

Object of Conformity Assessment is an entity to which specified requirements apply.

109.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

110 ODRL (Open Digital Rights Language)

The Open Digital Rights language (ODRL) allows to express policies that can be evaluated for access and usage control or in contract negotiation between participants.

110.1 References

Gaia-X Architecture Document 25.11

111 OpenID for Verifiable Credential (OID4VC)

OpenID Connect for Verifiable Credentials (OID4VC) is the name for collection of OpenID Connect specifications allowing Verifiable Credential and Verifiable Presentation exchanges.

111.1 References

Gaia-X Architecture Document 25.11

112 OpenID for Verifiable Presentation (OID4VP)

OIDC4VP is based on the OAuth 2.0 specification to allow a holder and its wallet to present one or multiple Verifiable Credentials to a verifier through a Verifiable Presentation.

112.1 References

113 Operator

Operators are Gaia-X Providers that have been approved by the ecosystem governance to operate federation services and the Federation, which are independent of each other. There can be one or more Operators per type of Federation Service.

113.1 References

Gaia-X Architecture Document 24.04

113.2 See Also

Federation Services

114 Orchestrator

An orchestrator is an entity within a digital ecosystem which is providing a certain set of services the ecosystem deems necessary or relevant.

114.1 Additional Information

These services may be of a strategic/business or technical nature and may be distributed to different orchestrators. These services facilitate the interplay of participants in a data space, enabling them to engage in (commercial) data-sharing relationships of all sorts and shapes. They can perform an intermediary role in the data space.

Examples: - GXDCH instances are non-exclusive, interchangeable, and operated by multiple market operators from different geographical locations and different industries. Such providers then have the role of Federator. [*Gaia-X Architecture Document*]

- Trusted Service Operator (TSO) are Gaia-X Providers that have been approved by the ecosystem governance authority to authoritatively provide one or more services to the ecosystem. [*Gaia-X Architecture Document*]
- Data space intermediary - A data space participant that provides one or more enabling services while not directly participating in the data transactions itself. [*DSSC Glossary*]

114.2 References

Gaia-X Architecture Document

115 Participant

Participant is an entity which is onboarded and has a Gaia-X Participant Credential. A Participant can take on one or more of the following roles: Provider, Consumer, and Operator.

115.1 References

Gaia-X Architecture Document 25.11

115.2 See Also

- Provider
- Consumer
- Operator

116 Party Credential

The Party Credential is based upon the Verifiable Credentials Data Model v2.0 and is the basis for all IAA Parties such as Natural Persons, Services, Legal Persons, etc.

116.1 References

Identity,Credential and Access Management Document 25.11

116.2 See Also

Verifiable Credentials Data Model v2.0

117 Permissible Evidence

Permissible Evidence is a Verifiable Claim template and a set of Accepted Issuers. The accepted issuers shall be part of an Issuers catalogue maintained by the ecosystem, with for each issuer the access method and the list of accepted VC templates are specified.

117.1 References

Gaia-X Data Exchange Document 25.07

117.2 See Also

- Claim
- Issuer

118 Permissible Standard

Permissible Standards shall identify standards respectively requirements/controls within such standards, where implementation shall be considered prima facie evidence of conformity with the related Gaia-X criterion.

118.1 References

Gaia-X Compliance Document 25.10

119 Physical Resource

A physical resource is a resource that has a weight, position in space and represents a physical entity that hosts, manipulates, or interacts with other physical entities.

119.1 References

Gaia-X Architecture Document 25.11

119.2 See Also

Resource

120 Policy

Policy is defined as a statement of objectives, rules, practices, or regulations governing the activities of Participants within Gaia-X. From a technical perspective, Policies are statements, rules or assertions that specify the correct or expected behaviour of an entity.

120.1 References

Gaia-X Architecture Document 25.11

121 Portability

Portability describes the ability to move data or applications between two different services at a low cost and with minimal disruption.

121.1 References

ISO/IEC 19941:2017(en)

122 Provider

A Provider operates resources in the Gaia-X ecosystem and offers them as services through Gaia-X service offering credentials.

122.1 References

Gaia-X Architecture Document 25.11

122.2 See Also

- Resources
- Gaia-X Ecosystem
- Gaia-X Credentail

123 Public Party Credential

Public Party Credential is a party credential which contains data that can be publicly accessed and queried.

123.1 References

Gaia-X Architecture Document 25.11

124 RDF (Resource Description Framework)

RDF is a standard model for data interchange on the Web. RDF has features that facilitate data merging even if the underlying schemas differ, and it specifically supports the evolution of schemas over time without requiring all the data consumers to be changed.

124.1 References

https://www.w3.org/RDF/

125 Resource

Resources describe in general the goods and objects of the Gaia-X Ecosystem. A Resource can be a:

- Physical Resource
- Virtual Resource
- Instantiated Virtual Resource

125.1 References

Gaia-X Architecture Document 25.11

126 Runtime Policy

Runtime Policies are derived from the Contract Policies and are used for the execution of the contract policies in the system of the participants.

126.1 References

Gaia-X Data Exchange Document 25.07

126.2 See Also

- Contract Policy
- Participant

127 Self-Sovereign Identity (SSI)

SSI allow users to control and own their digital identities and other verifiable digital credentials locally. It is not required to use a predominant cloud service provider, nor is the establishment of a central Gaia-X Identity provider necessary. Users are thus completely independent of third parties and decide themselves which identity data they share with whom, as all identity data is securely stored only with the individual user in their SSI wallet.

127.1 References

- Gaia-X secure and trustworthy ecosystems with Self Sovereign Identity - Whitepaper
- https://en.wikipedia.org/wiki/Self-sovereign_identity

128 Service Offering

A Service Offering is a set of resources, which a provider aggregates and publishes as a single entry in a catalogue.

128.1 References

Gaia-X Architecture Document 25.11

128.2 See Also

- Resources
- Provider
- Catalogue

129 Service Party Credential

Service Party Credential is issued by a Participant to entitle an automated service (usually an automated process) to interact with other Relying Parties belonging to other Participants.

129.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

130 Shape

The Gaia-X members define the Schema for Gaia-X credentials. It is used as the vocabulary of the claims about credential subjects and must be available in the form of SHACL shapes.

130.1 References

- Gaia-X Architecture Document 25.11
- W3C Shapes Constraint Language SHACL

130.2 See Also

- Gaia-X Credentials
- W3C Shapes Constraint Language SHACL

131 Shapes Constraint Language (SHACL)

Language for validating RDF graphs against a set of conditions. These conditions are provided as shapes and other constructs expressed in the form of an RDF graph.

131.1 References

SHACL specifications.

131.2 See Also

- RDF
- Shape

132 Signature Credential

Signature Credential is a Verifiable Credential introduced to express digital signatures in a machine-readable and interoperable form enabling several scenarios ranging from data transaction permissions to agreement signing. It allows participants to cryptographically sign digital resources and bind the signature to the identity of the signer with verifiable integrity.

132.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

133 Signature

The signature can be a digital signature (as for instance an eIDAS signature) or simply an electronic form (as a click on a “I agree” button in a specific screen provided by the DUA Notary).

133.1 References

Gaia-X Data Exchange Document 25.07

133.2 See Also

- Data Usage Agreement
- DUA Notary

134 Sovereignty

Sovereignty is the ability to exercise self-determination. It can translate into several meanings- political, economic, digital, and technical. Gaia-X does not provide any political or economic interpretation of sovereignty, but instead provides a framework to configure sovereignty from a digital and technical perspective.

134.1 References

Gaia-X Vision & Strategy

134.2 See Also

- Self Sovereign Identity
- Gaia-X

135 Technical Compatibility

A software component or system is Gaia-X technical compatible if and when it fulfils all the requirements of a published release of the Architecture Document.

135.1 References

Gaia-X Architecture Document 25.11

136 Terms of Usage

A specific instantiation of a data license included in a data product usage contract listing all the constraints associated with a data exchange.

136.1 References

Gaia-X Data Exchange Document 23.10

136.2 See Also

- Data License
- Data Product Usage Contract

137 Trust Anchor

Gaia-X Trust Anchors are bodies, parties, i.e., Conformity Assessment Bodies or technical means accredited by the Gaia-X Association to be parties eligible to issue attestations about specific claims.

137.1 References

Gaia-X Compliance Document 25.10

137.2 See Also

- Conformity Assessment Body
- Attestation

138 Trust Framework

A (generic) trust framework provides the methodology and technical specifications for collecting, organising, and verifying information to support trust decisions - that is, decisions about whether an entity, piece of information, or transaction can be trusted.

138.1 References

Gaia-X Architecture Document 25.11

139 Trust Indexes

Scoring tools meant to be used by all parties in ecosystems as a measure of distance for interoperability and trust with regards to the other offerings in the ecosystem catalogues.

139.1 References

Gaia-X Architecture Document 24.04

140 Trust Service Provider

Trust Service Provider is an entity approved by the Governance Authority to authoritatively issue verifiable credentials for a given scope and purpose.

140.1 References

Gaia-X Architecture Document 25.11

140.2 See Also

- Governance Authority
- Verifiable Credential

141 Trust

Trust refers to a decision by an entity to assume that a product, service or entity will behave as expected for a given circumstance. The Gaia-X Trust Framework provides the means to validate those assumptions based on a set of criteria and rules defined by governance authorities.

141.1 References

- Gaia-X Architecture Document 25.11
- ISO 20151
- CEN/CENELEC prEN 18235-1

142 Trusted Data Source

Source of the information used by the issuer to validate attestations.

142.1 Additional Information

Notaries perform validations and issue attestations based on objective evidences from Trusted Data sources. The accepted Trusted Data Source categories and Notaries are determined within the Gaia-X Compliance document, while the detailed list of valid Trusted Data Sources and Notaries resides in the Gaia-X Registry.

142.2 References

- Gaia-X Compliance Document 25.10
- Gaia-X Architecture Document 25.11

142.3 See Also

Evidences

143 Trusted Issuer

Trusted Issuer is a recognized entity authorized to issue verifiable credentials that conform to the defined Trust Scope, such as Party Credentials and Onboarding Credentials.

143.1 References

Gaia-X Identity, Credential and Access Management Document 25.11

144 Trusted Scope Credential

The Trusted Scope Credential is based on the Verifiable Credentials Data Model v2.0 and has the purpose of providing a machine-readable representation of the accreditation of a Trust Service Provider for a specific scope. This credential enables the usage of Party Credentials by defining their accredited issuers. Furthermore, the Trusted Scope Credential supports the cooperation and interoperability between organization/ecosystems/data spaces, by easing the use of external Trust Service Providers.

144.1 References

Gaia-X Architecture Document 25.05

144.2 See Also

- Verifiable Credential
- Trust Service Provider

145 Trusted Service Operator (TSO)

Trusted Service Operators (TSO) are Gaia-X Providers that have been approved by the ecosystem governance authority to authoritatively provide one or more services to the ecosystem. There can be one or more Trusted Service Operators for a given type of service, e.g., a catalogue service.

145.1 References

Gaia-X Architecture Document 25.11

145.2 See Also

Governance Authority

146 Usage Control

Usage control is an extension to traditional access control. It is about the specification and enforcement of restrictions regulating what must (not) happen to data.

146.1 References

Gaia-X Data Exchange Document 25.07

146.2 See Also

- Access control
- Data

147 Usage Plane

Usage Plane refers to the level where individual participants of an ecosystem exchange data or engage in mutual service interactions with other participants of the same ecosystem or of another ecosystem.

147.1 References

Gaia-X Architecture Document 25.11

148 Usage Policy

Usage Policies, also known as Provider Policy constrains the consumer’s use of a resource.

148.1 References

Gaia-X Architecture Document 25.11

148.2 See Also

- Consumer
- Resource

149 Validation

Validation is confirmation of plausibility for a specific intended use or application through the provision of objective evidence that specified requirements have been fulfilled.

149.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

150 Verifiable Credential Wallet

A wallet, also known as Verifiable Credential Wallet enables to store, manage, and present verifiable credentials.

150.1 References

Gaia-X Compliance Document

150.2 See Also

Verifiable Credentials

151 Verifiable Credential

A verifiable credential is a tamper-evident credential that has authorship that can be cryptographically verified. Verifiable credentials can be used to build verifiable presentations, which can also be cryptographically verified.

151.1 References

- W3C, Verifiable Credentials Data Model v2.0
- Gaia-X Architecture Document 25.11

151.2 See Also

- Credential
- Verifiable Presentation

152 Verifiable Presentation

A verifiable presentation is a tamper-evident presentation encoded in such a way that authorship of the data can be trusted after a process of cryptographic verification.

152.1 Additional Information

Certain types of verifiable presentations might contain data that is synthesized from, but do not contain, the original verifiable credentials (for example, zero-knowledge proofs).

152.2 References

W3C, Verifiable Credentials Data Model v2.0

152.3 See Also

- Data
- Verifiable Credential

153 Verification

Verification is confirmation of truthfulness through the provision of objective evidence that specified requirements have been fulfilled.

153.1 References

- ISO/IEC 17000:2020
- Gaia-X Architecture Document 25.11

154 Verifier

A role an entity performs by receiving one or more verifiable credentials, optionally inside a verifiable presentation for processing.

154.1 References

W3C, Verifiable Credentials Data Model v2.0

154.2 See Also

- Verifiable Credential
- Verifiable Presentation

155 Virtual Resource

A Virtual Resource represents static data in any form and necessary information such as dataset, configuration file, license, keypair, an AI model, neural network weights, etc.

155.1 References

Gaia-X Architecture Document 25.11

155.2 See Also

Resource

III. Acronyms

156 Acronyms

The following table contains the list of the acronyms used within Gaia-X.

Acronym	Meaning
AD	Architecture Document
BoD	Board of Directors
CAB	Conformity Assessment Body
CD	Compliance Document
CSP	Cloud Service Provider
DEX	Data Exchange (referred to the respective WG or deliverable)
DSBA	Data Spaces Business Alliance
DSBC	Data and Services Business Committee
DSSC	Data Spaces Support Centre
EEA	European Economic Area
EU Cloud CoC	European Cloud Code of Conduct
EFTA	European Free Trade Association
EUCS	European Cloud Scheme
FAIR	Findable, Accessible, Interoperable and Reusable
GA	General Assembly
GAB	Governmental Advisory Board
GDPR	General Data Protection Regulation
GXDCH	Gaia-X Digital Clearing House
ICAM	Identity, Credentials and Access Management (referred to the respective WG or deliverable)
LHP	Lighthouse Project
ODRL	Open Digital Rights Language
OGA	Ordinary General Assembly
PRC	Policy Rules Committee

Acronym	Meaning
TA	Trust Anchor
TC	Technical Committee
TCK	Technical Compatibility Kit
TISAX	Trusted Information Security Assessment Exchange
TSP	Trust Service Provider
VC	Verifiable Credential
W3C	Worldwide Web Consortium
WG	Working Group