



OCTOBER 2024 DATA SUMMIT

Hyatt Regency Orange County, CA
October 16-17, 2024

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VICTORIANO GIRALT

**HEAD OF SYSTEMS
ADMINISTRATION SERVICE,
UNIVERSITY OF MALAGA**

**Getting Ready for the Present:
Project CAD for
Interoperable Academic Credentials**

THURSDAY, OCTOBER 17, 2024

Standards mismatch

Standards mismatch

Mã;laga \iff Málaga

CAD

=

Computer Aided Design

CAD
≠
Computer Aided Design

CAD

=

Credenciales Académicas Digitales
(Digital Academic Credentials)

2020

no need to remember what
happened

2021



NextGenerationEU funds

2021



Plan de Recuperación, Transformación y Resiliencia



UniDigital Programme

UniDigital Programme

50% university's own projects

50% collaboration projects

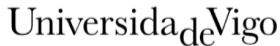
UniDigital Programme

betting on two horses

two verifiable credentials projects

CertiDigital project & CAD project

eleven universities



one contractor

inetum 

CAD objectives

- + Standards based interoperable solution for accreditations and certifications
- + Regulatory compliance (GDPR, eIDAS2)
- + Free software solution for the universities
- + Integrated with university IT systems
- + Foster verifiable credential use in the public and private sectors

Digital identity challenges

Diversity of standards



No interoperability or portability



Many identities (one per platform)



Incorrect or outdated information



Auditing and tracing requirements



Limited user control



Cybercrime, fraud, trust and security



Absence of single citizen vision



Repetitive and costly verification processes



Dependent on physical proofs and manual processes



Inconsistent or unreliable data



Personal information privacy regulations



Self Sovereign identity (SSI)

Credential producer



Entities that generate credentials about persons

Person /
Citizen



Persons that manage and voluntarily share credentials from their "identity wallet"

Service provider / Credential receiver



Any entity that can ask for and process shared data with previous person consent

Why a DLT (a.k.a. *blockchain*)



Transparency



Immutability



Decentralisation

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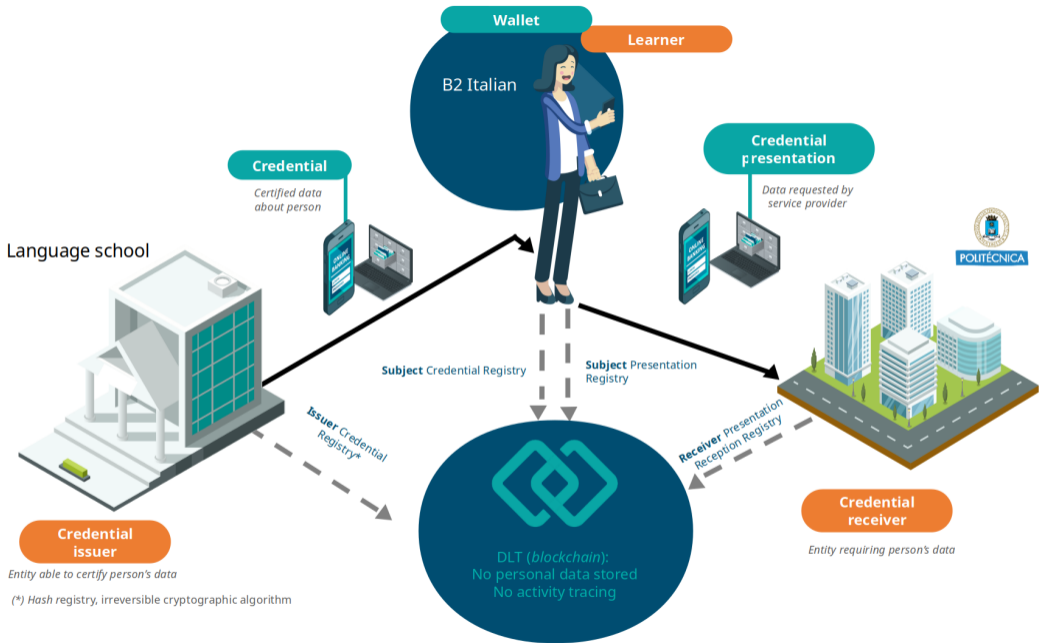
CURRENT MODEL OF IDENTITY

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SELF-SOVEREIGN IDENTITY



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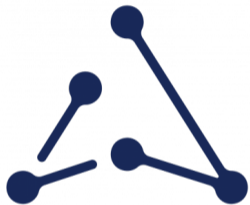


DALION

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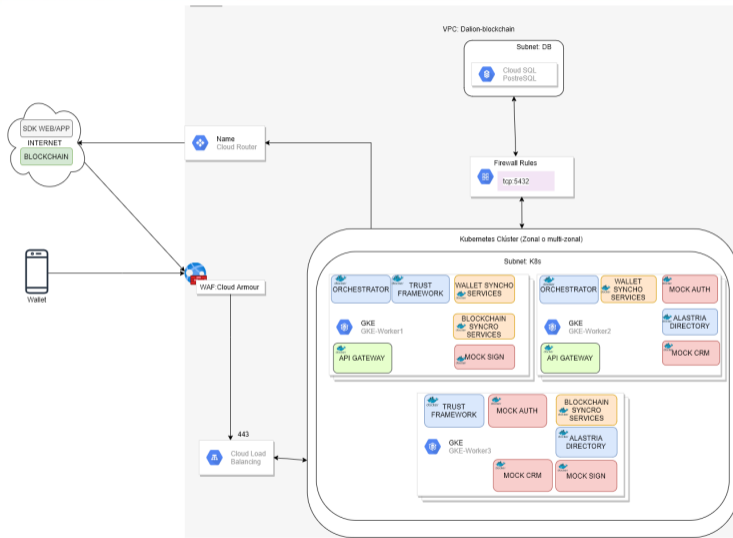


ALASTRIA

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Component summary

- + SDK for web and Android apps
- + Corporate services (SIS, IdM, ...)
- + Microservices for DLT operations
- + Alastria blockchain node
- + Dalion identity wallet

Operations

- + Registration (Alastria only)
- + Vinculation (DID \Leftrightarrow Uni Id)
- + Authentication
- + Issuance
- + Presentation

Schemas & Credentials

- + *Recycled* AlastriaID schema
- + Basic personal data
- + Student ID card
- + University diploma

A credential

```
{  
  "carnet_universitario": {  
    "apellido2": "Garcia",  
    "centro_estudios": "Servicio de Sistemas Informáticos (SCI)",  
    "numero_identificacion": "0610419411",  
    "apellido1": "Giralt",  
    "universidad": "Universidad de Málaga",  
    "nombre": "Victoriano Francisco"  
  },  
  "levelOfAssurance": 0  
}
```

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¡Hola Victoriano! 🇵🇷

MIIO es la herramienta con la que cambiarás la gestión de tu identidad

¿Cómo usar MIIO?



Aquí encontrarás una guía de uso para aprender la nueva forma de gestionar tus documentos y trámites digitales.

[Ver guía de uso](#)

Actividad reciente



No existe actividad

Aquí se guardará el registro de la actividad de tus datos. Todavía no has utilizado tus datos para ningún trámite.



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MIIO

Identificadores y claves

Alastria

DID	did:ala:quor:redT:797993172369a0d66451cef4708119c5d1ceccf5	
Clave pública	0xd6456a6ec1bf46bdb18a25351e43c5d8a6d847e9105ae03381f635952f83e3a57366832b8d447e3bbd6b160aafe4c84b29094ed6fc4ac5f915d856fa	

EBSI

DID	did:key:z2dmzD81cgPx8Vki7JbuuMmFYrWPgYoytykUZ3eyqht1j9KbqapXDYmQR4Qin7wiunoDcRNXRES3bfFdGNGeB2zKiUwLPUZHUXGkkjBokYCz4r	
Clave pública	{"kty":"EC","crv":"P-256","kid":"8pxCDHNQDTKdWq48_KRNN1ijtssTSnPU0meL-Cwa0U","x":"7RUKdhabGXsIGCZiG2oTI9LbMxLc117WK9krK000r34","y":"4	

there's more that fits the eye

```
{  
  "kty": "EC",  
  "crv": "P-256",  
  "kid": "8pxCDHNQDTKdWq48_-KRNN1ijtsTSnPU0meL-Cwa0U",  
  "x": "7RUKdhabGXsIGCZiG2oTI9LbMxLc117WK9krK000r34",  
  "y": "4KH05Kw6cDKP sxhtTjCi8HQbF796Ez2wvQ53RHv00co"  
}
```


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Tus datos a tu disposición

Gestiona tus datos y tu identidad digital

Credenciales españolas Credenciales europeas

🔍 Busca tus datos: "Dni", "Apellido", "Entidad"

Universidad de Málaga

Mostrar

victoriano@uma.es

Email
Universidad de Málaga

Giralt

Primer apellido
Universidad de Málaga

García

Segundo apellido
Universidad de Málaga

Victoriano Francisco

Nombre
Universidad de Málaga

0610419411

Carnet Universitario
Universidad de Málaga

victoriano@uma.es

Email
Universidad de Málaga



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MIIO

🔄 REFRESCAR

Dato

0610419411

Tipo de dato (multivaluado)

Carnet Universitario



Entidad emisora

Universidad de Málaga

Fecha de emisión

08-09-2024

Fecha de caducidad

08-09-2025

Nivel de confianza

Sin verificar



COMPARTIR DATOS

FIJAR COMO PREDETERMINADO



BORRAR DATO

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Tus datos a tu disposición

Gestiona tus datos y tu identidad digital

Credenciales españolas **Credenciales europeas**

🔍 Busca tus datos: "Dni", "Antena", "Entidad" 🔍

Carnet de estudiante

Ministrar ^

Carnet de estudiante

Fecha emisión: 02/10/2004

Carnet de estudiante

Fecha emisión: 04/10/2004

Carnet de estudiante

Fecha emisión: 04/10/2004



Inicio



Mis Datos



Actividad



Más

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MIIO

Carnet Universitario

Detalle general Detalle técnico

Número Identificativo

0610419411

Universidad

Universidad de Málaga

Nombre (DNI)

Victoriano Francisco

Primer Apellido (DNI)

Giralt

Segundo Apellido (DNI)

Garcia

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 DUMA Buscador Mis datos en DUMA ▾ castafiore@uma.es ▾

Éstos son los conjuntos de credenciales (certificaciones electrónicas de información que la Universidad dispone sobre usted), que puede descargar (*Emitir*) para almacenar en la *wallet* de su dispositivo móvil.

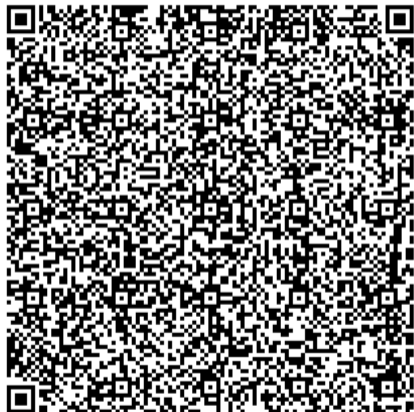
Credenciales básicas (formato español para Alastria)

Seleccione las credenciales que desea añadir a su *wallet*.

- Email
castafiore@uma.es (emitida)
- Primer apellido
Castafiore (emitida)
- Segundo apellido
Rufini (emitida)
- Nombre
Bianca (emitida)

[Carnet universitario](#)

A credential issuance



A credential issuance

```
{  
  'iss': 'did:ala:quor:redT:3356af27e8b0bafac4141b595c29dabec9a33536',  
  'exp': 1729138807,  
  'nbf': 1729138207,  
  'jti': 'UMA/alastria-token/a8844ab9-fdc3-4ff1-ae18-3a6d1b1a1544',  
  'iat': 1729138207,  
  'gwu': 'http://34.91.211.67:22000',  
  'cbu': 'https://cad-ud.sci.uma.es/orch/api/v1/tiny-url/credentials/b97',  
  'type': ['AlastriaToken', 'US221']  
}
```


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the future

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ebsi
European Blockchain

https:

[//ec.europa.eu/digital-building-blocks/sites/display/EBSI/What+is+ebsi](https://ec.europa.eu/digital-building-blocks/sites/display/EBSI/What+is+ebsi)

<https://hub.ebsi.eu/>



DIGITAL CREDENTIALS 4 EUROPE
DC4EU

<https://www.dc4eu.eu/>

the TIR Trusted Issuer Registry

The Trusted Issuers Registry (TIR) is a generic decentralised registry that maintains information about trusted issuers, including public data, accreditations and other relevant details. This information is stored in the smart contract as Attribute Envelopes (similar to Verifiable Credentials), which can be issued by Trusted Issuers or self-issued. Validation of generic Envelopes (like Verifiable Credentials) occurs outside the EBSI Platform. Issuers can define proxies used during credential verification to check if credentials are still valid or have been revoked. The verification flow is detailed in the Credential Status Framework.

<https://hub.ebsi.eu/vc-framework/credential-status-framework>

Schemata

Trusted Schema Registry

<https://hub.ebsi.eu/apis/pilot/trusted-schemas-registry>
<https://code.europa.eu/ebsi/json-schema/>

Natural Person in Education use cases:

@cef-ebsi/vcdm2.0-verifiable-education-id-schema

Europass EDC based on ELM 3.2

@cef-ebsi/vcdm2.0-europass-edc-schema

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Real working demo

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A login credential request

```
{  
  'iss': 'did:ala:quor:redT:3356af27e8b0bafac4141b595c29dabec9a33536',  
  'exp': 1729172389,  
  'nbf': 1729171789,  
  'jti': 'UMA/alastria-token/3c8355c4-344c-4267-a7ce-24a0ca7baf19',  
  'iat': 1729171789,  
  'gwu': 'http://34.91.211.67:22000',  
  'cbu': 'https://cad-ud.sci.uma.es/orch/api/v1/alastria/alastria-session',  
  'type': ['AlastriaToken', 'US211']  
}
```

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→ **THANK YOU**



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