



RedIRIS: Overview of Service Portfolio

GÉANT SIG-MSP – Istambul, 10.03.2020



RedIRIS

Spanish NREN
www.rediris.es

Strategic Plan 2020

Mission and Vision



May 2020

"To deliver excellent connectivity and related ICT services to the Spanish research and educational institutions, in close cooperation with those institutions and with regional and international Research and Education Networks, in order to facilitate access to e-infrastructure and remote collaboration at national and international level."

"To be recognized as the trusted partner of reference for IT-related issues by the Spanish research and educational institutions, promoting cooperation among these institutions, and providing them with a catalogue of world class connectivity and related ICT services, centrally managed or procured, which will boost e-science and advanced learning."

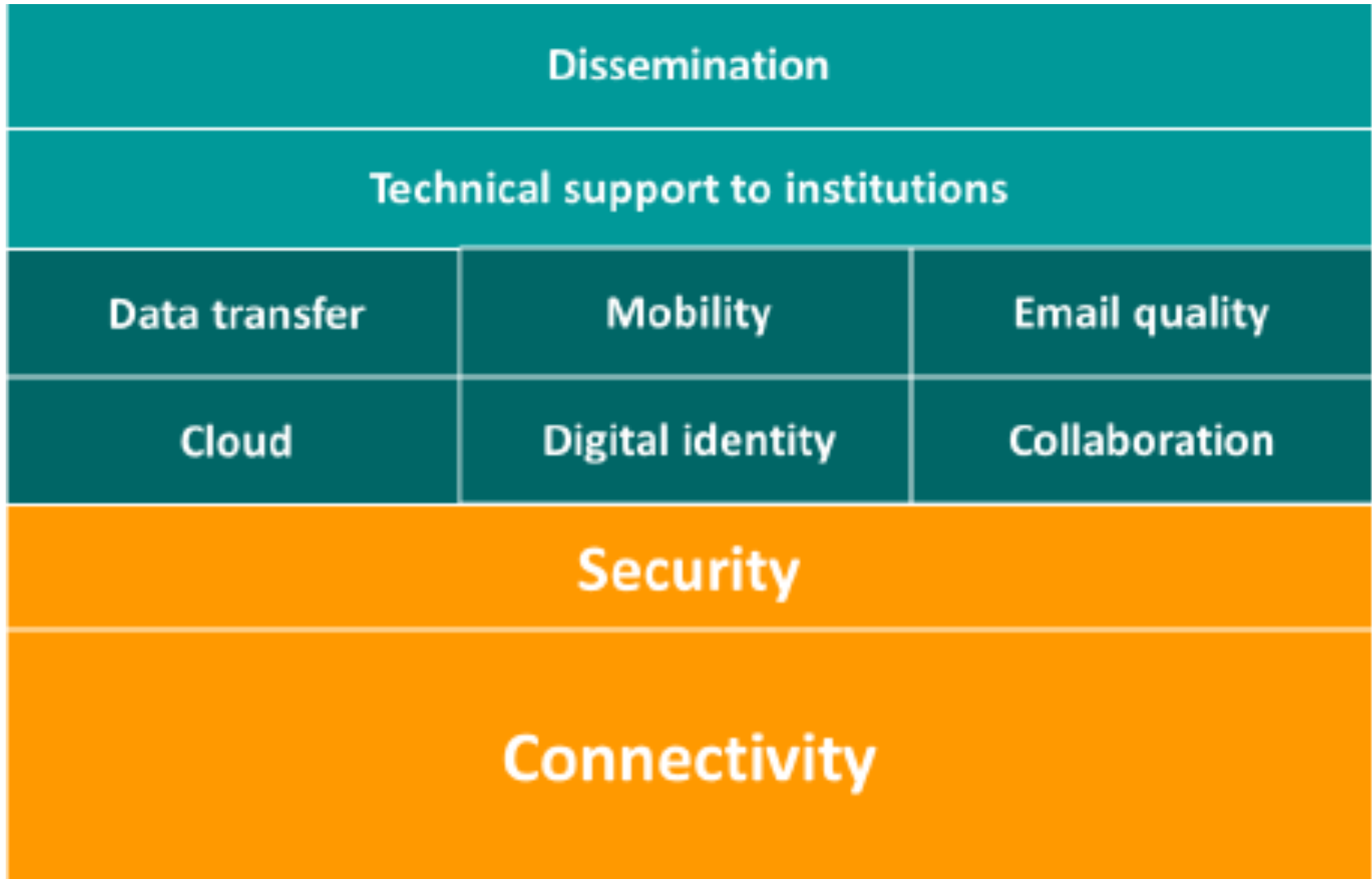
Strategic Plan 2020 Objectives

Objective 1 Progress towards consolidation of the infrastructure

Objective 2 Excellence in the delivery of secure, reliable services which provide significant added value

Objective 3 Embrace a user-centric approach in the management of the services lifecycle, in order to increase service usage and user satisfaction

Objective 4 Actively collaborate in the development of an integrated e-science environment at the European and national level, in which the RedIRIS contribution will be focused in the fields of data transfers, security, trust & identity, collaborative tools and shared cloud services



Some comments:

Dissemination		
Technical support to institutions		
Data transfer	Mobility	Email quality
Cloud	Digital identity	Collaboration
Security		
Connectivity		

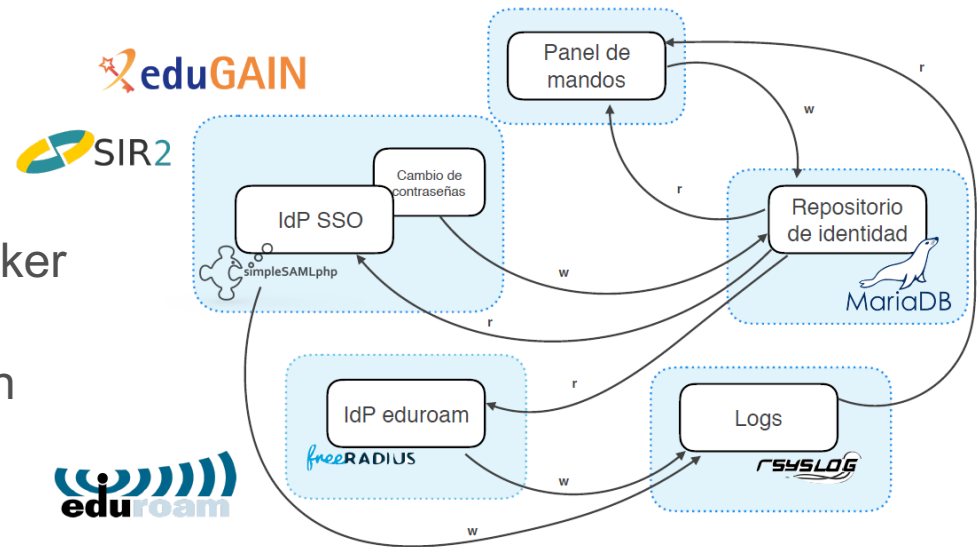
- RedIRIS activity is centrally funded by the Ministry of Science - this has pros and cons – in any case, so far there is no charge to users for services
 - Plan to implement pay-per-use for some new services
- The collaboration with other RENs is very important, as RedIRIS is understaffed (headcount: 16 FTE, plus some outsourced services)
- Main service categories, aligned with those of GÉANT and many NRENs
 - There are some differences in certain specific services, though
- Mix of “top down” and “bottom up”
- Need to: formalize better the service launch; SLAs (including 24/7 for certain services) and quality certification (ISO 9001 already – working on ISO 27001)

- Main service (around 5 million users)
- Upgrade of network equipment (2020: 17 M€ optical+ 10 M€ IP), in order to improve the network performance (multiple links at 100Gbps)
- Connectivity services needs to be:
 - Secure (investment of 2 M€ in DDoS mitigation system + support)
 - As fast as expected (data transfer experts – strategic goal) – ASPERA, DTN, PERT, performance tools, test of new protocols (BBR, GIC), etc.
- Interested in collaboration with new areas (innovation factor, use cases):
 - quantum computing, metrology, use of fibre for earthquake detection...

- Primarily intended for research centers and small institutions that do not have the IT resources to deploy and maintain their own IdP:
 - All-in-one solution
 - Ease and speed of deployment of a new IdP
 - Ease of administration for the institutions
 - Traceability and usage statistics
 - Special care with security

Some technical details:

- Kubernetes cluster with Docker containers
- *web-single-sign-on* based on SimpleSAMLphp
- IdP eduroam based on FreeRADIUS



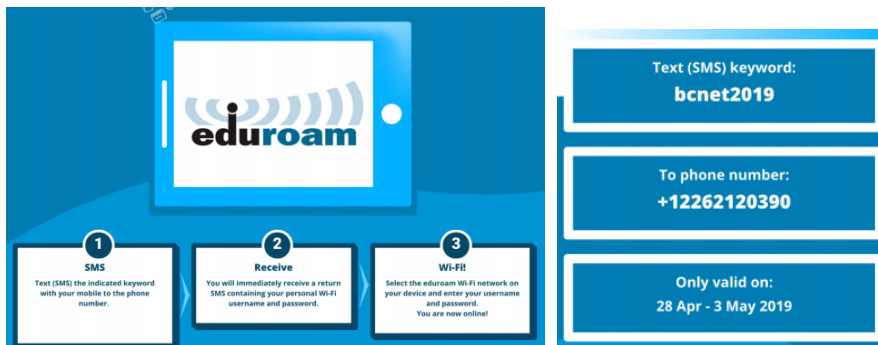
EDUROAM VISITOR ACCESS (EVA): A SIMPLE, EASY SOLUTION FOR CONNECTING VISITORS TO CAMPUS WI-FI

- Developed by SURFnet
- Eduroam Visitor Access enables higher education and research institute visitors to access the secure and trusted eduroam Wi-Fi network. The service can provide temporary access to the eduroam network on a simple and suitable manner.

Running a pilot with 7 institutions (UAM, USAL, UdG, UNIZAR, UNIA and RedIRIS)

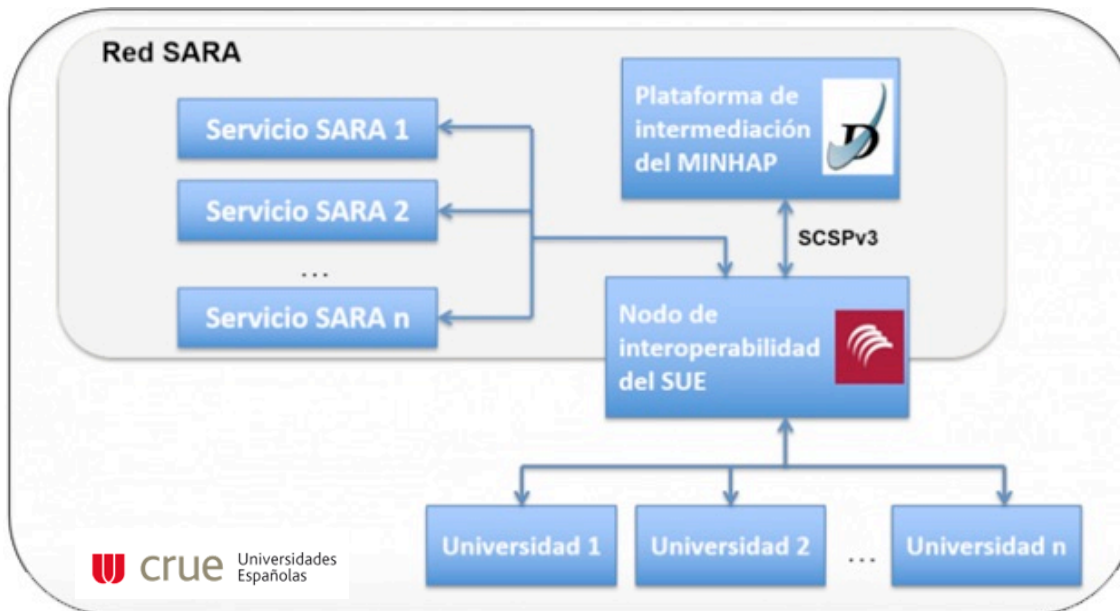
eVA Account Creation Methods

1. Individual Visitor Accounts
2. Batch/Group Accounts
3. SMS for Events



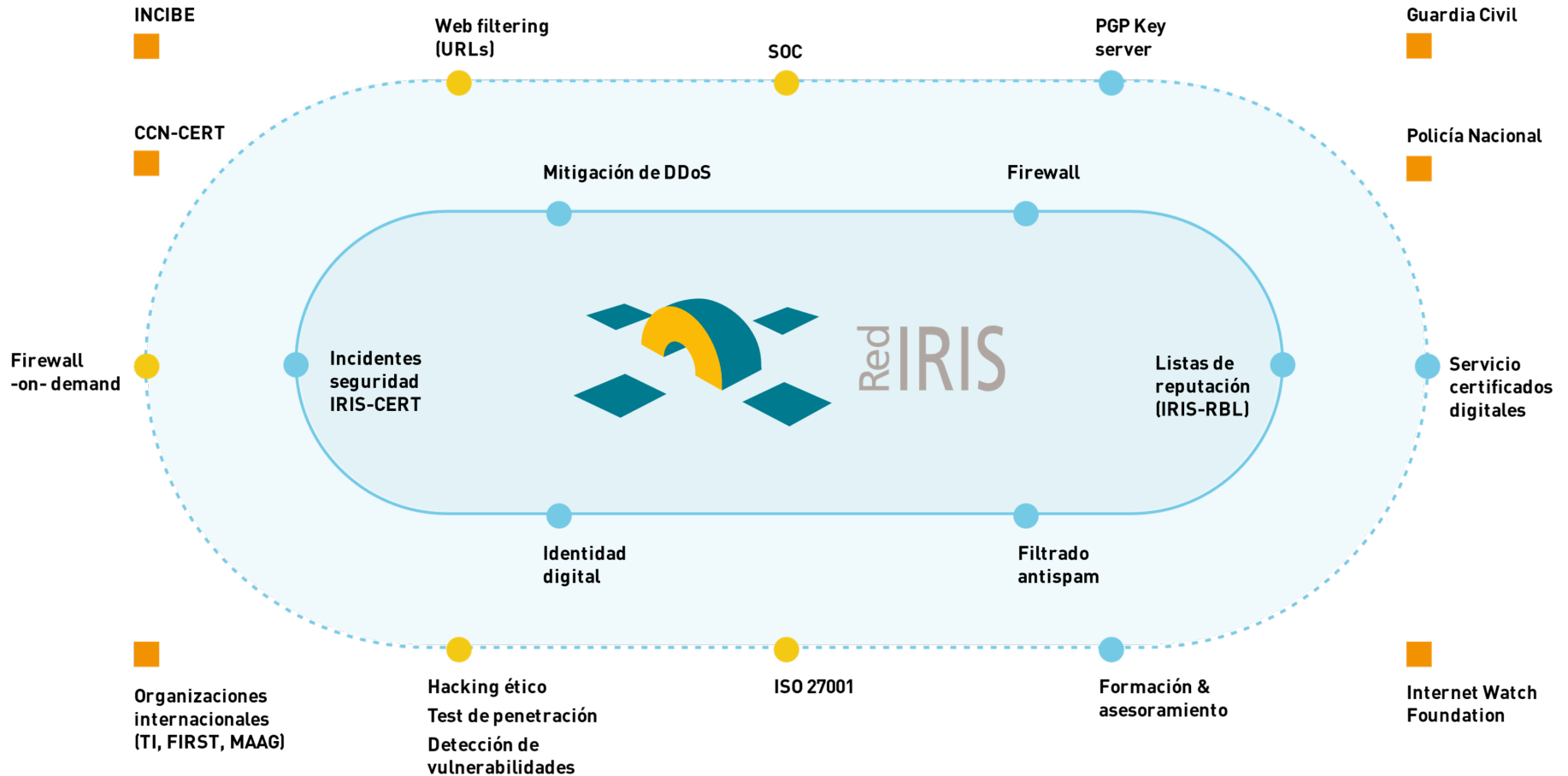
- E-administration services: Costly developments + complicated integration
- Role of RedIRIS: to offer **central services** and gateways to avoid each institution having to implement its own solution.
Examples: NISUE, @firma, Cl@ve, FIRE, etc.
- Services that facilitate compliance with e-government regulations by universities and other institutions affiliated to RedIRIS

<https://www.rediris.es/ae/>

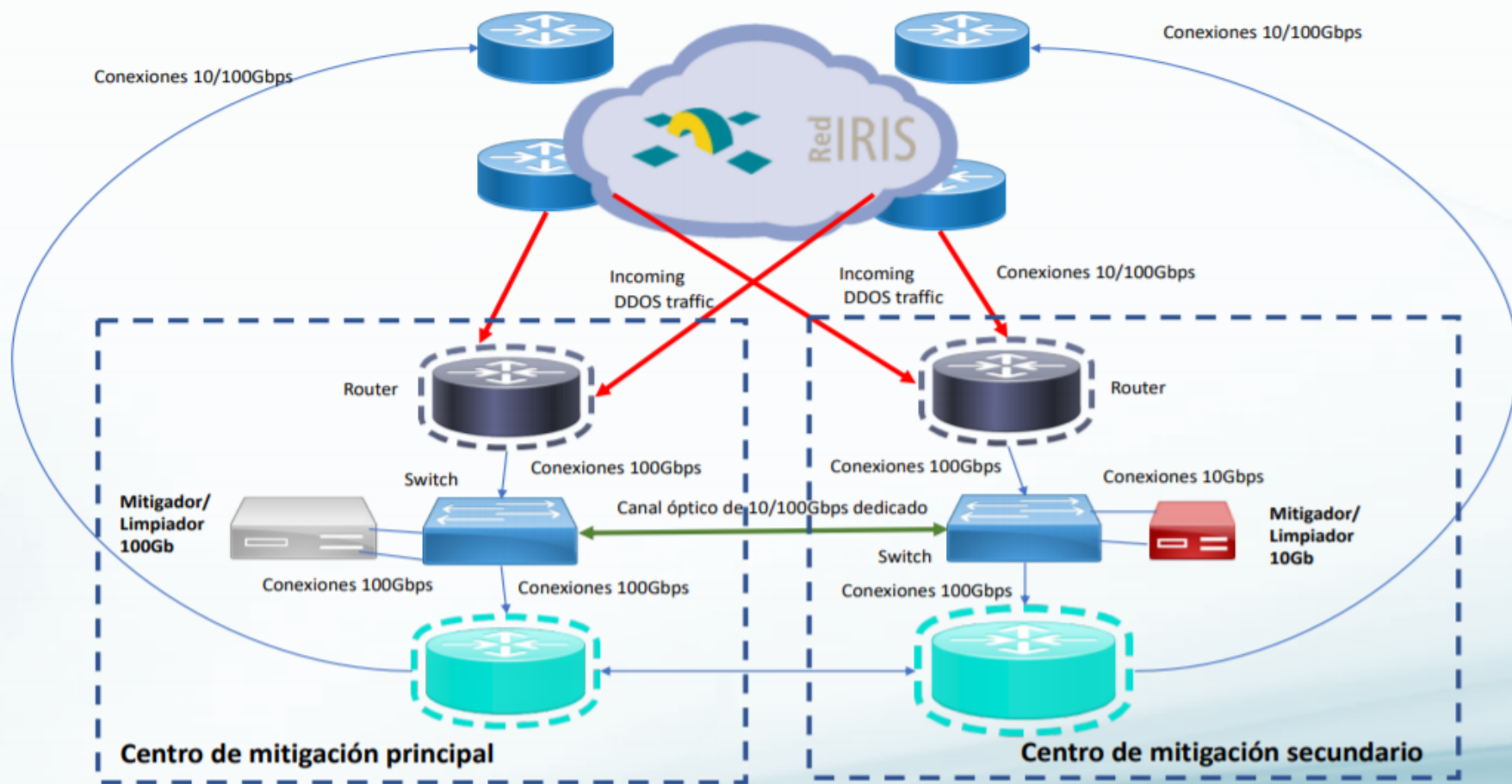


NISUE's objective:

- Central node to facilitate the exchanges of information between Universities and with other bodies of the administration



Egida v2. Scrubbing Center





Adoption of GÉANT IaaS Framework



	INSTITUTION	E/R	Pub/Priv	TECH
1	Universidad de Santiago de Compostela	E	Public	Azure
2	Fundación Privada Ramón Llul	E	Private	Azure
3	Institución Educativa SEK	E	Private	Azure
4	Universidad de Salamanca	E	Public	Azure
5	Universidad Pontificia de Comillas	E	Private	Azure
6	Universidad de Burgos	E	Public	Azure
7	Instituto de Empresa	E	Private	Azure
8	ESADE	E	Private	Azure
9	Universidad de Almería	E	Public	Azure
10	Universidad de Oviedo	E	Public	Azure
11	Universidad San Pablo Ceu	E	Private	Azure
12	IQS Ramón Llul	E	Private	Azure
13	Universidad Católica de Ávila	E	Private	Azure
14	Universidad de la Coruña	E	Public	Azure
15	Universidad Politécnica de Cartagena	E	Public	Azure
16	Universidad Autónoma de Madrid	E	Public	Azure
17	Universidad Oberta de Catalunya	E	Private	Azure
18	Universidad de Mondragón	E	Private	Azure
19	IESE	E	Private	Azure
20	Universidad Internacional de la Rioja	E	Private	Azure
21	Universidad Rovira i Virgili	E	Private	Azure
22	Universidad de Castilla-La Mancha	E	Public	Azure
23	Universidad Politécnica de Madrid	E	Public	Azure/AWS
24	Universidad Alfonso X el Sabio	E	Private	Azure
25	Universidad de Alcalá de Henares	E	Public	Azure
26	Universidad de Deusto	E	Private	Azure
27	Universidad Internacional de Cataluña	E	Private	AWS
28	Patrimonio Nacional	O	Public	Azure
29	IRAM	R	Public	AWS
30	Sincrotrón ALBA	R	Public	AWS
31	PIC (Port d'Informació Científica)	R	Public	AWS
32	CIBERONC	R	Public	Azure

And a few more coming ...

European Blockchain Services Infrastructure (EBSI)

(<https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/ebsi>)

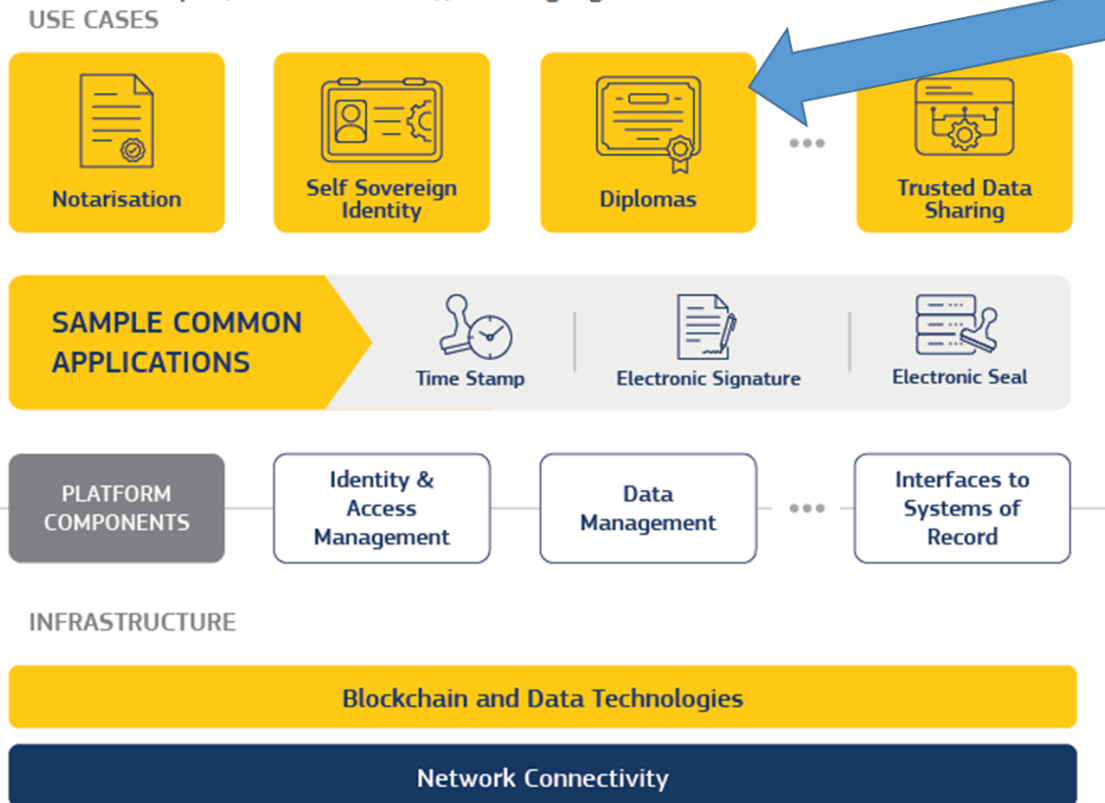
The European Blockchain Services Infrastructure (EBSI) is a joint initiative from the European Commission and the [European Blockchain Partnership](#) (EBP) to deliver EU-wide cross-border public services using blockchain technology. The EBSI will be materialised as a network of distributed nodes across Europe (the blockchain), leveraging an

increasing number of applications focused on specific use cases. In 2020, EBSI will become a [CEF Building Block](#), providing reusable software, specifications and services to support adoption by EU institutions and European public administrations.

4 initial uses cases. **CRUE + RedIRIS** participating actively in **Diplomas** in coordination with **MINCIU**

Cross-border Blockchain for Diploma Data in the EU

Discover Eva's journey <https://youtu.be/m2uj7fgb2JI>

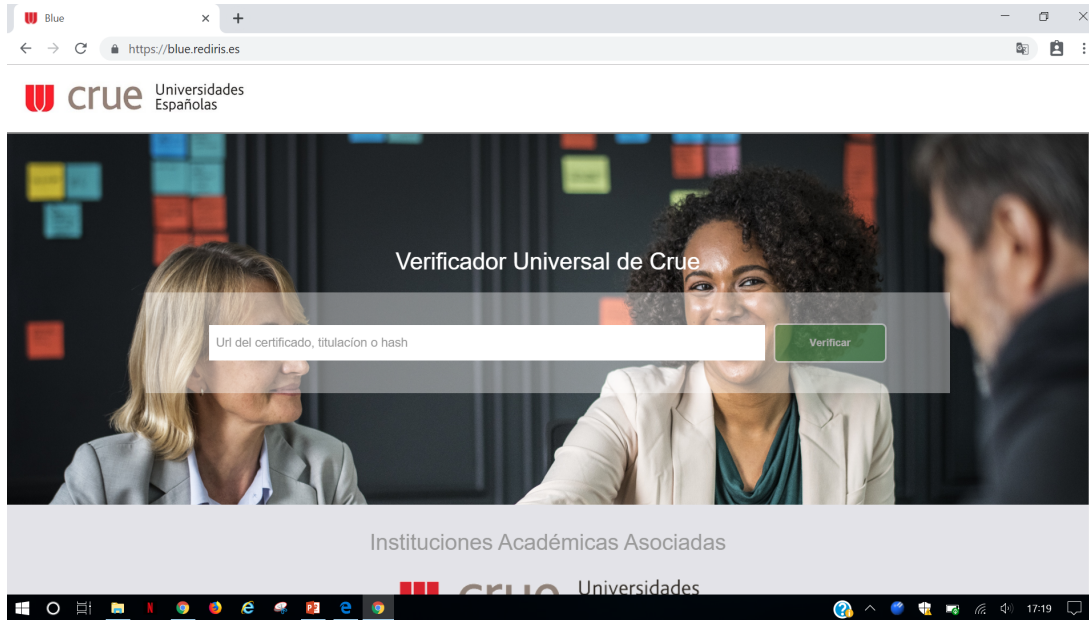


BLUE: Blockchain Universidades Españolas

- Working group by CRUE-TIC (Universities) + RedIRIS
- Currently **a test network** (PoC) built to experiment and study potential uses cases always to be **aligned with EBSI initiative**
- Permissioned network based on Hyperledger fabric (Linux Foundation)
- User layer based currently based on Blockcerts (opensource)
- Main node at RedIRIS + other 8 universities (UC3M leading) + one in LATAM (U. Rosario in Colombia)
- **First usage examples:** issuance of certificates of attendance to several conferences of CRUE-TIC and RedIRIS



Let's have a look...



<https://blue.rediris.es?hash=838755a92a2a1f563148e77bf3b0449481bdd055570e76b17dbb76ef97a578adb982ea86fd1bfc9967fd74fc999b2331670ddf3bcd061534006ef449a27e4f>



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