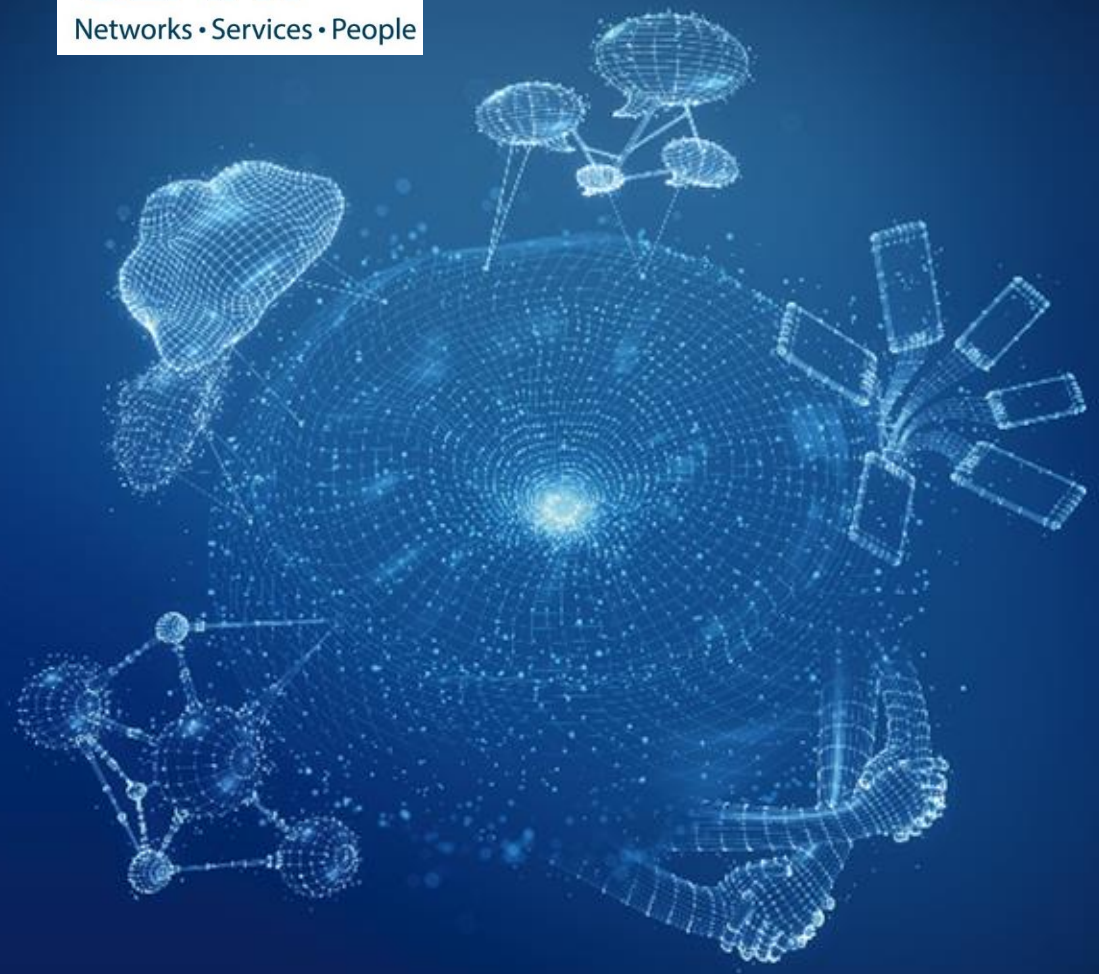
GÉANT
Networks • Services • People



GEANT Cloud Framework Agreement

SPARKLE | IP&DATA PLATFORM

SPARKLE | CLOUD & DATA CENTER PLATFORM

SPARKLE | CORPORATE PLATFORM

SPARKLE | MOBILE PLATFORM

SPARKLE | VOICE PLATFORM

SPARKLE

TIM

TIM Overview

TIM Overview

TIM is the **leading Italian** Telecommunications and ICT provider. In the areas of: fixed and mobile telecommunications, internet and media, office and systems solutions, research and development

Leading Player in Latin America

Among TOP global operators through Sparkle

Core markets: **Europe**, Middle East + **Latin America**

TIM Cloud Overview

Sparkle Overview

Company data

Headcount (*)
800 +

Countries of presence
37

Network coverage
#PoPs 122

PoPs via partners
> 1,000

Key figures

Voice Traffic
15.4 Bn minutes

IP&DATA
Over 12 Tbps

Revenues
1.3 Bn €

Data as of December 2015

(*) Data as of August 2016

Sparkle Key Assets

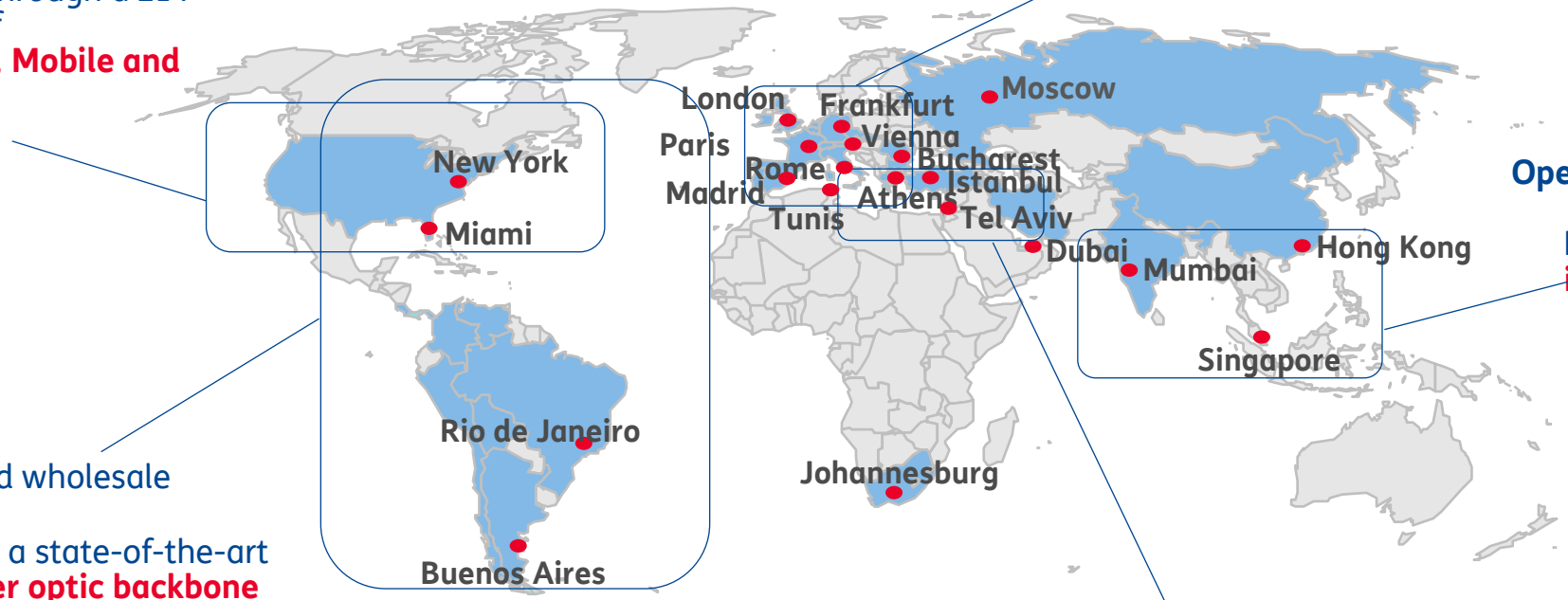
- ***State-of-the-art Global Network***, with proprietary backbones in Europe, Mediterranean Basin and the Americas and ownership in submarine cables connecting Europe with South-East Asia
- **Global Services Portfolio** for Fixed and Mobile Operators, ISPs, OTTs, Media & Content Players, Application Service Providers and Multinational Corporations
- **Worldwide presence in 37** countries based on fully owned companies and offices
- **Advanced OSS, BSS and Customer Care capabilities** with multi-lingual call center

Sparkle Operations

Sparkle has a ***global presence*** based on its fully owned companies and offices in ***37 countries*** and a headcount of over 800 + in Italy and abroad

European Backbone Network

Operations in the US through a 214 Licence, for the offer of **international IP&Data, Mobile and Voice solutions**



Operations in the AsiaPac Region through a FBO Licence, for the offer of **international IP&Data, Mobile and Voice solutions**

High quality, value-added wholesale service **operations in the Americas** through a state-of-the-art **regional proprietary fiber optic backbone** fully integrated with Sparkle's global network

High quality, value-added wholesale **service operations in the Mediterranean basin through a state-of-the-art regional proprietary fiber optic backbone** fully integrated with Sparkle's global network

● Office

Data as of August 2016

Sparkle Service Proposition

Complete set of IP, Data, Cloud & Data Center, Mobile and Voice solutions for Fixed and Mobile Operators, ISPs, OTTs, Media & Content Players, Application Service Providers and Multinational Corporations (MNCs)

SPARKLE | IP&DATA PLATFORM

- Complete range of solutions designed to access any content on the Internet with secure global international IP connectivity, high-performance international bandwidth and IP MPLS services.

SPARKLE | CLOUD & DATA CENTER PLATFORM

- Suite of highly flexible and scalable top class integrated IaaS, PaaS and SaaS that meet the ever growing need of cost efficient and top security IT solutions, available in several Data Center worldwide, with key assets presence in Europe.

SPARKLE | CORPORATE PLATFORM

- Complete portfolio of services ranging from entry-level solutions for small and medium enterprises, to business continuity solutions, with the highest level of service performance

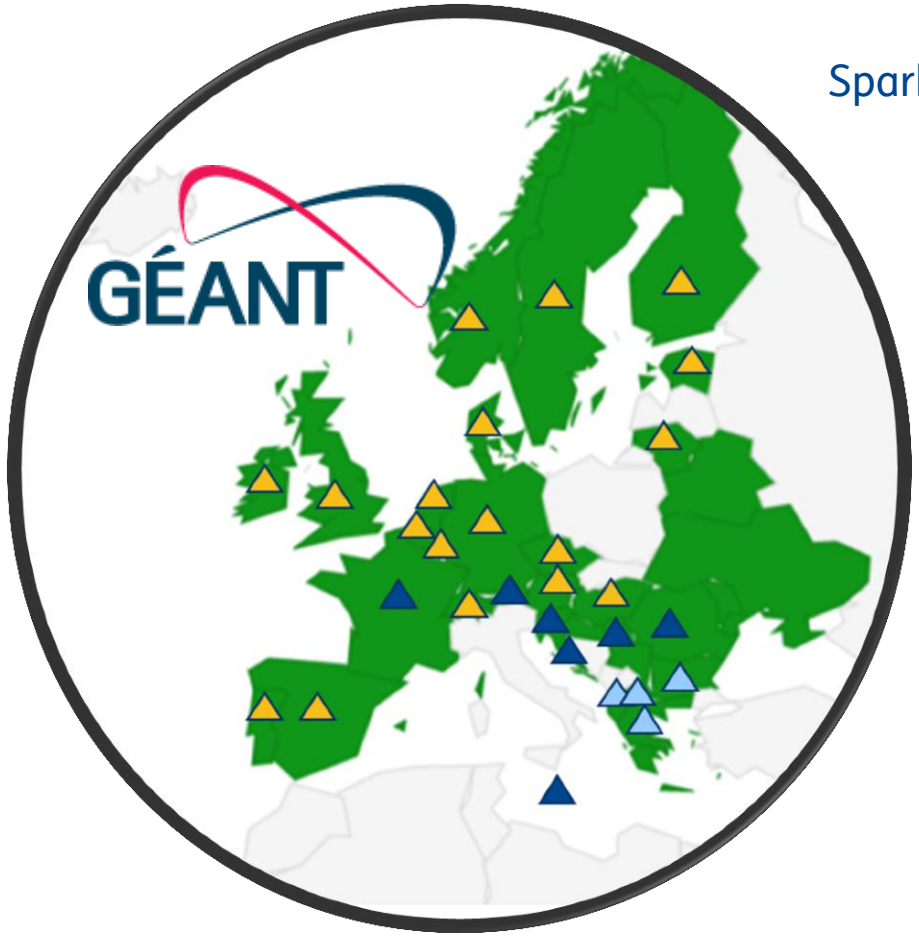
SPARKLE | MOBILE PLATFORM

- Distinctive portfolio of services to support the operations of new entrants and established mobile operators. The services aim to quickly increase international mobile service coverage and usage, thus generating new revenue streams for mobile operators while minimizing costs for service set up and management

SPARKLE | VOICE PLATFORM

- Voice Solutions offer worldwide voice capabilities to Carriers, Service Providers, and Mobile Operators combining network reliability, competitive pricing and excellent routing solutions.

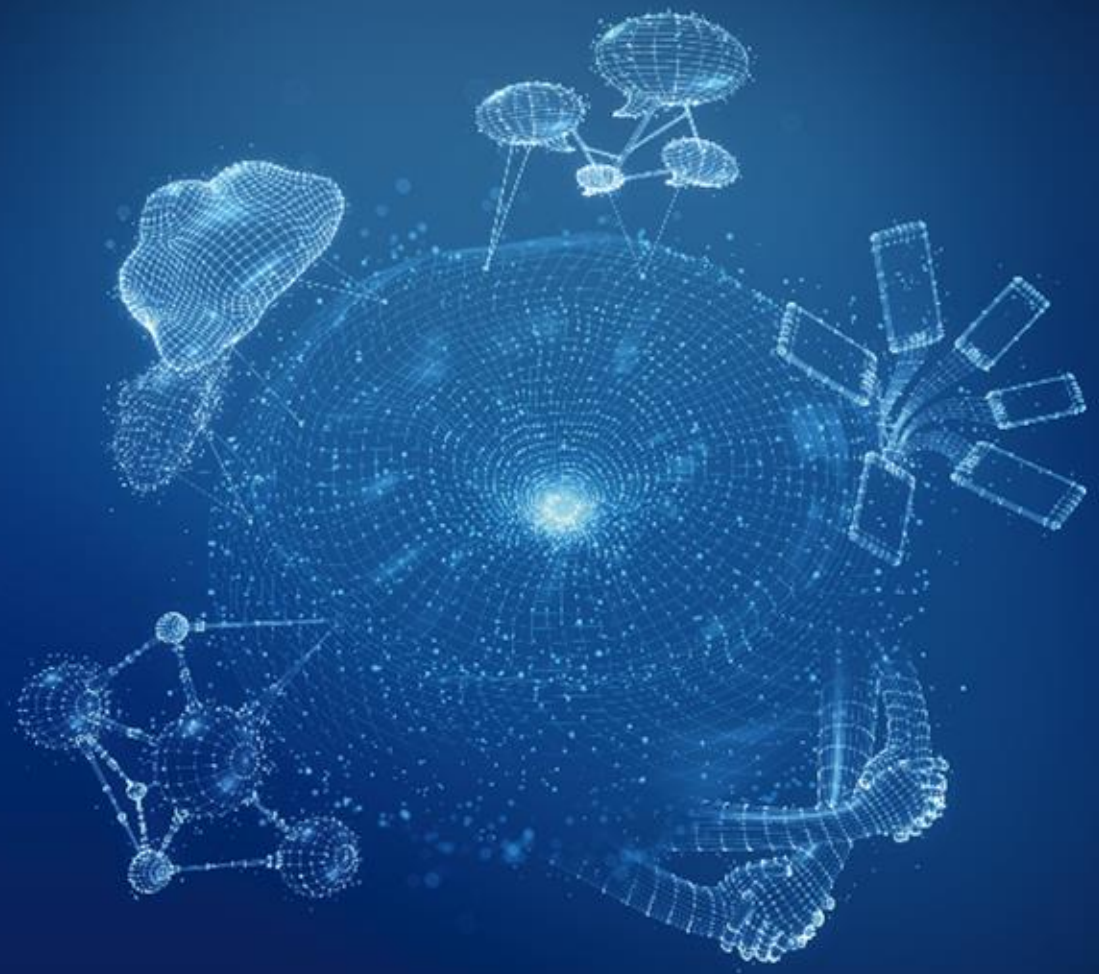
GEANT Infrastructure as a Service – a Brokerage challenge



Sparkle was awarded for provisioning Infrastructure ***as a service for the Research and Education community in 30 countries connected to GEANT***

Sparkle Brokerage on TIM IaaS

- Project Management
- Go2Market
- Marketing Support
- Convergent Billing
- Provisioning of three Service Providers



Cloud offering for Géant

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GEANT Cloud Summit Meeting

Sparkle's Cloud offering for Géant

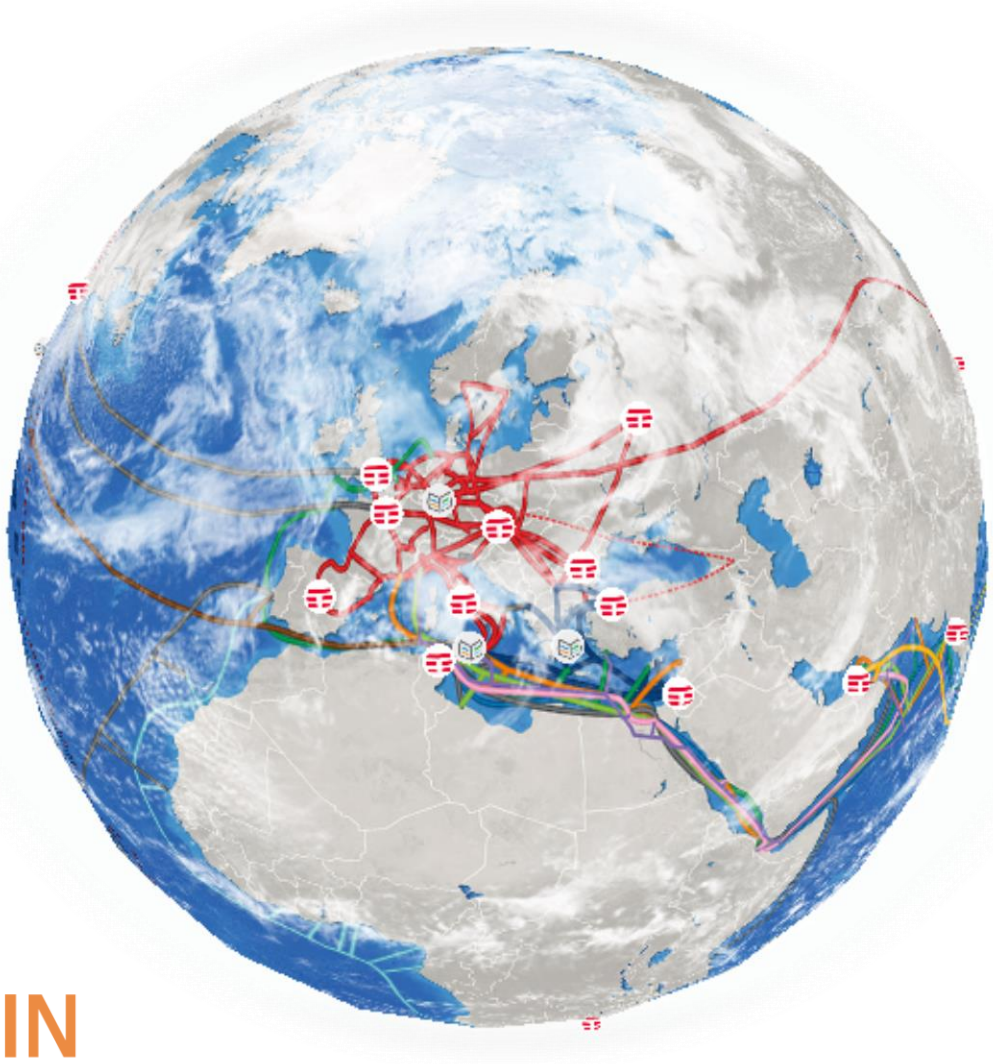
TIM

OIP

- Compute: TIM Self Data Center
- Compute: Sparkle GR Self Data Center
- Connectivity: Sparkle's global backbone
- Managed services
- Service Desk
- Brokerage services: Reporting, Billing, Accounting
- SSO proxy (SAML2) and eduGain federation

Common for all countries

- ***Sparkle Global Presence:***
  Sparkle employs an international workforce distributed worldwide
- ***Sparkle Service Desk***
  - Contact Center 7x24
  - Cloud Competence Center
- ***Common brokerage platform*** to support all business processes for all ***NRENs:*** account management, reselling, ordering, billing and reporting
- ***Common access to OIP*** control panels using ***SAML2***
- ***Federation to eduGAIN community*** eduGAIN



General Framework achievements

- Géant aim is to accelerate the ***Cloudification*** of the IT resources
- Infrastructure as a Service (**IaaS**), which provides in cloud virtualized computing resources
- Cloud **drivers**:
  - Easy access
  - Resouces usage flexibility
  - Cost reduction
  - Contract simplification

Contract results:

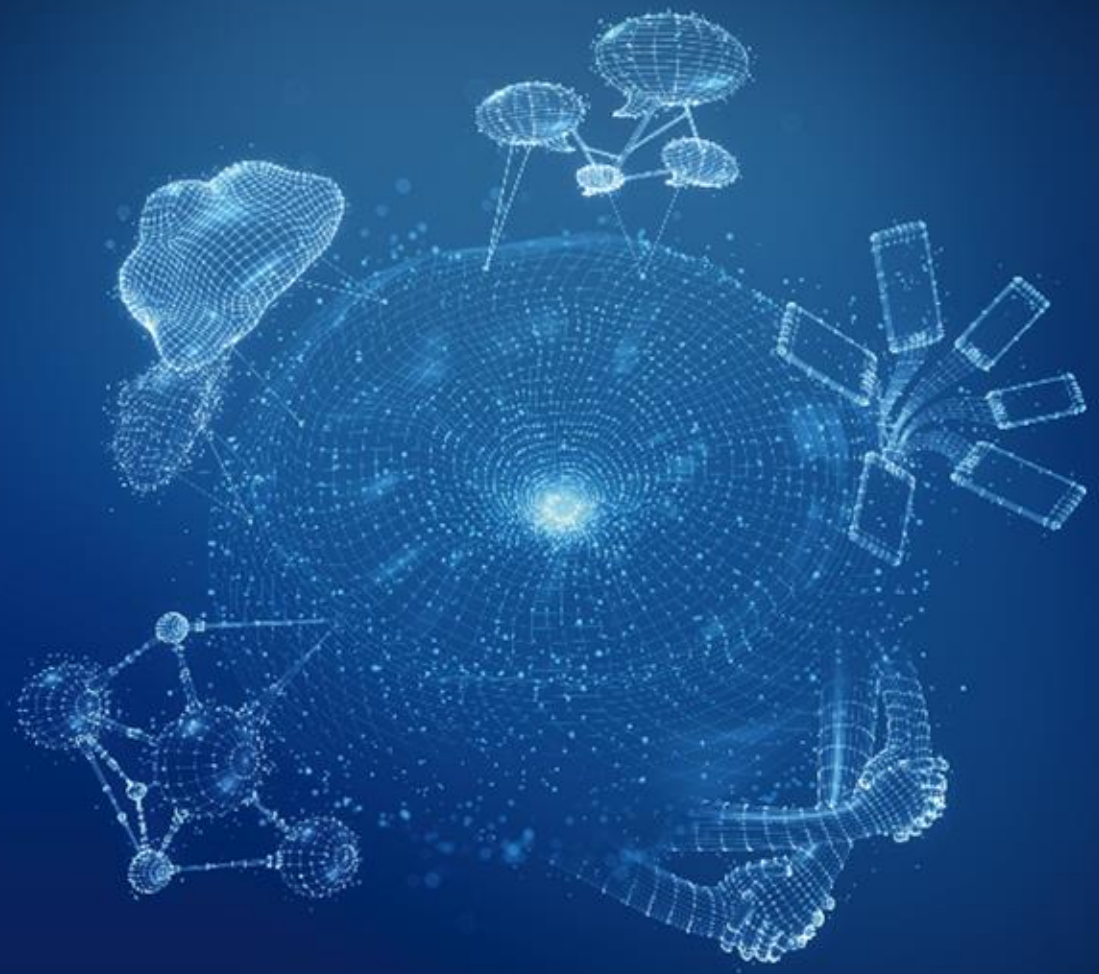
- Sparkle will support authentication provided by eduGAIN, the pan-European standard and **SAML2-based authentication** and authorization infrastructure for single-sign on (SSO)
- **Data egress charges exemption**
  - No charge for outbound traffic generated by DC OIP resources
  - Sparkle will also provide direct peering between the NRENs (National Research and Education Network), institutions and its own data centers, eliminating data transport-related costs

Marketing and Cloud Adoption Support

- ***Providing marketing and presales support,*** Sparkle plans to proceed in more focused initiatives, tailored to address specific R&E Communities and Institutions.
- ***Yearly free workshops per country per year***, at NREN's facilities, or at our local facilities
  - During the workshops: the challenges of IT cloudification, our methodology to help R&E Community to jump started in the cloud.
- ***Sparkle with your designated team to accomplish:***
  - **Analysis** of the organization's goals over the next 1-3 years
  - **Assessment** about the critical applications for achieving the identified goals, and the IT infrastructure currently in use for legacy applications (hardware, software, users, cloud-based services currently in use, etc.)
  - **Training** on cloud computing methodology and best practices
  - **Support** the cloud adoption roadmap using public/private/hybrid Infrastructure-as-a-Service (IaaS) platforms.

Sparkle Service Desk

- Sparkle Contact Center as the unique ***Customer Entry Point*** for all requests, providing 1st level of support.
- ***Sparkle Service Desk*** is organized as follows:
- Contact Center
- Cloud Competence Center
- ***Contact Center for 24x365 support in multiple languages*** (English, Italian, French, German, Spanish and Arabic). Contact Center is also the owner of the escalation and feedback process for Customer complaints.
- Sparkle's Cloud ***Competence Center for Géant*** supported by Sparkle ***ICT specialists*** together with Sparkle's partners:
- TIM Control Room
- Sparkle Cloud Competence Center in Rome and Athens



Sparkle IaaS for Géant

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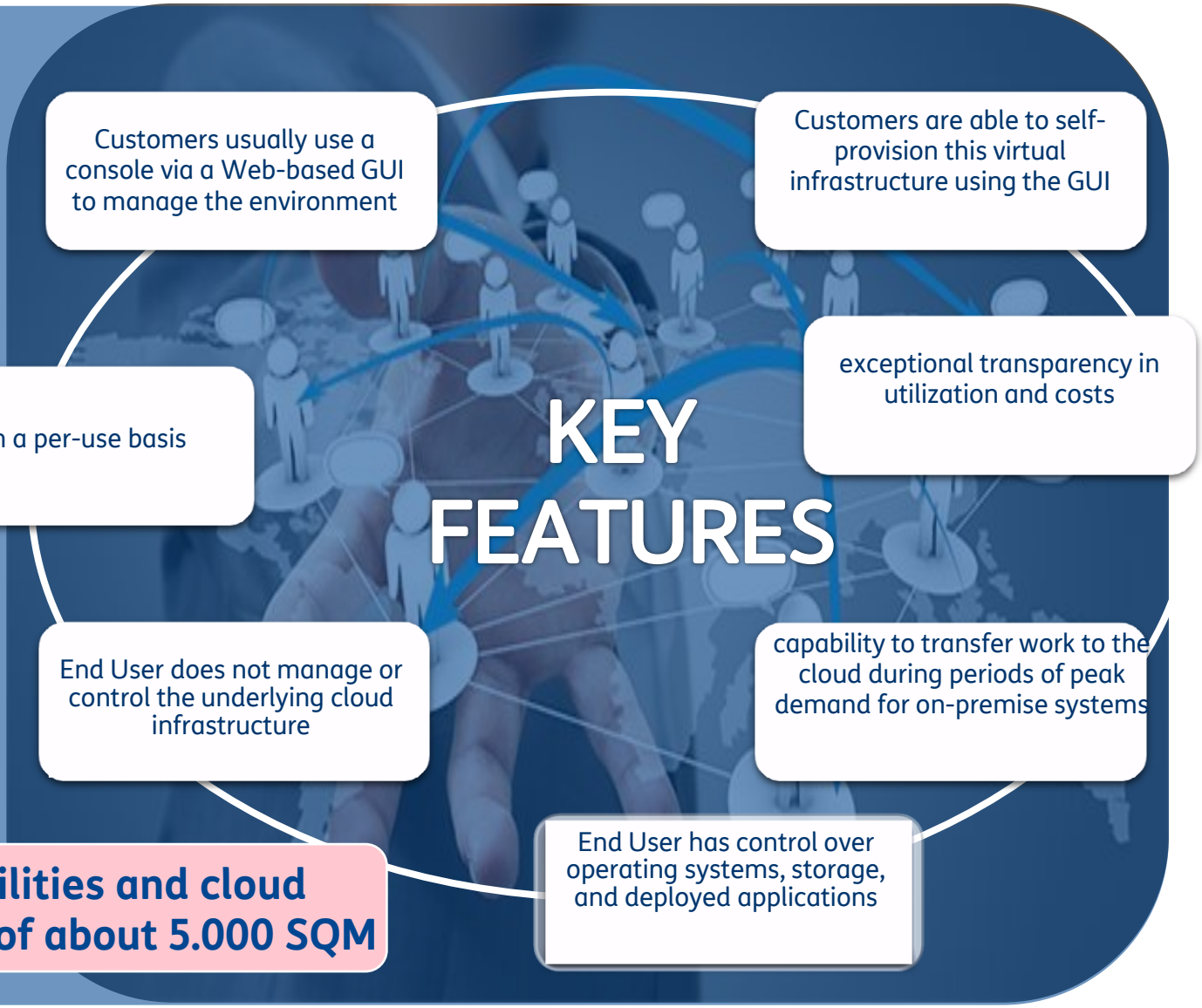
Cloud - Key Elements

Customer Benefit

- ***Scalability and flexibility***
- ***Support for DR, BC***
- ***Faster time 2 market***
- ***Cost savings***
- ***Focus on business growth***

Sparkle owns state-of-the-art Data Center facilities and cloud platforms in TK and GR accounting for a total of about 5.000 SQM



Sparkle IaaS for Géant: OIPs

- **Sparkle's OIPs selected for GEANT:**

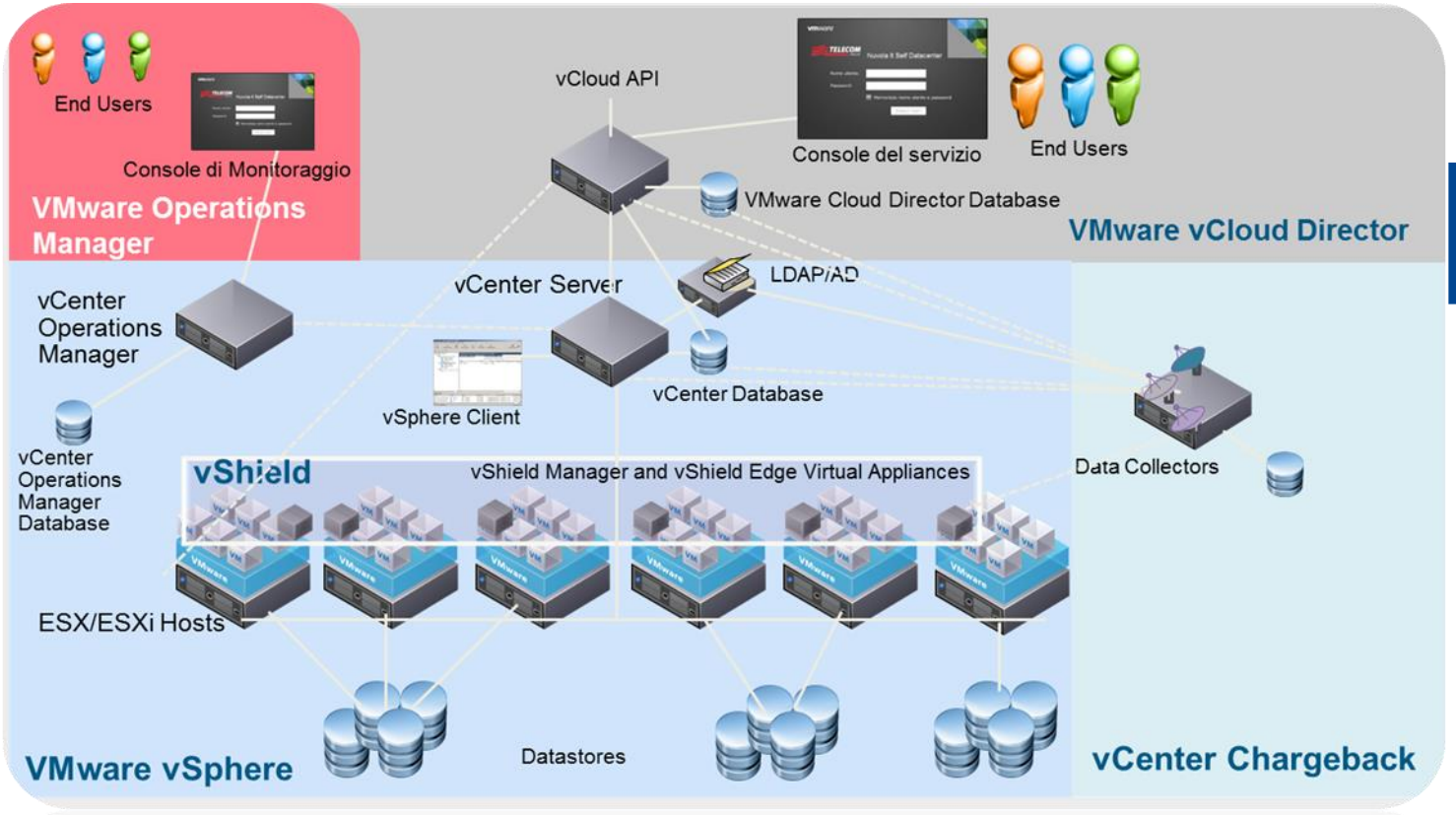
  TIM: "Nuvola It Self Data Center",

- The OIP TIM with the offer based on the same VMware based technology in selected countries (as per Annex B of the tender)
- ***The services are offered in two profiles:***
- **Pay As You Go** provides Virtual Computing resources, which are paid on consumption on the basis of actual use.
- **Allocation Pool** provides Virtual Computing resources logically reserved for the customer that are paid through a monthly flat fee regardless of usage.

IaaS Solutions - Self Data Center

- SDC service is based on **VMware vCloud Director** and other components of VMware Cloud Infrastructure Management (vSphere, vCloud Director, vShield , vCenter Chargeback e vCenter Operation, on-going deployment NSX-V).

- In the picture below are showed the main technological components that make the solution



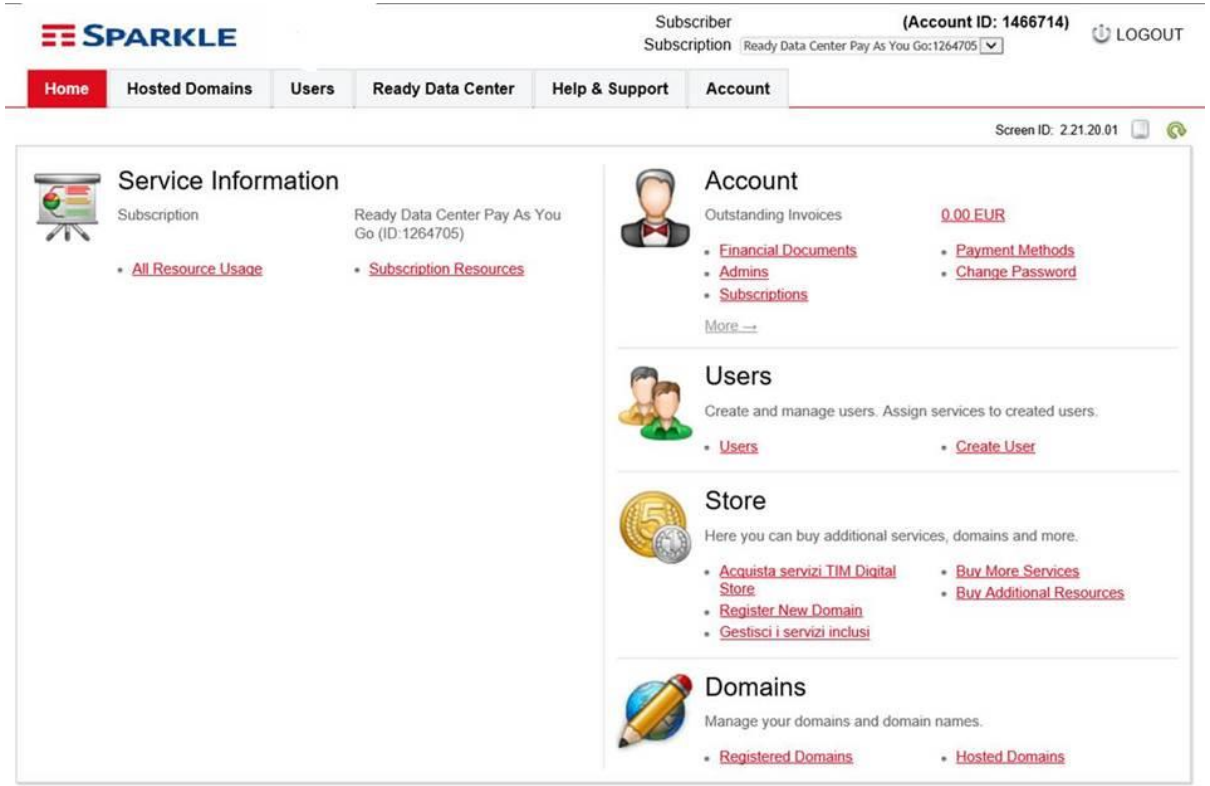
Sparkle Self Data Center delivers cloud computing for existing datacenters by pooling virtual infrastructure resources and delivering them to users as catalog-based services.

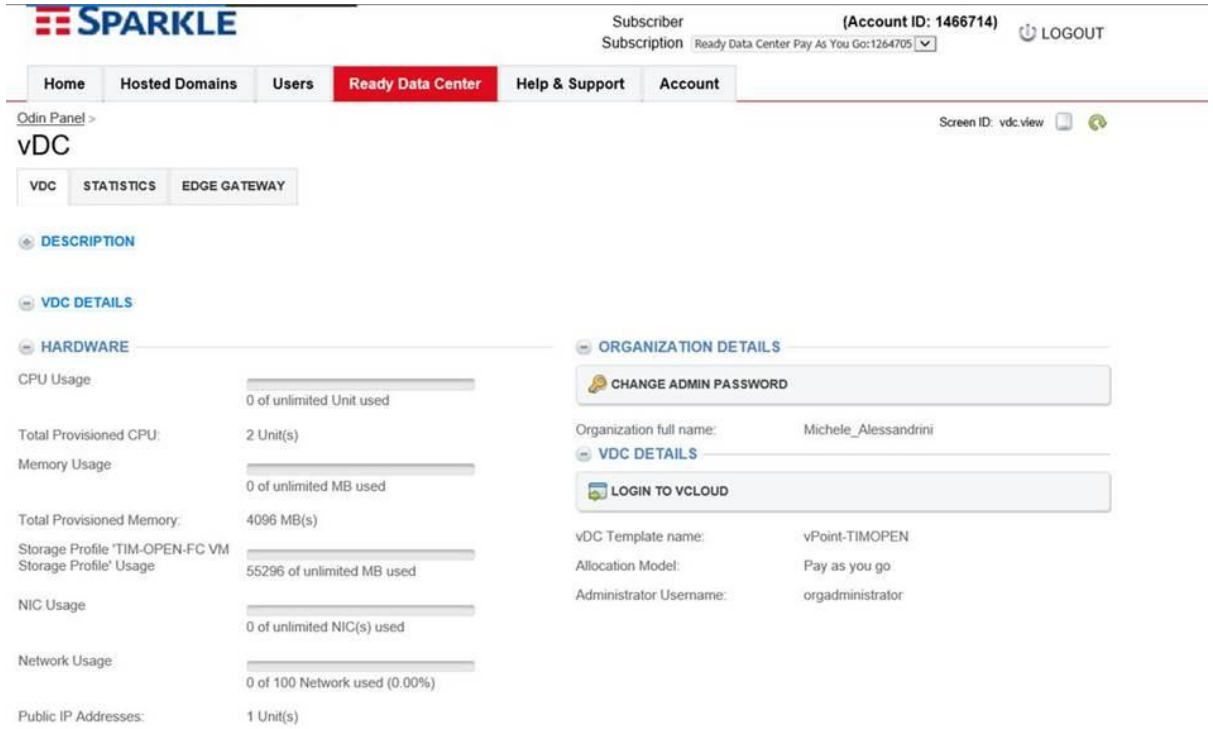
....And

Cloud Connect is based on Sparkle standard connectivity service portfolio.
In order to enable the service, Sparkle:

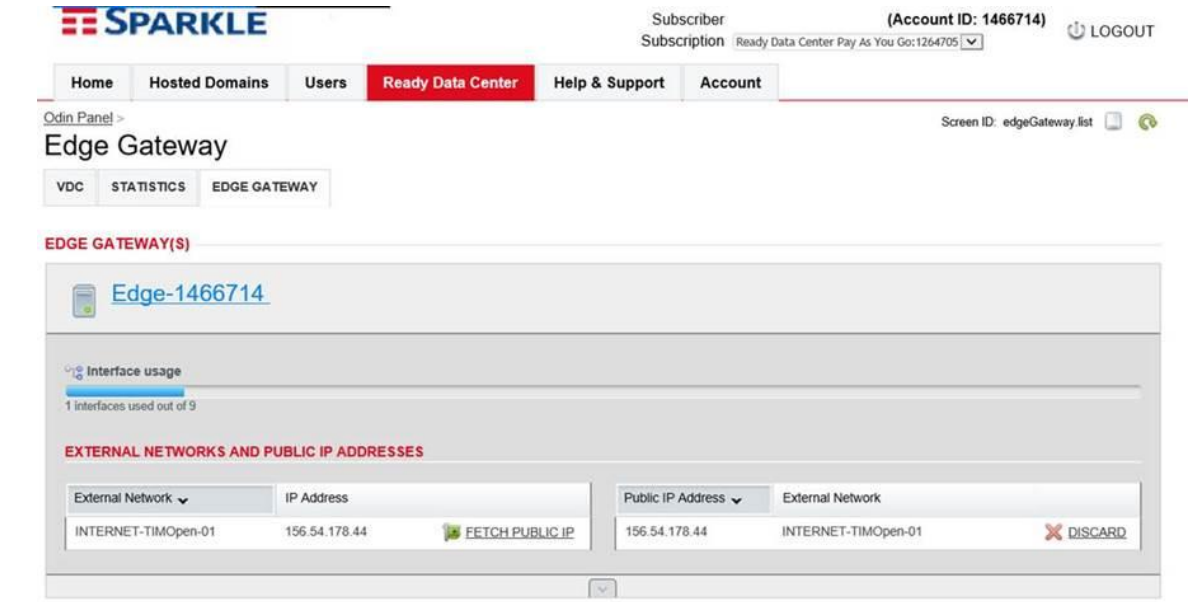
- implements NNIs to the main Cloud Providers
- Defines agreements with Cloud Providers

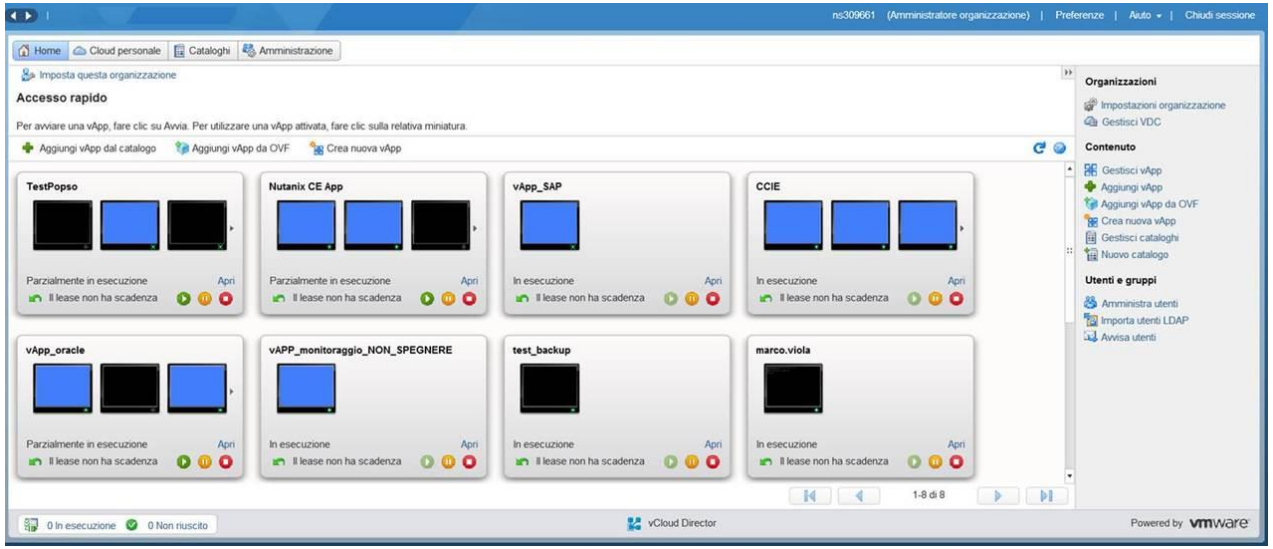
Cloud Web Portal 1/2

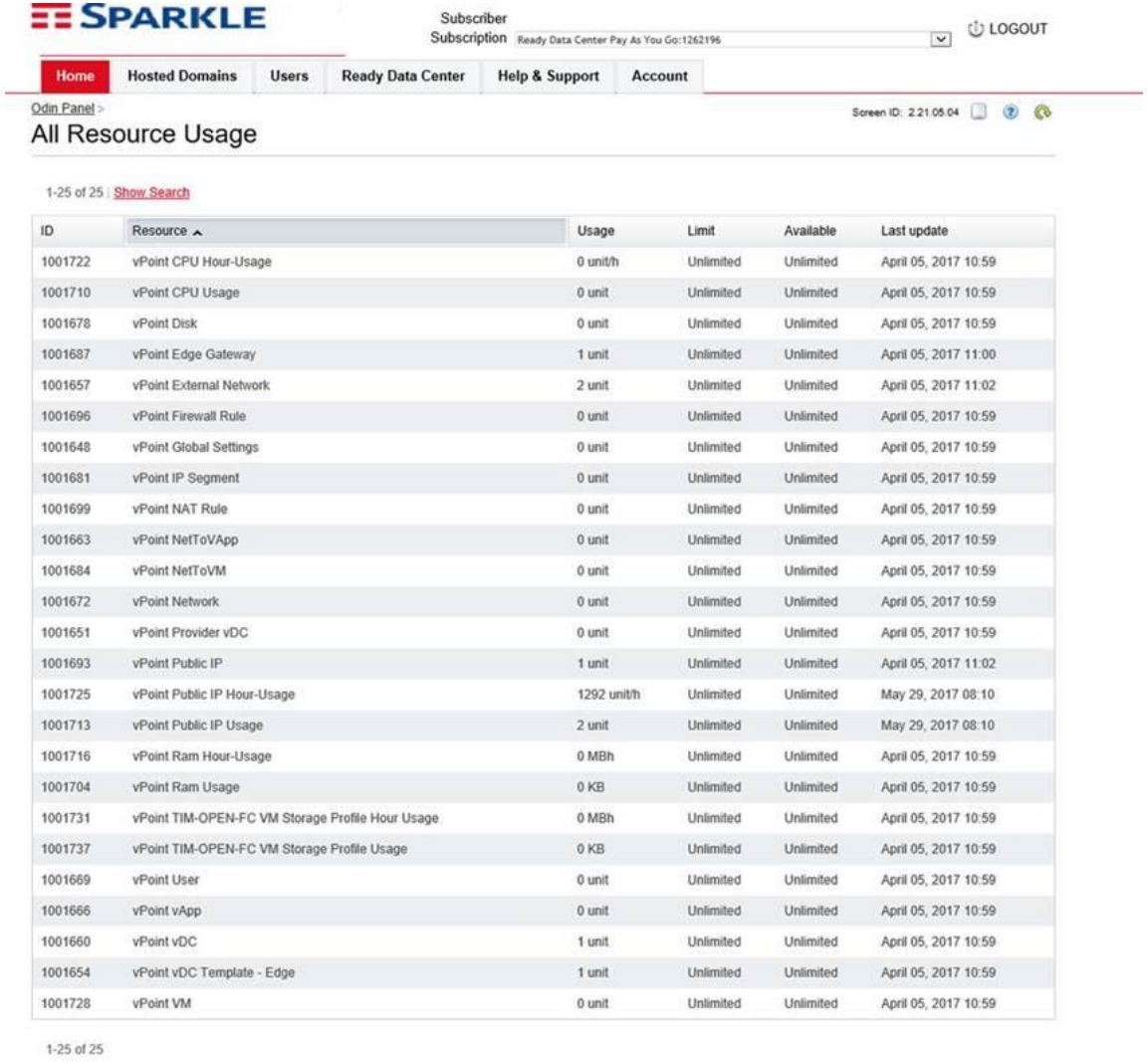




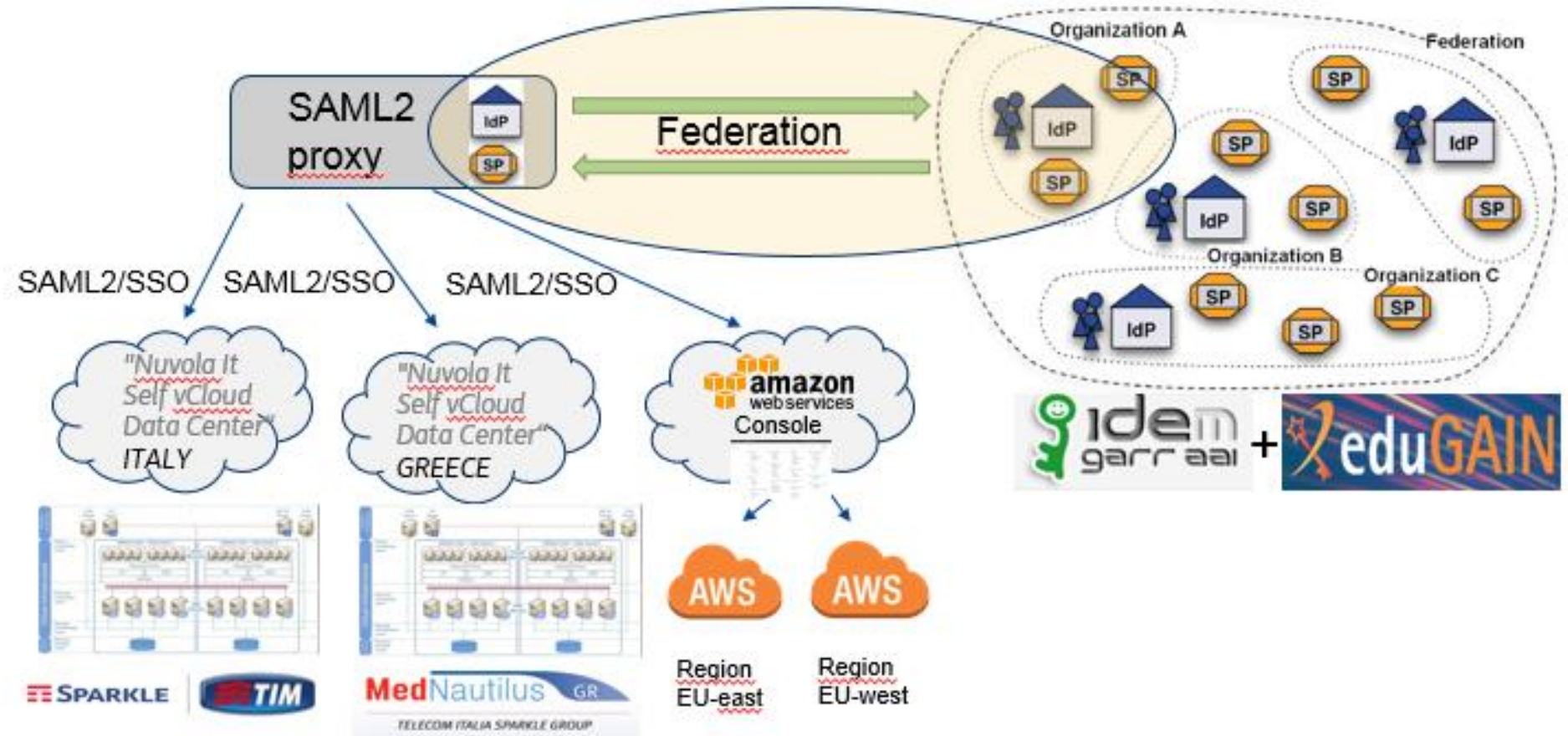
Cloud Web Portal 2/2

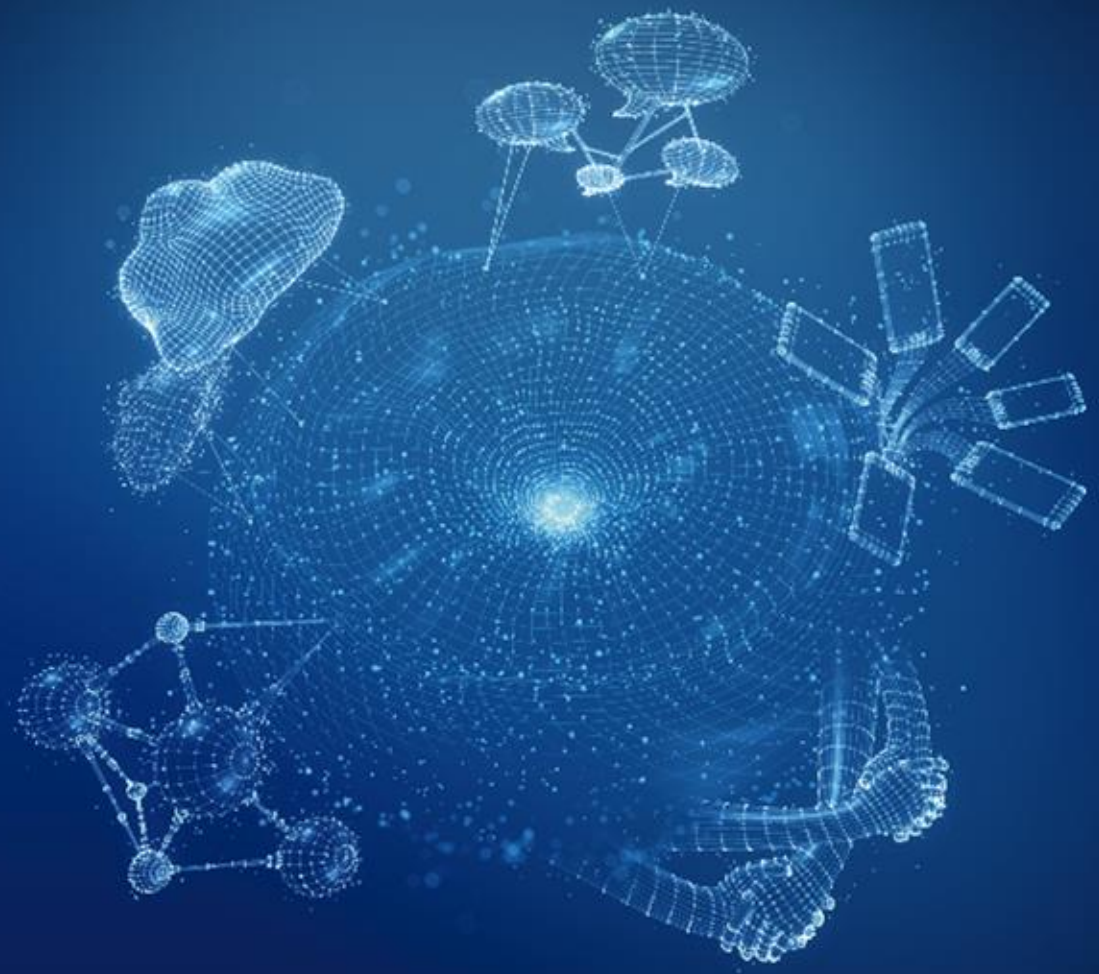






SAML2 Authentication proxy





Thank you

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