



GEANT Cloud Framework Agreement

 **SPARKLE | IP&DATA**
PLATFORM

 **SPARKLE | CORPORATE**
PLATFORM

 **SPARKLE | CLOUD & DATA CENTER**
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

TIM italian Cloud brand “Nuvola Italiana” the biggest Cloud provider in Italy

3 Cloud DC with Disaster Recovery and Business Continuity

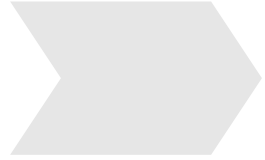
18.723 Virtual Machines

3.303 Customers

Sparkle Overview



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

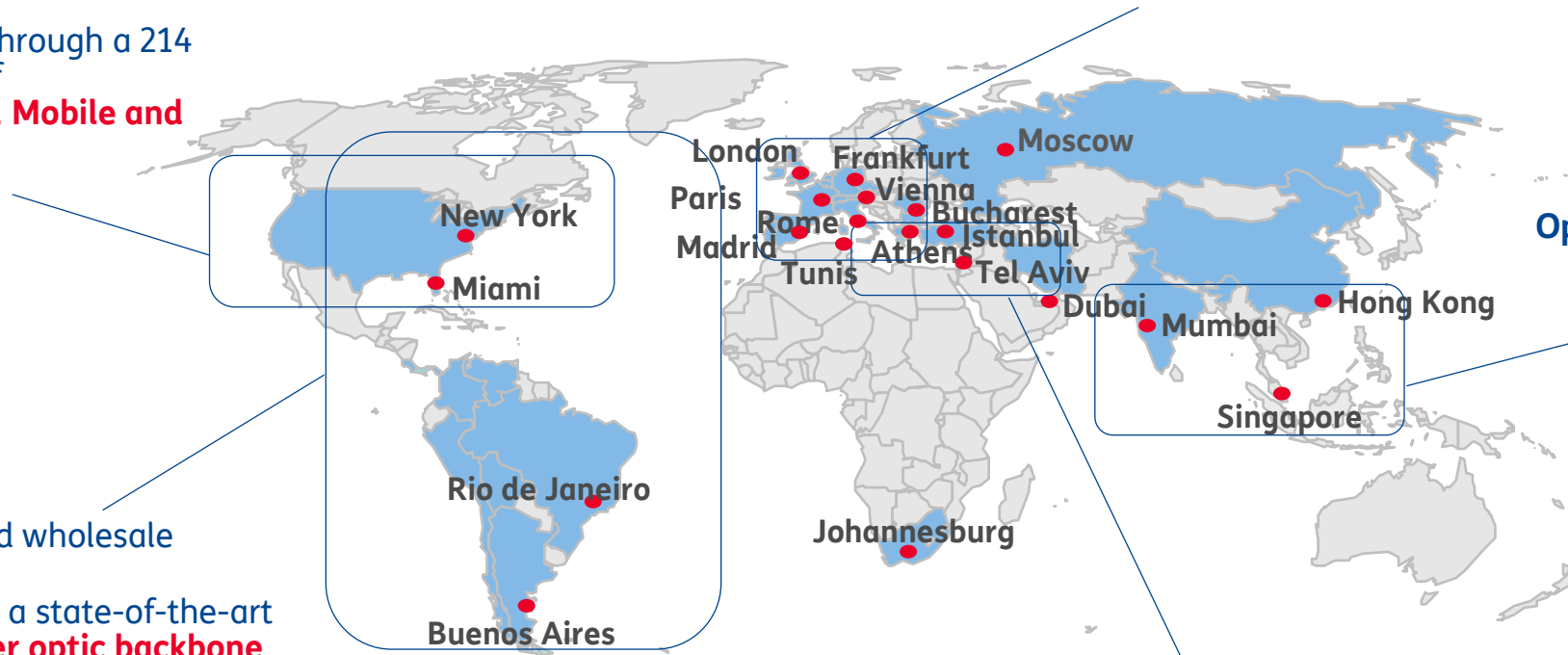
Operations in the US through a 214 Licence, for the offer of **international IP&Data, Mobile and Voice solutions**

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

European Backbone Network

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



● 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

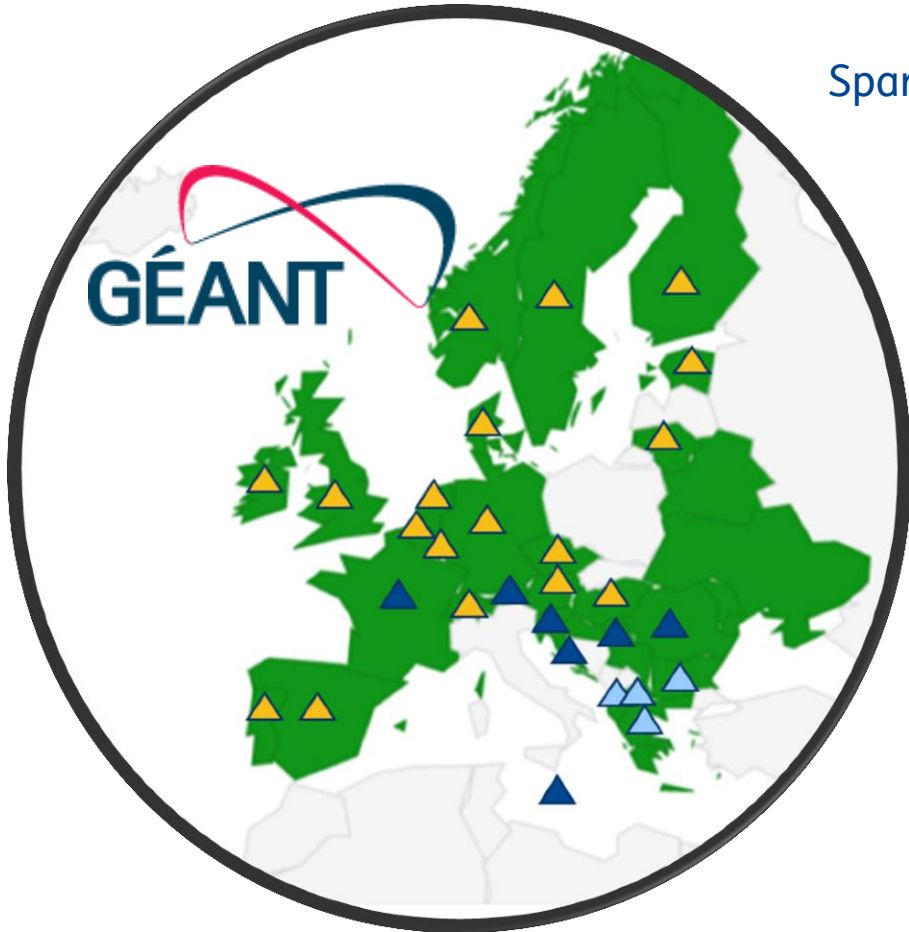
SPARKLE | MOBILE PLATFORM

- 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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PLATFORM

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PLATFORM

 **SPARKLE**

Sparkle's Cloud offering for Géant

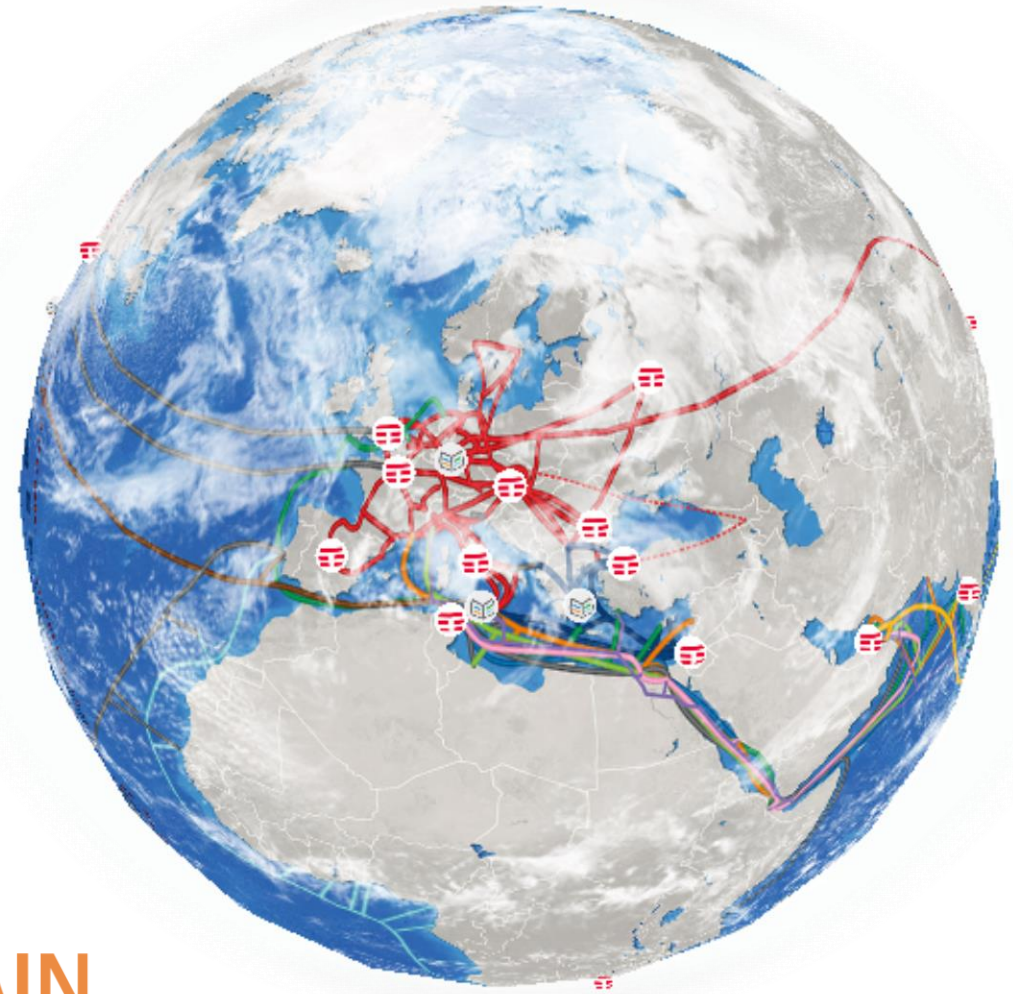


- Compute: TIM Self Data Center
- Compute: Sparkle GR Self Data Center
- Connectivity: Sparkle's global backbone
- Managed services
- Service Desk
- Brokerage services: Reporting, Billing, Accounting
- SSO proxy (SAML2) and eduGain federation



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
 - Resources 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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 **SPARKLE**

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

KEY FEATURES

Customers usually use a console via a Web-based GUI to manage the environment

Customers are able to self-provision this virtual infrastructure using the GUI

exceptional transparency in utilization and costs

pay on a per-use basis

End User does not manage or control the underlying cloud infrastructure

capability to transfer work to the cloud during periods of peak demand for on-premise systems

End User has control over operating systems, storage, and deployed applications

Sparkle IaaS for Géant: OIPs

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

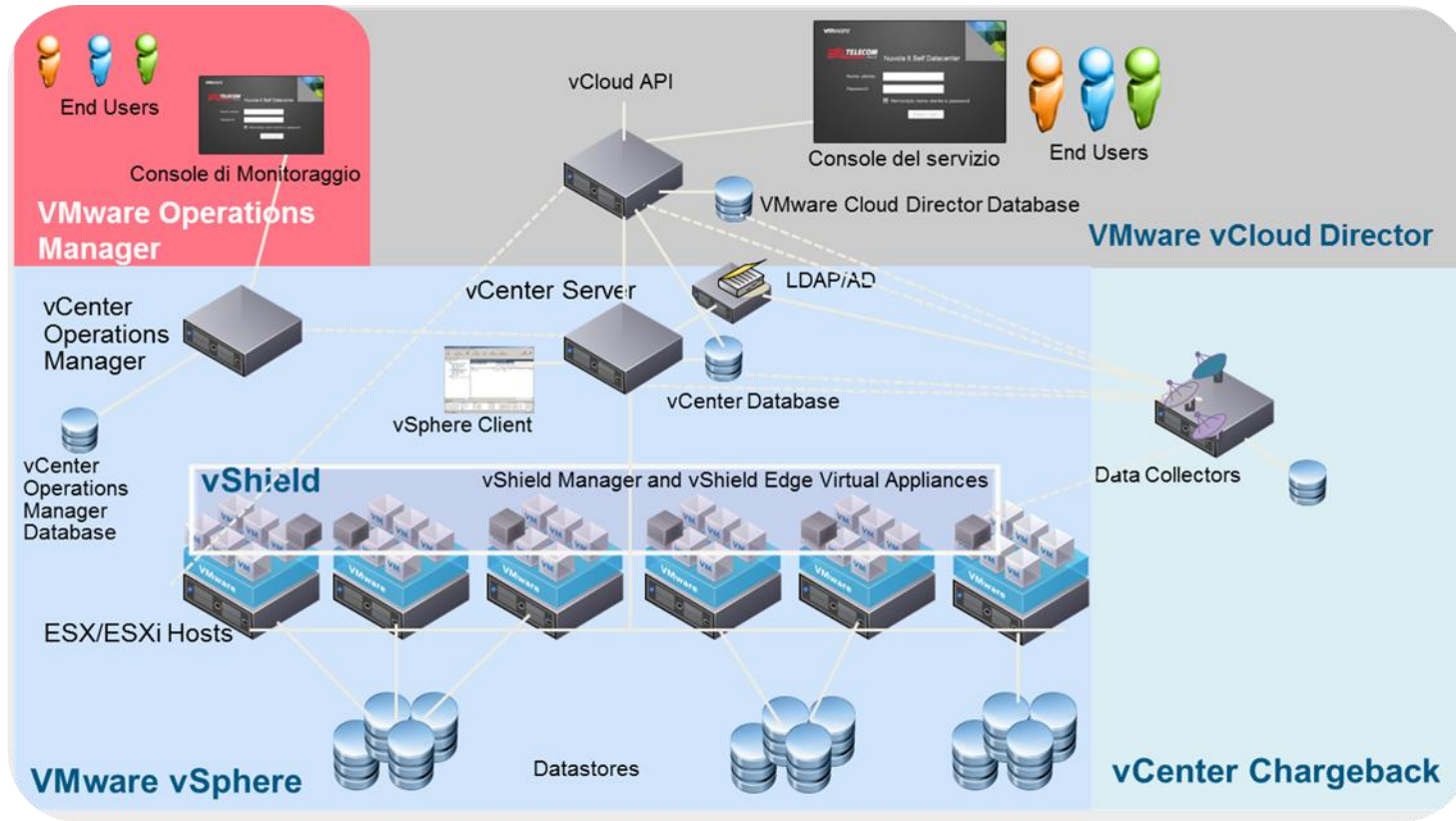
TIM: "Nuvola It Self Data Center",

- 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



Subscriber (Account ID: 1466714) LOGOUT
Subscription Ready Data Center Pay As You Go:1264705

Home Hosted Domains Users Ready Data Center Help & Support Account

Screen ID: 2.21.20.01

Service Information

Subscription Ready Data Center Pay As You Go (ID:1264705)

- All Resource Usage
- Subscription Resources

Account

Outstanding Invoices **0.00 EUR**

- Financial Documents
- Admins
- Subscriptions
- Payment Methods
- Change Password

More -->

Users

Create and manage users. Assign services to created users.

- Users
- Create User

Store


Here you can buy additional services, domains and more.

- Acquista servizi TIM Digital Store
- Register New Domain
- Gestisci i servizi inclusi
- Buy More Services
- Buy Additional Resources

Domains

Manage your domains and domain names.

- Registered Domains
- Hosted Domains



Subscriber (Account ID: 1466714) LOGOUT
Subscription Ready Data Center Pay As You Go:1264705

Home Hosted Domains Users Ready Data Center Help & Support Account

Odin Panel > Screen ID: vdc: view

vDC

VDC STATISTICS EDGE GATEWAY

DESCRIPTION

VDC DETAILS

HARDWARE

ORGANIZATION DETAILS

CPU Usage	0 of unlimited Unit used
Total Provisioned CPU:	2 Unit(s)
Memory Usage	0 of unlimited MB used
Total Provisioned Memory:	4096 MB(s)
Storage Profile 'TIM-OPEN-FC VM Storage Profile' Usage	55296 of unlimited MB used
NIC Usage	0 of unlimited NIC(s) used
Network Usage	0 of 100 Network used (0.00%)
Public IP Addresses:	1 Unit(s)

CHANGE ADMIN PASSWORD

Organization full name: Michele_Alessandrini

VDC DETAILS

LOGIN TO V CLOUD

vDC Template name: vPoint-TIMOPEN
Allocation Model: Pay as you go
Administrator Username: orgadministrator

Cloud Web Portal 2/2

Subscriber (Account ID: 1466714) LOGOUT
Subscription Ready Data Center Pay As You Go:1264705

Home Hosted Domains Users **Ready Data Center** Help & Support Account

Odin Panel > Edge Gateway Screen ID: edgeGateway.list

VDC STATISTICS EDGE GATEWAY

EDGE GATEWAY(S)

Edge-1466714

Interface usage
1 Interfaces used out of 9

EXTERNAL NETWORKS AND PUBLIC IP ADDRESSES

External Network	IP Address	Public IP Address	External Network
INTERNET-TIMOpen-01	156.54.178.44	156.54.178.44	INTERNET-TIMOpen-01

Subscriber (Account ID: 1262196) LOGOUT
Subscription Ready Data Center Pay As You Go:1262196

Home Hosted Domains Users **Ready Data Center** Help & Support Account

Odin Panel > All Resource Usage Screen ID: 2.21.05.04

1-25 of 25 [Show Search](#)

ID	Resource	Usage	Limit	Available	Last update
1001722	vPoint CPU Hour-Usage	0 unit/h	Unlimited	Unlimited	April 05, 2017 10:59
1001710	vPoint CPU Usage	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001678	vPoint Disk	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001687	vPoint Edge Gateway	1 unit	Unlimited	Unlimited	April 05, 2017 11:00
1001657	vPoint External Network	2 unit	Unlimited	Unlimited	April 05, 2017 11:02
1001696	vPoint Firewall Rule	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001648	vPoint Global Settings	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001681	vPoint IP Segment	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001699	vPoint NAT Rule	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001663	vPoint NetToVApp	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001684	vPoint NetToVM	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001672	vPoint Network	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001651	vPoint Provider vDC	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001693	vPoint Public IP	1 unit	Unlimited	Unlimited	April 05, 2017 11:02
1001725	vPoint Public IP Hour-Usage	1292 unit/h	Unlimited	Unlimited	May 29, 2017 08:10
1001713	vPoint Public IP Usage	2 unit	Unlimited	Unlimited	May 29, 2017 08:10
1001716	vPoint Ram Hour-Usage	0 MBh	Unlimited	Unlimited	April 05, 2017 10:59
1001704	vPoint Ram Usage	0 KB	Unlimited	Unlimited	April 05, 2017 10:59
1001731	vPoint TIM-OPEN-FC VM Storage Profile Hour Usage	0 MBh	Unlimited	Unlimited	April 05, 2017 10:59
1001737	vPoint TIM-OPEN-FC VM Storage Profile Usage	0 KB	Unlimited	Unlimited	April 05, 2017 10:59
1001669	vPoint User	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001666	vPoint vApp	0 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001660	vPoint vDC	1 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001654	vPoint vDC Template - Edge	1 unit	Unlimited	Unlimited	April 05, 2017 10:59
1001728	vPoint VM	0 unit	Unlimited	Unlimited	April 05, 2017 10:59

ns309661 (Amministratore organizzazione) | Preferenze | Aiuto | Chiudi sessione

Home Cloud personale Cataloghi Amministrazione

Imposta questa organizzazione

Accesso rapido

Per avviare una vApp, fare clic su Avvia. Per utilizzare una vApp attivata, fare clic sulla relativa miniatura.

Aggiungi vApp dal catalogo Aggiungi vApp da OVF Crea nuova vApp

TestPopso
Parzialmente in esecuzione
Il lease non ha scadenza Apri

Nutanix CE App
Parzialmente in esecuzione
Il lease non ha scadenza Apri

vApp_SAP
In esecuzione
Il lease non ha scadenza Apri

CCIE
In esecuzione
Il lease non ha scadenza Apri

vApp_oracle
Parzialmente in esecuzione
Il lease non ha scadenza Apri

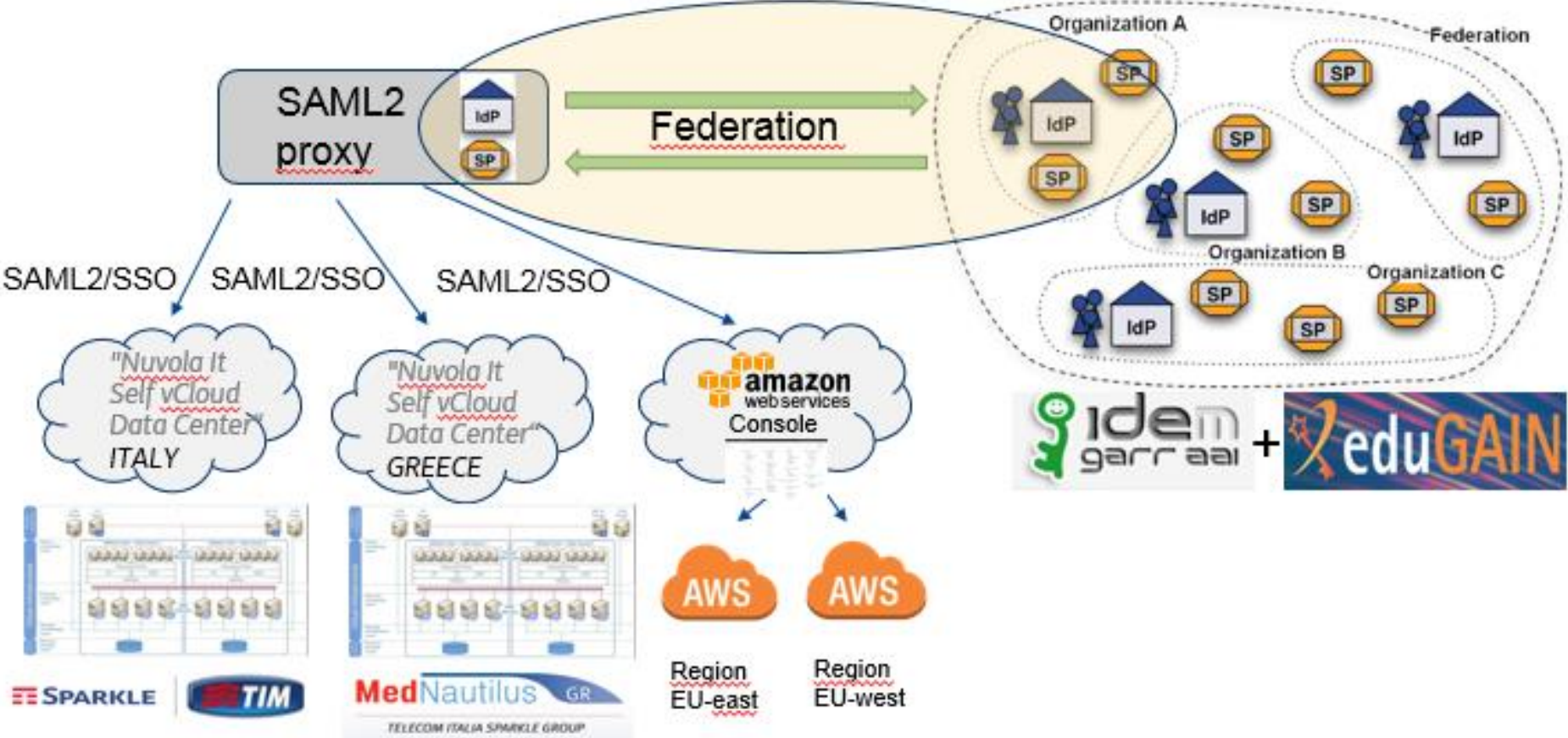
vAPP_monitoraggio_NON_SPEGNERE
In esecuzione
Il lease non ha scadenza Apri

test_backup
In esecuzione
Il lease non ha scadenza Apri

marco.viola
In esecuzione
Il lease non ha scadenza Apri

0 In esecuzione 0 Non riuscito vCloud Director Powered by VMware

SAML2 Authentication proxy





Thank you

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