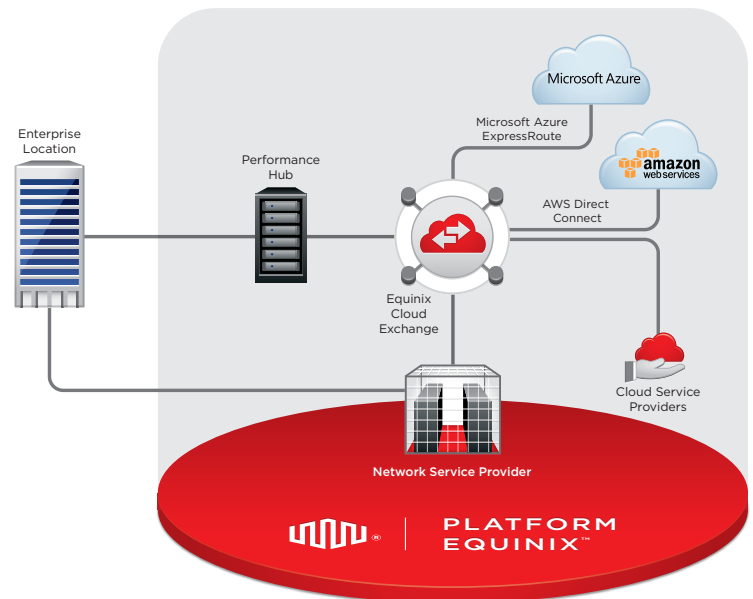# Enabling private virtual connections for direct cloud access

Cloud services are being quickly adopted worldwide, but concerns about them linger. People worry cloud services mean more expense with less reliability, control and security. The Equinix Cloud Exchange brings together cloud service providers and users, enabling them to establish affordable, private, high-performance connections within Platform Equinix.

Equinix Cloud Exchange is an Ethernet switching service that enables private virtual connections for direct cloud access with automated provisioning.

Key features of the Equinix Cloud Exchange include:

- **On-Demand Cloud Connection Automation** – Our portal and APIs simplify the process of managing connections to multiple cloud services.

- **One Port, Many Virtual Circuits** – Equinix is home to over 450 cloud services providers, and the number is growing. As more join the Cloud Exchange, service providers and users can connect to more participants over a single physical port.

- **Global Reach** – The data centers that host the Cloud Exchange will be found in 19 top-tier markets globally.

- **Secure, High-Performance Direct Connections** – Direct connections within the data center are more secure and reliable and have lower latency than public Internet connections.

What Cloud Exchange Can Do For You

The Equinix Cloud Exchange can extend your market reach and increase the privacy, performance and reliability of your cloud service connections, while simplifying interactions with cloud service providers.

Enterprise

- **Increase Speed to Multi-Cloud** – Automated, near-real time provisioning to multiple cloud service providers

- **Improve Performance** – Improve cloud application performance by connecting directly to cloud service providers

- **Increase Security** – Build a more secure application environment by deploying applications within your data center's local area network

- **Reduce Cost** – Lower your total cost of private network connectivity to cloud service providers

Network Service Providers

- **Create Customer Value** – Aggregate cloud service providers for private cloud connectivity, increasing the value of private network services

- **Simplify Operations** – Offer a streamlined network interconnection facility, saving capital expense

- **Reduce Complexity** – Establish standardized business processes, saving operational expense

- **Improve Time to Market** – Speed time to market with easily accessible cloud services, reducing development costs

Cloud Service Providers

- **Expand Market Reach** – Aggregate private network service providers, increasing enterprise market reach

- **Automate Provisioning** – Offer streamlined, automated network interconnection, saving capital expense

- **Reduce Complexity** – Establish standardized business processes, saving operational expense

www.equinix.com

EQUINIX®

Cloud Connection Automation

The Equinix Cloud Exchange's advanced interconnection capabilities make it easier to manage connections to multiple cloud services, while removing concerns about security, performance, reliability and vendor lock-in.

Customers use the Equinix Cloud Exchange Portal or API to allocate, monitor and modify virtual circuits in near real-time. The provisioning of virtual circuits is automated end-to-end, from the Cloud Exchange to the cloud service provider. That saves time and reduces operational complexity.

Why Equinix?

- **Deep expertise in operating global exchange platforms.** Equinix delivers over 128,000 cross connects among its 4,500 customers.

- **Global reach.** Equinix expands your market reach with over 100 data centers in 32 major metro areas across 15 countries.

- **Equinix's hosts 450+ cloud service providers.** As enterprises increasingly adopt cloud services, Equinix is a logical place to connect to them.

- **Equinix connects 975+ network service providers.** Enterprises and cloud service providers can choose from a wide range of vendors to provide a range of network services.

- **Industry-leading operational expertise and scale:** $7B+ invested in our data center platform since 1998.

Technical Specifications

Cloud Exchange Port*
Includes Cross Connect cable from customer cage to Ethernet Exchange Port

Media type supported for Cross Connect and Ethernet Exchange Port Speeds:

- 1G SX Multi-Mode Fiber
- 1G LX Single Mode Fiber
- 10G LR Single Mode Fiber

Virtual Circuits

- Speed options: 200Mbps, 500Mbps, 1Gbps

SLA

- EEE Performance SLA: 99.999%

*Equinix Cloud Exchange leverages the Equinix Ethernet Exchange platform

Cloud Exchange Availability

AMERICAS

SEATTLE
TORONTO
CHICAGO
SILICON VALLEY
NEW YORK
ATLANTA
LOS ANGELES
DALLAS
WASHINGTON, DC
SÃO PAULO

- ● Equinix Cloud Exchange Locations
- ◉ Equinix Cloud Exchange Locations (available Q3-2014)
- ○ Future Equinix Cloud Exchange Locations

EMEA

AMSTERDAM
LONDON
PARIS
FRANKFURT

ASIA-PACIFIC

OSAKA
TOKYO
HONG KONG
SINGAPORE
SYDNEY

Cloud Exchange is planned to be available in 19 markets globally

For More Information

http://www.equinix.com
1.800.322.9280

www.equinix.com

Amazon Web Services (AWS): Cloud Exchange Participant Profile

Type of participant: Cloud Service Provider

Why they joined: Equinix's global presence with local proximity to enterprise customers. Quality of facilities combined with network density.

What they bring to the ecosystem?

- Largest cloud service provider with a broad and deep list of services to support any workload

- Leverage Platform Equinix globally for both public and private access

- Many enterprises, cloud integrators and other third parties look to connect to AWS in and through Equinix facilities

Microsoft Azure

Type of participant: Cloud Service Provider

Why they joined: Equinix's global presence with local proximity and network density to reach the largest customer base globally. Quality of facilities and thought leadership in interconnection.

What they bring to the ecosystem?

- 350K customers, of which 58% are enterprises with over 50% of Fortune 500 using Azure.

- Promotion of hybrid deployments provides a cloud migration path for an extensive base of enterprise customers

- Second largest cloud service provider in the world with SaaS, PaaS and IaaS offerings

- Extensive partnership with system integrators and managed service providers globally

- Global scale with aggressive growth plan; initial launch in 16 markets

GoGrid

Type of participant: Cloud Service Provider

Why they joined: Value of Cloud Exchange to simplify the process of establishing hybrid cloud deployments, enabling their big data and cloud customers to use their services in a more secure, predictable and high performance manner. Access to key network service provider partners within Equinix.

What they bring to the ecosystem?

- Over 15K customers using their big data and cloud services

- Big data provider with broad set of solutions, such as Hadoop and Cassandra

- Global cloud service provider with multi-region offerings in North America and Europe within Equinix facilities

tw Telecom

Type of participant: Network Service Provider

Why they joined: Strong synergy with their Constellation Platform, elastic network capabilities and our depth/breadth of cloud service providers.

What they bring to the ecosystem?

- 8.7K intercity fiber route miles, 24K metro route miles, 208K lit fiber buildings and 50K customers
- Next generation orchestration and network capabilities
- Strong, growing partner channel

Level 3

Type of participant: Network Service Provider

Why they joined: Global solution to access the leading cloud providers in one place and our ability to automate and scale.

What they bring to the ecosystem?

- Expansive global backbone network with over 110K intercity fiber route miles, 36K metro route miles, 33K subsea miles and 13.5K lit fiber buildings
- Our most interconnected client
- Healthy enterprise funnel and growth
- Channel partner program with established cloud service provider and enabler relationships
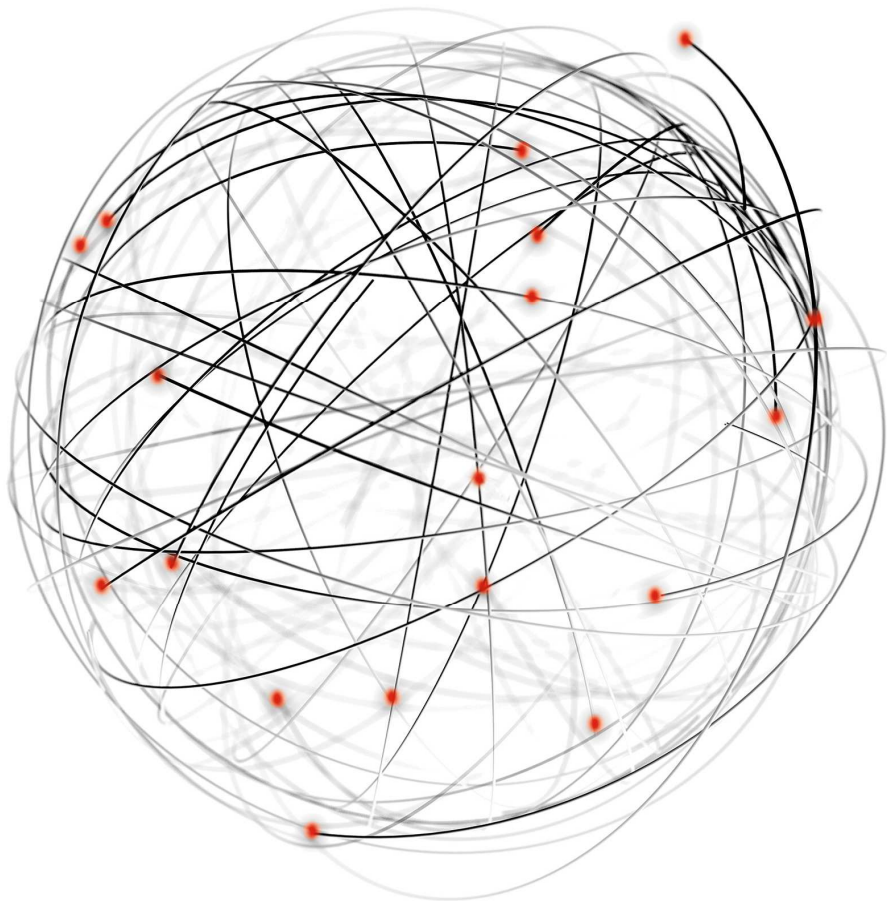
Orange Business Services

Type of participant: Network Service Provider

Why they joined: Global solution to access the leading cloud providers and to drive VPN Galerie sales.

What they bring to the ecosystem?

- Expansive global backbone network with strong managed services capabilities and access to over 8K facilities worldwide
- Great multinational customer list based in Europe with over 60K existing cloud customers
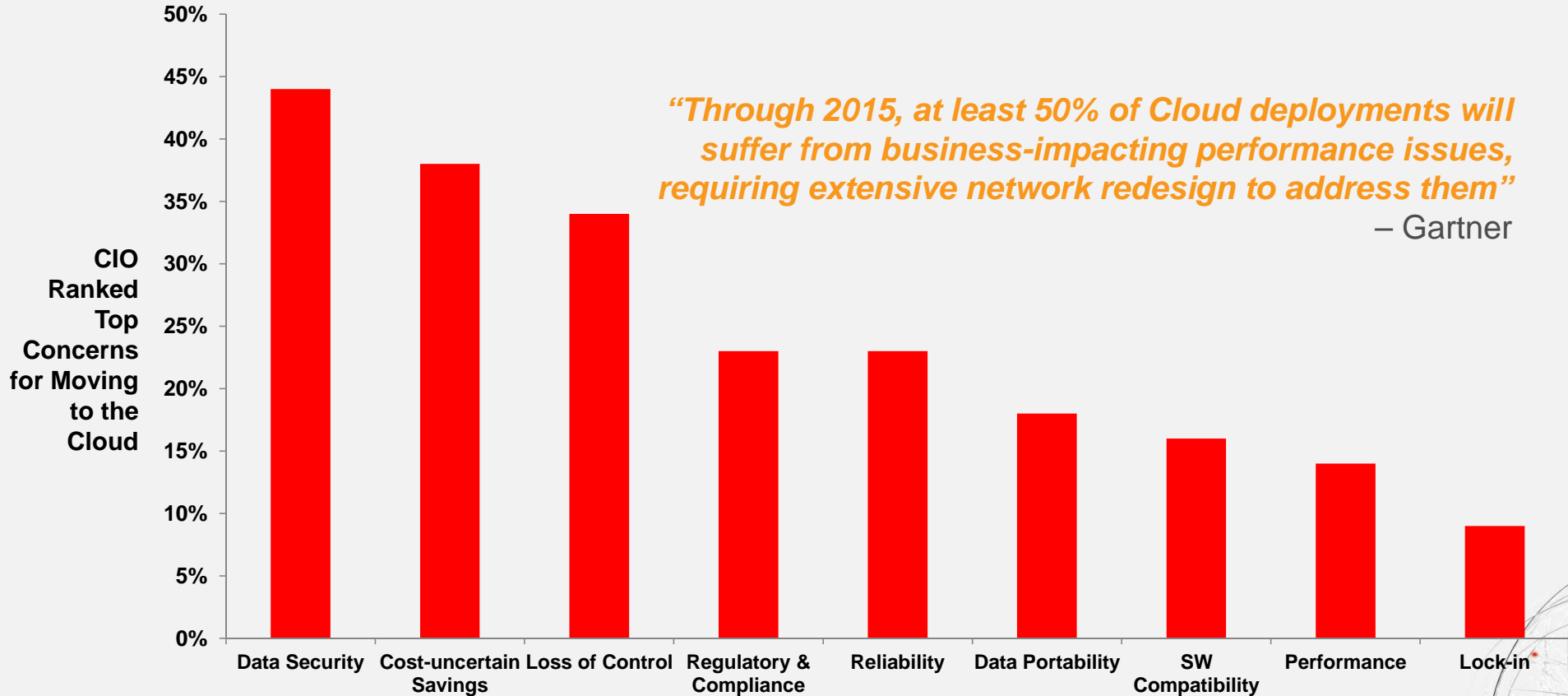- Highly recognized global Ethernet and MPLS service provider

EQUINIX

Cloud Exchange

**Presented by Chris Sharp | VP, Cloud Innovations &
Bill Long | VP, Interconnection Product Management
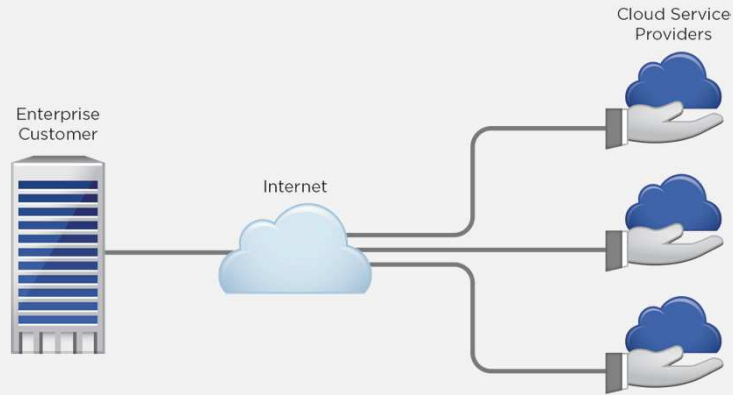Presented on: 06.25.2014**

What's Throttling Further Cloud Growth?

"Through 2015, at least 50% of Cloud deployments will suffer from business-impacting performance issues, requiring extensive network redesign to address them"

– Gartner

CIO Ranked Top Concerns for Moving to the Cloud (bar chart):

- Data Security — 44%
- Cost-uncertain Savings — 38%
- Loss of Control — 34%
- Regulatory & Compliance — 23%
- Reliability — 23%
- Data Portability — 18%
- SW Compatibility — 16%
- Performance — 14%
- Lock-in — 9%

Our Vision
Get the benefits of the Cloud without the downside of the public Internet

Access Cloud
via Public Internet

Cloud Service Providers

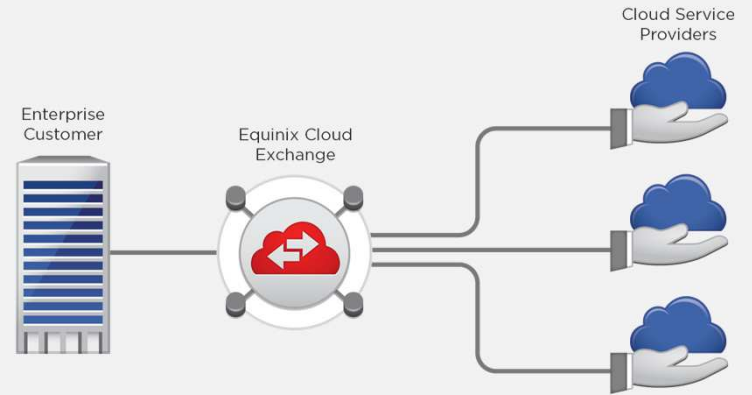Enterprise Customer

Internet

- Easy to connect (DIY)
- Single network interface
- Supports multi-cloud
- Globally available

- Less reliable
- Less secure
- Less control
- Lower performance
- Lower throughput
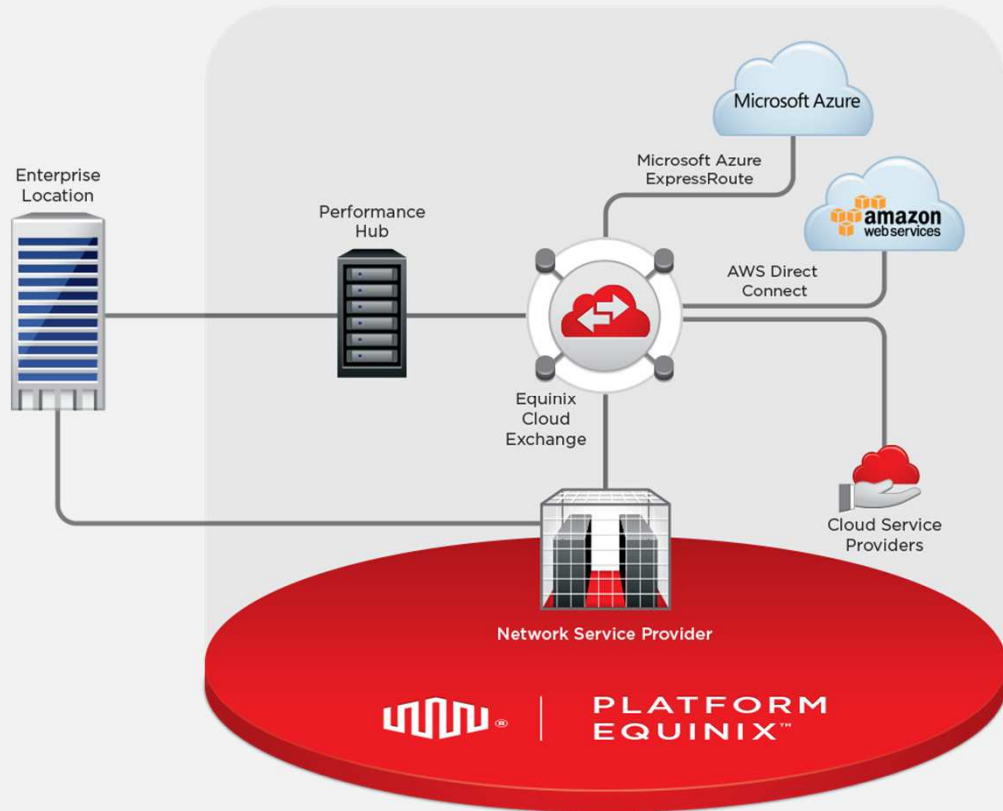
Access Cloud
via Equinix Cloud Exchange

Cloud Service Providers

Enterprise Customer

Equinix Cloud Exchange

- Easy to connect (Portal, APIs)
- Single network interface (single port)
- Supports multi-cloud (multi VCs)
- Globally available

- More reliable
- More secure
- Better control
- Higher performance
- Higher throughput

Solution Overview

Enabling simple, scalable one-to-many private connections to the Cloud

Network Platform
- Layer 2 Ethernet
- 1G and 10G Port Options
- Single Port to multiple Cloud Providers on separate virtual circuits (VC)

Service Orchestration
- Portal for real time VC provisioning and management
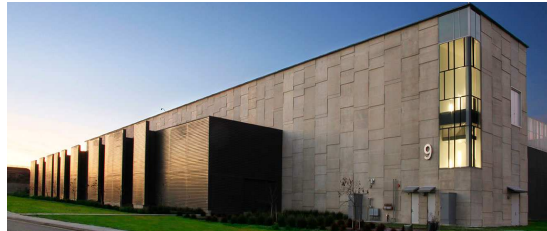- API integration into network and Cloud Service Providers for authentication and provisioning

Value for Participants

Value is created for all participants in the value chain

Segment	Value
CSPs	• **Unlock addressable market** by enabling workloads that are not well served via the internet • Efficient network interconnect **reduces capital expense** • Standardized business processes **lower operational expense globally**
Enterprises & Cloud Users	• **Increases "Cloud appropriate" workloads** by ensuring quality, lower cost and security • Ensure end user **Quality of Experience** • **Greater choice of cloud services** via private network connection and **reduced lock-in** • Single process for establishing private connectivity to CSPs **reduces operational expense** • Efficient network interconnect **reduces capital expense**
NSPs	• **Increase addressable market** by offering greater access to cloud service providers • Efficient network interconnect **reduces capital expense** • Standardized business processes **lowers operational expense** • **Reduced time to market** with "on-net" cloud services, reducing development costs

Why Equinix?

Equinix is "The Home of the Interconnected Cloud"

- **We have the demand…**
- **We have the supply…**
- **We have interconnection experience…**
- **We have it globally**

Cloud Exchange Participant Profile
AWS

Type of participant: Cloud Service Provider

Why they joined: Equinix's global presence with local proximity to enterprise customers. Quality of facilities combined with network density.

What do they bring to the ecosystem?
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– Many enterprises, cloud integrators and other third parties look to connect to AWS in and through Equinix facilities

Cloud Exchange Participant Profile

Microsoft Azure

Windows Azure™

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Cloud Exchange Participant Profile
Level 3

Level (3)®

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- Our most interconnected client
- Healthy enterprise funnel and growth
- Channel partner program with established cloud provider and enabler relationships

Cloud Exchange Participant Profile
OBS

Type of participant: Network Service Provider

Why they joined: Global solution to access the leading cloud providers and to drive VPN Galerie sales.

What do they bring to the ecosystem?

– Expansive global backbone network with strong managed services capabilities and access to over 8K facilities worldwide
– Great multinational customer list based in Europe with over 60K existing cloud customers
– Highly recognized global Ethernet and MPLS service provider