HUAWEI

How Abraxas build a Future-Proof Cloud Computing Data Center

Background

As the largest ICT integrator and Cloud Service Provider (CSP) in Switzerland's Zurich and St. Gallen states, Abraxas has a strong presence in the country. Offering network interconnection and data center cloud services, as well as network solution consulting and deployment services, Abraxas principally serves the government, education, and finance sectors. Adapting to the fast-paced development of the global cloud technologies market, Abraxas has drafted a future-oriented blueprint that suits its business needs and highlights its unique strengths.

*"To fulfill sustainable service development, our data center network architecture has to be flexible enough to evolve into **SDN-enabled** architecture. After making a comprehensive evaluation, we found that Huawei's Cloud Fabric Data Center Network Solution fully satisfied our requirements."*

Olaf Sonderegger ICT Architect
Infrastructure Management, Abraxas

Challenges

Abraxas integrates infrastructure, computing, storage, and network resources, and delivers these resources in the form of "services." Customers are able to utilize these resources on demand. Abraxas has been delivering continuous and effective cloud services to its customers for many years. However, recent business growth, increasing data traffic, and the ever-changing business needs of its customers have presented a series of challenges to Abraxas' cloud computing data center network:

- A virtual pool of integrated computing, storage, and network resources to provision on-demand services. The data center network must be upgraded to allow flexible migrations and deployments of Virtual Machines (VMs) and other resources to ensure efficient VM migrations and rapid service deployments.
- Reliable connections between Zurich, St. Gallen, and a planned data center for rapid service deployments and implementation of disaster recovery across the three data centers.
- Building data centers with sufficient service processing capabilities, handling heavy future data traffic loads, and planned device capabilities to sustain business development over the coming 10 years.

Solution

After evaluating proposals from several different vendors, Abraxas selected Huawei to tailor a cloud computing data center network

Executive Summary

Industry
IT Service Provider

Challenges
- Need to integrate ICT resources to provide users with the nearest and undifferentiated access to the cloud services.
- Need to improve the overall business operation capability of its ICT system and reduce TCO
- Improve its cloud service capability to provide faster and more flexible service provisioning for tenants and automatic O&M services.

Solution
- **TRILL** features used to build a flattened Ethernet anywhere
- **EVN** builds layer 2 fabric across multiple data centers
- **Virtual System** divides a physical core switch to multiple logical switches, different VS performs different functions

Benefits
- Build a large Layer 2 network and implement resource pooling in a data center.
- Provide SDN Ready, protecting investments
- Reduces the number of nodes, lowering O&M costs

solution for Abraxas' unique business characteristics and strengths. To meet demands for large capacity, high performance, high reliability, and feature-rich data center equipment, Huawei recommended that Abraxas purchase the CloudEngine series data center switches.

Huawei's CE12800 series data center core switches deliver a large switching capacity and support high-density 40GE/100GE cards, In-Service Software Upgrade (ISSU), and hot swappable key components. As a result, the CE12800 is ideally suited for Abraxas' data center scenario and fully meets Abraxas' requirements for data center network plans and capacity expansion for the next 10 years. In addition, through deployments of the Cluster Switch System (CSS), Virtual System (VS), and Virtual Private Network (VPN) features, the CE12800 strengthens network reliability and elasticity, implementing data isolation and access control. The CE12800 also offers the "VS+CSS" physical device virtualization capability, reducing customers' Total Cost of Ownership (TCO) and network maintenance costs.

Huawei builds a Transparent Interconnection of Lots of Links (TRILL) network within Abraxas' data centers and implements Ethernet Virtual Network (EVN)-based cross-DC interconnections. A large Layer 2 network that spans three places and three data centers is constructed, allowing different applications and VMs to be flexibly deployed and migrated among the three data centers. These network virtualization technologies support multi-tenant (4K tenants, which can evolve to 16M tenants) virtualization solutions, and achieve seamless connection to mainstream controllers and cloud platforms in the industry.

Benefits

Huawei's network solution also covers detailed designs and optimization of the network-wide Interior Gateway Protocol (IGP), Border Gateway Protocol (BGP), and backbone network Multi-Protocol Label Switching (MPLS). Via joint efforts with Huawei, construction of the Abraxas cloud computing data center is near completion. The large Layer 2 network interconnects three cities and is being built to enable VMs and applications to flexibly migrate within and between data centers. In addition, traffic isolation and effective access control have been achieved in Abraxas' cloud computing data centers. The three-city data center solution demonstrates unique disaster recovery advantages, laying a solid foundation for disaster recovery of various data and deployments of active-active services. In the event of a disaster, the remote disaster recovery center promptly starts data and service recovery, ensuring that Abraxas customers have 24/7 non-stop services.

About Huawei Enterprise Business Group

Huawei Enterprise Business Group ("Huawei Enterprise") is one of the three business groups of Huawei, a leading global information and communications technology (ICT) solutions provider. Leveraging Huawei's strong R&D capabilities and comprehensive technical expertise, Huawei Enterprise provides a wide range of highly efficient customer-centric ICT solutions and services to global vertical industry and enterprise customers across government and public sector, finance, transportation, electric power, energy, commercial businesses, and ISPs.

Huawei Enterprise's innovative and leading solutions cover network infrastructure, unified communications and collaboration (UC&C), cloud computing & data center, enterprise information security, and industry application solutions.

For more information, please visit: http://e.huawei.com

About Abraxas

Abraxas is a large ICT integrator and Cloud Service Provider (CSP) in Switzerland. Offering ICT outsourcing and data centre cloud services, as well as ICT solution consulting and deployment services, the company has been serving the government sector and medium-sized enterprises since 1998.

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