DataCenter PPNT

Poznań Science and Technology Park's customers enjoy their private cloud with pay-as-you-go billing

Located in Poland, Poznań Science and Technology Park's data center (DataCenter PPNT) has served the Park tenant's colocation needs for many years. To make good on their expectations the Park has recently constructed a modern data center and offered them Infrastructure-as-a-Service (IaaS). These services are also available to external customers. Adding external customers required introducing flexibility in service management and billing. Partnering with VMware, DataCenter PPNT has been able to achieve both goals. NSX brings security inside the PPNT data center with automated policies tied to the virtual machines, while its network virtualization capabilities let the PPNT reduce the time to provision multi-tier networking from weeks to seconds.

Poznań Science and Technology Park was built to support the incubation of start-ups and technology companies in Poland, through co-operation with science, business and technology bodies. It provides a wide range of facilities and services for businesses, including well-equipped laboratories, office space and specialized research equipment.

DataCenter PPNT offers an array of IT Infrastructure services to the companies at the Park. These include server colocation and hosting, system monitoring services as well as private virtual servers, storage space and data transmission infrastructure leasing.

The Challenge

Key to the new service offering was preparing a self-service virtual infrastructure putting customers in full control of the leased resources. This removed the need for DataCenter PPNT's staff assisting customers in ongoing administration of the server, storage and networking environments.

"We analyzed many service scenarios and the resulting requirements for virtualization technology" recalls Tomasz Łukaszewicz, Manager, DataCenter PPNT. "There are many server virtualization platforms available on the market. We carefully considered each of them with regard to functionality, flexibility and ongoing maintenance cost. We were specifically looking into open source solutions which are widely used by similar organizations, yet most of these turned out to be quite demanding in terms of investment in building competence (developers), management and maintenance time and effort. They cost less but the functionality and service availability they provide are significantly smaller than that of VMware."

Łukaszewicz points out that because the data center is technologically very modern, the decision has been made to offer the broadest functionality possible to match the prestige of the facility as well as to provide the highest level of flexibility with reasonable cost. This, in turn, implied excluding the price-sensitive segment of the mass market from the target group. With these criteria approved, the VMware vSphere stack looked like the only viable contender, especially because of the networking capabilities available in its NSX virtual routing technology. Extending it with self-service configuration tools of vCloud enabled DataCenter PPNT to offer each customer a complete Software-Defined Data Center.

The Solution

PPNT is taking a Software-Defined Data Center approach to its IT. It uses VMware vSphere and VMware vSphere Hypervisor ESXi for server virtualization, providing it with the best performance, availability, and efficiency from infrastructure and applications. This platform enables PPNT to optimize operations with automated management and intelligent operational insight that adapts to the data center environment.

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As a service provider, PPNT has deployed VMware vCloud Director, enabling it to build differentiated cloud services. Now customers can manage their virtual environment, create and delate virtual machines or control services connected with VMware NSX.

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A contract with DataCenter PPNT guarantees customers a certain amount of resources in the IaaS model: computing power, memory, storage and network bandwidth. The pricing is based on all four factors, combined. Customers can use the agreed upon resource allowance in part or in full. The functionality is not limited in any way. Customers' staff can create virtual machines and virtual applications or import them. Networking is fully manageable as well, including setting up configuration of basic services such as DHCP, routing, firewalling, load balancing or IPsec VPNs.

Business Results & Benefits

The data center services are available in the multitenant model. Each customer has a separate environment available, with separate management tools to match, to create user accounts, set access rights, create virtual machines and applications and configure virtual networks.

One of the key benefits of using DataCenter PPNT's private IaaS cloud is the NSX virtual networking platform. Just like in the case of servers, virtual networks are managed independently of the underlying hardware and their resources are provisioned purely through software. As a matter of fact, NSX creates a virtual network model which can have any topology, simple or complex, multitier. With NSX, adding or removing resources is possible in no time and advanced micro-segmentation becomes feasible in production environments. NSX provides a full set of logical network elements including switches, routers, firewalls, VPNs, as well as monitoring, quality of service and security facilities

which can be implemented using any infrastructure.

Networking services can be automatically configured for each virtual machine upon its start-up. These services can move with the virtual machine across the virtual space to keep the environment topology for the applications intact, regardless of location. NSX enables isolation of networks for business-critical applications as well as micro-segmentation of services.

"Such services are usually sought by financial companies and developers of SaaS platforms" Łukaszewicz says. "The unique characteristic of our services is the very high level of availability and performance which is the result of storage performance."

Security and scalability

DataCenter PPNT has its services certified for IT service management standard ISO 20000 as well as for information security standard ISO 27001.

"For our customers from the financial services sector, the certification matters because they strive to meet the requirements levied upon them in the Recommendation D issued by the Financial Supervision Commission in Poland." Łukaszewicz stresses.

The DataCenter PPNT's partnership with VMware guarantees the highest level of service for the customers. Data processing devices, as well as power supply and air conditioning hardware, are all fully redundant. The data center has the highest level support contract with VMware so any problems in the virtualization infrastructure are immediately taken care of by VMware support services. The company is ready for a sudden growth in the number of customers or their needs for data processing resources. The VMware agreement makes DataCenter PPNT comfortable adding new hardware resources for customers, anytime.

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