



KEY HIGHLIGHTS

INDUSTRY: TELECOMMUNICATION



CHALLENGE

- Increased maintenance and energy consumption costs
- Physical space limitations in the datacenter
- Outdated servers
- Need for a reliable disaster recovery solution for VMware Virtual Infrastructure

SOLUTION

- VMware Virtual Infrastructure Veeam Backup — backup & replication, and recovery solution for VMware Virtual Infrastructure

RESULT

VMware

- Achieved server consolidation ratio of 6:1
- Increased server utilization level by 60-70%
- Reduced data center footprint
- Decreased costs for:
 - New hardware
 - Power consumption
 - Hardware maintenance
- Data center renovation

Veeam Backup

- Speed of virtual machine recovery increased by 40-60%
- Backup time reduced by 60-70%.
- Reliable, correct recovery of virtual machines running critical applications

“In spite of the fact that it hasn’t been long since we started virtualization, the advantages of using VMware Virtual Infrastructure are obvious,” says Andrew Kochetov, MTT Company Senior Engineer.

“Consolidation of servers, reduction of costs for power and server maintenance, decrease of space and cooling system requirements... And with Veeam Backup, we are sure that our data is safe and our applications are available even in case of software or hardware failure.”

Andrew Kochetov, MTT Company Senior Engineer

The Client

Mezhhregionalniy Transit Telecom JSC (MTT) is one of the Russia’s five leading telecommunication operators. Working mainly with business customers, MTT provides long distance and international communications, traffic transmission for cellular operators and serves inbound international traffic.

MTT’s network of offices and services is spread across the whole territory of Russia. The headquarters of MTT is located in Moscow, Russia.

The Challenge

One of the reasons MTT sought the benefits of virtualization was economic. Prior to the deployment of the VMware virtual infrastructure, the company’s data center disposed of a number of heterogeneous servers, mainly the rack-mount type (HP Proliant DL360G3, DL380G3). “The servers we used were mostly outdated and occupied a lot of space in the datacenter. It was a common practice to run each of our applications on a separate server, which would definitely result in server sprawl. Eventually, we faced a challenge of significant increase in power, cooling and maintenance costs,” says Andrew Kochetov, MTT senior engineer.

“Deployment of a virtual infrastructure seemed to be the best solution — it would help us not only reduce costs and solve the datacenter footprint problem, but also renovate the data center and increase the server utilization level.” According to VMware estimations, the average maximal level of server utilization is 5 to 10 percent; after virtualization deployment, however, the number of required physical servers is typically reduced by up to 10 times.

The Solution

In 2008, MTT started the first stage of the VMware Virtual Infrastructure deployment, converting physical servers to virtual machines and consolidating them on ESX servers.

To deploy four two-processor ESX servers, MTT used free racks of HP blade servers. The newly deployed servers were consolidated into VMware HA/DRS clusters and connected to a Fiber Channel storage system.

By late 2008, MTT had virtualized 25 servers, with a server consolidation ratio of 6:1 (the number of virtualized servers per physical server).

“With the VMware solution, we created a robust, flexible and cost-effective IT environment,” Kochetov said. “Today we run four physical servers to handle the same workload that took 25 physical servers before.” These virtualized servers accommodate service programs for deep analysis of billing transactions, as well as applications specific to cellular communication networks management.

The Disaster Recovery Solution

With the VMware virtual infrastructure successfully deployed, the MTT team realized they needed a new disaster recovery solution to protect the virtual environment.

"We were looking for a tool that would guarantee safety of our data, business continuity and availability of the most important applications," Kochetov said. "We also needed to enable faster recovery in case of an outage."

MTT considered VMware Consolidated Backup (VCB). "It was important that we reduce the impact on our ESX servers," Kochetov explained. "With VCB, backup and replication operations are performed via a proxy server that works directly with SAN-attached storage, offloading that burden from the ESX hosts."

However, since VCB is not a full-fledged backup solution but rather a framework, the company needed third-party software that would work with VCB and automate disaster recovery processes.

The company chose Veeam Backup – a disaster recovery solution combining backup and replication options in a single product.

The Veeam product was brought to MTT by the Softline Company, Veeam's Gold ProPartner in the Russian Federation. Softline holds regular educational seminars for MTT, and demonstrated Veeam Backup at one of these events. MTT was impressed with both the speed and the functionality of Veeam Backup. Their special attention was brought by:

- The combination of backup and replication options in one product and interface, allowing faster recovery of critical services;
- The ability to back up multiple virtual machines simultaneously;
- Fast image- and file-level restore of virtual machines;
- The convenience of working with VCB and Veeam's 'VCB-on-the-fly' technology, facilitating significant speed up of the process of virtual machine image creation;
- The ability to recover a virtual machine to a specific point-in-time;
- Support of Windows VSS for correct recovery of fully functional virtual machines and applications running on them without any data loss;
- Reduced space requirements for storing backup copies due to data de-duplication;
- Increased backup speed owing to Veeam's innovative use of data compression and de-duplication.

The Result

As a result of moving to the VMware Virtual Infrastructure, MTT has achieved impressive cost savings on the basis of its 6:1 server consolidation ratio: reduced costs for new hardware and server maintenance, power and space consumption.

"We run our servers more efficiently with lower overhead," says Kochetov.

MTT's virtual infrastructure is constantly expanding, and is connected to the corporate data transfer network. By late 2009, MTT plans to convert 50 more servers to virtual machines, in addition to the 25 that have already been virtualized.

Veeam Backup was an important part of this successful project, allowing MTT to create an effective backup and recovery scheme to protect its valuable VMware Virtual Infrastructure. With Veeam Backup, MTT increased backup speed and ensured the quick and correct recovery of virtual machines running critical applications.

Offering comprehensive functionality, Veeam Backup is MTT's only solution for disaster recovery.

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