

# CASE STUDY

## AIRFARE BOOKING COMPANY

“Performance, availability and stability of our IT infrastructure is the key to success”

### Case Profile

As one of the leading online airfare booking companies in Europe, the customer provides wide range of flight tickets for travel in all major domestic and international carriers for the best value. The company is catering customers in Russia, CIS countries and plans further expansion to Europe and Asia. In collaboration with DEAC customer achieved a significant contribution to its electronic flight ticket reservation system via DEAC data centers based in Riga and Moscow. The aim of cooperation was to provide a comprehensive e-ticketing system based on the converged infrastructure to streamline efficient operations with flight reservation and perform live transactions through the payment gateway in a timely manner.

The technologies used in this project were provided by top virtualization, server and storage leaders – Microsoft, VMware and Hewlett Packard Enterprise (HPE).

### Main Benefits

- Customer received dynamic double disaster recovery within mirrored network and server cluster across two independent data centers, which resulted in **100% incident-free work** from the project start.
- Full round-the-clock remote monitoring and IT infrastructure management by DEAC experts gives flexibility in planning in-house IT processes, paying more attention to the core business' assets.
- Virtual storage helped to **cut costs up to 75%**, reducing future capital investments (CAPEX) and optimizing operational costs (OPEX).
- A higher availability achieved with automatic load balance from 99,5% up to 99,9% and **increase of online transactions by 12%** per day.
- Solution allowed customer to achieve larger data storage and processing magnitude than before, that allows to plan business' expansion strategy more rapidly.

### The Customer

- Online flight booking service
- More than 2 mln. tickets sold per year across Eurasia region
- DEAC customer since 2016

### Featured Solutions

- Virtual storage in 2 data centers
- Backup
- DDoS protection
- Server and network cluster

### Approach

E-ticketing system migration to cloud, expansion of the storage to vCloud in Russia and virtualization platform in Latvia.

### Value Add

- Best value for money
- Automatic load balance
- Higher availability up to 99,99%

Company has migrated its services, servers and users in order to build an entire infrastructure on a trusted data center facilities, using cutting edge virtualization technologies.

# Business Needs

**With up to 500 thousands** page visits per month, the customer needed a solution to replace its old load balancing solution with highest uptime guarantee for its e-commerce project. Thus, customer looked for a start-to-finish project placement provided by a single service provider with a personal and individual approach.

As a private data center operator, DEAC shares its vast experience to create tailored solutions to meet growing business' needs. In addition to developing and implementing IT solutions, DEAC experts have conducted a research on the main customers' IT challenges to deliver a robust and specialized project, dedicated to resolve individual storage, uptime and security issues.

As the company continued to collect and process data from transactions and booking deals, they were actively looking for other ways to implement high uptime data-driven solutions. One of the main challenges was to reduce initial online booking system failure rates by implementing a rigorous, systematic maintenance solution based on DEAC data centers infrastructure. All customer's business processes were brought under control by experienced DEAC's experts, covering strategic, technical, and procedural customer support issues at any time, as well as upon request.

Solution had to include geographically diverged infrastructure and data center services with highest

availability to host customer's online reservation system. Any downtime would impact transactions and cause a delay in the service delivery. Simultaneous online booking system operation and uptime, flexible storage while keeping costs down is a truly complex challenge, requiring industry's best practices and IT expertise.

Company also looked for a HPE backup storage that could secure company's remote operations and provide full business recovery in case of disruptive events. Thus the virtual data storage provided in the case study is a cost-effective solution for businesses to help them cut storage costs up to 75%.

"By having a redundant infrastructure in two data centers with different geographical location, as well as good performance and cost-effective virtual VMware storage, we are able to effectively track, control and manage all online transactions and orders across our booking platform."

## Challenges

- Implement mission-critical IT services based on infrastructure of two data centers in order to eliminate single points of failure and prevent further suspension of key services.
- Launch data-driven analytics to track and predict customer behavior.
- Achieve long term business goals and increase e-commerce up to 20% per year.
- Minimize downtime by IT solution, that provides a high uptime, not less than 99,99%.
- Keep all information stored and well-organized with multifactor authentication as an important technology for enforcing secure access management from any place, any time.
- Enhance system's security in order to prevent malicious booking behavior by competitors, tech-savvy users and illegal ticket resellers who use technical flaws to trick the booking system.





## Solution Components

In tight cooperation with the customer, DEAC has developed a workload-optimized solution, providing a balance of flexibility and control required to deliver excellent customer service to the end users.

**Customer encountered the biggest demand during summer season, which required solid hosts and an ease in managing storage solution that could grow on demand.** These requirements led us to recognize both cost and quality in HP enclosure with HP servers and HP StoreOnce backup storage. Servers were merged in a single software solution, based on VMware virtualization cluster, handling all processes on the common resource, which led to elimination of technical staff spend and allowed to effectively manage and predict operational costs.

In order to provide the agility and continuity of all online ticketing operations, DEAC

replaced customer's in-house storage solution with Hewlett-Packard Enterprise back-end storage combined with Veeam and HP licenses for virtualization and backups. Numerous servers, located at the customer's premises, were outdated, slow and costly to support, therefore VMware virtualization as the most commonly used and secure IaaS platform nowadays, became the general virtualization component for the customer's solution.

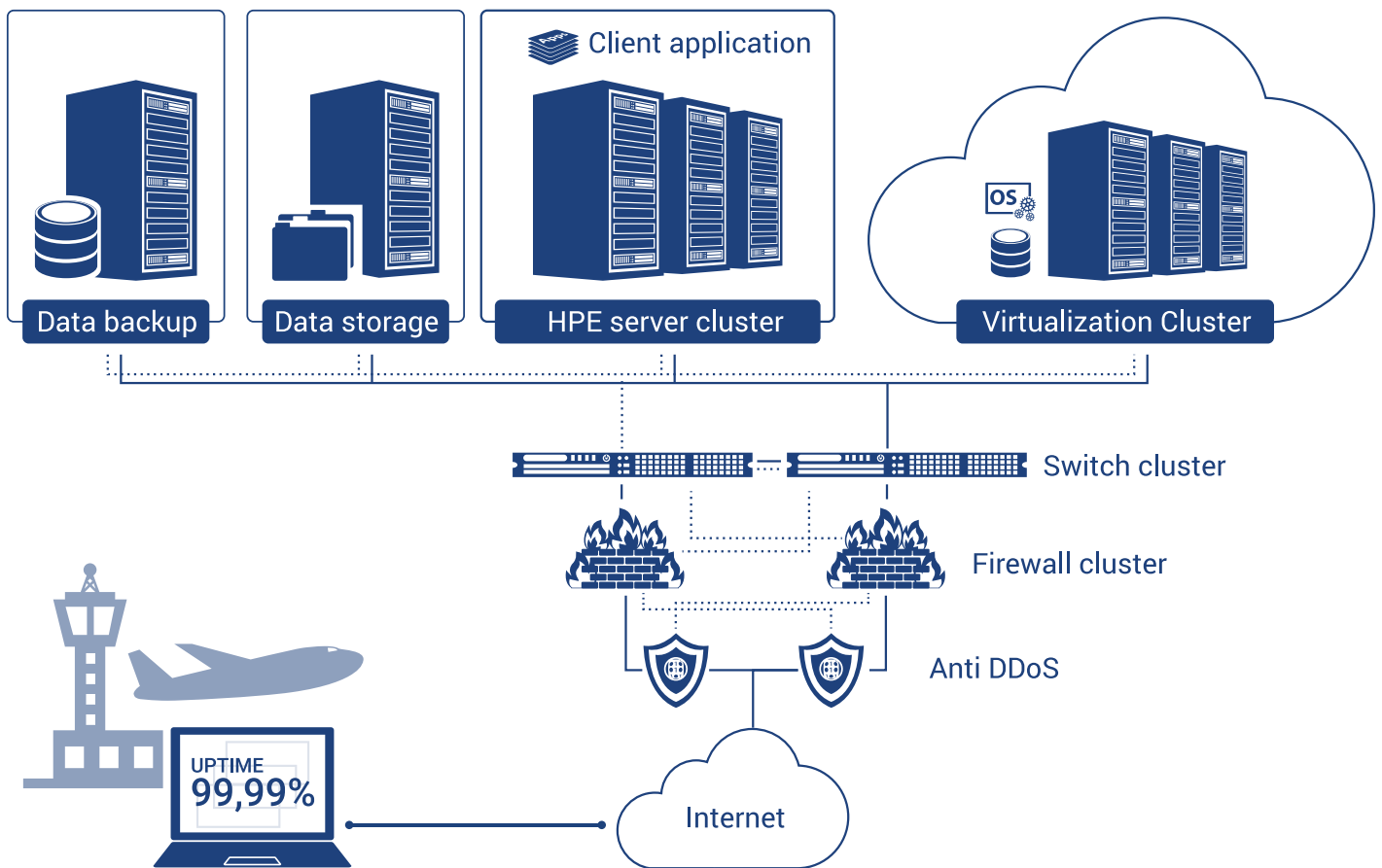
"Best-in-class virtualization solution helps us to improve our self-service environment and online customer experience."

**A typical recovery from a bare-metal disaster can take up to 40 hours, while loading the backup copies from virtualization to bring the system back online can be done in less than hour.** There

is also a handy and flexible backup-as-a-service solution implemented, to free up customers servers and to power with capabilities to recover from any disaster in the shortest time frame. Chosen virtualization provides snapshot technology and cloning that makes duplication of the complete operating system with all applications and data a matter of a few clicks. **Automated, bulletproof backup in 2 data centers with a multifactor authentication for enforcing access management keeps all the data 100% secure from any internal or external threat.**

Choosing the right Internet speed can heavily influence the type of online experience e-commerce projects provide. The solution was switched to two independent 10 Gbit/s internet channels that allow to experience near-zero webpage uptime and lowest possible latency, helping customer to expand and gain positions in potential markets.

# Solution Scheme



## Products

- HPE blade servers
- HPE shared disk storage system
- HPE backup storage
- VMware virtualization, server management software and virtual replication machines
- Veeam Backup restore and management software
- Rack rental and hardware colocation
- Disk space rent on DEAC HPE 3PAR virtualization platform
- DEAC vCloud capacity rent in Moscow

## Services

- Service Level Agreement (SLA) with response time within 1 hour
- Consultancy and project management of system administration
- Unified disaster recovery and DDoS protection services
- Security & network integration, maintenance and monitoring
- Construction of merged infrastructure and network cluster
- Consultancy of virtual storage workload balance
- Backup and software licenses
- End-to-end protection



## Benefits

- **In total, almost 75%** of customer's IT assets were replaced by virtualization and network infrastructure cluster, which allowed to free-up the internal resources and focus on the core business needs. Customer has now one single provider available 24/7, which helps to reduce risks, simplify in-house IT processes and focus staff resources on general tasks with the highest value.
- **High-performance servers** have increased the ticketing system's capabilities by 50% and maximized operational speed over the ticketing platform even over low bandwidths up to several times. DEAC team ensures always up-to-date server and network infrastructure maintenance and physical condition, with the 100% of replacement guarantee in case of technical issues. Virtual platform combined with physical servers allows customer to plan actual capacity and in hand with DEAC experts to find the best possible way for mission critical workloads optimization.
- Over the next months, **the traffic processing capability increased** from 3 Gbit/s to 10 Gbit/s via fully redundant internet channels. Customer expects to increase data processing speed each year. High speed connectivity with 10 Gbit/s optical core network decreases latency. The solution makes online ticketing sales business faster and more available, creating welcoming environment and positive self-service experience to back-end customers.
- **End-to-end data protection** ensures entire service reliability as security protection system is enabled in both data centers. Mission-critical services are securely isolated to protect the ticketing system against intrusion and guarantees the entire integrity of customer's data. Over the whole project period customer data security remained 100% safe, preventing processes from any data breach or unexpected data loss.
- **Replicated infrastructure** across two data centers delivers robust disaster redundancy. Solution is resilient to political or geographical disasters, even in case one storage system or network goes down, other data center's infrastructure will bear the full load of all operations by the time the problem is resolved. Customer receives near zero data loss and continuous operation of the system.
- **The solution allows to run processes with over 30% less hardware.** Investments in bare metal rent and colocation will pay off in the next 3-4 years. Thanks to virtualization, customer can now faster access mission critical files and data from any place, any time.
- As security is critical to customer's business, especially for mission critical payment operations, its requirements are implemented at the several levels, each of them working with strong isolation but on a single system, granting user with **the highest safety level**.

## Value added: solution

- Disaster recovery and backup solution don't require manual intervention anymore, and now the whole migration process takes a matter of minutes;
- Mission critical payment operations are secured with multi-level security;
- Automatic load balancing across the cluster systems allows to keep highest latency even on peak situations (more than 10 000 requests per minute), delivering excellent end user experience;  
SLA gives a warranty of risk reduction and 100% response within the specified time;
- Customer enjoys higher availability, not less than 99,99% thanks to high-speed network channels and automatic load balance.

## Value added: service

- Best value for money: a reliability and performance based on the largest supplier and vendor solutions;
- Certified multilingual DEAC staff is ready to respond to any customer's requests 24/7;
- Excellent security standards and individual approach to customer's requests.

**DEAC CONTINUES TO EVOLVE THE SOLUTION, ENSURING IT IS UP-TO-DATE WITH NECESSARY FURTHER ENHANCEMENTS TO DELIVER NON-STOP SERVICES AND ACCOMMODATE CUSTOMERS' CONTINUOUSLY GROWING BUSINESS REQUIREMENTS.**

