



Informatika is better equipped to deliver world-class SLAs with its customers and thus reduces reputational risk.



Power-related costs have decreased by about half due to lower consumption and lower heat dissipation of the solid-state disks.



Reduced complexity of the environment makes it much easier to train both operations staff and engineers who work with the infrastructure.

JKP Informatika maximizes service resilience for its customers

Public utility company JKP Informatika, a municipal IT and internet service provider in the town of Novi Sad, Serbia, overhauled its entire infrastructure to improve resilience of its systems and reinforce them against external cyberattacks. Due to previous positive experience with VMware technologies, the company opted for a comprehensive VMware modern data center solution to build a 3-location stretched cluster to operate its services for local authorities, public institutions, and citizens. They now enjoy greater speed and security with no outages.

Modern innovations improve service quality for end users

Founded in 1971, public utility company JKP Informatika Novi Sad (Informatika) provides telecommunication, utility, and household billing services. It operates and evolves the city's General Information System (GIS), the core database comprising key personal and business registers and records, and explores new digitization opportunities for the city. The company also operates an optic cable network in the city and provides hosting, web hosting, and public cloud services.

Ransomware attack reveals vulnerabilities and triggers changes

IT infrastructure and systems are the core of Informatika's business and the company's success hinges on their smooth and reliable operation. The company is expected to provide services to the municipality and its citizens in a timely manner and according to expectations, with the driving factors being speed, security, and technological excellence. However, Informatika's infrastructure was based on disparate and ageing technologies, rendering its services prone to outages and vulnerable to external threats, with slow recovery.

"It all started with a ransom attack in Spring 2020, which put our systems out of operation, and we struggled to get them back online. We arrived at the conclusion that we needed to evolve the infrastructure and implement new technology that would improve resilience of the system and allow for speedy disaster recovery," explains Duško Novaković, director assistant for Information and communication technology of JKP Informatika Novi Sad.



ИНФОРМАТИКА
JKP НОВИ САД

Public utility company JKP Informatika is a municipal IT and internet service provider in the town of Novi Sad, Serbia. It provides services to the citizens (users of utility-housing services), public companies, city administration and other companies.

INDUSTRY

Public Sector, Technology, Telecom

HEADQUARTERS

Novi Sad, Serbia

ABOUT BRAINEERING

Established in 2015, Braineering, a VMware Master and Professional Services partner, is one of the top 3 IT system integrators in Serbia with international projects spanning the Balkans and Middle East.

VMWARE FOOTPRINT

VMware vSAN™
VMware vSphere®

Integrated and automated infrastructure reduces complexity

Based on its previous positive experience with VMware solutions like vSphere, Informatika opted for this vendor's technologies to modernize its infrastructure. VMware was chosen also because it was the most logical and cost effective solution as Informatika wanted to future-proof their infrastructure and to make it more secure. The implementation partner Braneering, a leading Serbian systems integrator, thus recommended Informatika to deploy a hyper-converged infrastructure (HCI) solution based on VMware vSphere and vSAN across a stretched (metropolitan) cluster with two primary data center locations and one alternative location, with an automatic failover. The vSphere and vSAN HCI infrastructure supports over 300 VMs on a total of 10 servers with approximately 1000 end users.

“Software-defined and virtualized solutions from VMware have proved that they have a potential to reduce complexity, simplify operations, and improve security and resilience. As a result, we have been able to achieve a completely new level of services and guarantee their quality to the customers.”

DUŠKO NOVAKOVIĆ
DIRECTOR ASSISTANT FOR INFORMATION AND
COMMUNICATION TECHNOLOGY
JKP INFORMATIKA NOVI SAD

The system uses VMware vSphere vMotion to automatically migrate from one site to another based on pre-configured rules and procedures. VMware Site Recovery Manager (SRM) enables the recovery of the two locations should one site collapse. The new vSAN architecture also meant a switch from more costly and difficult to manage Storage Area Network (SAN). In the new architecture, all production systems leverage vSAN, while backups are located on a traditional system. Replacement of SAS and SATA drives with SSD and NVMe arrays has resolved speed issues.

“Everything mission-critical now runs on vSphere and vSAN. The important thing is that we have everything on one server and do not have to make interconnections to external SAN devices. Overall, we are happy with the solution and appreciate

the prompt response from VMware and its partner to fix issues that may occasionally occur,” adds Duško Novaković.

Resistance to attacks and disasters and a potential for further growth

Expanding the existing vSphere environment with a cluster solution, the new architecture has virtually eliminated downtime due to the introduction of a third site that acts as a supervisor between the two main sites. This third location serves as a quorum, which means that it constantly watches the other two locations and should one of them fail, the other is automatically activated. This automatic failover has substantially improved reliability and availability of the infrastructure. The hyperconverged infrastructure (HCI) has eliminated previous serious issues with network communication and micro-segmentation capabilities of the 100% virtualized environment have improved security. As a part of the infrastructure, Braneering also implemented next generation firewall and zero day security solutions.

Employee productivity has also increased due to reduced complexity, with much easier configuration and integrated management of compute and storage resources through a single pane of glass. Informatika also appreciated a switch from CAPEX to OPEX as it rents the new infrastructure from the implementation partner, Braneering. Overall, Informatika's systems are now more resistant to attacks and disasters, which has a significant positive impact for its business as a critical services provider.

“We measure the performance of IT systems based on SLA parameters, such as service availability, system response time, and resistance to failures. VMware enables us to reliably deliver our services with the guaranteed parameters and maintain high quality services consistently, which means we can serve the end customers better,” says Duško Novaković.

LOOKING AHEAD

Informatika has extensive plans for further development of their infrastructure with VMware solutions, including the adoption of SD-WAN for networking to remote offices, NSX for network virtualization and micro-segmentation, additional vSphere automation for new services and VMs deployment, and, depending on business needs, the company will also consider a transition to a Virtual Desktop Infrastructure (VDI) for remote workers. The reason for this is securing better network functionality, easy management and workforce and collaboration flexibility.



Public utility company JKP Informatika in Serbia leverages virtualization technology to improve resilience and availability of critical systems. #VMware #HCI
