Migrating from On-Premises Hosting to Microsoft Azure

An Israeli government organization with about 750 employees assists in the training of about 250 public organizations across the country, with more than 130,000 employees. The training is carried out through several training centers spread countrywide. The courses taught there are planned, organized, professionally managed and run by the government organization.

The courses are designed to help those public bodies boost their performance by improving professional knowledge and work processes. The training centers, which work in collaboration with the public organizations, assist in planning and supporting organizational change and development processes; strategic planning; consulting; coaching and managing partnerships, along with training activities of officials, managers, employees and staff in the public organizations.

A special SAP Business One-based system (running under Windows Server 2012 R2 operating system) has been built for distributing manuals and course lists to employees of the public organizations. Course registration is done online through a portal. The system also enables tracking attendance at courses.

The challenge: increasing system availability and resilience

The course system was hosted on servers of one of Israel's telecom companies, requiring management of both the server hardware and software. The government organization faced ongoing difficulties with constraints on system availability and with frequent unplanned downtime, which required contacting the hosting team to get certain services. The system was challenging to manage and the government organization also could not ensure its resilience.

Managers at the government organization wanted to increase efficiency and reduce costs. They sought to improve availability, enable resilience, set up a disaster recovery system and increase the system's stability. After examining various options, the government organization decided to move the system's on-premises server workloads to the fully managed cloud platform offered by Microsoft Azure. The managers came to the conclusion that migrating to Azure would enable them to provide the employees of the 250 public organizations with a more stable, reliable and resilient system.

Ness, due to its expertise, experience, and strong relationships with Microsoft, was selected for the job. Ness was asked to design the new cloud architecture and create a detailed migration plan, meeting the goals and timeframe requested by the government organization.

The Migration

Working closely with the government organization, Ness executed the migration and the system was seamlessly moved from the on-premises hosting environment to the cloud, within the timeframe and budget.

The project required complex preparations from Ness to make the system cloud-ready. A dedicated team was established. The team used Microsoft's Azure Migrate service, which provides guidance, insights and mechanisms to assist in migrating to Azure. Ness prepared the necessary migration documentation and followed Microsoft-recommended steps, including replication of the on-premises server to Azure, strict testing, setting up a disaster recovery system, building a fail-proof architecture, and running a disaster recovery drill.

During the migration, Ness evaluated local applications and servers – collecting information about servers and applications, including type, configuration and usage. Dependencies were tested and a configuration analysis was done to see if the operating system and workload were supported.

Ness planned the costs of using the cloud according to the expected use (the cloud is priced according to use). The goal was to utilize at least 90% of the virtual machines while ensuring performance and reliability. The Azure Migrate tool was used to conduct the evaluation.

The migration was made using Migrate with Site Recovery for Hyper-V VMs. Before starting the migration, a full backup was made to all servers, including SQL backup. The process involved preparing Azure and Hyper-V, preparing Azure resources for Hyper-V disaster recovery, and setting up disaster recovery of on-premises Hyper-V VMs to Azure.

The machines were then replicated, and a disaster recovery drill was run on Azure. Before the final transfer, another SQL backup was performed, as well as fail over Hyper-V VMs to Azure.

The process included rehosting Windows servers on Azure and rehosting SQL Server 2012 (11.0.701) with 8 databases on Azure. Remote Desktop Services (RDS) 2012 and RemoteApp virtual application solution were deployed.

The project resulted in improved overall performance and efficiency, better quality and reliability of services, high availability, improved customer satisfaction, as well as significantly reduced system and performance issues.