

Infrastructure Migration on Microsoft Azure for an **Education Company**

CASE STUDY



About Client

Leading
Education Company



Industry

Education



Service

Infrastructure migration to Microsoft Azure

Business **Need**

Our client had its entire IT infrastructure hosted on-premises and co-located in East USA and had its internal team managing it. The client wanted to migrate the IT infrastructure on to the Cloud to enable ease and simplicity in managing IT and

reduce its capital expenditure towards IT infrastructure, enhance security and compliance, improve options for scalability for business growth and achieve operational agility.

Business **Challenge**

- ▼ Full capacity in-house data center that needed to be migrated to Cloud with DR, backup, and restore mechanism and plans
- ▼ Being a technical migration, requirement was to ensure near zero disruption to business
- ▼ Integration of applications with Cloud to deploy game-changing solutions for customer
- ▼ Quick migration to Cloud with TCO considerations
- ▼ Financial data for all users had to be kept in a place where the SLA for storage is high and there is minimum recovery point objective (RPO)

Business **Solution**

The cloudxchange.io team worked upon Proof of Concept (PoC) for the client after evaluating the infrastructure utilization of the customer and created an Azure Landing Zone through provisioning Virtual Machines (VMs) for a seamless migration.

We developed a Cloud reference architecture comprising of network, security, network connectivity, Azure account, IAM, deployment architecture of all applications and detailed migration plan that including schedule and cost of implementation.

In the Cloud build stage, we helped the client to design a virtual network which included networking, Palo Alto firewall and WAF as an Application Gateway to route their Application URLs with detailed Cloud monitoring. We also ensured uninterrupted availability by applying CloudOps and ITIL process.

Project **Scope**

- **The Scope of work included:**
 - ▼ Deploying IAAS (VM, VNET, Storage) in East US region
 - ▼ Configuration of the network security
 - ▼ Installation of monitoring agents on VMs
 - ▼ Configuration of VNET Peering
 - ▼ Configuration of Backup policies on the infrastructure
 - ▼ Installation of Patches/Updates on the servers
 - ▼ Checking of the Security recommendations.
 - ▼ Troubleshooting Infra related issues

Our **Approach**



Design **Architecture**

- ▶ Multi segmentation of Azure landscape
- ▶ Architectural design as per Azure and industry standard best practices
- ▶ Hub and spoke model used with Azure

Security

- ▶ Detailed comparison and analyses of security in Cloud and On-premises security components
- ▶ Networking backbone and architecture with multiple branch locations
- ▶ Consultation for improvement of Azure security center score
- ▶ Next-generation firewall features
- ▶ Centralized login to virtual machines. Azure AD and centralized VM login using Azure AD
- ▶ WAF for customer rules of Geo fencing
- ▶ Improvement roadmap for security vulnerabilities

Migration **solution**

- ▶ Creation of Plan of Action (PoA) for enhancement of platform with advanced Azure services and NGFW implementation
- ▶ Understanding networking topology and designing Azure backbone
- ▶ Azure architecture design through various Azure services like VM, SQL DB PaaS, etc.
- ▶ Storage blob with LRS for storing backup data
- ▶ Security Center Configuration
- ▶ Creation of log analytics workspace
- ▶ Configure services like Just in time access
- ▶ Adding Application Servers behind WAF and Firewall
- ▶ Meeting SLA uptime for uninterrupted service

Business **Impact**

- ▶ Enabled Azure Security Centre with Azure AD protection
- ▶ Due to Hub and spoke model the servers can be accessed only through Log Me in Server
- ▶ Any third-party Application URLs or unauthorized access are strictly as per least privilege and have to undergo through Palo Alto Firewall.
- ▶ DR and backup and restore mechanism for Cloud migration was successfully implemented with near zero disruption to business
- ▶ Entire Data Centre has been moved on Azure Cloud Virtually
- ▶ Achieved reliable backup storage, disaster recovery & redundancy, secure data access, scalability & high availability through the migration.
- ▶ Financial Data for all users has been secured and encrypted with SLA for high storage and near zero data loss
- ▶ Successfully implemented Disaster Recovery with Test Failover run
- ▶ DR with minimum recovery point objective (RPO) and recovery time objective (RTO) was achieved

About **cloudxchange.io** - An NSEIT Company

Cloudxchange.io – An NSEIT Company, is an integrated managed services provider for multiple clouds like Amazon Web Services, Azure, Google, and Oracle Cloud. We deliver complete end-to-end managed services from cloud consulting, multi-cloud aggregation, cloud back-up, and disaster recovery to DevOps as a service. We leverage the best technology and provide tailored custom-built solutions to ensure a smooth cloud transformation.

NSEIT Limited is a digital native global technology company focused on creating tangible business impact with cutting-edge technology solutions and deep domain understanding. For over two decades, our innate drive for excellence has made us the partner of choice for global organizations. At NSEIT, we fuel digital progress.

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