FlexPod

FlexPod Datacenter with Microsoft Hyper-V 2025 & NetApp Shift Toolkit Solution Brief

Flexible private cloud infrastructure for the virtualization platform of your choice

Organizations around the globe are exploring new and innovative virtualization solutions. It can be difficult to assess which solutions work best to compliment existing skillsets, budgets, and deployment models. Enter FlexPod®, a collaborative solution between Cisco and NetApp. FlexPod engineers have been \working to help simplify deployment across multiple hypervisors. The latest NetApp® Verified Architecture (NVA) covers FlexPod Datacenter with Microsoft Hyper-V 2025, further expanding the FlexPod portfolio.

Hyper-V modernization made easy with FlexPod

FlexPod has been validated to run Microsoft Hyper-V for over a decade. The new NVA validates the latest version of Microsoft Windows Server, leveraging the venerable Cisco UCS compute and networking platforms along with NetApp all-flash storage. This robust, enterprise-ready foundation enables customers to quickly take advantage of the new features that come with Hyper-V 2025 and System Center Virtual Machine Manager (SCVMM). SCVMM enables organizations to automate workloads, streamline operations, and orchestrate virtual machine (VM) deployments to reduce operational strain and costs. Windows Server 2025 introduces massive performance and scalability improvements with Generation 2 VMs, supporting up to 2048 virtual CPUs and 240TB of memory, as well as GPU partitioning for GPU shared access across VMs with live migration support.

Unmatched reliability and efficiency at every layer

The deployment section of the NVA is a comprehensive guide on how to install and configure Hyper-V in a FlexPod environment as efficiently as possible. For example, the deployment model leverages iSCSI boot, saving on individual boot devices for each compute node. The fully redundant design helps to maximize reliability at the infrastructure level, while covering Windows Server Failover Clustering (WSFC) configuration to increase VM and application uptime. Block isn't the only protocol leveraged; the deployment section also highlights the inclusion of CIFS connectivity.

Shift Toolkit and SMI-S simplify VM and data management

The NVA doesn’t end at hypervisor deployment. The

NetApp Shift Toolkit provides a robust GUI to simplify the migration of virtual machines from VMware to Hyper-V. NetApp FlexClone® technology allows the rapid cloning of files or volumes without the need to copy data. NetApp ONTAP® software uses multiple protocols for single volumes, which allows an NFS share to be mounted on one hypervisor while Hyper-V accesses the same volume using CIFS/SMB. The Shift Toolkit can then easily and quickly migrate VMware VMDKs into Microsoft VHDX files, and vice versa. When the virtual machines have been migrated, NetApp SMI-S Provider acts as a plugin for SCVMM, providing storage management capabilities in a single pane of glass.

Learn More

- netapp.com/flexpod
- cisco.com/go/flexpod
- Read about NetApp ASA storage performance
- Read about Cisco UCS X-Series servers
- Read the NetApp Verified Architecture