VIRTUALISATION
BUYER'S GUIDE

INDEX

INTRODUCTION

Virtualisation now sits at the centre of modern IT, running everything from VDI to mission-critical applications. As workloads grow, storage becomes one of the main factors shaping performance.

A modern platform must handle high concurrency, unpredictable I/O, and fast provisioning to keep virtual environments responsive.

This guide highlights the key capabilities required from a modern storage platform to support virtual workloads effectively and at scale.

TODAY'S VIRTUALISATION LANDSCAPE

Virtualised environments now run a broad mix of workloads -large VM clusters, VDI, analytics, databases, and remote applications- all competing for shared resources. These diverse workloads generate unpredictable I/O and constant demand for low-latency performance.

To keep operations smooth, organisations need a storage architecture that remains fast, scalable, and reliable under concurrency, not just in ideal conditions.

Key Challenges

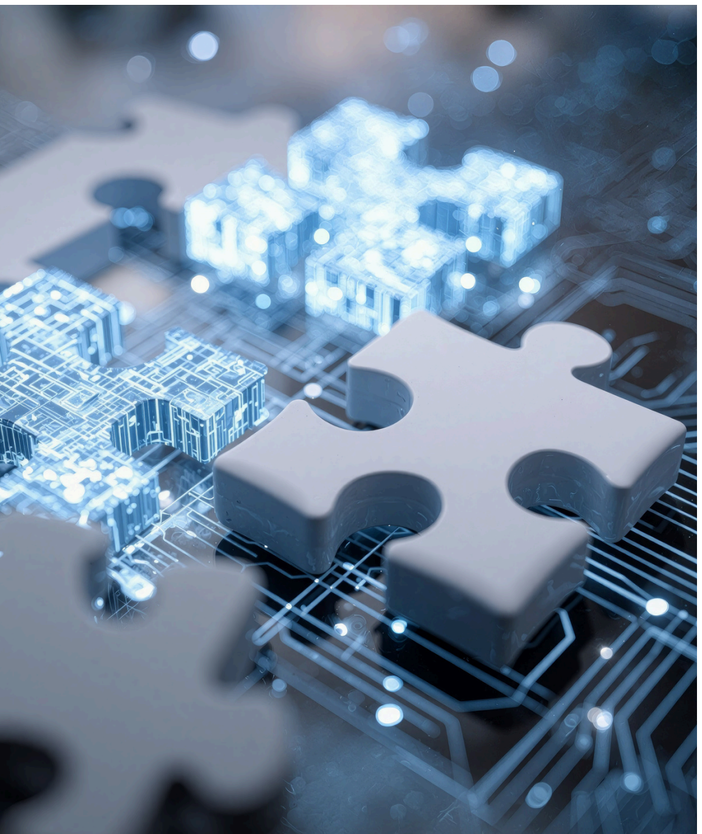
As virtual workloads grow, several challenges become common:

- Latency spikes during heavy VM or VDI activity
- Scaling that requires downtime or complex changes
- Fragmented management across SAN and NAS systems.
- Ransomware risks targeting snapshots and backup data
- Legacy arrays struggling with mixed, random I/O

These challenges show why virtual environments need storage purpose-built for modern workloads.

WHAT TO LOOK FOR

WHEN PICKING THE RIGHT PLATFORM



Before comparing platforms, it’s important to understand the capabilities that directly influence VM behaviour and user experience.

WHAT TO LOOK FOR

- Unified Architecture: One platform for block and file storage
- Predictable Low Latency: Consistent responsiveness under load
- Easy Scaling: Add capacity/performance without disruption
- Strong Protection: Immutable snapshots, replication, ransomware resilience
- VMware Integration: VAAI (vStorage APIs for Array Integration)
- Efficiency: Compression, deduplication, intelligent caching

These fundamentals ensure that your virtualisation environment remains stable, efficient, and future-ready.

WHAT TO MEASURE IN A VIRTUALISATION PLATFORM

To evaluate how well a storage system will support your virtual environment, focus on these core metrics:

- **IOPS:** Measures responsiveness for small, random VM I/O.
- **Throughput:** Shows sustained speed for large data operations.
- **Latency:** Indicates how smooth VM and VDI interactions feel.

But metrics alone aren’t enough, integration with VMware features also plays a critical role.

WHY VMWARE INTEGRATION MATTERS

Performance in VMware environments depends not only on raw metrics but also on how effectively the storage system collaborates with ESXi.

VMWARE CERTIFICATION

NGX AFA and Hybrid series are fully VMware-certified, ensuring:

- Version compatibility
- Stable behaviour during storage array failover
- Stable high performance with load balancing algorithms
- Seamless use of VMware features

This certification removes integration risk and ensures consistent performance in VMware environments.

VAAI SUPPORT

VAAI offloads cloning, migration and block-zeroing tasks to the storage array, reducing ESXi host load. This improves provisioning speed, decreases contention, and keeps dense clusters running smoothly.

NGX PRODUCTS OVERVIEW

NGX offers two VMware-certified product families **designed to meet the full spectrum of virtualisation needs**, from high-performance production clusters to cost-efficient backup environments.

For VMware Workloads

NGX AFA Series

For VM Backups

NGX Hybrid Series

NGX PRODUCTS OVERVIEW

NGX AFA SERIES: Built for VMware clusters, VDI, and mission-critical apps that require low latency and high random I/O support. Delivers consistent, predictable performance under dense virtual workloads.

NGX HYBRID SERIES: Ideal for large VM backup repositories needing high capacity at lower cost. Provides fast reads and efficient, scalable backup performance. Advanced caching design ensures multiple backup jobs run smoothly.

For VMware Workloads

NGX AFA Series

- High-core CPUs
- Up to 8TB DRAM cache
- 100GbE / 64Gb FC
- FC / iSCSI / NFS
- Unlimited immutable snapshots
- Native replication
- MetroScale cluster
- Immutable snapshots
- Deduplication & compression

For VM Backups

NGX Hybrid Series

- Cache-centric architecture
- Flash tier for fast reads
- Unlimited immutable snapshots
- Native replication
- FC / iSCSI / NFS / SMB / S3
- Deduplication & compression

NGX STORAGE

CHOOSING THE RIGHT OPTION

As organisations modernise their virtualisation environments, they usually follow one of a few strategic paths. Your priorities (performance, flexibility, or simplicity) determine which direction makes the most sense.

Choosing the Right Option

1. **Enhance VMware:** Improve performance and simplify operations in your existing VMware environment.
2. **Explore Alternatives:** Consider mixed-hypervisor options for greater flexibility.

The best approach depends on where your environment is today and how you expect it to evolve.

NEXT STEPS

01 Review VM Performance Issues

Identify current VM performance issues, latency patterns, and operational gaps.

02 Define Your Priorities

Clarify whether performance, simplicity, protection, or scalability matters most.

03 Assess Your Requirements

Match your workload demands with the capabilities your storage platform must deliver.

04 Compare Platform Capabilities

Evaluate platforms based on real performance, efficiency, and resilience.

05 Validate With a PoC

Test workloads directly to confirm suitability and expected results.

BEFORE YOU MOVE FORWARD

Modern virtualisation depends on a storage foundation that can keep pace with rising performance demands and increasingly mixed workloads. This guide has highlighted the factors that matter most, from latency and concurrency to VMware integration and data protection.

NGX platforms are built around these exact needs, delivering low-latency performance, strong VMware alignment, and resilient protection across both AFA and Hybrid series. As you plan your next steps, consider how NGX can support a simpler, faster, and more scalable virtualisation environment.

BULLETPROOF YOUR STORAGE WITH

NGX STORAGE

+90 312 227 04 74

info@ngxstorage.com

Hacettepe Teknokent, Safir C Blok

No:31 Ankara / Turkey