



# BACKUP & ARCHIVAL BUYER'S GUIDE

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# INTRODUCTION

Modern organisations create massive amounts of data that must be protected, retained, and recovered quickly. As volumes grow, storage becomes the key factor shaping backup speed, recovery times, and long-term cost.

Traditional arrays often struggle with the high write rates, large capacities, and durability needs of backup and archival workloads. This can lead to slow restores, limited scalability, and higher risk.

Organisations need a storage foundation designed specifically for large, always-growing backup and archival environments.

- *This guide highlights the essential capabilities required from a modern storage platform to support backup, recovery, and archival workloads efficiently and at scale.*

# TODAY'S DATA PROTECTION LANDSCAPE

Backup and archival environments now span large data repositories, long-term retention systems, disaster-recovery targets, and growing unstructured datasets. These workloads generate sustained write-heavy activity, massive capacity demands, and strict durability requirements.

Daily backups, rapid restore needs, and rising ransomware threats place continuous pressure on storage to remain fast, resilient, and cost-efficient, even as data volumes grow year after year.

To maintain reliable protection, organisations need storage that scales smoothly, safeguards data integrity, and delivers predictable performance for both backup ingestion and recovery.

## *Key Challenges*

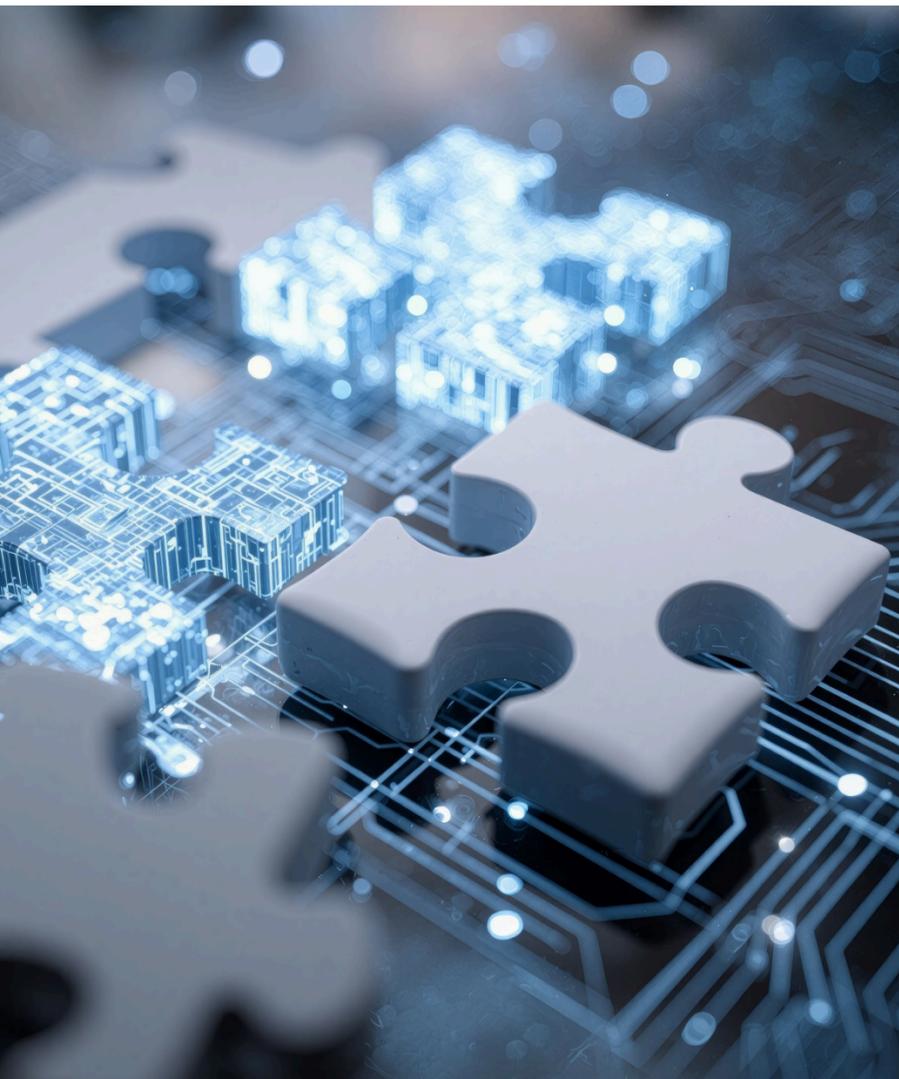
As backup and archival workloads expand, common challenges include:

- Slow backup or restore times
- Limited throughput for large backup jobs
- Capacity scaling that disrupts operations
- Rising storage costs for long-term retention
- Risk of corruption, ransomware, or data loss
- Fragmented storage across multiple systems
- Legacy arrays struggling with sustained write loads

These challenges underscore the need for storage built specifically for large-scale, always-growing backup and archival environments.

# WHAT TO LOOK FOR

WHEN PICKING THE RIGHT PLATFORM



Before comparing solutions, focus on storage capabilities that directly impact backup speed, data durability, and long-term efficiency:

## WHAT TO LOOK FOR

- **High throughput:** Ensures fast backup ingestion and rapid restore performance.
- **Instant snapshots:** Enables frequent, low-impact protection for critical data.
- **Efficient replication:** Supports off-site and multi-site protection without bandwidth waste.
- **Immutable backups:** Safeguards data against deletion, corruption, or ransomware.
- **Non-disruptive scaling:** Add capacity smoothly as retention windows or datasets grow.
- **Multi-protocol support:** Store backups via block, file, or S3-compatible object.
- **Data efficiency:** Compression and deduplication reduce storage costs at scale.

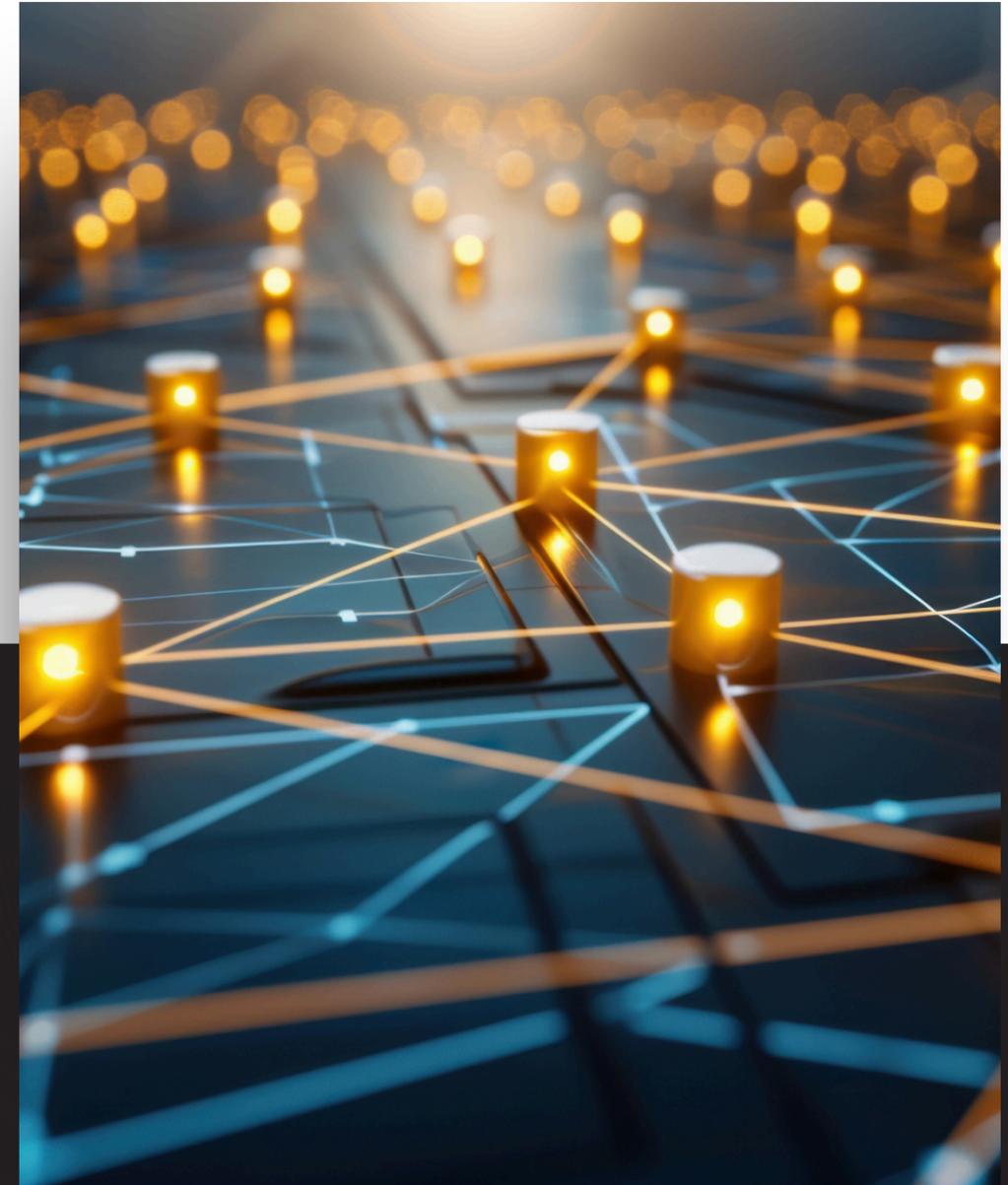
These fundamentals ensure your backup and archival environment remains fast, secure, and cost-efficient, even as data volumes grow.

# WHAT TO MEASURE FOR BACKUP & ARCHIVAL PERFORMANCE

To evaluate storage suitability for backup and archival workloads, track the metrics that directly influence protection speed, data durability, and long-term efficiency:

- ✔ **Throughput:** Measures backup ingest speed and restore performance.
- ✔ **Consistency:** Ensures stable performance as datasets and concurrent jobs grow.
- ✔ **Recovery Speed:** Indicates how fast systems or repositories can be restored after failures.
- ✔ **Data Durability:** Protects long-term integrity with immutable snapshots, replication, and corruption safeguards.

These metrics reveal whether your storage layer can support fast, scalable, and resilient backup and archival operations without bottlenecks or risk to long-term data retention.





# WHY BACKUP & ARCHIVAL PERFORMANCE MATTERS

Backup and archival efficiency depend on how effectively the storage system supports high-volume ingest, fast restores, long-term data durability, and seamless integration with backup software and data protection workflows.

## CAPACITY-OPTIMISED ARCHITECTURE

NGX Storage platforms use high-efficiency compression, deduplication, and scalable capacity tiers to support large datasets, long retention periods, and cost-effective archival growth.

This architecture ensures predictable performance during heavy backup windows, reduces storage footprint, and maintains fast access to active or historical data as repositories expand.

## OFFLOAD & DATA-PROTECTION FEATURES

Modern backup storage should support instant snapshots, immutable protection, fast replication, and offload mechanisms that reduce pressure on backup servers and networks.

These capabilities speed up backup jobs, improve restore times, strengthen ransomware resilience, and ensure reliable long-term retention for critical datasets.



# NGX STORAGE PRODUCTS OVERVIEW

NGX Storage provides two product families **engineered to handle everything from fast, large-scale backup ingestion to durable, long-term archival storage** with maximum data integrity.

For High-Speed  
Backups

**NGX AFA  
Series**

For Long-Term  
Archival Storage

**NGX Hybrid  
Series**

# NGX STORAGE PRODUCTS OVERVIEW

**NGX AFA SERIES:** Engineered for high-performance backup environments that require ultra-fast ingest, rapid restores, and strong resilience. Ideal for organisations running frequent backups, large datasets, and latency-sensitive recovery operations.

**NGX HYBRID SERIES:** Designed for large-scale archival, long-term retention, and cost-efficient backup repositories. Provides high capacity, reliable read performance, and flexible multi-protocol support for diverse backup software ecosystems.

For High-Speed  
Backups

## NGX AFA Series

- High-core CPUs
- Up to 8TB DRAM cache
- 100GbE / 64Gb FC
- FC / iSCSI / NFS / SMB / S3
- Unlimited snapshots
- Native replication
- MetroScale clustering
- Immutable snapshots
- Deduplication & compression

For Long-Term  
Archival Storage

## NGX Hybrid Series

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



# CHOOSING THE RIGHT OPTION

As backup and archival requirements grow, organisations typically follow one of three strategic directions. Your priorities (performance, retention needs, or consolidation) determine the best path.

- 1. Maximise Backup Speed:** For fast backup ingestion, quick restores, and stable peak-window performance.
- 2. Increase Retention Flexibility:** For long-term archival, compliance needs, and tiered retention plans.
- 3. Consolidate Repositories:** For unifying backups, snapshots, archives, and long-term data on one scalable platform.

The best approach depends on your data growth, recovery objectives, retention policies, and long-term operational strategy.



# NEXT STEPS

## 01 Review Backup Performance Issues

Identify slow backup ingestion, delayed restores, bottlenecks during peak backup windows, or capacity pressure in repositories.

## 02 Define Your Priorities

Clarify whether your focus is faster backups, long-term retention, cost efficiency, data durability, or simplified management.

## 03 Assess Your Requirements

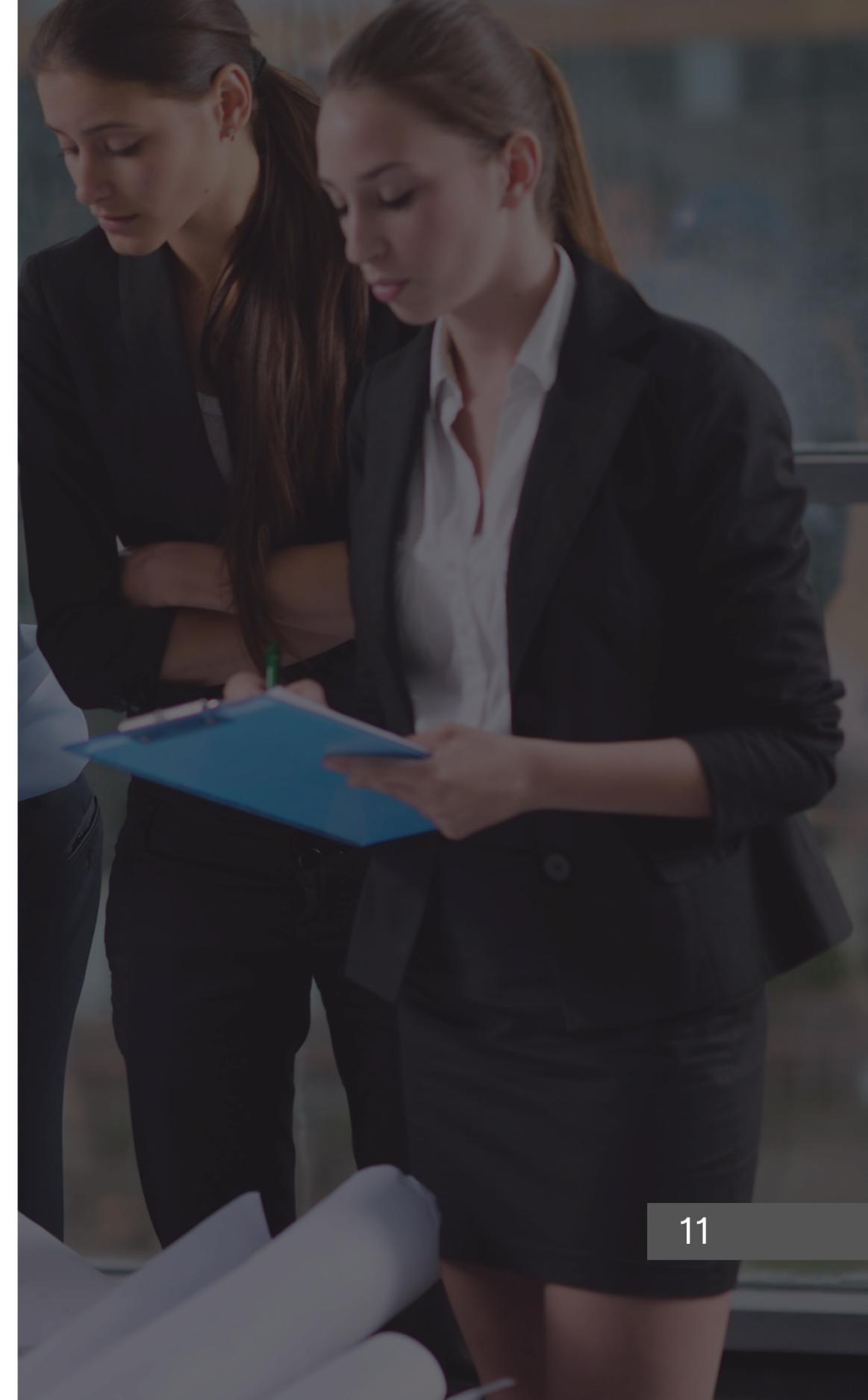
Match your priorities with the capabilities a storage platform must deliver—speed, resilience, immutability, and scalable retention.

## 04 Compare Platform Capabilities

Evaluate solutions based on real backup throughput, restore performance, snapshot efficiency, and long-term integrity features.

## 05 Validate With a PoC

Test real backup jobs, restores, and archival workflows to confirm reliability, speed, and data safety under real conditions.



# BEFORE YOU MOVE FORWARD

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A strong backup and archival strategy begins with storage built for speed, resilience, and long-term integrity. The essentials remain the same: high throughput, fast restores, reliable snapshots, immutability, and effortless scalability. NGX Storage delivers all of these with predictable performance, durable protection, and efficient growth across both AFA and Hybrid systems.

With NGX Storage underpinning your backup and archival layers, long-term data safety, rapid recovery, and scalable retention become a given, not a challenge.



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