Best Practices for File and Object Storage Modernization

Solving the Unstructured Data Management Problem

Companies today continue to swim in an ever-swelling sea of data. According to IDC¹, there will be 5 times the amount of data we have today by 2025. Thousands of users on millions of devices end up creating billions of files each year—all of which first, take up space, and second, house valuable insights that remain hidden due to siloed storage and inaccessibility. Beyond users, machines at the edges are beginning to create data at an even faster rate. They prefer to leverage programmable and API addressable object storage, the preferred storage of the applications of the future.



As this massive storage growth takes place, storage administrators and application owners are finding themselves bogged down by the complexity of managing and scaling to meet the needs of additional storage footprint, limited visibility—making it difficult to adhere to new and existing regulations, and inability to adopt cloud-like qualities and integrate with external clouds.

REQUIREMENTS FOR MODERN STORAGE MANAGEMENT

Massive data growth breaks old storage management methods and requires new thinking. IT teams look to modernize storage infrastructure to address these challenges. They want simple systems that allow anyone to manage their data storage infrastructure with just a few simple tools and just a few clicks. Manage/Reduce costs, become more flexible and get the most out of their data by modernizing datacenters, becoming more cloud like, and increasing data intelligence/visibility. They are evaluating storage solutions to enable these goals based on a set of key criteria:

Capacity

A solution that will expand easily, but not require new skills from upgrade to upgrade.

Storage efficiency

Software-defined storage efficiency technology such as compression and deduplication to lower TCO.

Interoperability

Ability to integrate with multi-cloud platforms easily.

Manageability

Easier management for storage systems, automation for common or predictable tasks, and self-servicing capabilities driven by the storage systems and machine intelligence.



KEY DATA STORAGE FACTS:

- Unstructured data represents over 80% of all data stored.
- According to Gartner², by 2022, more than 80% of enterprise data will be stored in scale-out storage systems in enterprise and cloud data centers, up from 40% in 2018.
- Gartner also states, by 2022, 30% of enterprises will implement at least one of the hybrid cloud storage approaches, up from 5% in 2018.²
- IDC projects the Scale-out Solutions Revenue to be 27B for both File-based and Objectbased software storage in 2019³

• Performance

Flexible performance that matches the value of the workload. Hot needs to be given high priority for high performance and cold needs low cost tiers for cheap and deep storage.

Resiliency

Some level of self-monitoring, self-healing, self-protection, and self-recovery.

Security and Multi-tenancy

Native security (such as encryption) and multi-tenancy (such as granular access rights and controls) to deliver storage-as-a-service to internal customers, improve up-time, and reduce administrative workload.

• Pricing

Good value with flexible consumption models.

NEXT-LEVEL SOFTWARE-DEFINED STORAGE

Nutanix brings the benefits of cloud to your on-prem storage offering a simple, scalable, and intelligent solution to consolidate file, block, and object storage. With a unified management plane to manage all storage services, one-click ease, and simple scale out or scale up, Nutanix modernizes your storage setup and simplifies operations.

A SINGLE UNIFIED SOFTWARE PLATFORM

Silos are the scourge of productivity and efficiency. With Nutanix storage services, you no longer need to design siloed infrastructure solutions and instead can enjoy a more service-oriented architecture. Unburden IT server and storage admins with a unified management plane that enables easy file, block, and object storage, and save space with on-demand erasure coding, deduplication, and compression technologies.

SENSIBLE SCALING

If you're going to be generating and managing terabytes or even petabytes of unstructured data stored as either file or object, you need a storage solution that is easy to deploy, manage, and scale. Nutanix lets you scale from a single TB to PBs with simplicity, giving you the flexibility to easily add compute and capacity independently based on business requirements. All of this is done with the benefits of pay-as-you-grow cloud models you've come to love, without compromising the control, security, and predictability you need in your on-prem infrastructure.

INTELLIGENT OPERATIONS



We're in an era of working smarter not harder, so IT teams need to include smart technology to help them remain competitive. IT teams need to automate common workflows, and eliminate the need for multiple management tools to reduce the learning curve and simplify management, and provide self-service capabilities so that end users aren't reliant on administrative actions to get the resources they need. With Nutanix you can analyze

system data to generate actionable insights for optimizing virtualization and infrastructure management. You can monitor and react to changing usage

patterns in your data in order to identify and solve system problems and bottlenecks before they impact end users. It will also protect your environment with enterprise-grade backups through a single management plane.

PRIORITIZED USE CASES

Consolidate Disparate Storage Systems

Replace older file or object storage solutions which are managed by specialized teams, using specialized tools, and suffer from long refresh cycles.

• ROBO

Nutanix Files gives IT and operations teams responsible for remote office and branch office deployments the ability to deploy granular, easily-managed storage with as little as a single node.

Digital Workspace/VDI

Give VDI administrators and EUC teams the ability to consolidate home directories, user profiles and departmental shares on Nutanix. With Nutanix Files, a VDI/EUC admin is no longer dependent on other teams for storage provisioning, gaining the freedom to control their complete virtual environment, including storage services.

Private Cloud

IT leaders want to operate their on-prem infrastructure like a cloud with the simplicity, flexibility, and economic models made popular by public cloud architectures. Nutanix Files and Nutanix Buckets provide software defined flexibility to exist alongside applications on the existing HCI infrastructure, the simplicity of automated and programmable resource allocation and maintenance, and cloud-like consumption models to achieve similar economics in the datacenter.

Long-term Archival and Back-up

Nutanix Buckets provides a single global namespace for active archive, using WORM (write once, read many) capabilities to meet regulatory compliance.

Application Development

Application developers who are unwilling to be slowed down by traditional storage resource acquisition want storage resources delivered as code. Nutanix Buckets is a fully programmable object storage solution that delivers the object storage applications owners need to speed up their development times and deliver applications and resources that drive their business.

Leading in the era of digital transformation will require new ways of thinking about data and the architectures that host it. Nutanix brings new simple, flexible, and intelligent storage architectures that will help you achieve digital transformation to drive your business to success now and into the future. Get a closer look at our storage solutions Nutanix Files—intelligent, flexible file storage— and Nutanix Buckets—one-click object storage—today.

¹ IDC White Paper, sponsored by Seagate, Data Age 2025: The Digitization of the World from Edge to Core, November 2018 https://www.seagate.com/files/ www-content/our-story/trends/files/idc-seagate-dataage-whitepaper.pdf

² Gartner, "Magic Quadrant for Distributed File Systems and Object Storage", Julia Palmer, Raj Bala, John McArthur, Oct 2018

³ IDC, Market Forecast, WW File and Object-Base Storage Forecast, 2018-2022 Doc # US41469117, Dec 2018



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Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at www.nutanix.com or follow us on Twitter@nutanix.

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