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Definitive Guide to Business-Critical Apps and Databases on Nutanix Cloud Platform

NUTANIX



Business-Critical Apps Require Modern Infrastructure

Enterprises have often relied on 3-tier infrastructure and storage area networks (SANs) to run business-critical applications and their associated databases. This includes critical applications such as ERP, CRM, HR, collaboration, and analytics as well as industry-specific apps and numerous business applications created in-house.

However, in response to accelerating digital transformation, enterprises across all industries are shifting to a higher gear and becoming application development factories. IDC estimates that [by 2026, 750M new applications will come to market](#).¹ This surge in application development is causing IT decision-makers to reconsider their infrastructure choices. More and more organizations are choosing a hybrid multicloud strategy, with applications and databases spanning on-premises datacenters, edge, public clouds, colocation facilities, and service providers.

The hybrid multicloud approach is not well supported by legacy infrastructure or public cloud. Legacy 3-tier infrastructure is too costly, with high OPEX due to complex management and frequent forklift upgrades. Flexibility is limited and 3-tier platforms cannot be easily extended to the cloud. Legacy solutions lack the agility to meet rapidly changing requirements, and operational complexity robs valuable time from IT staff.

Public cloud solutions provide automation, but they lack the flexibility to extend to other public clouds, on-premises datacenters, edge locations, or service providers. Public clouds may not accommodate all the specific databases you're using today, creating a need for time-consuming re-platforming.

Modern infrastructure is needed that can support all business-critical applications and databases (old and new), and capable of spanning on-premises, cloud, and other environments.

¹ IDC, 2022 FutureScape Report

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Hyperconverged Infrastructure for Business-Critical Apps

Hyperconverged infrastructure (HCI) is emerging as the best choice to address enterprise application challenges. A survey from 451 Research noted that **62%** of respondents use or plan to use HCI, with database and data warehousing as the number one workload.²

According to a recent analyst survey, **42%** plan to deploy HCI to migrate workloads and applications between clouds based on the optimal location to meet business needs. An IDC report from January 2021 provides similar guidance.

[Nutanix Cloud Platform \(NCP\)](#) is the ideal HCI solution to address the needs of your business-critical applications and databases, delivering consistent high performance similar to what a typical SAN offers, enhanced availability and security, improved agility, and less management complexity and cost. This eBook explores the advantages of NCP for organizations that want to deploy business-critical apps and databases on a flexible, cost-efficient platform that allows seamless scaling and deployment wherever it makes the most sense to meet business needs.

“When considering an HCI platform, look for the one that can offer a consistent experience regardless of where the workload is running. It should not matter where the user is connected and interacting with the HCI, whether through an API or UI or what you have, the experience should be consistent. It also shouldn't matter whether a workload is running on premises, in the cloud, or at the edge.³

[IDC, How HCI Can Enable a Hybrid/Multicloud Architecture](#)³

² 451 Research, Voice of the Enterprise: Hyperconverged Infrastructure, Strategy and Workloads; 2021.

³ IDC, How HCI Can Enable a Hybrid/Multicloud Architecture, and How to Choose the Right One, 2021.



Case Study: Nutanix Cloud Platform Drives AAA Success

The East Coast AAA Auto Club relies on its datacenter infrastructure to deliver convenient, personalized services for its members, support daily operations, and keep executives informed with valuable business intelligence (BI). However, as the organization's existing three-tier architecture aged, performance started to decline.

The team moved approximately 100 Microsoft SQL databases to Nutanix Database Service, running on all flash clusters, to increase performance and reduce TCO. The new solution accelerates delivery of BI reports, saves admin time, and provides an agile platform for DevOps.

Security is an important requirement for the auto club. Nutanix enabled the organization to meet requirements for application and network microsegmentation, security compliance, audits, and planning. To maximize the availability of its services, the organization installed Nutanix DRaaS (Disaster Recovery as a Service).

The team is also exploring whether it can eliminate its on-premises datacenter and put everything in the cloud, running on Nutanix Cloud Clusters (NC2).

“We moved the BI database from our previous three-tier SAN infrastructure to Nutanix HCI, and the performance was night and day.

Senior Architect,
East Coast AAA Club

[Read the Full Case Study](#)



Nutanix Benefits

- **80%** improvement in performance
- **50%** reduction in TCO
- Simplified database management and automation



Nutanix Cloud Platform: Superior Capabilities for Business-Critical Apps

Enterprises IT teams are moving applications and databases to HCI to better address agility, scalability, and availability requirements. Nutanix Cloud Platform is based on a proven HCI architecture ideal for running both applications and databases on one platform. Nutanix delivers consistent high performance for application and database workloads at any scale, with superior agility, built-in features that increase availability and security, and far less management complexity and cost than legacy SANs.

Nutanix Cloud Platform offers simplicity, performance, and scalability, allowing you to operate your critical workloads more easily and more successfully across on-premises, public cloud, edge, and service provider environments and quickly and cost-efficiently scale to meet the rapidly shifting demands of modern business.

NCP is composed of four important elements that address the diverse needs and requirements of business-critical applications:

Nutanix Cloud Platform: One Platform for Hybrid Multicloud

Nutanix Cloud Infrastructure (NCI)

A distributed infrastructure platform combining compute, storage, and networking resources into a single logical pool with integrated resiliency, security, performance, and simplified administration. Efficiently deploy and manage data and applications across datacenter, edge, cloud, and other environments.

Nutanix Cloud Manager (NCM)

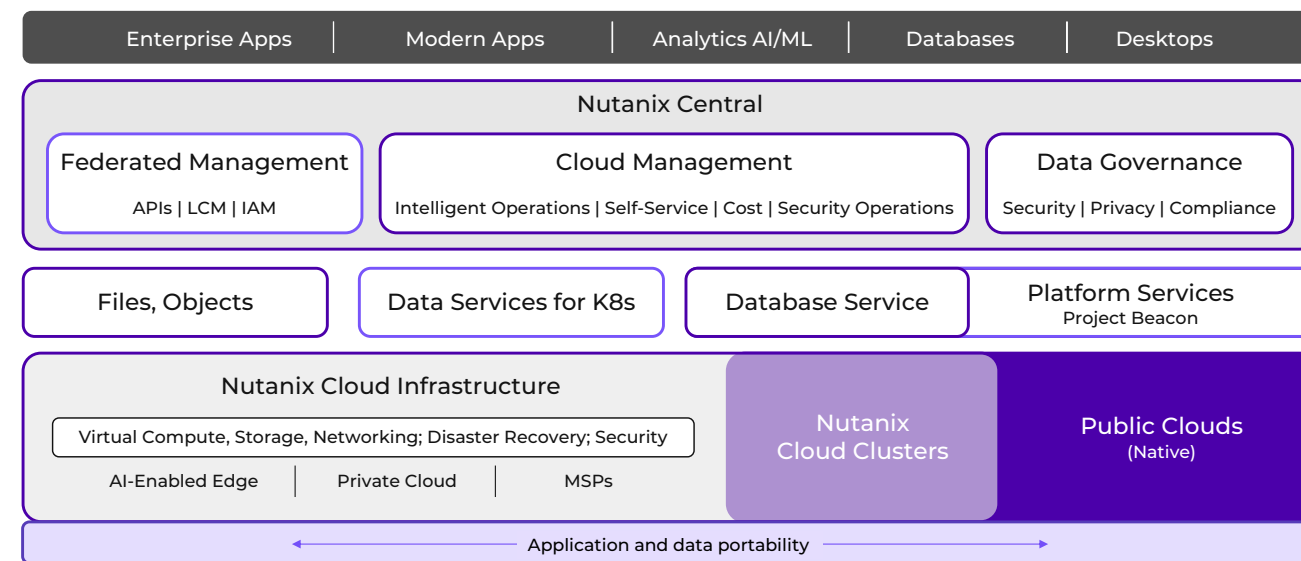
A unified solution for intelligent operations, self-service and orchestration, security compliance and visibility, and cost control. Build and manage multicloud deployments simply and quickly by automating routine operational tasks and leveraging tools for orchestration and compliance.

Nutanix Unified Storage (NUS)

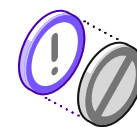
Software-defined storage that consolidates seamless access and management of block, file, and object storage in a single platform. NUS is designed to address the scale, performance, and integrated data security requirements of modern applications with easy access to structured and unstructured data, consistent high performance, seamless scale, and security against ransomware attacks—whether data is in the core, cloud, or edge.

Nutanix Database Service (NDS)

The only hybrid multicloud DBaaS (Database-as-a-Service) for Microsoft SQL Server, Oracle Database, PostgreSQL, MongoDB, and MySQL. Efficiently manage hundreds to thousands of databases.



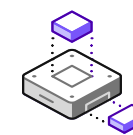
Nutanix Cloud Platform Benefits



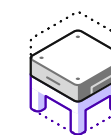
Reduces the risk effort, and cost of operating enterprise applications and databases



Is easily managed, reliable, and secure



Provides a scalable data platform easily accessed by applications



Gives developers self-services access to databases and other services



Is consistently responsive to applications and databases

Nutanix Cloud Platform: Benefits for Databases and Business-Critical Apps

Nutanix Cloud Platform brings one-click simplicity, intelligent automation, and always-on availability to support your business-critical applications. Benefits include:

High Performance

Provide consistent application and database performance at a level matching SAN—without the downtime and operational challenges that hamstring IT teams and frustrate end-users.

Simplicity

Converge critical applications and databases on a single platform that is easy to manage and highly automated, reducing OpEx and freeing your team to focus on projects that enhance business value.

Secured Availability

Keep business apps and database workloads up and running with a resilient platform that can help reduce downtime by as much as 97%. Protect your most valuable assets—and your company's reputation—with integrated security that automatically detects and fixes vulnerabilities and reduces the risk of ransomware and other cyber threats.

Scalability

Enable predictable, non-disruptive, independent scaling of compute and storage as your business needs, performance demands, and data sets grow. Adopt an add-as-you-grow model, scaling infrastructure incrementally while reducing planning time and eliminating regular refresh cycles and big upfront purchases.

Integrated Data Protection

Increase peace of mind with advanced availability and data protection, including integrated snapshots and clones, automated failover and rebuild, flexible replication options, and integrations with leading backup ISVs. Built-in capabilities reduce the management of add-on products, while one-click automation and enterprise-grade DR options further enhance protection and reduce costs.

Self-Service

Accelerate development efforts and free up IT admin time by offering self-service to users. Allowing users to satisfy routine requests themselves reduces the number of service tickets that IT teams must address and frees up time for higher-value projects.



Case Study: Sakra Accelerates Patient Care with Nutanix

Sakra World Hospital had reached a point where the three-tier infrastructure underpinning its hospital information system (HIS), EHR, PACS, and backend databases (Microsoft SQL Server and MySQL) became a barrier to progress. IT costs for power and cooling were increasing, and backup processes were taking too long, putting data at risk.

After migrating to NCP, performance has improved in every dimension. Clinicians can now access data in seconds not minutes, and the speed of billing has increased. With Nutanix, the hospital successfully launched multiple telehealth applications to help reduce the disruption created by COVID-19.

“We are no longer tied down by our legacy infrastructure and can respond quickly to rapid social change—integrating new healthcare applications into our Nutanix stack so we can deliver first-class medical care night and day.

Bhoopendra Solanki,
Head of IT, Sakra World Hospital

[Read the Full Case Study](#)



Nutanix Benefits

- Reduced HIS and EHR access time from **10-15 seconds** to just **1-2 seconds**
- Accelerated billing processes by **75%**
- Increased backup speed almost **5x**
- Cut IT management by **25%**
- Reduced downtime **90%**
- Lowered admin time **57%**
- Lowered power and cooling costs by **55%**
- Reduced TCO by **35%**





Nutanix Cloud Platform: Consistent High Performance

One of the biggest concerns for anyone moving business-critical applications to new infrastructure is performance. If there's a single reason why organizations stick with legacy SANs, it's a perceived performance advantage. However, if you haven't looked closely at NCP performance—or looked at it lately—you will be pleasantly surprised. Nutanix delivers consistent application and database performance at levels that match SANs—without the downtime or operational challenges that come with siloed infrastructure.

How Nutanix HCI Delivers Optimal Performance

Nutanix Cloud Platform supports all your critical applications and databases without requiring dedicated siloes of infrastructure. It delivers high database performance without constant tuning, including excellent random read/write performance for transactional workloads and excellent sequential read/write performance (bandwidth) for streaming workloads such as data warehouses. In addition, Nutanix operating software adapts to workload changes, so you spend less time tuning performance.

Intelligent Tiering

Nutanix automatically tiers data on different media types (if present) on each node and across nodes in a cluster.

Data Locality

The data used by a database or application is preferentially kept on the node where the associated VM is running, minimizing latency, and reducing network congestion. All a cluster's storage resources are available to all nodes within the cluster.

And Nutanix continues to innovate. Nutanix takes full advantage of the speed of modern software development, and the capabilities of the latest hardware platforms, to enhance performance with every software release. Recent enhancements take advantage of remote direct memory access (RDMA), multi-threading, disk sharding, and more.

Nutanix Performance Validation

In a [2021 technical validation of NCP](#), Enterprise Strategy Group (ESG) measured raw I/O performance and also ran specific SQL Server and Oracle benchmarks.

A four-node Nutanix cluster achieved **1,106,196** random-read I/O operations per second (IOPS) and **598,068** random-write IOPS.

Nutanix 2021 Cluster Performance

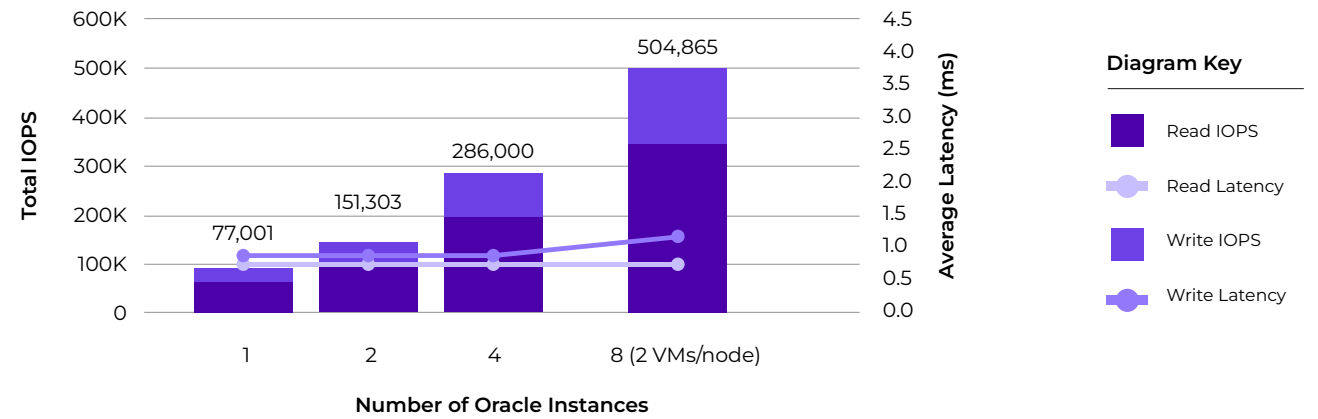
The same configuration also demonstrated dramatically faster speeds versus testing performed in 2017, with consistently high performance on SQL Server and Oracle benchmarks.



For SQL Server, as the number of simultaneous database instances scaled from one to four, there was a predictable increase in performance. ESG describes three clear benefits:

- Near-linear scaling of online transaction processing performance
- Consistent low latency
- Each workload consumes resources without impacting others

Oracle SLOB Performance



Source: Enterprise Strategy Group

Results were similar for Oracle benchmark testing with up to eight database instances. ESG noted that, “test results show significant improvement in IOPS over the 2017 results, with near-linear scaling for reads and writes, while using only half the number of nodes.” Average read latency remained less than one millisecond.



Case Study: RBL Chooses Nutanix Cloud Platform for Digital Journey

RBL Bank is a digital leader, but an aging three-tier infrastructure was creating unnecessary headaches. Opening applications and accessing data was frustratingly slow, the performance of MS SQL and Oracle databases was poor, availability was low, and infrastructure complexity was delaying the delivery of new services.

The bank turned to Nutanix to solve its database and EUC challenges, reaping substantial business benefits in the process.

“We have gone beyond HCI with Nutanix, using its suite of products for application and database automation, microsegmentation, and much more for faster business results, while never losing the promise of simplicity and high performance.

Tejas Mehta,
CTO, RBL Bank

[Read the Full Case Study](#)



Nutanix Benefits

- Time-to-market for new services dropped from **2-4 days** to **4-6 hours**
- IT downtime was virtually eliminated
- **6x** faster performance for call-center applications and databases
- **35%** improvement in call-center efficiency
- **50%** reduction in time spent on user acceptance testing
- Database provisioning time reduced by **90%**
- Database clones in just **4 hours** versus **1-2 days**



Cyber Resilience Through Secured Availability

The availability of your business-critical applications and the security of your databases are paramount. Availability and security start with the underlying infrastructure. Legacy SANs and three-tier infrastructure solutions have a lot of moving parts, and a single configuration mistake could bring your application crashing down or let the bad guys in.

NCP leverages HCI to consolidate datacenter components (compute, storage, networking) into a single footprint with all the capabilities you need to ensure that the infrastructure running your applications is available and secure. The Nutanix Secured Availability strategy unlocks new capabilities for your hybrid cloud:

Self-Healing Resiliency

A self-healing architecture [reduces downtime by as much as 97%](#).

Intelligent Platform Security

Misconfigured security settings are detected and fixed on your infrastructure, workloads and data.

Integrated Data Protection

Integrated data protection ensures that your data is always safe and rapidly recoverable.

Each of these elements contributes to increased availability and cyber resilience.

Self-Healing Resiliency

Resilient infrastructure is the first line of defense for your data and applications. NCP is designed to deliver high availability at scale. Our platform is fault resistant, with no single points of failure and no bottlenecks, providing best-in-class infrastructure resiliency and availability.

A self-healing architecture keeps applications running should failures occur. NCP is designed to detect, isolate, and recover from failures, survive system hardware, software, and hypervisor issues, and maintain data availability.

If a conventional storage system loses a drive, performance can suffer noticeably, and time is of the essence when replacing any failed hardware. If a Nutanix drive fails, active data is accessed from copies on other nodes, so the performance impact is minor; data redundancy is quickly restored in the background by re-establishing redundant copies of all data.

If an entire Nutanix node fails, workloads are automatically restarted on other nodes. Data is accessed from alternate copies, and data redundancy is restored quickly in the background. The more nodes in a cluster, the more widely distributed the recovery work, and the more resilient the system. Self-healing reduces the urgency associated with replacing failed hardware.

Larger Nutanix clusters also provide block (a block is a chassis containing one to four server nodes) and rack awareness for even greater resilience to failures.

Intelligent Platform Security

Cyberattacks are becoming more refined and harder to detect, meaning sensitive data is more vulnerable than ever. Your security tactics must evolve to address a growing number of security challenges, including:

- Increasing datacenter complexity
- Growing frequency and sophistication of cyberattacks including ransomware and data breaches
- Reliance on manual security controls that impact operational agility and increase risk
- Multicloud environments where security parameters are undefined and difficult to protect

Traditional infrastructure consists of products from multiple vendors, each with a narrow and limited view of security. Validating and maintaining a security baseline with this legacy approach is time-consuming. Responding to cyber events often involves error-prone manual processes that take too much time and reduce your effectiveness.

Nutanix makes security easy to implement and operate with built-in threat protections that harden your infrastructure, data, and apps while augmenting existing security resources and investments.

Three elements enable Nutanix to deliver intelligent security and cyber resilience at the platform level:

- Self-healing security
- Granular security insights
- Alignment of workload and data security



Self-Healing Security

Nutanix security begins with intelligent software designed to automate and operate critical security controls. These functions improve your security posture, help to detect security threats, prevent breaches, and prevent data loss while minimizing disruptions to ensure business continuity.

Nutanix incorporates industry best practices and government standards into a system that automates the configuration and monitoring of a secure baseline. Nutanix software self-heals when an anomaly is found, helping you achieve your security and compliance goals effortlessly.

Nutanix has developed its own security hardening guides—based on the US Department of Defense (DOD) Security Technical Implementation Guide (STIG) frameworks—that are easy to maintain and machine-readable. Nutanix software automatically configures itself without a lot of tedious manual settings or knobs to turn.

Regular health checks of an applied STIG baseline are performed automatically and—if a system is found non-compliant—the baseline settings are reset and reapplied, so that a hardened system remains compliant, reducing the risk of manual misconfigurations and configuration drift.

Security Insights on Your Terms

Nutanix provides security insight at every layer of your hybrid multicloud stack, including infrastructure, data, and workloads. By delivering platform-level monitoring on security-related events, Nutanix helps identify misconfigurations, vulnerabilities, anomalies, and potential attacks in your datacenter and across clouds:

Infrastructure

Ensuring the core platform is secure and hardened is the first step toward a stronger security posture. Nutanix helps you identify unchanged/weak passwords, anomalies resulting from security baseline deviations, and Common Vulnerabilities and Exposures (CVEs) across all your installed Nutanix systems.

Data

Securing your data begins with visibility into every type of data you produce. From large unstructured data sets to critical files and folders, Nutanix helps protect your data from malicious behavior, ransomware, and other cyber threats. Everything is holistically managed from a single pane of glass.

Workloads

NCP delivers a centralized view across all workloads (running in VMs or containers), on-premises or in the cloud. Intelligent analysis helps automate responses to anomalies or vulnerabilities. Nutanix also helps maintain industry and government-required governance and compliance.

Align Data and Workload Security

Nutanix enables you to align capabilities for protection, detection, and response to meet your data and workload security needs using powerful and quickly implemented solutions. As you identify unique security criteria, Nutanix provides the necessary tools to secure, monitor, and respond to those requirements at the infrastructure, data, application, and database levels.

Planning features help you quickly understand your current security landscape and implement security solutions such as:

- Network microsegmentation to protect data and application workflows
- Scanning for your entire database estate to identify vulnerabilities in infrastructure, data, and applications
- Compliance tools to meet PCI-DSS or HIPAA guidelines

Leverage built-in capabilities with a few clicks to enable data protection, VM-level encryption, and user-behavior analytics, creating a secure run-time state without adding third-party resources and tools that increase complexity.



Case Study: Utility Boosts Cybersecurity for Critical Systems with Nutanix Cloud Platform

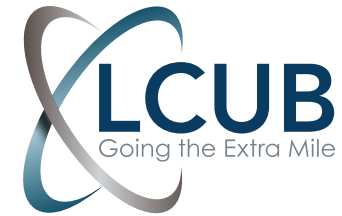
The Lenoir City Utilities Board (LCUB) provides water, electrical, wastewater, and gas services to its residents. Lenoir relies on Nutanix to support the utility's production Microsoft SQL Server, PostgreSQL, and MongoDB workloads and to provide enhanced capabilities for disaster recovery and ransomware recovery.

Ransomware and other cyber threats are a significant concern for utility providers given recent high-profile attacks against utilities and the importance of the services they provide. That may explain why LCUB has an expert on ransomware, Dr. William Jason Tuttle, as its Manager of Information Technologies.

“Nutanix is the perfect platform for recovering from ransomware because you can restore an entire server within seconds. We take snapshots of our production environment several times per day. If there ever is a ransomware attack, we have a quick way to go back in time without having to lose 24-hours-worth of data. We are subject to audits on a regular basis where we must restore a server. Since we've moved to Nutanix, we've never failed a recovery test.

Dr. William Jason Tuttle
Manager of Information Technologies, LCUB

[Read the Full Case Study](#)



Nutanix Benefits

- Improved ability to recover from disasters and ransomware
- **5x** reduction in management time
- **20x** faster performance
- **2/3** reduction in OpEx





Integrated Data Protection

Ensuring business continuity in the face of disruption and protecting business-critical data and applications are critical functions of IT. However, in today's digital-first world, data protection is not that simple. Organizations struggle with three major challenges:

- Ensuring that backups and recoveries are fast and reliable—without introducing unnecessary operational complexity
- Guaranteeing business continuity in the face of natural and manmade threats
- Protecting against ransomware and other cybercrime

Nutanix integrates and simplifies data protection to address these challenges, delivering the capabilities that are essential for cyber resilience and data protection from the edge to the datacenter and across clouds as part of its Secured Availability strategy.

Advanced availability and data protection capabilities include integrated snapshots and clones, automated failover, flexible replication options, and integrations with the leading backup ISVs you already use. Robust, built-in capabilities reduce the need for additional data protection products while making it simpler to meet the necessary recovery time objective (RTO) and recovery point objective (RPO) for each workload.

Data, Workload, and Database Backup and Recovery

Regular workload and data backups are critical to the protection of your business-critical applications and databases. Nutanix offers integrated tools that provide protection at multiple levels:

- On-cluster snapshots provide a first line of defense and the fastest and most convenient recovery from application problems or user errors.
- Remote backup replicates snapshots to a remote Nutanix cluster for longer-term retention and site-level resilience.
- Cloud backup uses a public cloud as a remote backup target.

Nutanix also integrates with popular third-party backup vendors to create a turn-key solution for backup and recovery leveraging the tools you already use, providing centralized visibility and policy-based control over data from creation to archival.

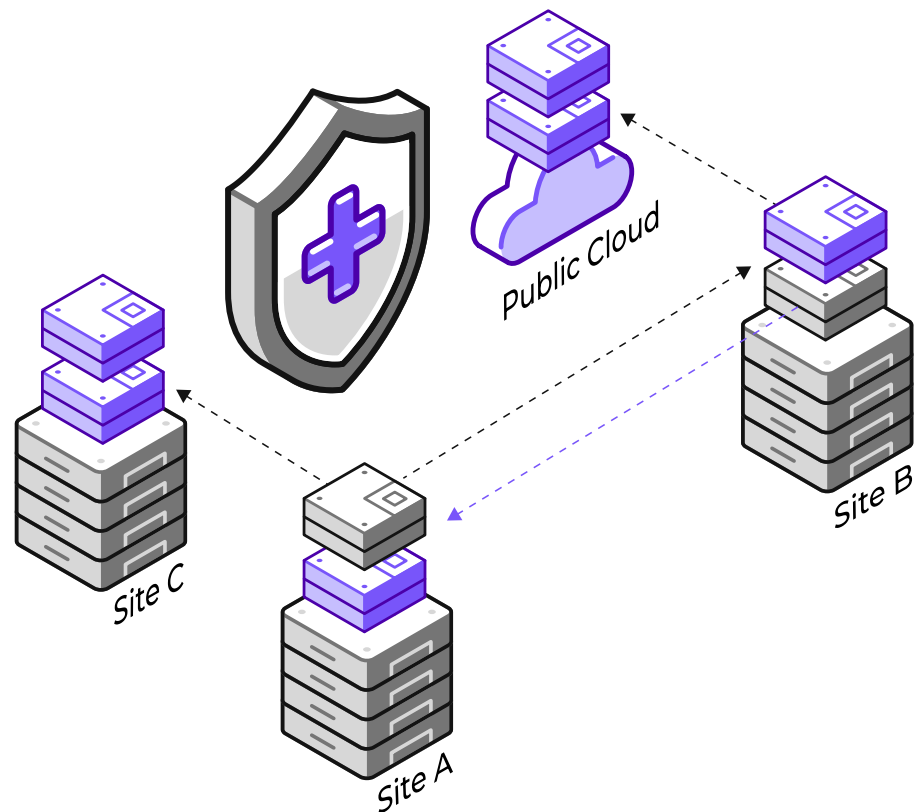
Disaster Recovery (DR)

Many disaster recovery (DR) solutions require the integration of third-party software which adds cost and complexity. As a result, important applications remain under-protected, putting business continuity at risk.

[Nutanix Disaster Recovery](#) is a natively integrated DR solution included with the Nutanix Cloud Platform that helps you stay prepared so you can minimize data loss and downtime should disaster strike. This solution helps you design DR plans that meet the specific needs of data, business-critical applications, and databases. With options that include recovery on-premises, to a public cloud, to an managed service provider (MSP), and disaster recovery-as-a-service (DRaaS), Nutanix DR offers one-click failover, failback, and automated recovery—so you can meet SLAs while eliminating data silos and reducing total cost of ownership (TCO).

[Nutanix Disaster Recovery-as-a-Service](#) (Nutanix DRaaS) builds on Nutanix core DR to create a fully managed DR service that eliminates the need for dedicated DR sites, minimizes data loss and downtime, and helps you meet RTO and RPO SLAs with greater confidence. As a fully managed cloud-based DR offering, Nutanix DRaaS helps you free up your IT teams and reduce TCO, while protecting critical applications and data from unexpected downtime or disruption. The service includes onboarding and multiple connectivity options.

Make Replication and DR Effortless Across Multiple Sites

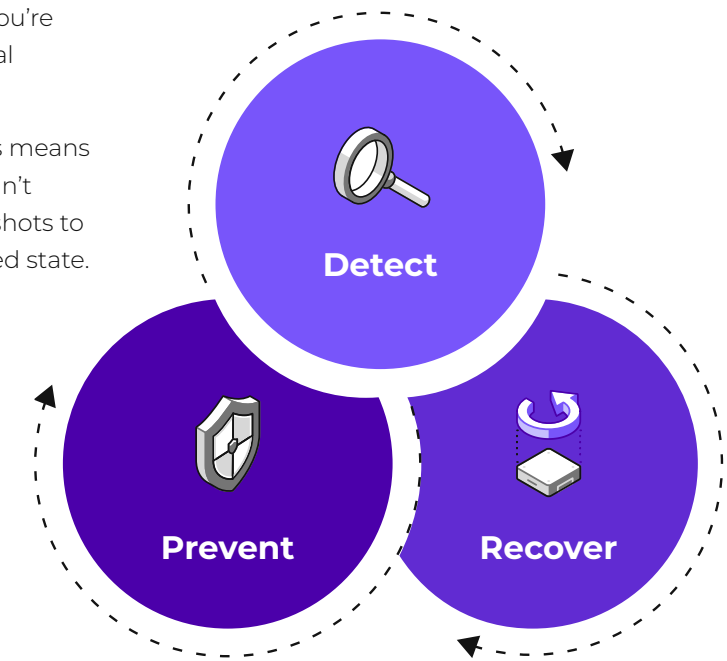


Ransomware Protection with Immutable Backups

Backups are the last line of defense against ransomware.

If threat actors succeed in encrypting primary data sets, your best hope is fast recovery from clean, uninfected backups. As a result, backups have themselves become a ransomware target; if you lose the ability to recover from backups, you're more likely to pay the ransom. Unfortunately, traditional backups are no match for sophisticated ransomware.

Nutanix snapshots are read-only and immutable. This means that if ransomware gains access to your backups, it can't encrypt or delete them. You can leverage these snapshots to quickly restore your workloads or data to an uninfected state.



Case Study: Medical Service Relies on Nutanix for Backup and DR

Baker County Medical Services (BCMS) was relying on a traditional 3-tier infrastructure stack to support its MEDITECH EHR system. With MEDITECH on the critical path for patient care, complex management and unacceptable service levels were having a significant impact.

BCMS now runs its MEDITECH EHR solution on Nutanix Cloud Platform, which includes end-to-end support for MEDITECH's File Servers, the core databases for the software. Nutanix delivers high performance and the highest level of patient data protection, exceeding MEDITECH's performance SLAs. In addition, Nutanix enhances patient privacy and data security with built-in security features, including data-at-rest encryption and microsegmentation.

Since moving to Nutanix, BCMS has experienced **99.99%** uptime for its EHR service, while also improving performance. Backups are a particular problem in MEDITECH environments, but Nutanix has helped the BCMS team streamline data protection and DR.

“Backups are traditionally very difficult in the MEDITECH environment. Disaster recovery is also much easier. With Nutanix, we don't have to deal with a separate cloud service or a third-party disaster recovery application anymore. By using the Nutanix all-in-one solution, we retain better control of our confidential data, and it's much more cost effective.

Ernie Waller,
IT Director, Baker County Medical Services

[Read the Full Case Study](#)



Nutanix Benefits

- **30%** faster MEDITECH client performance
- **99.99%** EHR availability
- Simplified management and non-disruptive upgrades
- Improved backups and DR



DBaaS with Nutanix Database Service

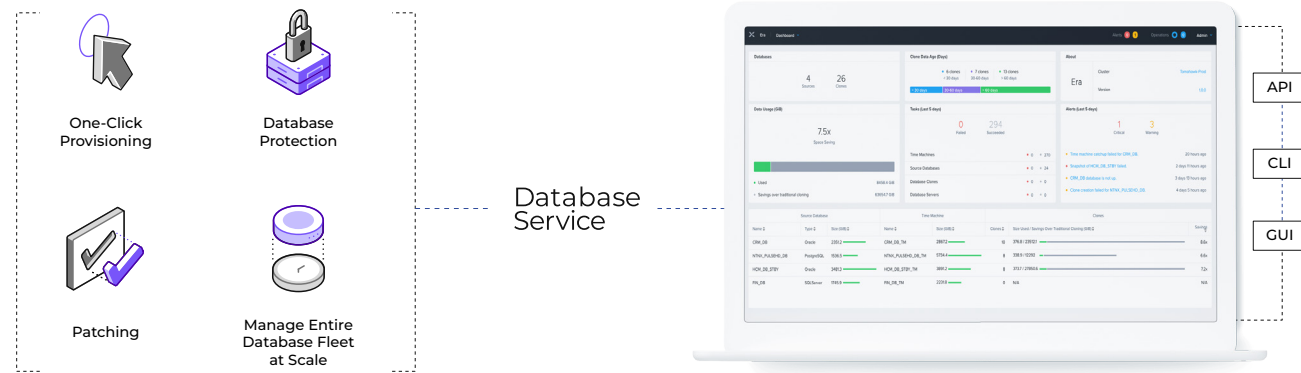
The number of databases under management is growing rapidly. Most business applications utilize a database, and modern applications with multiple microservices often use more than one. Even mid-sized organizations may run hundreds or thousands of database instances.

While most legacy applications run on proprietary databases, developers are increasingly turning to fit-for-purpose open-source databases, including PostgreSQL and MongoDB.

In addition, the public cloud now accounts for **40%** of database spend. Teams are making informed choices about which workloads are fit for the public cloud and which should stay on-premises, with more and more organizations employing a hybrid multicloud strategy.

As a result of these changes, database administrators spend most of their time on database management tasks—and not enough time focused on high-value projects that move your business forward.

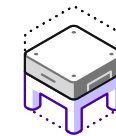
Developers, meanwhile, often end up waiting days, weeks, and sometimes even months for database administrator (DBA) teams to deliver requested resources, stifling innovation and slowing time-to-market for new software products.



What is Nutanix Database Service?

Nutanix Database Service (NDB) is the only hybrid multicloud DBaaS for Microsoft SQL Server, Oracle Database, PostgreSQL, MongoDB, and MySQL. NDB enables your team to efficiently manage hundreds to thousands of databases without complex migrations. With NDB, you can:

- Quickly and easily provision new databases
- Automate important but tedious administrative tasks like patching and backups
- Choose the right operating systems, database versions and database extensions to meet app and compliance requirements



Simplified database operations



Operational consistency and increased productivity



Retain control and maintain database standards



Accelerate software development

NDB is ideally suited for dynamic database operations, automating and simplifying database administration and bringing one-click simplicity and invisible operations to database provisioning and lifecycle management, with full support for different production and dev/test use cases.

NDB architecture makes it easier to keep database software up to date, reducing risk, and it enables you to provision, clone, and refresh databases at any point in time. Every operation is fully audited.



Secured Availability with Nutanix Database Service

NDB further enhances the security and availability of your database operations with simplified data protection and data management for multiple types of databases. This capability is particularly useful for organizations running several different database platforms.

NDB provides one-click backup to protect any size database in a full database-consistent manner in minutes. Space-efficient snapshots of critical database instances can be stored locally or on a secondary system, eliminating the need for third-party backup storage. Policies can be set to efficiently replicate VMs over a WAN to a remote Nutanix system to protect against catastrophes.

Benefits of Nutanix Database Service

Simplify Operations

Run each database wherever it is most cost effective, on-premises, in public clouds, or using a service provider or colocation

Automate Management

Ensure operational consistency and free up time for your teams to spend on higher-value tasks.

Accelerate Tasks

Perform patching, upgrades and backups using a single console to ensure operational consistency.

Gain Granular Control

Manage database servers to choose just the right database operating systems, versions, and extensions to meet application and compliance requirements.

Leverage Self-Service

Enable developers and other database users to provision services with just a few clicks from a single, self-service console to gain access to necessary resources and speed release velocity.

The Bottom Line: Better for Database Administrators and Better for Business

A leading analyst firm conducted a Nutanix-sponsored study on NDB. Key findings include:

- Increases speed of database provisioning
- Decreases storage requirements for copies and backups by **60%**
- Reduces the need for database administrator overtime by up to **50%**
- Reduces costs related to administration tool sets and licenses.

These benefits translate to tangible business results for the customers surveyed, including:

- Three-year **291%** ROI
- Recoup investment in less than six months
- **9,300** hours of downtime avoided

Case Study: Database Modernization with NDB

SB Technology Corporation, part of the SoftBank Group, was using Microsoft SQL Server in legacy infrastructure, but management tasks were requiring more time and effort. The company migrated operations to NCP and employed NDB to simplify the migration.

“Nutanix enabled us to build new databases with one-click simplicity. We’ve been building databases on legacy architecture up to now, so this is a revolutionary change. It makes database operations management simple enough that even those without special database management skills can serve as database admins, so this will hopefully also help resolve the shortage of qualified personnel.

Naoki Endo
Senior Engineer, Data Management, EC Management Dept., EC Services, SB Technology Corp.

[Read the Full Case Study](#)

SB Technology

Nutanix Benefits

- Database modernization in just **two months** with NDB
- Automated database backups and faster recovery
- Intuitive database management for non-specialists
- In-house development of modern apps



Getting Started with Business-Critical Apps on Nutanix Cloud Platform

Nutanix Cloud Platform increases the simplicity, performance, and availability of your business-critical apps and databases—on-premises, in the cloud, and at the edge—while increasing operating efficiency and delivering the agility you need to accelerate application development.

Nutanix replaces legacy SAN deployments with cyber-resilient infrastructure delivering consistent performance and simplified operations at scale. A data-first architecture commits IO during failure conditions for maximum resiliency and ensured data integrity. The use of Nutanix Database Service further simplifies database management at scale, with additional advantages such as self-service provisioning, easy cloning, integrated database backups, patching, and more.

If you're ready to find out more about running business critical apps on Nutanix, visit nutanix.com/solutions/business-critical-apps. To learn more about Nutanix Database Service visit nutanix.com/database-service.

You can also experience the simplicity, performance, and agility of our industry-leading HCI firsthand.

[Take a Test Drive](#)

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