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Accelerare lo sviluppo di applicazioni moderne su Openshift grazie a Nutanix Database Service (NDB)

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Businesses are Driving Strategic Initiatives with Numerous Constraints

Initiatives

Transform
Operate in new ways, engage new customers, and deliver exceptional experiences.

Grow
Automate to protect existing revenue and innovate to develop new revenue streams.

Manage Risk
Secure everything and maintain compliance across diverse locations, systems, networks, and apps.

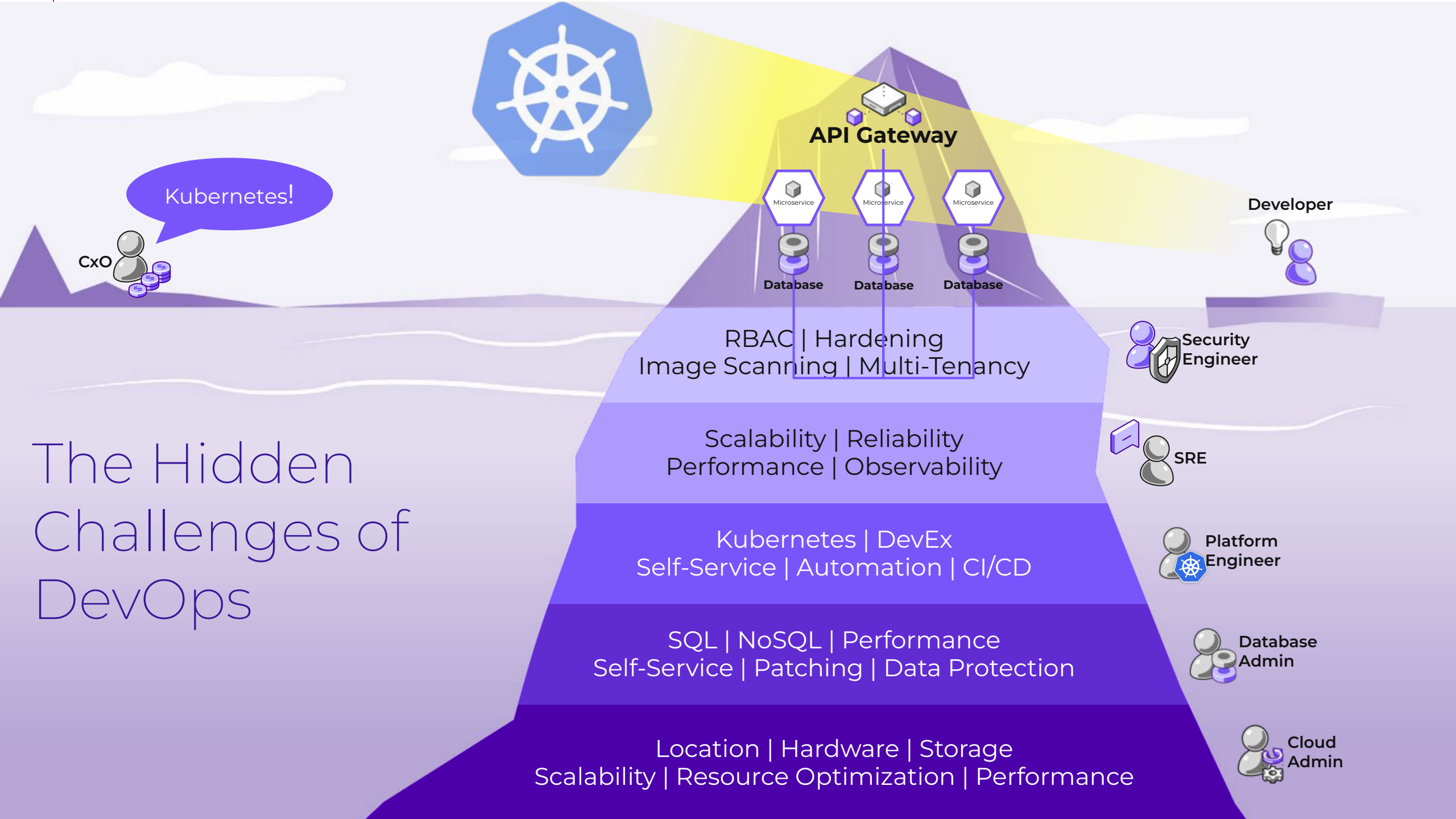
Constraints

Budget
Do more with less, focus on cost control, squeeze as much out of existing systems as possible.

Staffing
Address skills gaps and lack of specialized training that are barriers to transformation and growth.

Time
Accelerate development under economic and competitive pressure.

The Hidden Challenges of DevOps



Siloed Operating Models and Tools Just Can't Keep Up

Why?

- Too Slow
- Too Complicated
- Too Expensive
- Not Enough Skilled Talent

What's Needed?

- Adopt a DevOps culture
- Implement a Cloud Platform
- Focus on Automation
- Establish Best Practices

Common challenges in adopting a DevOps culture

Resistance to Change It's important to explain that the impact of change can be minimized to make it sustainable	Employees familiar to traditional processes may resist adopting new DevOps practices especially in Operations. This resistance can manifest in reluctance to learn new skills or collaborate across teams.
Legacy Systems and Technical Debt Leveraging a cloud platform can facilitate this transition	Outdated systems can complicate automation and create obstacles adopting DevOps, especially when transformation costs are high.
Communication Gaps Working in team on procedures, prevent internal conflicts	Effective communication is critical for DevOps success, silos between development and operations often lead to misunderstandings.
Too Many Tool It's important to start with essential tools based on immediate goals and gradually expand, ensuring team members are trained for effective use	Integrating multiple tools during the DevOps transition from the beginning can be overwhelming and inefficient.
Lack of Automation and Best Practices Adoption of best practice to standardize and simplify it's crucial for adoption	Manual processes slow development and increase errors. Implementing automation and self-service options, particularly in continuous integration and deployment, is vital for accelerating the development lifecycle and enhancing consistency.

Research Says that Organizations Want One Place to Manage Everything: A Consistent Cloud Operating Model

74%

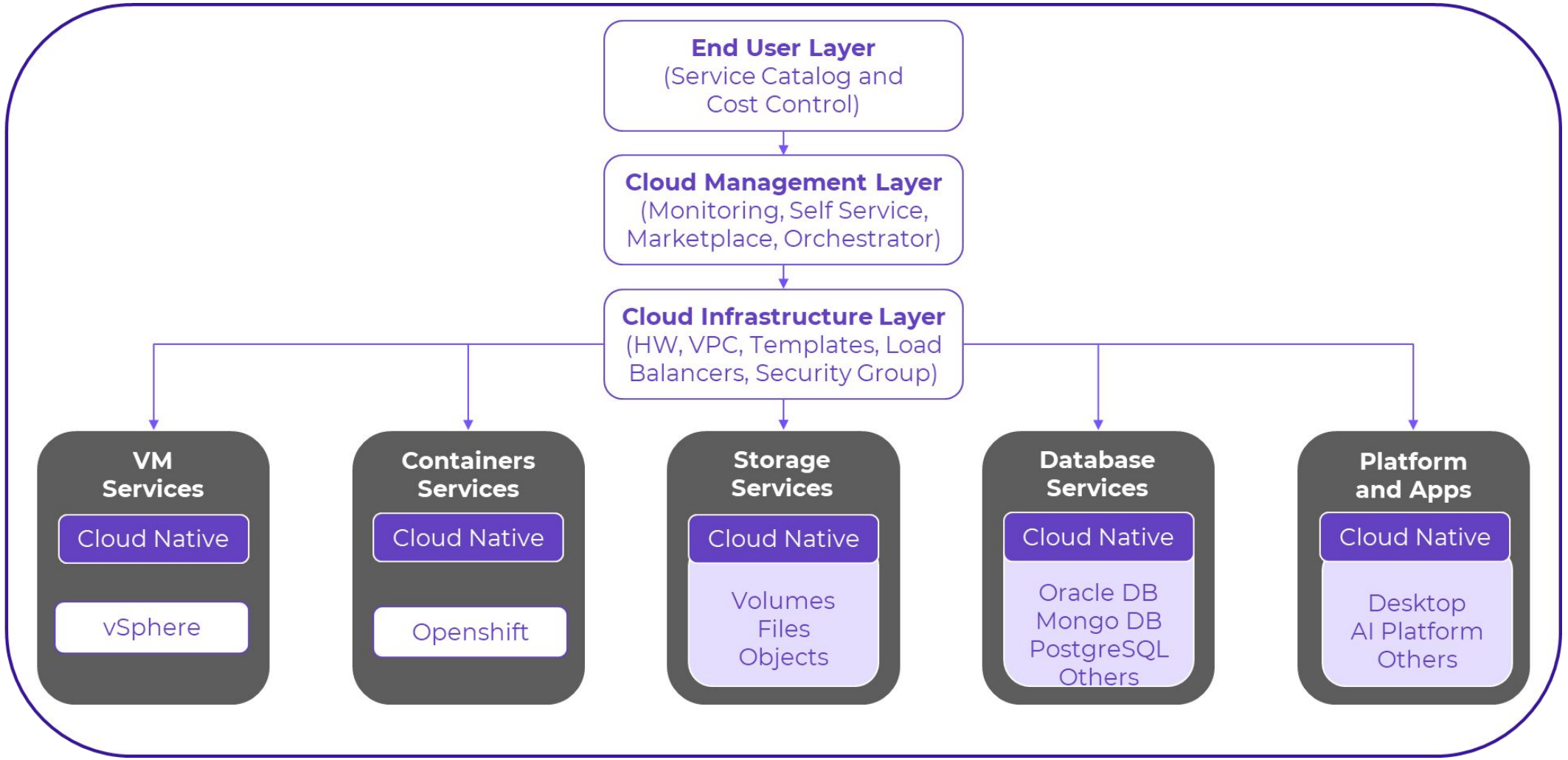
of IT teams are expected to leverage more than one IT infrastructure in the next 1-3 years, including a mix of private and public clouds, multiple public clouds, or an on-premises datacenter along with a hosted datacenter

94%

say they'd benefit from having a single, unified place to manage applications and data across diverse environments

5th Annual Nutanix Enterprise Cloud Index Report, April 2023

Cloud Platforms give fully Self-Service Experience



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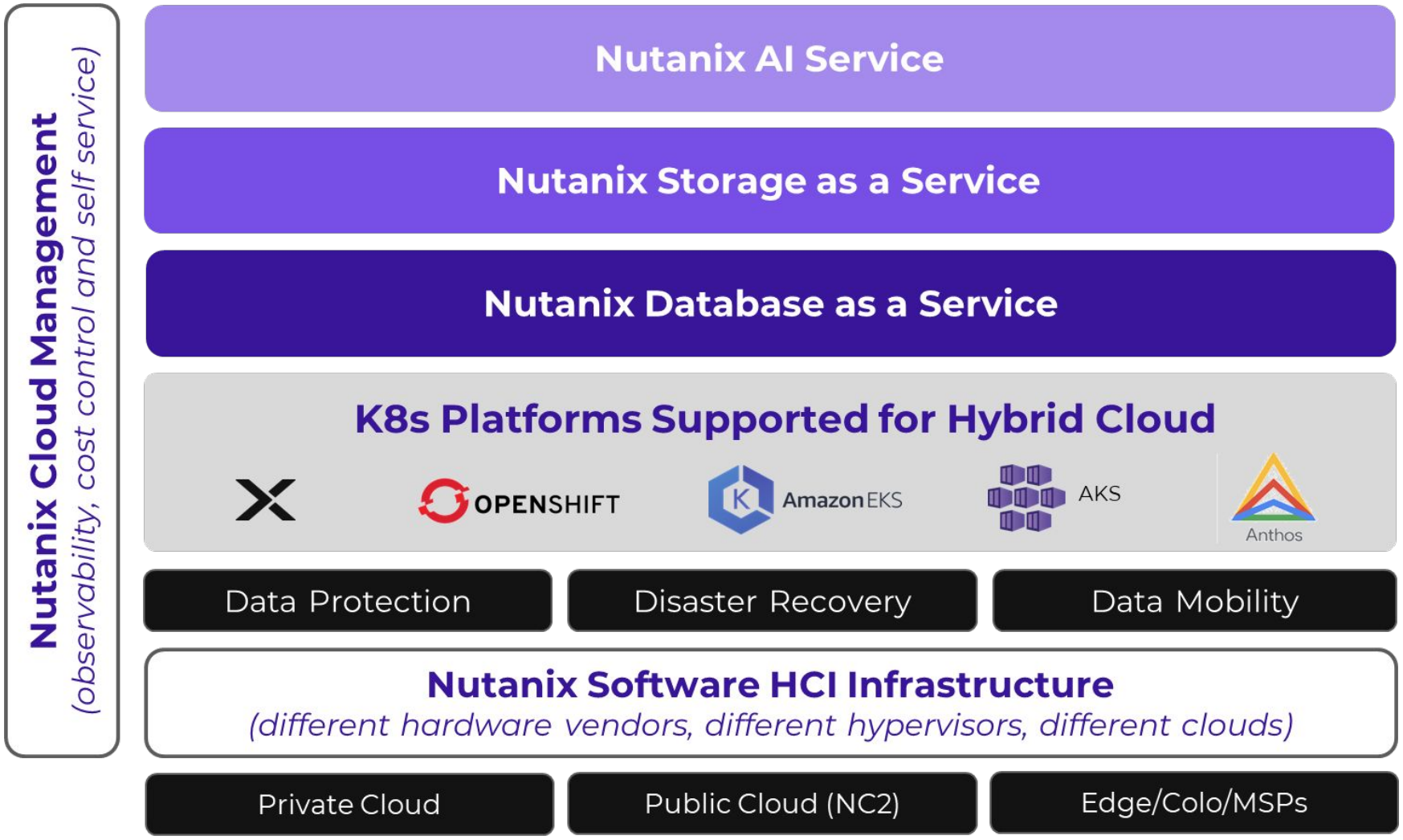
The Nutanix Cloud Platform

for legacy applications, modern applications and AI-driven applications



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Automation is the key to simplify DevOps adoption

DEVELOPMENT

Developer teams need self-service capabilities to accelerate the transition from coding to production.

- Innovation
- Time to Market
- Reliability

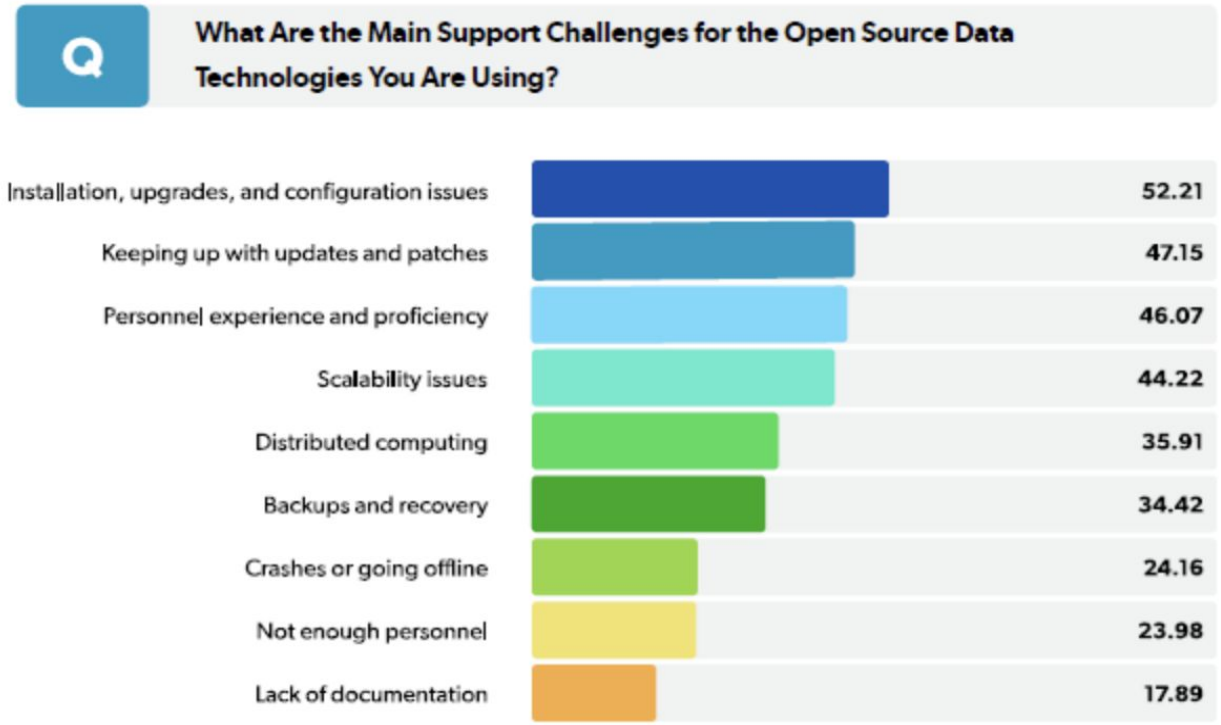
by enhancing collaboration, reducing bottlenecks and not increasing costs

OPERATIONS

Operations teams should leverage existing skills and knowledges to effectively manage emerging technologies and navigate increasing complexity.

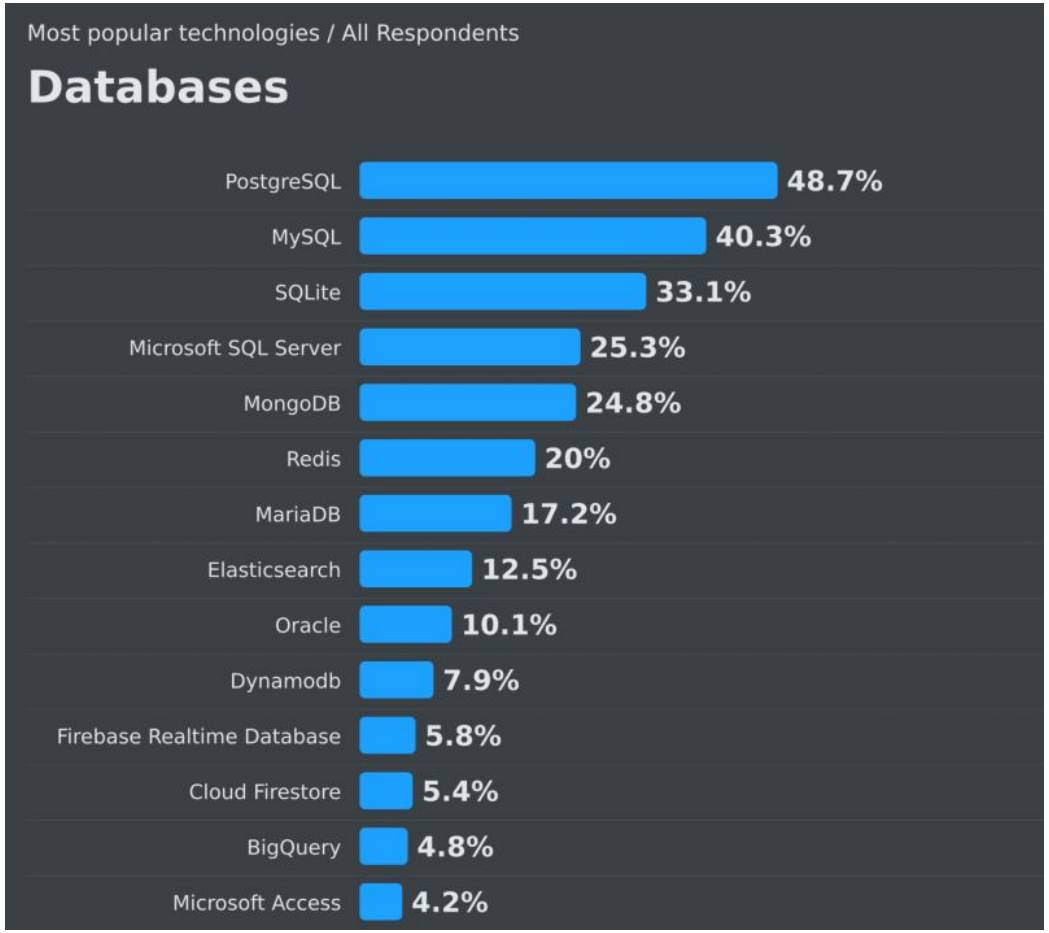
The Rise of Opensource Relational DB and NoSQL DB

Modern applications are driving the adoption of specialized, primarily open-source database technologies. Business-critical applications demand complex architectures that require advanced skills, which are often hard to find in the market.



Source: https://www.openlogic.com/resources/2022-open-source-report

Top-rated databases in 2024



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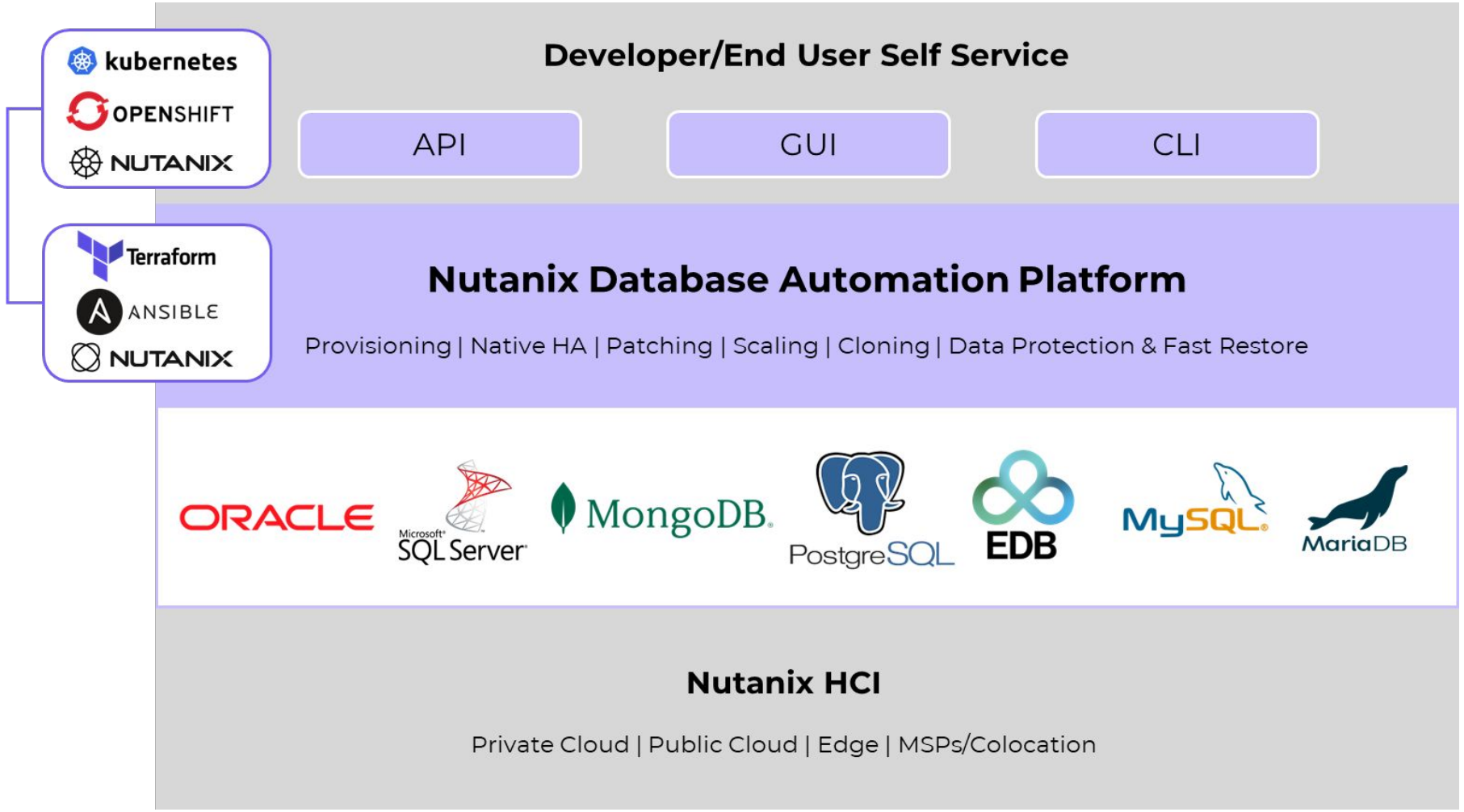
Nutanix Database Service (NDB)



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The 4 Essential requirements to mitigate security risks on your Modern Apps Data

Data Encryption

Encrypting data is crucial for security. Works at Virtual Machine (VM) and at Database engine-level. Use robust key management systems for cloud native services without VM-level access

Network Segmentation

It adds a necessary layer of defense against vulnerabilities exposed by port-scanning techniques, restricting lateral (east-west) movement of threats. Access rules should adhere to a least-privilege principle, ensuring that only authorized users or processes can access sensitive data.

Regular Patching

Consistent patching for databases and operating systems is critical for mitigating both new and known vulnerabilities. Many IT teams struggle with this due to time and resource constraints. Automation can simplify and accelerate the patching process, ensuring continuous protection.

Certified Golden Images

While widely used for IT infrastructure, this approach often faces challenges when applied to database deployment, as manual hardening steps by Database Administrators (DBAs) are required. Automation can extend the benefits to databases ensuring security at every stage of development..

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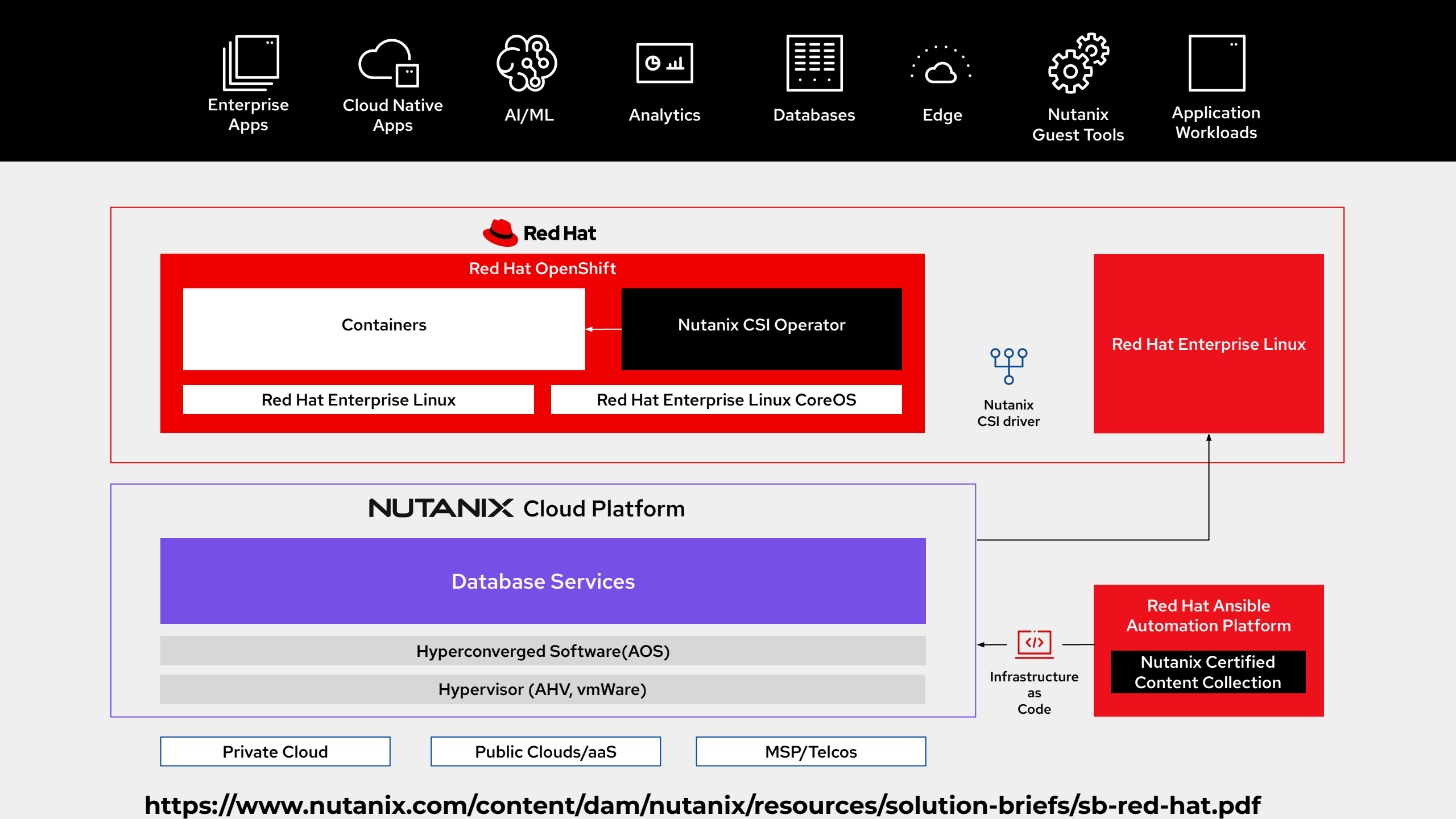

https://www.nutanix.com/content/dam/nutanix/resources/solution-briefs/sb-red-hat.pdf

Demo

02_ndb_create_connection.yaml

```yaml
apiVersion: ndb.nutanix.com/v1alpha1
kind: NDBServer
metadata:
  name: dur-ndb
  namespace: tme-ndb-demo
  labels:
    tier: ndb
spec:
  credentialSecret: ndb-secret
  server: https://10.48.13.51:8443/era/v0.9
  skipCertificateVerification: true
```

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Thank you