

# Book of Cloud Native Services

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The CNCF defines cloud native as "a set of technologies that empower organizations to build and run scalable applications in modern, dynamic environments such as public, private and hybrid clouds". The primary technologies driving this shift to application modernization include containers, microservices, and Kubernetes.

We believe Nutanix hyperconverged infrastructure (HCI) is the ideal infrastructure foundation for cloud native workloads running on Kubernetes at scale. Nutanix provides platform mobility giving you the choice to run workloads on both your Nutanix private cloud as well as the public cloud. The Nutanix architecture was designed keeping hardware failures in mind, which offers better resilience for both Kubernetes platform components and application data. With the addition of each HCI node, you benefit from the scalability and resilience provided to the Kubernetes compute nodes. Equally important, there is an additional storage controller that deploys with each HCI node which results in better storage performance for your stateful containerized applications.

The Nutanix Cloud Platform provides a built-in turnkey Kubernetes experience with Nutanix Kubernetes Engine (NKE). NKE is an enterprise-grade offering that simplifies the provisioning and lifecycle management of multiple clusters. Nutanix is about customer choice, customers can run their preferred distribution such as OpenShift, Rancher, Anthos, and others, due to the superior full stack resource management. Read more on that in the chapters below.

Nutanix Unified Storage provides persistent and scalable software-defined storage to the Kubernetes clusters. These include block and file storage via the Nutanix CSI driver as well as S3-compatible object storage. Furthermore, with Nutanix Database Service, you can provision and operate databases at scale.

The following chapters will cover these in more detail: