



# Nutanix Karbon: Efficient One-Click Kubernetes

## KEY BENEFITS OF KARBON

### Easy deployment of Kubernetes platform:

- Highly available deployment support: Multi-Master Control Plane
- Persistent storage support: CSI with Volumes / Files
- Integrated monitoring, logging, and alerting

### Easy operations of Kubernetes platform:

- Zero downtime upgrades for Node OS and Karbon Service
- On-demand scale up or down of Kubernetes workers

## THE OPERATIONAL CHALLENGE OF MANAGING THESE PLATFORMS

Containers are a rapidly growing technology that is drawing tremendous interest from IT customers. It is already in heavy production use in many hyperscale web and SaaS providers such as Google, which runs its entire infrastructure in containers. While containers are already deployed on a massive scale in some web companies, the rest of the market is in its very early steps. Commercial solutions have been in market for only a short time; public cloud container services are in a similar maturity stage. While much of the container ecosystem is open source, market growth will be strongly driven by commercially supported solutions or services.

Also, according to IDC, "Container construction and deployments are forecast to grow at very high rates over the next five years, particularly among enterprises and other large organizations."

Cyxtera is one of Karbon's early Tech Preview customers, and Karbon has already made a significant improvement in their business agility. According to Zach Hilliard, Senior Director of SREs, "Leveraging Nutanix Karbon, we can deploy a Kubernetes cluster in just a few minutes. Prior to Karbon, this process was complex, tedious and very time-consuming. Now, we are able to increase the business agility and serve our developer on demand with their container requests."

Many organizations are running vanilla (open source) Kubernetes or Kubernetes based PaaS/CaaS (Platform as a Service / Containers as a Service) distributions on top of Nutanix, but they are struggling with the operational burden that these platforms add to their already tight budgets; plus PaaS/CaaS is, in essence, another silo of management, infrastructure, operations that many are not aware of.

Customers need consumer-grade design in the world of Containers and Kubernetes. They do not want to invest in dedicated DevOps or SRE teams to keep Kubernetes online, up to date, or integrated with 3rd party components and tooling.

## NUTANIX KARBON

Nutanix Karbon is a private cloud, turnkey-curated, enterprise-grade Kubernetes service offering that simplifies the provisioning, operations, and lifecycle management of Kubernetes. Karbon makes it simple to deploy a highly available Kubernetes cluster and operate web-scale workloads.

Nutanix Karbon enables enterprises to provide a private-cloud Kubernetes solution with the simplicity and performance of public clouds. It is also part of a complete Cloud Native solution from Nutanix including storage (Volumes/Buckets/Files), database automation (Era), and enhanced monitoring (Epoch). Leveraging Karbon, developers can enjoy the native Kubernetes experience that is delivered fast while all complexities of infrastructure are abstracted with no additional costs. Karbon is included in all AOS software editions.

With a highly available deployment support, Multi-Master Control Plane, reliable and performant storage provided by the Nutanix HCI platform for block (Nutanix Volumes) and file (Nutanix Files) through CSI, and object storage via Nutanix Buckets, and integrated monitoring, logging, and alerting, Nutanix Karbon makes it simple for customers to deploy a highly available Kubernetes cluster.

Nutanix Karbon also offers zero downtime upgrades for Node OS and Karbon Service, as well as on-demand scaling up or down. This allows customers to easily operate web-scale workloads on a Kubernetes platform.

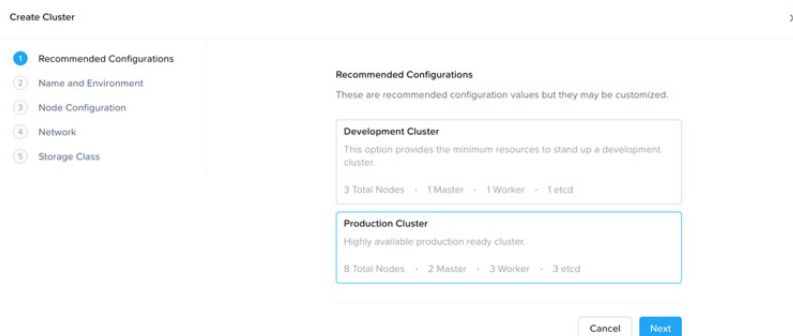
Karbon simplifies all Kubernetes operations:

Day 0: Install

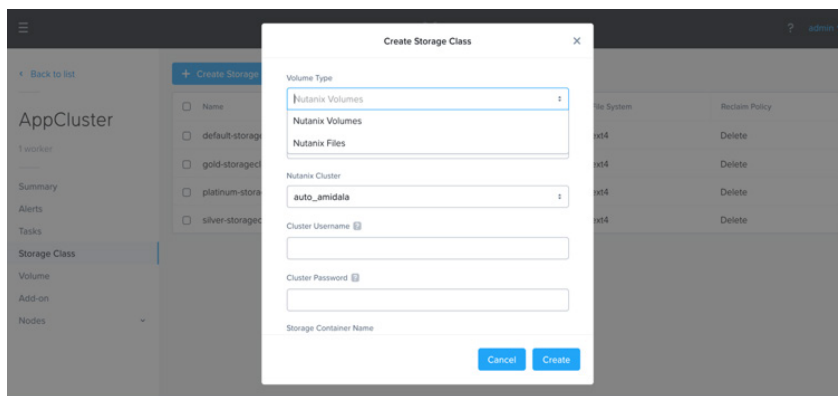
Day 1+: Configure & Operate, Optimize, Compliance, Upgrade, Patching.

Karbon One-Click Kubernetes includes:

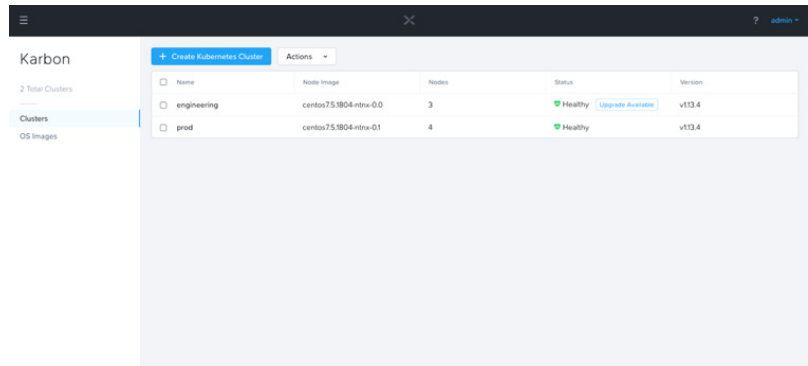
- Create cluster with recommended configuration. Provides easy installation and deployment of the Kubernetes platform.



- Storage class. Focused on integrated persistent storage for containerized applications through volumes files using CSI.



- Cluster list with upgrade available. Upgrading Node OS and Karbon: 0 downtime upgrades.



Leveraging Karbon, developers can enjoy the native Kubernetes experience and also make use of all the Cloud Native solutions/Nutanix HCI Platform offers such as DBaaS with Nutanix Era, Application Monitoring with Nutanix Epoch and more.

Nutanix Karbon allows organizations to be more agile and efficient. More importantly, they can save the cost of hiring additional dedicated resources to manage their infrastructure, help alleviate the pain of dealing with day to day monitoring, and further assist with the uptime of the Kubernetes cluster. With Karbon, IT teams can focus on the business, increase the rate of innovation, and decrease time to market—all while developers enjoy the fast, efficient native Kubernetes experience.



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