

# Kasten K10 - #1 Backup for Kubernetes

## Kubernetes is the leading enterprise application platform

Applications using microservice architectures and containers have quickly gained traction in the enterprise - an evolution from earlier monolithic models and virtualization. Innovators who make this transition choose Kubernetes as their container orchestrator. As such, Kubernetes is the fastest-growing infrastructure software.

Kubernetes provides high availability and scalability of application services, but these benefits do not extend to customer data. Data and application protection are a critical priority for Kubernetes workloads. Enterprises must extract data from the Kubernetes environment and store it securely while addressing “Day 2” production challenges.

*Kasten by Veeam deeply understands Kubernetes and the unique challenges in backup/restore, disaster recovery and application mobility in this environment. Kasten K10 helps enterprises confidently and successfully run applications on Kubernetes.*

## Kasten K10 Unique Value

### Built for Kubernetes

Purpose-built for Kubernetes using cloud native architectural principles

### Ease of Use

State-of-the-art multi-cluster management interface; cloud native API, easy install, extensible

### End-to-End Security

Support for RBAC, OIDC, Token Auth, IAM, and industry-standard encryption as well as data immutability to defeat ransomware attacks and avoid accidental or malicious deletion

### Rich Ecosystem

Extensive support across the entire application stack. Select the best tools or infrastructure.

## Kasten K10 Use cases

### Backup & Recovery

Multi-tenant, RBAC, Scale, Performance, Polyglot Persistence

### Disaster Recovery

Cross-AZ and Region, Multi & Hybrid Cloud, Storage Transformations

### Application Mobility

Cluster Upgrades, Application Transformations, Test/Dev Clusters

## Customers seek an alternative to current solutions

DevOps teams seeking an efficient solution to address the above needs are faced with key shortcomings in current solutions:

**Legacy architectures** lack the requisite elasticity and do not employ modern, declarative approaches resulting in weak fit with container-based environments.

**Operational Complexity:** Relying on multiple tools and scripts results in a highly complex and difficult to maintain architecture.

**Enterprise Data at Risk:** Inability to automatically discover and securely protect Kubernetes applications leaves data exposed and failing to meet compliance requirements.

**Limited Kubernetes ecosystem support:** Limited Kubernetes ecosystem support can tie enterprises to legacy products that require cumbersome customer scripting efforts.

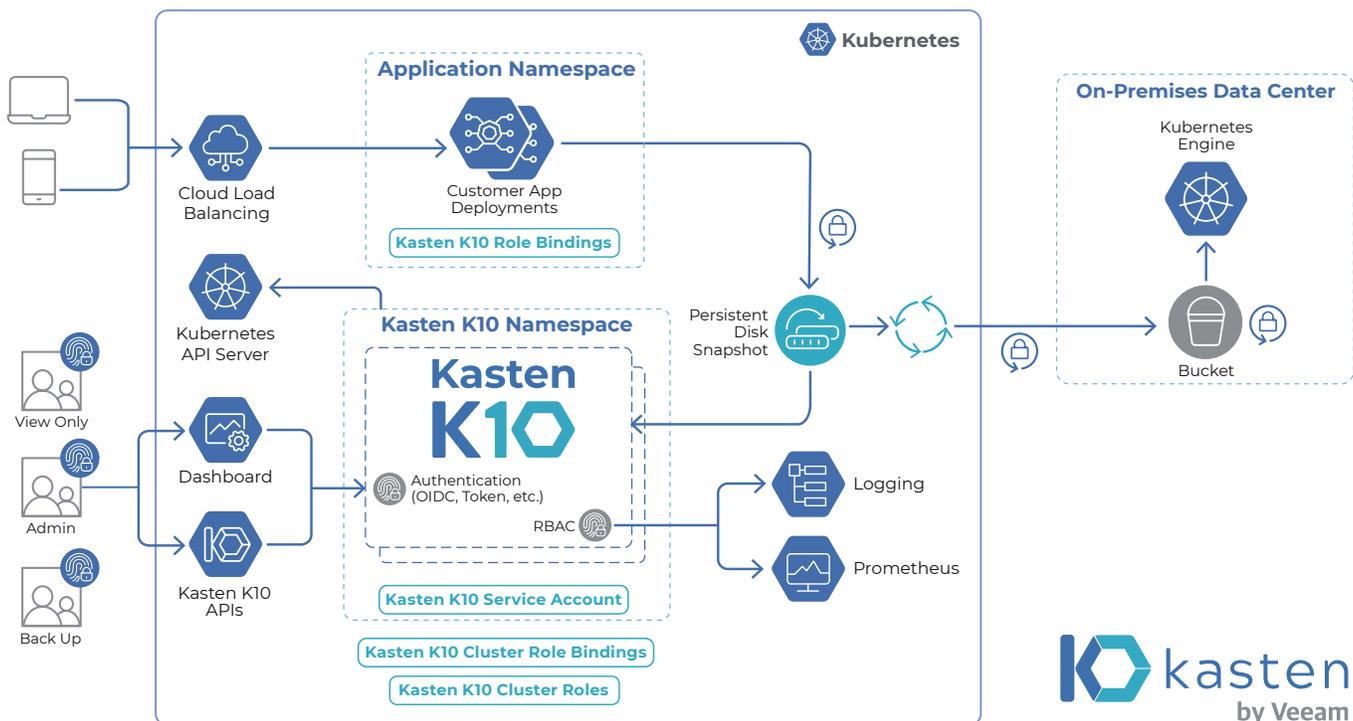
## Why Kasten K10: Leading in Kubernetes native data management

**The Kubernetes platform** is fundamentally different from all earlier compute infrastructures, using its own placement policy to distribute application components. Containers can be dynamically rescheduled or scaled. New application components can be added or removed at any time.

**A data management solution** needs to understand this cloud native architectural pattern, be able to work with a lack of IP address stability and deal with continuous change.

**Kasten K10** was purpose-built for Kubernetes and provides enterprise operations teams an easy-to-use, scalable and secure system for backup/restore, disaster recovery and mobility of Kubernetes application.

## Kasten K10: Technology Overview



## Spotlight - New for Release of Kasten K10 V4.5

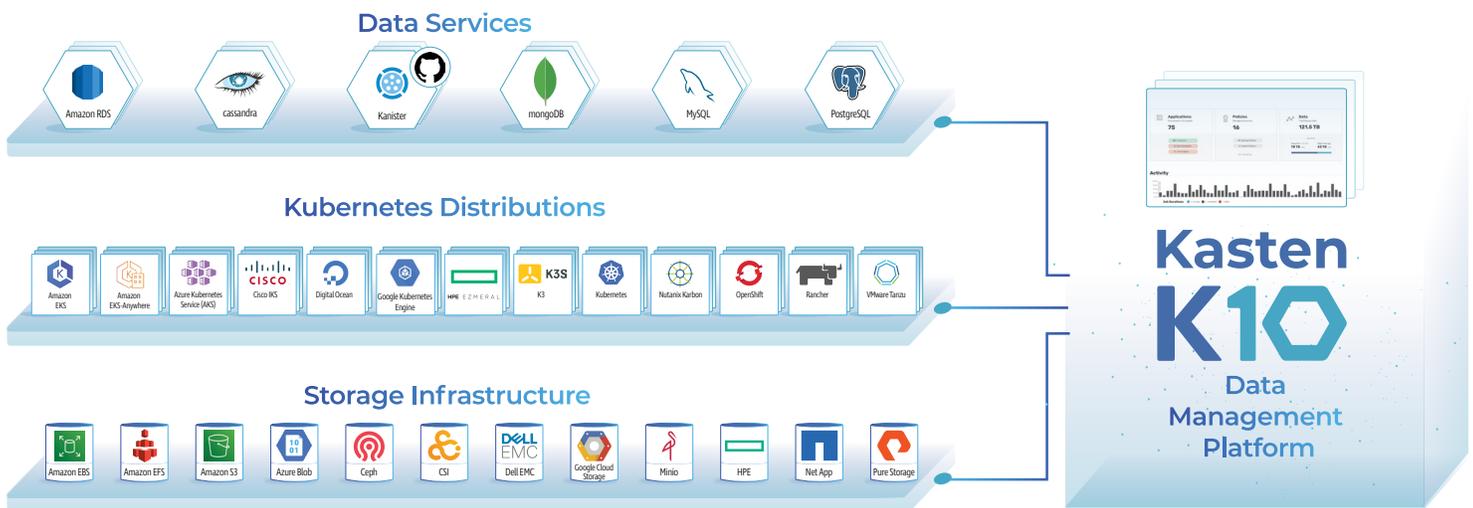
Improved Out of the Box Experience	Extensibility Enhancements	New Kubernetes Edge support	VBR integration
<p><b>Native RDS &amp; K8ssandra Support</b></p> <ul style="list-style-type: none"> <li>Automated Environment Discovery and Integration with Kasten K10</li> </ul>	<p><b>Integrations with external data services</b></p> <ul style="list-style-type: none"> <li>Simplified blueprint consumption, well documented how to guides</li> </ul> <p><b>External Monitoring, alerting</b></p> <ul style="list-style-type: none"> <li>Integration with popular analysis tools of choice: e.g: Prometheus, DataDog</li> </ul>	<p><b>K3s</b></p> <ul style="list-style-type: none"> <li>Highly available K8s distribution for remote workloads</li> </ul> <p><b>Amazon EKS Anywhere</b></p> <ul style="list-style-type: none"> <li>Fast growing Kubernetes deployment on premises and in the cloud</li> </ul>	<p><b>Unified backup target support</b></p> <ul style="list-style-type: none"> <li>Veeam Backup &amp; Replication backups and Kasten K10 PVC backups on vSphere</li> </ul>

## Kasten K10 Top Features and Benefits

Category	Features	Benefits
<p><b>Built for Kubernetes</b> Kasten K10 is purpose-built for Kubernetes and is constructed using cloud-native architectural principles.</p>	<p><b>Application-centric</b></p> <p><b>Polyglot persistence</b></p> <p><b>State-of-the-art dedup</b></p>	<p>Captures the entire application stack with a consistent application-to-infrastructure view</p> <p>Supports cloud-native applications that simultaneously use multiple data services</p> <p>Source-side deduplication tailored for cloud-native application data access</p>
<p><b>End to End Security</b> Kasten K10 provides comprehensive end-to-end security via enterprise-grade features.</p>	<p><b>Ransomware protection</b></p> <p><b>RBAC: support for role-based access control</b></p> <p><b>Encryption</b></p>	<p>Immutability and policy based automation to protect against malicious or accidental backup corruption</p> <p>Ensures appropriate permissions levels for level of access needed (e.g. admin vs. user)</p> <p>End-to-end encryption of application/ configuration/ data and associated metadata artifacts in flight and at rest</p>
<p><b>Ease of use</b> Kasten K10 is quick to deploy and easy to use via a state-of-the-art management interface or a cloud-native API. It has the versatility to accommodate complex applications easily.</p>	<p><b>Extensibility</b></p> <p><b>Simple Installation and Automatic Application discovery</b></p> <p><b>Advanced Management Interface</b></p>	<p>Uses blueprints from open-source Kanister framework to add support for new or custom applications</p> <p>Installs via a single Helm command or via cloud market provider marketplaces.</p> <p>Integrates monitoring, management and alerts for all Kasten K10 management actions</p>
<p><b>Rich Ecosystem</b> Kasten K10, with extensive support for ecosystem components across the entire application stack, supports user choice to pick the best tools or infrastructure for the job.</p>	<p><b>Data Services</b></p> <p><b>Distributions</b></p> <p><b>Storage</b></p>	<p>Supports all leading applications and data sources (e.g. Cassandra, MongoDB, Kafka etc..)</p> <p>Provides broad Kubernetes distros support (e.g. OpenShift, Rancher, etc.) and cloud vendors (Google, Azure, etc.)</p> <p>Supports Cloud Storage (e.g., AWS, Google, Azure) and on-prem: e.g., EMC, NetApp, etc.)</p>

## Kasten Ecosystem - out of the box integrations & extensibility

Integrations	Extensibility
<p>Integrating and testing with key partners in data services, Kubernetes distributions, storage and observability</p> <p>Providing pre-integrated tools to minimize time to market for new deployments with key partner technologies</p>	<p>Providing flexibility to select the best tools available in the wider Kubernetes ecosystem</p> <p>Enabling easy integration of partner tools of choice in operational Kubernetes environments.</p>



## Resources

Blog: <https://blog.kasten.io/>

Case Studies: <https://www.kasten.io/kubernetes/resources/customer-case-studies/>

Data Sheets: <https://www.kasten.io/kubernetes/resources/data-sheets>

Videos: <https://www.kasten.io/kubernetes/resources/videos>

Kasten by Veeam® is the leader in Kubernetes backup and disaster recovery. Its solution helps enterprises overcome Day 2 data management challenges to confidently run applications on Kubernetes. Kasten K10, its data management platform purpose-built for Kubernetes, provides enterprise operations teams an easy-to-use, scalable, and secure system for backup/restore, disaster recovery, and application mobility with unparalleled operational simplicity. Kasten is an independent Kubernetes Business Unit within Veeam. For more information, visit [www.kasten.io](http://www.kasten.io) or follow [@kastenhq](https://twitter.com/kastenhq) on Twitter.