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# Kasten by Veeam

Backup, DR e migrazione multi-cloud  
per **Red Hat OpenShift**

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Presales Manager, Italy

Veeam Software

**veeam**

## Best of Breed Technology Alliance

“

Data protection and backup is a necessity for managing Kubernetes at scale across the hybrid cloud. We are pleased to collaborate with **Kasten by Veeam** so organizations across the globe can use Kasten K1O data management platform with **Red Hat Openshift** to rollout, upgrade and protect their cloud-native applications.

”

**Joe Fernandez**

*VP and GM, Core Cloud Platforms at RedHat*

# Kasten by Veeam: our Mission

Kasten's **Mission** is tackling Day 2 data management challenges to help enterprises confidently run applications on **Kubernetes**.



**Backup & Restore**



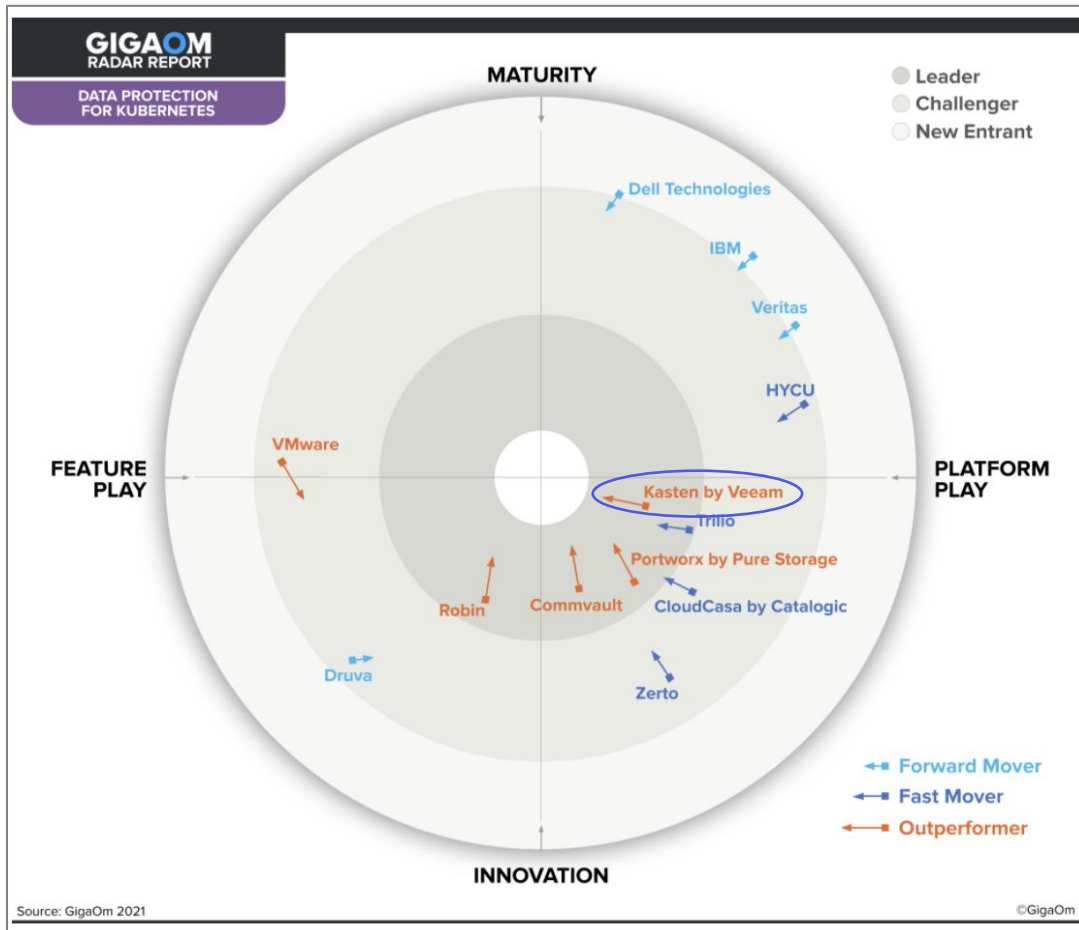
**Disaster Recovery**



**Application Mobility**



# Kasten by Veeam: industry recognition



*Kasten K10 is a Kubernetes-native, mature solution that's very suitable for self-hosted, self-managed use cases. Its architecture scales well and is especially well-suited for edge deployments.*

*It's RBAC features and centrally managed policy model are well aligned with large enterprise and self-service requirements.*

*It's application-aware data management framework, Kanister, is promising and quickly maturing. It has good support for on-premises repositories.*

Enrico Signoretti  
Senior Data Storage Analyst, GigaOm  
December 2021



# Kubernetes Data Protection – Key customer asks



## Kubernetes native

Automation and workflows in Kubernetes native environments



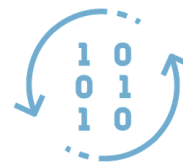
## Multi-layered consistency

Consistent data and application resources capture



## Freedom of choice

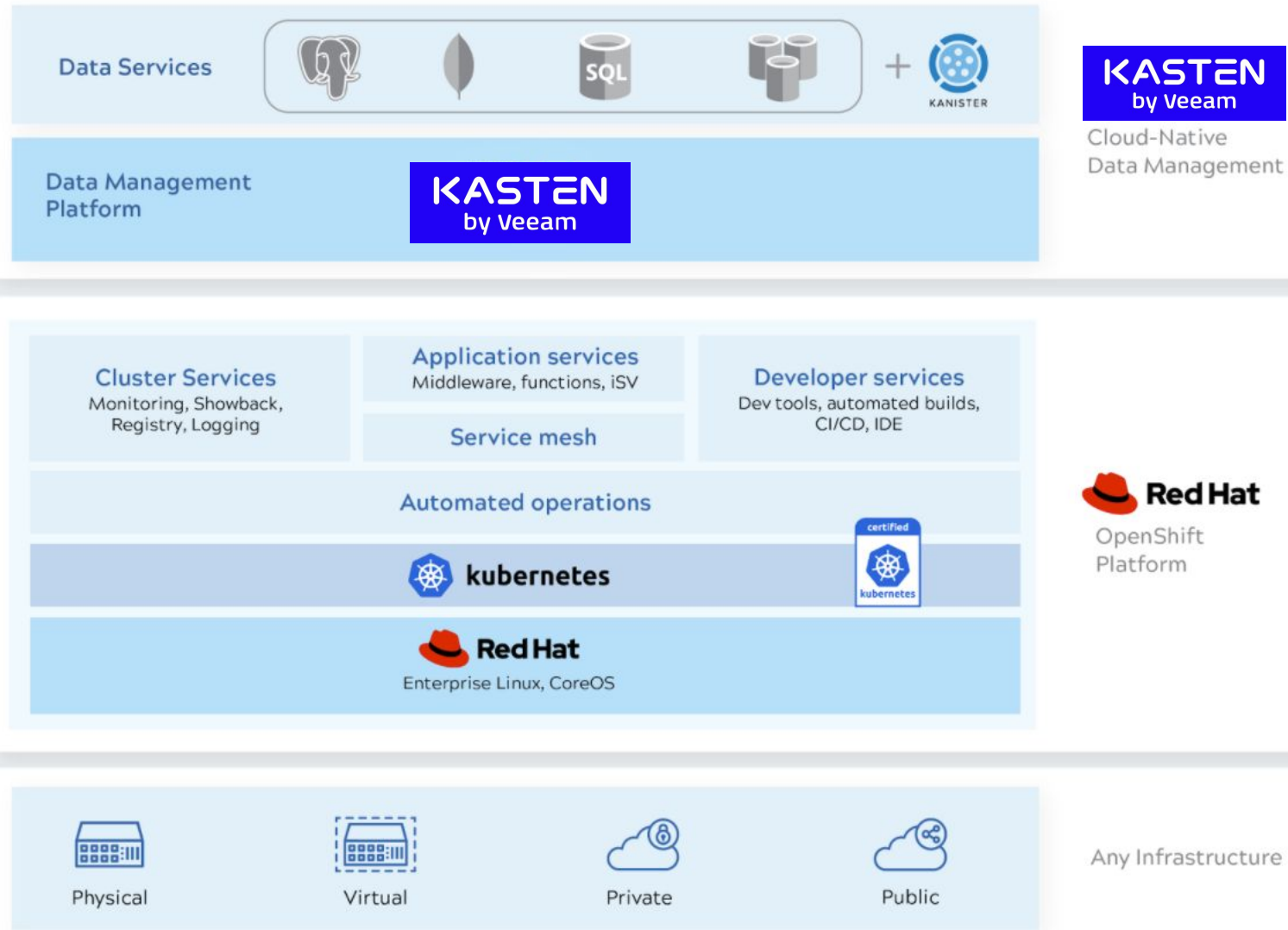
Avoid fragmentation and enable deployment flexibility



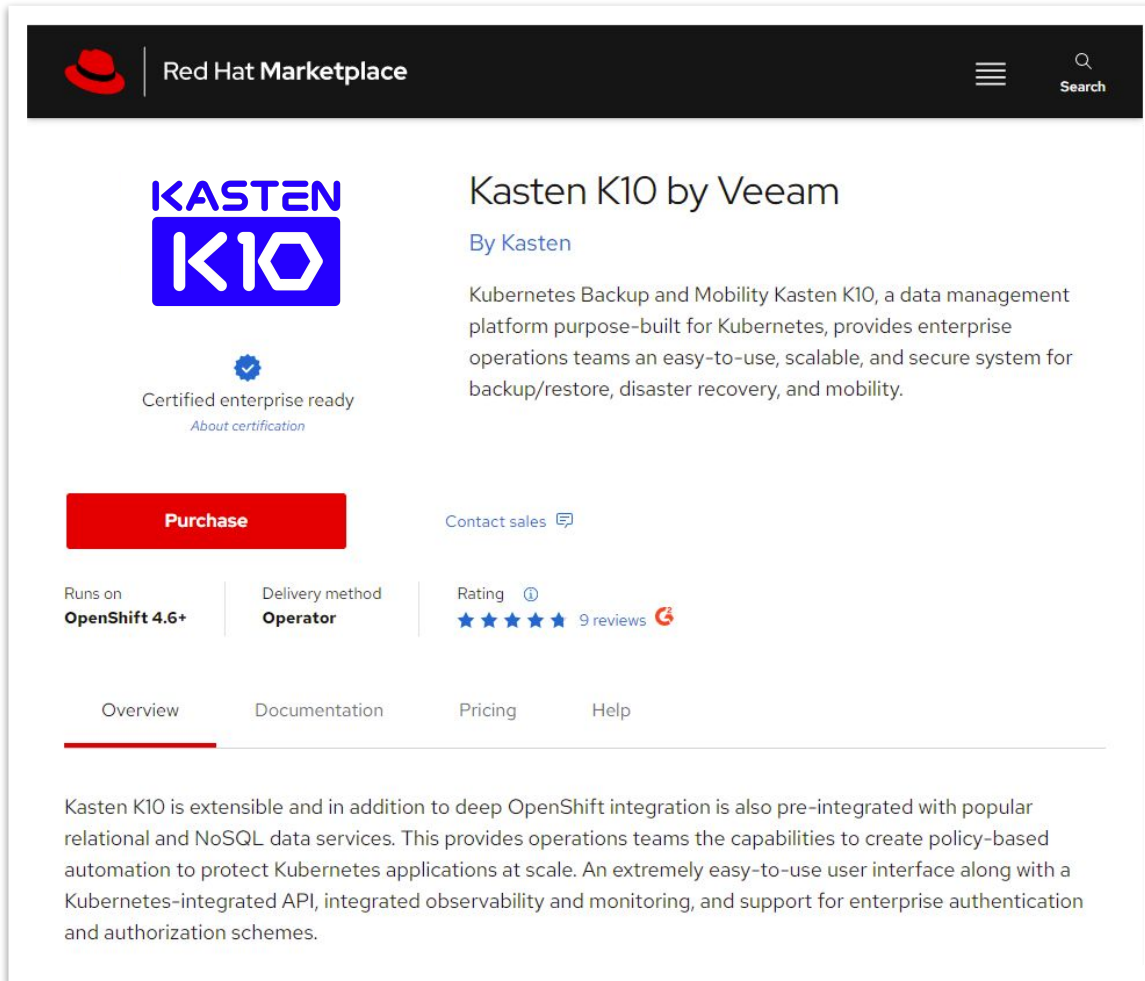
## DevOps speed & scale

Shift-left environments and secure self-service

# Kasten by Veeam + Red Hat OpenShift



# Kasten on Red Hat Marketplace



The screenshot shows the Red Hat Marketplace interface for the Kasten K10 by Veeam product. The header includes the Red Hat logo and 'Red Hat Marketplace' text. The main content area features the Kasten K10 logo, a 'Certified enterprise ready' badge, and a 'Purchase' button. Below the purchase button, there are details for 'Runs on OpenShift 4.6+', 'Delivery method Operator', and a 'Rating' of 5 stars based on 9 reviews. A 'Contact sales' link is also present. At the bottom, there are navigation tabs for 'Overview', 'Documentation', 'Pricing', and 'Help'. The 'Overview' tab is selected, showing a paragraph of text describing the product's extensibility and integration with OpenShift and various data services.

**KASTEN K10**

Certified enterprise ready  
[About certification](#)

**Purchase**

Contact sales

Runs on **OpenShift 4.6+**

Delivery method **Operator**

Rating ①  
★★★★★ 9 reviews

Overview | Documentation | Pricing | Help

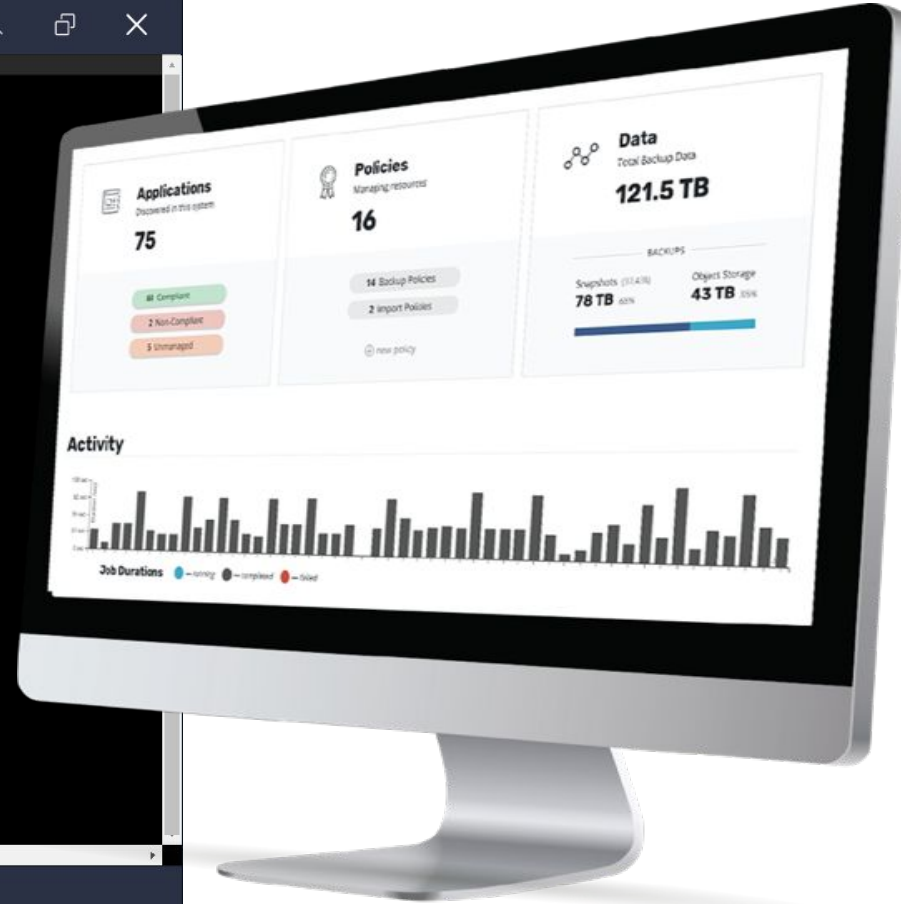
Kasten K10 is extensible and in addition to deep OpenShift integration is also pre-integrated with popular relational and NoSQL data services. This provides operations teams the capabilities to create policy-based automation to protect Kubernetes applications at scale. An extremely easy-to-use user interface along with a Kubernetes-integrated API, integrated observability and monitoring, and support for enterprise authentication and authorization schemes.

- Backup and DR for OpenShift
- Flexible purchase options
- Level III certified operator with full lifecycle capabilities (backup, failure recovery / DR)



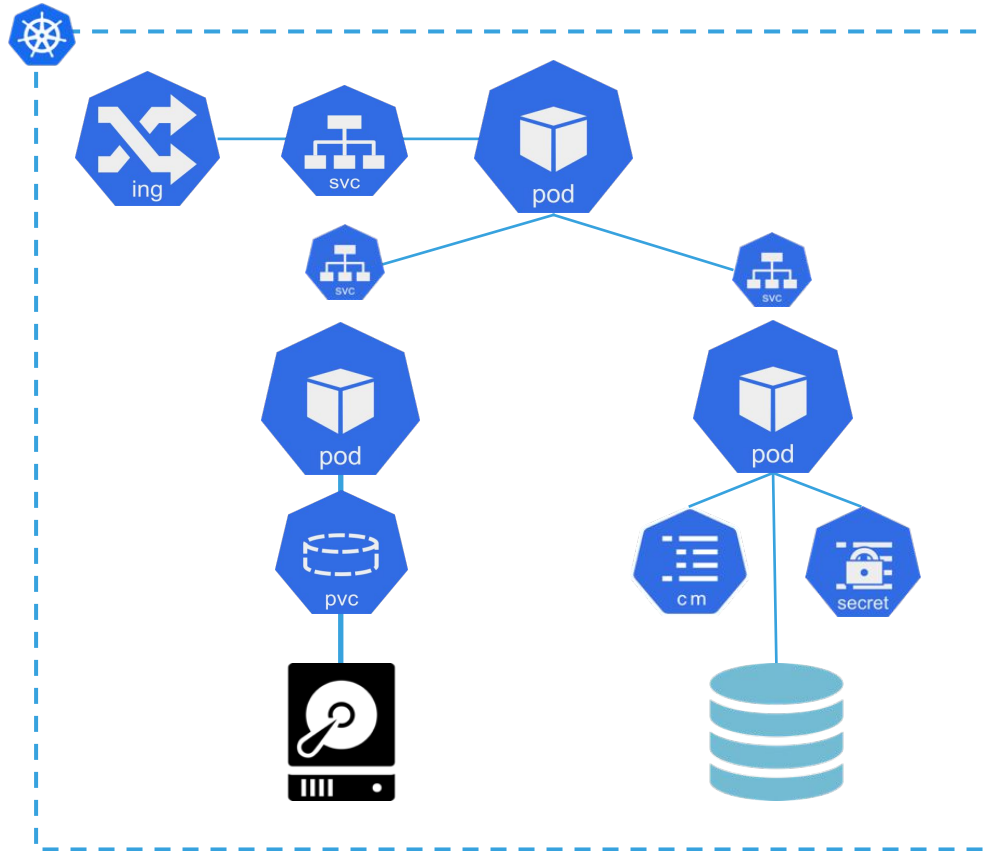
# Kubernetes-native, policy-based protection

```
mysql-backup
1 kind: Policy
2 apiVersion: config.kio.kasten.io/v1alpha1
3 metadata:
4   name: mysql-backup
5   namespace: kasten
6   uid: 9b29e82b-7164-4c89-b306-6206848129e0
7   resourceVersion: "97195772"
8   generation: 2
9   creationTimestamp: 2022-09-28T10:24:04Z
10  managedFields:
38 spec:
39   frequency: "@daily"
40   subFrequency:
41     minutes:
42       - 0
43     hours:
44       - 4
45     weekdays:
46       - 0
47     days:
48       - 1
49     months:
50       - 1
51   retention:
52     daily: 7
53     weekly: 4
54   selector:
55     matchExpressions:
56       - key: k10.kasten.io/appNamespace
57         operator: In
58         values:
59           - mysql
60   actions:
61     - action: backup
62       backupParameters:
63         filters: {}
64         profile:
65           name: gcs-dchiavari
79   retention: {}
80
```





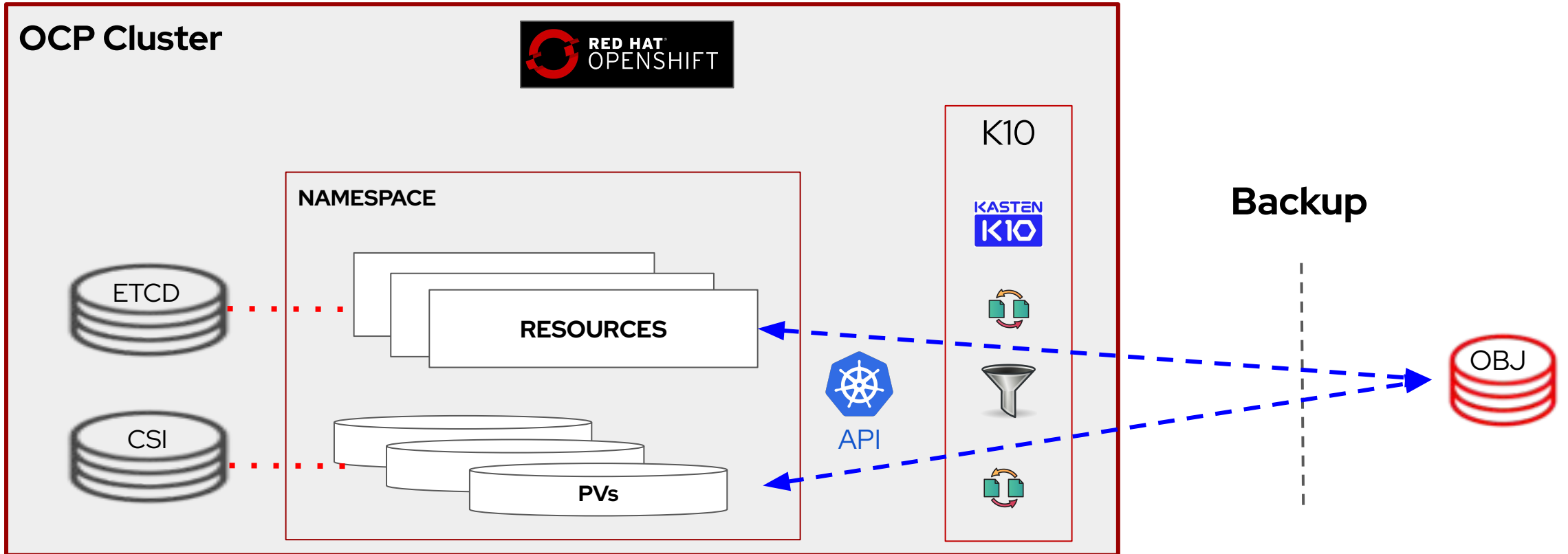
## How Kasten K10 by Veeam works



### Applications as the Operational Unit

- Perform complete application capture
- Abstract underlying infrastructure
- Perform coordinated operations

# How Kasten K10 by Veeam works



## Application Transforms – Kasten K10 by Veeam

### Restore Point

**Application Name**  
Select a namespace to restore into. The contents of the selected namespace will be overwritten with the restored application.

app-1 ×

[+ Create a New Namespace](#)

**Optional Restore Settings**

**Pre and Post-Restore Action Hooks**  
Optional blueprint actions to be run before or after restores complete

- Before
- After - On Success
- After - On Failure

**Data-Only Restore** 🗨  
Restore only the volume data and exclude other artifacts such as config files.

**Don't wait for workloads to be ready**  
Specifies whether the restore action should skip waiting for all workloads (Deployments, StatefulSets or DeploymentConfigs) to be ready before completing.

**Apply transforms to restored resources**  
On restore, change the contents of spec resources. This may be useful when migrating between environments. For example, you can change storage classes or edit container image names.

[+ Add New Transform](#)

[Restore](#) [Cancel](#)

Resource	Transform Examples
Ingress	Change FQDNs
Service Account	Merge image pull Secrets
Storage	Change StorageClass
Registry	Transform registry URLs for applications
StatefulSets	Transform DNS names, e.g., workload URLs
Secrets	Filter by label, e.g., Remove TLS secret for auto-regeneration
OpenShift	Internal updates, e.g., OCP ImageStream tags

# Application Transforms – Kasten K10 by Veeam

### Test Transform

**Operations**

- > **Replace**
  - path `"/spec/ports/0/targetPort"`
  - value `6380`

**Original Resource**  
Paste a test resource here — JSON or YAML

```
1 apiVersion: v1
2 kind: Service
3 metadata:
4   creationTimestamp: 2019-05-23T15:48:38Z
5   labels:
6     app: redis
7     chart: redis-7.1.0
8     heritage: Tiller
9     release: wanton-cat
10  name: wanton-cat-redis-master
11  namespace: redis
12  resourceVersion: "22491736"
13  selfLink: /api/v1/namespaces/redis/services/v
14  uid: 3b513112-7d72-11e9-9bf4-42010a8a0204
15 spec:
16   clusterIP: 10.55.250.25
17   ports:
18     - name: redis
19       port: 6379
20       protocol: TCP
21       targetPort: redis
22   selector:
23     app: redis
24     release: wanton-cat
25     role: master
26   sessionAffinity: None
27   type: ClusterIP
28 status:
29   loadBalancer: {}
30
```

**Transformed Resource**  
Transform result will be placed here.

```
1 apiVersion: v1
2 kind: Service
3 metadata:
4   creationTimestamp: 2019-05-23T15:48:38Z
5   labels:
6     app: redis
7     chart: redis-7.1.0
8     heritage: Tiller
9     release: wanton-cat
10  name: wanton-cat-redis-master
11  namespace: redis
12  resourceVersion: "22491736"
13  selfLink: /api/v1/namespaces/redis/servic
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23     app: redis
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27   type: ClusterIP
28 status:
29   loadBalancer: {}
30
```

</> Paste an existing resource for testing... ▾

## Kasten K10 by Veeam – Main features



### Built for Kubernetes

Purpose-built for Kubernetes using cloud native architectural principles



### Security Everywhere

Support for RBAC, OIDC, Token Auth, IAM and industry-standard encryption



### Rich Ecosystem

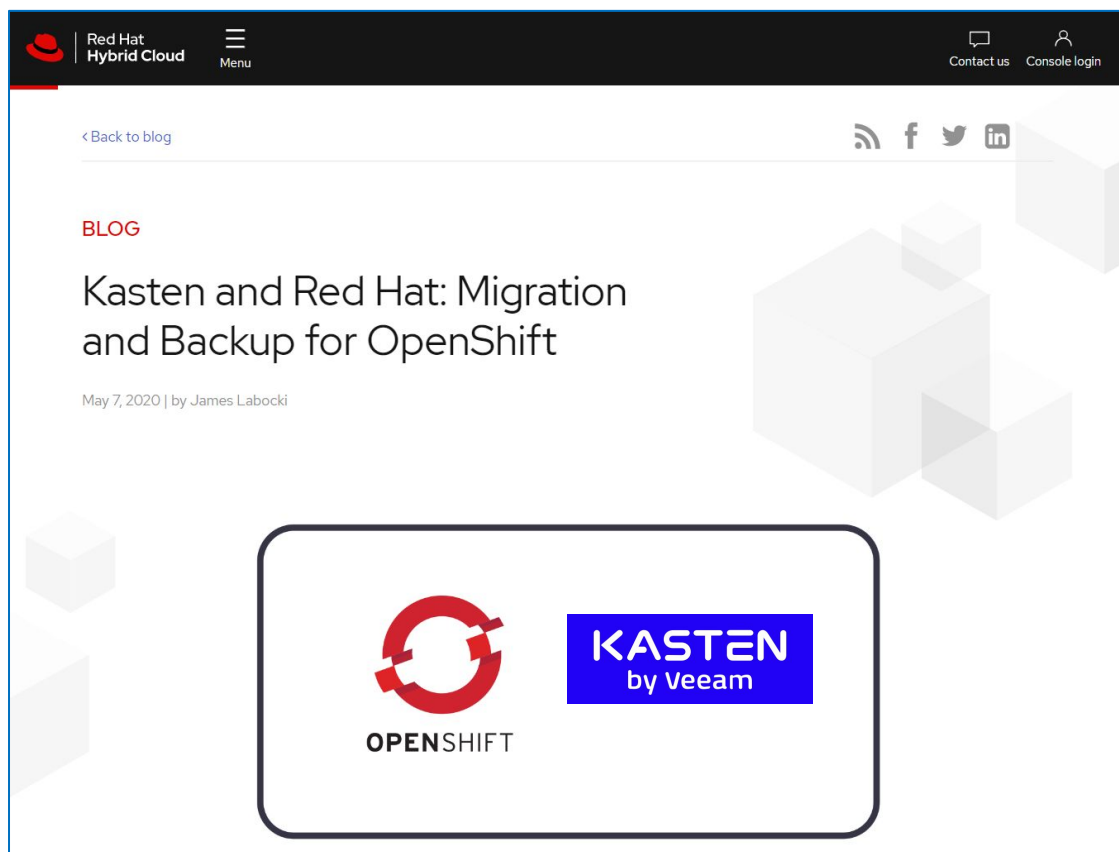
Extensive support across the entire stack: select the best tools or infrastructure



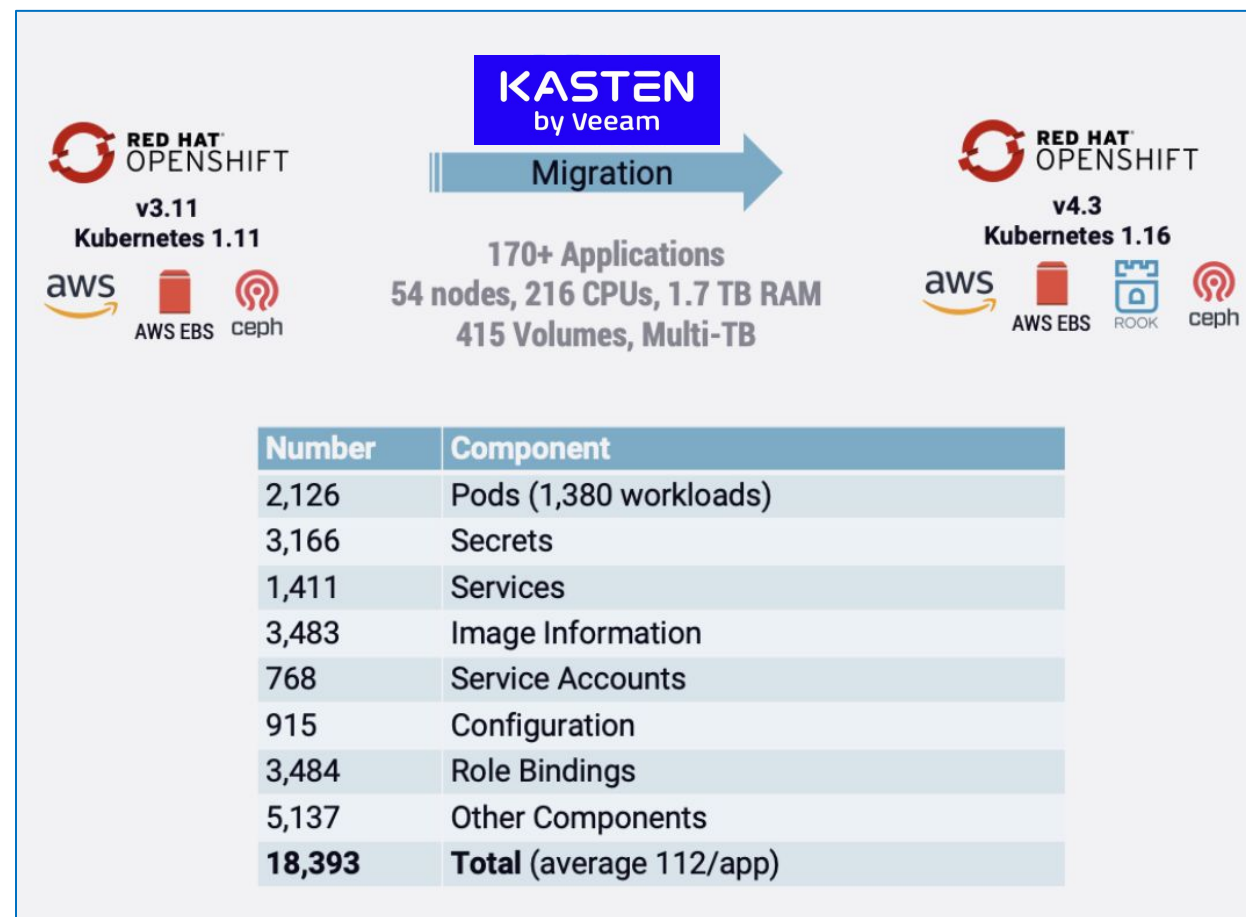
### Ease of Use

State-of-the-art multi-cluster UI; cloud native architecture and API, easy install, extensible

## Use case: OpenShift Migration (v3.11 → v4.3)



<https://cloud.redhat.com/blog/kasten-and-red-hat-migration-and-backup-for-openshift>



## Integrated reporting & visibility

The screenshot shows the Kasten web interface with three main sections:

- Applications:** 7 discovered in this system. Status: 5 Compliant, 0 Non-Compliant, 2 Unmanaged.
- Policies:** 3 managing resources. Status: 3 Backup Policies, 0 Import Policies.
- Usage & Reports:** Total Backup Data: 445.2 MiB. Backups: 174 MiB (39%), 271 MiB (61%).

### Reports

The most recent reports that have been generated for this cluster.

Enable Reports  
Turn on auto-generated reports.

DATE	ACTIONS	COMPLIANCE	STORAGE	K10 VERSION
Oct 5 to Oct 6, 2021	16 (16) 0 0	6 0 0	Snapshot: 39.7 GiB Object: 18.3 GiB	4.5.0
Oct 4 to Oct 5, 2021	16 (15) 0 1	5 1 0	Snapshot: 37.1 GiB Object: 17.4 GiB	4.5.0

```
$ kubectl get -n kasten-io reports.reporting.kio.kasten.io
```

NAME	LICENSE	DR	TIME	AGE
scheduled-45cfn-qwmcw	Valid	Disabled	2021-10-06T22:58:54Z	24h
scheduled-568xd-s2qgh	Valid	Disabled	2021-10-07T22:57:49Z	16m

The screenshot shows the K10 Dashboard with the following metrics:

- General / K10 Dashboard:** 18 (large green number), 0 (large white number).
- System:** 10 runs, 208 MiB, 26.4 MiB, 903 MiB.
- Compliance:** 5 (large green number), 0 (large green number), 0 (large green number).
- Storage:** 46.2 MiB, 96 GiB, 1.05 GiB, 521 MiB, 22.7 MiB, 2.31 GiB.



# Kasten K10 by Veeam v5 – What's new?



## Platform Hardening & Ease of Use

- KMS integration for encryption keys management
- Kubernetes native RBAC objects (Roles and Bindings) exposed in UI dashboard



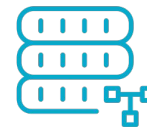
## Data Protection Policy Guardrails

- Plugging vulnerabilities by identifying (and fixing) misconfigurations
- Enforceable Policy standards (e.g., RPO, retention, immutability)



## Ransomware Attack Detection

- Early detection of potential / impending attack
- AWS S3 or S3-compatible storage supporting S3 Object Lock



## Veeam Hardened Linux Repository with immutability

- Comprehensive, end-to-end ransomware protection, from Performance Tier to Capacity Tier
- Next step in VBR data path integration

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# Thank you



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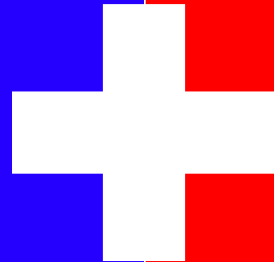


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