

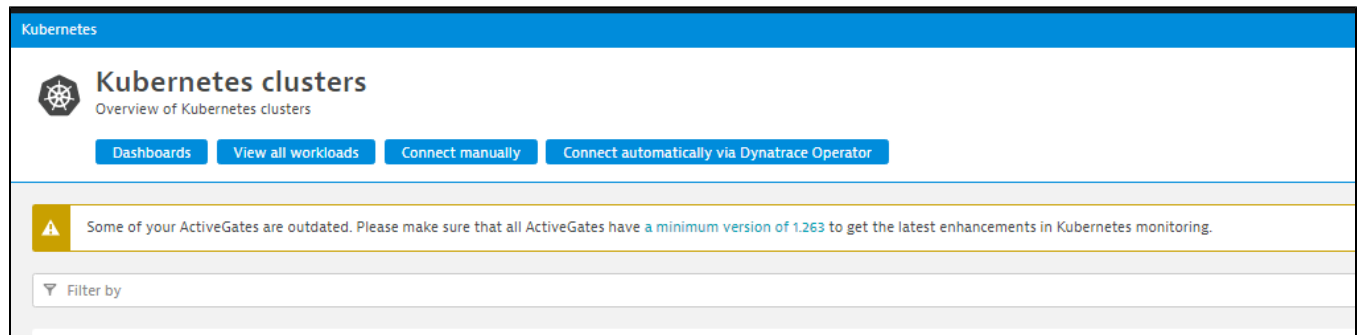
Kubernetes Cluster Monitoring

Dashboards Links:

Kubernetes Cluster Overview: <https://brs073.dynatrace-managed.com/e/75b464a0-d0bc-47e2-a4b3-a97f8c248d55/#dashboard;gtf=-2h;gf=all;id=6b38732e-8c5c-4b32-80a1-7053ec8f37e1>

Kubernetes Workload overview: <https://brs073.dynatrace-managed.com/e/75b464a0-d0bc-47e2-a4b3-a97f8c248d55/#dashboard;gtf=-2h;gf=all;id=6b38732e-d26b-45c7-b107-ed85e87ff288>

Step-1: Connect the Kubernetes Cluster automatically via Dynatrace Operator



Step-2: Update the below details as shown in the screenshot, Name , Group and create Dynatrace Operator token ingest token, and will share the Kube commands and YAML file Kubernetes team and once they run the command we will start connecting to the Kubernetes cluster

Monitor Kubernetes / OpenShift

Choose the following options and run the resulting commands with CLI.

Name	<input type="text" value="Enter name"/>	
Group (optional)	<input type="text" value="Enter group"/>	
Dynatrace Operator token	<input type="text" value="Enter combined API and PaaS tok..."/>	<input type="button" value="Create token"/>
Data ingest token (optional)	<input type="text" value="Enter data ingest token"/>	<input type="button" value="Create token"/>
<input checked="" type="radio"/> Skip SSL certificate check		
<input type="radio"/> Enable volume storage. Required for GKE, Anthos, CaaS, TGKI and IKS.		

Kubernetes

OpenShift

Download the YAML file:

[Download dynakube.yaml](#)

Execute the following commands in your terminal:

Please note that **kubectl** must be installed.

```
kubectl create namespace dynatrace
kubectl apply -f https://github.com/Dynatrace/dynatrace-operator
kubectl -n dynatrace wait pod --for=condition=ready --selector=a
kubectl apply -f dynakube.yaml
```

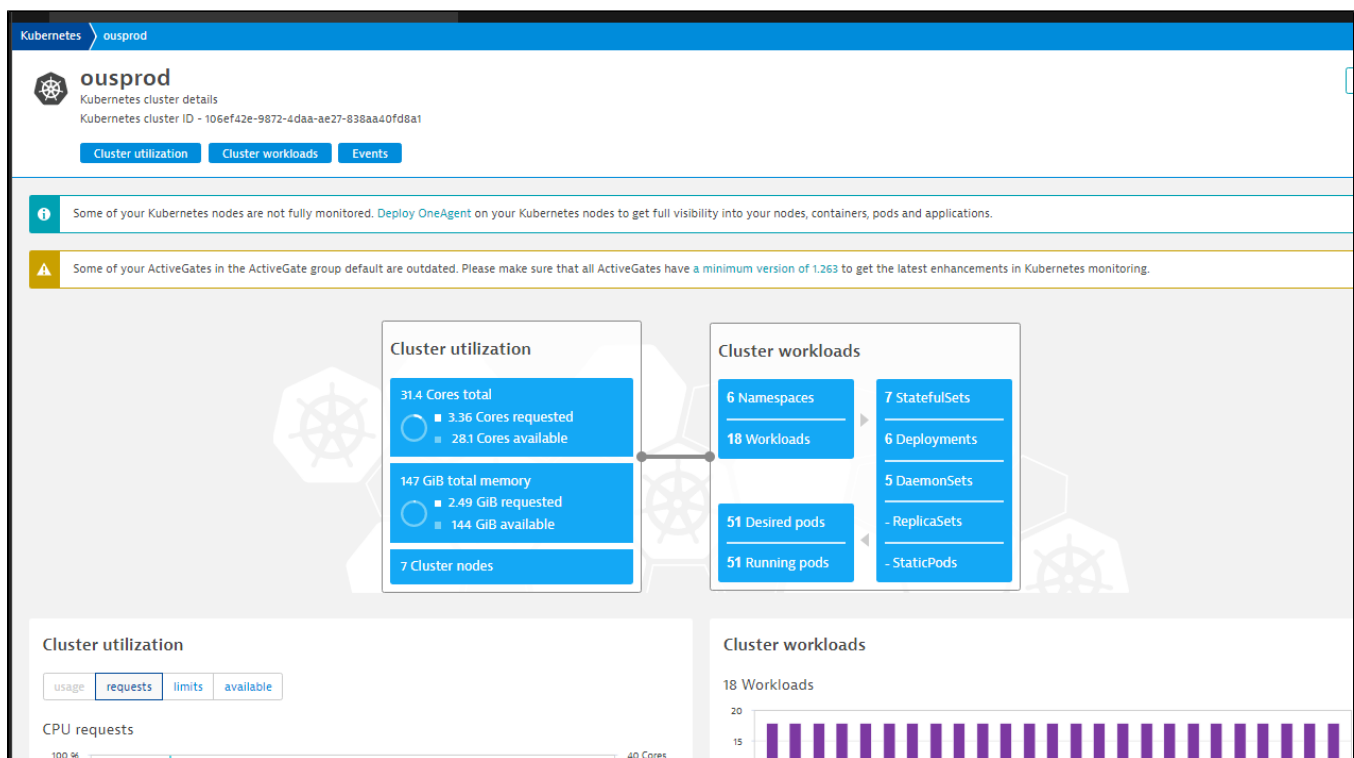
Copy

For more information about Dynatrace Operator, see [our documentation on GitHub](#).

For detailed instructions on monitoring Kubernetes/OpenShift, see the [Kubernetes Monitoring documentation](#).

[Show deployment status](#)

Step-3: Once the Kubernetes cluster is connect we get the below data from cluster all the Namespaces, pods, nodes and work loads data and cluster utilization



Kubernetes Namespaces: Below are the 6 namespaces we are Discovered and Monitoring

Kubernetes namespaces
Overview of Kubernetes namespaces

Filtered by Cluster: ousprod Clear all

Some of your ActiveGates are outdated. Please make sure that all ActiveGates have a minimum version of 1.263 to get the latest enhancements in Kubernetes monitoring.

Kubernetes namespaces
Contains 6 Kubernetes namespaces.

Name	Cluster	Workloads	Kubernetes services	CPU requests	CPU limits	Memory requests	Memory limits
confluent	ousprod	7 Kubernetes wor...	27 Kubernetes se...	100 mCores	500 mCores	256 MiB	512 MiB
default	ousprod	-	kubernetes	-	-	-	-
dynatrace	ousprod	4 Kubernetes wor...	2 Kubernetes ser...	650 mCores	1.7 Cores	768 MiB	1.88 GiB
kube-node-lease	ousprod	-	-	-	-	-	-
kube-public	ousprod	-	-	-	-	-	-
kube-system	ousprod	7 Kubernetes wor...	2 Kubernetes ser...	1.41 Cores	3.3 Cores	1.43 GiB	5.58 GiB

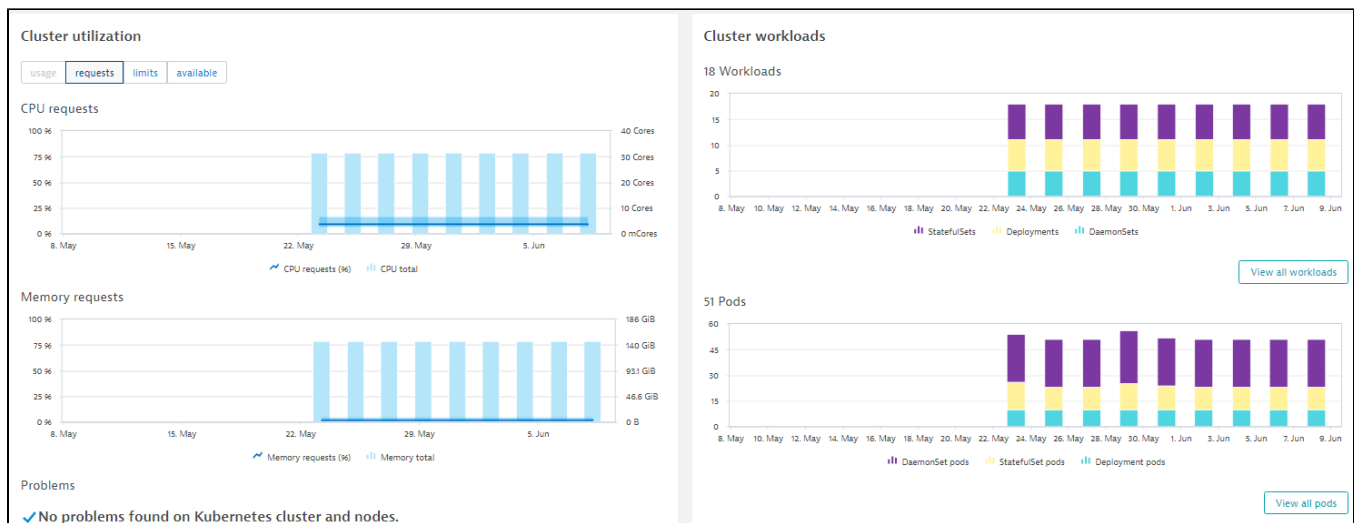
Kubernetes Workloads: There are total 18 workloads have been discovered and monitoring by the Dynatrace

Workloads							
Contains 18 Kubernetes workloads.							
Name ↕	Status ↕	Type ↕	Pods ↕	Services	Namespace	Cluster	
aws-load-balancer-controller	OK	Deployment	2 of 2	-	kube-system	ousprod	
aws-node	OK	DaemonSet	7 of 7	-	kube-system	ousprod	
confluent-operator	OK	Deployment	1 of 1	-	confluent	ousprod	
controlcenter	OK	StatefulSet	1 of 1	-	confluent	ousprod	
coredns	OK	Deployment	2 of 2	-	kube-system	ousprod	
dynatrace-operator	OK	Deployment	1 of 1	-	dynatrace	ousprod	
dynatrace-webhook	OK	Deployment	2 of 2	-	dynatrace	ousprod	
ebs-csi-controller	OK	Deployment	2 of 2	-	kube-system	ousprod	
ebs-csi-node	OK	DaemonSet	7 of 7	-	kube-system	ousprod	
ebs-csi-node-windows	OK	DaemonSet	0	-	kube-system	ousprod	
kafka	OK	StatefulSet	3 of 3	-	confluent	ousprod	
ksqldb	OK	StatefulSet	1 of 1	-	confluent	ousprod	
kube-proxy	OK	DaemonSet	7 of 7	-	kube-system	ousprod	
ousprod-activegate	OK	StatefulSet	1 of 1	-	dynatrace	ousprod	
ousprod-oneagent	OK	DaemonSet	7 of 7	-	dynatrace	ousprod	
replicator	OK	StatefulSet	2 of 2	-	confluent	ousprod	
schemaregistry	OK	StatefulSet	2 of 2	-	confluent	ousprod	
zookeeper	OK	StatefulSet	3 of 3	-	confluent	ousprod	

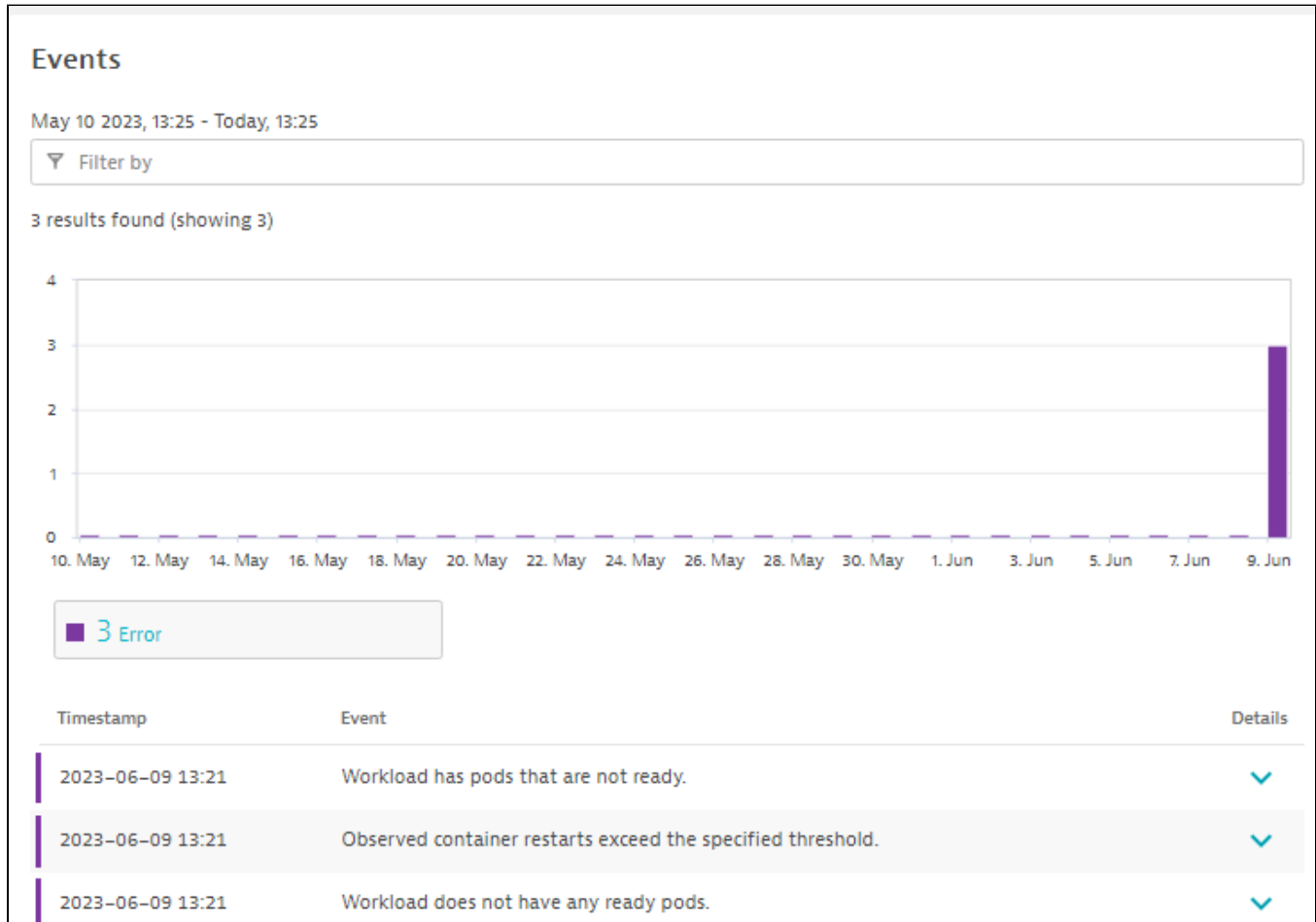
Pods: There are total 51 pods Dynatrace able to discover and we are monitoring all the Pods

Kubernetes Pods							
Overview of Kubernetes pods							
Filtered by Cluster: ousprod							
Some of your ActiveGates are outdated. Please make sure that all ActiveGates have a minimum version of 1.263 to get the latest enhancements in Kubernetes monitoring.							
Kubernetes pods							
Contains 51 Kubernetes pods.							
Name ↕	Type ↕	Status ↕	Cluster	Namespace	Workload	Age ↕	
aws-load-balancer-controller-745bbf6c79-8pjlk	Deployment	Running	ousprod	kube-system	aws-load-balancer-controller	47 d 2 h	
aws-load-balancer-controller-745bbf6c79-978g9	Deployment	Running	ousprod	kube-system	aws-load-balancer-controller	47 d 2 h	
aws-node-77gix	DaemonSet	Running	ousprod	kube-system	aws-node	47 d	
aws-node-7d4m4	DaemonSet	Running	ousprod	kube-system	aws-node	47 d	
aws-node-965m2	DaemonSet	Running	ousprod	kube-system	aws-node	47 d	
aws-node-jzjff	DaemonSet	Running	ousprod	kube-system	aws-node	47 d	
aws-node-sn8bd	DaemonSet	Running	ousprod	kube-system	aws-node	47 d	

Kubernetes Cluster Utilization details



Below are the events Dynatrace able to capture so far for the Kubernetes Cluster and there are 3 errors



Kubernetes Settings: Monitoring setting that to be enabled for the data you want to monitor for cluster, like volume chains, namespaces ,pods, nodes, metrics, events etc.

Kubernetes

ousprod

Settings

Monitoring settings

Kubernetes settings

ousprod

Monitoring settings

Anomaly detection

Configure detection sensitivity

▼

Monitoring settings

Connect to Kubernetes or OpenShift for enhanced observability. Learn more about Kubernetes or OpenShift in our [documentation](#).

Enabled

Test connection

Name

ousprod

Renaming the cluster breaks configurations that are based on its name (e.g., management zones, and alerting).

Connect containerized ActiveGate to local Kubernetes API endpoint

For more information on local Kubernetes API monitoring, see the [documentation](#).

Kubernetes cluster ID

106ef42e-9872-4daa-ae27-838aa40fd8a1

Monitor Kubernetes namespaces, services, workloads, and pods

Monitor persistent volume claims

To enable dashboards and alerts, add the [Kubernetes persistent volume claims](#) extension to your environment.

Monitor annotated Prometheus exporters

For annotation guidance, see the [documentation](#).

Monitor workload resource metrics

requires ActiveGate 1.261+

Monitor events

Anomaly Detection Settings: Enabled all the settings and thresholds are set for default

Kubernetes settings

ousprod

Monitoring settings

Anomaly detection

Configure detection sensitivity

Cluster

Node

Namespace

Workload

Persistent volume claim

Kubernetes cluster anomaly detection

Dynatrace automatically detects a wide range of common Kubernetes-related issues. Use these settings to configure alerts relevant to your Kubernetes cluster. Changing thresholds resets the observation period.



These settings are overriding [Environment settings](#)

[Remove override](#)



Detect cluster readiness issues



Configure



Detect cluster CPU-request saturation



Configure



Detect cluster memory-request saturation



Configure



Detect cluster pod-saturation



Configure



Detect monitoring issues