Monitoring Kubernetes with the Cluster Agent

The Cluster Agent monitors the health of Kubernetes and OpenShift clusters. It can be deployed using the AppDynamics Kubernetes Operator and is supported on all major distributions of Kubernetes. The Cluster Agent collects metrics and metadata for the entire cluster, every node, namespace and down to the container level. When applications are instrumented with AppDynamics APM agents, the Cluster Agent allows you to view both Kubernetes and APM metrics for those pods, provided that both the Cluster Agent and the APM agents are reporting the data to the same account the Controller.

With the Cluster Agent you can:

- Gain visibility into key Kubernetes metrics and events and detect uptime and availability issues
- Diagnose issues that may prevent uptime or scalability issues such as:
  - Pod failures and restarts
  - Node starvation
  - Pod eviction threats and pod quota violations
  - Image and storage failures
  - Pending/stuck pods
  - Bad endpoints: detects broken links between pods and application components
  - Service endpoints in a failed state
  - Missing dependencies (Services, configMaps, Secrets)
- Track resource utilization of pods relative to the declared requests and limits.

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**Deploy on Kubernetes**

- Deploy the AppDynamics Operator on Kubernetes
- Build the Cluster Agent Container Image
- Configure the Cluster Agent
- Deploy the Cluster Agent on Kubernetes

**Deploy on Red Hat OpenShift**

- Deploy the AppDynamics Operator on Red Hat OpenShift
- Build the Cluster Agent Container Image
- Configure the Cluster Agent
- Deploy the Cluster Agent on Red Hat OpenShift

**Using the Cluster Agent**

- Configure the Cluster Agent
- Use The Cluster Agent
- View Container Information
- Administer the Cluster Agent
- Monitor Cluster Health
- Monitor Kubernetes Events

**Reference and Troubleshooting**

- Install the Cluster Agent
- Overview of Cluster Monitoring
- Cluster Agent Requirements and Supported Environments
- Cluster Agent Configuration Files
- Cluster Metrics
- Troubleshoot the Cluster Agent