



# What tools can you use for container orchestration and monitoring?

## Container Orchestration Tools

| Tool                           | Description   |
|--------------------------------|---|
| Kubernetes                     | Industry standard for container orchestration with robust scaling, deployment, and service discovery. |
| Amazon ECS/EKS                 | AWS-native container services (ECS is simpler, EKS supports Kubernetes).                              |
| Google Kubernetes Engine (GKE) | Managed Kubernetes on Google Cloud.   |
| Azure Kubernetes Service (AKS) | Microsoft's managed Kubernetes service.   |
| Docker Swarm                   | Lightweight alternative to Kubernetes, tightly integrated with Docker.                                |
| Nomad                          | HashiCorp's orchestrator, suitable for both containerized and non-containerized workloads.            |
| OpenShift                      | Red Hat's enterprise Kubernetes platform with built-in CI/CD and developer tools.                     |

## Container Monitoring Tools

| Tool                                  | Description   |
|---------------------------------------|---|
| Prometheus                            | Open-source metrics collection system; designed for Kubernetes.       |
| Grafana                               | Visualization dashboard; often paired with Prometheus.                |
| Datadog                               | Commercial APM and infrastructure monitoring with container insights. |
| New Relic                             | Observability platform with container monitoring features.            |
| Dynatrace                             | AI-powered monitoring with auto-discovery of containers.              |
| Elastic Stack (ELK)                   | Log collection and analysis stack (Elasticsearch, Logstash, Kibana).  |
| Sysdig                                | Monitoring and security for containers, often used in DevSecOps.      |
| AWS CloudWatch                        | AWS-native monitoring tool for ECS/EKS and other services.            |
| Google Cloud Operations (Stackdriver) | Native GCP monitoring for GKE and workloads.                          |

**Which of the following is NOT a Kubernetes-based orchestration tool?**

- A. Amazon EKS
- B. Google Kubernetes Engine (GKE)
- C. Docker Swarm
- D. Azure Kubernetes Service (AKS)

✓ **Answer:** C. Docker Swarm

**Prometheus is mainly used for:**

- A. Log aggregation
- B. Distributed tracing
- C. Metrics collection and alerting
- D. Continuous deployment

✓ **Answer:** C. Metrics collection and alerting

**Which tool is most commonly paired with Prometheus for dashboards and visualization?**

- A. Jaeger
- B. Grafana
- C. Zipkin
- D. Dynatrace

✓ **Answer:** B. Grafana

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