CONFIGURATION GUIDES › KUBERNETES

.NET monitoring in Kubernetes

Applicare 10.0 · Updated July 18, 2025 · dotnet, kubernetes · **Pending technical review**

Before you begin .NET monitoring installation, ensure the **Applicare Collector** is already installed and actively running on your **Applicare Controller** machine. For detailed instructions on setting up the collector, please refer to our guide: Applicare Collector Configuration on Linux/Ubuntu

To install the operator in an existing cluster, install cert-manager, if it is not already installed.

```bash
kubectl apply -f https://github.com/cert-manager/cert-manager/releases/download/v1.18.2/cert-manager.yaml
```

Install Opentelemetry operator in your Kubernetes cluster.

```bash
kubectl apply -f https://github.com/open-telemetry/opentelemetry-operator/releases/latest/download/opentelemetry-operator.yaml
```

Create a file dotnet-instrumentation.yaml and add the below content and save it.

```yaml
apiVersion: v1
kind: Namespace
metadata:
  name: applicareotel-ns
  labels:
    name: applicareotel-ns

---

apiVersion: opentelemetry.io/v1alpha1
kind: Instrumentation
metadata:
  name: dotnet-instrumentation
  namespace: applicareotel-ns
spec:
  exporter:
    endpoint: http://<APPLICARE_CONTROLLER_IP>:4318
  propagators:
    - tracecontext
    - baggage
  dotnet:
    image: ghcr.io/open-telemetry/opentelemetry-operator/autoinstrumentation-dotnet:1.9.0
```

Before deploying the above Instrumentation, ensure you replace the following placeholders:

`<APPLICARE_CONTROLLER_IP>` : Replace this with the actual IP address or hostname of your Applicare controller instance

After creating the yaml file, execute the command below.

```bash
kubectl apply -f dotnet-instrumentation.yaml
```

Add the below annotation in your application and **redeploy the application**.

```text
instrumentation.opentelemetry.io/inject-dotnet: "applicareotel-ns/applicaredotnet-instrumentation"
```

```yaml
---
apiVersion: apps/v1
kind: Deployment
metadata:
  name: applicareapp
  namespace: applicare-ns
spec:
  replicas: 1
  selector:
    matchLabels:
      app: applicareapp
  template:
    metadata:
      labels:
        app: applicareapp
      annotations:
        instrumentation.opentelemetry.io/inject-dotnet: "applicareotel-ns/applicaredotnet-instrumentation"
    spec:
      containers:
        - name: webapplication1
          image: applicare910/applicareapp:dotnetcore
          ports:
            - containerPort: 8080
```