Establishing an EDA Platform on Openshift

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Part I: Infrastructure

I.1. Storage Subsystem (Optional)

I.1.1. Openshift Capability

Openshift Data Foundation (ODF) is an integrated collection of storage and data services for Openshift.

From an EDA Platform point of view, ODF gives us the capability to store information in a highly available replicated clustered environment on different types of storage types, block, file system and even Simple Storage System (S3), using native devices, or virtual devices offered by the underlying compute/cloud provider.

I.1.2. Installation

Installation is straight forward using the Openshift Data Foundation operator, which includes a wizard to create a storage subsystem.

During the wizard you are presented with a choice of using an existing storage class, local storage, or connecting to an existing ceph cluster. You also have the option to taint the nodes, to be dedicated storage nodes.

For in depth information on installing ODF see the documentation.

> *ODF Documentation*
> Openshift Documentation access.redhat.com/documentation/en-us/red_hat_openshift_data_foundation

> *YouTube Video*
> Installing ODF on Red Hat Virtualization

I.2. Serverless

I.2.1. Capabilities

Openshift Serverless gives our EDA Platform the infrastructure to create Cloud Native Eventing and Serving capabilities.

On the serving side, it gives us access to automatic scaling and rapid deployment of applications.

Scaling includes traffic-splitting across different versions, flexible routing and scale to zero, which saves resources if deployment is not in use.

Eventing opens a host of features directly related to EDA processing, channels (publish/subscribe), broker (filter based subscription) and Cloud Events.

Cloud Events forms an important part of EDA, and acts as the internal payload definition, with typically HTTP as the communication protocol.

— Add samples github.com/cloudevents/spec/blob/main/cloudevents/formats/json-format.md

> *Serverless Documentation*
> Openshift Documentation access.redhat.com/documentation/en-us/red_hat_openshift_data_foundation

YouTube Video
Installing ODF on Red Hat Virtualization using builtin Ovirt storage class -youtu.be/5kqyFDlyv54

I.3. Storage Subsystem

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