Where do I run workloads in OCI?

run anything

run containers

OCI Compute

Best for:

 Requirement to control operating system

Use cases

- Non-containerized workloads
- Windows workloads
- Legacy applications
- Per-server licenses

OCI Container Engine for Kubernetes (OKE) with Managed Nodes with Virtual Nodes

Best for:

- Requirement to control operating system
- Per-node pricing

Use cases:

- Any containerized applications
- Stateful workloads
- GPU workloads

Best for:

- Fully managed infrastructure
- Per-pod pricing

Use cases:

- Any containerized applications
- Spiky workloads
- Jobs, Batch
- Stateful (roadmap)
- GPU (roadmap)

OCI Container Instances

Best for:

- Teams who don't know Kubernetes
- Fully managed infrastructure

Use cases:

- Any containerized applications
- Ephemeral workloads (media/data processing, batch)
- Dev/Test environments

OCI Functions

Best for:

- Fully managed infrastructure
- Short lived executions

Use cases

- Event-driven code execution
- Simple API implementation
- Extend cloud services capabilities

Control, more operations

Agility, less operations

Pay for committed resources

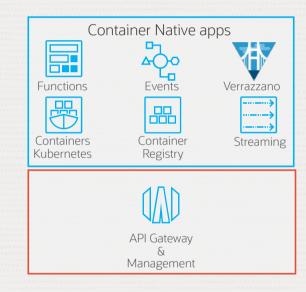
Pay for usage



Cloud Native Application

Overview

- OCI is a robust backbone for running cloud-native applications efficiently.
- Development teams can rely on OCI and deploy cloud-native applications in a comfort zone of containers, Kubernetes, serverless infrastructure, streams, APIs, DevOps, and more.
- Oracle is dedicated to an open-source ecosystem under the CNCF umbrella, providing powerful automation capabilities within the cloud-native ecosystem.



Functions

What Is It?

- OCI Functions is a serverless platform that lets developers create, run, and scale applications without managing any infrastructure.
- Key features:
 - Just write and deploy your code. Oracle will automatically provision and scale resources.
 - Support various programming languages: Python, Go, Java, Node, and others.
 - Platform independent, built on open-source Fn Project, Docker and CloudEvents
 - Optimize cost, and pay for execution, not for idle time.
- Functions fit into cloud-native architecture, enabling different triggers to run your code and making magic of automation happen.





Why to Use It?











How It Works?

- A function is packaged as a container image and executed on a dedicated, transparent infrastructure, making a serverless experience.
- Function executes per client request, which might incur a cold start. To make it latencyefficient, you can use provisioned concurrency to overcome cold start latencies.
- Functions use FDK's in multiple languages: Python, Java, Go, Node, Ruby
- · You can bring your image with Dockerfile leveraging various technologies to run as a serverless container (e.g., GraalVM Native Image).















Pre built functions

- catalog of ready-to-use functions that you can configure to run common tasks or actions across OCI services <u>without writing any code</u>..
- extension of OCI Functions that offers an easy-to-use serverless platform to all OCI users for automation, integration and extensibility. You can simply discover a prebuilt function, configure it, and deploy it to OCI Functions with a single click or using API. This function is then invoked by predefined triggers, based on an event or an API request to run a specific task or action for which it is built.

Object Storage File Extractor

This Pre-built Function (PBF) reads a zip file from an Oracle Cloud Infrastructure (OCI) Object Storage bucket and extracts it to the specified target bucket.

Object Storage File Zip

This Pre-Built Function (PBF) is used to zip files stored in an Oracle Cloud Infrastructure (OCI) Object storage bucket and save the zip file to the specified target bucket.

Media Workflow Job Spawner

This Pre-Built function (PBF) triggers a workflow job for the given Media workflow when video content is uploaded to Object storage bucket. To set up this automation - 1) Deploy this PBF as a Function in your compartment & configure its parameters 2) Configure an Event Rule on the object storag...

Zero Quota Policy Creator

This Pre-Built Function (PBF) creates a quota policy to prevent the creation of Oracle Cloud Infrastructure (OCI) resources to help enforce budgets and manage your OCI spending. To set up an automation to create a zero quota policy preventing creation of OCI resources when spending..



Coding Example

```
package com.example.fn;
public class HelloFunction {
   public String handleRequest(String input) {
        System.out.println("Value of input is " + input);
        String name = (input == null || input.isEmpty()) ? "world" : input;
        System.out.println("Value of name is " + name);
        return "Hello, " + name + "!";
   }
}
```



Ecosystem Example

