

# HDP Developer: Custom YARN Applications

Learn via: **Classroom**

Duration: **2 Day**

## **Overview**

This course is designed for developers who want to create custom YARN applications for Apache Hadoop. It will include: the YARN architecture, YARN development steps, writing a YARN client and ApplicationMaster, and launching Containers. The course uses Eclipse and Gradle connected remotely to a 7-node HDP cluster running in a virtual machine.

## **Prerequisites**

Students should be experienced Java developers who have attended HDP Developer: Java OR HDP Developer: Pig and HiveOR are experienced with Hadoop and MapReduce development.

## **Who Should Attend**

Architects, software developers, analysts and data scientists who need to apply data science and machine learning on Hadoop.

## **What You Will Learn**

At the completion of the course students will be able to:

- Describe the YARN architecture
- Describe the YARN application lifecycle
- Write a YARN client application
- Run a YARN application on a Hadoop cluster
- Monitor the status of a running YARN application
- View the aggregated logs of a YARN application
- Configure a ContainerLaunchContext
- Use a LocalResource to share application files across a cluster
- Write a YARN ApplicationMaster
- Describe the differences between synchronous and asynchronous ApplicationMasters
- Allocate Containers in a cluster
- Launch Containers on NodeManagers
- Write a custom Container to perform specific business logic
- Explain the job schedulers of the ResourceManager
- Define queues for the Capacity Scheduler

## **Training Outline**

- Run a YARN Application
- Setup a YARN Development Environment
- Write a YARN Client
- Submit an ApplicationMaster
- Write an ApplicationMaster
- Requesting Containers
- Running Containers
- Writing Custom Containers