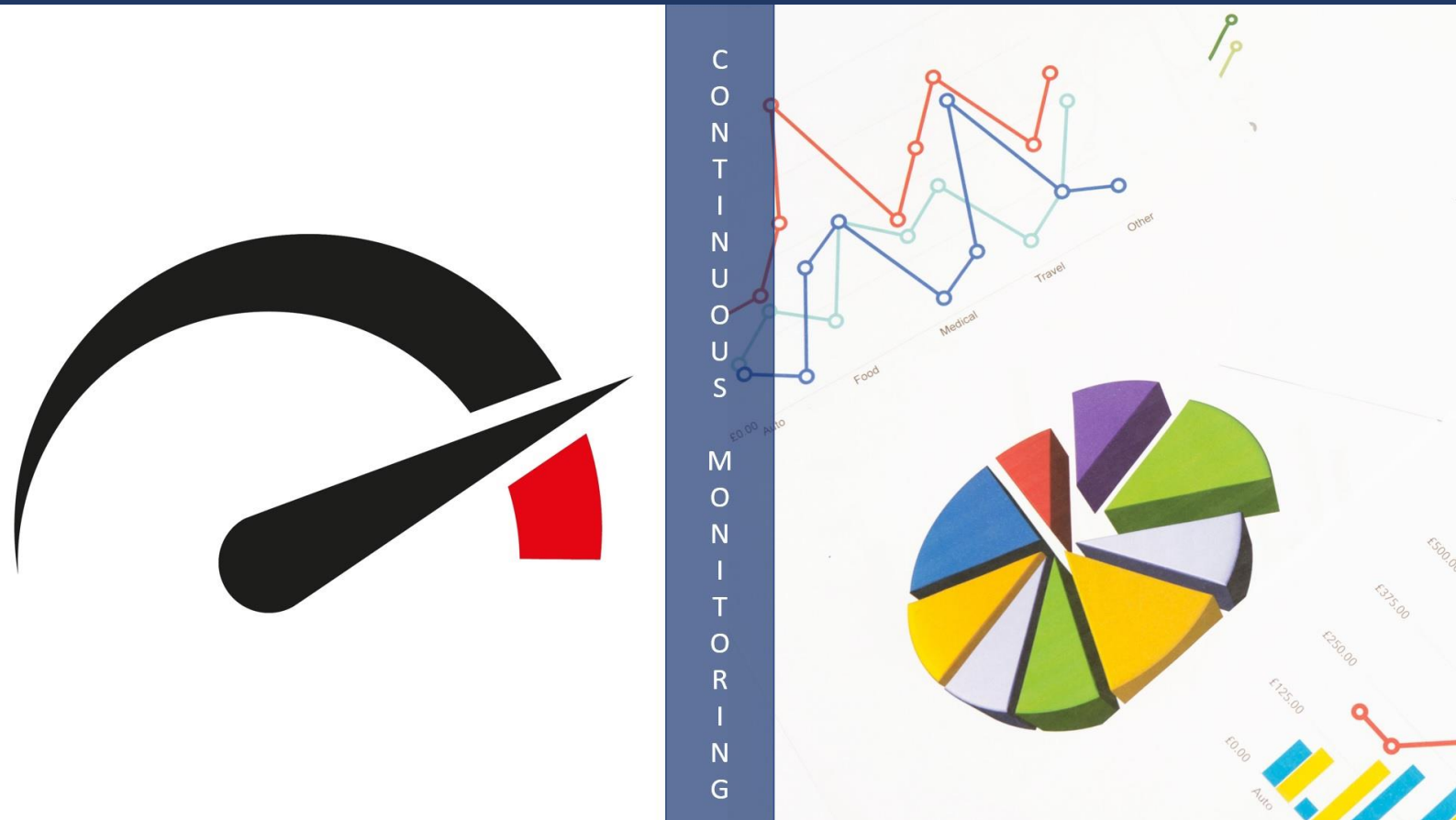


Certified Professional DevOps Continuous Monitoring (CP-DCM) Certification Course



<http://cpdcm.devopsppalliance.org/>
<http://devopsppalliance.org/cp-dcm.html>



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<http://devopsppalliance.org/>



What is CP-DCM course?

CP-DCM stands for “Certified Professional - DevOps Continuous Monitoring”

The course is designed to practically learn and implement continuous monitoring using open source tools. The program is relevant for anyone on the DevOps team who would like to learn the practical aspects of Continuous monitoring using open source tools.

How is CP-DCM useful?

Monitoring applications & application servers is an important part of the today’s DevOps culture & process. You want to continuously monitor your applications and servers for application exceptions, server CPU & memory usage, or storage spikes.

As part of the continuous monitoring process we want to be alerted or notified if there is a breach of some thresholds e.g CPU usage more than the defined threshold or memory usage more than the expected number for a certain period of time and how we can automatically deal with such a situation.

Just like any other course from Agile Testing Alliance and DevOps++ Alliance the core differentiation is focus on hands on/practical aspects. There is no better learning than hands on learnings. The CP-DCM program has been designed to give participants a hands on practical knowledge of using the best of breed open source tools for not only DevOps monitoring but visualization of the results.

Am I Eligible?

You should have basic knowledge DevOps and DevOps Life Cycle. It is recommended that participants go through the CP-DOF (Certified Professional - DevOps Foundation) program before starting this one. The program is a deep dive into continuous monitoring, hence if someone is only interested in learning continuous monitoring, they can directly go for this program as well.

What is the Training and Certification Exam structure?

CP-DCM is designed specifically for corporate and working professionals alike. If you are a corporate you can opt for either 6 half days course or 3 full days course. The CP-DCM exam is conducted on the last day of the program.

CP-DCM certification exam has two parts. A theory exam which is of 1 hour duration and is conducted through online multiple choice question pattern. The theory exam is of 40 marks with no negative marking. The practical exam is taken immediately after the theory exam and is of 2-hour duration. The practical exam is case study based and follows the pattern taught in the program

Learning Objectives and Main Topics

1. Introduction

- 1.1. ATA and DevOps++ Alliance Introduction
- 1.2. Course Introduction
- 1.3. A brief introduction of DevOps Lifecycle
- 1.4. Need and importance of Continuous monitoring in the DevOps Lifecycle
- 1.5. Alerting v/s Trending
- 1.6. False positives and the need to minimize them
- 1.7. Black Box vs. White Box Monitoring/Probing

2. Lab preparation

- 2.1. Setting up the sandbox / VM for the Continuous monitoring
- 2.2. Installations of the necessary tools for starting the program
 - Setting up Nagios through docker container
 - Setting up Prometheus
 - Setting up Grafana

3. Blackbox monitoring or Probing - Basic monitoring of small and/or static systems

- 3.1. What is blackbox probing
- 3.2. Nagios as a tool for blackbox probing
 - What is Nagios
 - Nagios Architecture
 - Configured Nagios to monitor another host
 - Configure alerting in Nagios
 - Defining a SLA and monitoring for HTTP and HTTPS responses
- 3.3. Monitoring - windows machine using Nagios
- 3.4. Installing new Nagios Plugins
 - Nagios Exchange
 - Installing a new plugin for a remote wordpress server
 - Check for WordPress update availability
- 3.5. Using Prometheus for blackbox probing

- What is Prometheus and its architecture
- Features and Components of Prometheus
- Prometheus Configuration
- Prometheus Config file
- Monitoring Nodes (Servers) with Prometheus
- Node exporter for Linux
- Node Exporter for Windows (WMI Exporter)
- Prometheus and blackbox exporter for monitoring end points
- Monitoring a web application - Calculating Apdex score

4. Visualization

- 4.1. Visualization layer with Grafana
- 4.2. Grafana with Prometheus Installation / Setup.
- 4.3. Grafana Provisioning
- 4.4. Expression Browser
- 4.5. Console templates

5. Alert Management

- 5.1. Alerting Overview
- 5.2. Configuration Prometheus AlertManager
- 5.3. Clients Notifications

6. Whitebox monitoring or Probing using Prometheus and Grafana and more

- 6.1. Importance / need to understand application internal state
- 6.2. Monitoring Java Spring Boot applications with Prometheus
- 6.3. Monitoring docker container metrics using CAdvisor.
- 6.4. Scraping Kubernetes with Prometheus

7. A comparison summary of various DevOps Monitoring Tools

How do I enroll myself?

You can enroll by following the information on these URL's.

<http://cpdcm.devopsppalliance.org/> ,
<http://devopsppalliance.org/cp-dcm.html>

If you are interested in getting a corporate program done at your location please do get in touch with us on ATASupport@AgileTestingAlliance.org