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## Architecting with Google Kubernetes Engine

**Duration: 3 Days    Course Code: GO6594    Delivery Method: Company Event**

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### Overview:

This three-day instructor-led class introduces participants to deploying and managing containerized applications on Google Kubernetes Engine (GKE) and the other services provided by Google Cloud Platform. Through a combination of presentations, demos, and hands-on labs, participants explore and deploy solution elements, including infrastructure components such as pods, containers, deployments, and services; as well as networks and application services. This course also covers deploying practical solutions including security and access management, resource management, and resource monitoring.

#### Company Events:

These events can be delivered exclusively for your company at one of our training centres or at your own location, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

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### Target Audience:

This class is intended for the following participants: Cloud architects, administrators, and SysOps/DevOps personnel Individuals using Google Cloud Platform to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud Platform.

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### Objectives:

- This course teaches participants the following skills: Understand how software containers work Understand the architecture of Kubernetes Understand the architecture of Google Cloud Platform Understand how pod networking works in Kubernetes Engine Create and manage Kubernetes Engine clusters using the GCP Console and gcloud/ kubectl commands Launch, roll back and expose jobs in Kubernetes Manage access control using Kubernetes RBAC and Google Cloud IAM Managing pod security policies and network policies Using Secrets and ConfigMaps to isolate security credentials and configuration artifacts Understand GCP choices for managed storage services Monitor applications running in Kubernetes Engine
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### Prerequisites:

To get the most out of this course, participants should have:  
Completed Google Cloud Platform Fundamentals: Core Infrastructure or have equivalent experience Basic proficiency with command-line tools and Linux operating system environments

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## Content:

### Course Outline

The Architecting with Google Kubernetes Engine specialization will teach you how to implement solutions using Google Kubernetes Engine, or GKE, including building, scheduling, load balancing, and monitoring workloads, as well as providing for discovery of services, managing role-based access control and security, and providing persistent storage to these applications.

The modules cover the following topics:

- Introduction to Google Cloud Platform (GCP)
- Introduction to Containers and Kubernetes
- Kubernetes Architecture
- Kubernetes Operations
- Deployments and Jobs
- Google Kubernetes Engine (GKE) Networking
- Persistent Data and Storage
- Access Control and Security in Kubernetes and GKE
- GKE Logging and Monitoring
- Using GCP Managed Storage Services with GKE

The story builds from an introduction to GCP and a quick overview of containers and Docker concepts. The bulk of the course introduces Kubernetes infrastructure and GKE concepts at a high level initially and then explores the major concepts starting with Pods and Deployments and then moving on to Networking, Storage, Identity and Security, Logging and Monitoring, and finally to the integration of other Google Services with Kubernetes applications.

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## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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