



## 10. Container and DevOps – 1 Day Training & Hands-on Workshop

This one-day training course along with hands-on lab is designed to guide you through the process of learning, building and deploying Docker images to the Kubernetes platform hosted on Azure Kubernetes Services (AKS), in addition to learning how to work with dynamic service discovery, service scale-out, and high-availability.

At the end of this training, you will have better understanding of docker, kubernetes and AKS and should be able to build and deploy containerized applications to Azure Kubernetes Service and perform common DevOps procedures.

### Target Audience:

- Application developer
- Infrastructure architect
- DevOps Professionals

### Agenda

- Module 1: Create and run a Docker application
  - Run and Test the application
  - Enable browsing to the web application
  - Create a Dockerfile
  - Create Docker images
  - Run a containerized application
  - Setup environment variables
  - Push images to Azure Container Registry
- Module 2: Deploy the solution to Azure Kubernetes Service
  - Tunnel into the Azure Kubernetes Service cluster
  - Deploy a service using the Kubernetes management dashboard
  - Deploy a service using kubectl
  - Initialize database with a Kubernetes Job
  - Test the application in a browser
- Module 3: Scale the application and test HA
  - Increase service instances from the Kubernetes dashboard
  - Increase service instances beyond available resources
  - Restart containers and test HA
- Module 4: Setup load balancing and service discovery
  - Scale a service without port constraints
  - Update an external service to support dynamic discovery with a load balancer
  - Adjust CPU constraints to improve scale
  - Perform a rolling update



**Duration:** 1 Day

**Mode of Delivery:** Online and Onsite

**At the end of the workshop:**

By the end of this workshop session you will be better able to design, build and deploy containerized applications to Azure Kubernetes Service and perform common DevOps procedures.

Please reach out to [info@spektrasystems.com](mailto:info@spektrasystems.com) incase of any questions or for scheduling.