

# Developing Applications with Containers

Empower your organization to achieve more

Developing Applications with Containers is a four-day immersive course with blend of instructor led training sessions followed by a Proof of Concept (PoC).

This workshop takes the hands-on approach to cover designing, developing and deploying applications

using containers targeting Linux and Windows platform. The workshop closes with a PoC presenting a real world "Lift and Shift" scenario for containerization of legacy applications.

## Outcomes

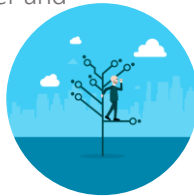
The Proof of Concept (PoC) is based on a real world scenario that helps you understand the end-to-end containerization process of a legacy application (a.k.a Brown Field). During this PoC you lift and shift a canonical legacy 3-tier .NET 4.5 application to Windows containers platform. This application consists of ASP.NET 4.5 MVC web application, .NET 4.5 based business/data layer and

SQL Server. In addition, you will have a solid understanding of Linux and Windows containers, containerization process, monitoring and troubleshooting containers, microservices, just to name a few.



### Lift and Shift

Understand lift and shift of legacy .NET Applications to Windows containers



### Containerization

Understand the process of packaging multi-container legacy applications. Build Docker compose files to launch multi-container application. Run multi-container application and test it out.



### Looking ahead

Discuss pros and cons of lift and shift approach towards containerization and discuss modern approaches towards containerization and beyond.

## Capabilities

This workshop will help you meet today's and tomorrow's challenges by acquiring knowledge on Linux and Windows Containers. Understanding the "Containerization" process, using containers to design and develop Microservices, and Clustering & Orchestration Tools, including Kubernetes, Swarm and DC/OS. Implement CI/CD pipeline for

Containerized Applications using VSTS/TFS to build, publish and trigger deployments. Lastly you will learn about monitoring and troubleshooting containers.

### 01 Empower developers

Take your team to the next level by leveraging the benefits of a Container technology to design and develop solutions for today and tomorrow.

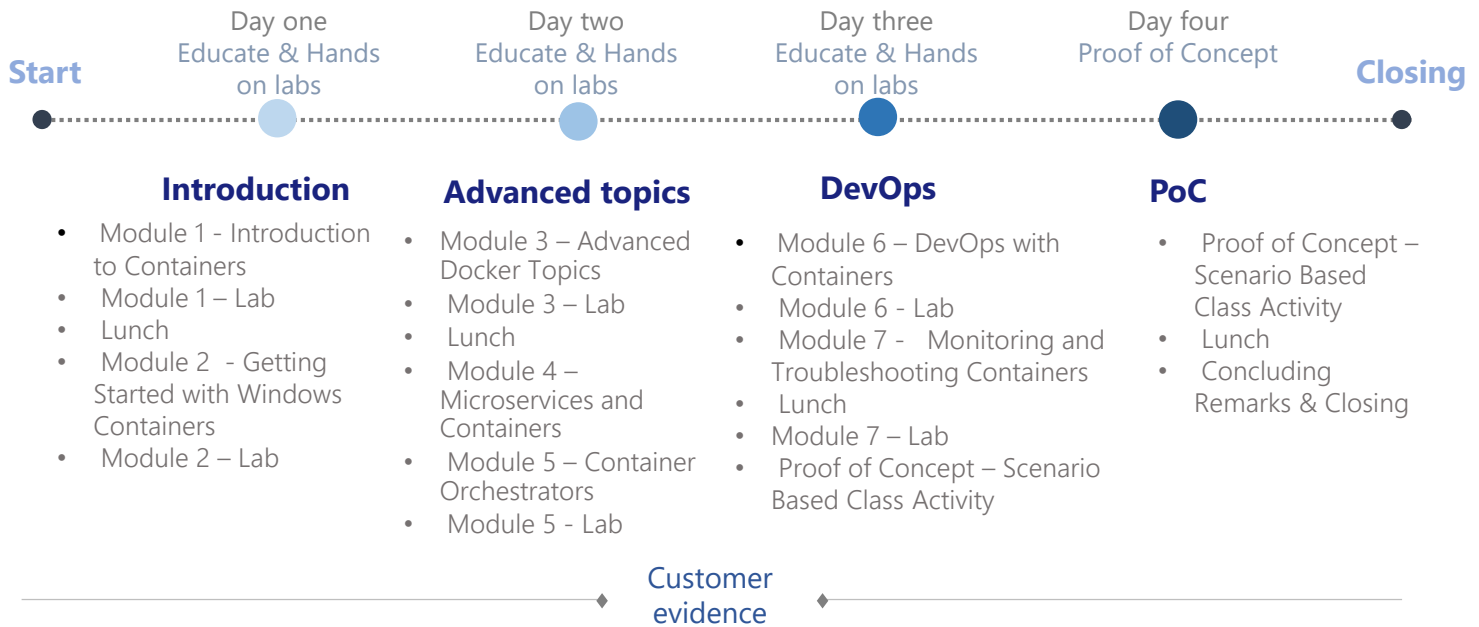
### 02 DevOps

Implement CI/CD pipeline for Containerized Applications using VSTS/TFS to build, publish and trigger deployments. .

### 03 Education & Readiness

Drive readiness for your developers through education services and ensure that your solution uses recommended practices to take advantage of the power of Azure

# Duration: 4 days



*From a development and delivery perspective, containers do everything a virtual machine can do, but far much better!*

A senior developer at a major software development company

## Additional details

The first 2 ½ days aims at introducing the customer to leverage containers technology in order to improve and innovate modern application development. With the instructor led hands-on education sessions, the focus is on developing applications using Containers targeting Linux and Windows platform. All sessions are heavy on demos and have extensive hands-on labs.

### Syllabus

Scope of the delivery will be defined in the scoping call with the customer (usually 4 modules per day). Following are the topics covered during the course of this workshop:

- Docker Images – CoreOS, Ubuntu, Python, NodeJS
- Dockerfile – Building Custom Images
- Docker Run - Running Docker Containers
- Microsoft Windows Containers
- Windows Server Core & Nano Server Images
- Containers - IIS, ASP.NET 4.5 & ASP.NET Core
- Docker Persistent Volumes
- Docker Trusted Registries (DTR)
- Docker - Removing Images & Volumes
- Microservices & Containers
- Docker Compose – Defining multiple services
- Docker & Visual Studio Team System / TFS
- Docker Tasks - VSTS Build
- Azure Container Service (ACS)
- Azure Container Registry (ACR)
- Orchestrators – DC/OS, Swarm, Kubernetes
- CI/CD – VSTS & Azure Container Service
- Monitoring - Azure Operations Management Suite
- Container Troubleshooting – Logs, Inspect etc.
- Azure 3rd Party – Datadog & Sysdig