Microservices

[8 hours]

2019

## 

*Prerequisites and basics*

**Evolution of microservices**

* Monolithic Architecture
* Distributed Architecture
* Service oriented Architecture
* Microservices in nutshell
* Business Domain centric
* Domain Driven Design
* Big Mud Ball to Sweet Gems

## CONTENTS

**Microservices Architecture and design [4 hours]**

* Microservices Design
* Dependency Injection
* Understanding DIP and IOC
* Autofac understanding
* Autofac with MVC 5
* Loosely Coupled
* Code implementation with Autofac
* Observable: Centralized Monitoring and Logging
* Automation: CI tools and CD tools
* Microservice Design Patterns
* Microservice Architecture Decisions
* REST Architecture principles
* Microservice Characteristics
* Inter-Process Communications
* Microservice Transaction Management

**Microservices Security [1.5 hour]**

* Why is Security important?
* Microservice Security Principles
* Microservice Security techniques
* Access Tokens
* How to secure a Microservice using OAuth 2.0

**Technologies for microservices [1.5 hour]**

* Asynchronous Communication
* Virtualization
* Containers
* Self Hosting
* Scalling
* Api gateway

**Docker Containerization [1.5 hour]**

* Understanding Docker
* Understanding Docker commands
* Push and pull Docker Images
* Azure Kubernetes services
* Implementing Containers with Azure