

University of Wales - Azure Training Proposal



Context

- The students have recently started in February and will be studying the Public Cloud ecosystem in detail this coming year. Appvia will be providing interactive lab-based workshops based on industry best-practice in relation to Microsoft Azure. We will utilise real world examples from real world clients to help the students understand the practical application of complex architectural concepts.
- This will be to introduce the students to Azure and security methods including:
 - a. Intro to DevOps
 - b. Docker
 - c. CI/CD
 - d. Infrastructure as Code
 - e. Key Vaults & Secrets
 - f. Disaster recovery

Session 1 - DevOps and Containerisation

Format

- One Day (09:00 - 12:00 hrs & 13:00- 17:00 hrs)
- Facilitated hands on lab sessions
- In person

Agenda

- What is DevOps? What does it really mean?
- Docker: What is containerisation?
 - Monoliths vs Microservices
 - 12 factor apps
 - Build your own container
 - Running a container
- Continuous Integration & Continuous Delivery
 - Delivery vs deployment
 - Best practice and pipelines
 - GitHub Actions example
 - GitOps

Pre-Requisites

- Technical background
- Account created on GitHub, Docker Desktop
- Azure account
- Access to a laptop with internet access
- Full list of prerequisites and installation guides to follow

Session 2 - Infrastructure as Code & Security

Format

- One Day (09:00 - 12:00 hrs & 13:00- 17:00 hrs)
- Facilitated hands on lab sessions
- In person

Agenda

- What is IaC (Infrastructure as Code)
 - Why do we use IaC?
 - Key principles of IaC
 - What tools are used?
 - Plan, apply and destroy commands
 - Terraform state files and how are they used?
- Key Vaults & Secrets
 - Why we use Key Vaults
 - What is stored in a Key Vault?
 - How does it work?
 - Set up & live demo
- Disaster Recovery
 - Why do we have disaster recovery?
 - Different types of disaster recovery
 - What is the difference between backups and fail-overs?

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Industry Training & Certifications

- <https://www.youtube.com/@cncf\>
- <https://learn.microsoft.com/en-gb/collections/n6ga8m0jkgrwk>
- <https://www.youtube.com/@NTFAQGuy>
- <https://learn.microsoft.com/en-us/credentials/certifications/azure-fundamentals/>