

# DevOps w/ Containers

Docker, Kubernetes/AKS, Automation Pipelines

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# Introduction

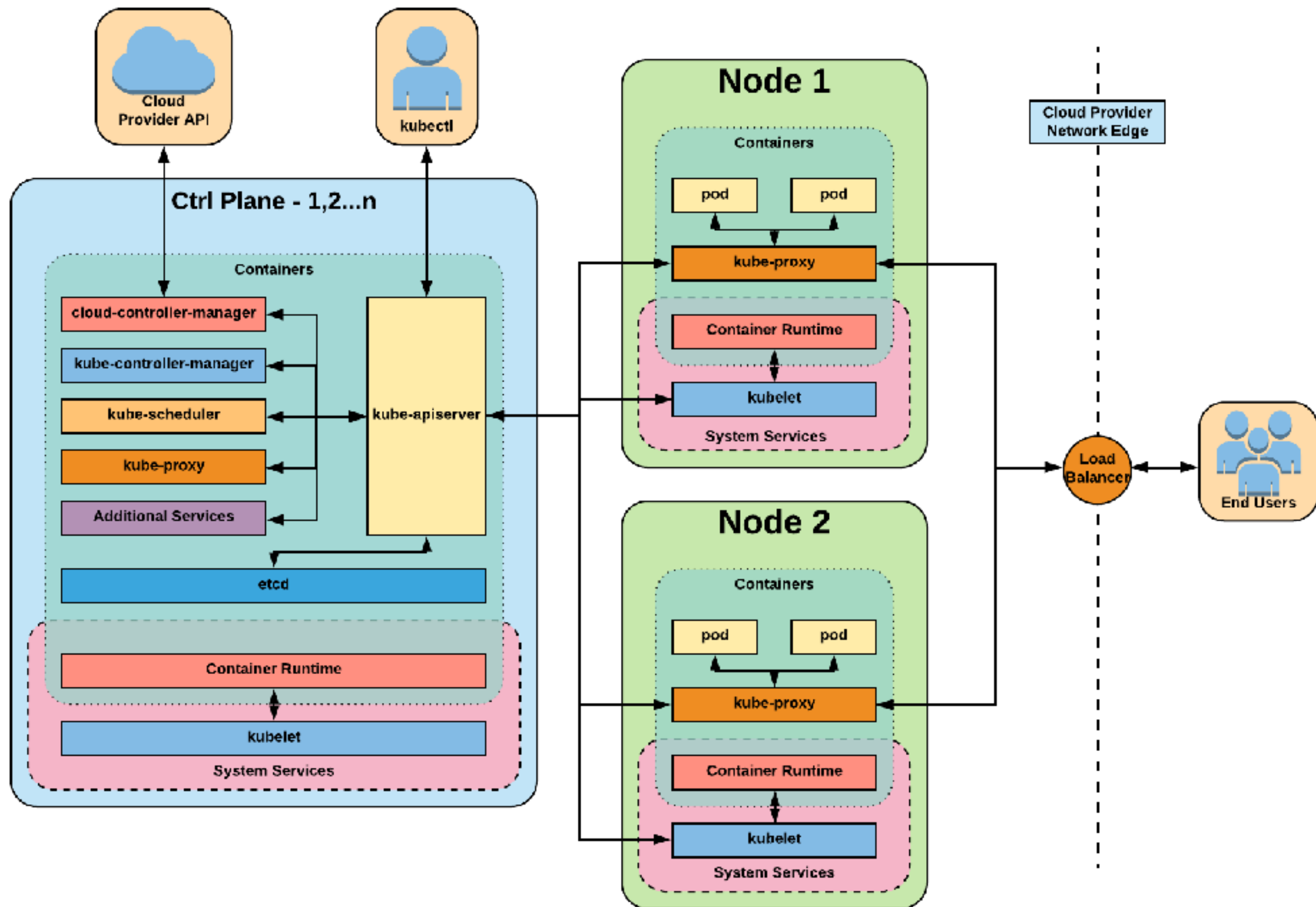
- Who we are and what we do!
- Pre-Requisites & Purpose
- Format of the Workshop
- Materials Provided

# Docker

- What Is Docker?
- What are the benefits of Containers?
- What tools does Docker provide?
- How should we containerize/Dockerize my apps?
- What are my deployment/orchestration options?
- **Hands On Demonstrations**
  - Containerizing an Application and Building Locally
  - Running Micro-Service containers via docker-compose

# Kubernetes / AKS

- What is Kubernetes?
- What are the components of a Kubernetes cluster?
- How should I deploy different types of workloads?
- What system services are provided natively or as add ons?
- What does it take to maintain uptime and auto-scale?
- **Hands On Demonstrations**
  - Build an AKS Cluster and/or Run MiniKube Locally
  - Deploy a Demo Micro-Service Application (docker-compose translation)



# Kubernetes Pipelines

- What is Helm?
- What are the benefits of Helm?
- How should we use Helm to package applications?
- What SCM and build strategy makes sense in this context?
- **Hands On Demonstrations**
  - Creating a Helm chart
  - Deploying Jenkins via Helm to Kubernetes
  - Constructing Jenkins Pipelines for Build/Deploy (Immutable Builds)