



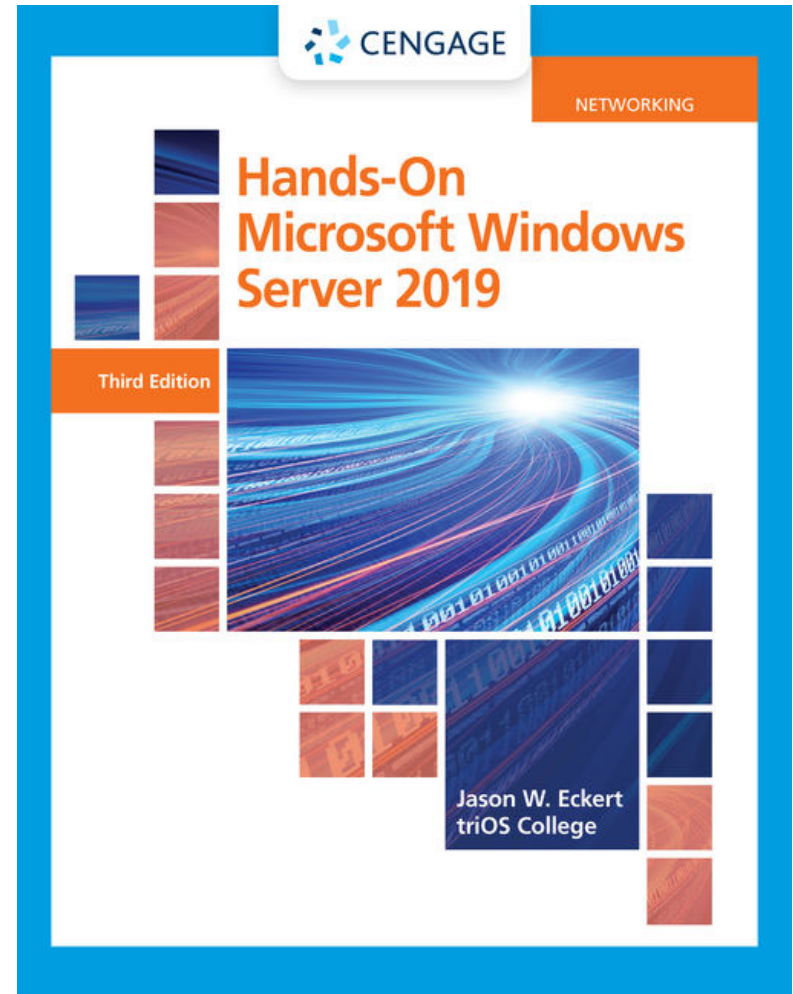
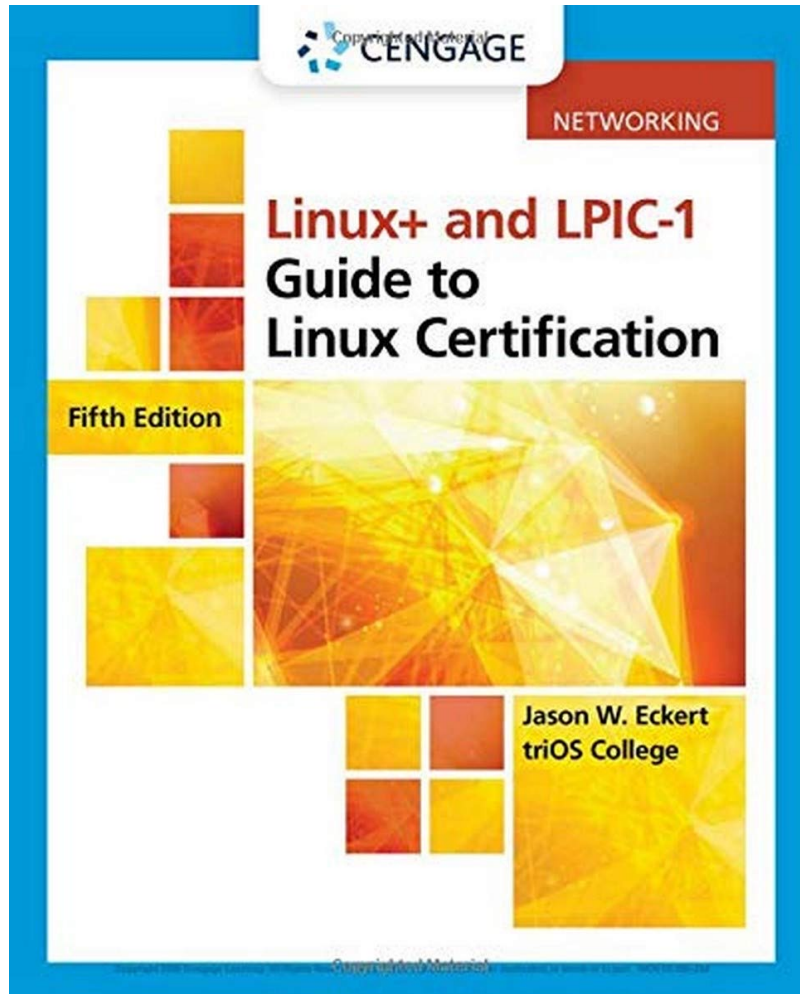
kubernetes

QUICKSTART

Preamble:

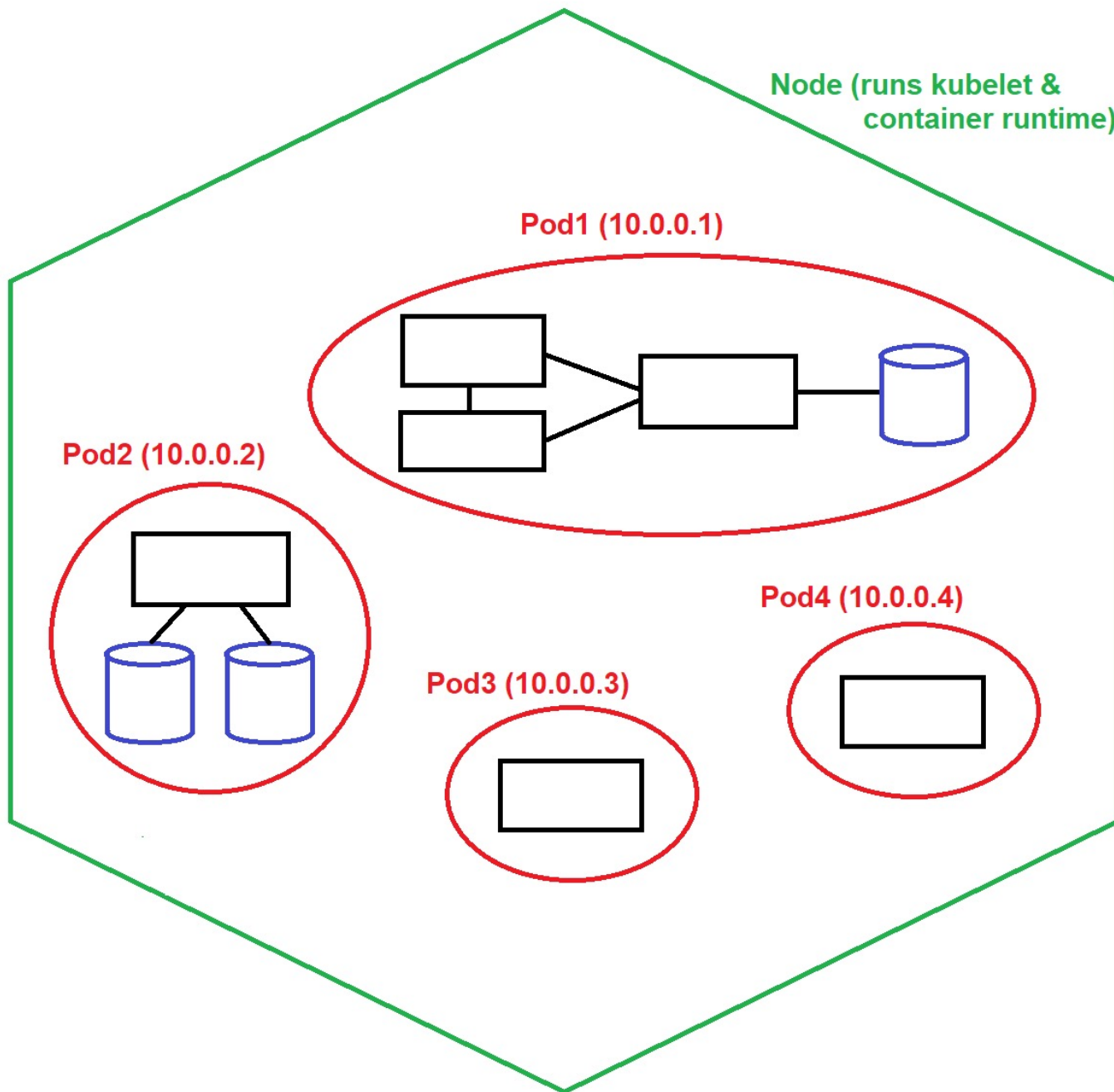
- This is essentially a follow-on to my previous presentation on *cloud buzzwords and how they are related to each other*
 - Microservice development & containers has been standard in development courses/books for years
 - Containers have been a focus on the sysadmin side for the last few years (and now it's Kubernetes)
 - I've always approached Kubernetes from the developer side (easy), but I now have to think of how to introduce it on the sysadmin side

Shameless plug:

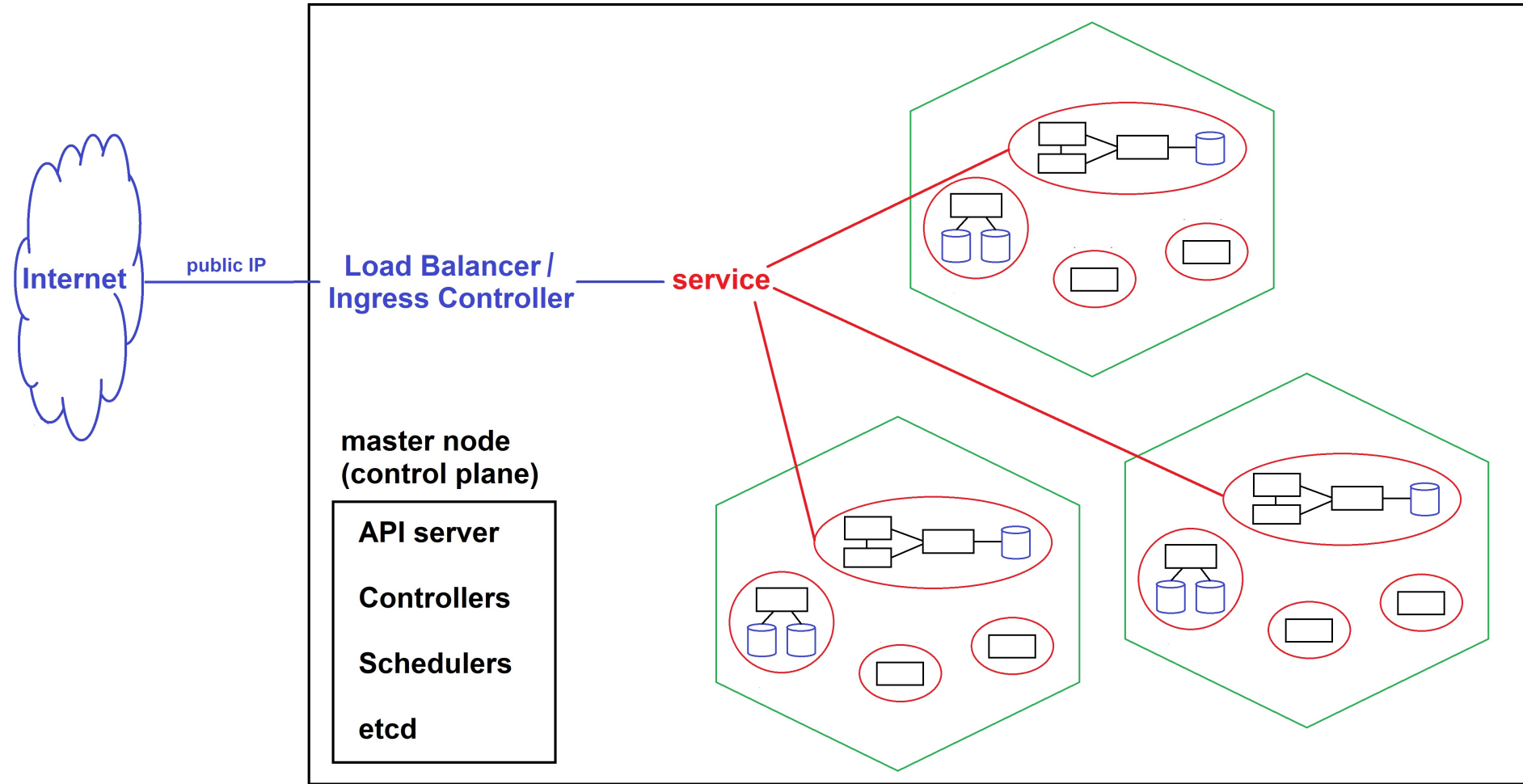


Microservices & Kubernetes (K8S)

- Want to deploy, scale & manage containers in your public/private cloud?
 - K8S is the industry standard orchestrator/API
 - You install a K8S *cluster* with a *control plane* and one or more *nodes* (~VMs with container runtime & *kubelet*)
 - Web apps are called *pods* and may consist of one or more containers or persistent storage volumes.
 - Managed K8S is common (cloud provider service)



Kubernetes cluster (black box with API)



K8S Quickstart Lab Setup

- **Docker Desktop** (includes the containerd runtime) on Windows or macOS
- **Minikube** (a pre-configured single-node Kubernetes cluster that runs in a VM/macOS or WSL2/Windows)
- **kubectl** (the main K8S command – *cue-bee-cuttle*)
- **Helm** (a package manager for Kubernetes)
- **Lens** (a visual K8S management & monitoring tool)
- **Prometheus** (a K8S data collection tool)
- **Grafana** (displays data from Prometheus)

K8S Quickstart Lab Setup

- If you are using Windows, install **WSL2**:

```
wsl --install
```

```
wsl --set-default-version 2
```
- Install the **Docker Desktop** app (Windows/macOS) from the Docker website & start it
 - Containerd runs in background when app is closed
- Let's play with a quickstart (also on my blog)
 - <https://jasoneckert.github.io/myblog/kubernetes-quickstart/>