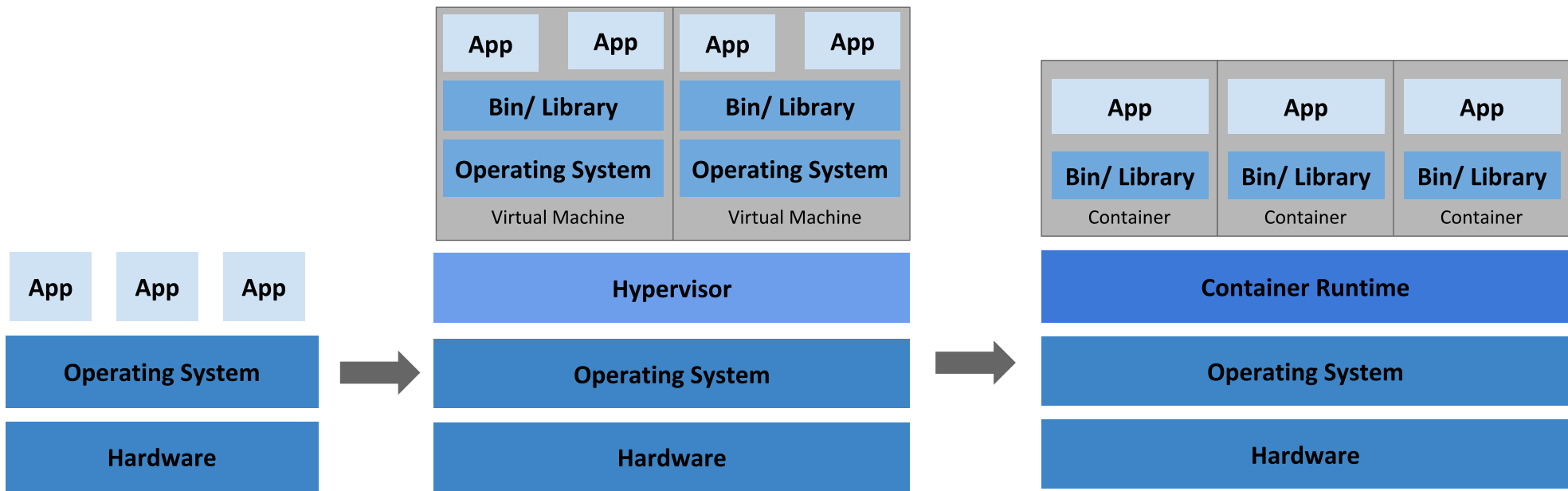# Springfield CCE Containerization 101

What is a Container?

- Server ("Bare Metal")
- Virtual Machine
- Container

Traditional Deployment

Virtualized Deployment

Container Deployment

Why Containers?

- Light weight
- Simple
- Portable

Container Tools

- Docker

- Containerd

- Podman

- CRI-O

- Kubernetes*

Terminology

- runc
- Namespaces
- cgroups / capabilities

- Images
- Containers
- Volumes
- Networks

Building a Container

- Dockerfile
- Build Stages
  - Build vs Runtime
- Inspecting the Container

Container Registries

Pre-created images publicly available!

- Docker Hub
- AWS Gallery
- Private Registries

Security

- App Security is still #1
- Non-root image
- Distroless

- Dropping Capabilities
- Read-only filesystem
- Pinned images

Questions?

Sources

- https://kubernetes.io/docs/concepts/overview/

- https://github.com/UMLCloudComputing/Docker