

Course Outline:

- Setting up and configuring a Swarm
 - Operational priorities of container orchestration
 - Containerized application architecture
 - Swarm scheduling workflow & task model
 - Automatic failure mitigation
 - Swarm installation & advanced customization
- Deploying workloads on Swarm
 - Defining workloads as services
 - Scaling workloads
 - Container scheduling control
 - Rolling application updates and rollback
 - Application healthchecks
 - Application troubleshooting
 - Deploying applications as Stacks
- Networking Swarm workloads
 - Swarm service discovery and routing implementation
 - Routing strategies for stateful and stateless workloads
 - Swarm ingress traffic
- Provisioning dynamic configuration

- Application configuration design
- Environment variable management
- Configuration file management
- Provisioning sensitive information
- Provisioning persistent storage
 - Storage backend architecture patterns
 - NFS backed Swarms
- Monitoring Swarm
 - What to monitor in production-grade Swarms
 - Potential Swarm failure modes & mitigations
 - Swarm workload monitoring