|  |  |  |
| --- | --- | --- |
| **Day** | **Time Schedule** | **Topics Covered** |
| 1 | 9:30 Am – 11:30 Am | 1. Working with Kubernetes Scheduler. 2. Pod Scheduling within the Kubernetes Cluster   Taints, Tolerances, Node Selector, labels & Selectors |
|  | 11:30 Am – 11:40 am | Tea Break |
|  | 11:40 am – 1pm | 1. Sets 2. Stateful Applications in Kubernetes 3. DeamonSets in Kubernetes |
|  | 1pm – 1:40 pm | Lunch break |
|  | 1:40 pm – 4:00 pm | 6**. Cluster Hardening RBAC**   * Intro * Practice - Role and Rolebinding * Practice - ClusterRole and ClusterRoleBinding * Accounts and Users * Practice - CertificateSigningRequests * Recap * TEST - RBAC ServiceAccount Permissions * TEST - RBAC User Permissions * TEST - CertificateSigningRequests Sign Manually * TEST - CertificateSigningRequests Sign via API |
|  | 4:00 pm – 4:10 pm | Tea Break |
|  | 4:10 pm – 6:30 pm | **7. Logging and Monitoring**   * Describe Resources * Pod/container logs * Metric Server & top command * Events   **Lab**: Working on Logs and Events  **Lab**: Working with Metric Server  **Lab**: Working with HPA |

**1.Working with Kubernetes Scheduler**

* Pod Scheduling within the Kubernetes Cluster
* Configuring the Kubernetes Scheduler
* Running Multiple Schedulers for Multiple Pods
* Taints, Tolerances, Node Selector, labels & Selectors
* Scheduling Pods with Resource Limits and Label Selectors
* Displaying Scheduler Events

**Lab:** Manually scheduling Pod

**Lab:** Scheduling Pod based on Node Selector and Labels

**Lab:** Taints and Tolerations

**Lab:** Working with Affinity and Anti-Affinity

**2.** Sets

Stateful Applications in Kubernetes

DeamonSets in Kubernetes

3.  **Cluster Hardening RBAC**

* Intro
* Practice - Role and Rolebinding
* Practice - ClusterRole and ClusterRoleBinding
* Accounts and Users
* Practice - CertificateSigningRequests
* Recap
* TEST - RBAC ServiceAccount Permissions
* TEST - RBAC User Permissions
* TEST - CertificateSigningRequests Sign Manually
* TEST - CertificateSigningRequests Sign via API

**4. Logging and Monitoring**

* Describe Resources
* Pod/container logs
* Metric Server & top command
* Events

**Lab**: Working on Logs and Events

**Lab**: Working with Metric Server

**Lab**: Working with HPA