**Lesson 3 Demo 6**

**Kubernetes Dashboard**

**Objective:** To deploy and access the Kubernetes dashboard

**Tools required:** kubectl, kubeadm

**Prerequisites:** A Kubernetes cluster should be set up (follow steps of Lesson 2 Demo 1)

**Note 1:** Assisted Practice is based on Kubernetes version 1.23

**Note 2:** Make sure you have executed **sudo kubeadm reset** on all machines, which will clean up the entire cluster.

Steps to be followed:

1. Deploying the dashboard
2. Verifying the Pods, Services, and Deployments
3. Editing the Service type of the dashboard
4. Verifying the Service type of the dashboard
5. Checking where the Pod is running
6. Copying the IP and NodePort
7. Selecting desktop form taskbar from the master node
8. Opening the link on the Firefox browser
9. Accessing the dashboard

**Step 1: Deploying the dashboard**

1. The dashboard user interface is not deployed by default. To deploy it, run the following command:

**kubectl apply -f** [**https://raw.githubusercontent.com/kubernetes/dashboard/v2.5.0/aio/deploy/recommended.yaml**](https://raw.githubusercontent.com/kubernetes/dashboard/v2.5.0/aio/deploy/recommended.yaml)

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**Step 2: Verifying the Pods, Services, and Deployments**

1. To verify if the Pods, Services, and Deployments are created or not, use the following commands:

**kubectl get pods -n kubernetes-dashboard -o wide**

**kubectl get deployment -n kubernetes-dashboard -o wide**

**kubectl get svc -n kubernetes-dashboard -o wide**

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**Step 3: Editing the Service type of the dashboard**

1. To access the Service outside the cluster, edit the Service type **ClusterIP** to **NodePort**:

**kubectl edit svc -n kubernetes-dashboard kubernetes-dashboard**

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| **Note:** Change the attribute after entering the deployment  type: ClusterIP (image 1) to NodePort (image 2) |

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Image 1 Image 2

**Step 4: Verifying the Service type of the dashboard**

1. To verify if the Service type is changed to **Nodeport**, use the following command:

**kubectl get svc -n kubernetes-dashboard -o wide**

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**Step 5: Checking where the Pod is running**

1. To check where the Pod is running, use the following command:

**kubectl get pods -n kubernetes-dashboard -o wide**

**kubectl get svc -n kubernetes-dashboard -o wide**

**kubectl get nodes -o wide**

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| **Note:** In this case, the Pod is running on **worker-node1**. Note down the **IP** and **NodePort** of node1. |

**Step 6: Copying the IP and NodePort**

1. Copy this link [https://172.31.48.237:31851](https://172.31.48.237:31851/)

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| **Note:** In your case, the IP and NodePort will be different. Change the IP and NodePort accordingly:  **https:// <<your worker-node 1>>:<<NodePort>>** |

**Step 7: Selecting desktop form taskbar from the master node**

1. Navigate to the master node and select **desktop**:

A screenshot of a computer

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**Step 8: Opening the link on the Firefox browser**

1. Open the Firefox browser, paste the copied link in the search bar and press the enter key:

Graphical user interface, website

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1. Select **Advanced:**

**Graphical user interface, text, application, email, website

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1. Select **Accept the Risk and Continue:**

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**Step 9: Accessing the dashboard**

1. Select **Token** from the given options and enter the token:

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| **Note:** To get the token, navigate to the master node and use the command:  **kubectl -n kube-system describe secret $(kubectl -n kube-system get secret | awk '/^deployment-controller-token-/{print $1}') | awk '$1=="token:"{print $2}'** |

**Graphical user interface

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When you access the dashboard on an empty cluster, you will see the welcome page. This page contains a link to deploy your first application.

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