🚀 \*\*Successfully Deployed a Kubernetes Cluster on AWS\*\* 🚀

I'm excited to share my latest project where I deployed a robust Kubernetes cluster using kubeadm on AWS and created Deployment, Pod and DaemonSet! Here’s a detailed breakdown of what I accomplished:

### \*\*Project Overview:\*\*

1. \*\*AWS Instances:\*\*

- Launched one AWS t3.medium RHEL instance for the Manager Node (MN).

- Launched two AWS t2.micro RHEL instances for Worker Nodes (WN-1 and WN-2).

2. \*\*Software Installation:\*\*

- Installed Kubernetes using kubeadm, CRI-O, Vim, and Calico on all nodes.

3. \*\*Node Configuration:\*\*

- Connected WN-1 to the MN.

4. \*\*Namespace Creation:\*\*

- Created four namespaces: `webserver-ns`, `app-ns`, `deploy-ns`, and `ds-ns`.

5. \*\*Pod Deployment:\*\*

- Created a YAML file for a pod in the `app-ns` namespace.

6. \*\*Deployment Management:\*\*

- Created a YAML file for a deployment in the `deploy-ns` namespace with 3 replicas.

- Scaled the deployment replicas from 3 to 10, and then back to 3.

- Updated the deployment image from `nginx-latest` to `nginx-mainline`.

7. \*\*DaemonSet Implementation:\*\*

- Created a YAML file for a DaemonSet in the `ds-ns` namespace.

- Connected WN-2 to the MN, resulting in the DaemonSet automatically deploying on WN-2.

- Verified that both MN and WN-2 were running the DaemonSet.

### \*\*Key Takeaways:\*\*

- \*\*Hands-on Experience:\*\* This project provided valuable hands-on experience with Kubernetes cluster management and scaling.

- \*\*Automation and Efficiency:\*\* Leveraging Kubernetes’ features such as deployments, scaling, and DaemonSets significantly streamlined the process.

- \*\*Cloud Infrastructure:\*\* Successfully integrated Kubernetes with AWS, demonstrating the power of cloud-native technologies.

This project was a fantastic learning experience and has deepened my understanding of Kubernetes and cloud infrastructure. I'm looking forward to applying these skills in future projects!

#Kubernetes #AWS #CloudComputing #DevOps #CRI-O #Calico #Automation #TechProjects