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Company: Crest Data Systems



Internship
Job Role

SRE Network Operations Centre

Deep Understanding of Linux and it's usage in NOC

- Networking Command
- Echo redirections
- CPU Monitoring
- Linux Partition

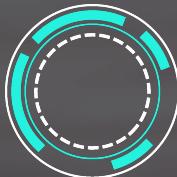


Deep Dive into KVM

- Understanding of KVM
- Understanding and usage of libvirt
- Understanding and Usage of virsh and polaris



Monitoring Tools



Zabbix Installation

Zabbix is an open source software for monitoring of endpoints such as Linux, to monitor the cpu utilization, memory etc.



Sumologic

Sumologic is a cloud based SIEM [Log Management Tool] that collect data such as logs and metrics to show graphs and perform log search



Grafana

Grafana is both on-premise and cloud based monitoring tool to gather logs and metrics and display realtime data in graphical presentations.

HAProxy & Sumologic



Understanding the Architecture of HAProxy as a Load Balancer for incoming traffic to distribute in the back-end architecture.

Understanding and working on Sumologic log search.

Kubernetes

Container Orchestration System

Load Balancing Pods

Understanding the Architecture of Container and Installation of Kubernetes Cluster using 3 machine, 1 master and 2 worker

Creating Services, Config Maps, Deployments, Secrets etc

Understanding of Calico Plugins and Flannel for cluster networking

Creating custom images and running in the cluster



Ansible and Certification

- Ansible as automation for infra configuration
- Completing Red Hat Certified Engineer
- Troubleshooting Playbook for company project





Red Hat, Inc. hereby certifies that

Souhardya Sarkar

has successfully completed all the program requirements and is certified as a

Red Hat Certified Engineer (RHCE)

A handwritten signature in black ink, appearing to read "RR" followed by a cursive name.

RANDOLPH R. RUSSELL
DIRECTOR OF RED HAT CERTIFICATION



February 29, 2024 CERTIFICATION ID: 220-112-676

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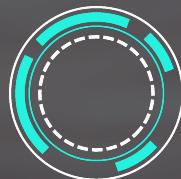
Containerd over Docker



Understanding containerd as a runtime and how docker uses containerd within itself.

Difference between containerd and docker shime to interact with a kubernetes cluster.

Playbook for Kubernetes



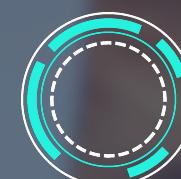
Playbook for Master Node

This playbook would run in a remote system and download and install kubernetes along with containerd runtime.



Understanding the errors and using error handling

The playbook gave many errors while testing and those were handled.



Adjusting the same for worker node

The master playbook was copied and adjusted to copy the join command and run in worker nodes.

Terraform

- Understanding the working of terraform
- Terraform using Hasicorp Language HCL and the use of .tf files
- Creating terraform script to test creation of repo in github.



Thank You