

ABSTRACT

This research focuses on developing a technical guide for installing OpenShift on the Nutanix Cloud Platform, a key technical challenge in optimally utilizing hyper-converged infrastructure. The complexity of integrating OpenShift, a container orchestration platform, with Nutanix, which simplifies resource management, is a key concern. This research involved configuring virtual machine (VM) provisioning, installing OpenShift, and monitoring the performance of the integration results. This approach enabled the identification of technical challenges and solutions at each stage of the implementation. The results showed that the installation was successful and the system was able to dynamically respond to increased load through the pod autoscaling feature. Furthermore, the combination of OpenShift and Nutanix provided better efficiency in terms of resource utilization and scalability.

Keywords: *OpenShift, nutanix, hyper-converged infrastructure, kubernetes, virtual machines, containerization*