

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 1, November 2022

Automate the Deployment of Any Custom Web **Applications Across Several Clouds using Kubernetes** Clusters

Ms. Amrapali Chavan¹, Ms. Mansi Deshmukh², Mr. Vishnu Parikh³, Mr. Ajinkya Khandave⁴, Ms. Suvarna Pawar⁵

Faculty, Department of Computer Engineering¹ Students, Department of Computer Engineering^{2,3,4,5} AISSMS Institute of Information Technology, Pune, Maharashtra, India amrapali.chavhan@aissmsioit.org@gmail.com, mansid411@gmail.com, vishnuparikh12345@gmail.com, ajinkyaakap11@gmail.com, pawarsuvarna2017@gmail.com

Abstract: During COVID period, most the businesses are worked in online mode. For deploying their businesses need to keep their web apps up all throughout the clock. Every successful small-scale business has its own website or [3] web application. To deploy the website with every modification needed, a team of DevOps Engineers is needed. The role of those engineers is to take the website, run it on a server and make it available to the end-user. This entire process can therefore be automated in a single click with this system. In this system, we are integrating the DevOps tools such as Ansible, Terraform, Kubernetes, Docker and Cloud Servers. This system when used will save more time and would be much more efficient. It will help businesses cost-effectively achieve zero downtime. Along with these benefits, their website or web app would be secured as it would be deployed and monitored on Cloud. This system will help businesses to grow more.

Keywords: Ansible, AWS, Azure, Docker, Kubernetes

REFERENCES

- [1]. Arnaldo Pereira and Ferreira; Richard Sinnott,"A Performance Evaluation of Containers Running on Managed Kubernetes Services", 2019 IEEE International Conference on Cloud Computing Technology and Science (CloudCom), Sydney, NSW, Australia, 2019, doi:10.1109/CloudCom.2019.00038.
- [2]. Ruchika Muddinagiri; Shubham Ambavane; Simran Bayas, "SELF HOSTED KUBERNETES: DEPLOYING DOCKER CONTAINERS LOCALLY WITH MINIKUBE", 2019 International Conference on Innovative Trends and Advances in Engineering and Technology (ICITAET), Shegaon, India, 2019, doi: 10.1109/ICITAET47105.2019.9170208.
- [3]. Daniel Vladusic, Dragan Radolovic, Infrastructure as Code for Heterogeneous Computing, 2020 22nd International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC), 2020, doi: 10.1109/ SYNASC51798.2020.00011.
- [4]. T. Deepa, Dr. Dhanaraj Cheelu, "A Comparative Study of Static and Dynamic Load Balancing Algorithms in Cloud Computing", International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS-2017), Chennai, India, 2018, doi: 10.1109/ ICECDS.2017.8390086.
- [5]. Aayush Agarwal; Subhash Gupta; Tanupriya Choudhury, "Continuous and Integrated Software Development using DevOps", 2018 International Conference on Advances in Computing and Communication Engineering(ICACCE), Paris, France, doi:10.1109/ICACCE.2018.8458052.
- [6]. Nikhil Marathe, Ankita Gandhi, Jaimeel M Shah, "Docker Swarm and Kubernetes in Cloud Computing Environment", 2019 3rd International Conference on Trends in Electronics and Informatics (ICOEI), 2019, doi: 10.1109/ ICOEI.2019.8862654.
- [7]. Leonardo Reboucas de Carvalho; Aleteia Patricia Favacho de Araujo, Performance Comparison of Terraform and Cloudify as Multicloud Orchestrators, 2020, doi: 10.1109/ CCGrid49817.2020.00-55. DOI: 10.48175/IJARSCT-7335

IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 1, November 2022

[8]. Nishant Kumar Singh, Sanjeev Thakur, Himanshu Chaurasiya, Himanshu Nagdev, Automated provisioning of application in IAAS cloud using Ansible configuration management, 2016, doi: 10.1109/NGCT.2015.7375087.