# **Impact of Kubernetes in the world of DevOps**

The DevOps movement started back in 2007 when the division between the developers and IT operations teams was growing wider. There was a dire need for a neutral collaborative platform to bridge the gap and hence the DevOps platform was born. Since its inception, DevOps has provided a complete package of integration between the two sides of the IT world where processes are automated and integrated to expedite the process of building and testing software.

DevOps also relies heavily on automated containerized services and this is where its interdependence on Kubernetes comes into play. Kubernetes was developed by Google as an open-source platform that helps in automating the deployment and management of containerized applications and specifically targets DevOps related problems. A variety of container-based tasks like load balancing, managing VM clusters, microservices, and network traffic distribution are easily accomplished via this system. Due to its nature of being a cluster management tool, Kubernetes offers a lot of advantages to DevOps. From load testing websites, moving applications from test to production environments to creating a staging environment, Kubernetes is always there to make DevOps shine. It is a true lifesaver for developers as it helps transition from development to production environments with great ease. A layer of abstraction makes it transparent for developers to easily test code in one environment and release it consecutively in the next, without affecting any underlying applications.

Now that we have learned about Kubernetes, let us explore the main advantages it offers to the DevOps platform:

1. **It can deploy anywhere**: The biggest advantage Kubernetes provides is its ability to deploy an application virtually anywhere without interrupting the underlying infrastructure. This separation of services provided by Kubernetes is paramount for running containers. No matter where the containers are deployed, they always run the same within Kubernetes.
2. **It can run in a hybrid environment**: The beauty of Kubernetes is that it can run anywhere, whether it is a cloud-based, on-prem, or an edge deployment.
3. **It is a portable environment**: The ability to run Kubernetes “as-code” allows the environment to be automatically maintained and controlled, and both the infrastructure and application layers are preserved in a portable source repository.
4. **It is an open-source platform**: Kubernetes follows an open-source standard which makes it easier to take advantage of new ground-breaking tools and services.
5. **It provides faster deployments**: There is no downtime with deployment strategies that utilize Kubernetes. The applications are deployed continuously making it easier for developers to test in production without impacting other users. Not only this, but Kubernetes also comes with a built-in rollback capability, should a need arise for that.

After studying the above facts, it would be fair to say that DevOps and Kubernetes are indeed a perfect pair. Kubernetes brings a positive impact for DevOps by providing easy ways for organizations to deploy applications resulting in quick turnarounds for their customers. If you are looking for a highly secure, scalable, and flexible platform then pairing Kubernetes with the DevOps platform is the way to go.