WHAT ACTUALLY DOCKER IS?

Beginning with devops field i was very unfamiliar with the terms docker , and the other devops resources . and i grew terrific and many questions have stemmed into my mind whether i could learn this? Is this docker really? But the major question that have reached my mind is what is docker. But i wanted to clear that docker is not hard as you think. starting the docker journey what is a docker with an simplified example.

What is a Docker with example

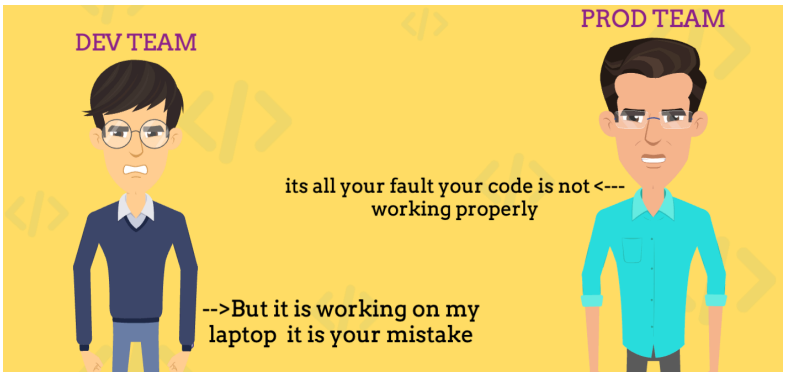
First getting to know about the term DEVOPS. devops is mainly splitted into two words that is DEV+OPS . DevOps is a set of practices and cultural philosophies that aim to bridge the gap between software development (Dev) and IT operations (Ops) by fostering collaboration, communication, and integration across these traditionally siloed teams. It emphasizes automation, continuous integration, continuous delivery (CI/CD), and a shared responsibility for the quality and stability of software systems. By adopting DevOps, organizations can accelerate the development

and deployment of software while maintaining high standards of security, reliability, and performance.

In the below example we consider an organization in which both the dev and ops teams are working together. First in the Development team an application is build and started running successfully,

Later the devops team have given the application to the production team for testing the other operations and there started getting the errors in production team

and there started the differentiation between dev and the ops team stating that error is yours.



Here come a doubt why is this error occuring as the application is being able to deploy on dev team but unable to deploy on prod team , here comes some of the reason

- No proper availabilty of software in the production team(operation)
- No storage of the application as there might be some loss during transferring it to ops team

What should we do to avoid this errors

In order to avoid this the hero known as Docker comes into the picture

Docker is an open-source platform that automates the deployment, scaling, and management of applications using containerization. Containers are lightweight, standalone units that package an application's code, its dependencies, and runtime environment, ensuring consistency across different computing environments. Docker helps developers and operations (DevOps) teams build,

ship, and run applications reliably, regardless of where they are being executed.

Uses of Docker in DevOps Field

- **Consistent Development Environment**: Developers can create a standardized environment using Docker, ensuring that the code runs identically in development, testing, and production environments. This reduces the “it works on my machine” problem.
- **Simplified CI/CD Pipelines**: Docker plays a crucial role in CI/CD pipelines by allowing teams to easily create, test, and deploy applications in a consistent environment. This accelerates the software release process and minimizes configuration issues.
- **Rapid Deployment and Scalability**: Docker containers can be quickly deployed and scaled across different environments, making it easier for Ops teams to manage workloads dynamically based on demand.

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