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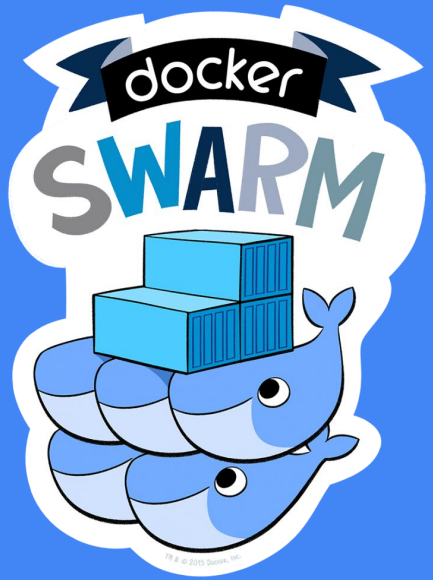
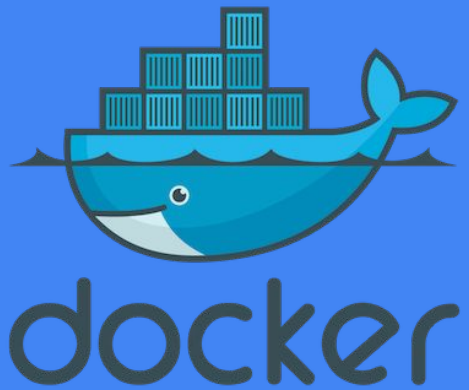
Developers Thought

Docker Deep Dive (Part-2)





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SAGAR JADHAV

Cloud Developer,
IBM Software Labs (ISL)
(YouTuber | Speaker | Open Source Contributor)

Past Experience:

Project Engineer @ ***C-DAC R&D***
Senior Software Engineer @ ***GS Lab***
Software Engineer @ ***Veritas LLC***

Total Experience: *5+ Years*

Technology Stack:

JAVA, GO, Node JS, Loopback, Spring Boot, Docker, Kubernetes, Terraform, Microservices, MongoDB, PostgreSQL

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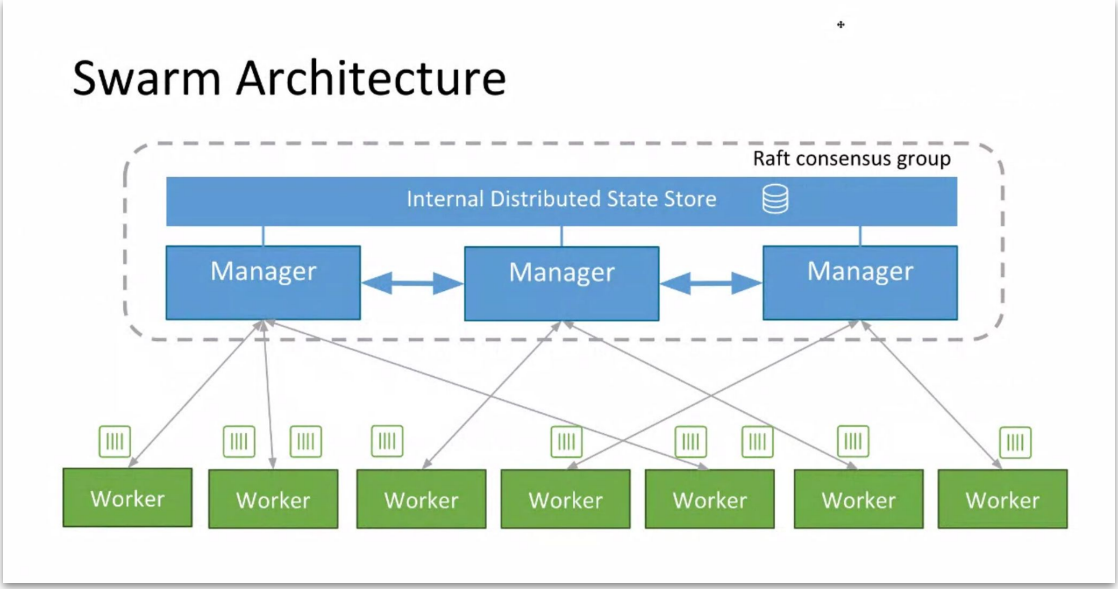
Docker Swarm



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Docker Swarm (Contd.)

1. In build cluster management & orchestration features in the Docker Engine.
2. A swarm is multiple docker host running in a Swarm mode which will act as Master & Worker Nodes.
3. Swarm cluster can comprises of multiple master & worker nodes.
4. When we create a Service by declaring desired state, Docker works to maintain that desired state for the Service.

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Docker Swarm (Nodes)

1. Nodes are the instance of Docker engine participating in the Swarm Mode.
2. Two types of Nodes are present in Swarm mode i.e. Master & Worker.
3. Task of Master Node is to perform the cluster management & delegation of tasks, It may or may not run containers/services.
4. Task of Worker Node is to run the containers/services.

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Docker Swarm (Features)

1. Cluster management integrated with Docker Engine
2. Decentralized design
3. Declarative service model
4. Scaling
5. Desired state reconciliation
6. Multi-host networking
7. Service discovery
8. Load balancing
9. Secure by default
10. Rolling updates

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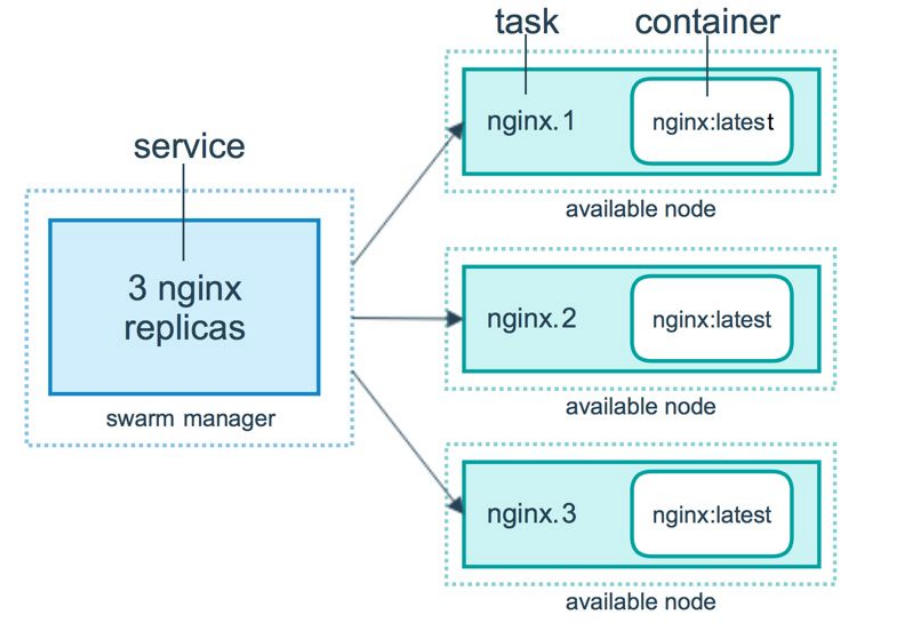
Services



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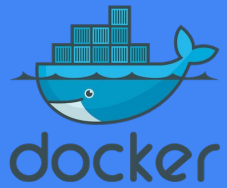
Services (Contd.)

Services are required when we want to deploy docker image in the Docker Swarm. While creating a Service we have to specify the following:

1. Docker Image
2. Command which will run inside the running container
3. Port
4. Overlay Network
5. CPU, Memory limits & Reservations
6. Rolling update policy
7. Number of Replicas



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Types of Services

1. Replicated
2. Global (--mode global)

Source

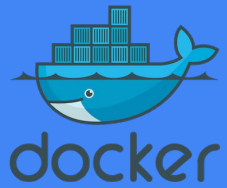
1. Docker Service:

   https://docs.docker.com/engine/swarm/how-swarm-mode-works/services/#services-tasks-and-containers

2. Docker Swarm:

   https://foxutech.com/docker-swarm/docker-swarm-architecture/

   https://m-square.com.au/video-whats-new-in-docker-swarm-1-1/



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