 walkthrough that covers writing your first app, data storage, networking, and swarms, and ends with your app running on production servers in the cloud.

攻略包含了写我们的第一个应用、数据存储、网络连接、集群建立。最后将我们的应用跑在生产环境下的server作为结束。

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什么是swarm?

A [swarm](https://docs.docker.com/engine/swarm/) is a cluster of one or more Docker Engines running in [swarm mode](https://docs.docker.com/glossary/?term=swarm mode).

什么是docker engine?

* The Docker Engine - our lightweight and powerful open source containerization technology combined with a work flow for building and containerizing your applications.

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## Docker concepts

Docker is a platform for developers and sysadmins to ****develop, deploy, and run**** applications with containers. The use of Linux containers to deploy applications is called containerization. Containers are not new, but their use for easily deploying applications is.

Containerization is increasingly popular because containers are:

* Flexible: Even the most complex applications can be containerized.
* Lightweight: Containers leverage and share the host kernel.
* Interchangeable: You can deploy updates and upgrades on-the-fly.
* Portable: You can build locally, deploy to the cloud, and run anywhere.
* Scalable: You can increase and automatically distribute container replicas.
* Stackable: You can stack services vertically and on-the-fly.

什么是container?

## Definition of: container

A container is a runtime instance of a [docker image](https://docs.docker.com/glossary/?term=image).

A Docker container consists of

* A Docker image
* An execution environment
* A standard set of instructions

The concept is borrowed from Shipping Containers, which define a standard to ship goods globally. Docker defines a standard to ship software.

那什么又是image呢?

Docker images are the basis of [containers](https://docs.docker.com/glossary/?term=container). An Image is an ordered collection of root filesystem changes and the corresponding execution parameters for use within a container runtime. An image typically contains a union of layered filesystems stacked on top of each other. An image does not have state and it never changes.

什么是layer呢?

## Definition of: layer

In an image, a layer is modification to the image, represented by an instruction in the Dockerfile. Layers are applied in sequence to the base image to create the final image. When an image is updated or rebuilt, only layers that change need to be updated, and unchanged layers are cached locally. This is part of why Docker images are so fast and lightweight. The sizes of each layer add up to equal the size of the final image.

什么是Dockerfile呢?

A Dockerfile is a text document that contains all the commands you would normally execute manually in order to build a Docker image. Docker can **build images** automatically by reading the instructions from a Dockerfile.