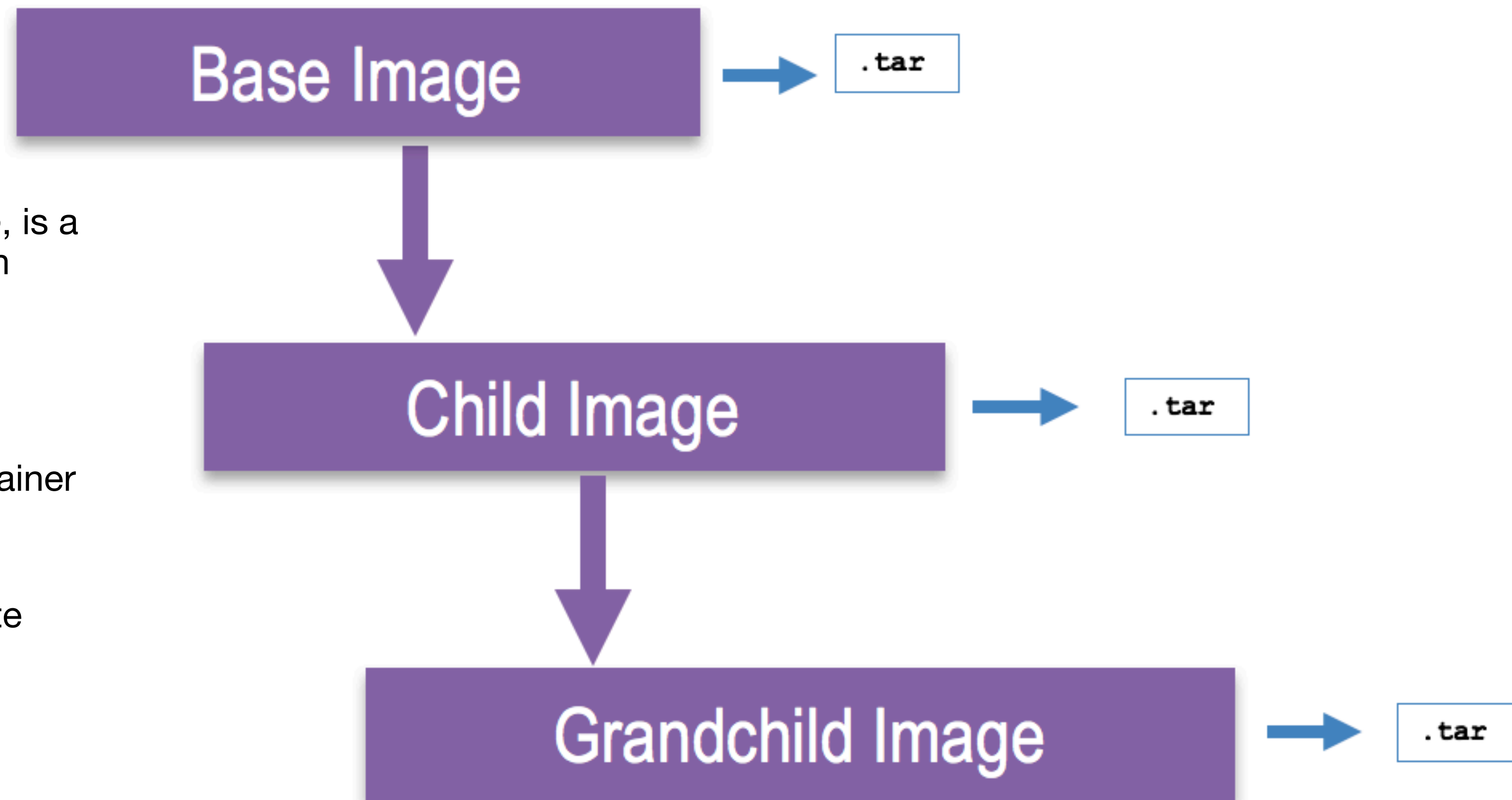# Docker Containers Concept
Docker Concepts and Components

A Docker **container image**, is a tar file that is built based on a **nesting relationship** of containers.

A container is essentially a snapshot of a running container rolled into a tar file.

A File-based Copy-On-Write (COW)

Base Image → .tar

Child Image → .tar
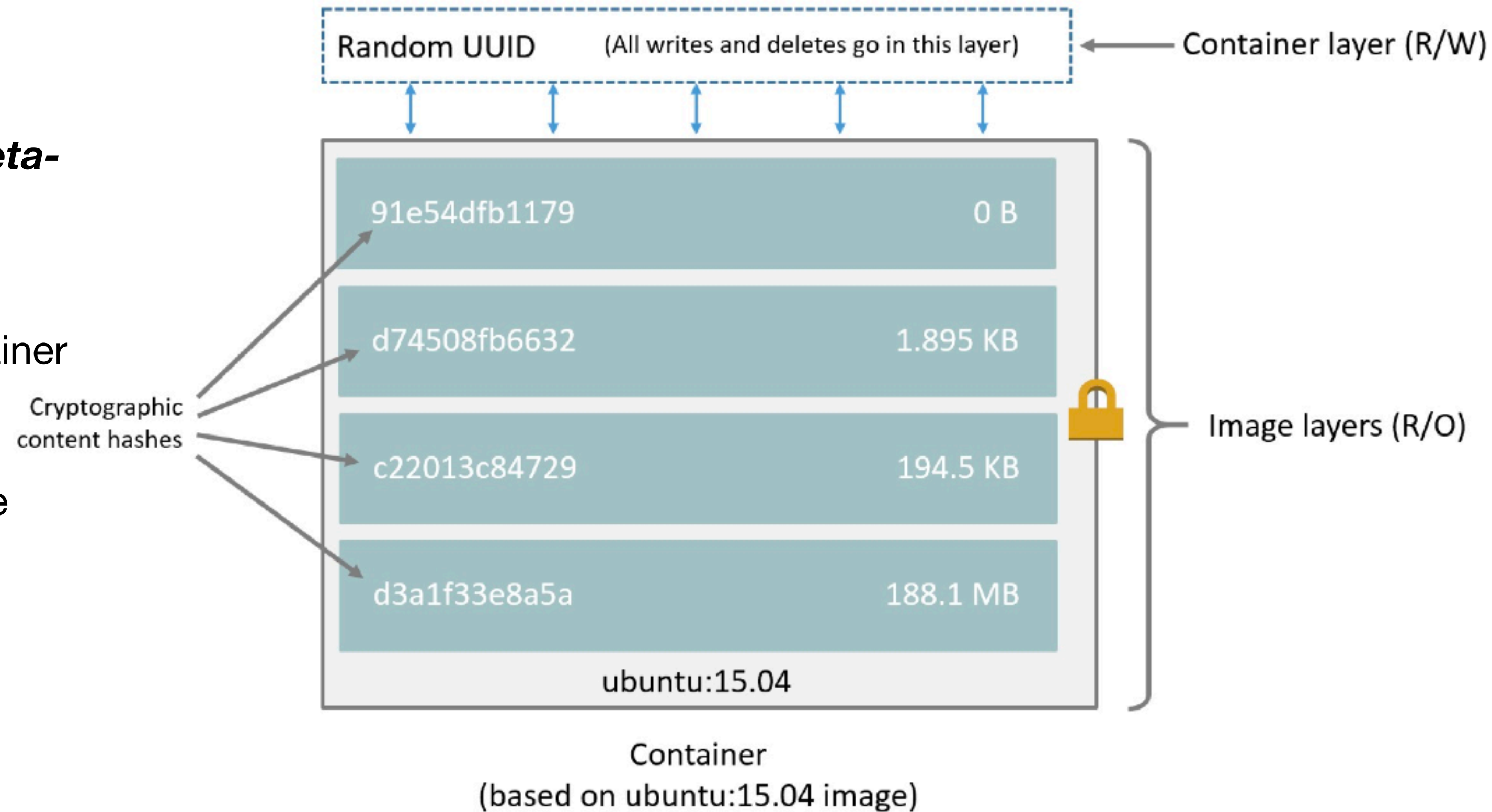
Grandchild Image → .tar

Source: Medium

#init6

Docker Containers Concept
Docker Concepts and Components

A Docker *container image shown previous layers (Meta-data hashed)*

A container is essentially a snapshot of a running container rolled into a tar file.

A File-based Copy-On-Write (COW)

Random UUID   (All writes and deletes go in this layer)   ← Container layer (R/W)

91e54dfb1179   0 B

d74508fb6632   1.895 KB

Cryptographic content hashes

c22013c84729   194.5 KB   Image layers (R/O)

d3a1f33e8a5a   188.1 MB

ubuntu:15.04

Container
(based on ubuntu:15.04 image)

Source: docs.docker.com

#init6