



ONAP Multi-CPU Architecture Container Images

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ONAP IS VENDOR-AGNOSTIC

Charter

1.b. ONAP will include **product / service / resource agnostic** platform modules for lifecycle management

Architecture Principles

All components should be software-based with **no dependency on hardware platform.**

..the **cloud platform implementation** should be pluggable and **transparent to the ONAP components.**

The ability for ONAP to be used by various users worldwide dictates the need to **avoid dependency on any single supplier(s).**

THE BENEFITS OF MULTI-CPU CONTAINER IMAGES

OCI Container Image Specification supports multi-cpu architecture.

ONAP images will be able to support multiple cpu architectures in Dublin.

Usability and deployability* of ONAP containers will improve across architectures and platforms.

THE BENEFITS OF MULTI-CPU CONTAINER IMAGES

Operators will be able to run ONAP on the infrastructure of their choice.

Users no longer need workarounds, such as adding an architecture-specific prefix to release image tags.

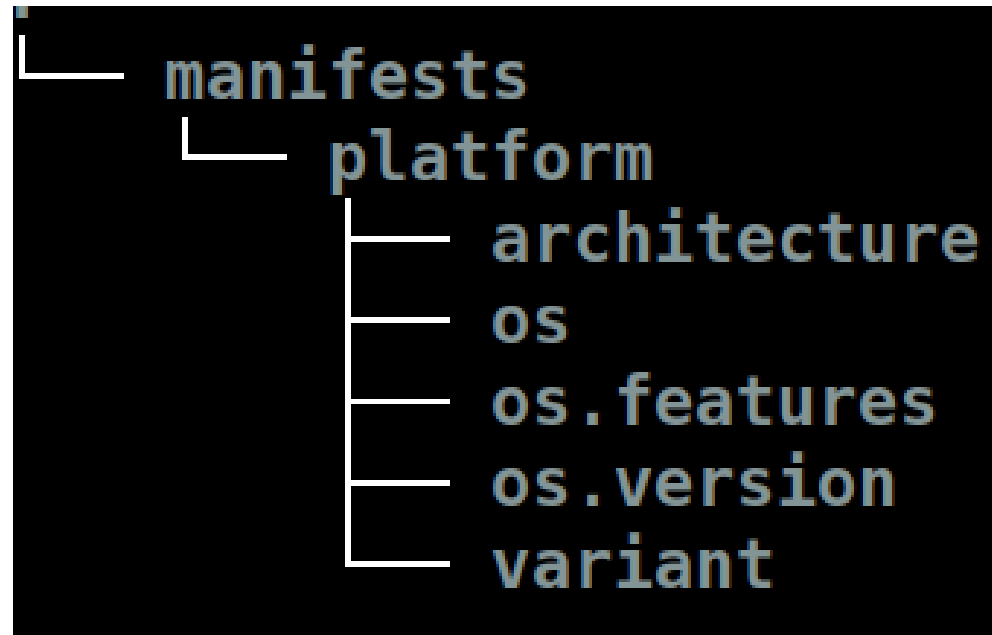
OCI Image Index Specification

A higher-level *manifest*

Points to specific image manifests

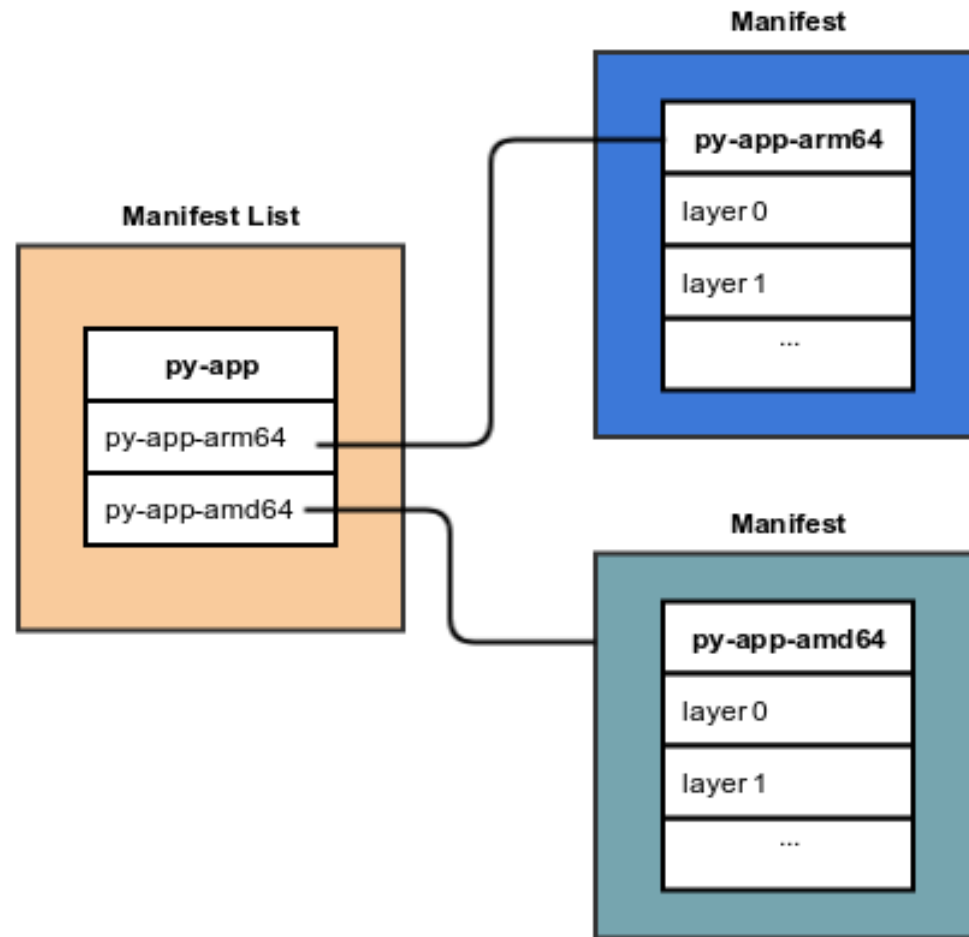
Ideal for one or more platforms

OCI “Fat” Manifest/List



*Only relevant attributes are shown.

OCI “Fat” Manifest/List



Bottom Line

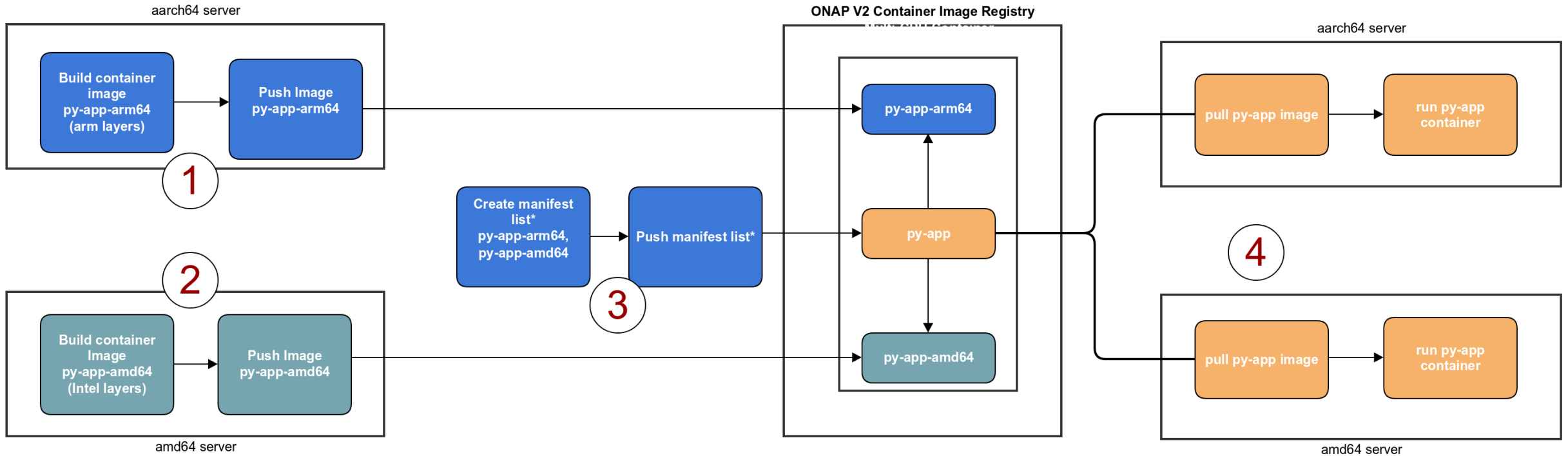
A single image tag supports multiple platforms (cpu architecture, os, etc)

“docker manifest”

Experimental feature

Must be explicitly enabled

HOWTO: Build-Ship-Run Multi CPU Architecture Images



(*) Uses docker manifest command
To be implemented on the arm branch of the pipeline.

Multi-CPU Image - Tutorial

<https://wiki.onap.org/display/DW/Building+a+Multi-CPU+Architecture+Container+Image>

OCI Image Index

<https://github.com/opencontainers/image-spec/blob/master/image-index.md>

ONAP CIA Project

<https://wiki.onap.org/pages/viewpage.action?pageId=34375682>