

AArch64

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Discussion

AArch64 identifies the 64-bit execution state of the Arm architecture. It uses the A64 instruction set.

Operating systems, package managers, container registries, build tools, virtualization platforms, and infrastructure providers commonly use the labels AArch64, aarch64, or arm64 for this architecture. A controlled architecture model should normalize these labels while preserving the source-specific label required by each implementation.

AArch64 differs from the A32 and T32 execution states and does not apply to all Arm architectures or every Arm processor implementation.

Definition

The 64-bit execution state of the Arm architecture that uses the A64 instruction set.

Source

- Arm, *Arm Architecture Reference Manual for A-profile Architecture*
- Arm, *A64 Instruction Set Architecture*
- [References](#)

Note

The labels **AArch64**, **aarch64**, and **arm64** commonly refer to the same 64-bit processor architecture across different operating systems, tools, package repositories, and infrastructure providers.

AArch64 identifies an architectural execution state. It does not identify a specific processor, processor manufacturer, Machine Image format, operating system, or infrastructure provider.

Example

A Crucible Image Requirement identifies `AArch64` as the normalized processor architecture while an Amazon Web Services provider mapping uses `arm64` and a Red Hat Enterprise Linux package repository uses `aarch64`.

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