Image Build

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Discussion

An Image Build is a controlled process that transforms defined inputs into a Machine Image.

The process may retrieve installation media, create storage structures, install an operating system, apply provisioning content, configure services, add packages, perform security hardening, run compliance scans, and record the resulting artefacts and Provenance.

An Image Build uses an Image Baseline to identify the controlled inputs, settings, dependencies, and build procedures required to produce the image.

Within Crucible, an Image Build may produce a Base Image, Guest Image, Hardened Image, or Capability Image.

Definition

controlled process that transforms defined inputs into a machine image

Source

Generalized from machine-image engineering, operating-system installation, configuration management, and reproducible-build usage and specialized for the Crucible architecture and operational model.

Note

An Image Build identifies the complete controlled process rather than only the execution of a particular build tool.

Repeated Image Builds from the same controlled inputs should produce results that satisfy the applicable reproducibility criteria, even when generated identifiers or environment-specific metadata differ.

Example

A Crucible Image Build boots the Red Hat Enterprise Linux (RHEL) 9 installation medium, creates the

required filesystems, installs packages, applies Ansible provisioning, performs Security Technical Implementation Guide (STIG) remediation, runs a compliance scan, and produces a Hardened Image.
