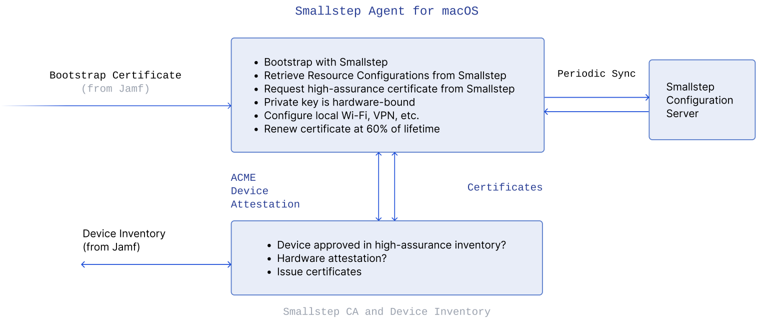
DATA SHEET

Jamf + Smallstep

Trusted device enrollment with hardware based validation

Lock down MDM enrollment to only verified company-owned devices with Smallstep's next-gen device authentication.

Our lightweight Jamf Pro integration offers the strongest possible guarantee that only trusted devices can successfully enroll into your MDM to obtain client certificates to access Wi-Fi, VPN, and other other internal services.


Smallstep Agent for macOS
Bootstrap Certificate
(from Jamf)
Periodic Sync
Smallstep Configuration Server
ACME Device Attestation
Certificates
Device Inventory (from Jamf)
Smallstep CA and Device Inventory

- Bootstrap with Smallstep
- Retrieve Resource Configurations from Smallstep
- Request high-assurance certificate from Smallstep
- Private key is hardware-bound
- Configure local Wi-Fi, VPN, etc.
- Renew certificate at 60% of lifetime

- Device approved in high-assurance inventory?
- Hardware attestation?
- Issue certificates

Smallstep Device Trust Features

Smallstep Trusted Device Inventory

- Adds high-assurance device checks to the Jamf device enrollment process
- Device authentication keys cannot be exported
- Keep personal devices away from your most sensitive resource.
- Device authentication complements user authentication
- Eliminate static SCEP secrets with dynamic, per-device enrollment challenges
- Extend beyond Mac OS to Windows and Linux

When you add device trust to your security model, it becomes easier to contain threats—an attacker would need access to both valid credentials and a trusted device to gain entry.

When Smallstep is added to Jamf Pro, a device's identity becomes a factor in certificate issuance. Instead of relying solely on user credentials, we silently verify device trust at enrollment—blocking unauthorized machines without adding friction for users.

Easily Integrates with Jamf Pro

Smallstep enhaThe Smallstep integration with Jamf Pro ensures that only verified, company-owned devices can access critical resources by combining Jamf's device management with Smallstep's secure certificate workflows. This moves beyond user-based access to establish true device identity by cryptographically binding credentials to trusted devices using ACME Device Attestation, addressing a key weakness of traditional systems. Smallstep's Trusted Inventories sync with Jamf Pro, using dynamic SCEP challenges to ensure device legitimacy.

The Smallstep Agent automates device connections, performs attestation, and manages certificate lifecycles. This cross-platform solution extends beyond macOS and Jamf to other device types.

More Secure Than Standard MDM Enrollment

Most MDM solutions, including Jamf Pro, rely on portable credentials (user logins, MDM enrollment profiles, or static SCEP challenges) to issue certificates. These credentials can be copied and used on unauthorized devices.

This lack of hardware-bound verification has led to security incidents like the June 2024 Snowflake data breach, where an attacker used stolen credentials on a personal, malware-infected device to gain access to sensitive data.

With Smallstep Trusted Device Inventory, certificates are tied to device hardware (Secure Enclave, TPM) using ACME Device Attestation (ACME DA). They cannot be exported, copied, or installed on unverified devices—ensuring that only company-owned endpoints gain access to critical resources.

Increase security without adding to users' authentication burden

With Smallstep, the silicon is the key. When accessing resources from an authorized device, users will not see any additional interruptions at login. No YubiKeys to plug in and tap, no codes to type in.

Smallstep is the market leader in end-to-end encryption across infrastructure. The comprehensive platform detects and mitigates anomalies, equipping developers with a toolkit that continuously monitors everything, everywhere. Smallstep removes the gap traditional secrets create, using certificates to enable trusted communications between technology and people. Learn more about operationalizing end-to-end encryption for all your devices, workloads, and people at smallstep.com.