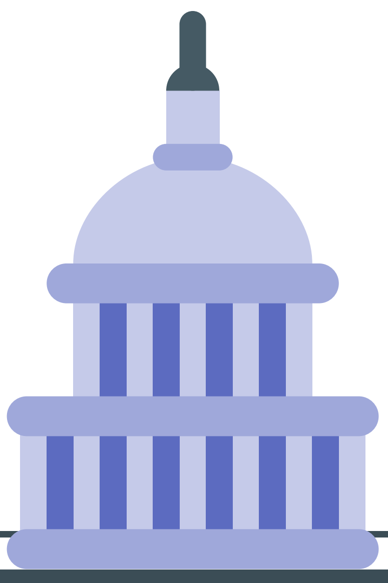
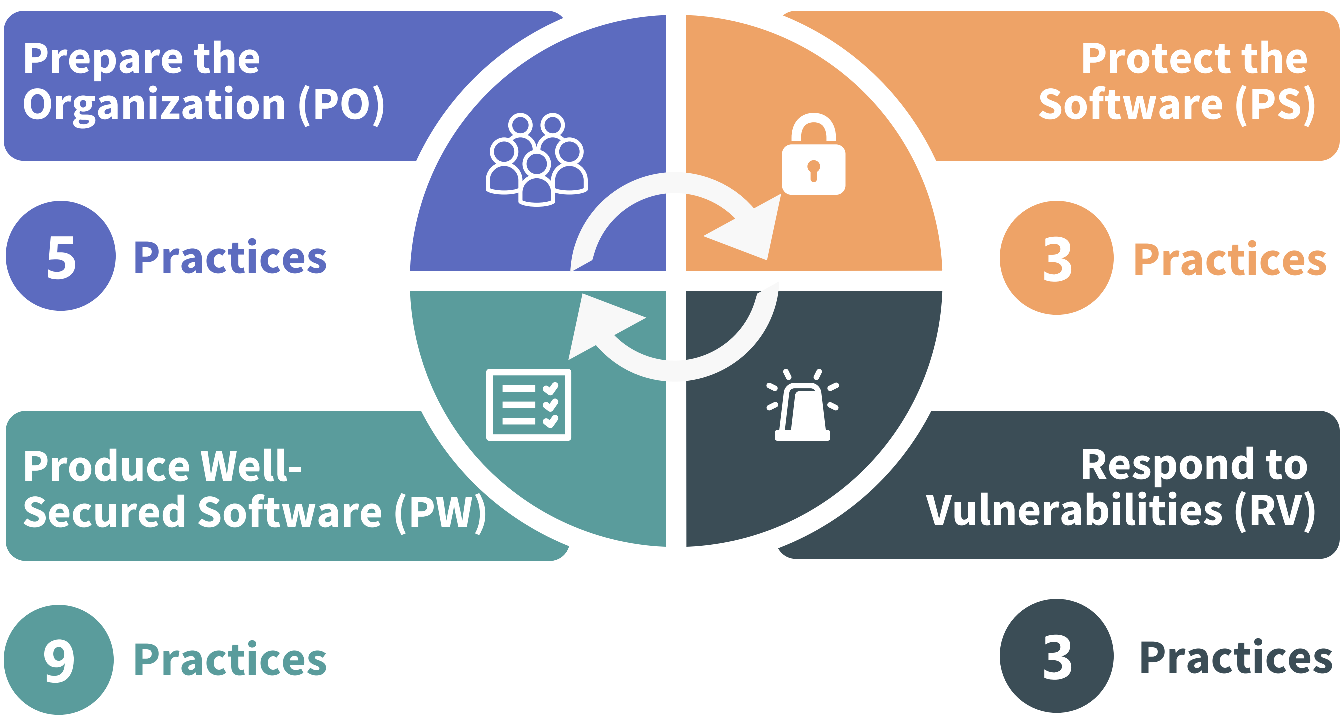


The Quick Guide to

The Secure Software Development Framework (SSDF)

Following the Cybersecurity Executive Order, NIST released version 1.1. of 'The Secure Software Development Framework (SSDF): Recommendations for Mitigating the Risk of Software Vulnerabilities'. This is a quick primer to the framework and you can read the entire report here: https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-218.pdf.

Few software development life cycle (SDLC) models explicitly address software security in detail. The secure software development framework (SSDF) addresses this gap by describing a set of high-level practices. The practices are divided into 4 groups. Each group outlines practices which in turn provide tasks that may be needed to perform the practice. Each task has examples and references.



Prepare the Organization (PO)

5 Practices

Protect the Software (PS)

3 Practices

Produce Well-Secured Software (PW)

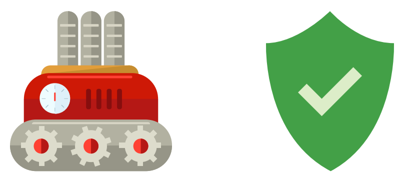
9 Practices

Respond to Vulnerabilities (RV)

3 Practices

Prepare the Organization - Examples

Make sure the security requirements are defined and understood by your entire organization early. Update security requirements annually - at least. (PO 1.1)



Treat build systems like production systems by securing and hardening development endpoints. (PO 5.2)

Protect the Software - Examples

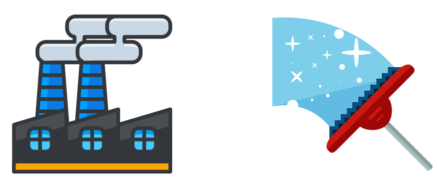
Use code signing to help protect the integrity of executables (PS 1.1)

Use an established certificate authority for verifying release integrity (PS 2.1)

Share provenance data e.g. in a software bill of materials [SBOM] (PS 3.2)

Produce Well Secured Software - Examples

Reuse existing, well secured software (e.g. open source frameworks) instead of duplicating functionality. (PW 4.1)



Implement "clean builds" and perform all builds in a dedicated, highly controlled build environment (PW 6.2)

Respond to Vulnerabilities - Examples

1 → Establish a vulnerability disclosure program

2 → Monitor vulnerability databases

3 → Have a security response playbook

4 → Deliver remediations with automation

5 → Record root causes in a wiki

6 Analyze root causes over time

LEARN MORE: Read the Chainguard blog series on the SSDF at https://blog.chainguard.dev/