The Challenges of Software Assurance and Supply Chain Risk Management

Carol Woody, PhD

Software Engineering Institute, Carnegie Mellon University

Software supply chain risk has increased exponentially since 2009 and will continue to do so given the current environment.



		Project	Product	Protection	Policy
Identified Criteria	Long-Term Support	Forke d Project			No Security Policy
	Dependencies	74 Abandoned Dependencies	No Update Tools		
	Security		4 Unfixed Critical Vulnerabilities	Workflow with Excessive Permissions	
	Integrity		No Fuzz Testing	30 Unreviewed Change Sets	
	Malicious Actors	Commit ID Known Malicious			
	Suitability				12 Restrictive Licenses
	Realm of Observable Facts of OSS Projects and Products				

- Review data available
- Identify useful criteria
- Extract key data
- Map to acceptable criteria
- Evaluate red flags
- Identify appropriate mitigations
- Confirm supportability

Measure and baseline what you have, especially open source.

Assess how you are vulnerable and identify an improvement path.

Integrate measurement and monitoring throughout the lifecycle.

