

Secure Software Supply Chain



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What is the software supply chain?

Everything that goes into delivering applications into production



Infrastructure as code



Technology partner



Containers



Kubernetes orchestration



Open source





Security



CI/CD

What is the software supply chain?

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Security



CI/CD

What is the risk?

- Data exposure or loss
- **Backdoor** injection
- Ransomware





attacks:

- Stuxnet

- Solarwinds



Software Supply Chain Cyber

• NotPetya / M.E.Doc • British Airway

Key Risk Areas



Upstream libraries and tools

Libraries and tools from Open Source projects

Vendor Libraries and tools Libraries and tools shipped and support by vendors, i.e. Operating Systems, Container Runtime, Orchestrators

Application Code

In-house written applications and libraries -or- Open Source applications



Secure Software Supply Chain



CI/CD **Pipelines**







Devs code & test locally ("Inner Loop")

CI/CD tests applications; digitally signs them



Images are stored in a registry, scanned for vulns

Images that pass all tests & security checks promote to production



Image Security & Governance











Continual security checks to surface new security issues

Ship Code Faster: Secure Software Supply Chain







Prod



Mirantis Kubernetes Engine

Running Workloads



Platform Engineering

Images that are scanned, tested, reviewed, and verified.



Images that are scanned, tested, reviewed, and verified.





Build code with Jenkins

Scan for vulnerabilities

Run unit and integration tests with Jenkins





Digitally sign images **Ensure only** signed images can run





The infrastructure



CI/CD Cluster



Code Repository





Image Registry



Application Cluster



Thank you! **Questions? Please contact us at** http://www.mirantis.com/contact



MIRANTIS Ship Code Faster.



