PRACTITIONER

You've mastered CI - now what? How to actually do CD on k8s

Kevin Ng
SOLUTION ARCHITECT
MIRANTIS

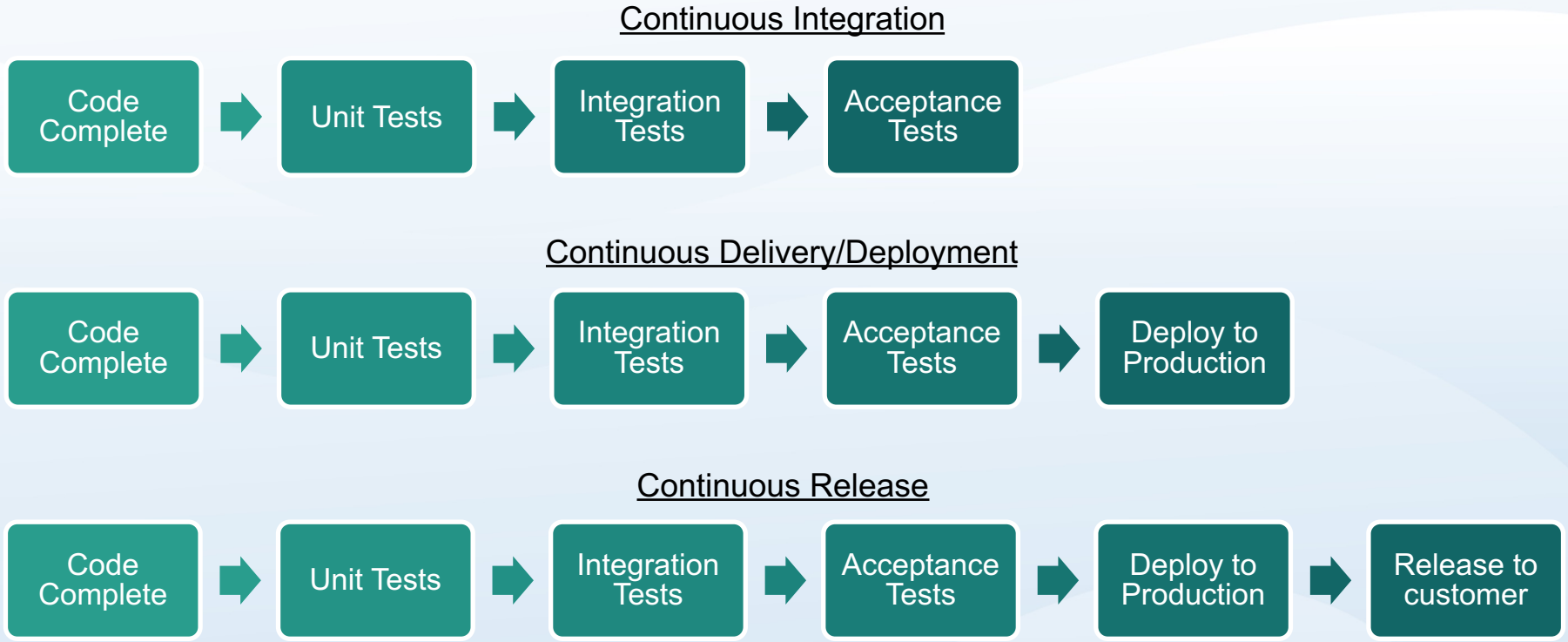
Kevin Ng

Passionate about helping people identify issues and find solutions to overcome them

Takeaways

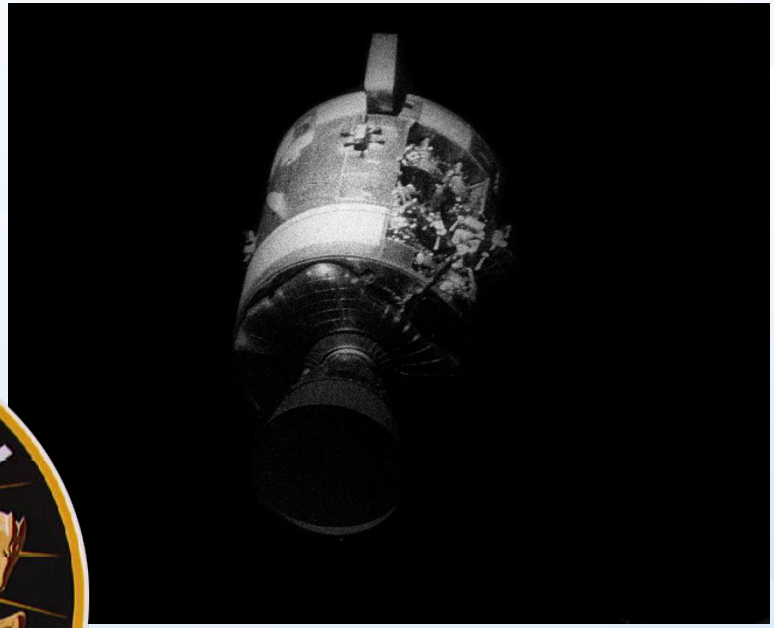
- How to update an application without breaking production
- How to avoid introducing vulnerabilities
- How to handle security when automatically deploying changes
- The right way to update a running application on Kubernetes

CI/CD

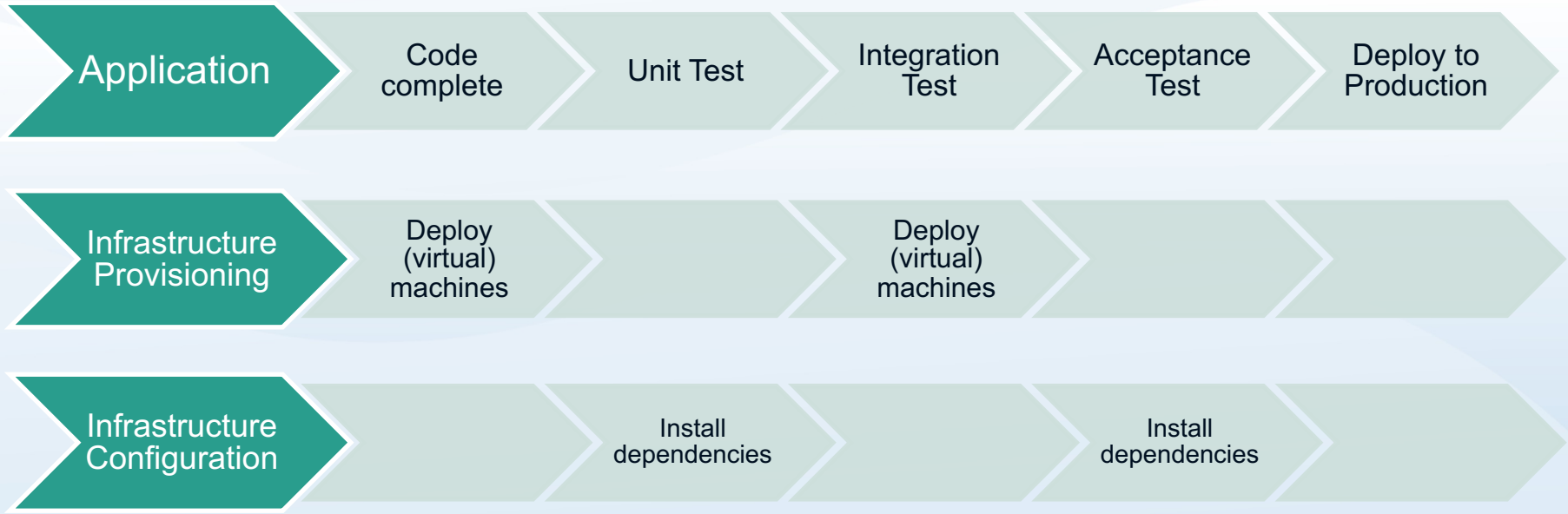


How to update an application without breaking production

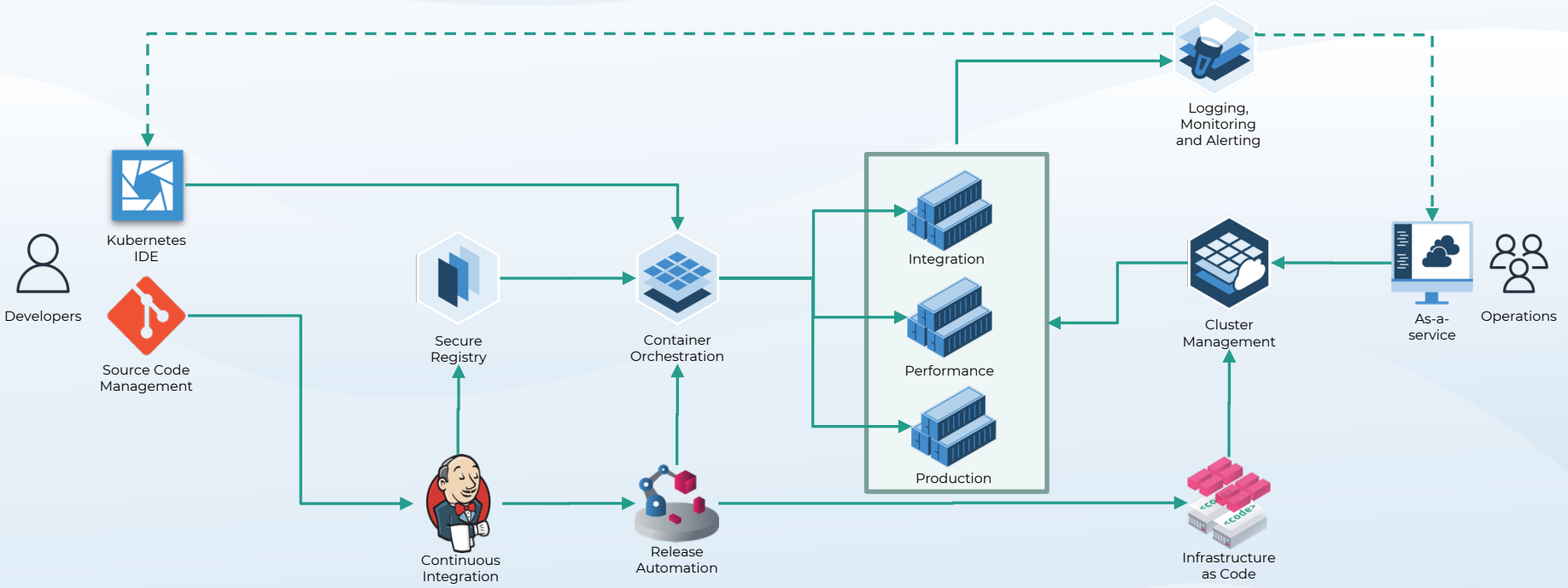
Thoroughly test throughout the pipeline



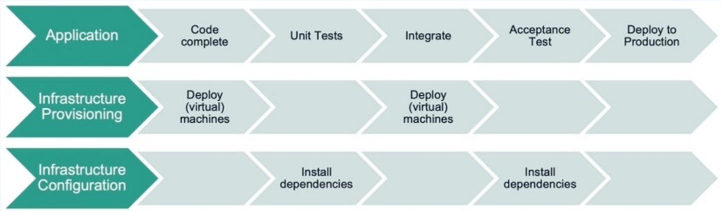
Application deployment process

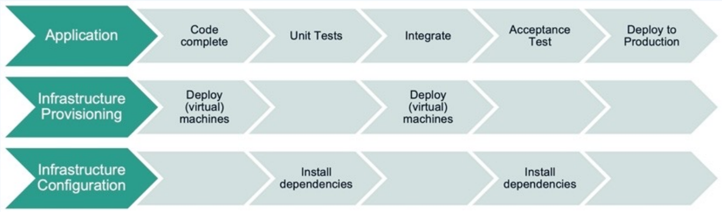


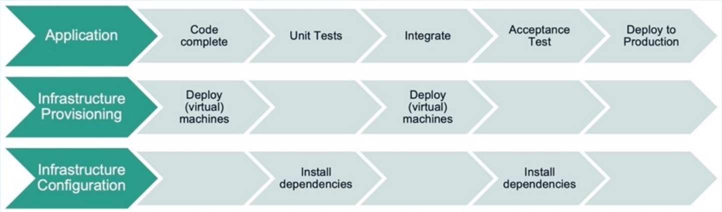
Automate the deployment pipeline

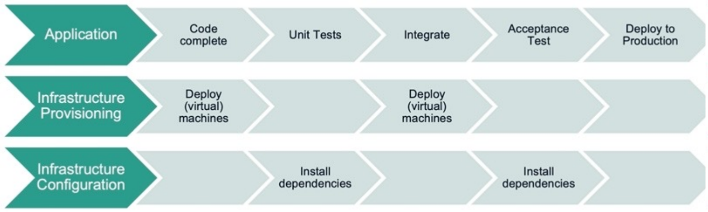


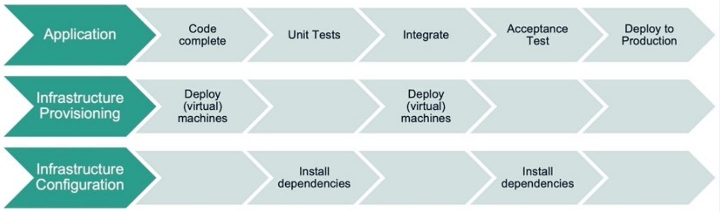
Application deployment process across teams



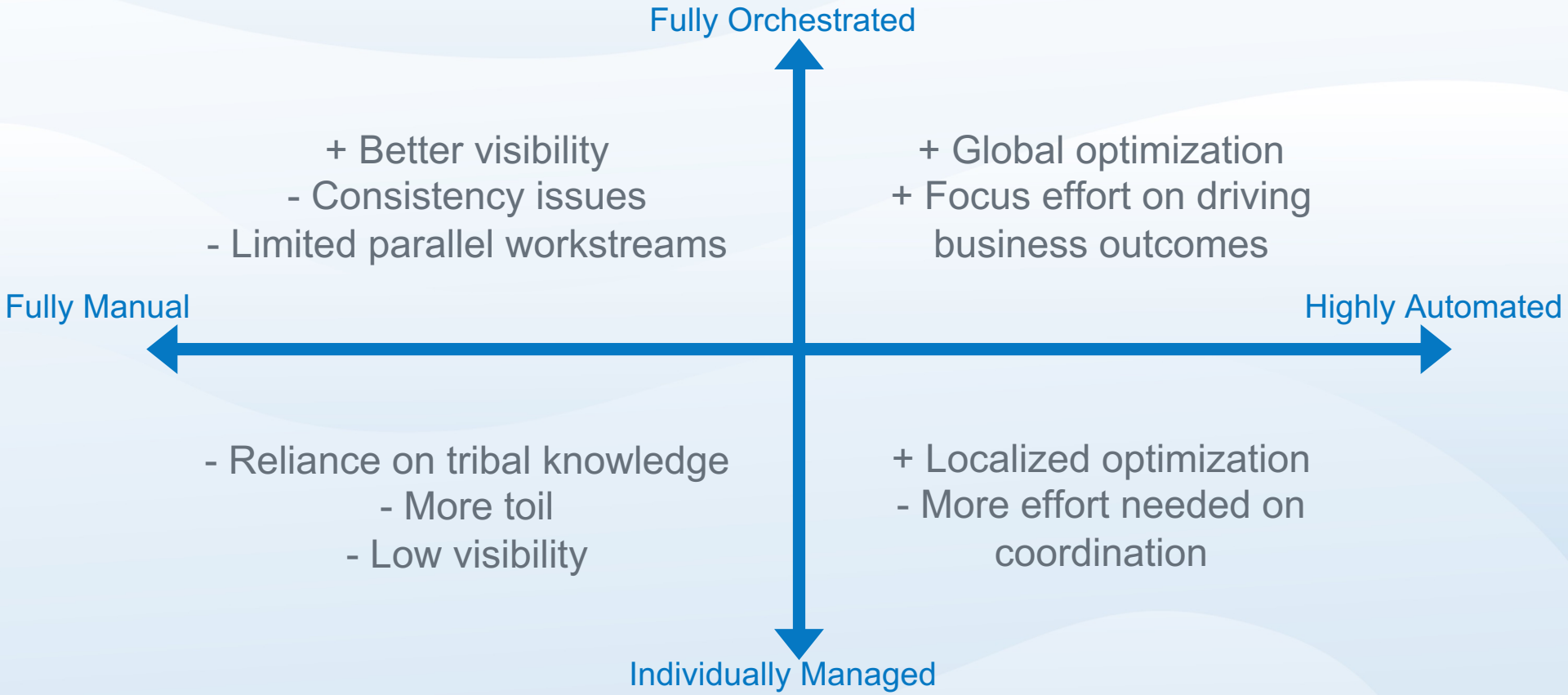








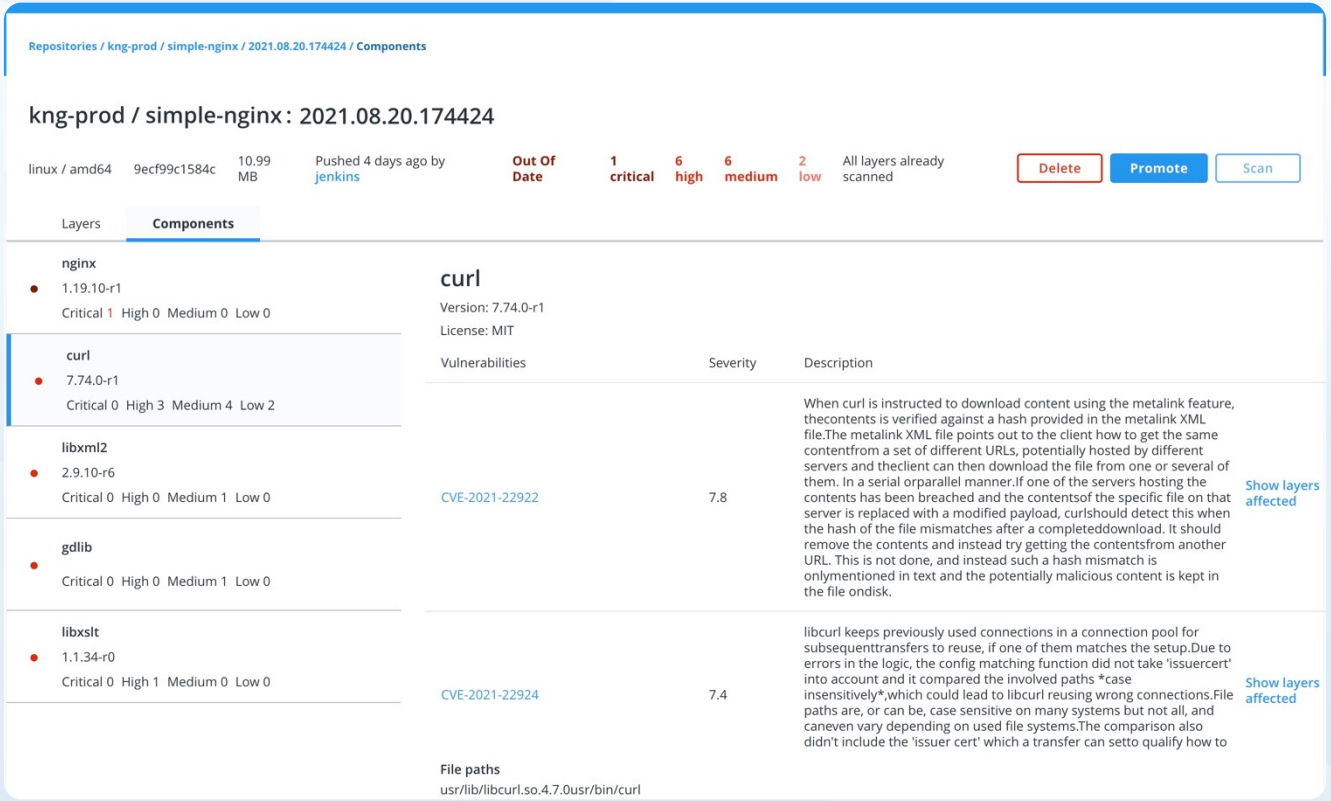
Automation and Orchestration



How to avoid introducing vulnerabilities

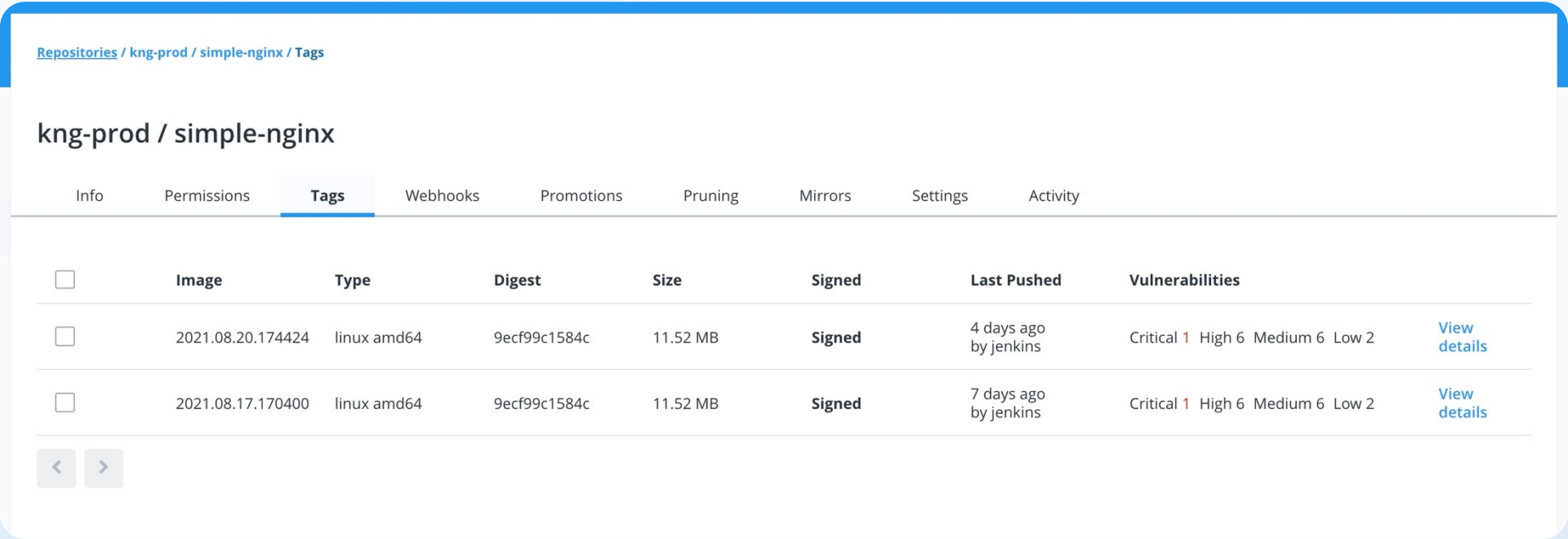
Use approved base images

Thoroughly scan images

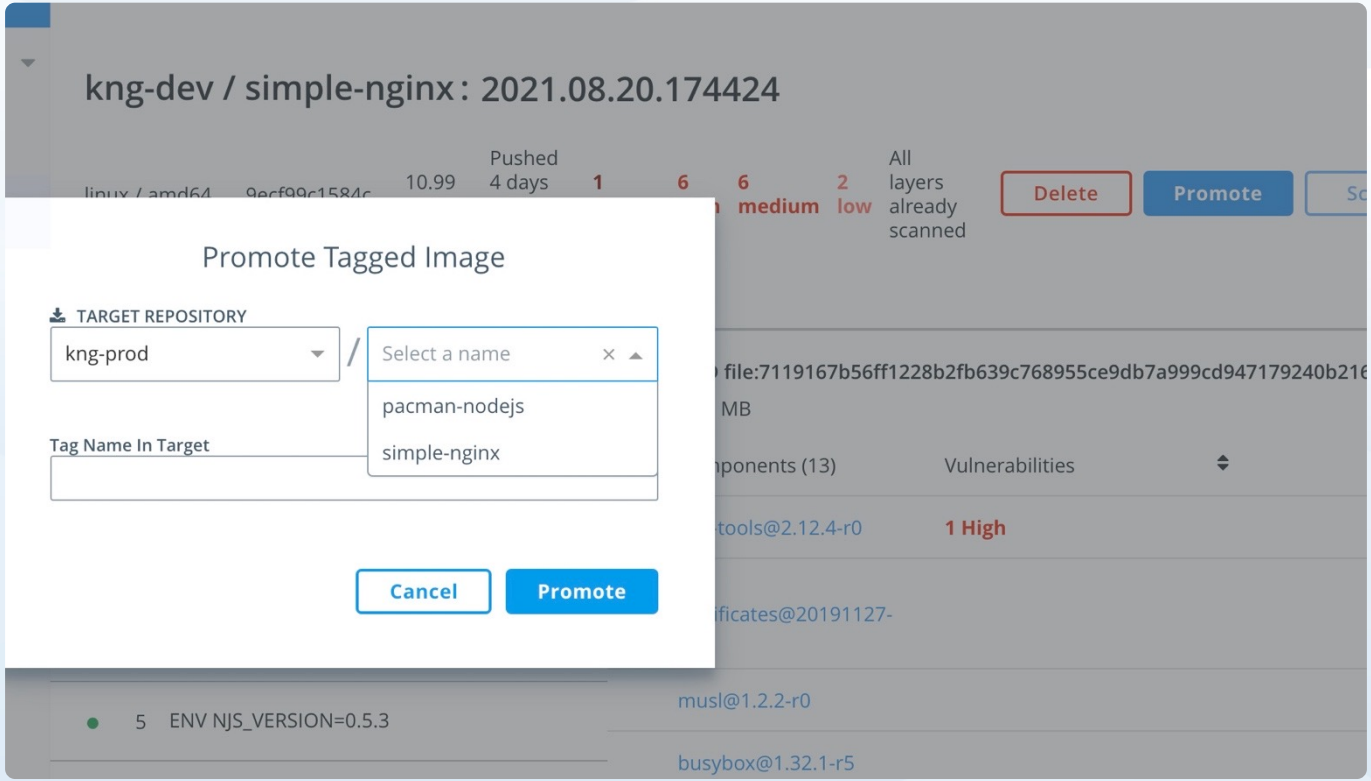


How to handle security when automatically deploying changes

Sign deployment images

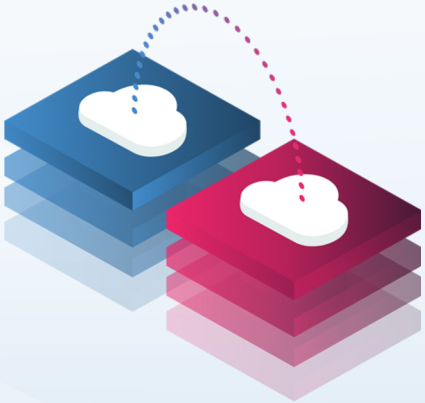


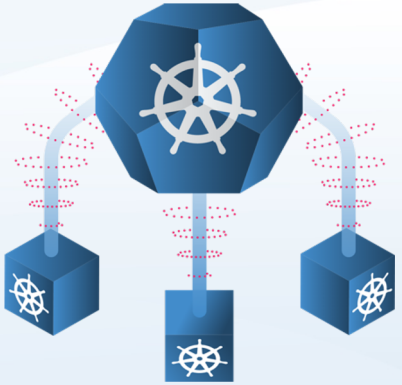
Promote, don’t rebuild

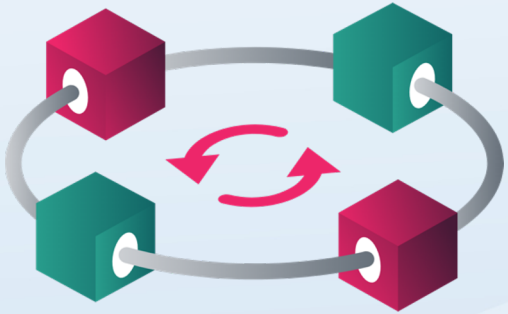


The right way to update a running application on Kubernetes

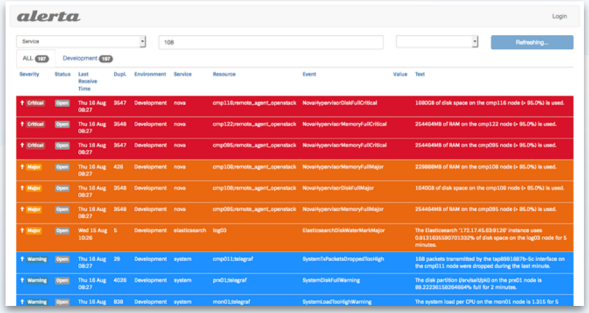
Utilize deployment patterns

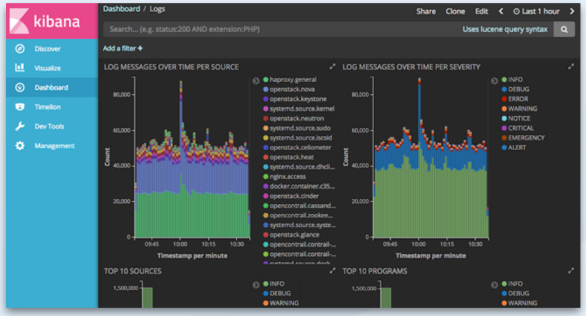




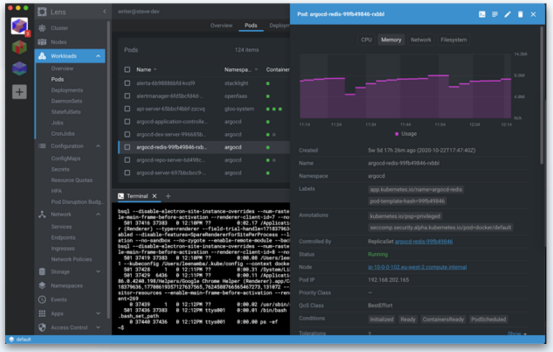


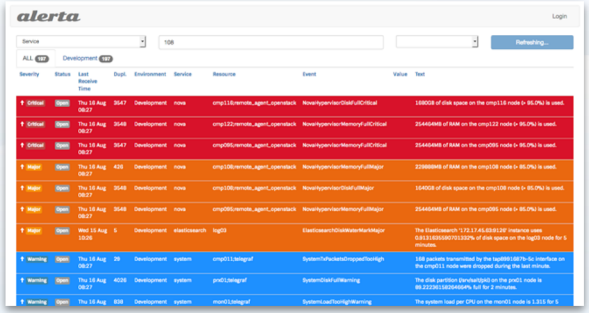
Increase environment observability

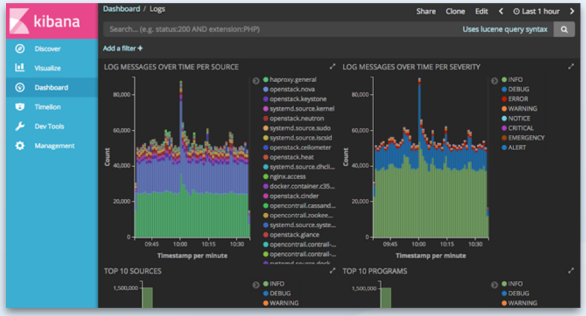




Promote information sharing between teams







Recap

Recap: updating applications safely

- Test the application and pipeline thoroughly to ensure reliability
- Automate the deployment pipeline to reduce manual errors and allow for process improvement
- Orchestrate all activities to account for dependencies and bottlenecks

Recap: avoid introducing vulnerabilities

- Use approved base images to avoid malicious code
- Perform thorough scans on images to proactively identify vulnerabilities

Recap: securely deploy images

- Ensure deployment images are signed for authenticity
- Promote images throughout environments to avoid introducing vulnerabilities

Recap: updating applications with Kubernetes

- Utilize deployment patterns to control release effects
- Increase environment observability for rapid response
- Promote information sharing between teams to facilitate continuous improvement

Thank you!

Kevin Ng

LinkedIn: https://www.linkedin.com/in/kevinkng/

Twitter: @kevng9

Email: kng@mirantis.com

Find out more at mirantis.com or k8slens.dev