ORCHESTRATION
&
ORCHESTRATION TOOLS

BY

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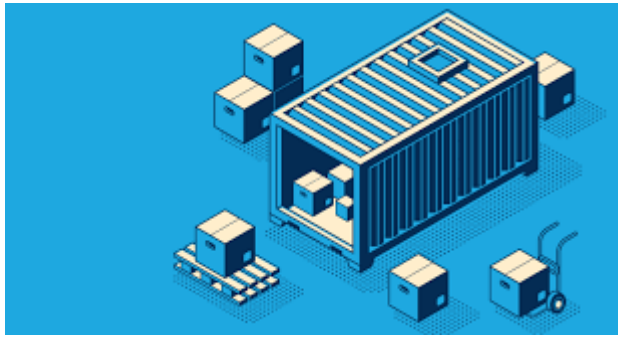
Orchestration Overview



- Orchestration is the automated configuration, management, and coordination of computer systems, applications, and services.

- The need to combine multiple automated tasks and their configurations across groups of systems or machines increases. That's where orchestration can help.

- IT orchestration also helps you to streamline and optimize frequently occurring processes and workflows, which can support a DevOps approach and help your team deploy applications more quickly.

Orchestration vs Automation

- Orchestration and Automation are different, but related concepts.

- In general, automation refers to automating a single task. This is different from orchestration, which is how you can automate a process or workflow that involves many steps across multiple disparate systems.

- When you start by building automation into your processes, you can then orchestrate them to run automatically.
- https://www.youtube.com/watch?v=Xqir-m69r7M

Benefits of Orchestration

Orchestration offers multiple benefits such as

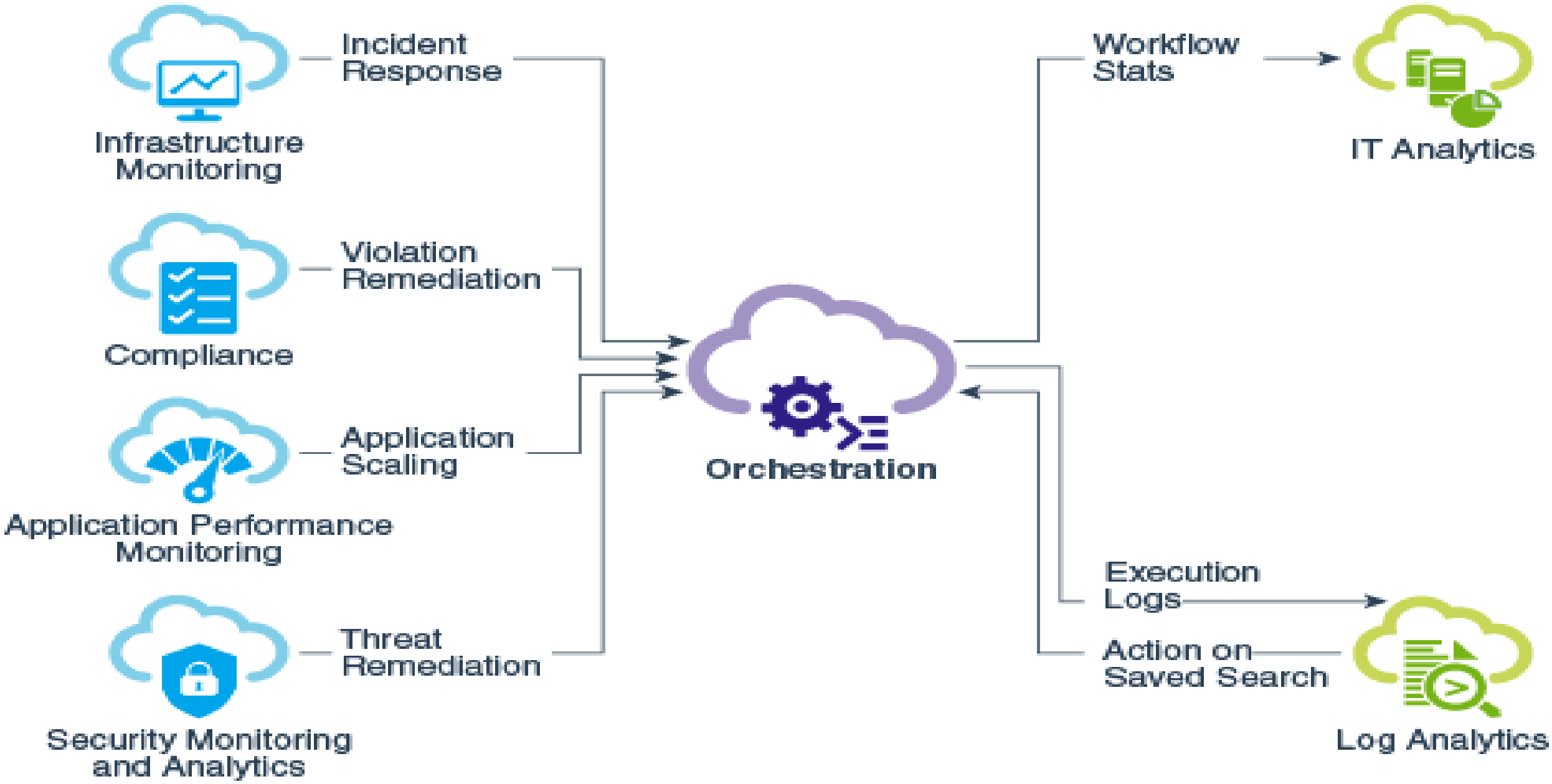
- **Centralized management**: Orchestration enables IT teams to automate tasks across multiple platforms from a single point, which provides centralized monitoring and management over all IT servers, applications, and workflows.
- **Fast and easy integrations**: Centralized coordination among IT servers and applications enables easier and faster integration of new tools and systems to the existing infrastructure.
- **Reduced product-release cycles**: Coordinating IT workflows such as DevOps and automation testing enables faster time to release new products and applications

Where is orchestration used?

- Unified IT workflow automation
- Devops Orchestration
- Cloud Orchestration

Top 6 Reasons To Invest In DevOps Orchestration

1. Accelerate your automation process
2. Improve cross-team collaboration
3. Ensure higher release quality
4. Reduce costs for IT infrastructure and human resources
5. Build transparency across the SDLC
6. Boost the velocity of releases


Incident Response
Infrastructure Monitoring
Violation Remediation
Compliance
Application Scaling
Application Performance Monitoring
Threat Remediation
Security Monitoring and Analytics
Orchestration
Workflow Stats
IT Analytics
Execution Logs
Action on Saved Search
Log Analytics

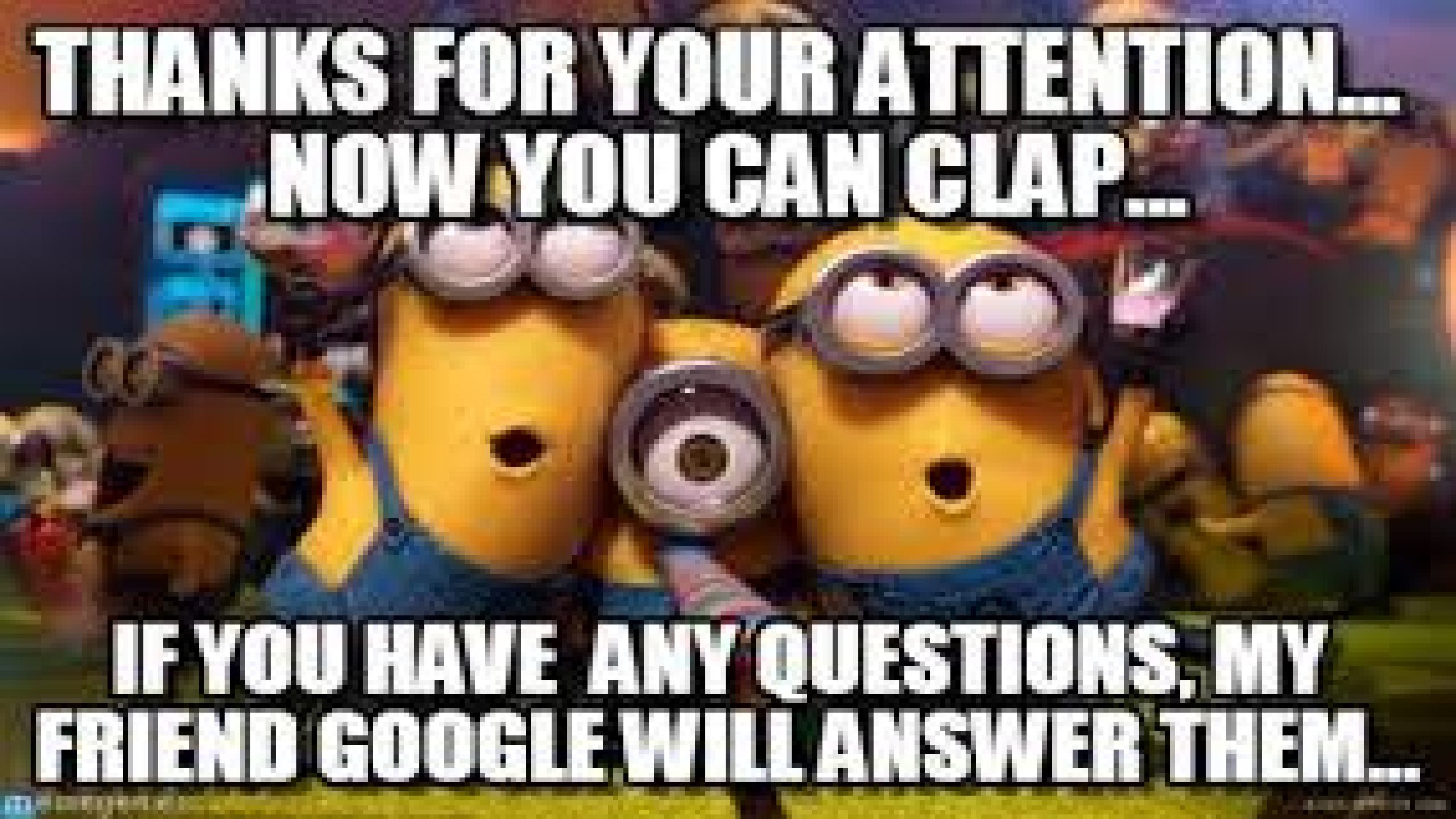
Best Orchestration tools in Devops

Here's the list of the best DevOps orchestration tools.

1.Kubernetes
2.Dynatrace
3.Ansible
4.Azure Kubernetes Services (AKS)
5.Amazon Elastic Kubernetes Service (AWS EKS)
6.RedHat OpenShift
7.Rancher
8.Docker Swarm
9.MiniKube
10.Nomad

Resources

- https://www.redhat.com/en/topics/automation/what-is-orchestration#:~:text=Orchestration%20tools,-Today's%20IT%20brings&text=You%20need%20a%20tool%20that,manage%20networking%2C%20among%20other%20tasks.
- https://research.aimultiple.com/orchestration/
- https://katalon.com/resources-center/blog/devops-orchestration-investment#
- https://theqalead.com/tools/best-devops-orchestration-tools/
- https://www.youtube.com/watch?v=lJxWhKFriOs
- https://www.qentelli.com/thought-leadership/insights/devops-tools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