



A DevOps Mario Developer Game Challenge with GRC

Multilevel Mario Engineer Challenge



BMK Lakshminarayanan

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ABOUT ME

BMK Lakshminarayanan

Solutions Architect | DevOps Advocate



MISSION

*Make your life better,
Make others life better,
Make the world better*

Community



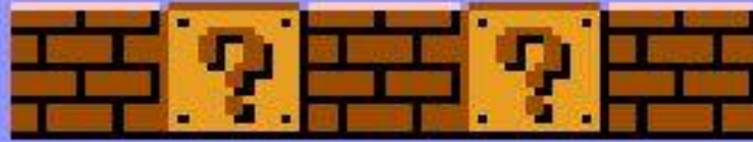
**Pictures Courtesy:
Internet
Super Mario Games (<https://www.nintendo.com/>)**

A Developer on A Mission





Challenges to Unlock

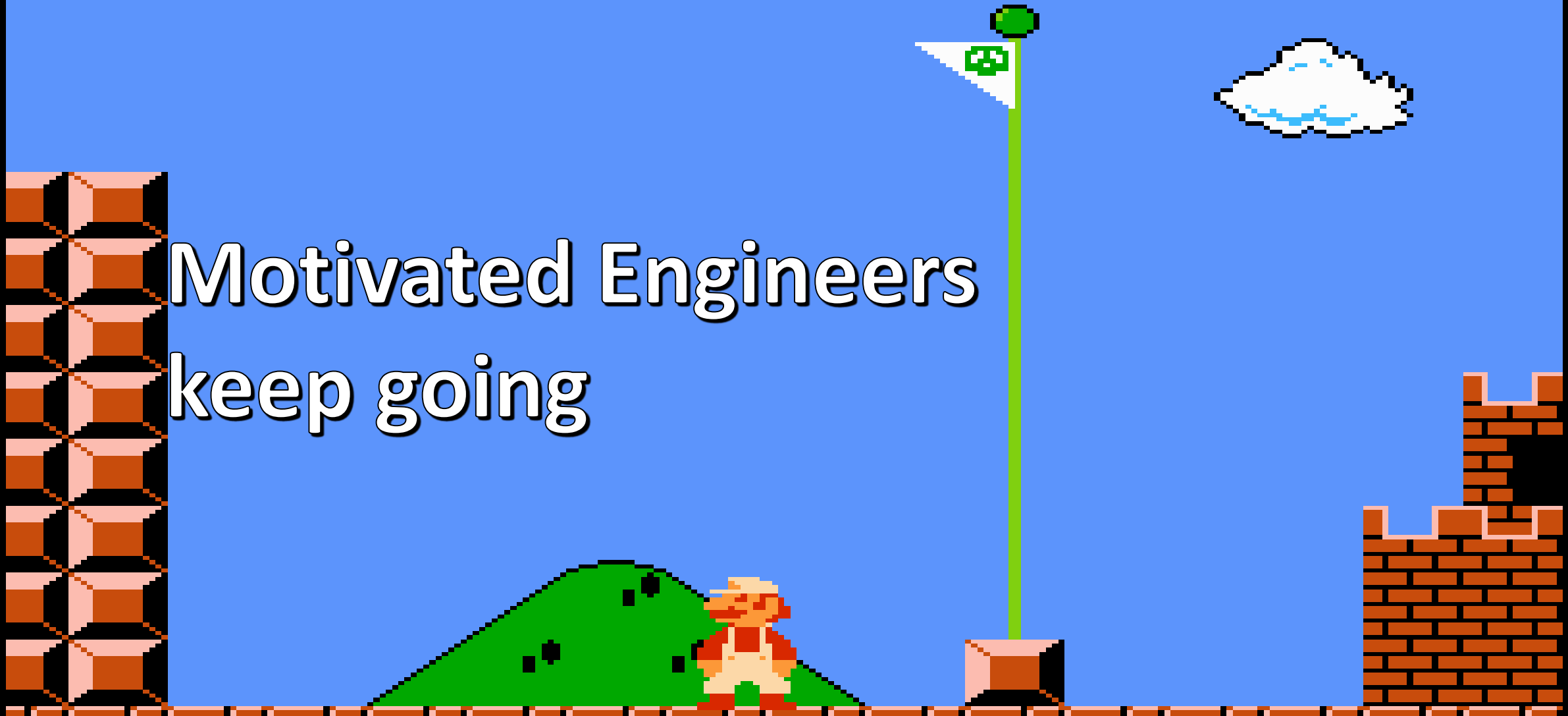


MARIO
002750

NINTENDO-GIFS.TUMBLR
x01 1-1

TIME
310

Motivated Engineers
keep going



Wait you have “Security”
– a new level to clear





MARIO
060300

×20

WORLD
8-4

TIME
200

What is this one?
Oh Governance!!!



**How fast could you deliver
Customer Value?**

Most Enterprises/IT Organizations like Mario Game Challenge

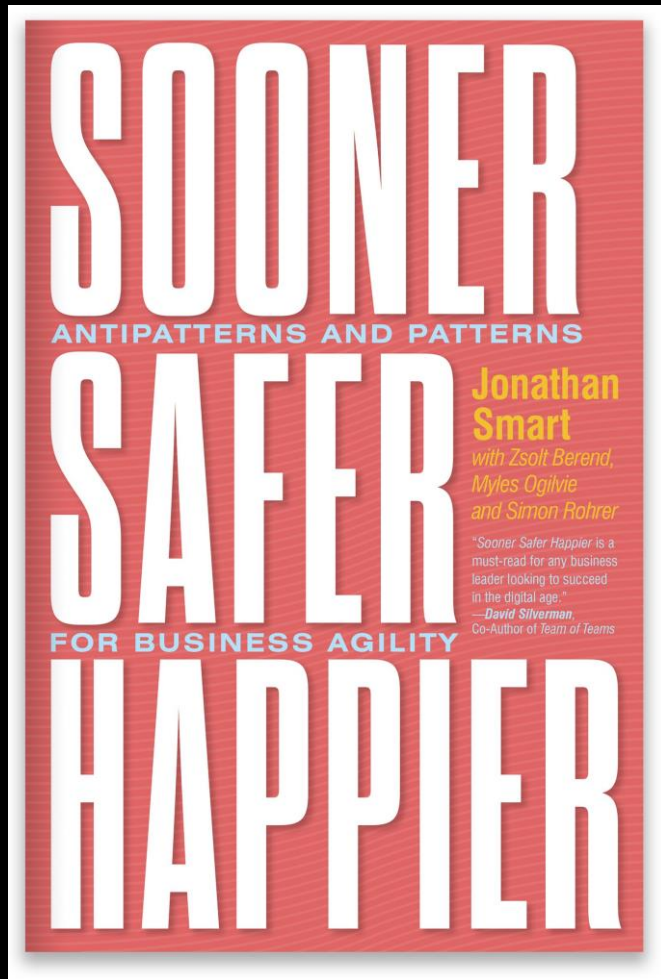
**Mario (Dev, Testers, Ops)
go thru these levels**

From Here to Where?

**The most critical metric is:
how long it takes
for an innovative
idea to reach a customer**

- Adrian Cockcroft, Vice President of Cloud

https://d1.awsstatic.com/executive-insights/en_US/ebook-cloud-for-ceos.pdf



Using Old Ways of Thinking to Apply new Ways of Working

- Jonathan Smart

<https://itrevolution.com/sooner-safer-happier/>

Centralize Governance
“to”
Decentralized Governance

Organizations today are subject to many regulations governing the protection of confidential information, financial accountability, data retention and disaster recovery, among others. They're also under pressure from shareholders, stakeholders and customers.

<https://www.cio.com/article>

"IT governance is the responsibility of executives and the board of directors, and consists of leadership, organizational structures, and processes that ensure that the enterprise's IT sustains and extends the organization's strategies and objectives."

<https://www.architectureandgovernance.com/>

Compliance tick boxes
“to”
Compliance as Code


**‘Compliance as Code’
can be summarised as the
organisational capability to automate
the implementation, verification,
remediation, monitoring and
reporting of compliance status.**

**Faking security controls
“to”**

Baking them in delivery pipelines

**No to tedious audits
“to”**

Yes, to automated evidence

MARIO 106950  x48 WORLD 8-4 TIME 314



THANK YOU MARIO!

YOUR QUEST IS OVER.
WE PRESENT YOU A NEW QUEST.

PUSH BUTTON B

TO RELEASE



**How fast could you deliver
Customer Value?**

Dear Auditor,



a love letter to auditors from devops,
where we promise to make life better

<http://dearauditor.org/>

DevOps Automated Governance Reference Architecture



Attestation of the
Integrity of Assets
in the Delivery Pipeline



*As more and more DevOps practices are automated, it becomes harder to capture the data required to ensure all security and compliance concerns are met. **Organizations need an automated way to track governance** throughout the entire software delivery process so they can attest to the integrity of all assets and to the security of all running applications.*

<https://itrevolution.com/book/devops-automated-governance-reference-architecture/>

AUTOMATED CLOUD GOVERNANCE

ONUG AUTOMATED CLOUD GOVERNANCE WORKING GROUP MEMBERS

Don Duet, Senior Advisor,
Concourse Labs

Zhen Fan, Director, IT,
FedEx

Alex Kyvat, Director,
Application Delivery
Tools and DevOps, Kaiser
Permanente

Nick Lippis, Co-Founder
and Co-Chair, ONUG

Kelley Mak, Principal,
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Carlos Matos, Executive
Director, CyberSecurity
and Risk, JPMC

Michael McKenna,
Architecture Director,
Cigna

Pat O'Neil, Cyber Security
Fellow, FedEx

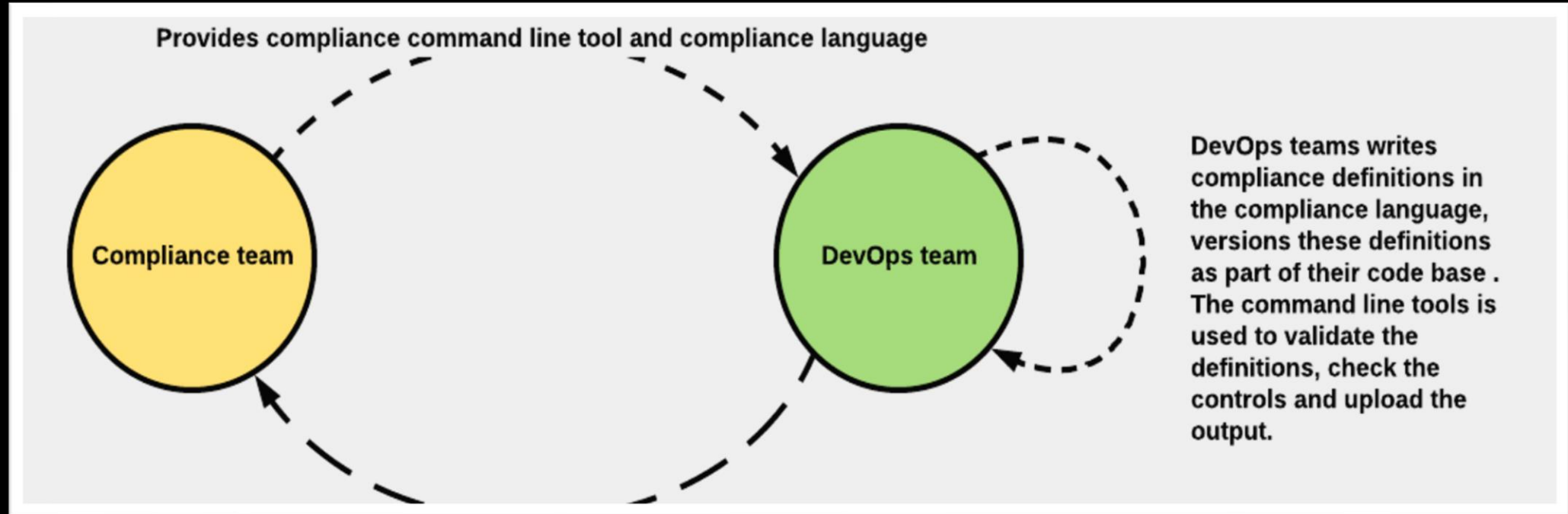
John Willis, Automated
Cloud Governance
Working Group Chair,
Senior Director Global
Transformation Office
RedHat, DevOps &
DevSecOps Researcher

The intent of this paper is to provide greater choice and options for corporations to consume cloud computing services by automating manual cloud governance processes. This paper seeks to accelerate compliance at the speed and scale of DevOps.

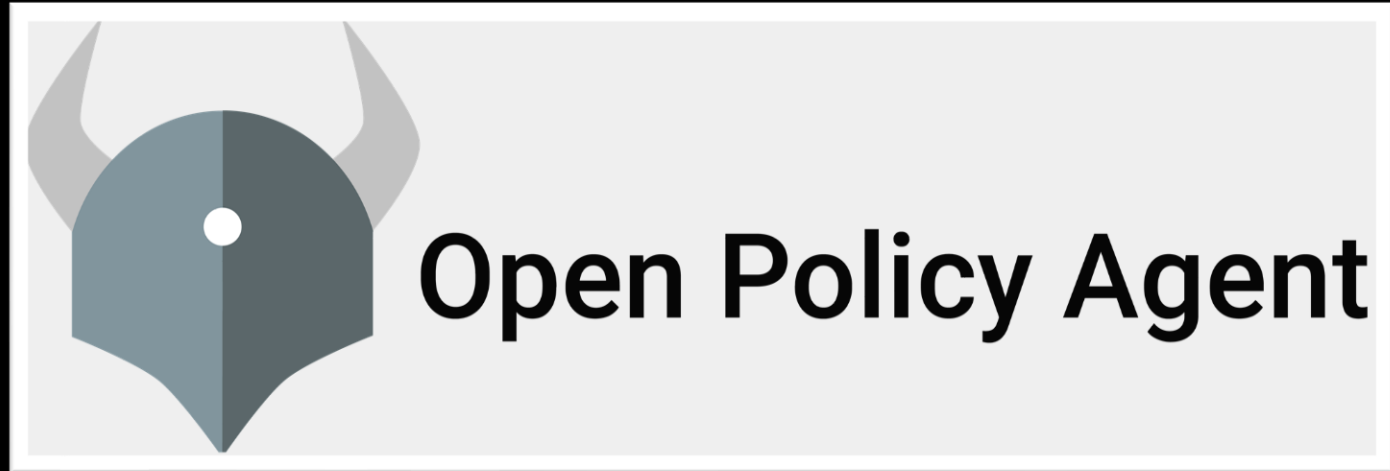
ONUG

https://www.onug.net/app/uploads/2020/05/ONUG_WP_Automated-Cloud-Gov_Final.pdf

Compliance as programming language



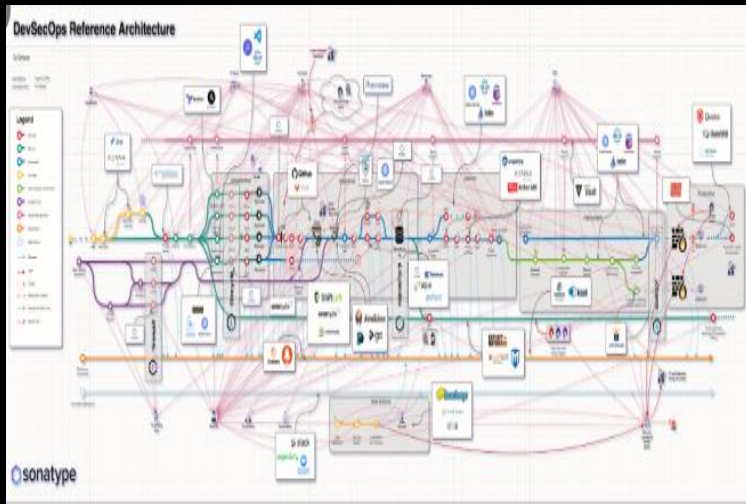
<https://medium.com/faun/compliance-as-programming-language-da25f11be9d2>



Policy-based control for cloud native environments
Flexible, fine-grained control for administrators across the stack

<https://www.openpolicyagent.org/>

Successful DevSecOps practices encompass people, processes, tools, and measurement. But where should you start, how can you validate your existing practices, or what are the possibilities? Then answer the following:



- Where can we further automate manual, security, and business tasks?*
- What DevSecOps tools and integrations are others deploying?*
- What interactions do we need to be aware of or map out?*

<https://www.sonatype.com/referencearchitecturetestdrive>

Thank you





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