SKILUP DAYS

by: DevOps INSTITUTE

“Will This Never End?”

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APPDYNAMICS

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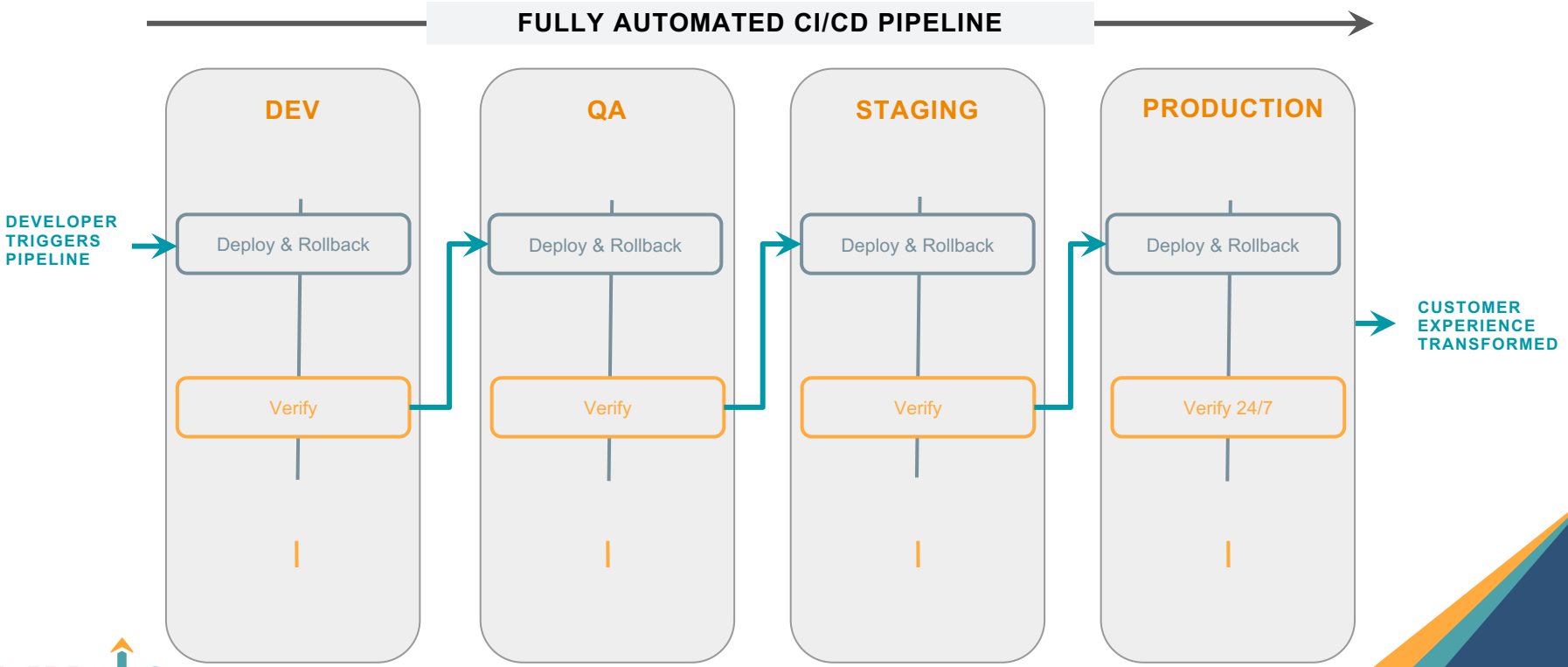
Agenda

- Will this never end?
- You want me to do what?
- Will this thing work?
- Oops

Marco Coulter
Technical Evangelist
@marcocoulter

Marco Coulter is passionate about the experience that humans have when interacting with technology. A former startup CTO, Marco led the data science organization at 451 Research; managed global engineering and operations organizations at several major banks and hospitals. He earned him the nickname "tech-whisperer" for his skills in translating business drivers for techies and technical concepts for business leaders. When taking the rare break from technology, Marco can be found harvesting fresh vegetables from his apartment garden.

Continuous Delivery & Verification



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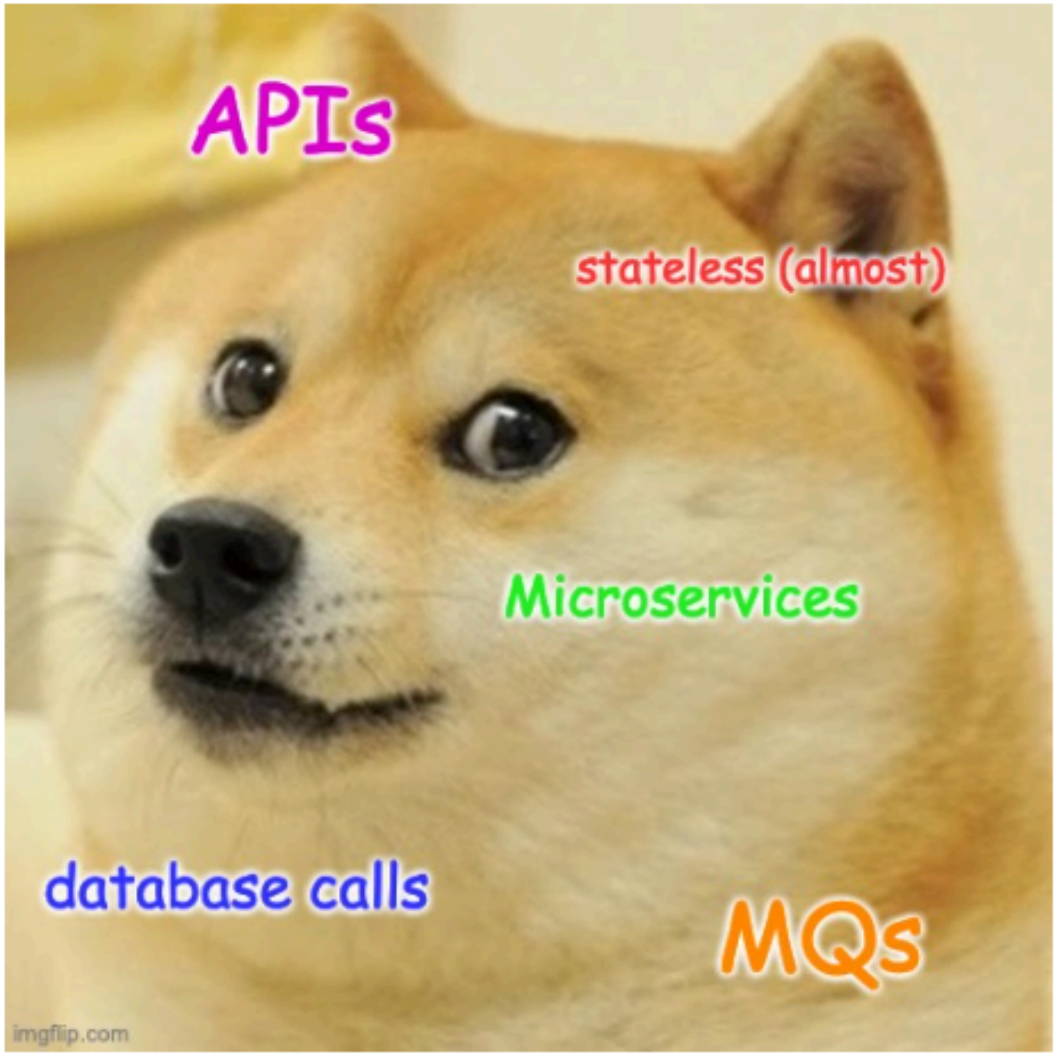
“Will this never end?”



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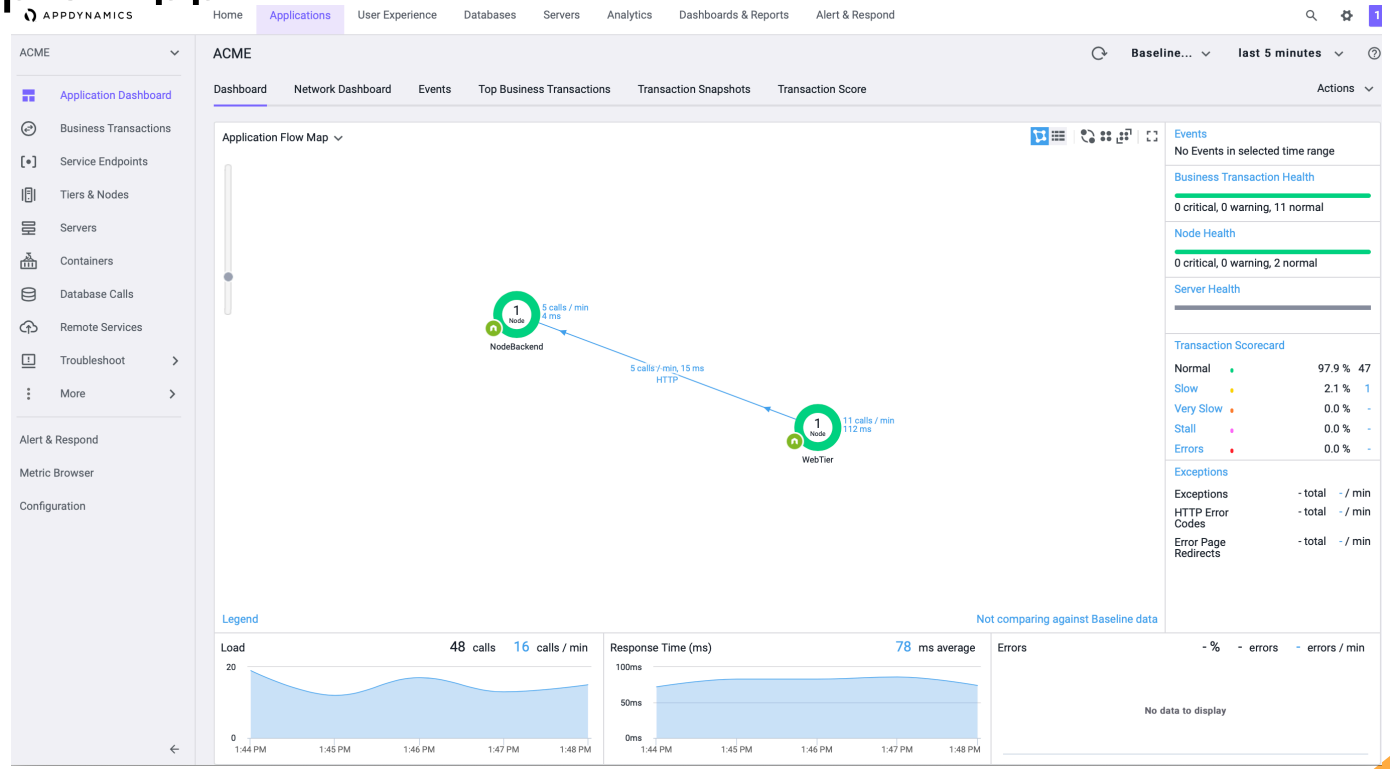
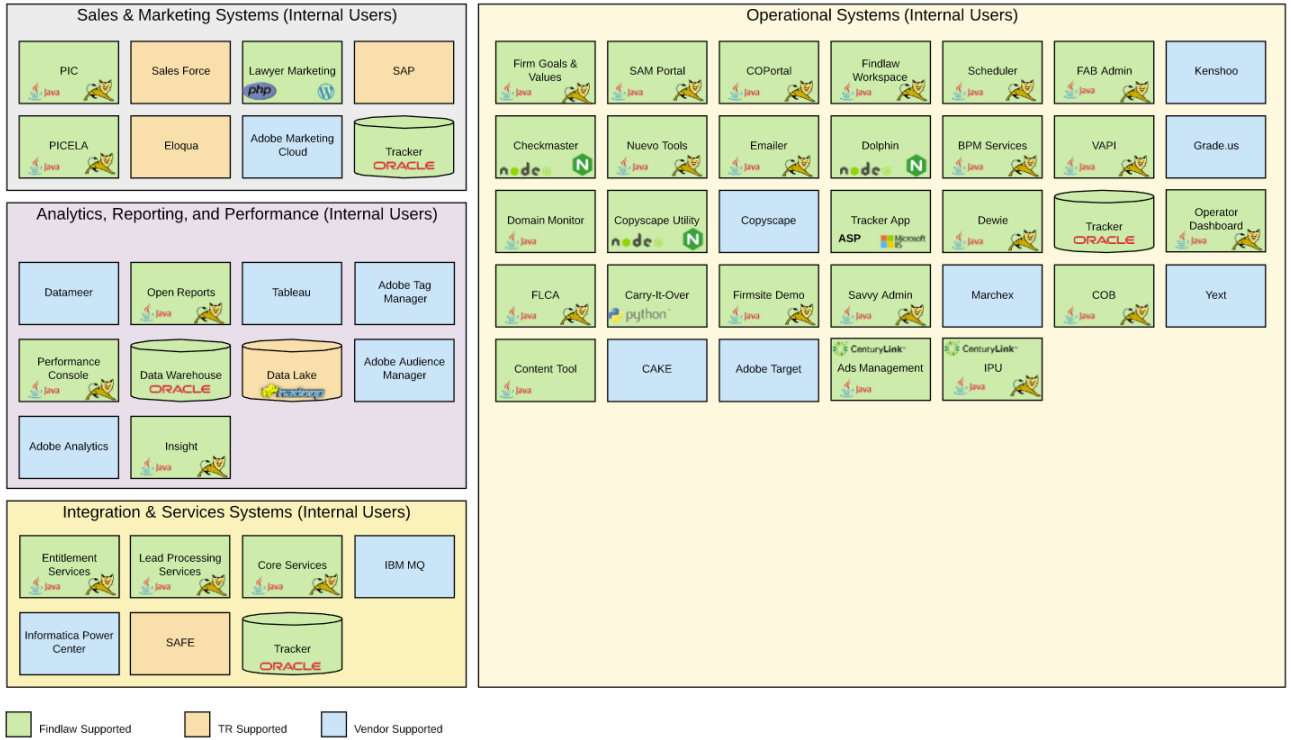
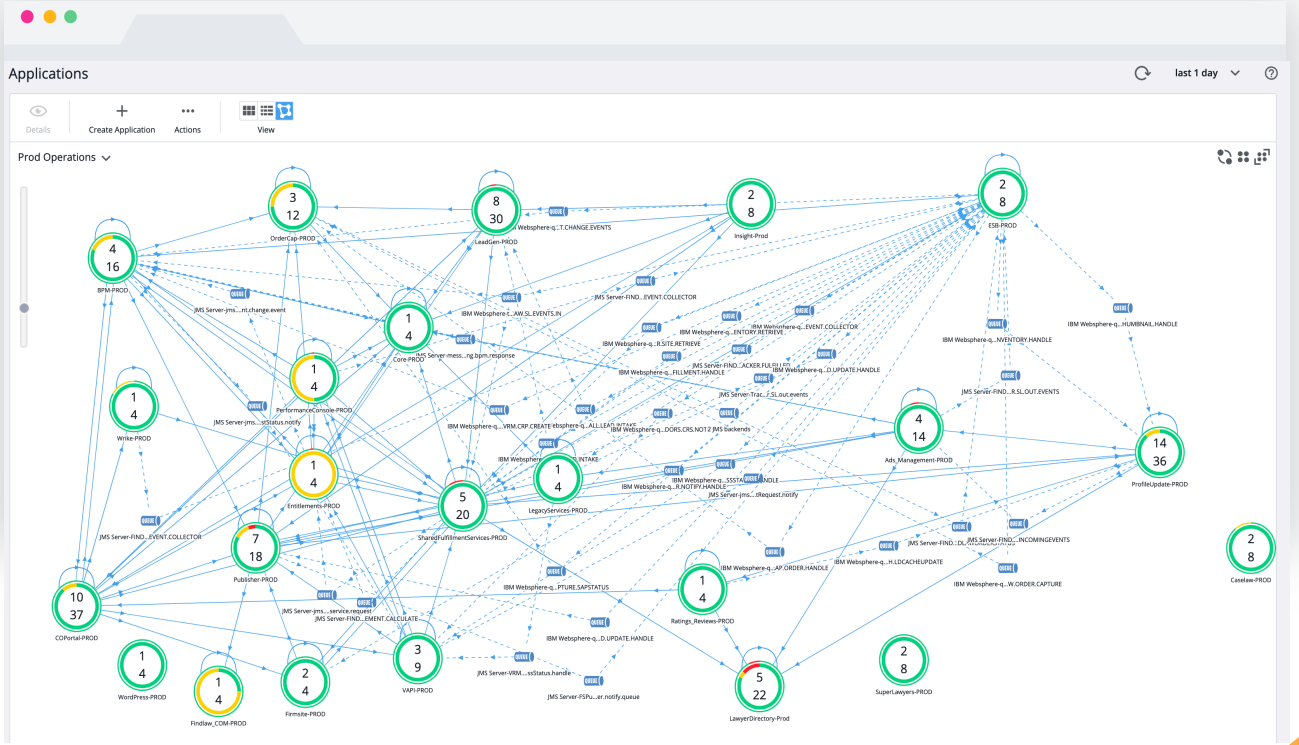
The Example App

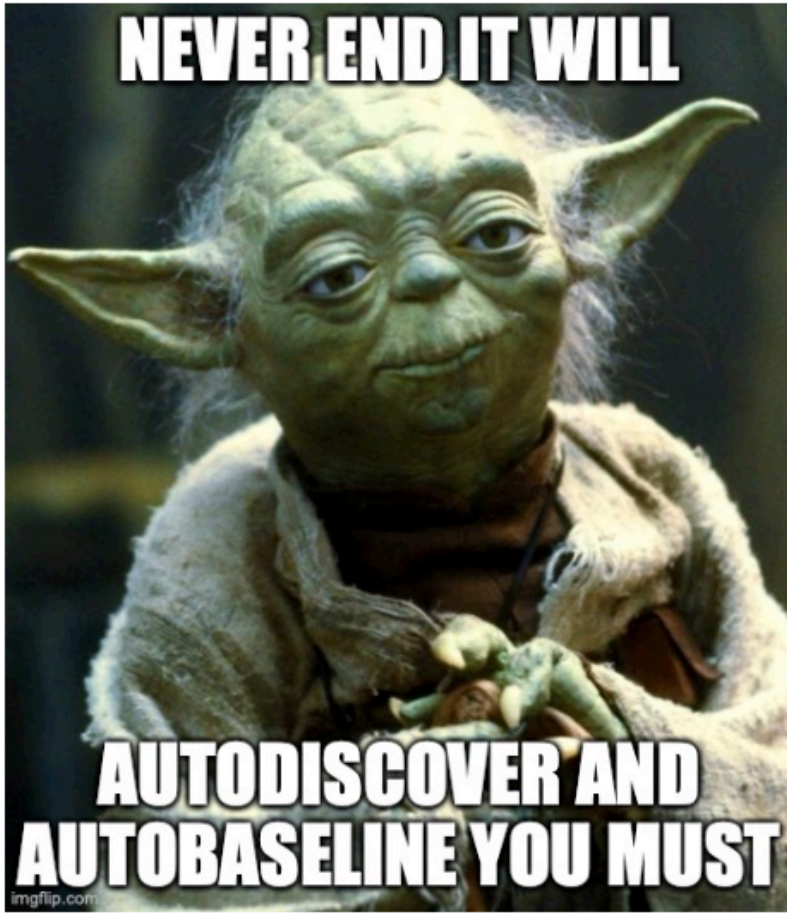


What we think the code is doing



What the code is actually doing





Lesson One

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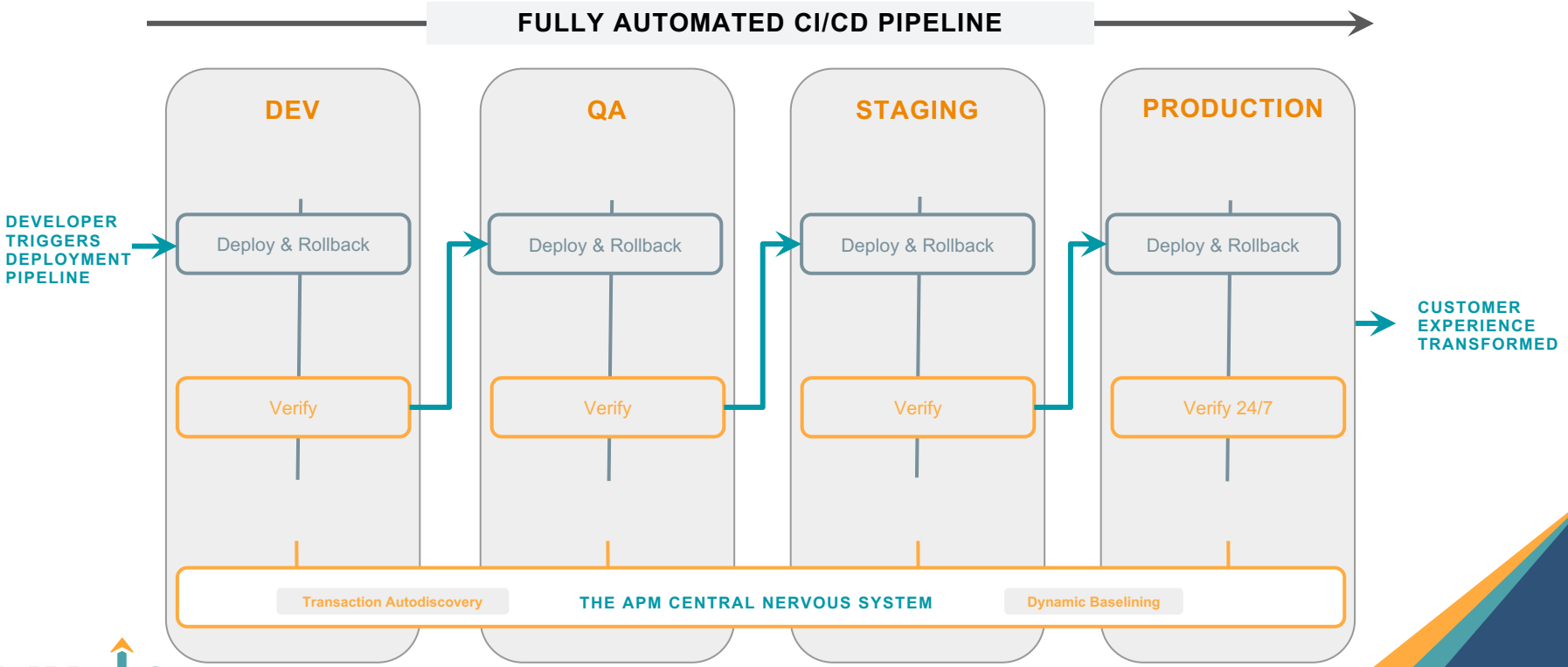
Continuous Delivery & Verification



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“You want me to do what?

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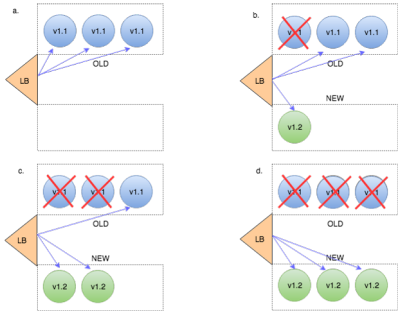
Deployment Options

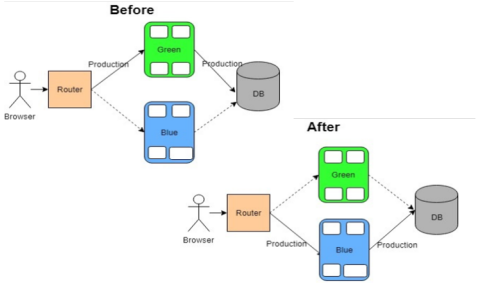
ROLLING UPGRADE

For many PaaS's this is the default deployment. Slowly scale up the new version while simultaneously slowly scaling down the old version.



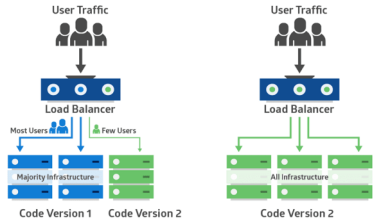
BLUE/GREEN DEPLOYMENT

Stand up a complete deployment of the new version (blue) while leaving a complete copy of the old version (green) up and running.



CANARY DEPLOYMENT

A variation of Blue/Green. Stand up a small deployment of the new version (the canary) and direct a small portion of incoming traffic to the canary



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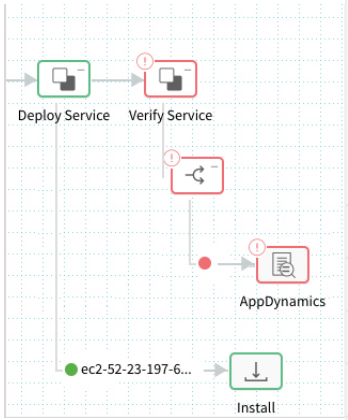
Continuous Deploy and Rollback

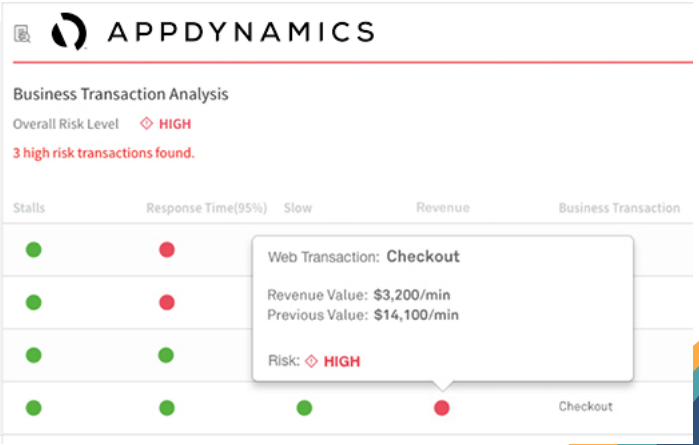
VISIBILITY

INSIGHT

ACTION

- Identify slow application response time
- Measure Business Impact of Performance Degradation





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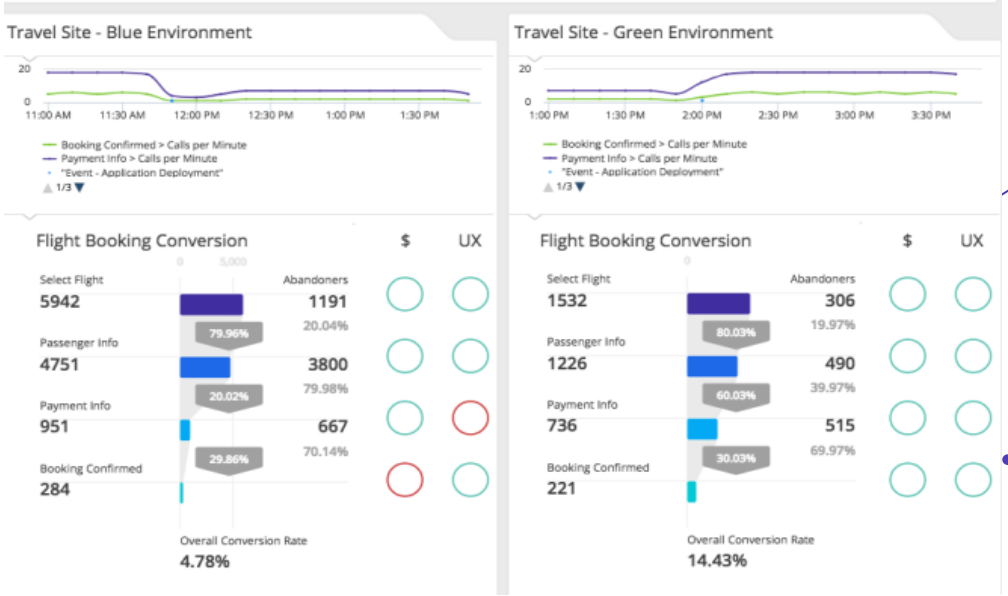
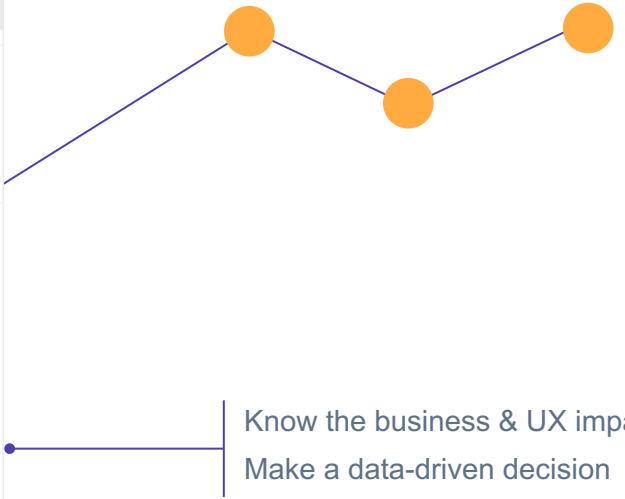
Continuous Deploy and Rollback

VISIBILITY

INSIGHT

ACTION





Know the business & UX impact

Make a data-driven decision

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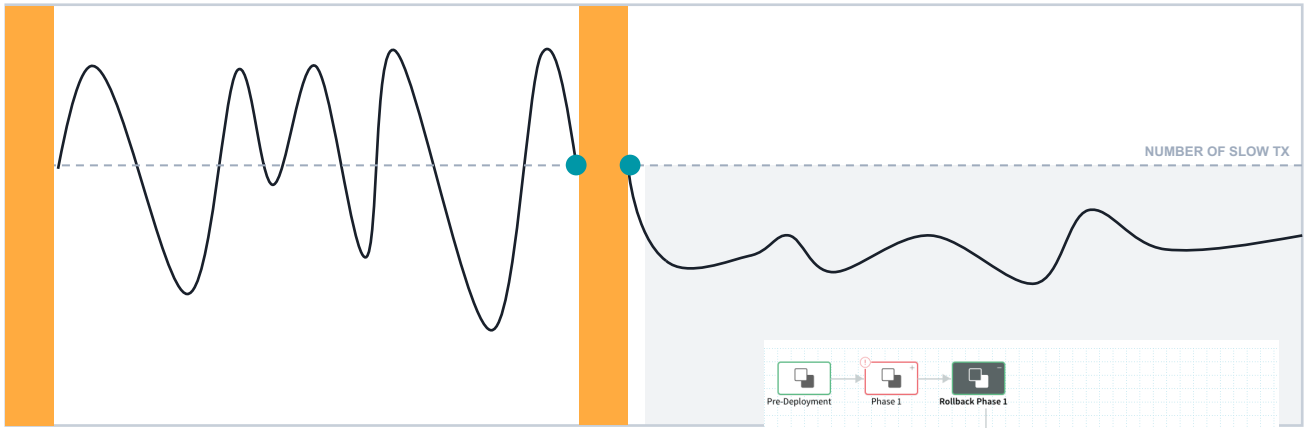
Continuous Deploy and Rollback

VISIBILITY

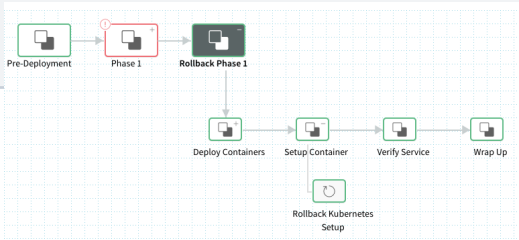
INSIGHT

ACTION



CANARY RELEASE

ROLLBACK



Canary/Blue Green Releases are stopped when performance issues are identified

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Lesson Two

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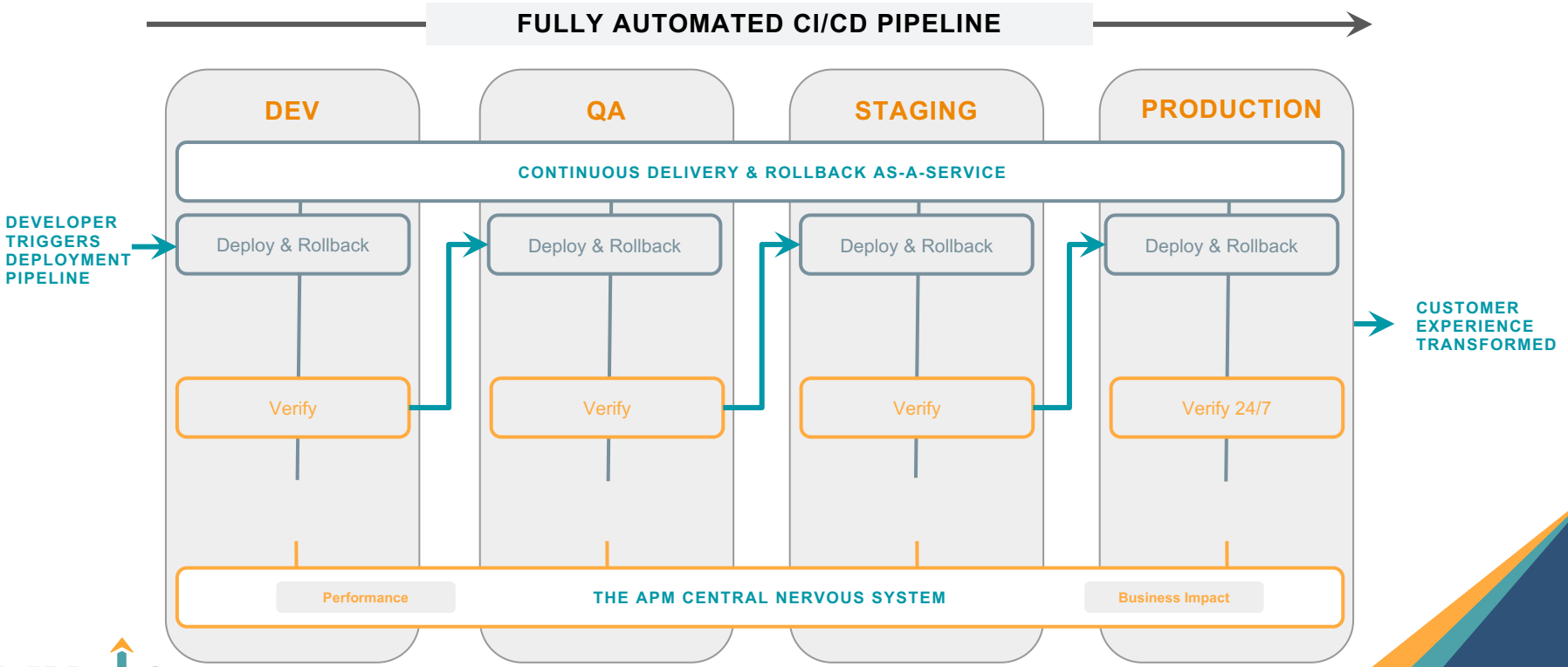
Continuous Delivery & Verification



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Lesson Three

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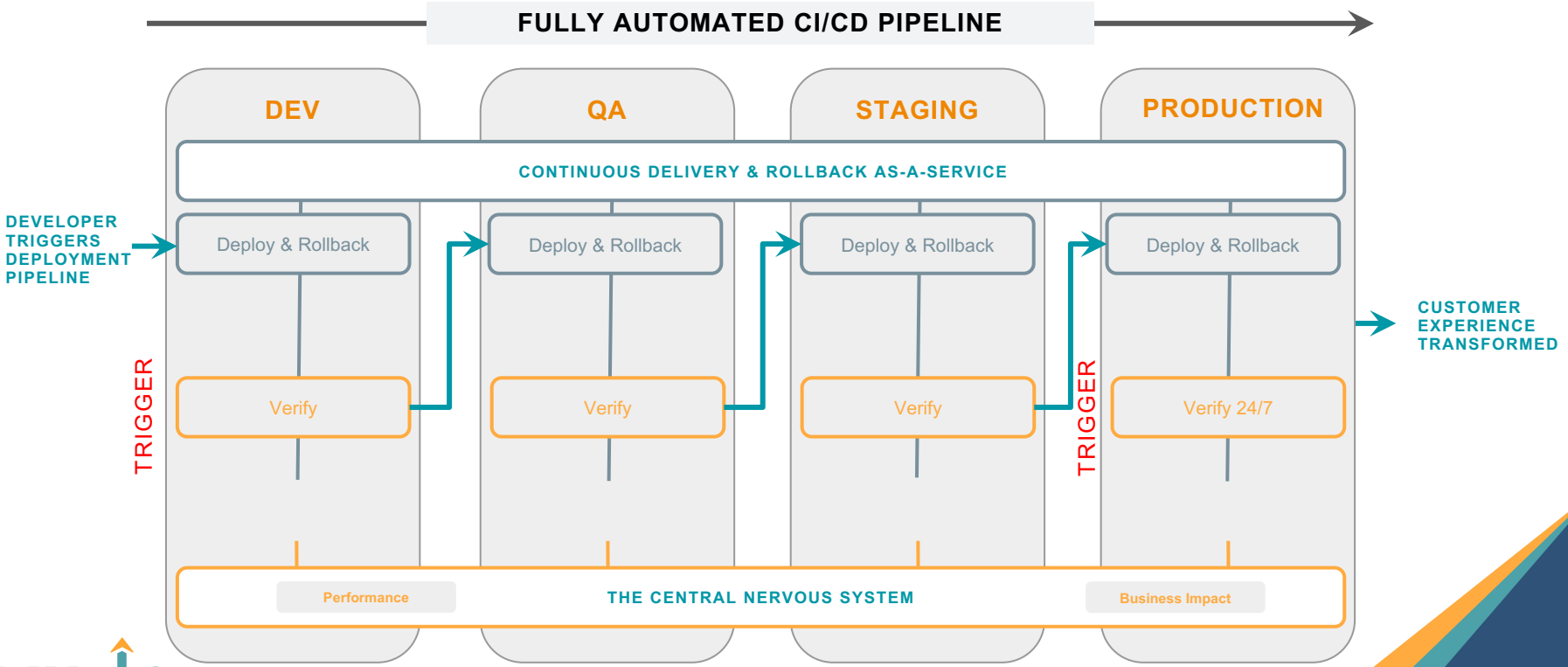
Continuous Delivery & Verification



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“Will this thing work?”

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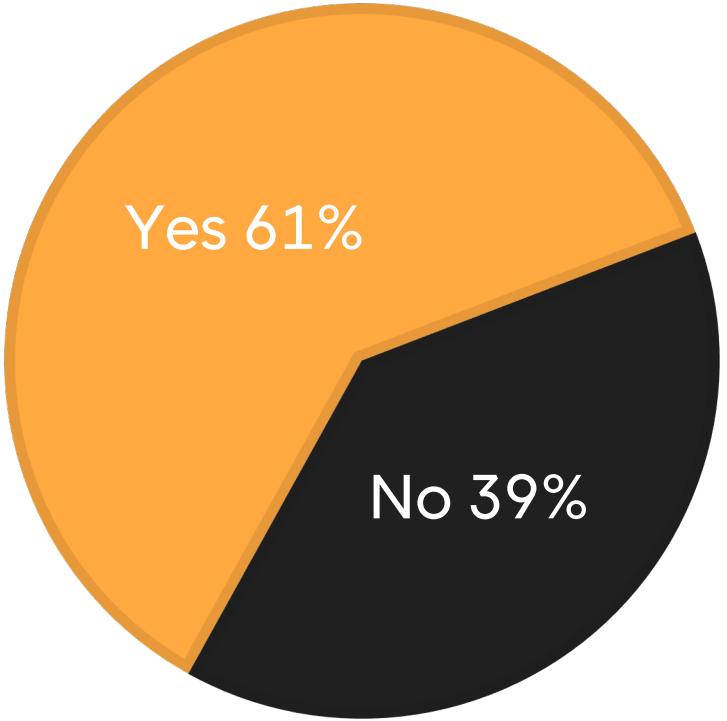
Q: Suffers from release anxiety?

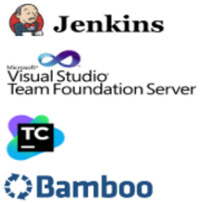


Source: DevOps.com webinar, June 2020

Source: devops.com Webinar June 18. 2020

This is what verification looks like

Create Scripts | Setup Monitoring | Build | Run Test | Analyze | Report



Ensure scripts match skills

Save metrics selections as part of test config

Pull APM metrics into the test analysis

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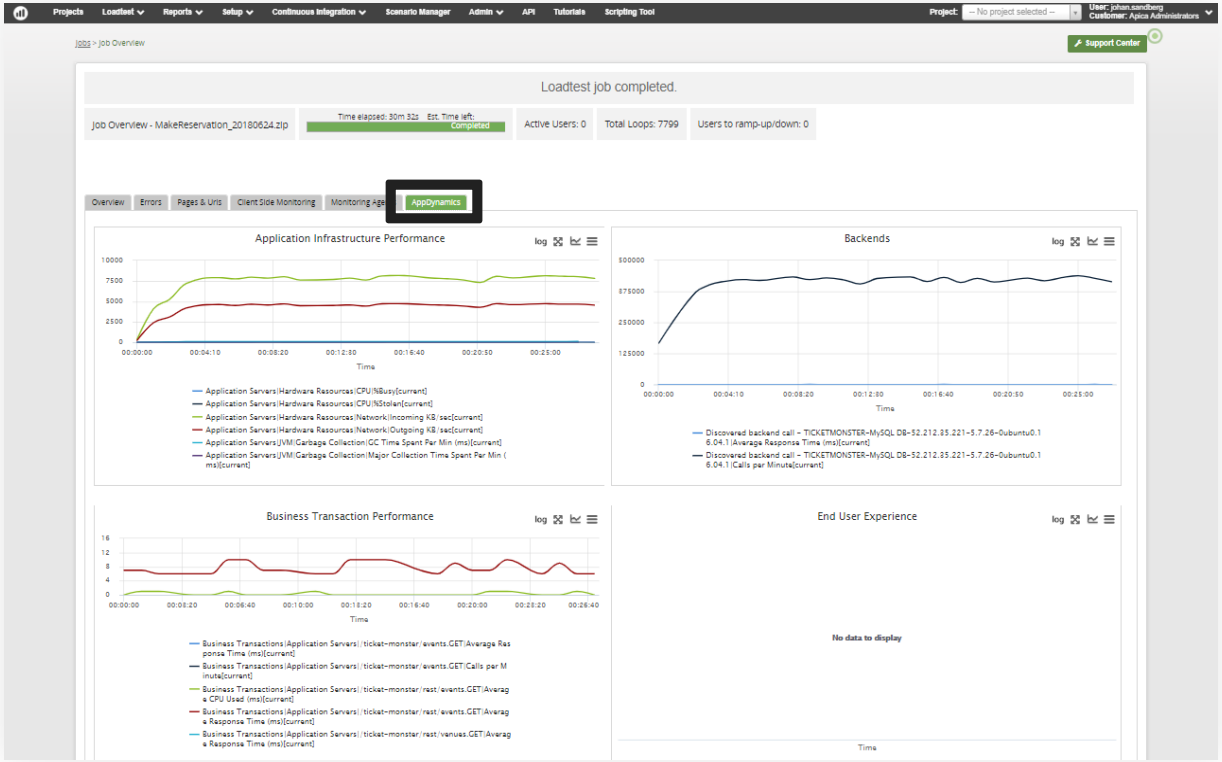
This is what integrated verification looks like



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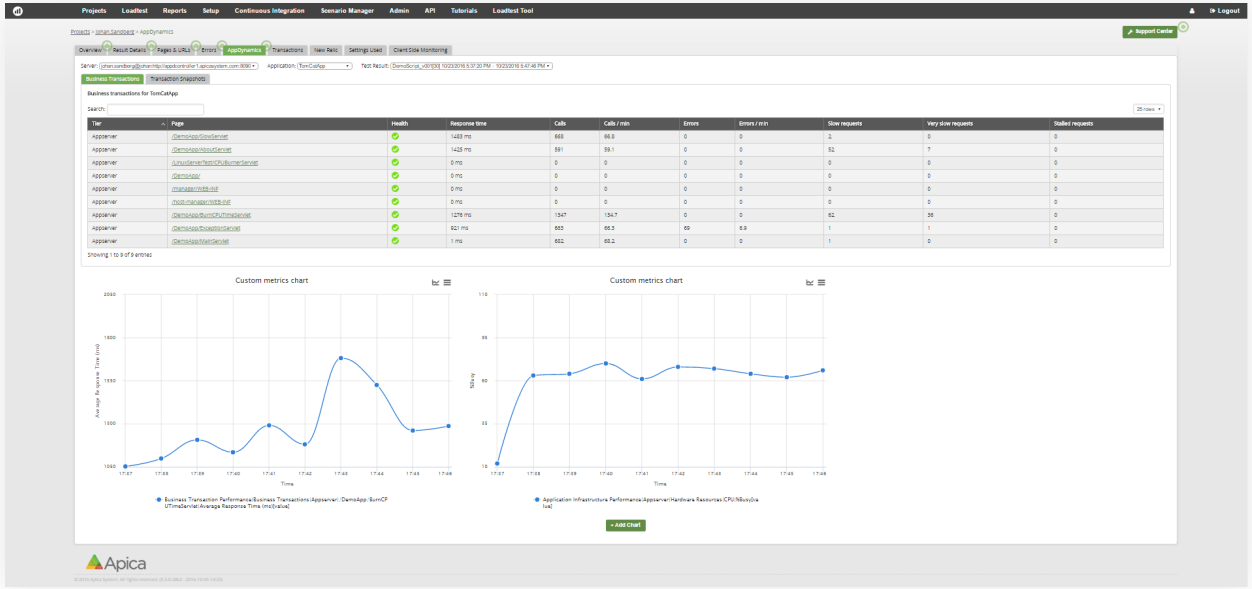
Integration is the key to success



SKILup DAYS

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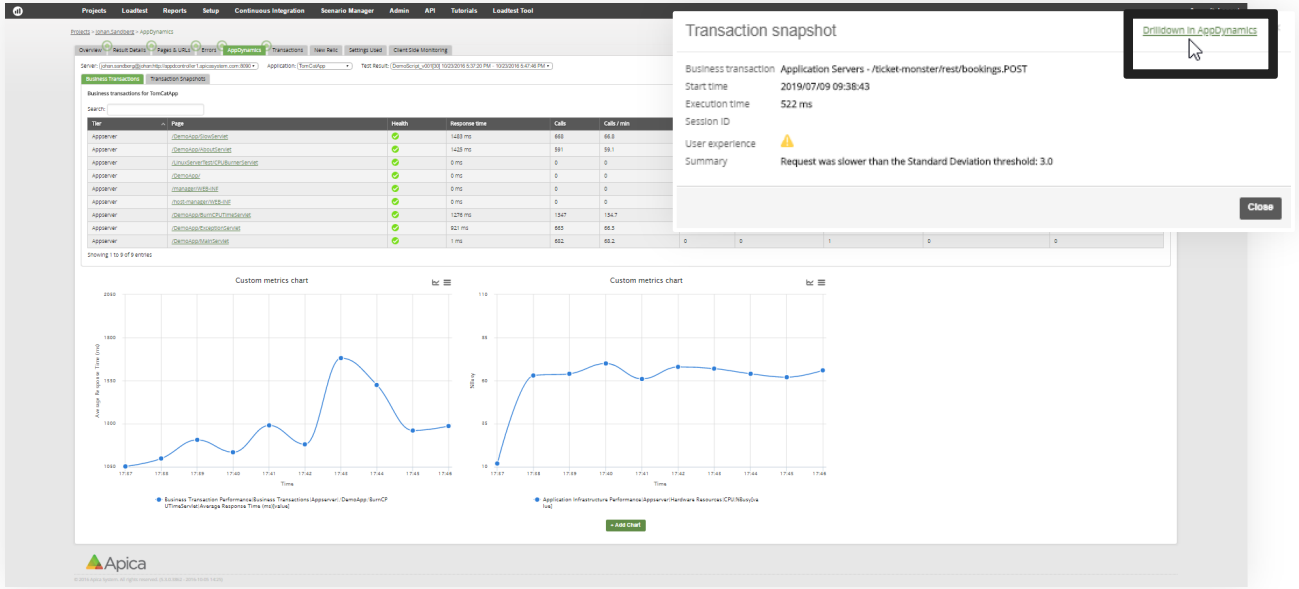

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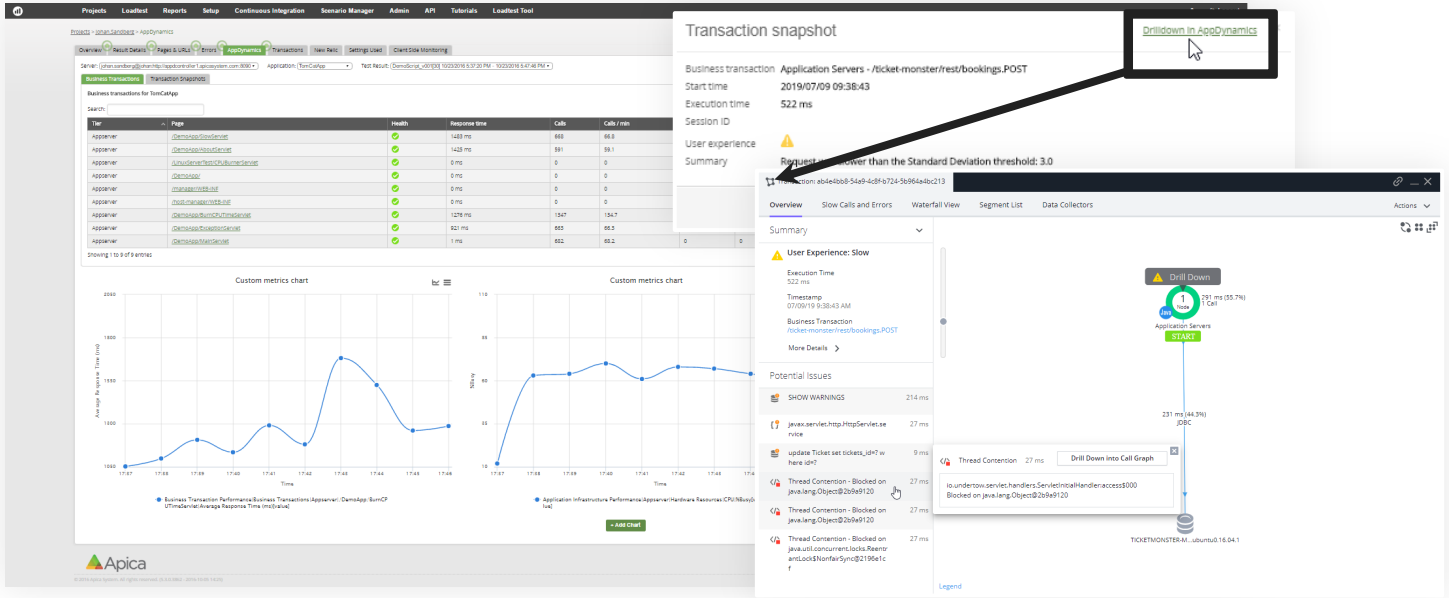

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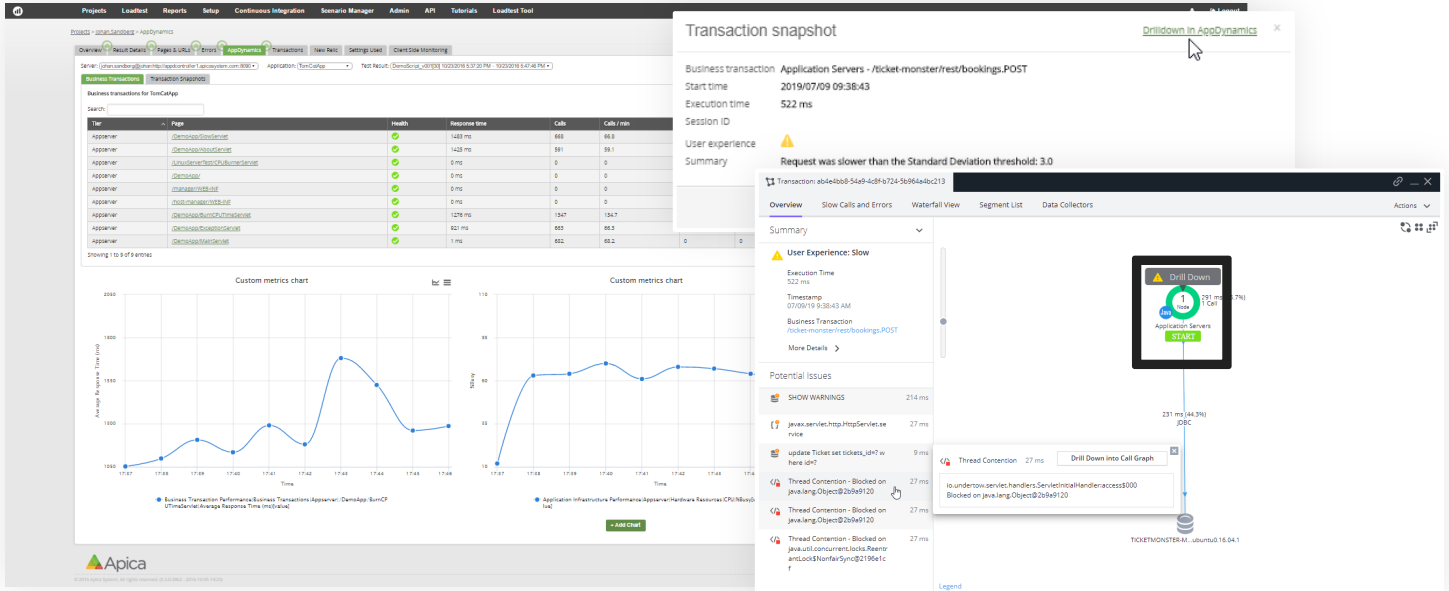

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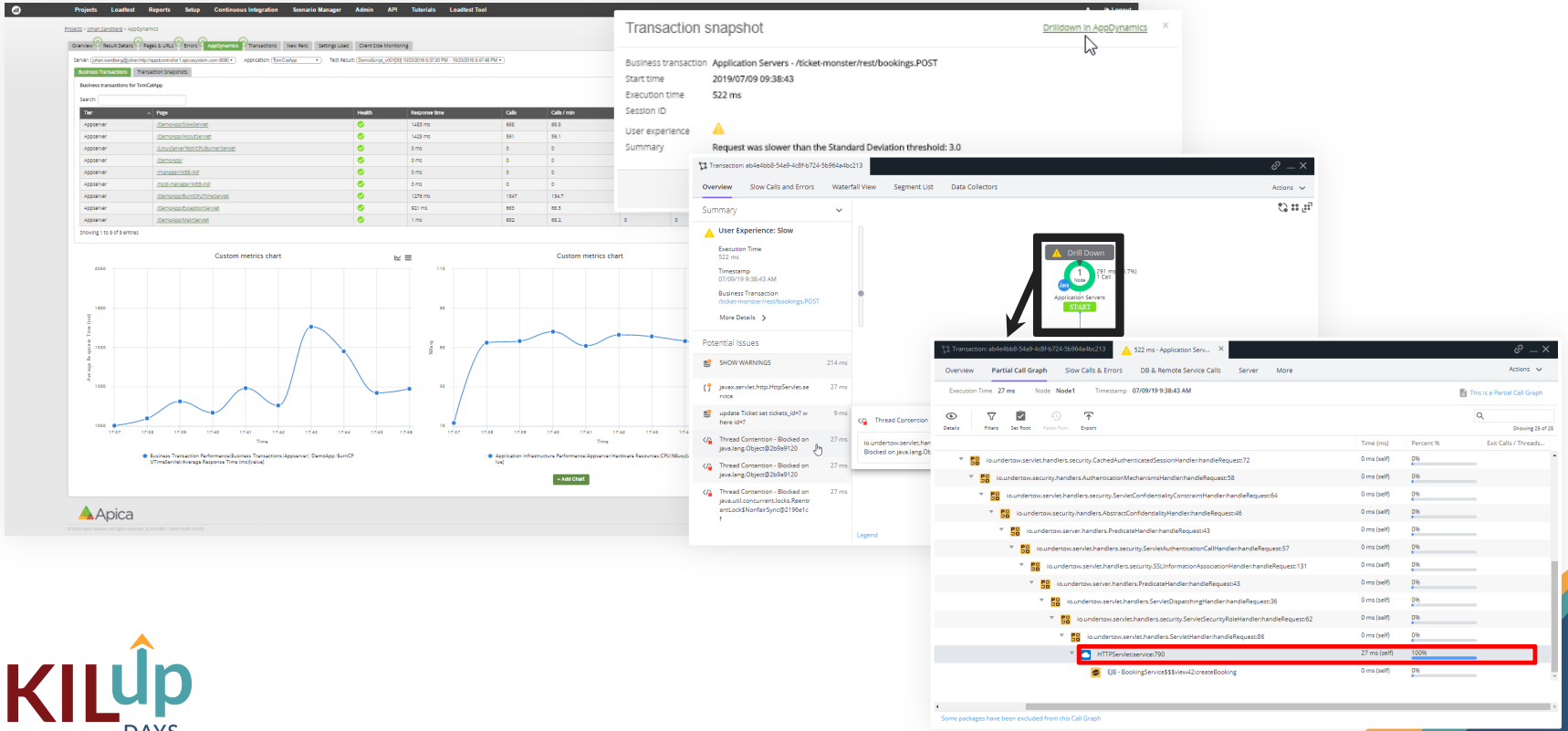

Lesson Four

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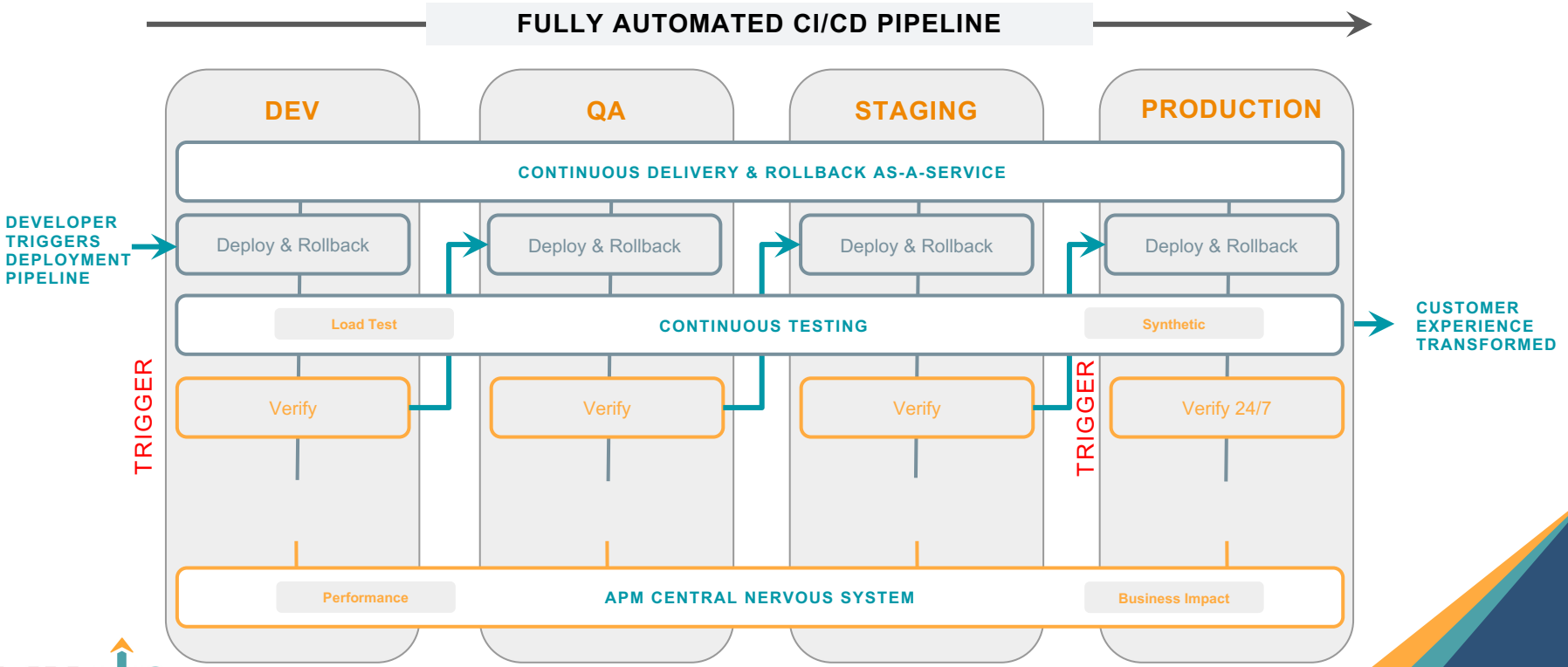
Continuous Delivery & Verification



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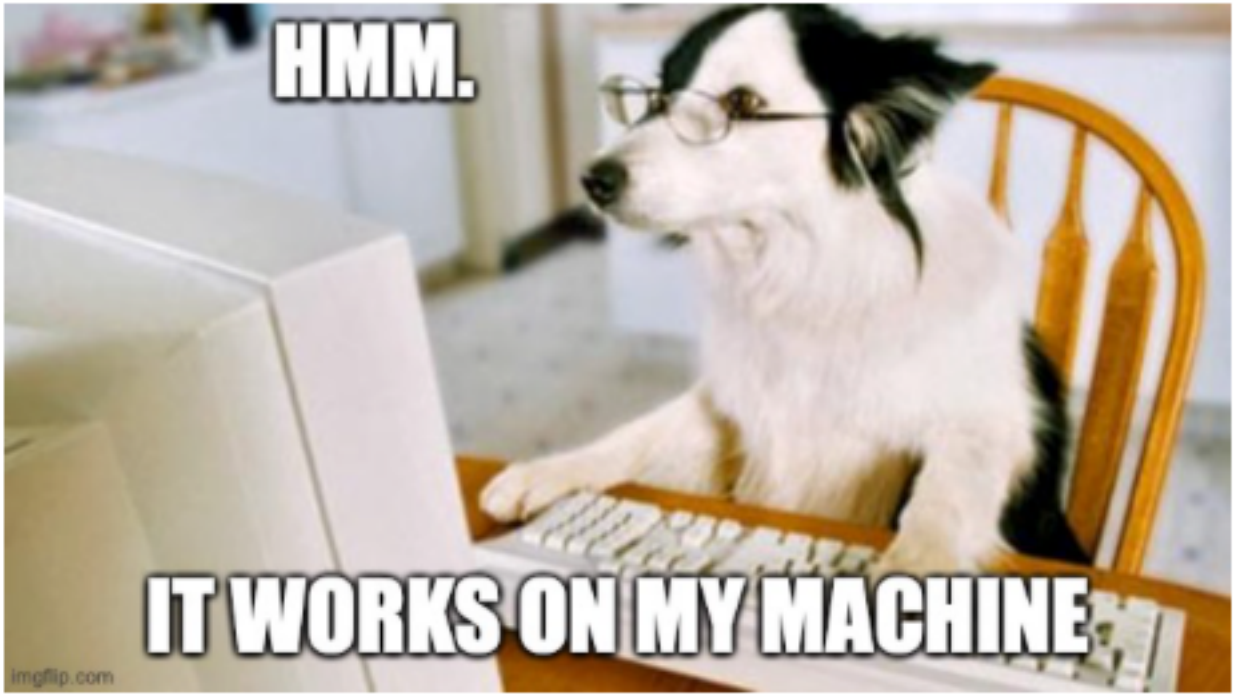
“Oops”



What does it take for Dev to collect more data?

- Typical Debugging Process

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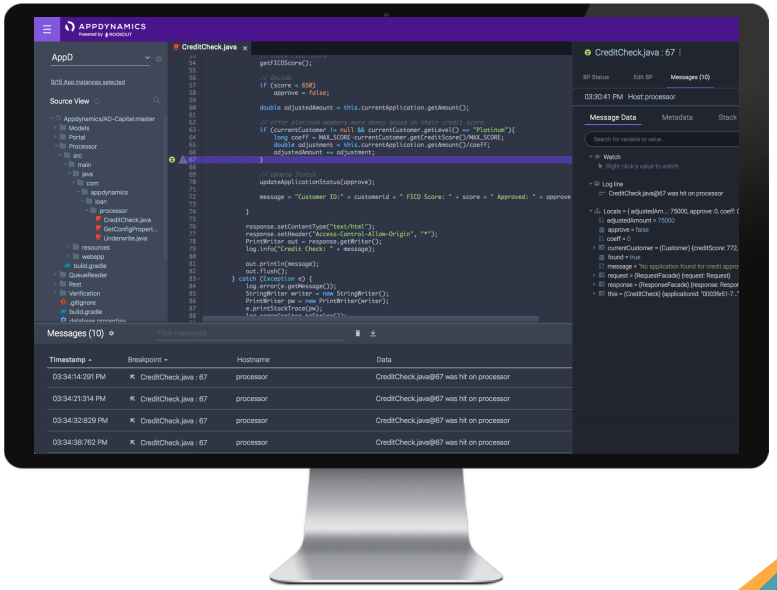
What are Non-Breaking Breakpoints?

- May be applied to a live instance of an application without changing code or restarting the app (in development, staging or production)
- N-B Breakpoint triggers internal logic to fetch local variables and send debugging data to DCI



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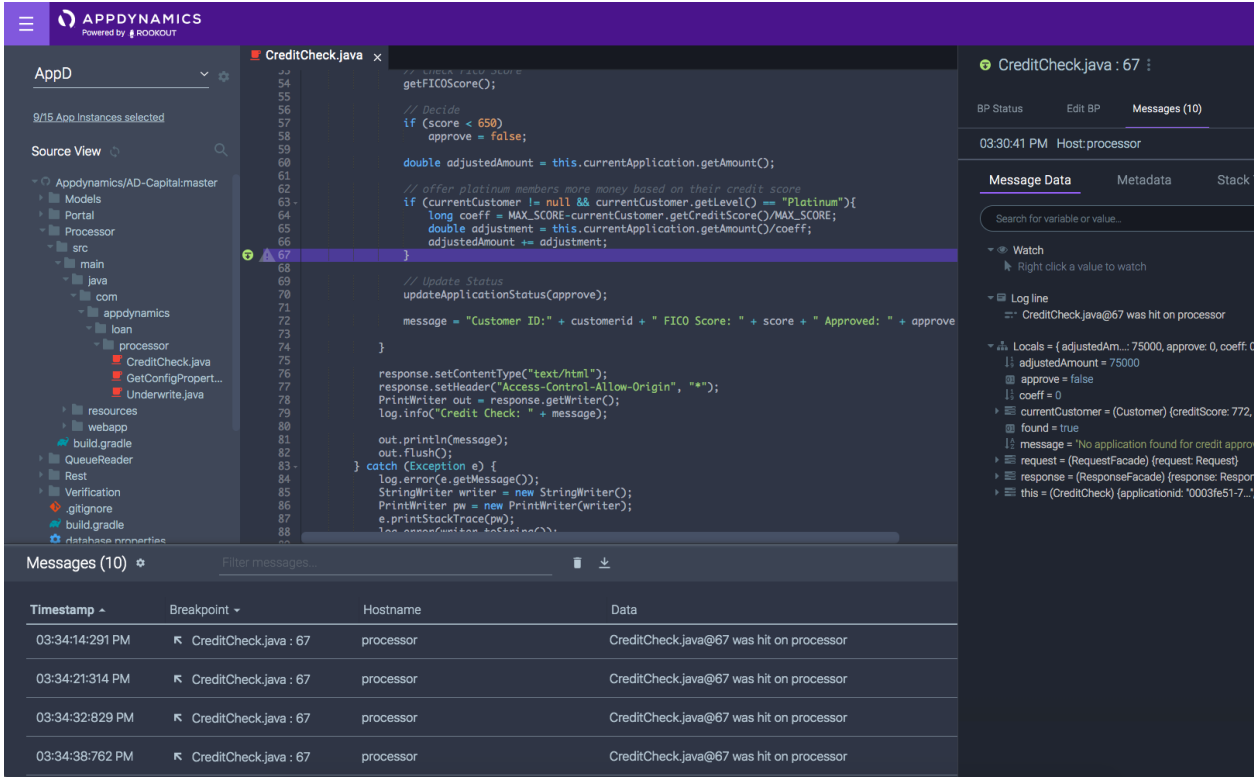
Deep Code Insights

Powered by Rookout



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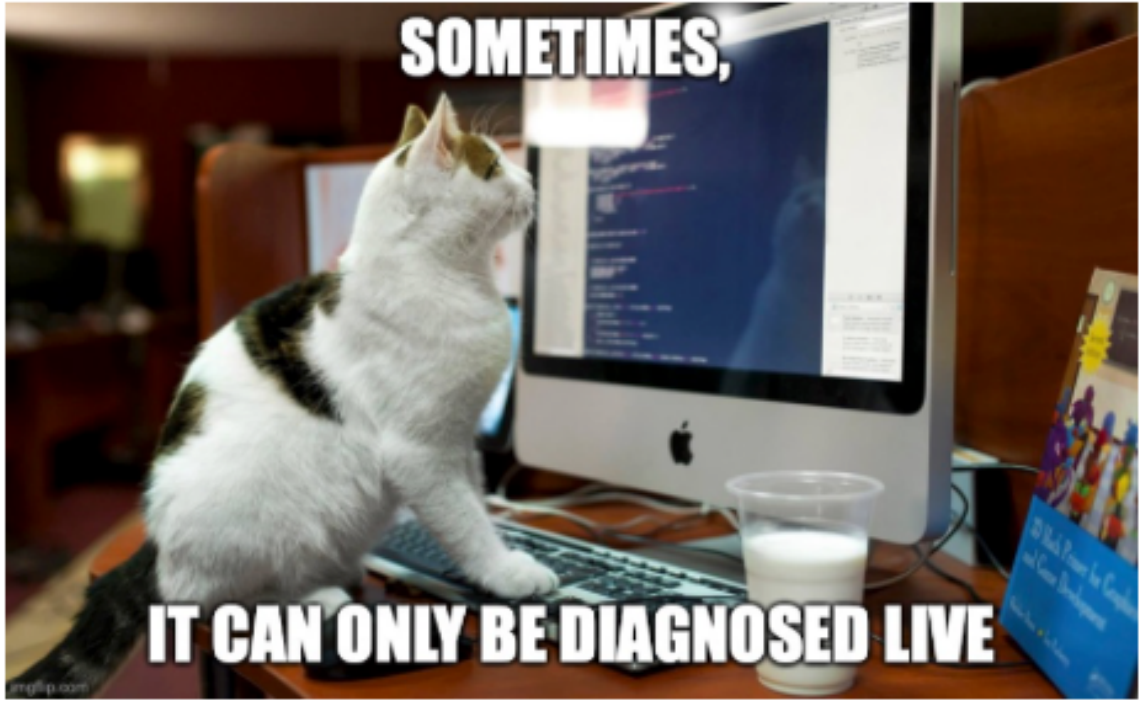

Lesson Five

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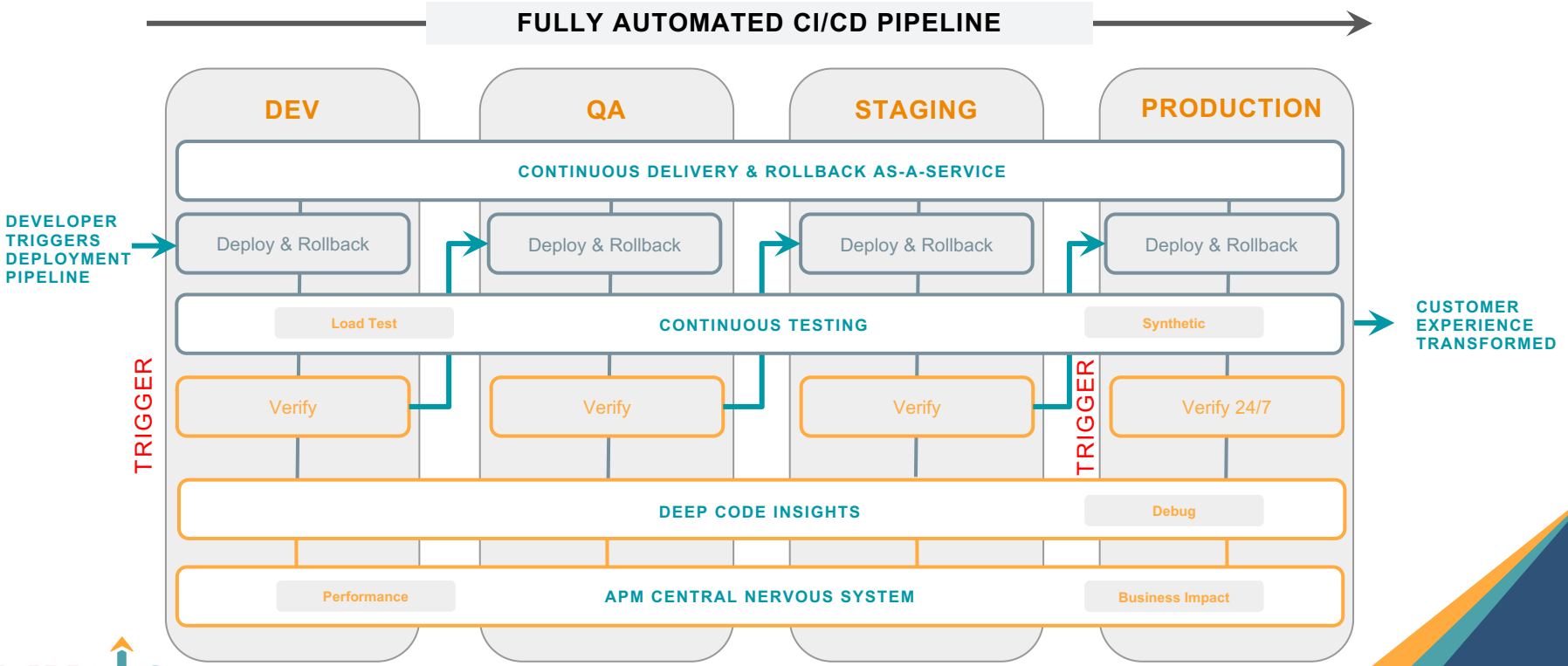
Continuous Delivery & Verification



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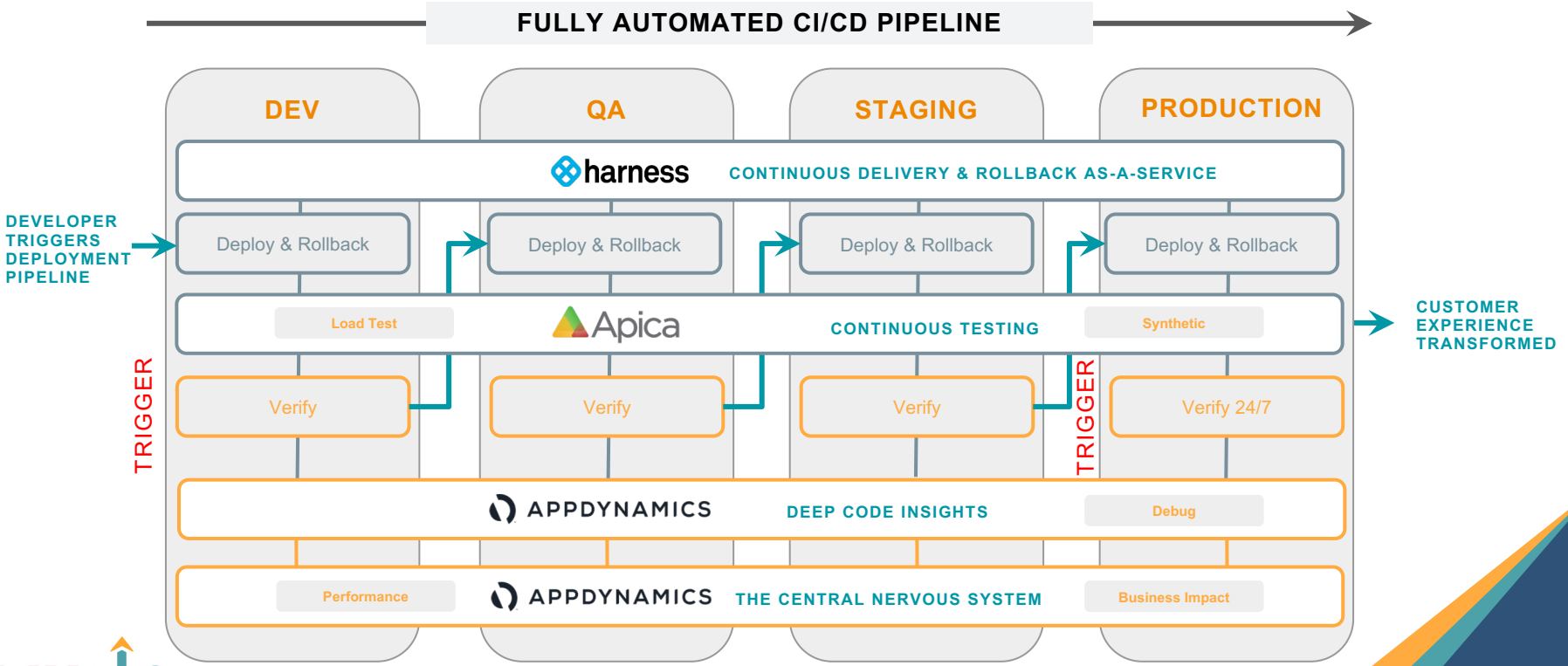
Continuous Delivery & Verification



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Integrated with AppDynamics

“experience with performance tuning and monitoring has moved … to a 39% must-have skill ranking.”

Source: DevOps Institute | 2020 Upskilling: Enterprise DevOps Skills Report

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Lessons

- APM first gives autodiscovery & dynamic baselines
- Automate deploys & rollbacks
- Schedule releases on engineering AND business needs
- APM & Test tool integration = relaxed releases
- Sometimes, it can only be diagnosed live

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Links

- Join a session specific ongoing conversation at https://eurl.io/#B4zgIZQ_E

(WebEx Teams - will ask for your email)

- Continuous Delivery https://www.appdynamics.com/solutions/continuous-delivery
- Central Nervous System https://www.appdynamics.com/central-nervous-system/
- AppDynamics & Harness - https://bit.ly/Appd_Harness
- AppDynamics & Apica - https://bit.ly/AppD_Apica
- Accelerating Digital Transformation and Application Performance In Turbulent Times - https://bit.ly/accelturbulent
- Successfully Deploying AIOps - https://bit.ly/deployaiops

- My chosen charity for your consideration: Doctors Without Borders https://bit.ly/msf_dwb

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THANK YOU!

Meet me in the Network Chat Lounge for questions

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