# DevOps

A right career for you?

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## Know the guy :)

I’m Sabin Ranjit

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Former, Senior DevOps Security Eng. @ Leapfrog

Spare-time: Cyber Security Consultant, Trainer, Researcher

Catch me:
https://www.linkedin.com/in/sabinranjit/

Right career for you?

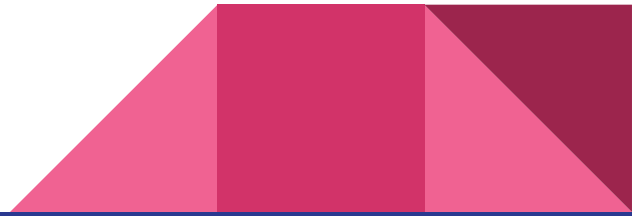
# Intro

DevOps is the combination of cultural philosophies, practices, and tools that increases an organization’s ability to deliver applications and services at high velocity

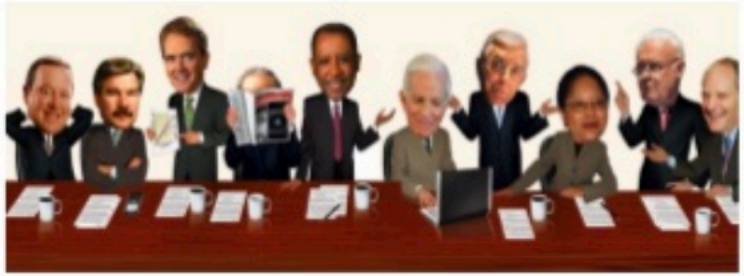
evolving and improving products at a faster pace

The first was also called “agile system administration” or “agile operations”

collaboration between development and operations staff throughout all stages of the development lifecycle



We need to move quicker than our competitors



# Benefits

Speed

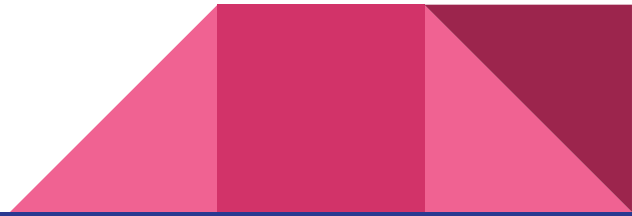
Rapid delivery

Reliability

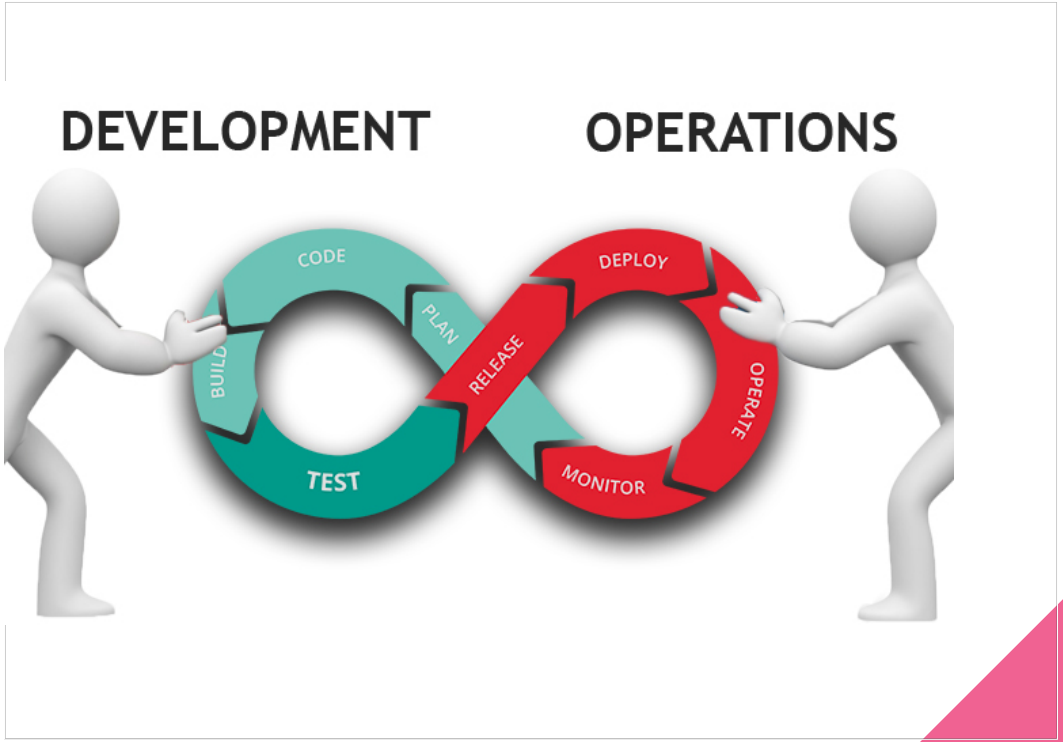
Scale

Improved collaboration

Security



# DevOps in a picture


DEVELOPMENT
OPERATIONS
CODE
PLAN
BUILD
TEST
RELEASE
DEPLOY
OPERATE
MONITOR

# DevOps Culture

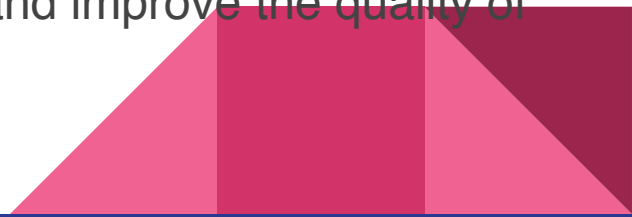
DevOps has strong affinities with Agile and Lean approaches

No more siloed Dev and Ops part

Transitioning to DevOps requires a change in culture and mindset

With DevOps, the two teams work together to optimize both the productivity of developers and the reliability of operations.

Strive to communicate frequently, increase efficiencies, and improve the quality of services they provide to customers

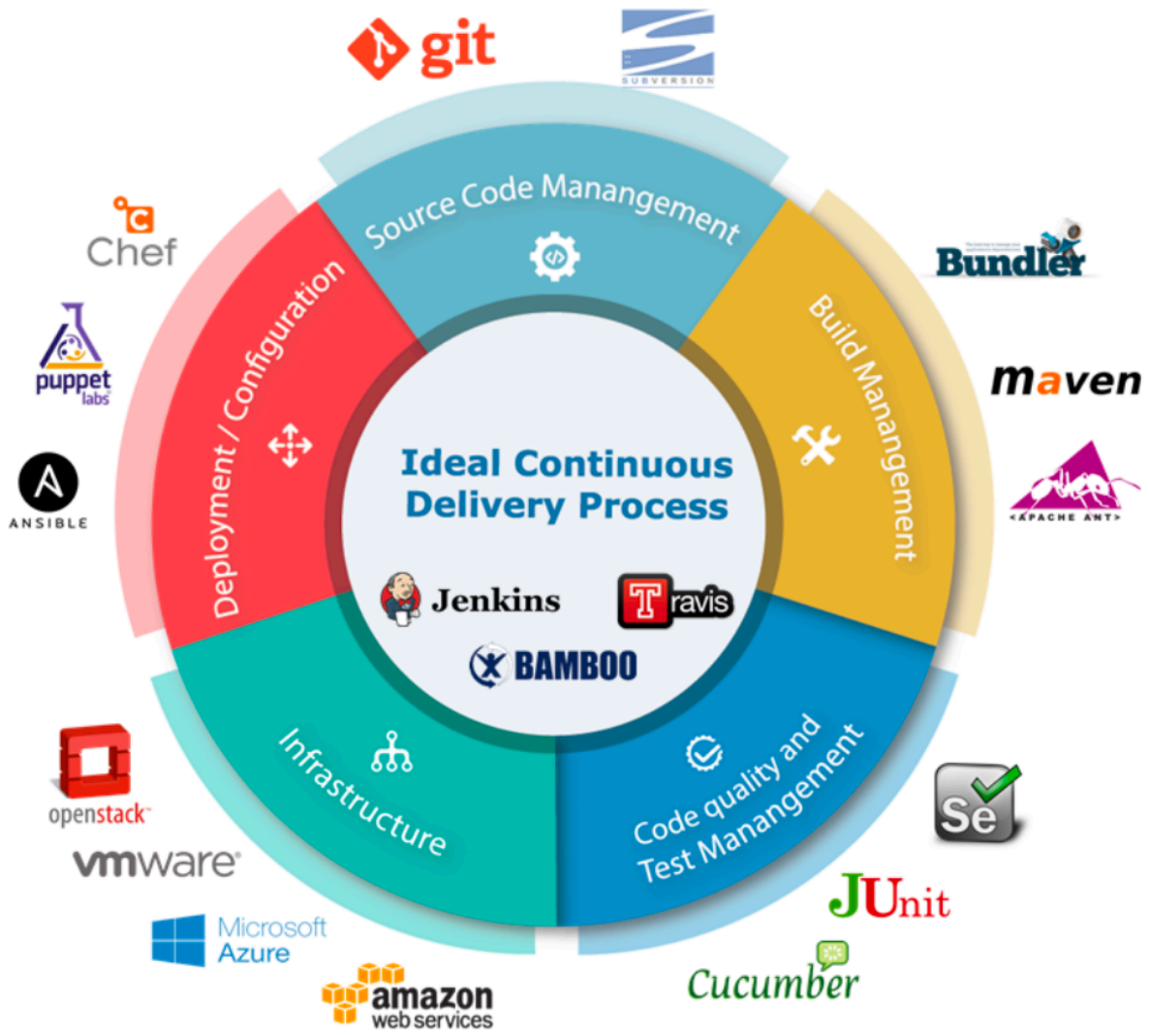


# DevOps practices

One fundamental practice is to perform very frequent but small updates

a microservices architecture

continuous integration and continuous delivery solve challenges in microservices and increased release frequency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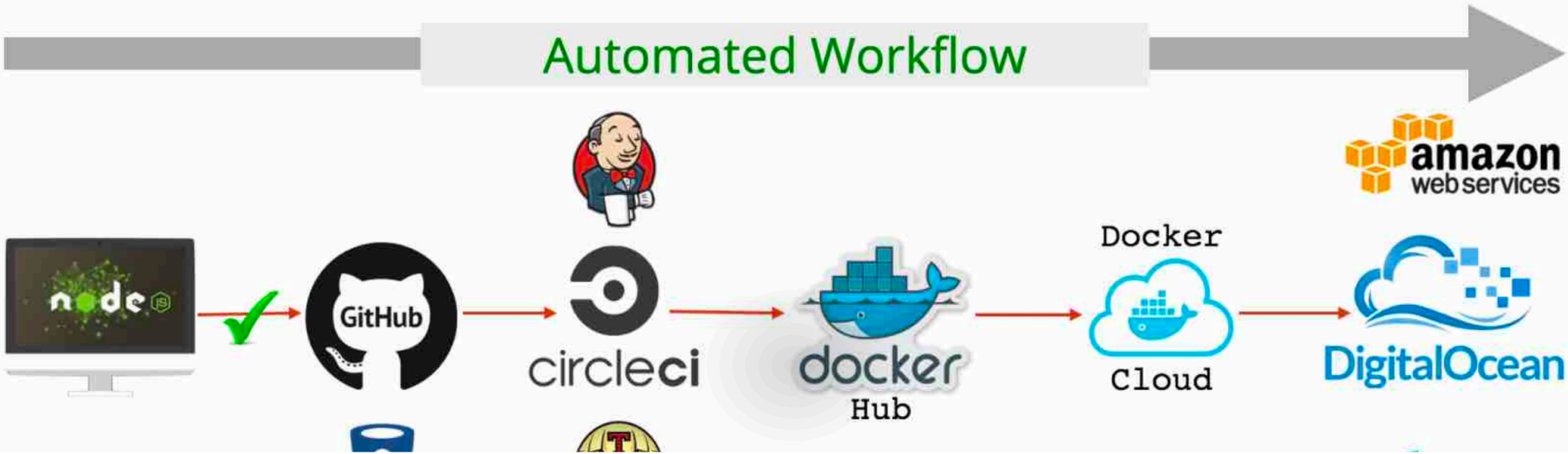
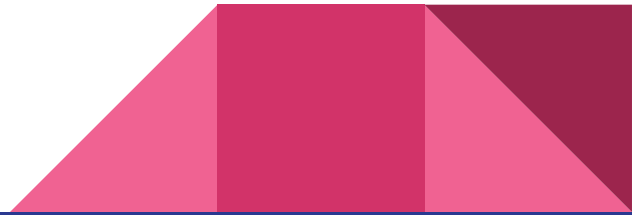

Automated Workflow
node
GitHub
circleci
docker
Hub
Docker
Cloud
amazon
web services
DigitalOcean

## Continuous Integration

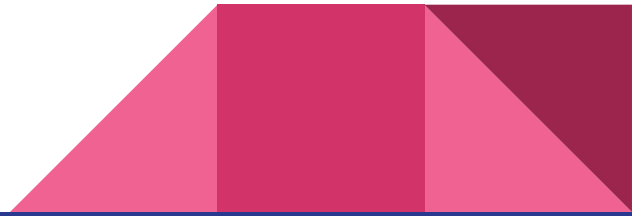
software development practice where developers regularly merge their code changes into a central repository, after which automated builds and tests are run

The key goals of continuous integration are to find and address bugs quicker, improve software quality, and reduce the time it takes to validate and release new software updates.



## Continuous Deployment

a series of practices designed to ensure that code can be rapidly and safely *deployed* to production by delivering every change to a production-like environment and ensuring business applications and services function as expected through rigorous automated testing.

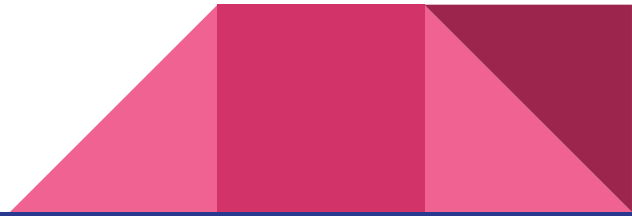


Who are Dev?

Software engineers, Software Architects, Web Developers, … more lean to development

Who are Ops?

System engineers, System Architects, Network Engineers, more learn to operation



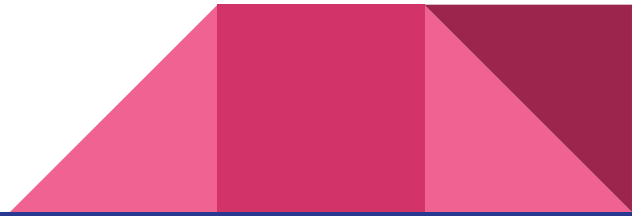
# Dev or Ops?

6 Days after a successful deployment, the server experiences high load.

Software is deployed to the test environment. You can’t login to the application.

“It works on my machine”

“It’s not the server, it’s your code.”



# Roles of Dev and Ops

Dev

- Create change
- Add or modify features

Ops

- Create stability
- Create or enhance services

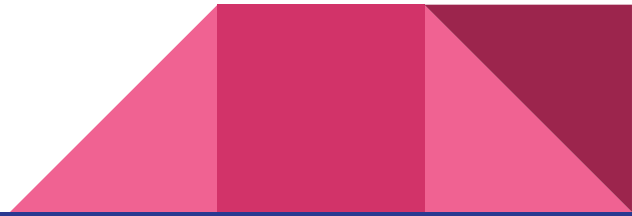
# Problems between Dev and Ops

Disconnection; lack of communication

Conflicts in interest

Devs dont deploy consistent software

Ops are to resistant to change



# DevOps

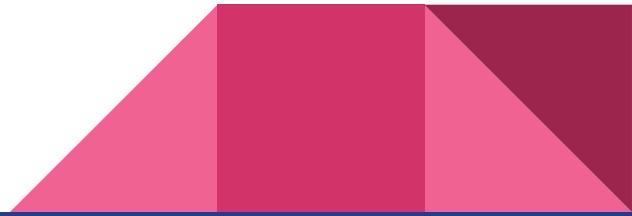
An approach to bridge the gap between agile software development and operations

Collaborative mindset to Dev and Ops

Create maintain relationships

Engage early and engage often

Be open and stop pointing fingers



# Culture

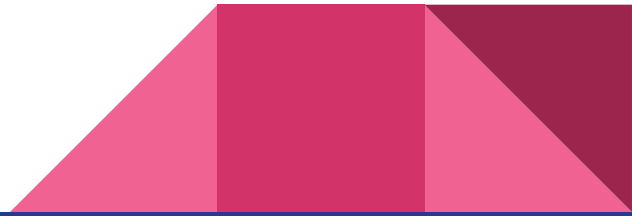
Talk and communicate

Involve each other in core processes and decisions

Ask Questions

Don’t say ‘No’

Invite everyone to stand ups and retrospectives



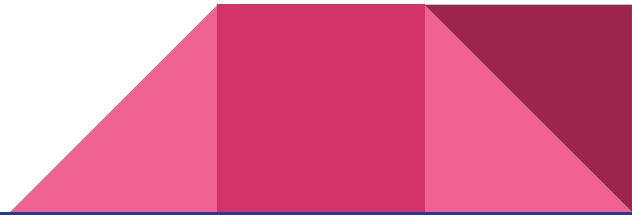
# Automate things

Automation is one of the part of the DevOps activity. It helps

- Machine are good at doing same things again and again
- Consistent and known state
- Fast and efficient

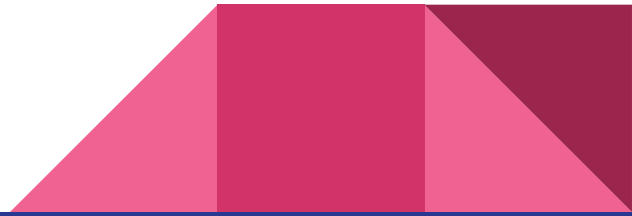
Doesn’t mean things always has to be automated. Automate only if you can fix errors

Myth: DevOps is all about automation



Automate

- Builds
- Deployment
- Testings
- System rollouts
- System configuration, etc.



# DevOps life cycle

Before engagements

Talk about functional and non functional requirements

> Functional requirements may be calculations, technical details, data manipulation and processing and other specific functionality that define what a system is supposed to accomplish.
>
> Non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors.

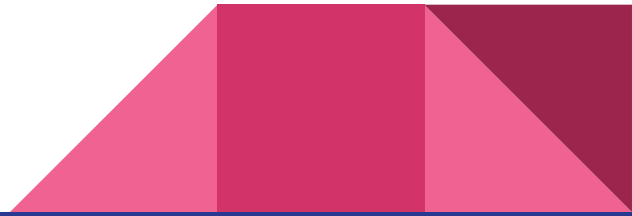
During engagement

Communication,

source control,

automate things

Collate system metrics



After engagement

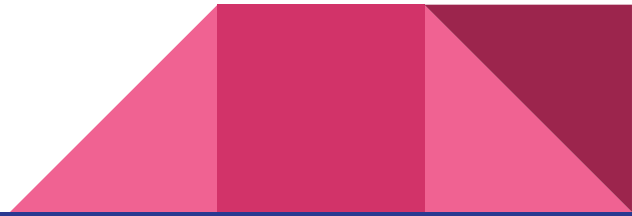
Release

Retrospective meetings

Continue to run tests

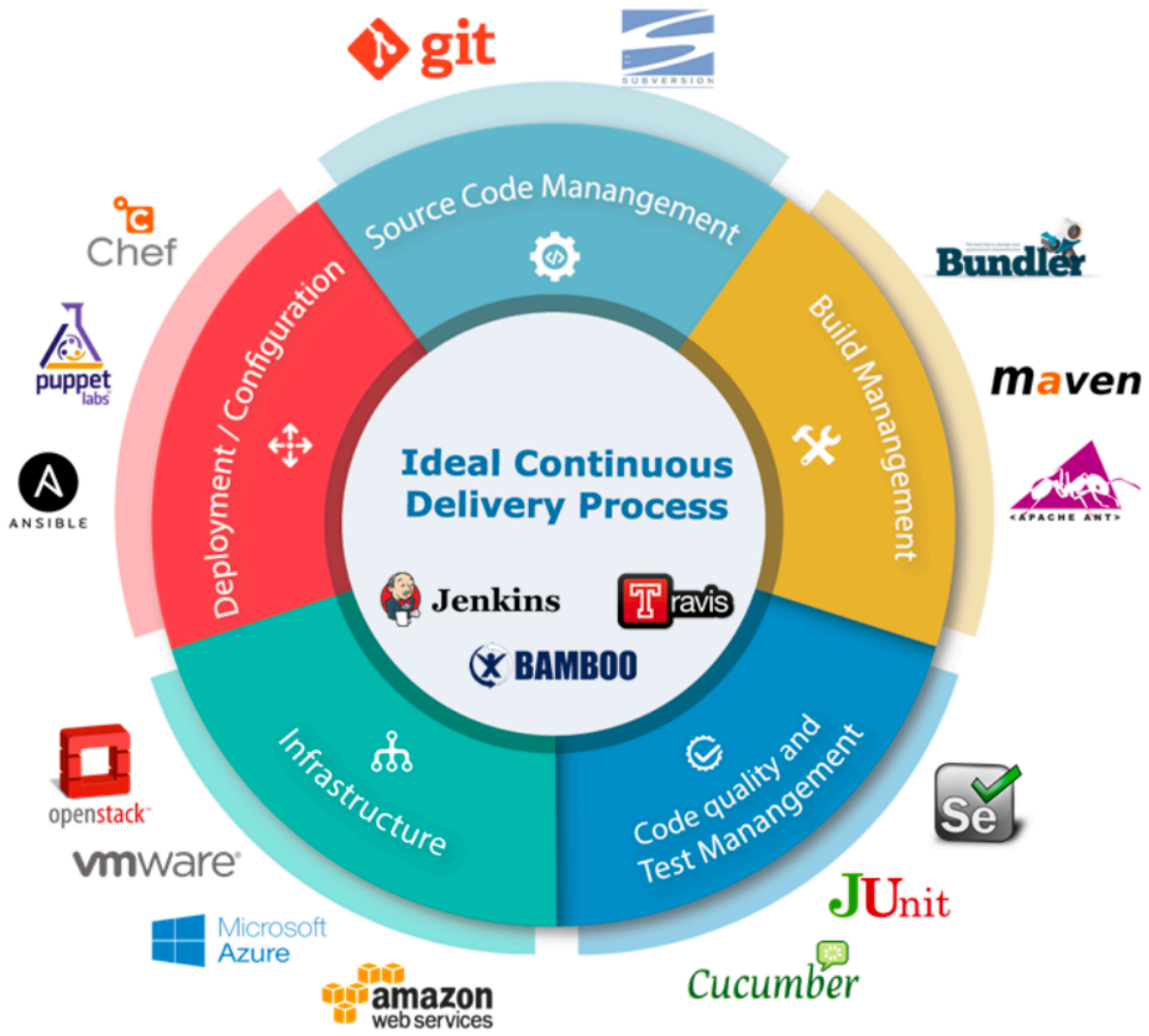
Monitor Applications and Systems

Issues: Post Mortem meetings



Right career for you?

THANK YOU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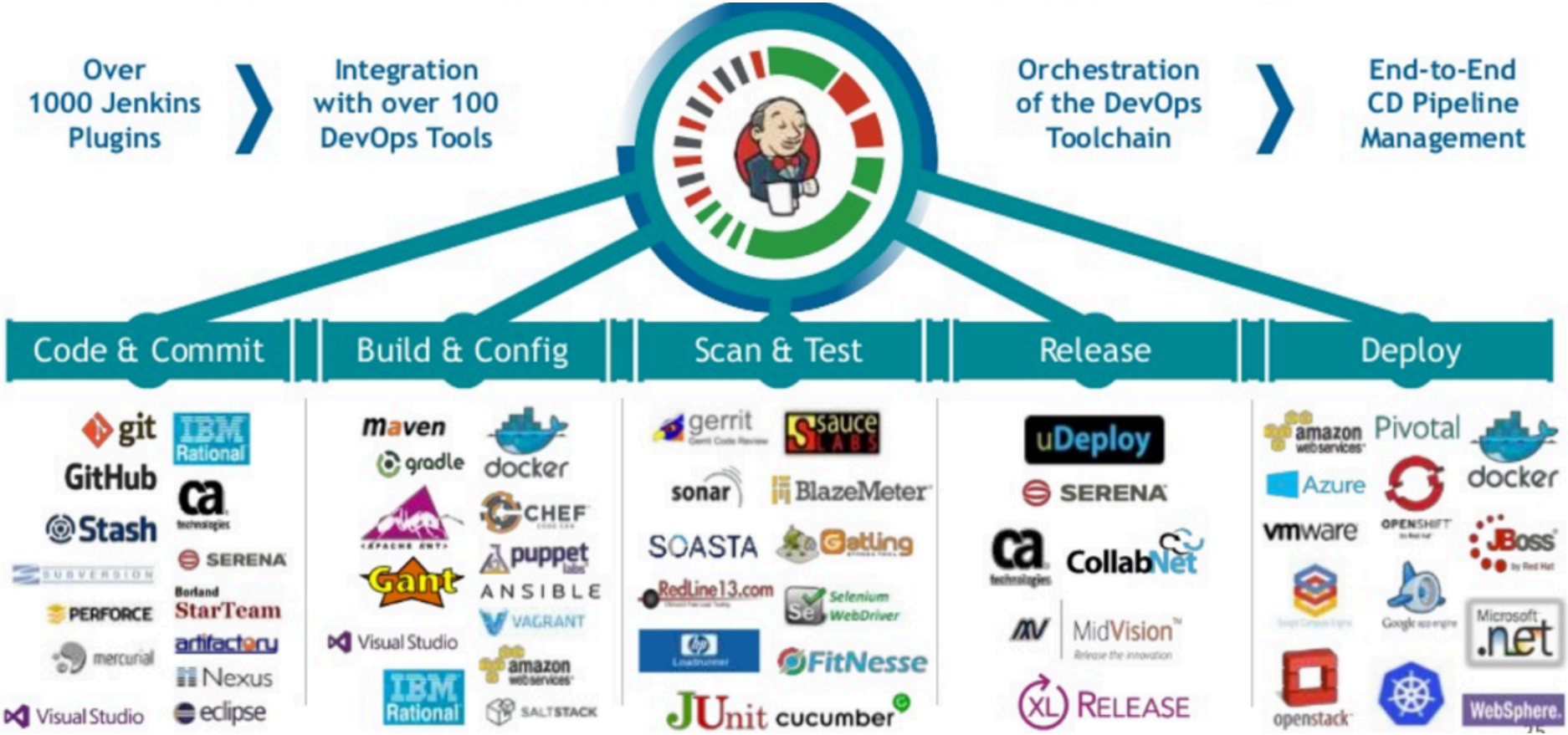
Over 1000 Jenkins Plugins
Integration with over 100 DevOps Tools
Orchestration of the DevOps Toolchain
End-to-End CD Pipeline Management
Code & Commit
Build & Config
Scan & Test
Release
Deploy
git
GitHub
Stash
SUBVERSION
PERFORCE
mercurial
Visual Studio
IBM Rational
ca technologies
SERENA
Borland StarTeam
artifactory
Nexus
eclipse
maven
gradle
ANT
Gant
Visual Studio
IBM Rational
docker
CHEF
puppet labs
ANSIBLE
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SALTSTACK
gerrit
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Sauce LABS
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Loadrunner
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