

Introduction to DevOps

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Who is a Developer?

- A software developer is a person concerned with facets of the software development process
 - Research
 - Design
 - Programming
 - Testing

What is IT Operations?

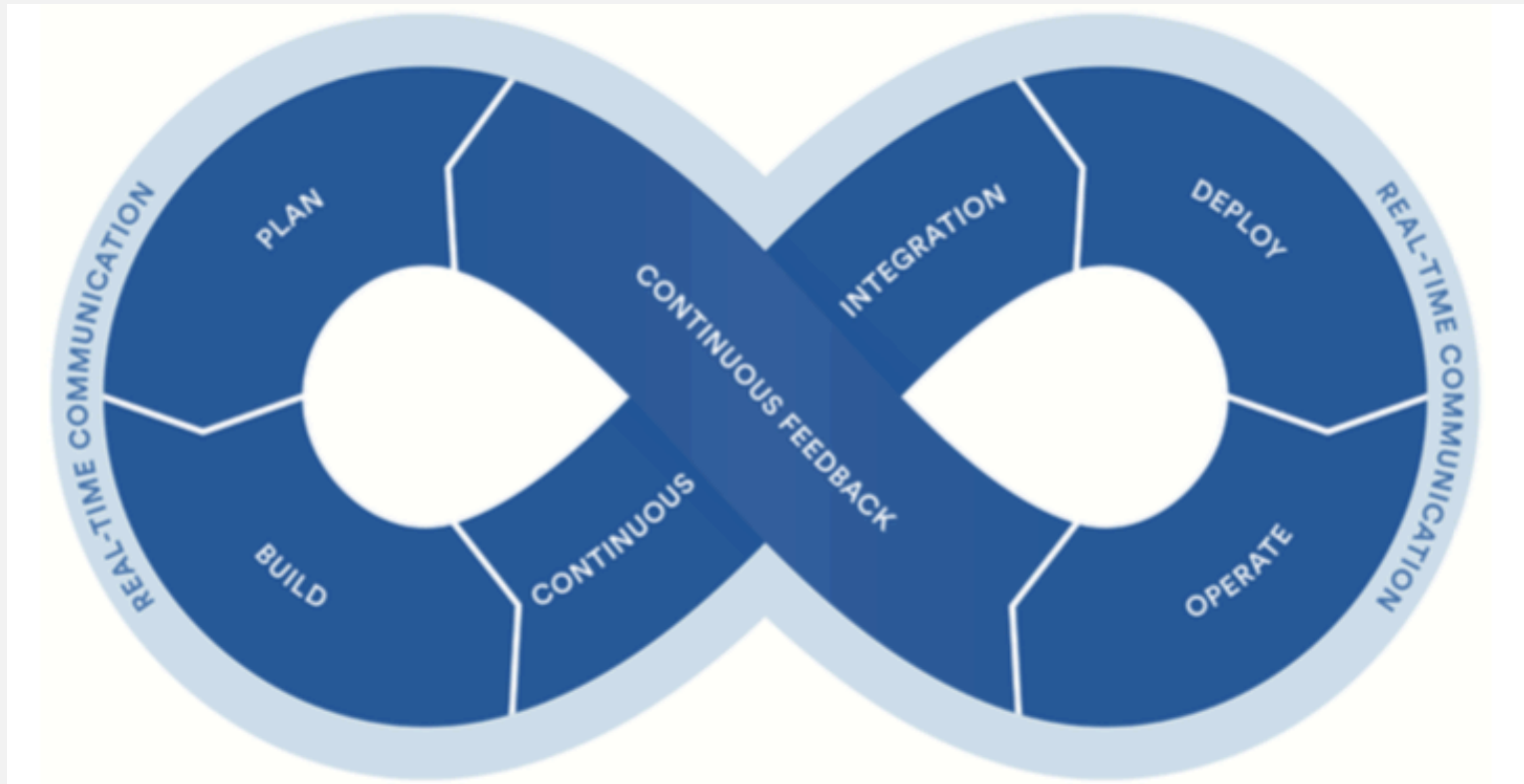
- Responsible for the smooth functioning of
 - The infrastructure
 - Operational environmentneeded to deploy applications to internal and external customers
- Includes
 - Network infrastructure
 - Server and device management
 - Computer operations
 - Help desk Services

What is DevOps?

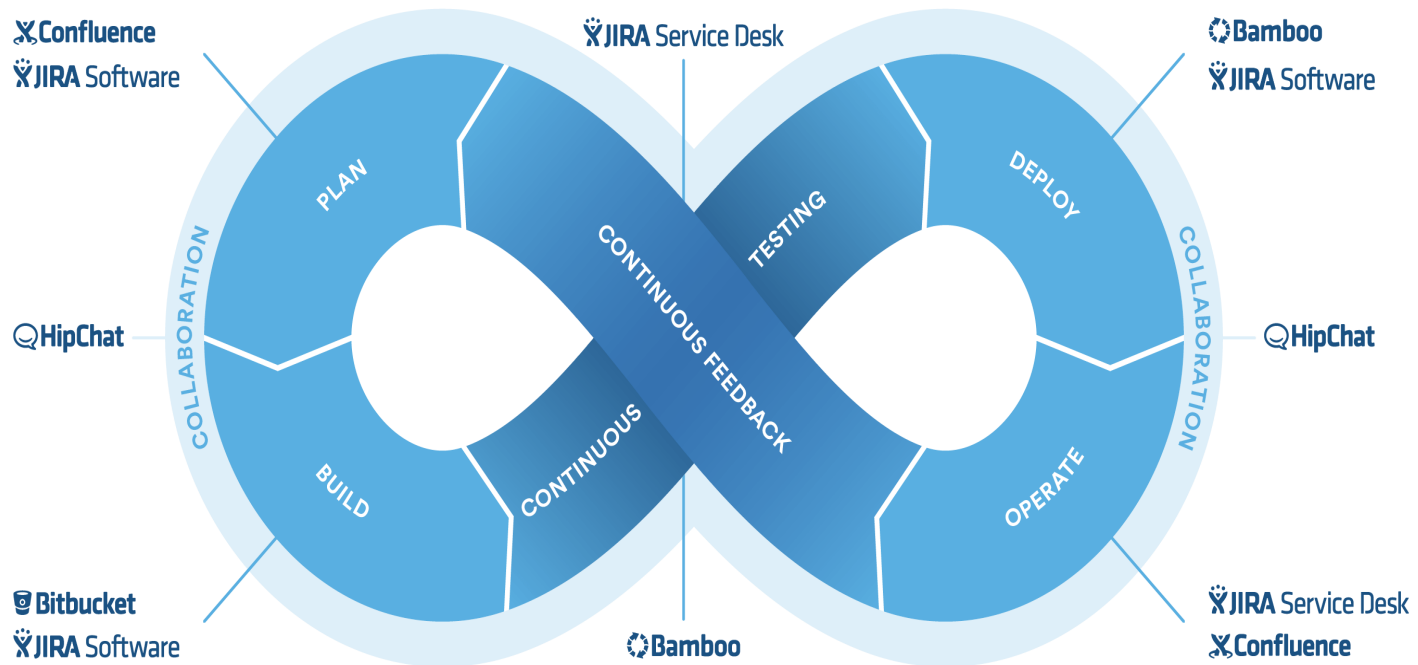
- Software development and delivery process
- Automates
 - Software integration
 - Testing
 - Deployment
 - Infrastructure change
- Rapid, frequent and reliable
 - Software building
 - Software testing
 - Software Deployment

How?

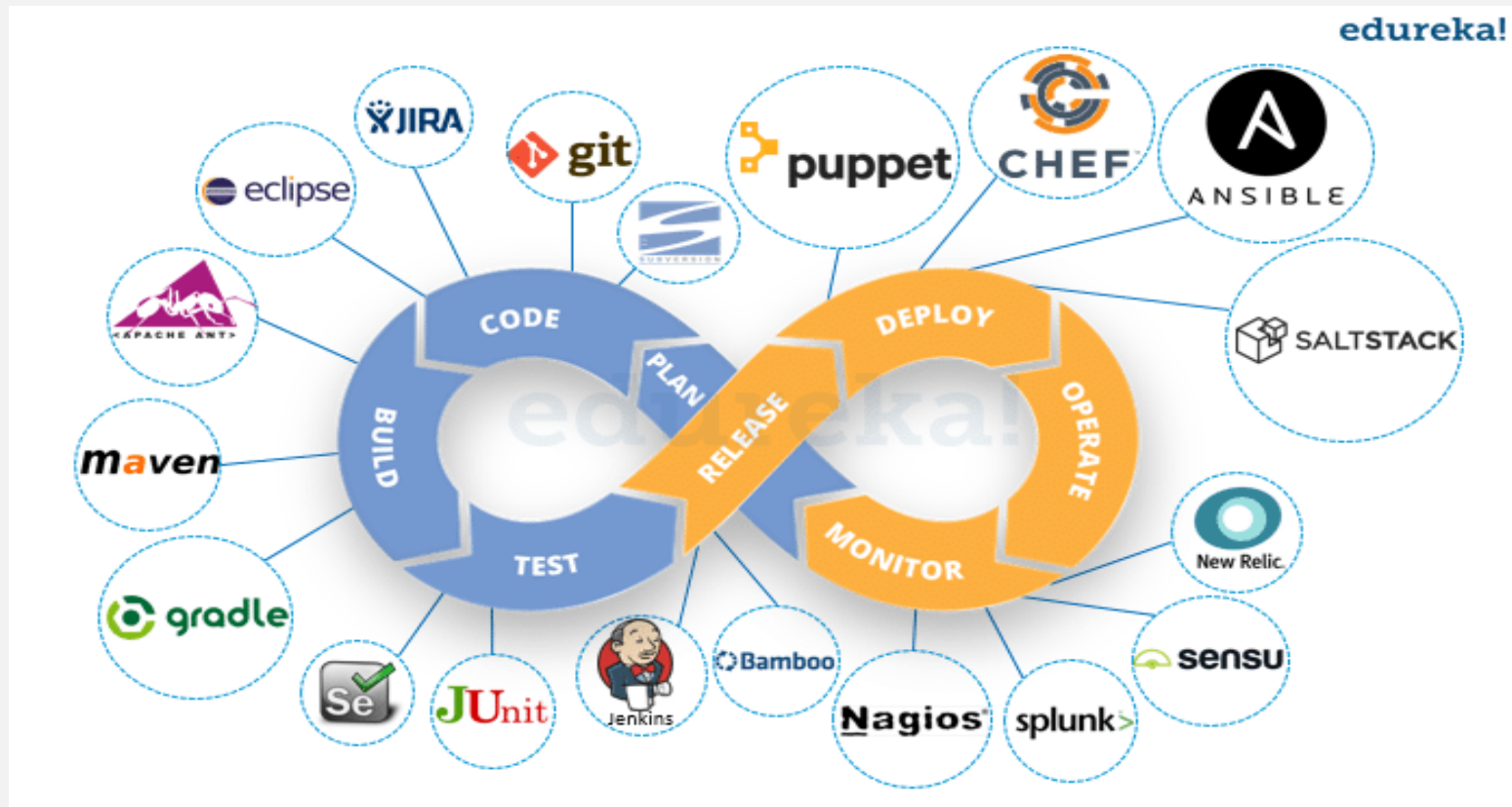
- Better communication and collaboration



Atlassian



Alternatives



Continuous Integration?

- Merge developer working copies to a shared mainline frequently
- Aims to prevent integration problems
- Depends on
 - Test-driven development
 - Automated unit tests

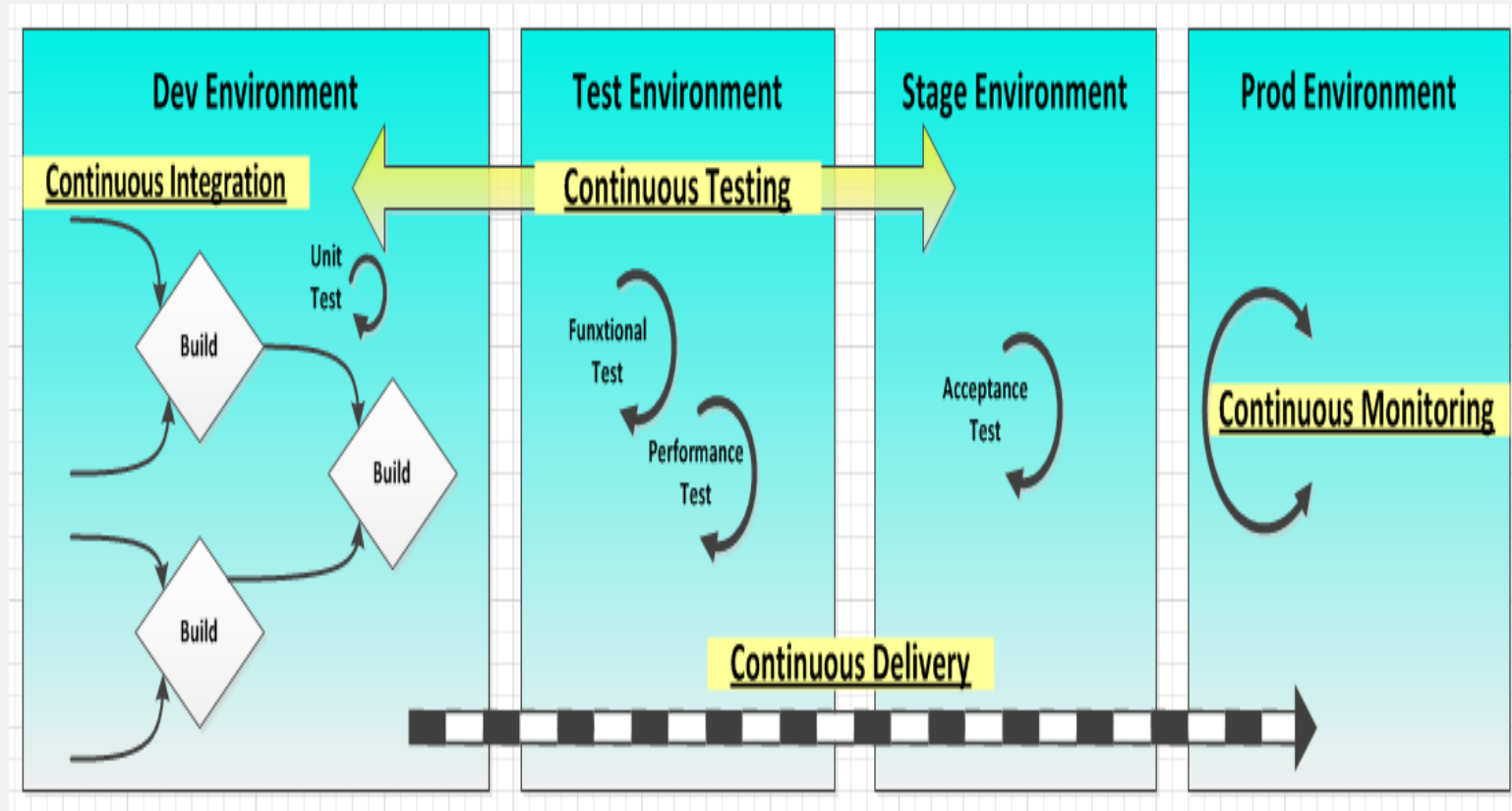
Continuous Delivery / Deployment?

- Aims to
 - Build
 - Test
 - Release

Software with greater speed, frequency and reliability.

- Incremental updates
- Continuous Delivery – manual deployment
- Continuous Deployment – automated deployment

CI CT CD CM



DevOps Tools

source : <https://xebialabs.com/periodic-table-of-devops-tools/>

PERIODIC TABLE OF DEVOPS TOOLS (V3)																	
1 Os Gl GitLab																	2 En Sp Splunk
3 Fm Gh GitHub	4 En Dt Datical															10 Fm Sg Sumo Logic	
11 Os Sv Subversion	12 En Db DBMaestro															18 Os Fd Fluentd	
19 En Cw ISPW	20 En Dp Delphix	21 Os Jn Jenkins	22 Fm Cs Codeship	23 Os Fn FITNesse	24 Fr Ju JUnit	25 Fr Ka Karma	26 Fm Su SoapUI	27 En Ch Chef	28 Fr Tf Terraform	29 En XLd XebiaLabs XL Deploy	30 En Ud UrbanCode Deploy	31 Os Ku Kubernetes	32 Fm Cc CA CD Director	33 En Pr Plutora Release	34 Pd Al Alibaba Cloud	35 Os Oo OpenShift	36 Os Ps Prometheus
37 Pd At Artifactory	38 Fm Rg Redgate	39 Pd Ba Bamboo	40 Fm Vs VSTS	41 Fr Se Selenium	42 Fr Jm JMeter	43 Os Ja Jasmine	44 Pd SI Sauce Labs	45 En An Ansible	46 Os Ru Rudder	47 En Oc Octopus Deploy	48 Os Go GoCD	49 Os Ms Mesos	50 Os Gke GKE	51 Fm Om OpenMake	52 Pd Cp AWS CodePipeline	53 Pd Cy Cloud Foundry	54 En It ITRS
55 Pd Nx Nexus	56 Os Fw Flyway	57 Os Tr Travis CI	58 Fm Tc TeamCity	59 Os Ga Gatling	60 Fr Tn TestNG	61 Fm Tt Tricentis Tosca	62 Pd Pe Perfecto	63 En Pu Puppet	64 Os Pa Packer	65 Fm Cd AWS CodeDeploy	66 En Ec ElectricCloud	67 Os Ra Rancher	68 Pd Aks AKS	69 Os Rk Rkt	70 Os Sp Spinnaker	71 Pd Ir Iron.io	72 Pd Mg Moogsoft
73 Fm Bb BitBucket	74 En Pf Perforce	75 En Cr Circle CI	76 Pd Cb AWS CodeBuild	77 Fr Cu Cucumber	78 Os Mc Mocha	79 Os Lo Locust.io	80 En Mf Micro Focus UFT	81 Os Sa Salt	82 Os Ce CFEngine	83 En Eb ElasticBox	84 En Ca CA Automatic	85 En De Docker Enterprise	86 Pd Ae AWS ECS	87 Fm Cf Codefresh	88 Os Hm Helm	89 Os Aw Apache OpenWhisk	90 Os Ls Logstash
91 En XLI XebiaLabs XL Impact	92 Os Ki Kibana	93 Fm Nr New Relic	94 En Dt Dynatrace	95 En Dd Datadog	96 Fm Ad AppDynamics	97 Os El ElasticSearch	98 Os Ni Nagios	99 Os Zb Zabbix	100 En Zn Zenoss	101 En Cx Checkmarx SAST	102 En Sg Signal Sciences	103 En Bd BlackDuck	104 Os Sr SonarQube	105 Os Hv HashiCorp Vault			
106 En Sw ServiceNow	107 Pd Jr Jira	108 Fm Tl Trello	109 Fm Sk Slack	110 Fm St Stride	111 En Cn CollabNet VersionOne	112 En Ry Remedy	113 En Ac Agile Central	114 Pd Og OpsGenie	115 Pd Pd Pagerduty	116 Os Sn Snort	117 Fm Tw Tripwire	118 En Ck CyberArk	119 En Vc Veracode	120 En Ff Fortify SCA			

Os

Fr

Fm

Pd

En

Open Source

Free

Freemium

Paid

Enterprise

Source Control Mgmt.

Database Automation

Continuous Integration

Testing

Configuration

Deployment

Containers

Release Orchestration

Cloud


AIOps

Analytics


Monitoring

Security

Collaboration

XebiaLabs

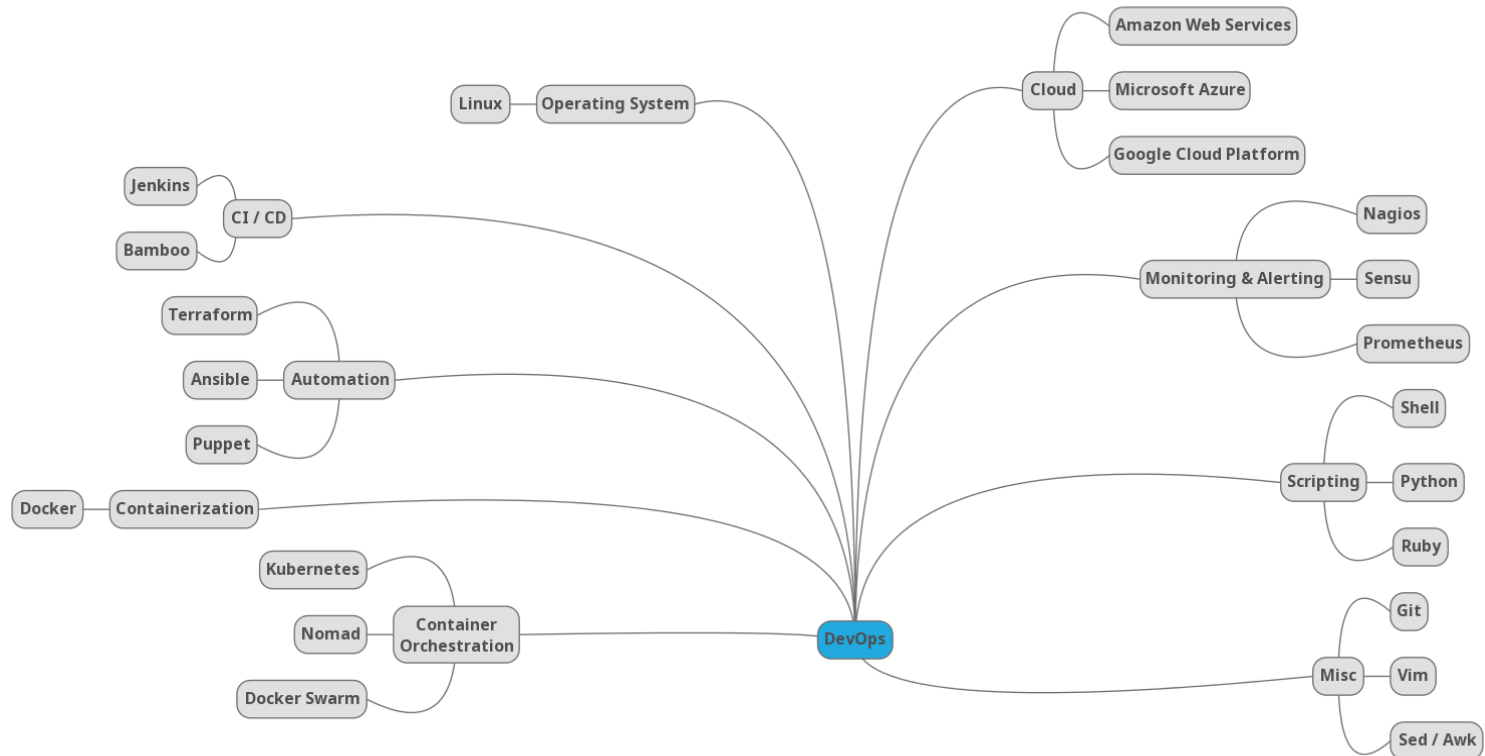
Enterprise DevOps

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DevOps Skills



AWS DevOps Toolchain

- CI / CD
 - CodePipeline - Software release workflows
 - CodeBuild - Build and test code
 - CodeDeploy - Deployment automation
 - CodeStar - Unified CI/CD projects
- Infrastructure as code
 - CloudFormation - Templated infrastructure provisioning
 - OpsWorks - Chef configuration management
 - Systems Manager - Configuration management
 - Config - Policy as code
- Monitoring and logging
 - CloudWatch - Cloud and network monitoring
 - CloudTrail - Activity and API usage tracking
 - X-Ray - Distributed tracing
- Version Control
 - CodeCommit - Private Git hosting



Questions & Answers



Thank You

Glisten Software



DODGE
DATA & ANALYTICS



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PROJECT



C
cariQ[™]



P *Pinterest*



Nitor
Brilliance @ work