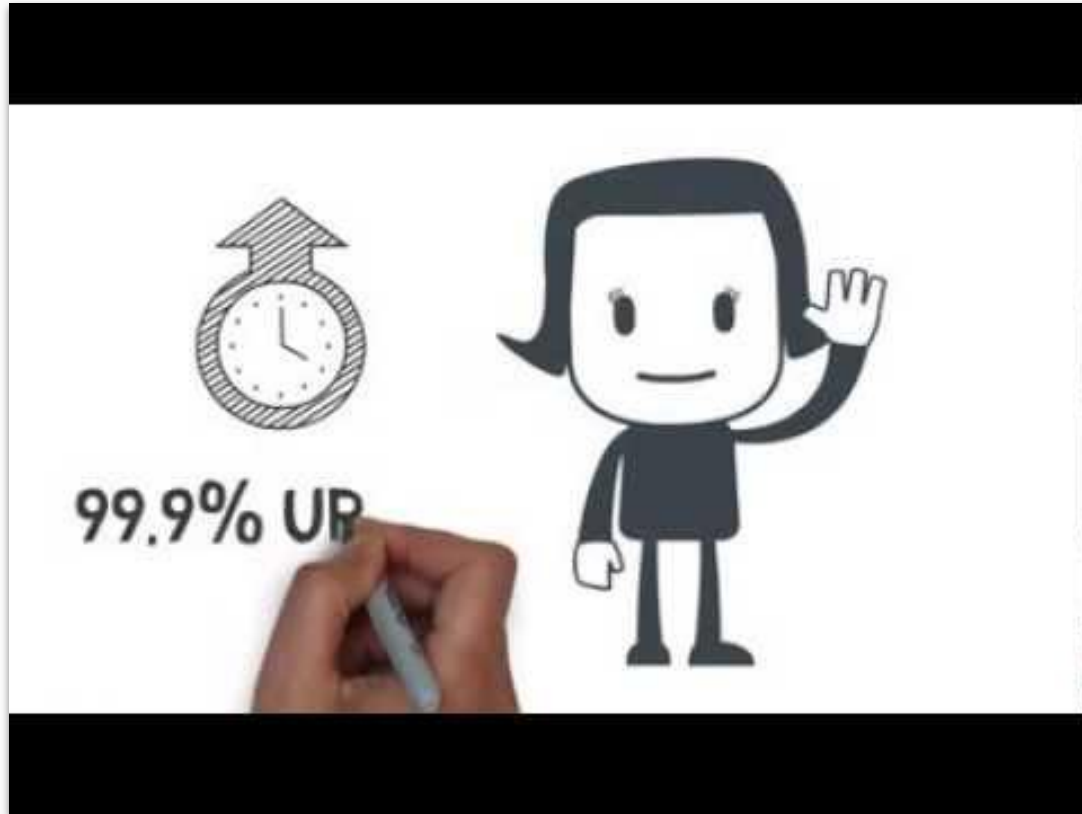


Developer Operations

Instructor: Nicholas Mendez

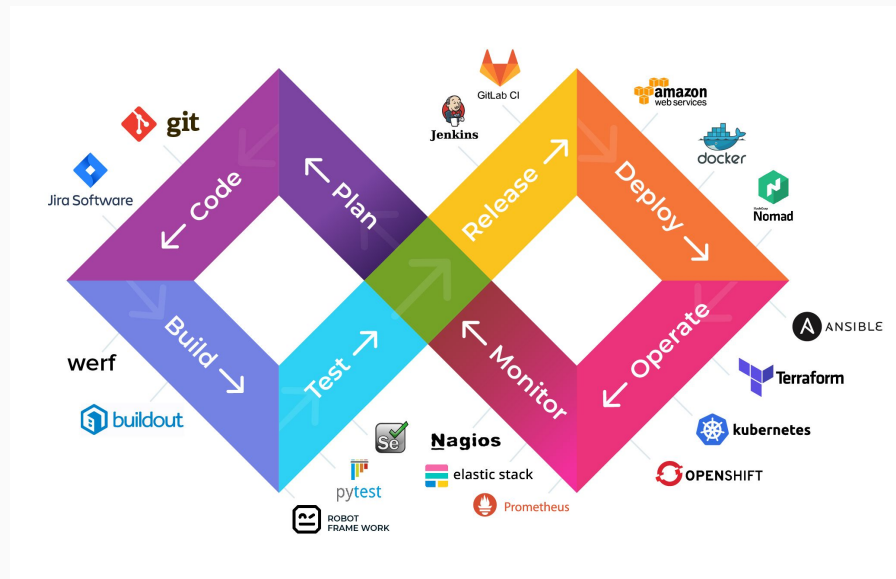


What is DevOps?



Roles of DevOps

- Monitoring and measuring system performance
- Source Control Management
- Continuous Integration
- Configuration Management
- Issue Tracking
- Automating system processes
 - Configuration
 - Building & Releasing
 - Testing
 - Deployment



Continuous Integration/Deployment

- Continuous Integration (CI) is a development practice where developers integrate code into a shared repository frequently, preferably several times a day. Each integration can then be verified by an automated build and automated tests. While automated testing is not strictly part of CI it is typically implied.



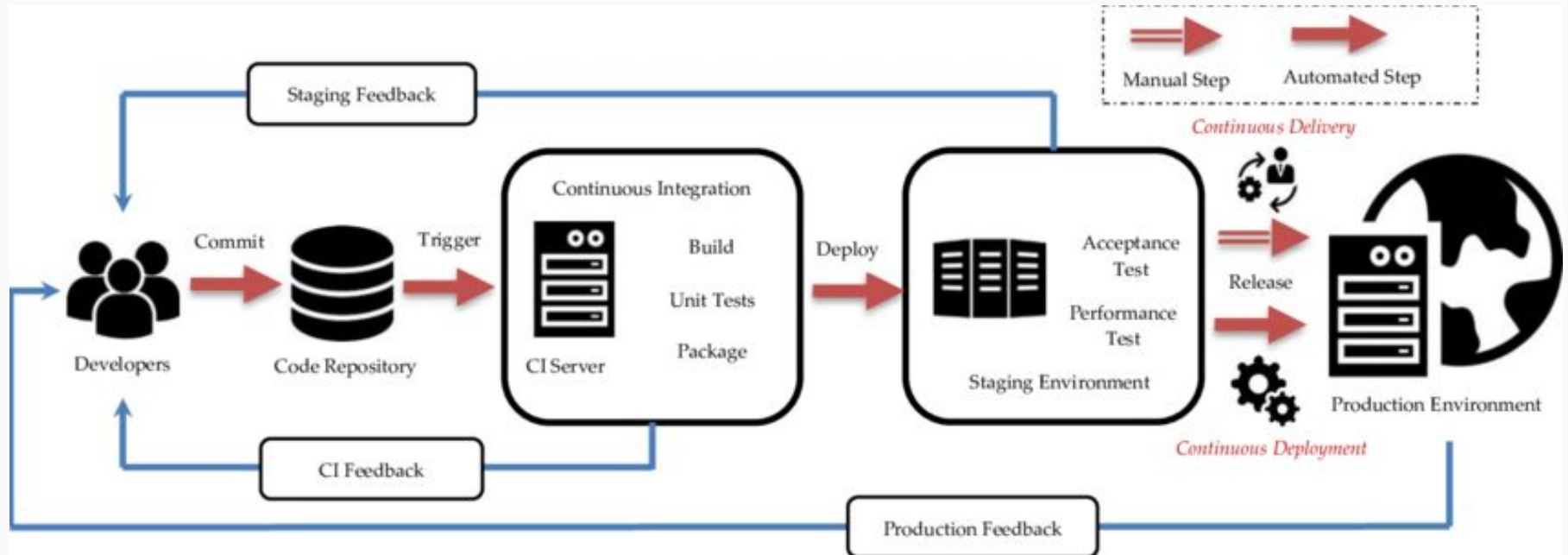
Travis CI



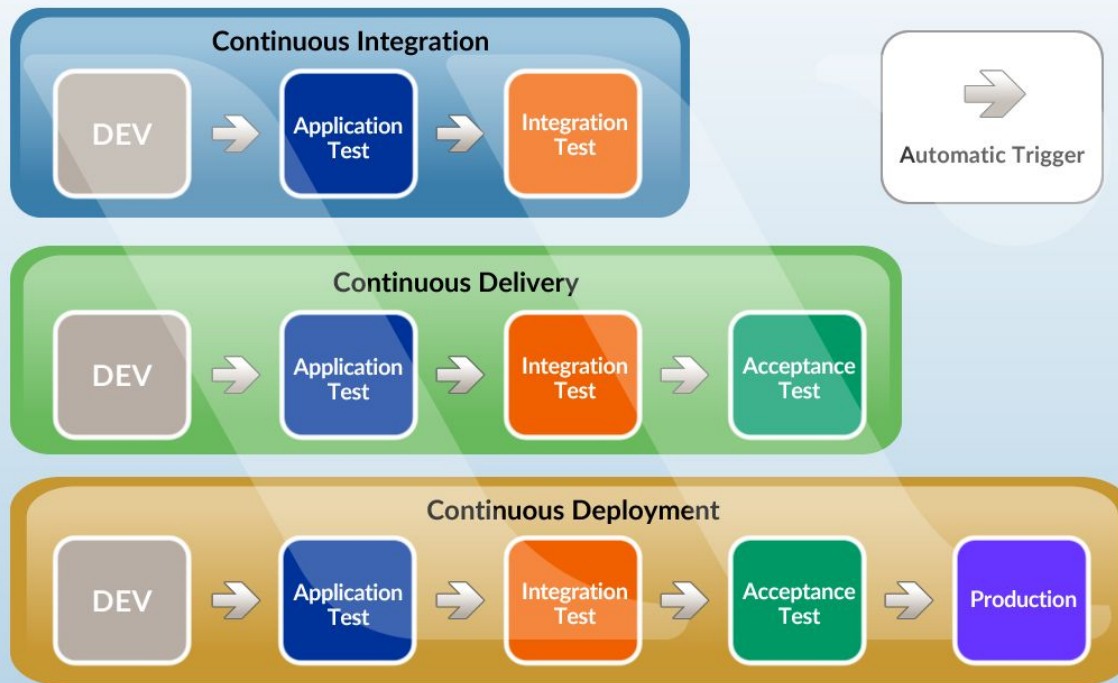
GitHub Actions



Continuous Integration/Deployment

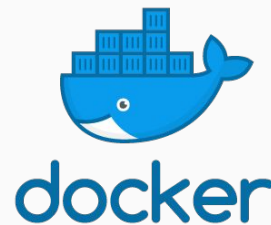


Continuous Integration/Delivery/Deployment



Software Configuration Management

- “Here’s my definition of configuration management: it’s the discipline of ensuring that all software and hardware assets which a company owns are known and tracked at all times—any future changes to these assets are known and tracked. You can think of configuration management like an always up-to-date inventory for your technology assets, a single source of truth.”
- track and automate the configuration of IT assets and changes
- Deployment config, infrastructure as code



<https://www.plutora.com/blog/configuration-management>

Source Control Management

- Hosting repositories
- Issues/Pull requests
- Branching and merging
- CI Integrations
- Self Hosted or 3rd party hosted
- Versioning/ Release Management
- Code Review



An issue tracking system is a computer software package that manages and maintains lists of issues. Issue tracking systems are generally used in collaborative settings—especially in large or distributed collaborations—but can also be employed by individuals as part of a time management or personal productivity regime.



Zoho BugTracker



GitHub
Issues

backlog
by nulab

Monitoring

An early warning software system that observes, measures and reports on the performance and overall health of other software.



DevOps Ecosystem

PERIODIC TABLE OF DEVOPS TOOLS (V2) (V1)																				EMBED		DOWNLOAD		ADD				2		Fm	
1 Gh Github		3 Os		4 Pd																		2 Fm Aws Amazon Web Services									
5 En		6 En		7 Os		8 En		9 Os		10 Pd																					
Ch Chef		Pu Puppet		An Ansible		Sl Salt		Dk Docker		Az Azure																					
11 Fm		12 Os																													
Bb Bitbucket		Lb Liquibase																													
19 Os		20 En		21 Os		22 Os		23 Os		24 Os		25 Fr		26 Os		27 Fr		28 Os		29 Pd		30 Os									
Gl GitLab		Rg Redgate		Mv Maven		Gr Gradle		At ANT		Fn FitNesse		Se Selenium		Ga Gatling		Dh Docker Hub		Jn Jenkins		Ba Bamboo		Tr Travis CI									
37 Os		38 En		39 Os		40 Os		41 Os		42 Fr		43 Os		44 Fr		45 Os		46 Fm		47 Pd		48 Fm									
Sv Subversion		Dt Datical		Gt GrunT		Gp Gulp		Br Broccoli		Cu Cucumber		Cj Cucumberjs		Qu Qunit		Npm npm		Cs Codeship		Vs Visual Studio		Cr CircleCI									
55 En		56 En		57 Fr		58 Os		59 Os		60 Fr		61 Fr		62 Fr		63 Os		64 Fm		65 Fm		66 Os									
Hx Helix		Dp Delphix		Sb sbt		Mk Make		Ck CMake		Jt JUnit		Jm JMeter		Tn TestNG		Ay Artifactory		Tc TeamCity		Sh Shippable		Cc CruiseControl									
73 En		74 En		75 Os		76 Os		77 Fr		78 Os		79 En		80 Os		81 Os		82 Os		83 Fm		84 Pd									
Cw ISPW		Id Idera		Msb MSBuild		Rk Rake		Pk Packer		Mc Mocha		Xltv XL TestView		Jm Jasmine		Nx Nexus		Co Continuum		Ca Continua CI		So Solano CI									
85 En		86 En		87 Fm		88 En		89 Fr		90 En																					
Xld XL Deploy		EB ElasticBox		Dp Deploybot		Ud UrbanCode Deploy		Fl Fleet		Os OpenShift																					

PERIODIC TABLE OF DEVOPS TOOLS (V2) (V1)

EMBED DOWNLOAD ADD

Os	Open Source	SCM	Database Mgmt	Build
Fr	Free	CI	Repo Mgmt	Testing
Fm	Freemium	Deployment	Config / Provisioning	Containerization
Pd	Paid	Cloud / Iaas / Paas	Release Mgmt	Collaboration
En	Enterprise	BI / Monitoring	Logging	Security

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91	En	92	En	93	En	94	En	95	En	96	En	97	En	98	Pd	99	Fm	100	Pd	101	Fm	102	Fm	103	Fm	104	Pd	105	En
Xlr		Ur		Bm		Hp		Au		Pl		Sr		Tfs		Tr		Jr		Rf		Sl		Fd		Pv		Sn	
XL Release		UrbanCode Release		BMC Release Process		HP Codar		Automic		Plutora Release		Serena Release		Team Foundation		Trello		Jira		HipChat		Slack		Flowdock		Pivotal Tracker		ServiceNow	
106	Os	107	Fm	108	Os	109	Os	110	En	111	Os	112	En	113	En	114	Fm	115	Fm	116	Os	117	Os	118	Os	119	Os	120	En
Ki		Nr		Ni		Zb		Dd		El		Ss		Sp		Le		Sl		Ls		Gr		Sn		Tr		Ff	
Kibana		New Relic		Nagios		Zabbix		Datadog		Elasticsearch		StackState		Splunk		Logentries		Sumo Logic		Logstash		Graylog		Snort		Tripwire		Fortify	

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