

DevOps

History

Patrick Debois start's assessing IT Value Chain



Agile System Administrators Group is launched on Google



Inaugural "DevOps Days" are held in Ghent, Belgium



Industry leading software vendors increase market presence with "Enterprise" class DevOps tools



devX is born and Xceed launches the "12 days of DevOps"



2007

2008

2009

2010

2011

2012

2013

2014

2015



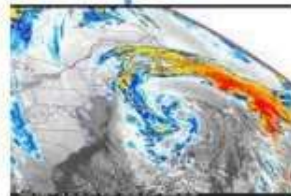
Andrew Clay Shafer and Patrick Debois meet at Agile Conference 2008



Open Source toolsets rip up the legacy playbook



John Allspaw and Paul Hammond present "10 Deploys per day" at Velocity



The "Perfect Storm" of adjacent methodologies occurs



Cameron Haight predicts that DevOps will hit the big time in 2015 across Enterprise organisations



Gene Kim releases "The Phoenix Project"

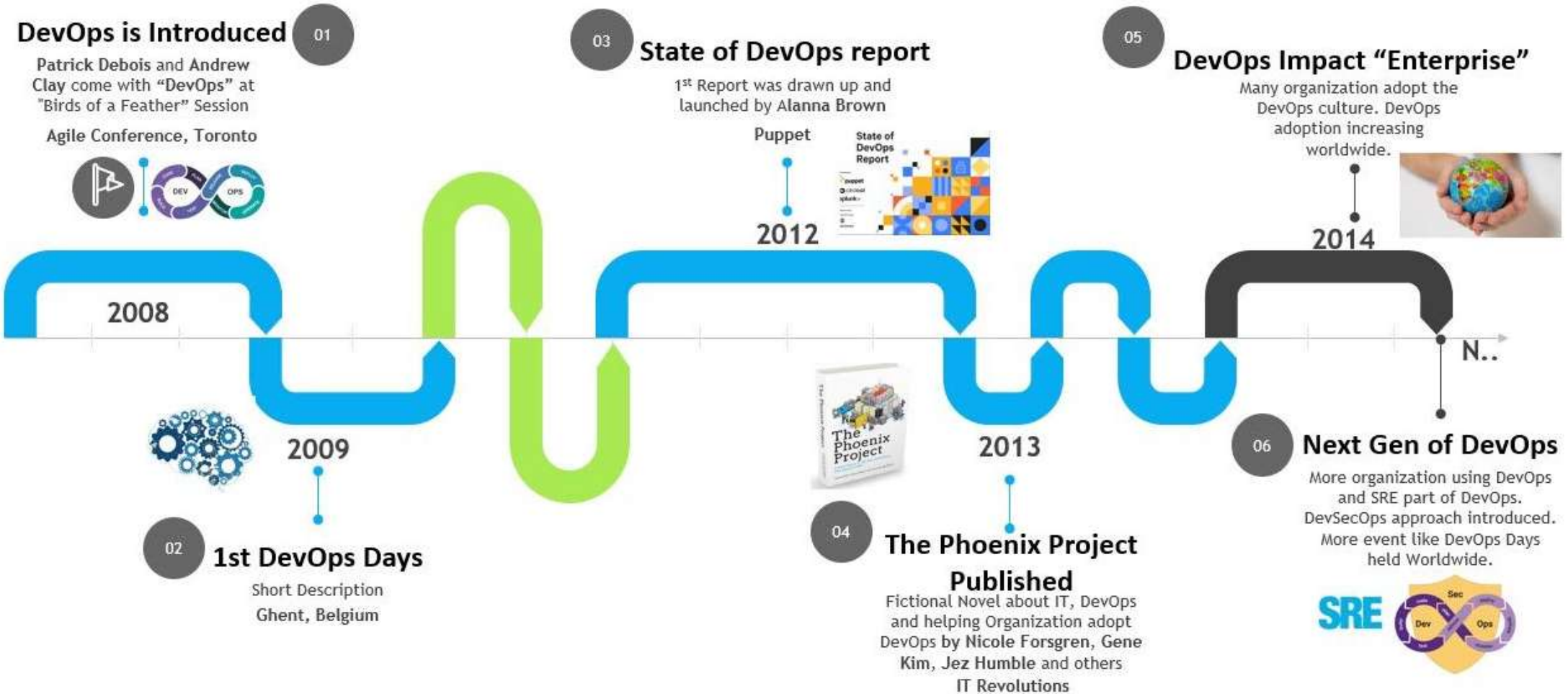


DevOps begins to provide positive impact to "Enterprise" IT and experiences seismic adoption rates



What does the future of DevOps hold for your organisation?

History



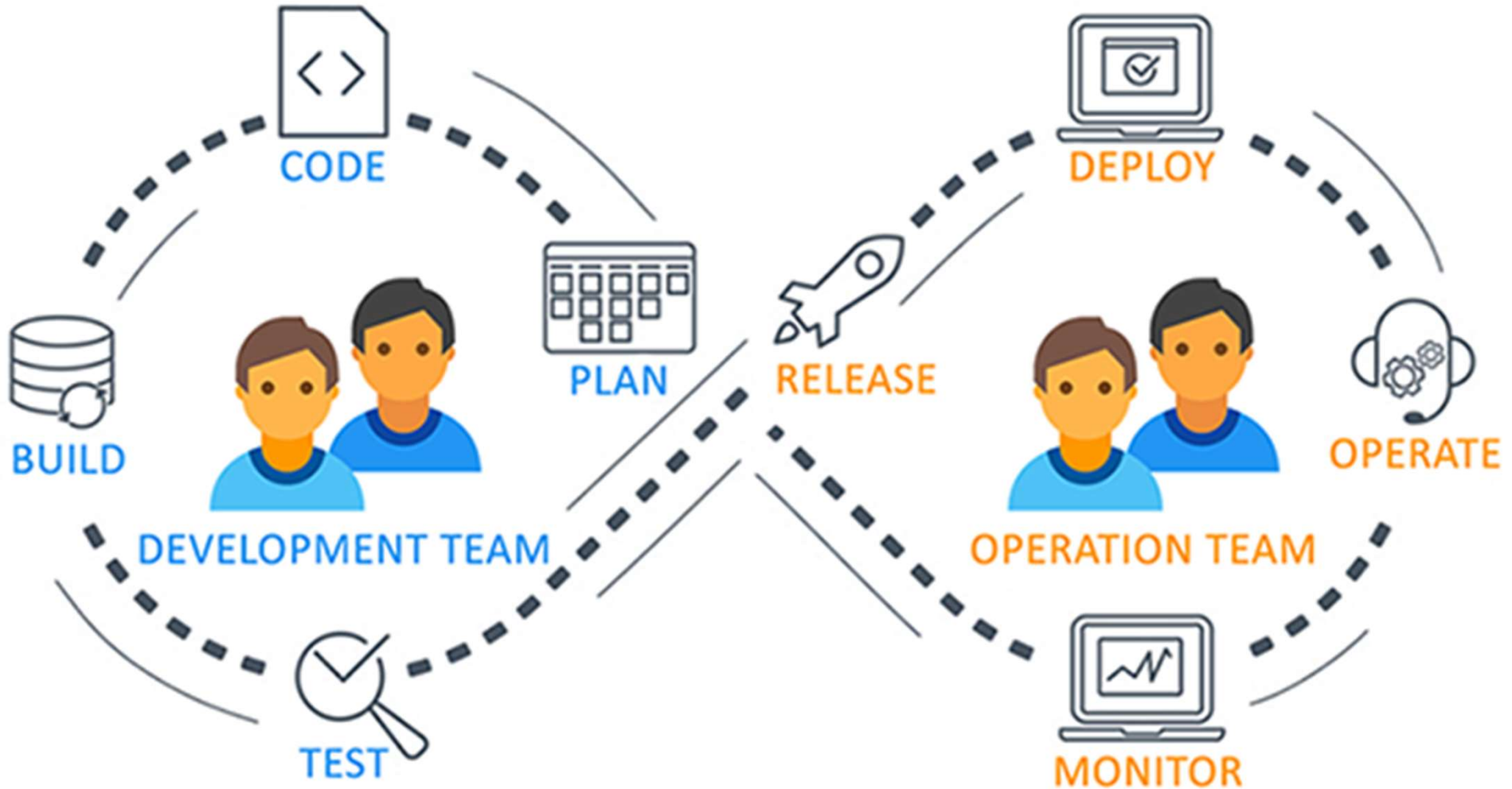
Configuration management

- Process of maintaining systems, such as computer hardware and software, in a desired state
- Configuration Management (CM) is also a method of ensuring that systems perform in a manner consistent with expectations over time.

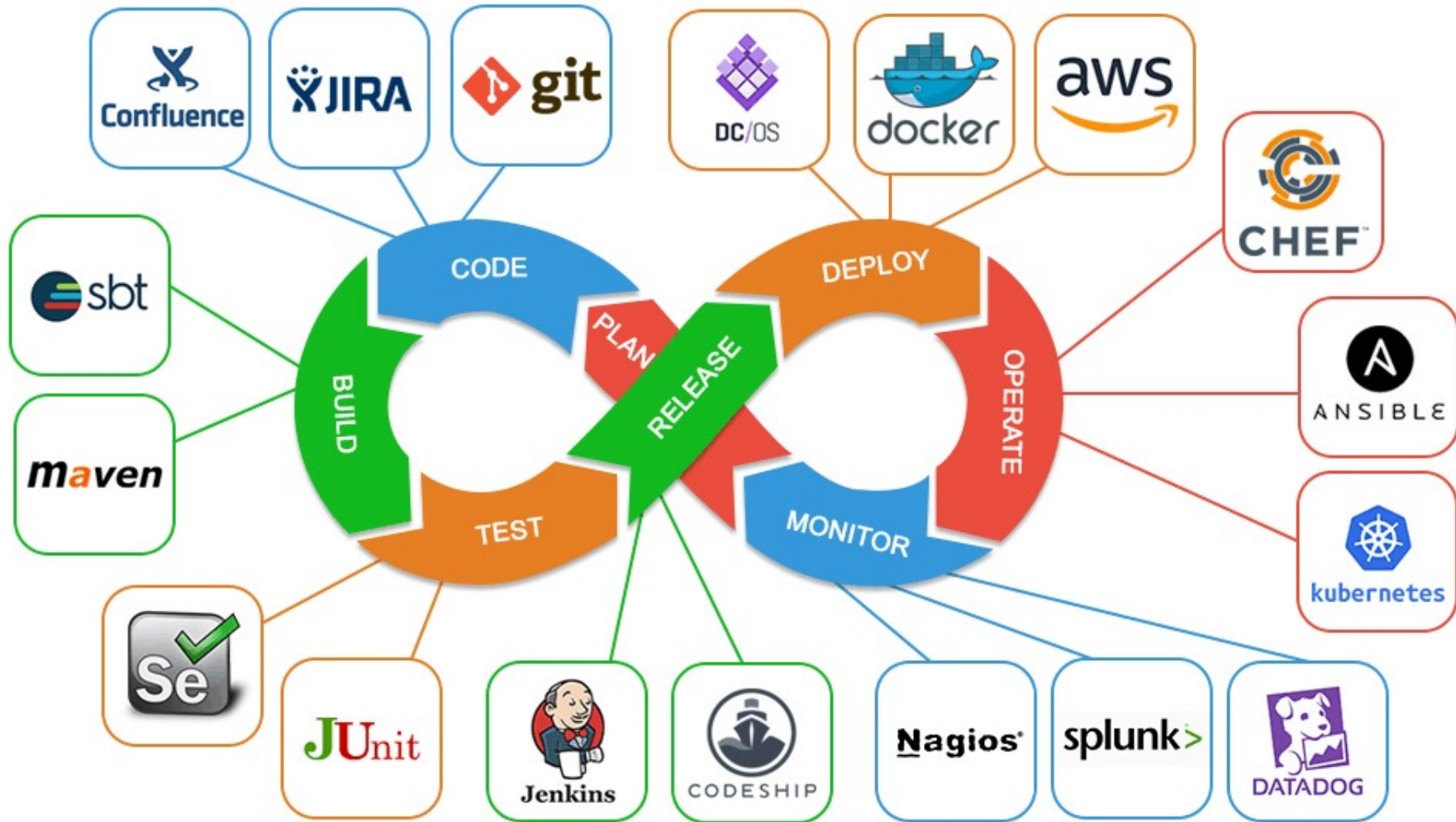
Benefits of Configuration Management

- Reduces risk of unpredictable system failures
 - because it offers perfect visibility and tracks every change made to test environments.
- Reduces costs
- Offers greater agility and better resolution of issues
- Implement faster restoration of services

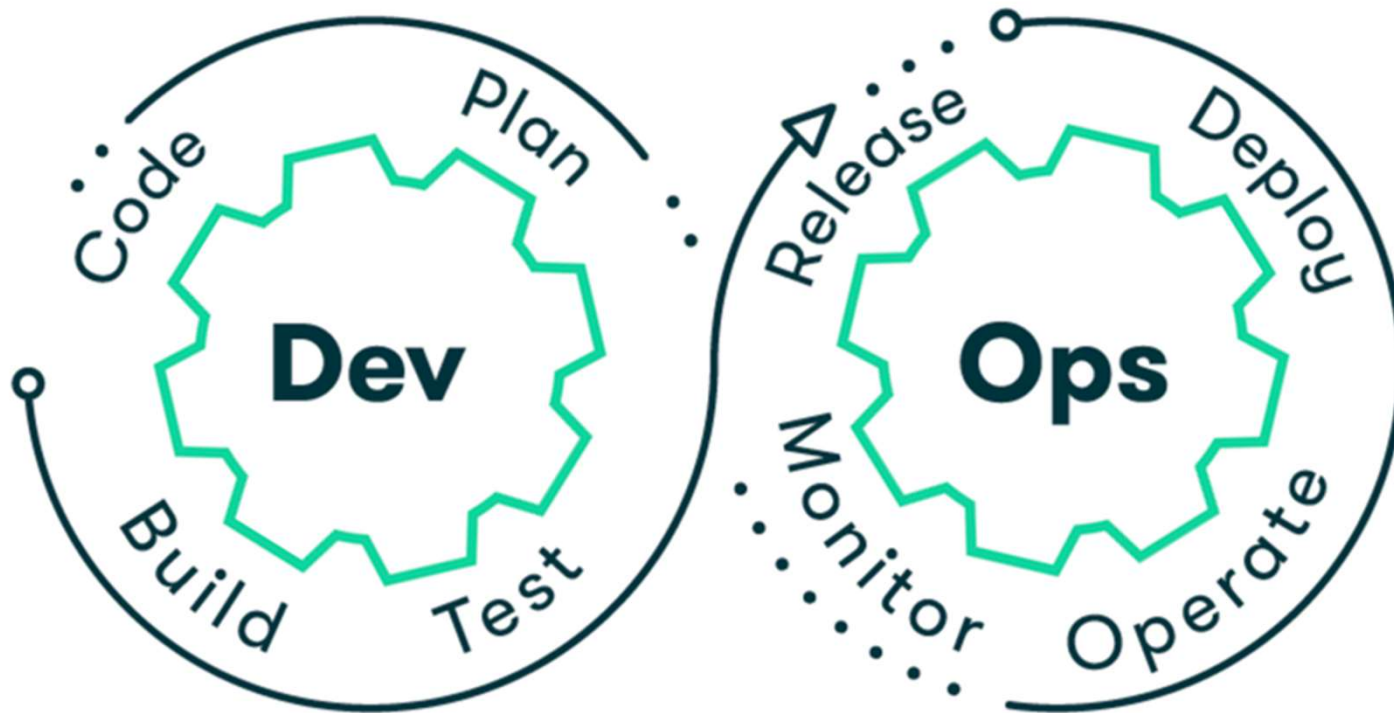
What and why of DevOps?



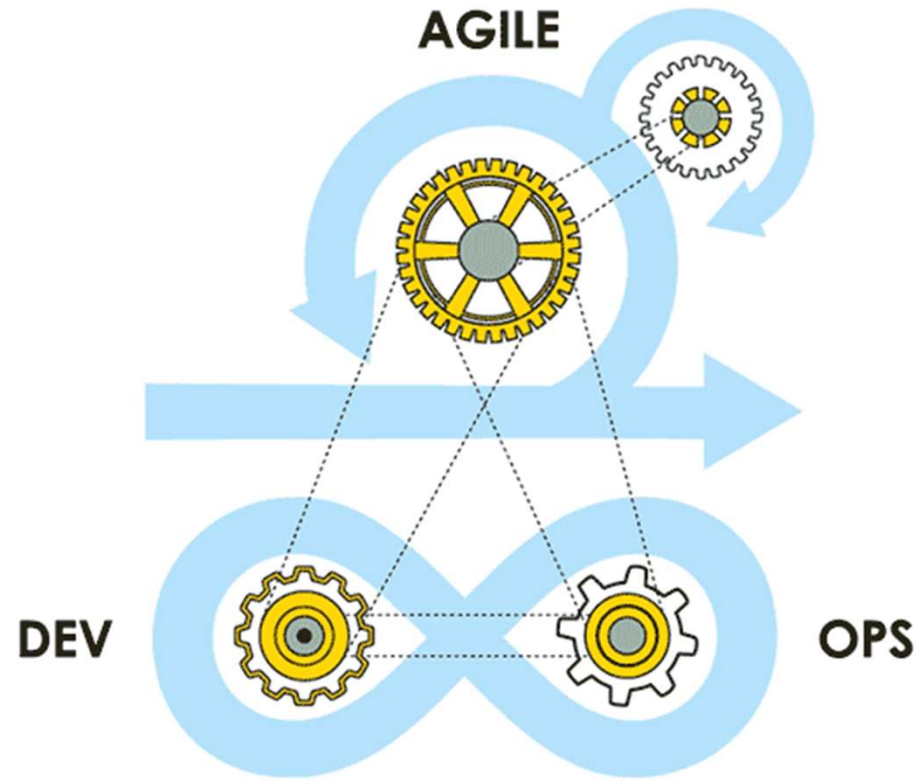
What and why of DevOps?



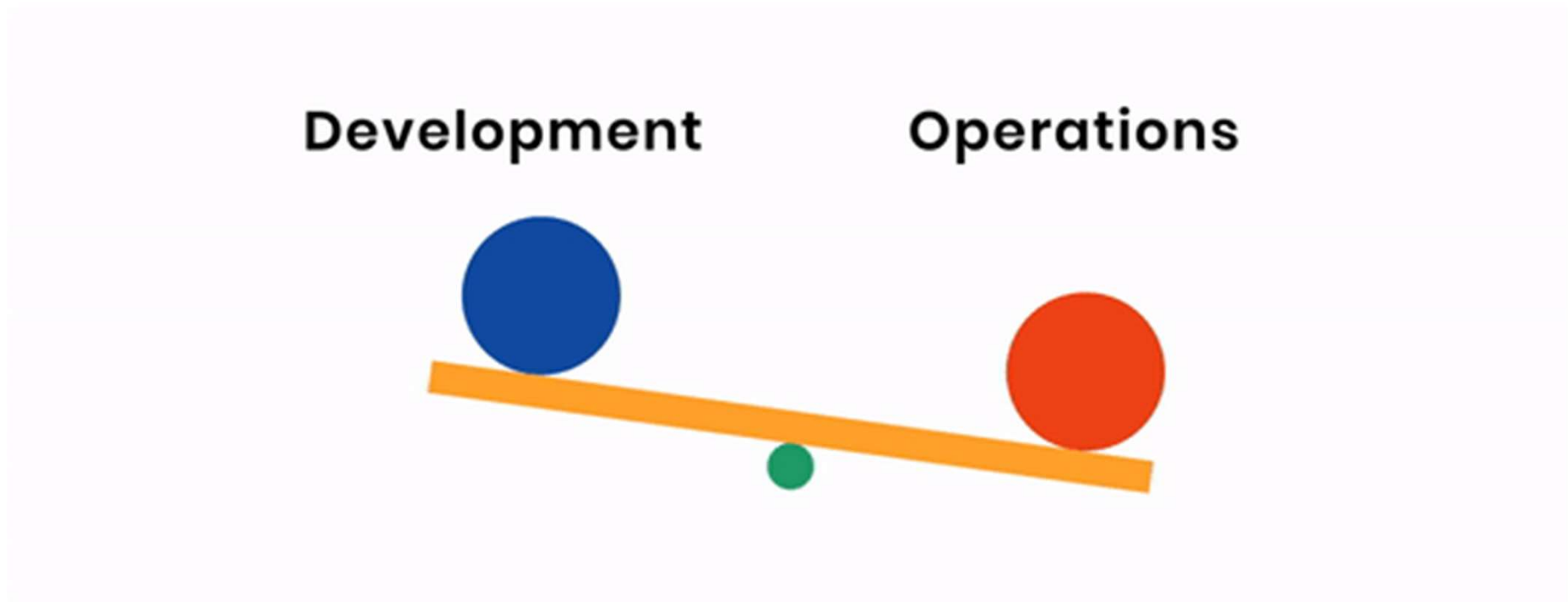
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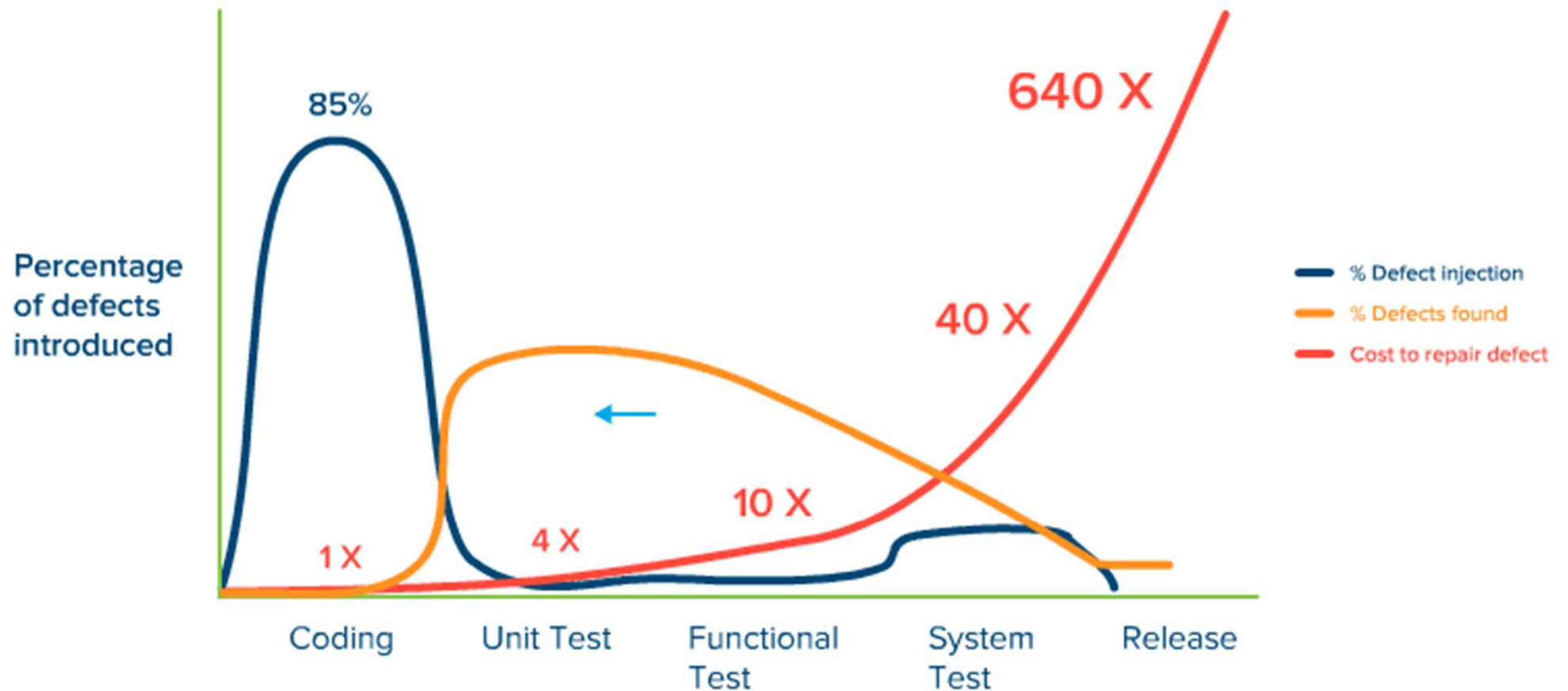
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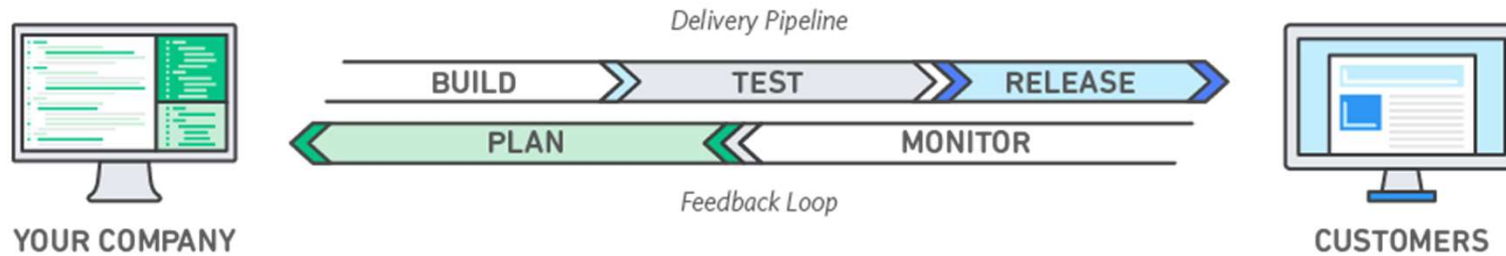


Early Defects vs Delayed Defects detection

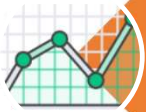


Jones, Capers. *Applied Software Measurement: Global Analysis of Productivity and Quality*.

DevOps as a solution and Advantages



DevOps as a solution and Advantages



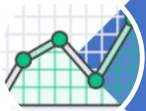
Speed



Rapid Delivery



Reliability



Scale



Improved Collaboration

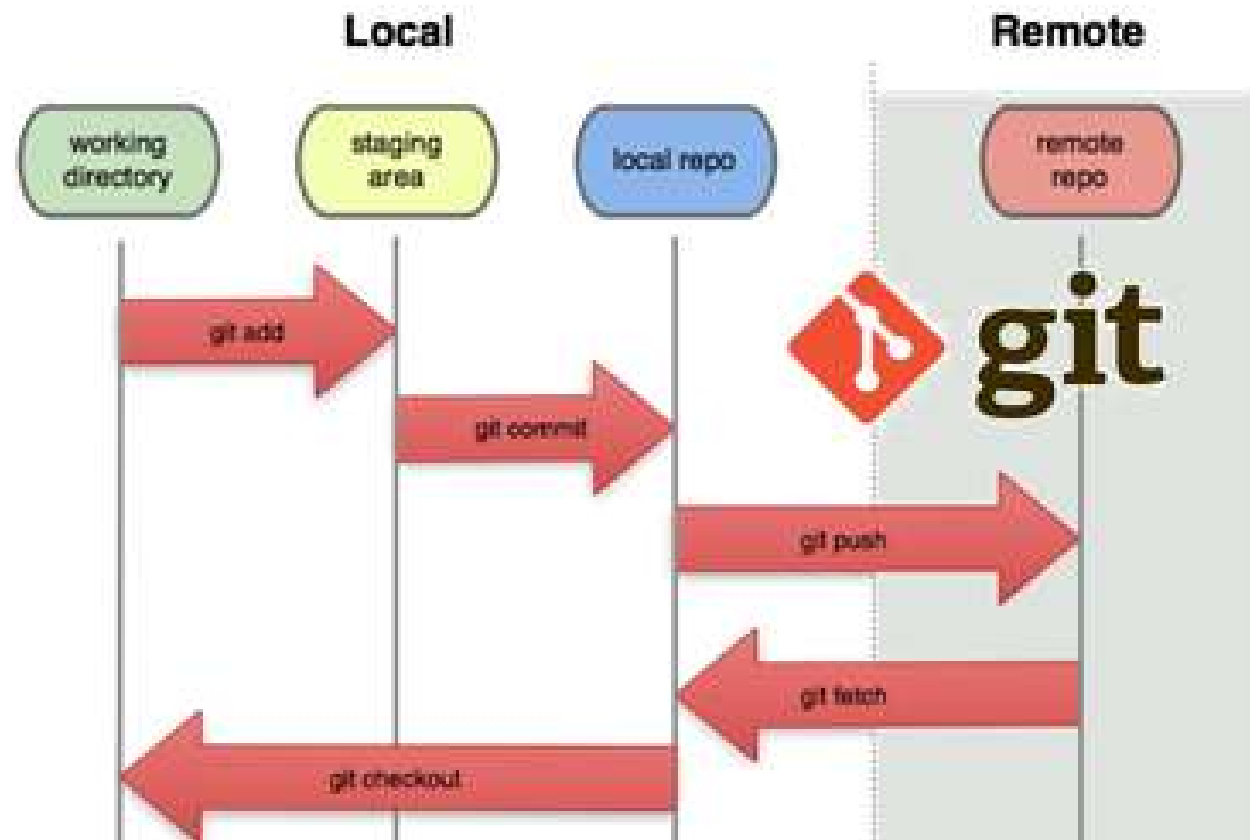


Security

DevOps Tools – Overview and Use case









Source control

- To ensures for working on the right version
- Important for maintaining a single source of truth

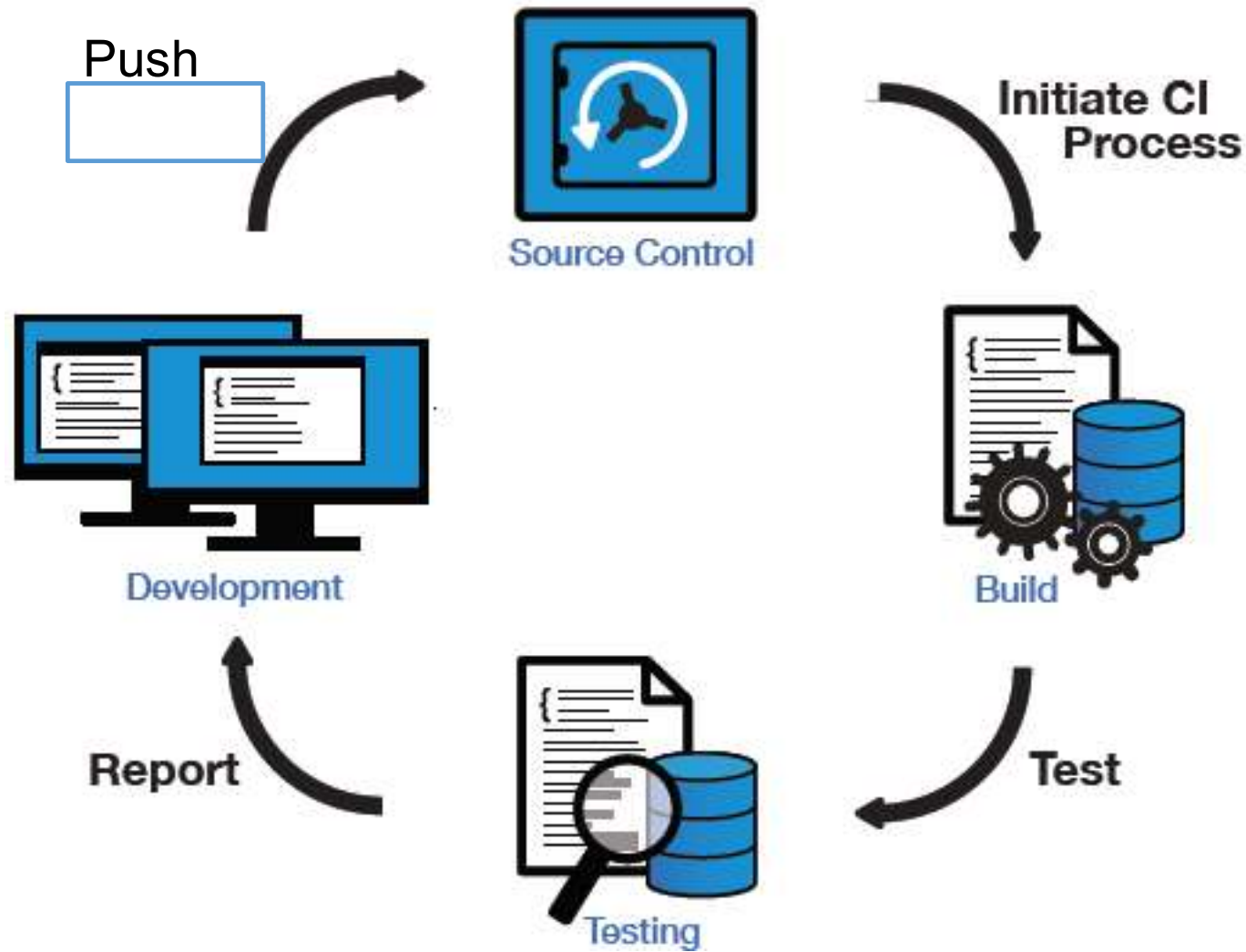


Source Code Management (SCM Tools)

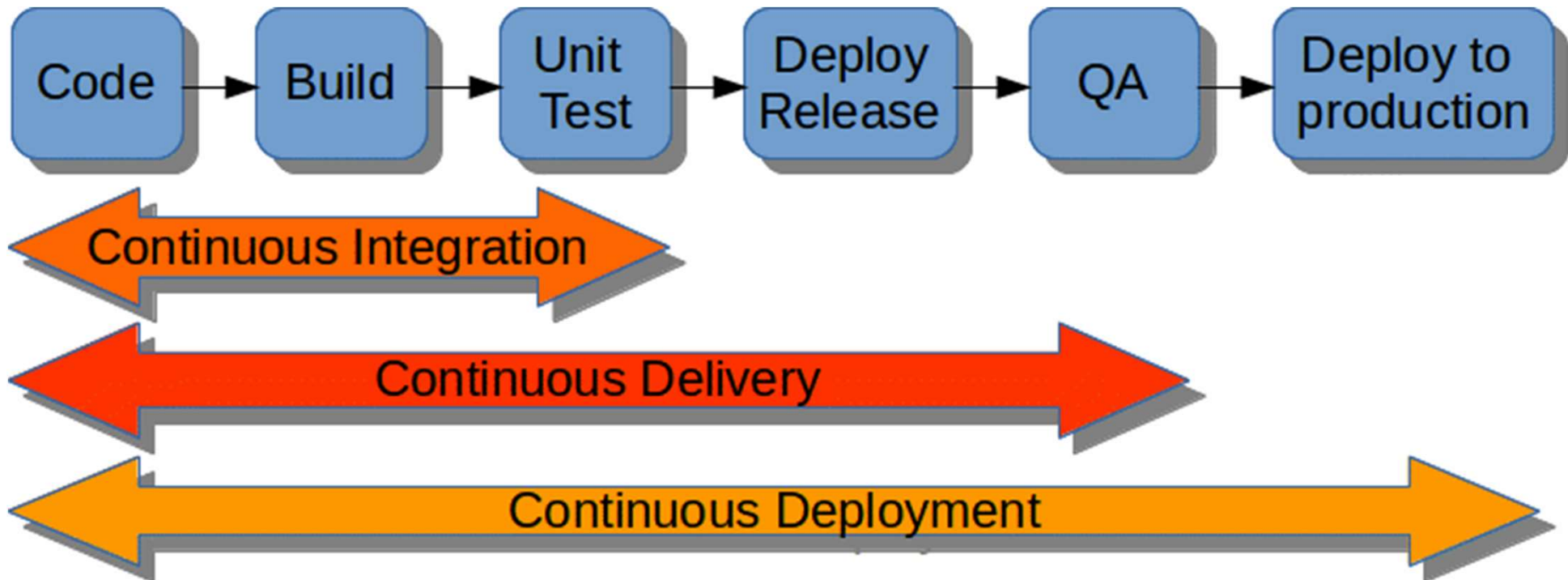
- Help to keep track of code
- Complete history of changes.

			
Git	Mercurial	AccuRev	Rational Team Concert
			
Sonatype Nexus Repository	Kallithea	Perforce	Deveo

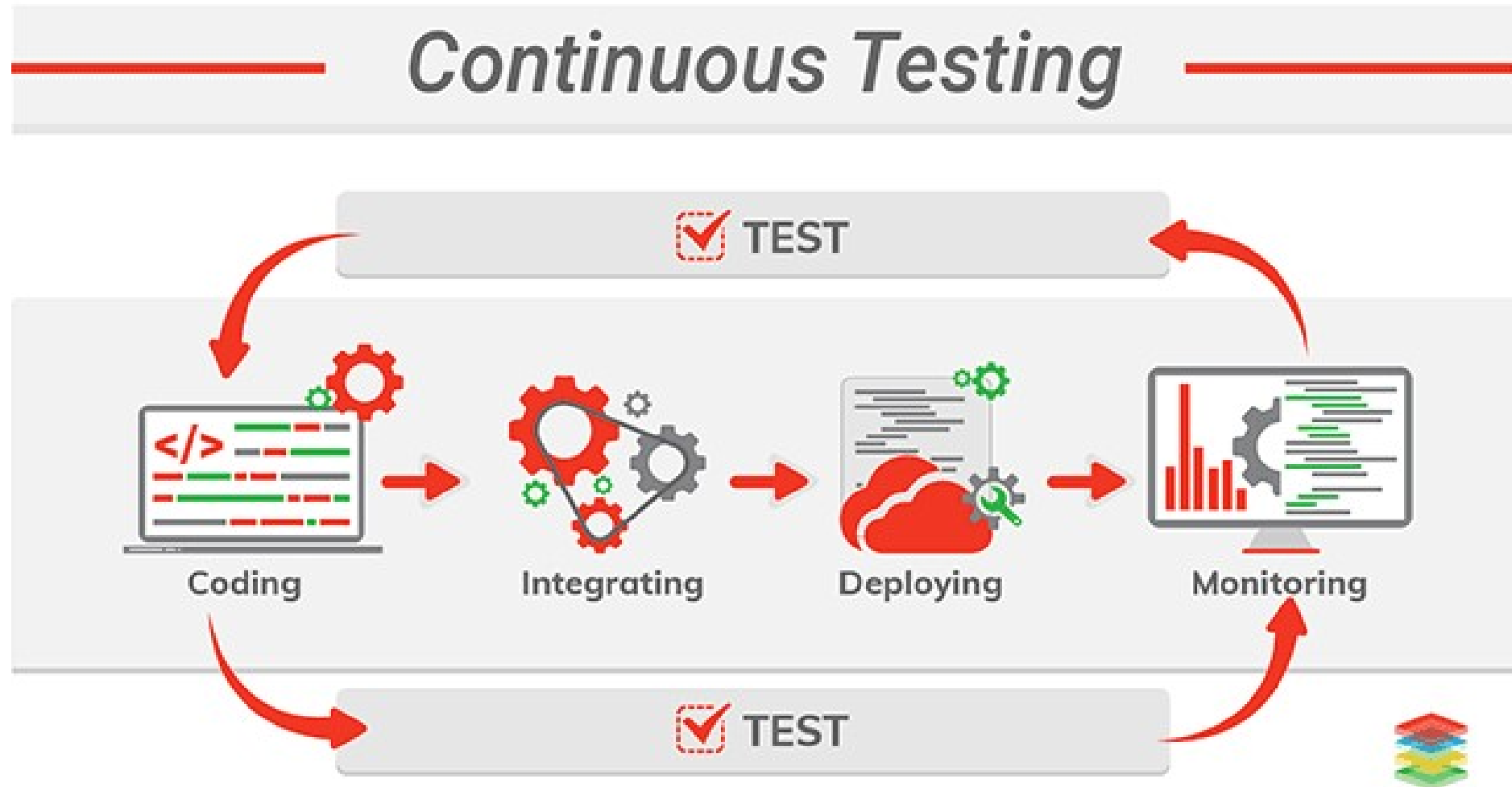
Continuous Integration



Continuous Delivery and Deployment

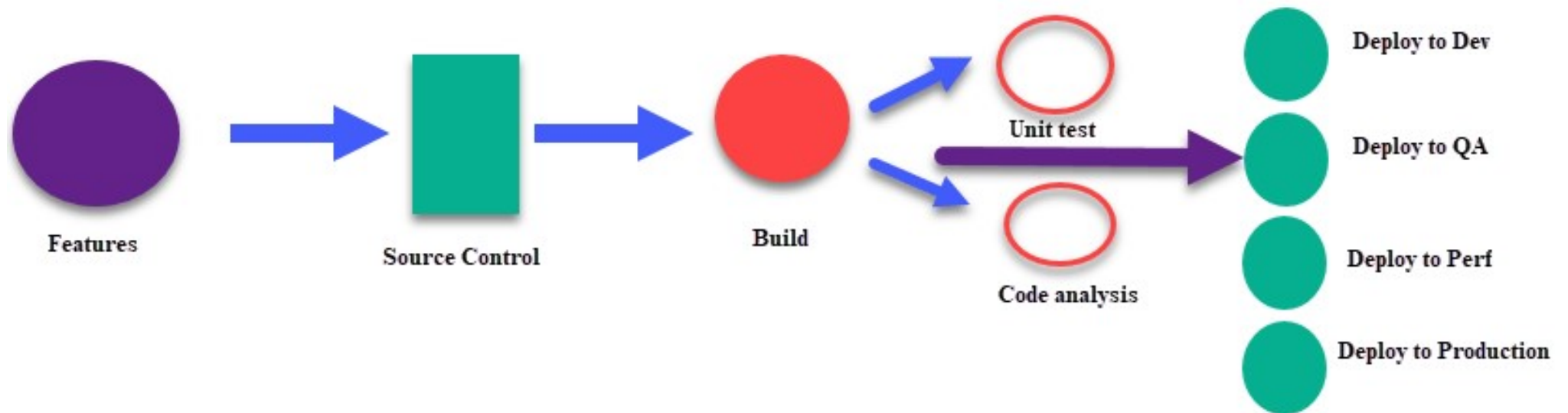


Continuous Testing



Continuous Testing

Continuous Testing



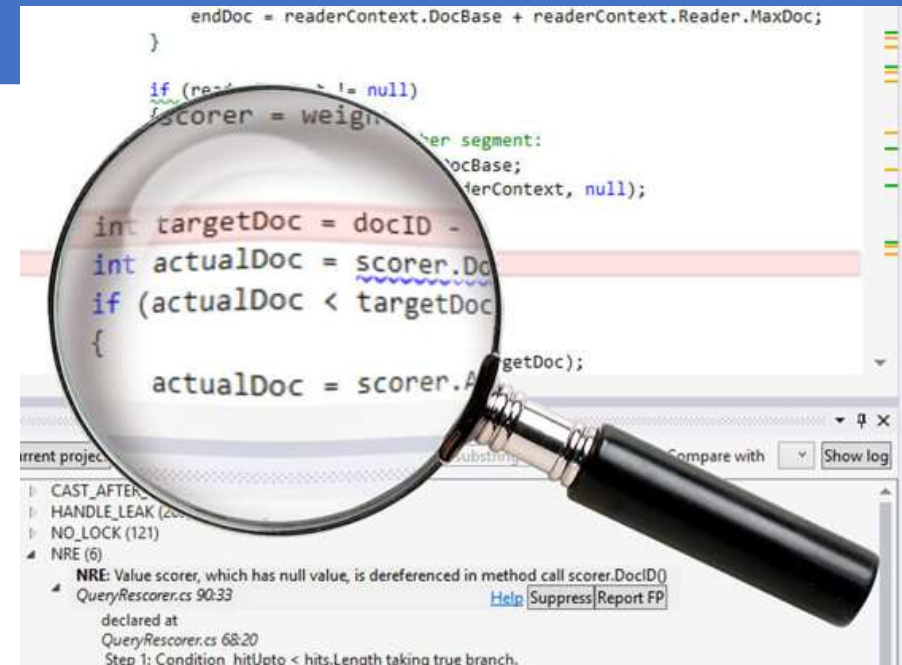
What Is Static Code Analysis?

A method of debugging

Examine source code before a program is run

Done by analyzing a set of code against a set of coding rules.

Performed early in development



Static Code Analysis Tool

Development teams are under pressure

Quality releases needed to be delivered on time

Coding and compliance standards need to be met

And mistakes are not an option.

That's why development teams are using static analysis tools.

Static Analysis vs. Dynamic Analysis

- Static analysis
 - Identifies defects before running a program (e.g., between coding and unit testing).
- Dynamic analysis
 - Identifies defects after running a program (e.g., during unit testing)

Few Static Code Analysis Tools

Apache Yetus

Code Dx

ConQAT

Coverity

IBM Security AppScan

Facebook Infer

Lint

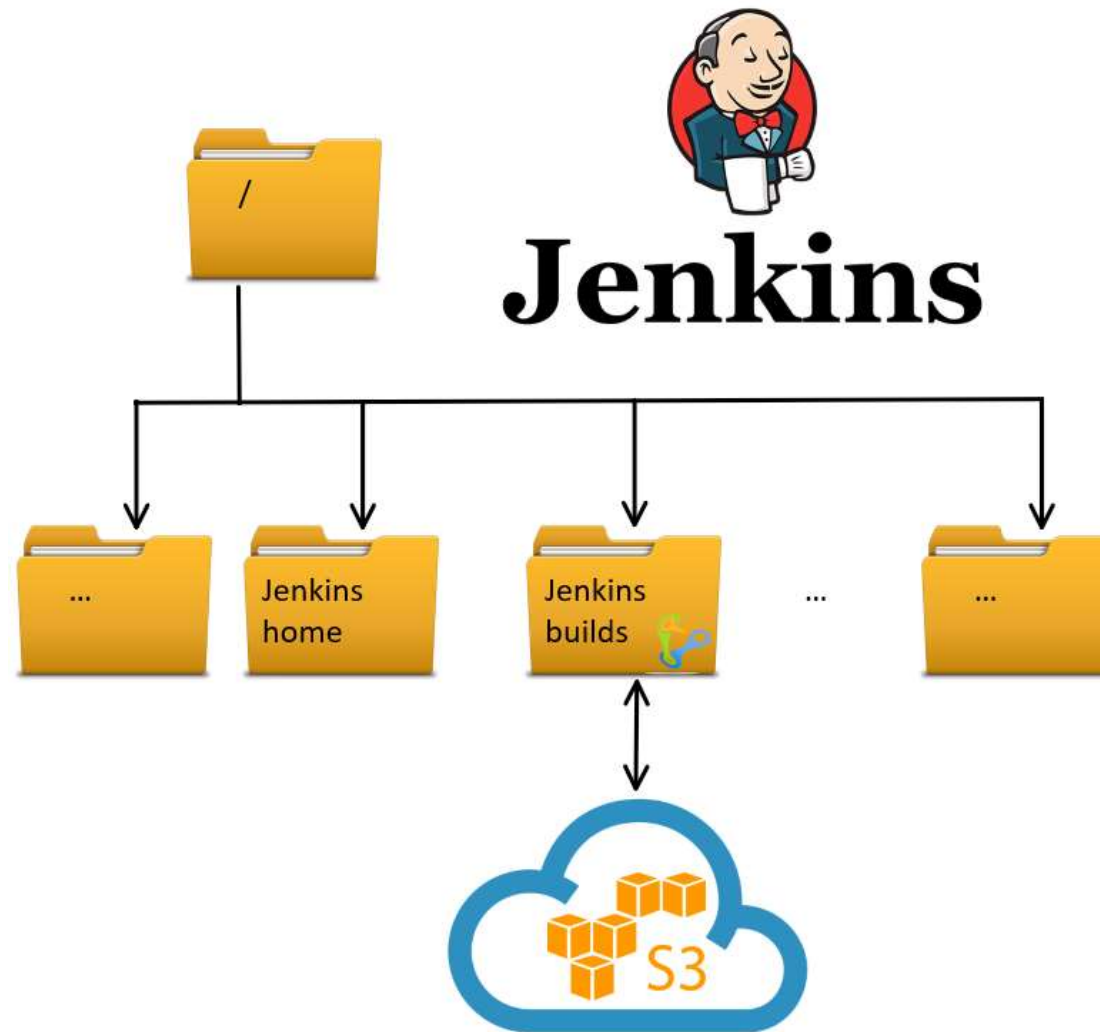
SonarQube

SourceMeter

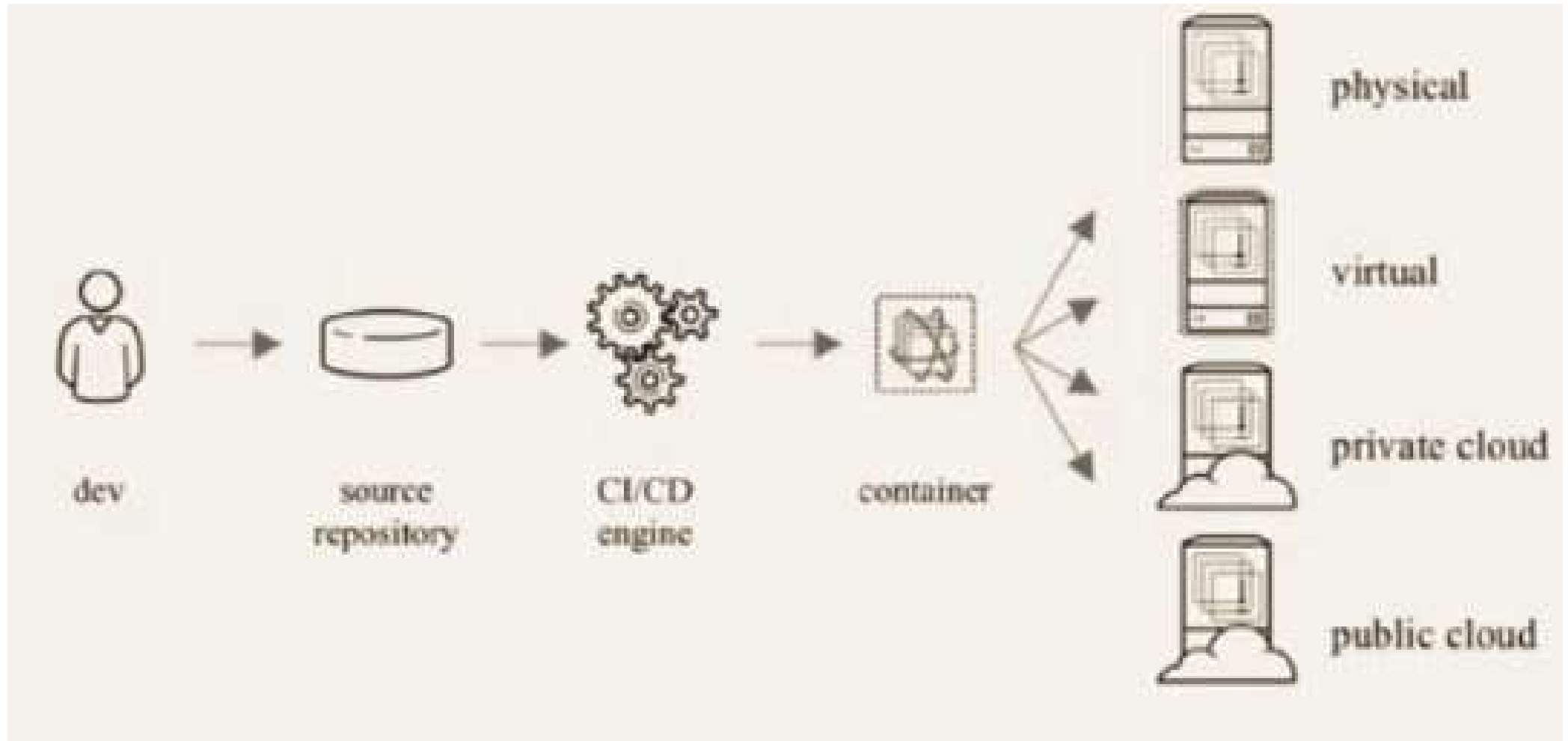
For complete list refer:

- https://en.wikipedia.org/wiki/List_of_tools_for_static_code_analysis

Storage Artifacts



Containerization



Configuration Management

- A process for maintaining
 - Computer systems
 - Servers, and
 - Software in a desired, consistent state

Benefits of Configuration Management for Servers

Quick Provisioning of New Servers

Quick Recovery from Critical Events

Version Control for the Server Environment

Replicated Environments

Configuration Management Tools



Terraform

'SALTSTACK



puppet



git



CHEF™



ANSIBLE



docker

Thanks