Microsoft Azure

CloudBees

The Enterprise Jenkins Company

How to Scale Jenkins for CD with Microsoft Azure

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Game plan

- CD is what again??
- The State of CD
- BS #!*@! to AS :^)
- Azure Container Service
- This is your Jenkins on Azure

Poll (1/2)

- **How big is your Development/IT organization?**
  a) 1 – 50 ppl
  b) 50 – 200 ppl
  c) 200 – 500 ppl
  d) Other or ”Do you know anybody hiring?"

- **What is your role?**
  a) Developer
  b) Operations
  c) QA
  d) All of the above
  e) Other

Poll (2/2)

- **By show of hands do you practice?**
  a) Continuous Integration
  b) Continuous Delivery
  c) DevOps
  d) None of the above or GDD (Get ‘er Done Development)

- **At what scale (tooling and practice)?**
  a) Single Team
  b) Multiple Teams
  c) Organization-wide (managed services)
  d) Cloud-Scale (internal or external PaaS)

CD is what again??

Fundamentally it’s about…

Delivering

Concept-to-Customer

Better

High Quality

- Performance
- Feature
- Function

Software

High Value

Faster!

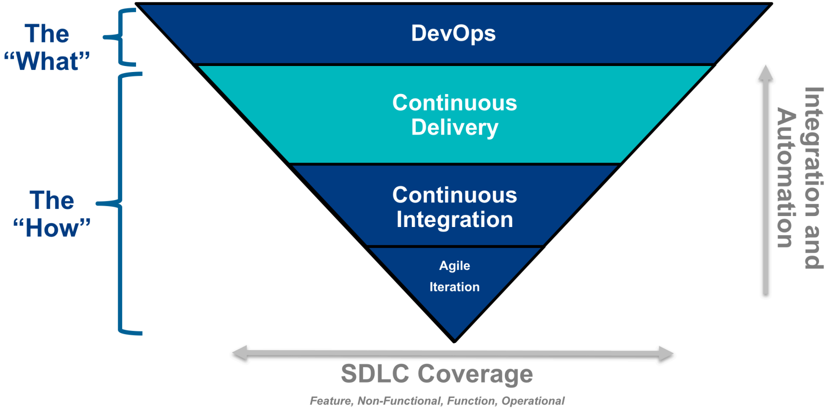
Rapidly

Eliminating Waste

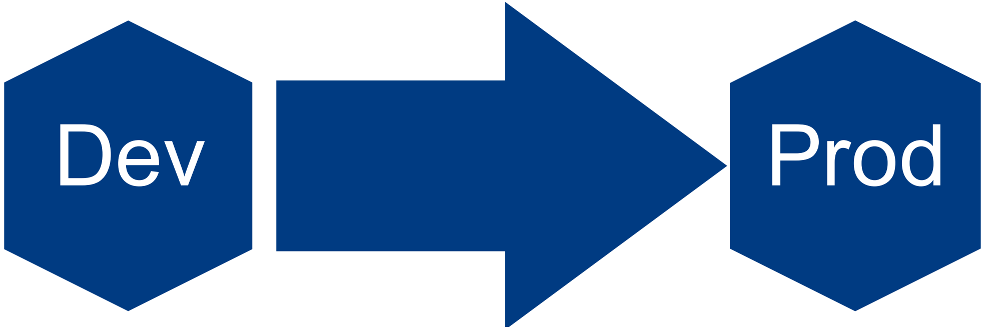
Market Innovation

Continuous delivery (CD) is…

- the practice of automatically and continuously building, testing and deploying software to ensure it **CAN** be released at any time.
- an extension of continuous integration (CI) and enables DevOps
- NOT Continuous Deployment



How Do You Deliver Better Software Faster?



Rapidly

Repeatedly

Reliably

Microsoft Azure

Jenkins

The State Of CD

The State of Continuous Delivery

- CD offers significant technical and business benefits
  - Deliver Faster - ship to production several times per week or per day
  - Demonstrably higher quality
  - Considerably lower production incidents and near-zero Sev 1's
  - No War Rooms, imagine the harmony
  - Measurably happier team members

…and more

The State of Continuous Delivery

- CD is being rapidly adopted across teams and organizations

65% of respondents have started down the path to implementation of continuous delivery with 37% adopting it on some projects, and 28% on all projects.

- Perforce "Continuous Delivery: The New Normal for Software Development"

The State of Continuous Delivery

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The State of Continuous Delivery

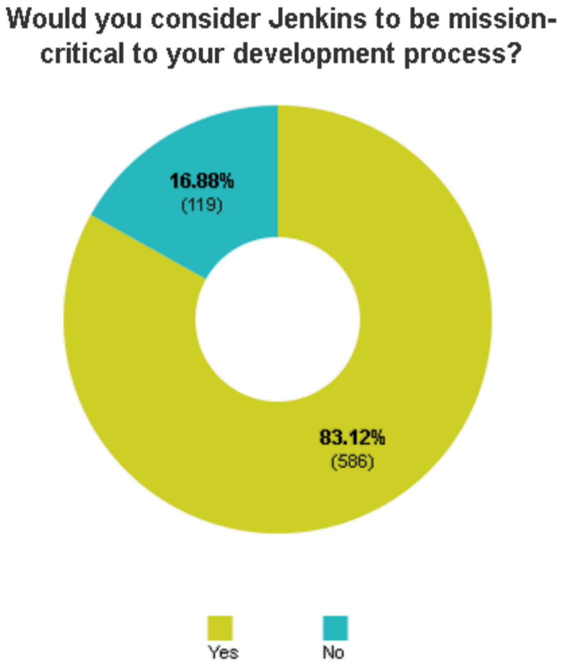
- Jenkins, CI and CD tooling are often implemented at team level and administered by developers

Yay! I deployed Jenkins and everybody is using it!

Damn! Now I own it!#@!*

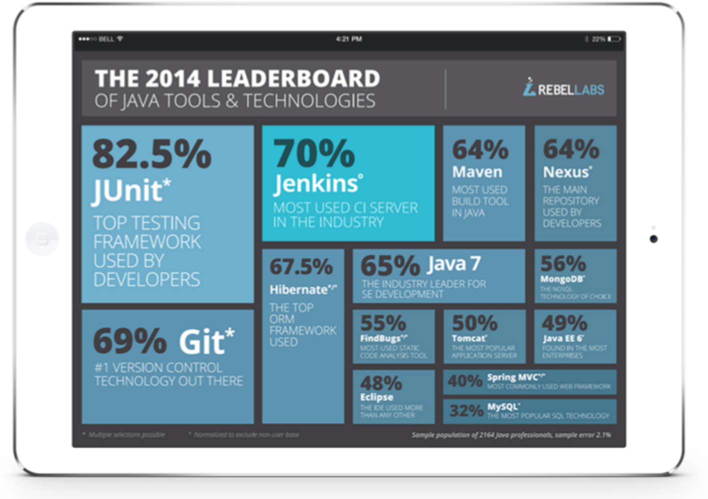
The State of Continuous Delivery

- Jenkins, CI and CD have become mission critical



The State of Continuous Delivery

- Jenkins is the leading CD solution



THE 2014 LEADERBOARD
OF JAVA TOOLS & TECHNOLOGIES

REBELLABS

82.5% JUnit* TOP TESTING FRAMEWORK USED BY DEVELOPERS

70% Jenkins° MOST USED CI SERVER IN THE INDUSTRY

64% Maven MOST USED BUILD TOOL IN JAVA

64% Nexus° THE MAIN REPOSITORY USED BY DEVELOPERS

69% Git* #1 VERSION CONTROL TECHNOLOGY OUT THERE

67.5% Hibernate*/° THE TOP ORM FRAMEWORK USED

65% Java 7 THE INDUSTRY LEADER FOR SE DEVELOPMENT

56% MongoDB° THE NOSQL TECHNOLOGY OF CHOICE

55% FindBugs*/° MOST-USED STATIC CODE ANALYSIS TOOL

50% Tomcat° THE MOST POPULAR APPLICATION SERVER

49% Java EE 6° FOUND IN THE MOST ENTERPRISES

48% Eclipse THE IDE USED MORE THAN ANY OTHER

40% Spring MVC*/° MOST COMMONLY USED WEB FRAMEWORK

32% MySQL° THE MOST POPULAR SQL TECHNOLOGY

* Multiple selections possible ° Normalized to exclude non-user base

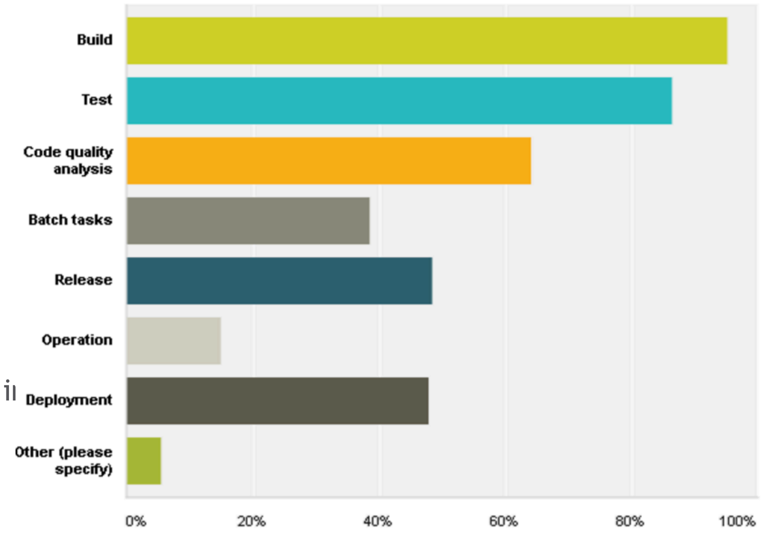
Sample population of 2164 Java professionals, sample error 2.1%

70%

Jenkins

Most used CI server in the industry

What types of tasks do you use Jenkins for?



This results in….

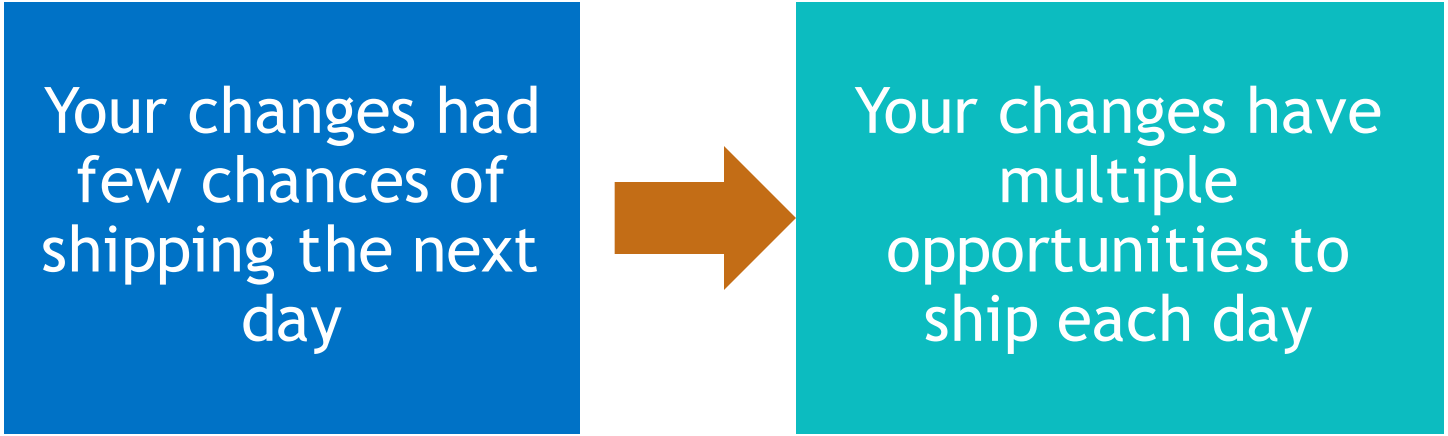
- **Developers acting as administrators**
- Potential **lack of security and/or exposure** of IP
- **Difficulty in sharing best practices** across teams
- **Absence of reliable infrastructure** to maintain continuity and productivity
- **Inability to quickly scale** as **adoption** or demand grows

BS #!@#@ to AS :^)

Benefits of Scaling Continuous Delivery

- Able to recognize the **benefits across the entire organization**
- Enable teams to **rapidly on-board and adopt**
- Remove team-level administration to **increase reliability and productivity, and governance**
- Provide **cross-team visibility**
- Share **best practices**

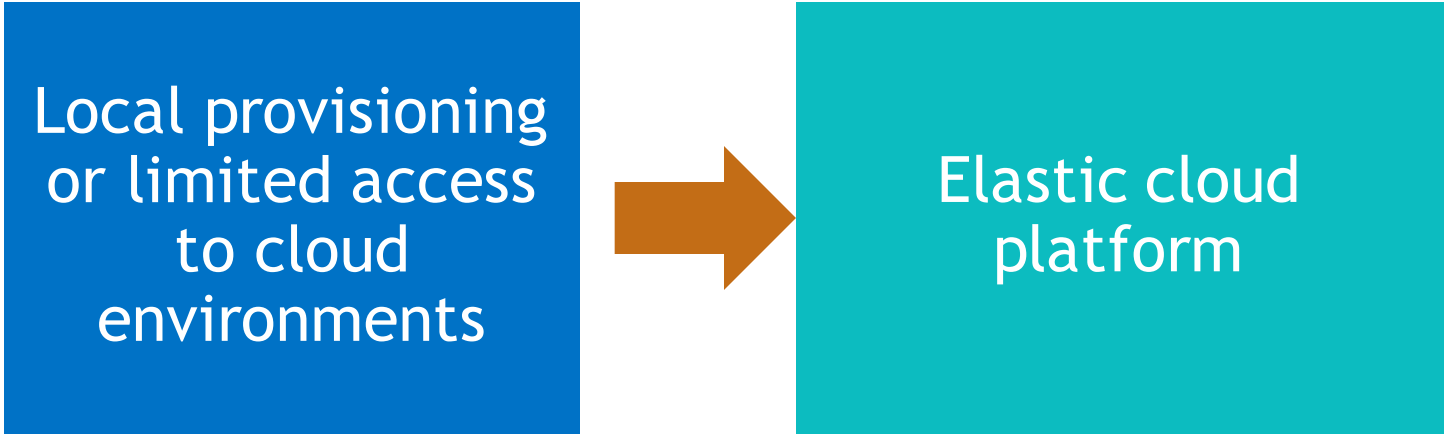
Before Scale and After Scale



Your changes had few chances of shipping the next day

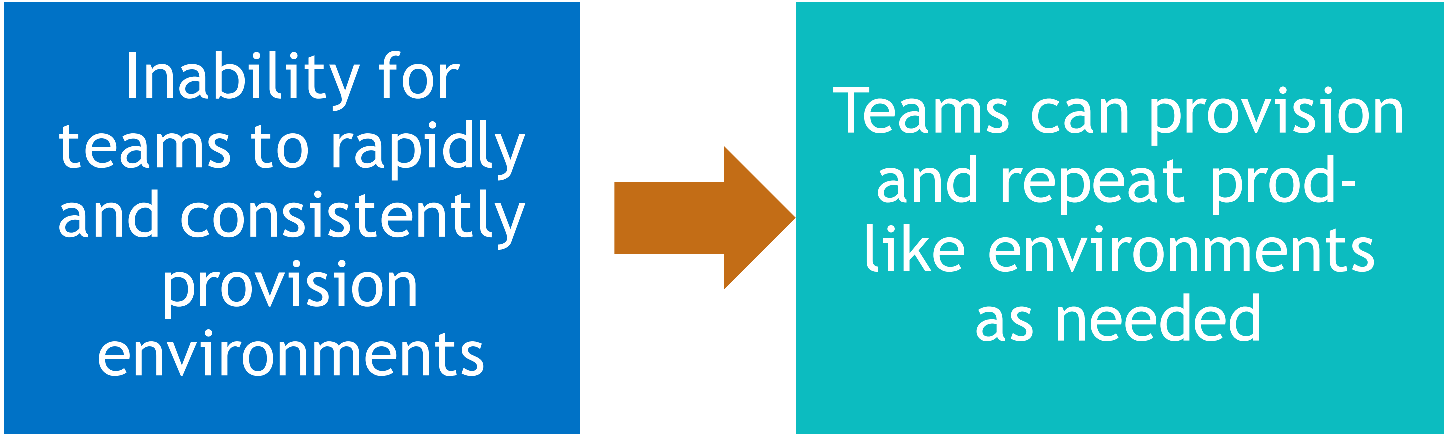
Your changes have multiple opportunities to ship each day

Before Scale and After Scale


Local provisioning or limited access to cloud environments

Elastic cloud platform

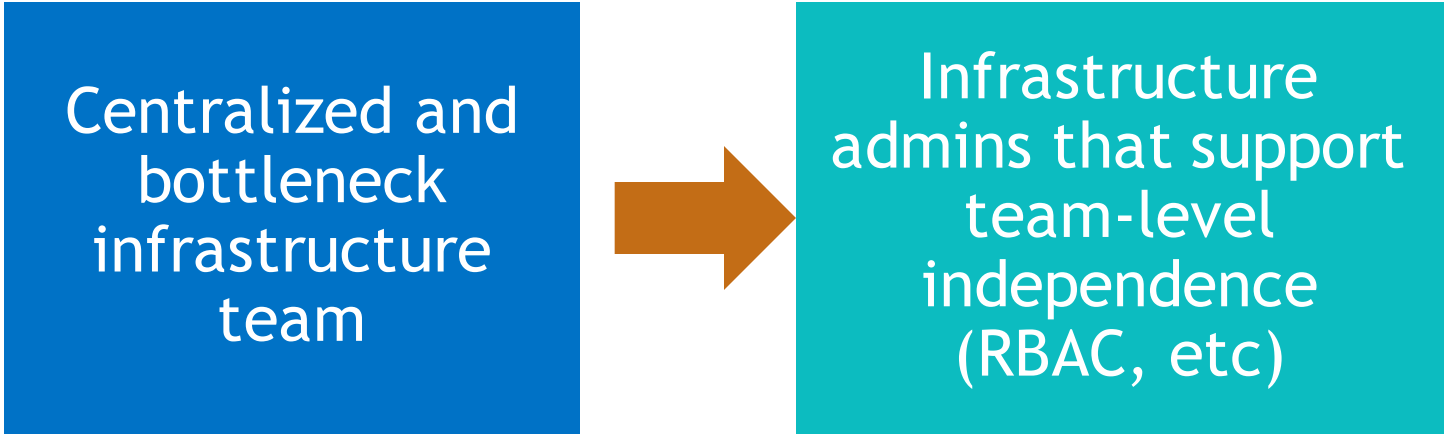
Before Scale and After Scale



Inability for teams to rapidly and consistently provision environments

Teams can provision and repeat prod-like environments as needed

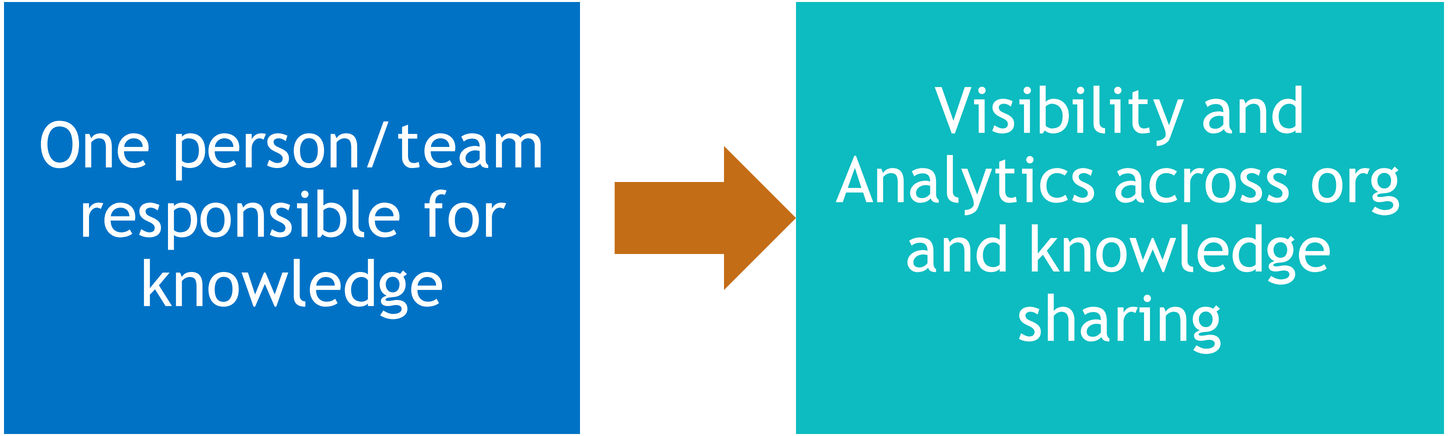
Before Scale and After Scale



Centralized and bottleneck infrastructure team

Infrastructure admins that support team-level independence (RBAC, etc)

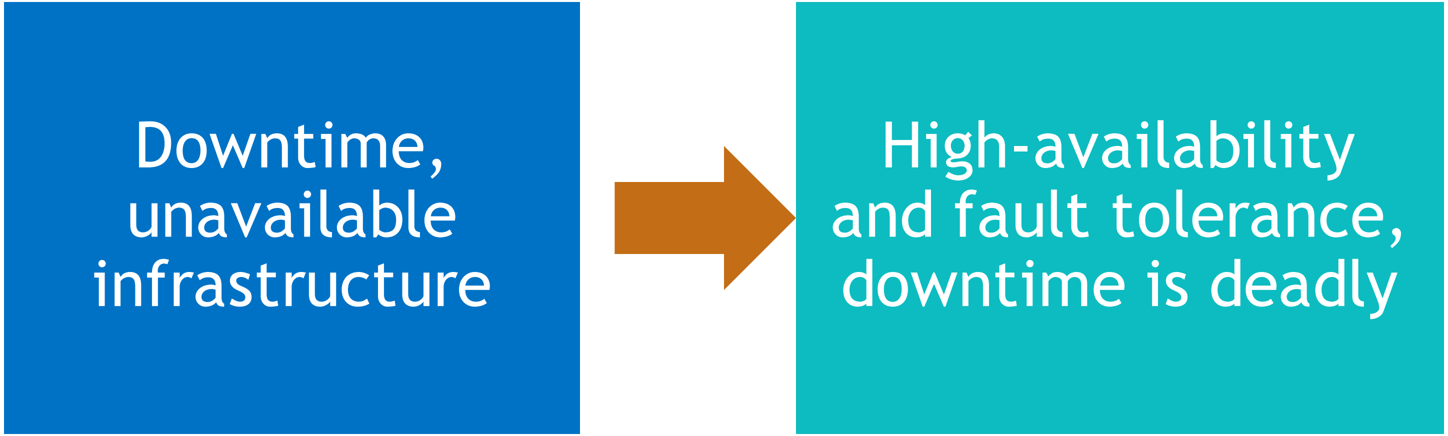
Before Scale and After Scale



One person/team responsible for knowledge

Visibility and Analytics across org and knowledge sharing

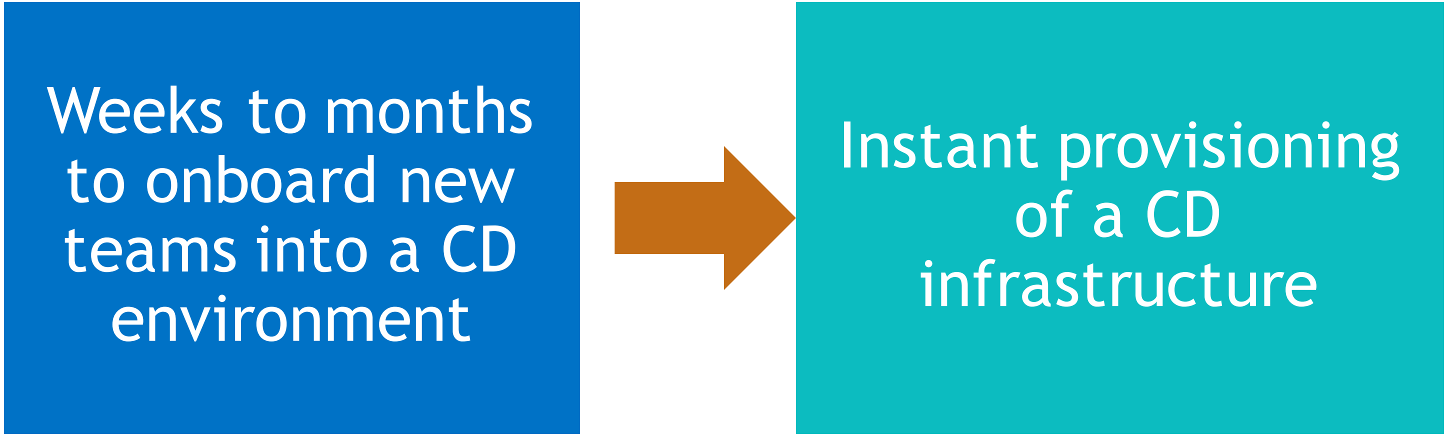
Before Scale and After Scale



Downtime, unavailable infrastructure

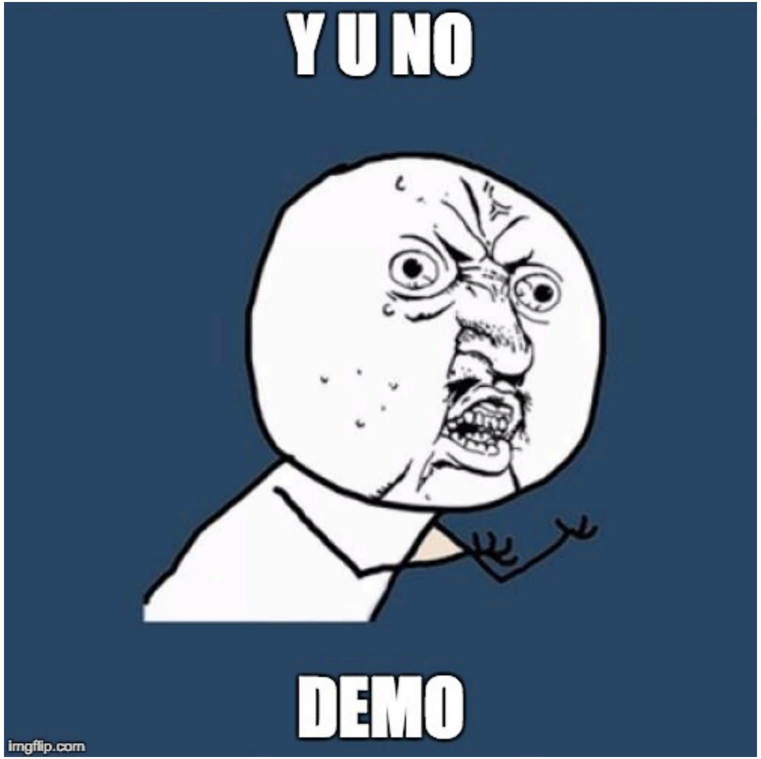
High-availability and fault tolerance, downtime is deadly

Before Scale and After Scale



Weeks to months to onboard new teams into a CD environment

Instant provisioning of a CD infrastructure



- Azure and Azure Container Service
- Jenkins in the Cloud