OSS DevOps on Microsoft Azure

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Objective

- Understand why and how modern DevOps practices fit within the Microsoft Azure platform using Visual Studio Team Services.

Our DevOpsDays Sessions

November 6, 2017

08:00 - 09:00	Registration, Breakfast, Sponsors
09:00 - 09:10	Opening Welcome
09:10 - 09:55	Ken Mugrage - You Can't Buy DevOps - Driving Real Change
09:55 - 10:30	Christian Witts - The CAP Theorem of Humans
10:30 - 10:45	Coffee Break
10:45 - 11:20	Jaco Greyling - Continuous Testing – The final frontier of DevOps
11:20 - 11:55	De Wet Blomerus - What I learned from applying for 107 jobs
11:55 - 13:00	Lunch

13:00 - 13:30	Ignites Reuben Honigwachs - The state of Upspin.io Storm Joubert - Security for Everyone
13:30 - 14:00	Open Space Opening
14:00 - 16:45	Sherif El Mahdi - DevOps on Azure
14:00 - 16:45	Grant Finnemore - Integrating Jira Service Desk>Jira>BitBucket>Bamboo>Service desk
14:00 - 14:45	Open Space #1
15:00 - 15:45	Open Space #2
16:00 - 16:45	Open Space #3
18:00 - late	Evening Event at Woodstock Lounge

November 7, 2017

08:00 - 09:00	Registration, Breakfast, Sponsors
09:00 - 09:10	Introduction
09:10 - 09:55	Spencer Krum - What can we learn from esports?
09:55 - 10:30	Duncan Phillips - Something isn't right here.
10:30 - 10:45	Coffee Break
10:45 - 11:20	Rahul Mahale - Deploying Production ready Kubernetes clusters - Lessons Learnt
11:20 - 11:55	William Stewart - The Wonderful Things You Can Do With Linux's Kernel Tracing
11:55 - 13:00	Lunch

13:00 - 13:30	Ignites Whitney Tennant - A mini adventure in Minikube King'ori Maina - 5 Things I Wish I Knew Before Moving To Kubernetes
13:30 - 14:00	Open Space Opening
14:00 - 16:45	Sherif El Mahdi - OSS-based DevOps on Azure
14:00 - 16:45	Mark Clarke - Hands On With Ansible
14:00 - 14:45	Open Space #1
15:00 - 15:45	Open Space #2
16:00 - 16:45	Open Space #3
17:00 - 19:00	Closing Event

What We Covered

- Traditional Development and Operations
- What's DevOps?
- DevOps Practices
- Visual Studio Team Services
- DevOps + Azure
- Demo
- Resources
- Conclusion + Q&A

List of DevOps Practices

- ✓ Infrastructure as Code (IaC)
- ✓ Continuous Integration
- Automated Testing
- ✓ Continuous Deployment
- ✓ Release Management
- App Performance Monitoring
- Load Testing & Auto-Scale

- Availability Monitoring
- Change/Configuration Management
- Feature Flags
- Automated Environment De-Provisioning
- Self Service Environments
- Automated Recovery (Rollback & Roll-Forward)

http://www.itproguy.com/devops-practices/

Visual Studio Team Services

Plan & Track Work

Source Code Management

Package Management

Quality Management (Automated Test)

Cross-platform Build

Continuous Deployment

Release Management

Feedback Management

Application Telemetry

Extend, Customize & Integrate

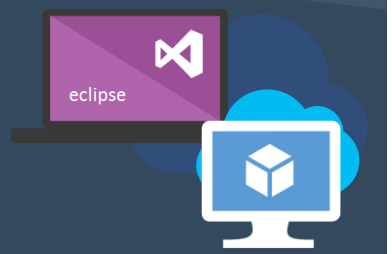
Microsoft ecosystem

People | Process | Tools

01

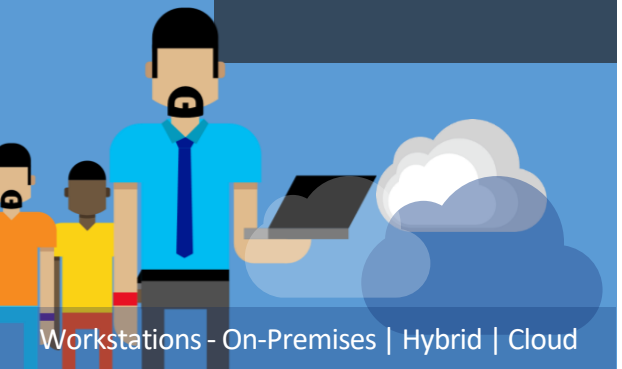
Develop

Developer Workstation



Team Collaboration

TFS / VSTS



Workstations - On-Premises | Hybrid | Cloud

02

Build and Test

Build/CI

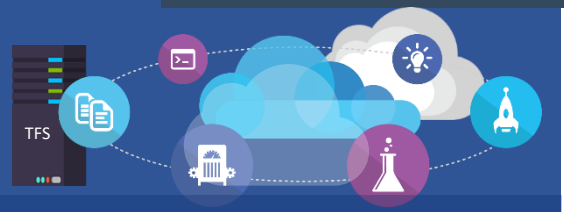
TFS / VSTS

Release Management for Visual Studio

Test

TFS / VSTS

Microsoft Test Manager



ALM Services - On-Premises | Hybrid | Cloud

03

Deploy

Release

Microsoft System Center

Release Management for Visual Studio

Automation Service

PowerShell | WAML

Azure Resource Management

xPlat Command Line

Environments - On-Premises | Hybrid | Cloud

04

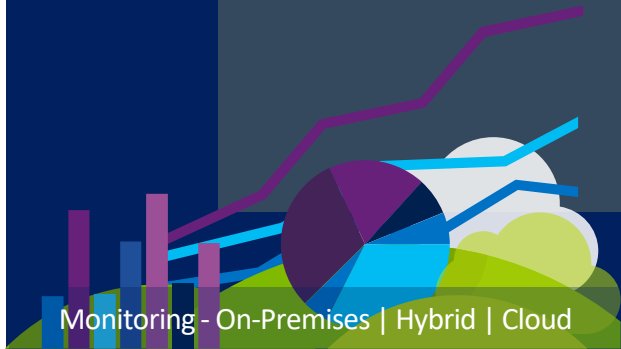
Monitor and Learn

Monitor

Microsoft System Center

VSTS

Application Insights
OMS



Monitoring - On-Premises | Hybrid | Cloud

Mixed ecosystem

People | Process | Tools

01 Develop

Developer Workstation

Team Collaboration

GitHub

CodePlex

02 Build and Test

Build/CI

gradle

GRUNT

Jenkins

Hudson

Test

gradle

GRUNT

03 Deploy

Configuration

puppet labs

CHEF

Release

gradle

GRUNT

Jenkins

Hudson

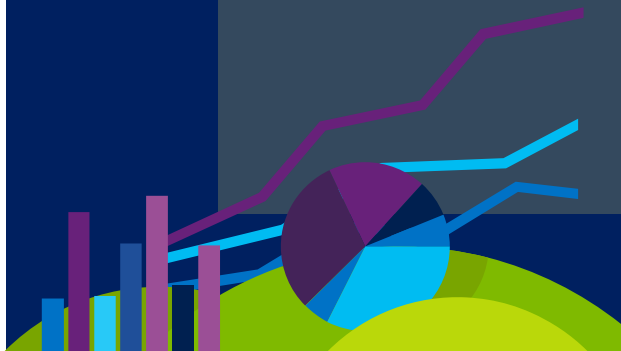
VAGRANT

04 Monitor and Learn

Monitor

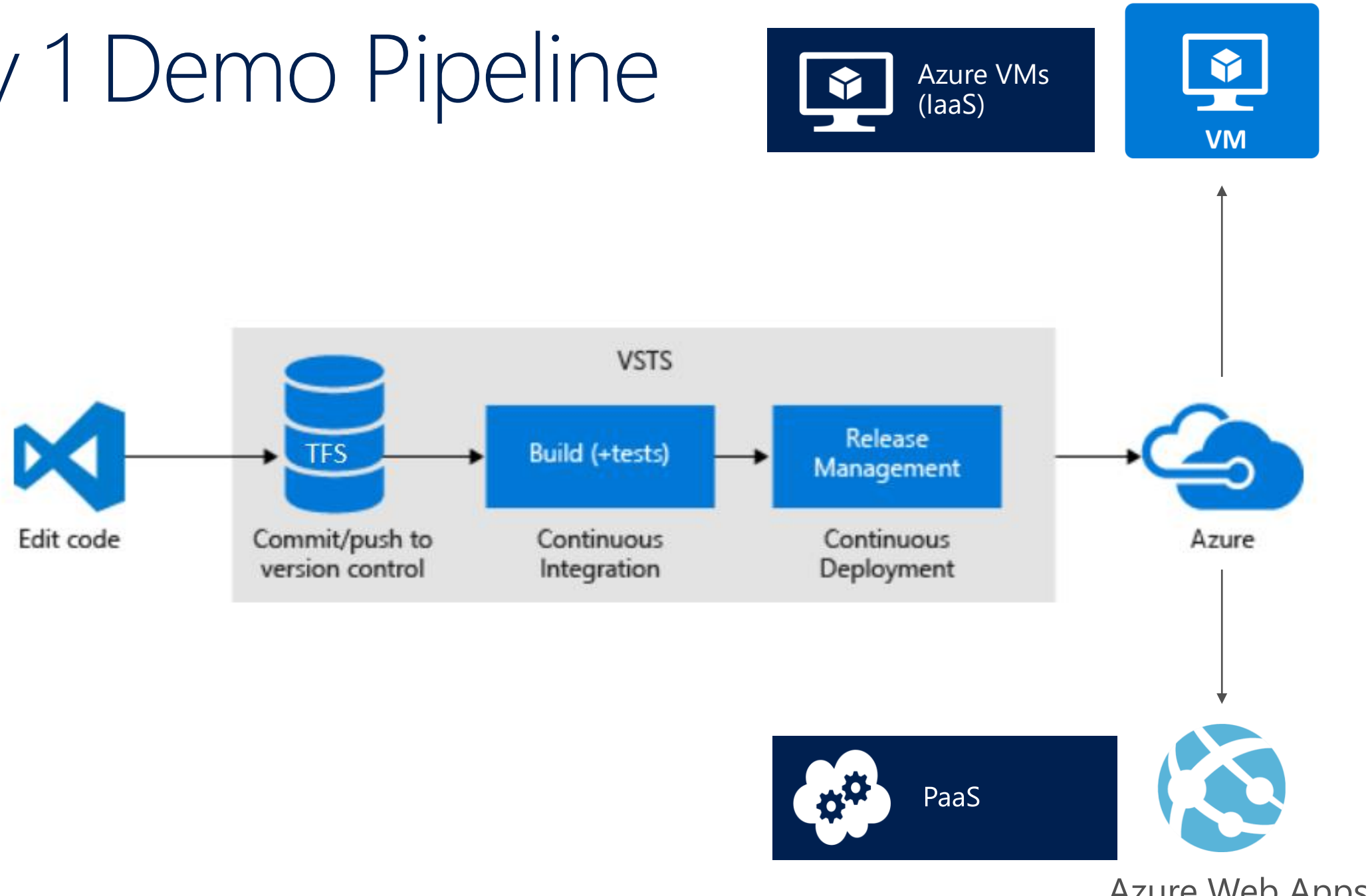
Nagios

ZABBIX

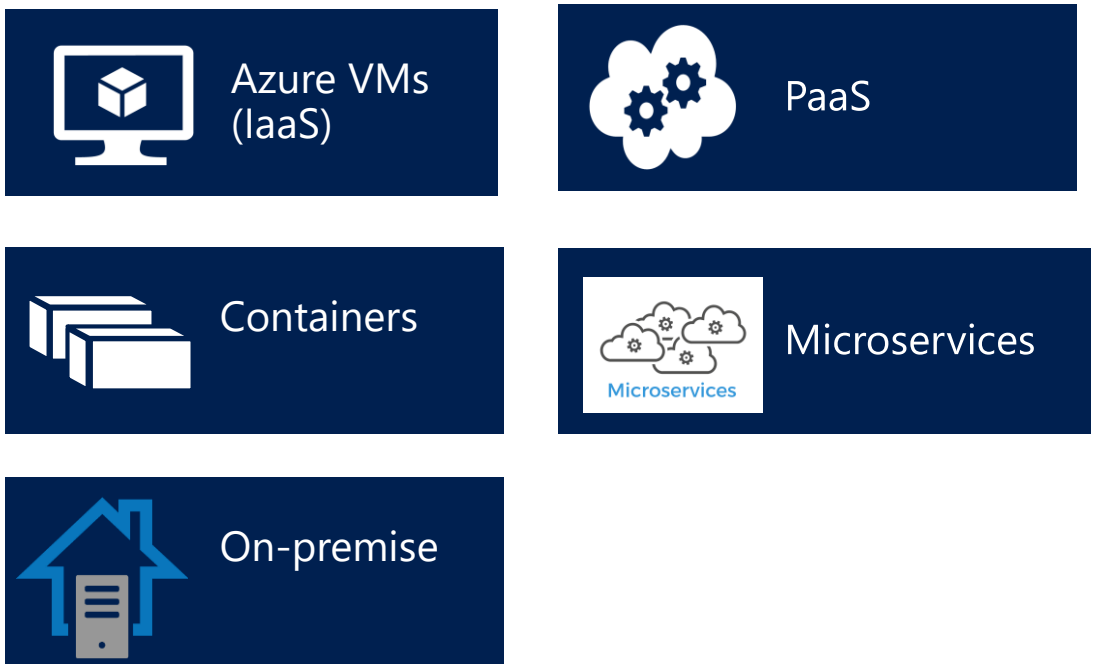


This graphic shows OSS and partner products that are integrated with the Microsoft DevOps solution

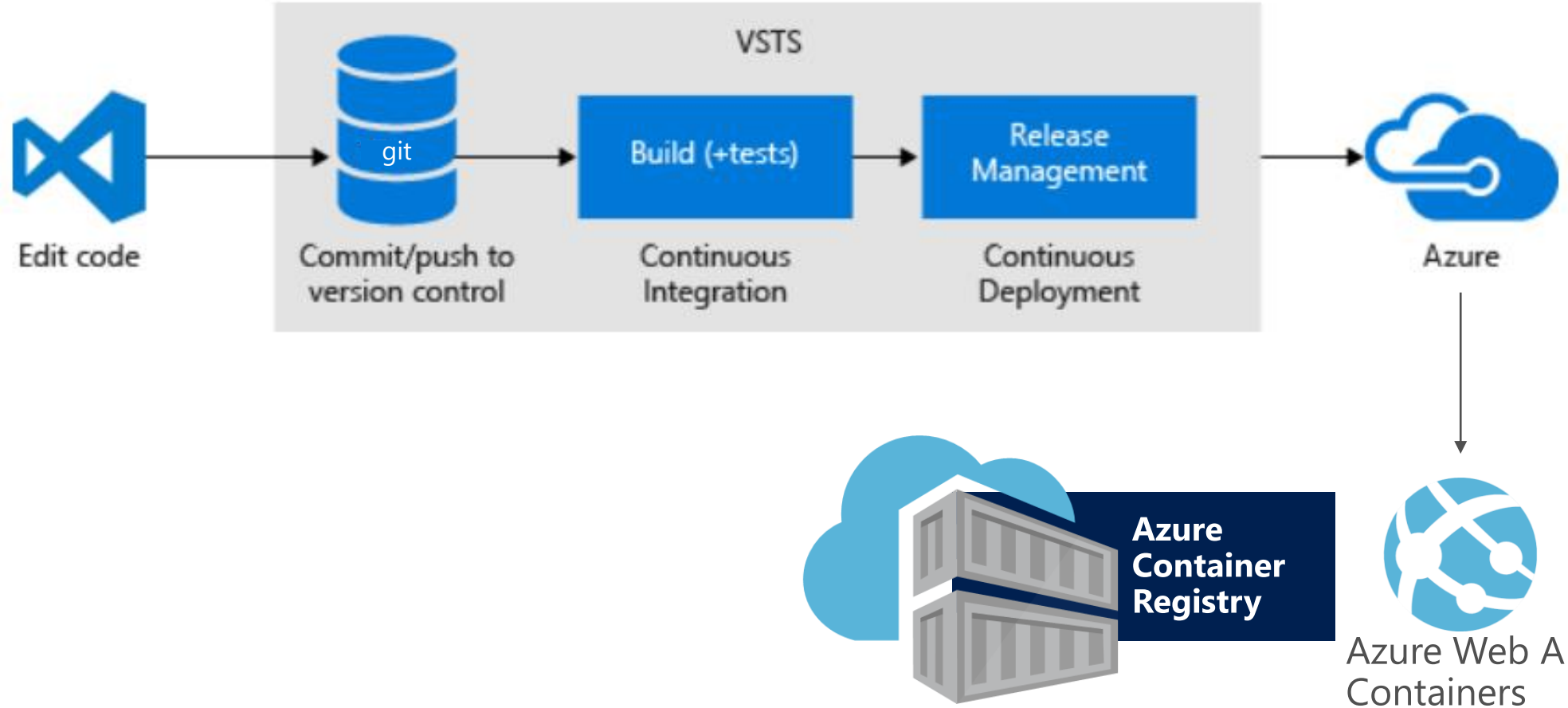
Day 1 Demo Pipeline



VSTS for any Architecture (deployment)



Demo Pipeline



Session Review

In this session, you learned how to:

- Explain why and how modern DevOps practices fit within the Microsoft Azure platform.

DevOp horses and unicorns

Horses—companies that follow manual, traditional, reliable methods

- Low trust organizations
- Shoot the messengers of bad news
- Crush new ideas

Unicorns—classic DevOps superstar successes like Netflix, and Etsy

- High-trust environments
- Empower bridging between functions
- Encourage new ideas

"if there's anything that all horses hate, it's hearing stories about unicorns."

Resources

Concept went mainstream around 2009

Ten deploys per day presentation (Dev and Ops at Flickr)
John Allspaw and Paul Hammond
Velocity Conference (https://www.youtube.com/watch?v=LdOe18KhtT4)

Phoenix project

Gene Kim
https://en.wikipedia.org/wiki/The_Phoenix_Project_(novel)

VSTS Documentation

https://docs.microsoft.com/en-us/vsts/index

Questions?

Shoooot