Lesson 1.1: Module 1 Introduction

DEVOPS CULTURE AND MINDSET

Module 1 Introduction

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Slide 1: Welcome!

Welcome!

Module 1: DevOps Fundamentals

- Define DevOps
- Discuss key DevOps principles
- Discuss DevOps as extension of Lean
- Map Lean principles to the software industry
- Explain each of the “Three Ways” in DevOps

Slide 4: Lean Values in DevOps

Lean Values in DevOps

Break down historic silos

Improve **collaboration** between **Development** and **Operations**

Streamline and **improve work** in key ways

Cultural focus: **Deliver value** to customer

Slide 5: Key DevOps Acronyms

Key DevOps Acronyms

CAMS

Culture

Automation

Measurement

Sharing

CALMS

Culture

Automation

Lean

Measurement

Sharing

Slide 6: Defining DevOps

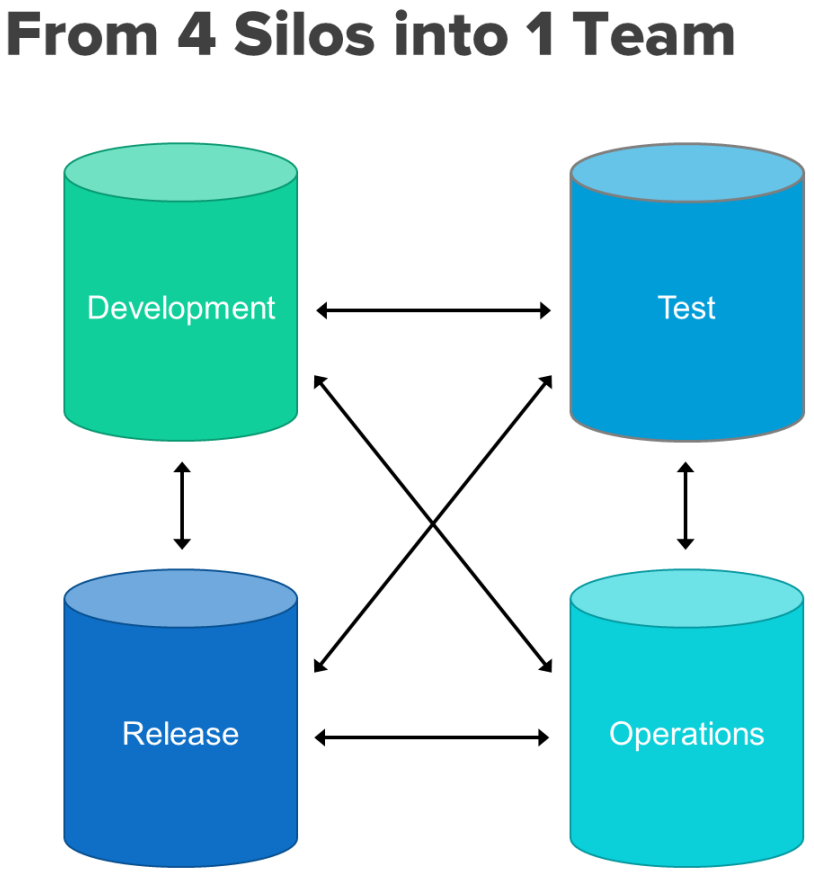
Defining DevOps

"DevOps is about **humans**. DevOps is a set of practices and patterns that turn **human capital** into high-performance **organizational capital**."

– John Willis

Slide 9: From 4 Silos into 1 Team

Slide 10: From 4 Silos into 1 Team



Slide 4: Introducing The Three Ways

Introducing The Three Ways

1. Systems thinking
2. Amplifying feedback loops
3. A culture of continuous experimentation and learning

Developed by Gene Kim and Mike Orzen

Slide 6: Systems Thinking

Systems Thinking

Emphasizes **performance** of entire system

Collaboration across functional lines

Focuses on IT-enabled **value streams**

Slide 11: Amplifying Feedback Loops

Amplifying Feedback Loops

Feedback Loop:

A process that allows for reflection on its own output before determining the next steps that need to be completed

Slide 15: A Culture of Continual Experimentation and Learning

A Culture of Continual Experimentation and Learning

Create that culture!

Encourage **risk-taking** & **failing forward**

Affirm that **repetition** in practice is a **prerequisite to mastery**

Slide 19: Addressing the Biggest Challenge

Addressing the Biggest Challenge

Figure out how to protect capacity

When pressure's on delivery trumps experimentation and learning

Leaders who balance capacity with experimentation and learning are key

Slide 20: Consider Chaos Engineering

Consider Chaos Engineering

Check out the Netflix **Chaos Monkey**

Use **Resilience Engineering** to prepare for outages

Create culture where it's **safe to take risks**

Slide 2: Principal #1: Eliminate Waste

Principle #1:
Eliminate Waste

Don’t code more features than needed

Slide 3: Principle #2: Build Quality In

Principle #2:
Build Quality In

"Quality is everyone's responsibility."

- W. Edwards Deming

Verify that quality is built into the product and process

Slide 4: Principle #3: Create Knowledge

Principle #3:
Create Knowledge

AKA: Amplifying learning

Development is constant learning

Slide 5: Principle #4: Defer Commitment

Principle #4:
Defer Commitment

Make decisions at the right time

After analysis and consideration

Delay decisions until you have more info

Slide 7: Principle #5: Deliver Fast

Principle #5:
Deliver Fast

Ensure feedback received early & often

Allow for course correction

Smaller batches allow you to deliver faster

Slide 8: Principle #6: Respect People

Principle #6:
Respect People

Lack respect for people in your culture?

Lean and DevOps falls apart

Slide 9: Principle #7: Optimize the Whole

Principle #7:
Optimize the Whole

Employ systems thinking