DevOps for Defense

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Agile Deep Dive

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Session 3: Continuous Integration & Delivery

https://www.meetup.com/DevOps-for-Defense/
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DevOps for Defense Meetup: Code of Conduct

➢ UNCLASSIFIED ONLY!!!!
➢ Treat each other with respect and professionalism.
➢ Do not talk about private, sensitive, or proprietary work.
➢ Do talk about your experiences, needs, desires to improve work in our domain.
➢ Do share your thoughts.
➢ Do learn from others.
➢ Do respect & tip your bartenders!
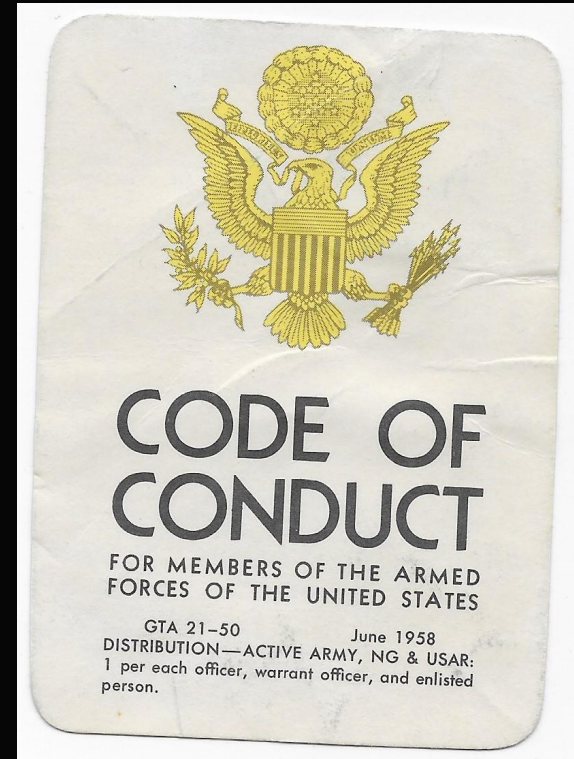
Definitions

Continuous: (adj) Something that happens way more often than you think it does.

**Integration:** (verb) Making sure things fit and work together the way you intended.

Delivery: (verb) The art of confidently shiping working product.

Deployment: (verb) When you have such confidence that you realize waiting for a deployment decision is wasted time, so you just automate deployment within your pipeline.
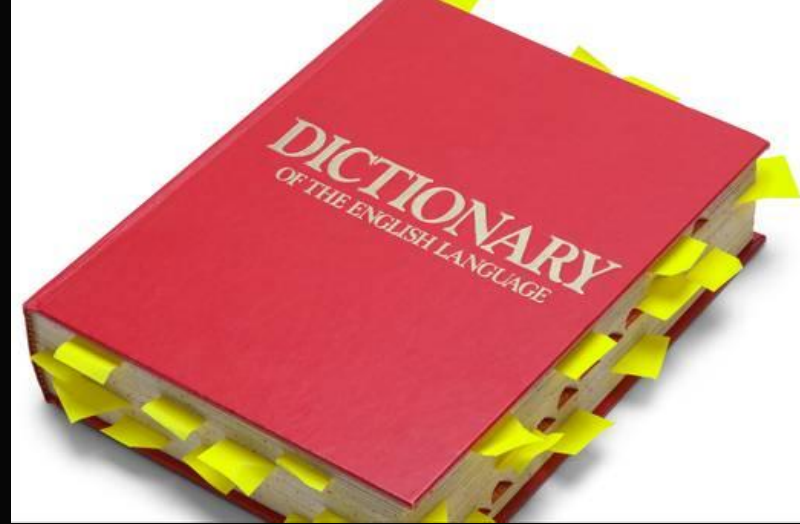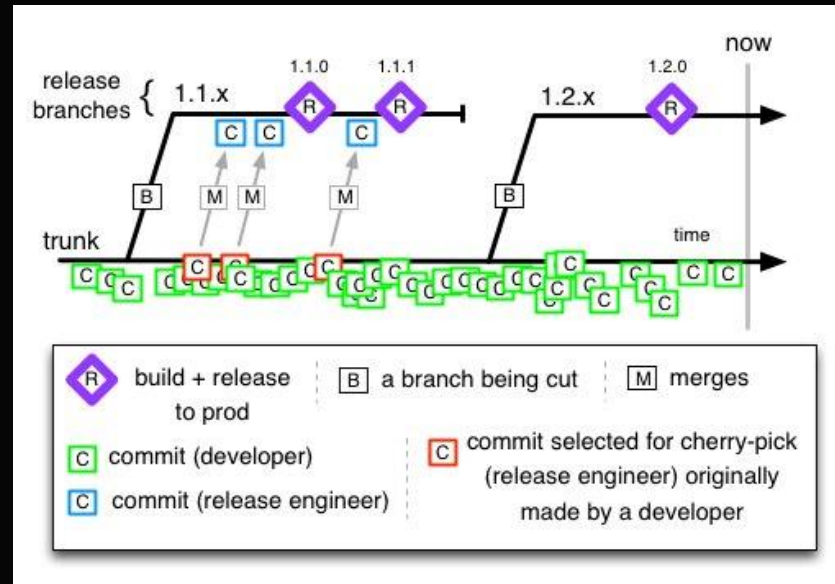
Continuous Integration >> Continuous Delivery >> Continuous Deploy

CI/CD Prerequisite: Good CM
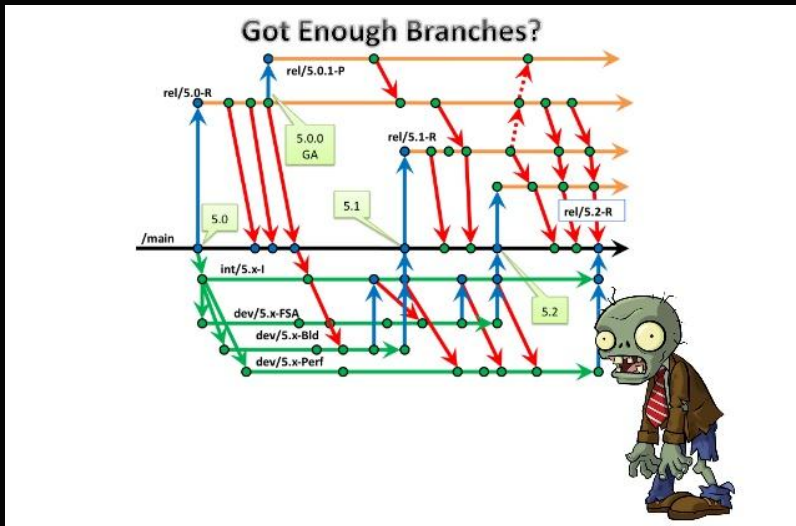
"CM Smells"

- Lots of branches
- Long lived branches
- Large complex merges take a long time
- Deep branch hierarchy (e.g. based on org)
- You know what a config spec is and have mastered manipulating it

Trunk-Based Development

- Recognize that branches defer integration
- Commit to trunk / master is the ideal
- Use short lived feature branches (aka Pull Requests) if that works best for your team
- Monitor branch lifespan & kill them off
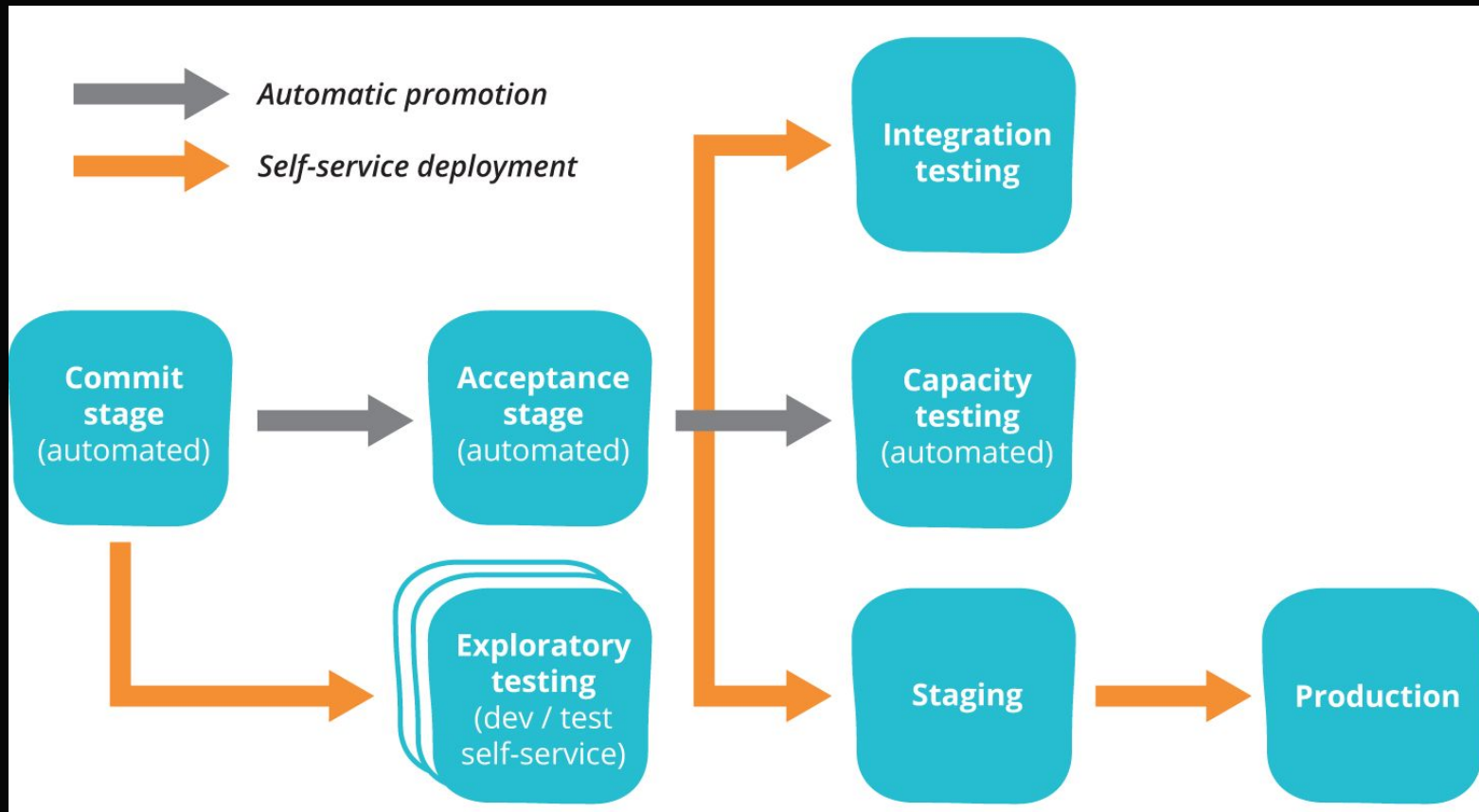
The CI/CD Fundamentals

2) Your pipeline steps delegate to an automate build tool (e.g. Gradle)
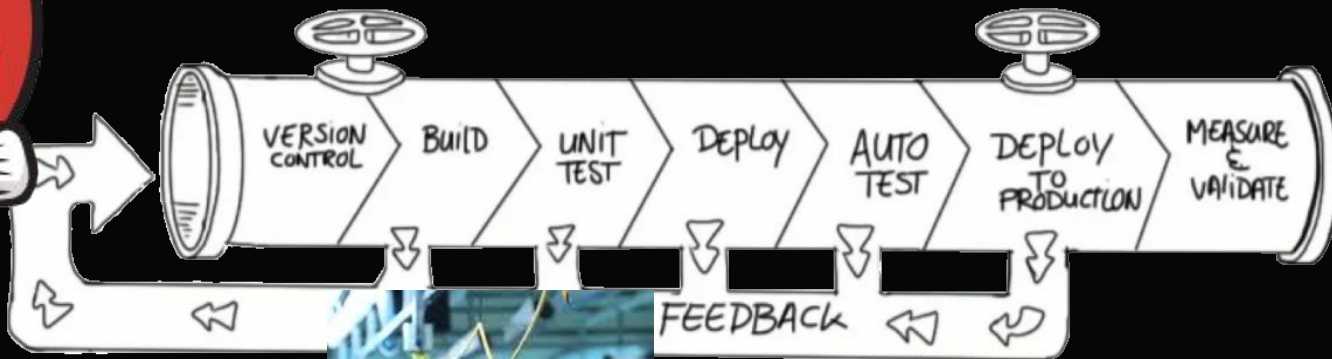
1) Use a pipeline tool to automate execution (e.g. Jenkins)

3) When something fails in your pipeline, stop and fix it underline immediately (e.g. Andon Cord)

Anatomy of a CI / CD Pipeline

Resources: *Continuous Delivery* by Jez Humble & Dave Farley, continuousdelivery.com

Demonstration: Simple App with Commit Phase

Note: This is the first DevOps for Defense live demo! Please give me your feedback.

Group Exercise: Lean Coffee

1. Each table has a facilitator.
2. The facilitator has a short introduction.
3. Everyone write down questions or topics for discussion on the subject. Place them in the middle of the table.
4. The group votes on each question or topic by placing a dot on the card. 3 votes per person.
5. Cards with most dots goes first. Set a timer for 5 minutes and discuss.
6. After 5 minutes, either vote (thumbs up/down) to keep going or move on to the next card.

Finish with a Lean Coffee

1. How can CI/CD work for SEI&T?
2. How can DEV and OPS work together in a CI/CD environment?
3. How can PMs take advantage of CI/CD to plan and measure progress?

DevOps Resources

Books / Publications:
- The Phoenix Project
- The DevOps Handbook
- Continuous Delivery
- Lean Enterprise
- Lean Startup
- The State of DevOps Report
- Turn the Ship Around!

Conference Presentations (YouTube):
- DevOps Enterprise Summit (DOES)
- Velocity
- GoTo