17310: DevOps on the Mainframe: Managing the Cultural Divide

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Agenda

I. Introductions
   a) Key terminology
   b) Why is the DevOps conversation important?

II. Hurdles

III. Agreement on common goals

III. DevOps in the SDLC? What might I observe?

IV. Let's come out of the cloud!
   a) A discussion around your SCM and JCL
   b) How might I start?
   c) Practical examples

V. Recap
Definitions

- DevOps
- Agile
- CI
- ITIL
Why is this conversation necessary?

- Your peers and your managers are talking about it!
- Systems of Record and Systems of Engagement
- Information is Power. Remember DevOps by definition is collaborative.
Hurdles to DevOps on the Mainframe

People

Process

Technology

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Hurdles to DevOps on the Mainframe

People

• Very mature environment (decades?)
• Belief that limiting change minimizes risk
• Belief that ‘Agile’ approach applies more to Dev and Systems of Engagement and wouldn’t apply for the ‘well managed’ Systems of Record
Hurdles to DevOps on the Mainframe

Process

• Existing processes for mainframe systems-of-record are well-entrenched over many years. Adapting these to a CI approach can be viewed as overly time-consuming and costly
• Collaboration is often hindered by current Test / Deploy processes for the mainframe which can be very silo’ed and inconsistent among Dev teams
• Financial justification can be challenging

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Hurdles to DevOps on the Mainframe

Technology

• DEV team often lacking tools to find/fix defects early in the SDLC
• DevOps teams use different tools / inconsistent approaches for Test / Release / Deploy
• CMDB of APP components is unavailable / inaccurate
• SDLC lacks automation at key release / deployment points
• SDLC and/or DEV tools lack metrics and reporting for governance and continuous improvement
• DEV teams lack knowledge of overall batch flows and/or ability to model changes

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Common Objectives
Common Objectives
DevOps in the SDLC? What might one observe?

- Compressing Time Between Releases
- Enabling Technology
- Confidence in Testing
- Accuracy
- Reliance on metrics
- Automated Maintenance of documentation CIs
- Continuous Process Improvement

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Let's come out of the_

...Your JCL and SCM Process

- The best place to start is the source and scripting code management process and toolset (SCM).
- The change management process is a good starting point, as it provides the Organization’s promotion and deployment map.
- Scripting (JCL) is as important as application code.
- Fundamentally, look for all opportunities in the SDLC to increase the speed for Test / Release / Deploy within the systems-of-record while adhering to quality guidelines.

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So How Do We Get There?

• Empower developers with the right tools to enable frequent iterations of high reliability testing early (and throughout) the SDLC

• Provide reliable documentation for modeling and maintenance (especially for legacy systems)

• Provide a consistently accurate CMDB to ensure high confidence in application component dependencies
So How Do We Get There?

- Instill high confidence in the Build/Test/Deploy process. When looking at it one should observe:
  - Limited variance
    - (e.g. Why do we need different build/test processes for each application group?)
    - Can we use middleware to connect systems and reduce the number of unneeded instances (risk of variance)?
  - As much well designed automation as possible
  - Shared metrics and reporting for governance and continuous improvement
  - A high level of confidence that processes are not bypassed without well-defined and accepted exception approval procedures

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Technology and Automation Tools

- Middleware Centric
- Simulation
- Environment and Deployment Tools

Continuous Delivery

Compressed Release Cycle
Middleware Centric and Simulation Automation Tools

- Eclipse IDE and others
- Simulation and run-time validation
- Automate environments provisioning
- Reduce Mean-Time-To-Repair

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JCL Testing and Documentation Tools

- Complete System Level Documentation
- Cleanup obsolete and decommissioned components
- Testing
- Modeling (Reuse)
- Application Rebuild

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Measured Process Automation “The Handoff”

- Automate Testing
- Check Dependencies
- Execution forecast and simulation
Real-time Predictive Analysis

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Measuring process adoption

- Identify right group of quality and relevant metrics to the business
- Establish a baseline and continuous monitoring and feedback
Measuring process adoption

Index and Correlation Engines

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Other Considerations
Continuous Process Improvement
Continuous Process Improvement
Refactoring using Naming Conventions

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Summary

These are not new concepts

We all want better quality sooner

It’s not about

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