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Merging traditional Agile Development team
with a DevOps Team

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A case study in merging teams

Cornell had two teams supporting the financials system. a development team maintaining the code base and a devops team maintaining the infrastructure hosting the application. This presentation will discuss what was done to merge the teams, and why it was done, and some of the lessons learned.

A truism

- To understand a piece of development work
 - you need to understand any underlying devops work
- To understand a piece of devops work
 - you need to understand related software changes
- To understand a piece of software
 - you need to understand both infrastructure and application code
- To understand the cost of a change
 - You need to understand time and effort of both development and devops

Where the team started - People

- Technical Team Manager
- Functional Ownership Team
- Five Developers
- Two Devops Engineers

Where the team started - Working

- Traditional agile process to manage developer work
 - Scrum meetings
 - Robust Jira task management
 - Time box changes into two week sprints
- Informal task queue Devops worked from
 - Jira tasks in a queue of work and assigned to a devops engineer
- Recently transitioned hosting of the application from on-premises servers to AWS

Very first step

- Before making any changes, identify what problems need to be addressed
- In general, the team needed the following
 - Expand devops support coverage hours
 - Improve communication between devops and
 - Tech Team Manager
 - Development Team
 - Functional Team

The problems identified

- Tech Team Manager needed help
 - Understanding the devops work
- Development team needed help
 - Understanding the tooling provided by devops
 - Diagnosing problems with the tooling by devops
 - Expressing changes needed to Devops
- Devops team needed help
 - Understanding what new tooling was needed by developers
 - Understanding bugs with existing tooling
 - Understanding new work driven by functional requests
 - Supporting AM hours
- Functional team needed help
 - Understanding how devops work impacted their change requests

Approach Taken

- Tech team manager considered doing one big jump of merging the two teams
- An iterative approach was chosen
 - Minimize disruption at any one point
 - Small changes at a time, adjust based off what works and what does not

First Step

- Actions
 - Ask one of the developers to take on some devops responsibility
 - Weekly “stand up” with devops team, tech team manager, and development team lead.
 - Weekly devops team check-in with just devops team members
- Results
 - Devops had morning support
 - Tech team manager starting to understand the devops work queue
 - Developer/Devops team member
 - Started learning devops skills
 - Began the process of translating devops to developer, and developer to devops

Second step

- Actions
 - Improve management of the devops backlog of issues
 - Each devops team member have their own queue of work
 - Weekly prioritization of backlog and issues moved into individual queue
 - In the development team agile board, start using sub tasks to denote a ticket exists for devops to do a thing
- Results
 - Tech team manager improving understanding of the devops work
 - Devops Work directly related to a piece of development work is documented on the agile board
 - Continue to improve communication between development and devops

Third Step

- Actions
 - Devops team invited to attend daily development agile standup
- Results
 - Devops can report on status of work in the standup
 - Devops work directly tied to a development task is managed in the development agile board
 - Devops tasks NOT directly tied to a development task is managed through the informal queue
 - Continue to improve communication

Fourth Step

- Actions
 - All devops and development work is managed in one agile board
- Results
 - Devops work not directly related to development is included in the agile process
 - Standard agile process keeps communication flowing in a timely manner
 - Daily standup
 - Sprint retro
 - Release notes

Ongoing challenges

- How to decide the number of tasks in a sprint
 - (number of development tasks) + (number of devops tasks) + (ad hoc support tasks) = 1 sprint
- How to size devops tasks so they can be completed in a sprint
- Not all devops tasks model in the development dev/test/prod paradigm
 - When work doesn't follow the “standard” paradigm, confusion occurs

Questions?

- There were at least two weeks between each step. It wasn't easy, but we are in a much better place after this change.
- **Any Questions?**
- Questions after the presentation,,,
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