From Students...
...to Professionals

Beta Presentation
Ford Accelerate Monitor

The Capstone Experience

Team Ford

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Fall 2020
Project Overview

• Web Portal
  • Register teams, projects and products
  • Statistics dashboard

• CI/CD Product Integration
  • Jenkins, GitHub, and SonarQube (stretch)
  • Software statistics calculated with data from products

• Smart Home Device Skill
  • Google Assistant and Alexa (stretch)
  • Retrieve software statistics for their team or project by asking structured questions
System Architecture
Team Homepage

Team Homepage

Project List
- Web Portal
- Search Service
- Accelerate Monitor

Project Information of: Accelerate Monitor

GitHub

Jenkins

Incident

Show Details >
Product Registration Hub
GitHub Registration Page

To register the GitHub repository used for your project, enter the following information:

Accelerate Monitor

https://github.com/accelerateMonitor

Ford

teamford2020
### Deployment Frequency Calculation

#### Build Record in Database

<table>
<thead>
<tr>
<th>Key</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>commitId</td>
<td>&quot;ad5f42a9725cf221fe2c6057dedf5c090a5143cc&quot;</td>
</tr>
<tr>
<td>date</td>
<td>&quot;2020-09-16 23:11:05 EDT&quot;</td>
</tr>
<tr>
<td>deployment</td>
<td>true</td>
</tr>
<tr>
<td>env</td>
<td>&quot;PROD&quot;</td>
</tr>
<tr>
<td>projectName</td>
<td>&quot;jenkins-test&quot;</td>
</tr>
<tr>
<td>status</td>
<td>&quot;FAILURE&quot;</td>
</tr>
</tbody>
</table>

- **Commit SHA**: `MJ1M5VRAhBv5tGhh_pz`
- **Build Timestamp**: "2020-09-16 23:11:05 EDT"
- **Deployment?**: true
- **Environment**: "PROD"
- **Registered Name**: "jenkins-test"
- **Build Result**: "FAILURE"
Deployment Frequency Graph
Mean Time To Restore Calculation

Incident Record in Database

- MJmyGMQw13DmrcjBotJ
- MJnSzk0j-2bECEiXIrP
  - date: "2020-10-16 18:11:42 EDT"
  - projectName: "incident-test"
  - status: "Down"
- MJnXDDk7pRR-arsk9Lk
  - date: "2020-10-16 18:30:10 EDT"
  - projectName: "incident-test"
  - status: "Restored"
- MJwLZC50GaE9kLERGUc

Down Record

Restored Record
Mean Time To Restore Graph

Average MTTR of the last seven days: 3
Average MTTR of the most recent month: 4.43
Average MTTR overall: 8.8
## Lead Time Calculation

### Build Record in Database

<table>
<thead>
<tr>
<th>commitID</th>
<th>b852af55b7a61a3838bdc70acbefa1981e316029</th>
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<tbody>
<tr>
<td>date</td>
<td>2020-09-23 09:24:22 EDT</td>
</tr>
<tr>
<td>deployment</td>
<td>true</td>
</tr>
<tr>
<td>env</td>
<td>PROD</td>
</tr>
<tr>
<td>projectName</td>
<td>cfp-test-1</td>
</tr>
<tr>
<td>status</td>
<td>SUCCESS</td>
</tr>
</tbody>
</table>

### Commit Record in Database

| date              | 2020-09-23T09:41:10Z                      |
| projectName       | cfp-test-1                                |
| sha               | b852af55b7a61a3838bdc70acbefa1981e316029 |
| user              | elekom                                   |
Lead Time Graph

Average Lead Time of the last seven days: 3.157
Average Lead Time of the most recent month: 2.85
Average Lead Time overall: 2.65
Change Fail Percentage Calculation

Build Records in Database
Exported and formatted for display
Change Fail Percentage Graph

Average Change Fail Percentage of the last seven days: 0.7
Average Change Fail Percentage of the most recent month: 0.425
Average Change Fail Percentage overall: 0.41
What’s left to do?

• Testing
  ▪ More variety of data
  ▪ Stress testing

• Fix bugs
  ▪ Build failure notification trigger
  ▪ Error handling

• Update web portal design

• Package software for handoff
Questions?