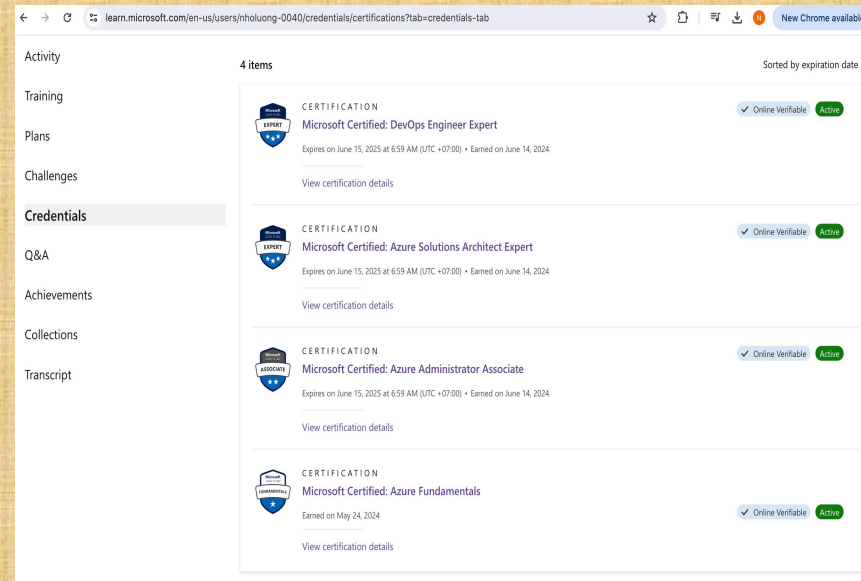
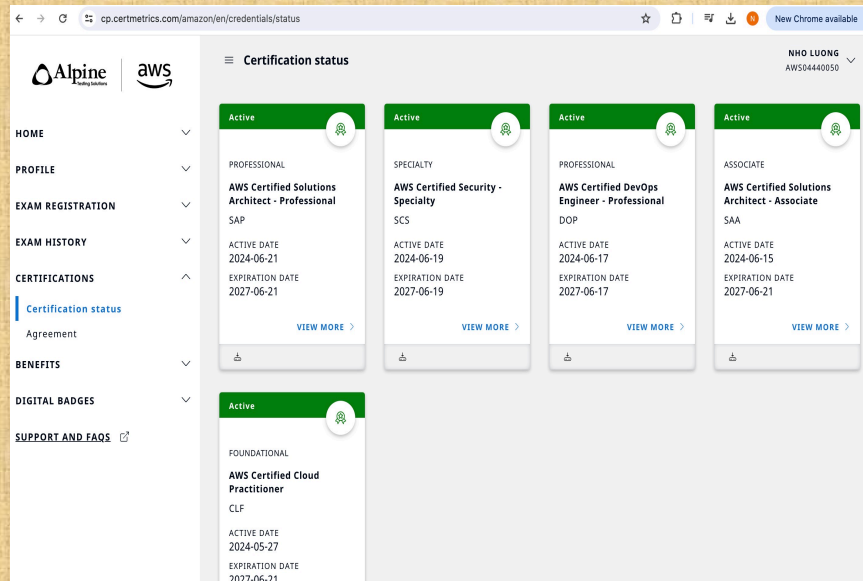


Migrating my Azure DevOps Pipeline Release Notes Extension to GitHub Actions

Author: Nho Luong

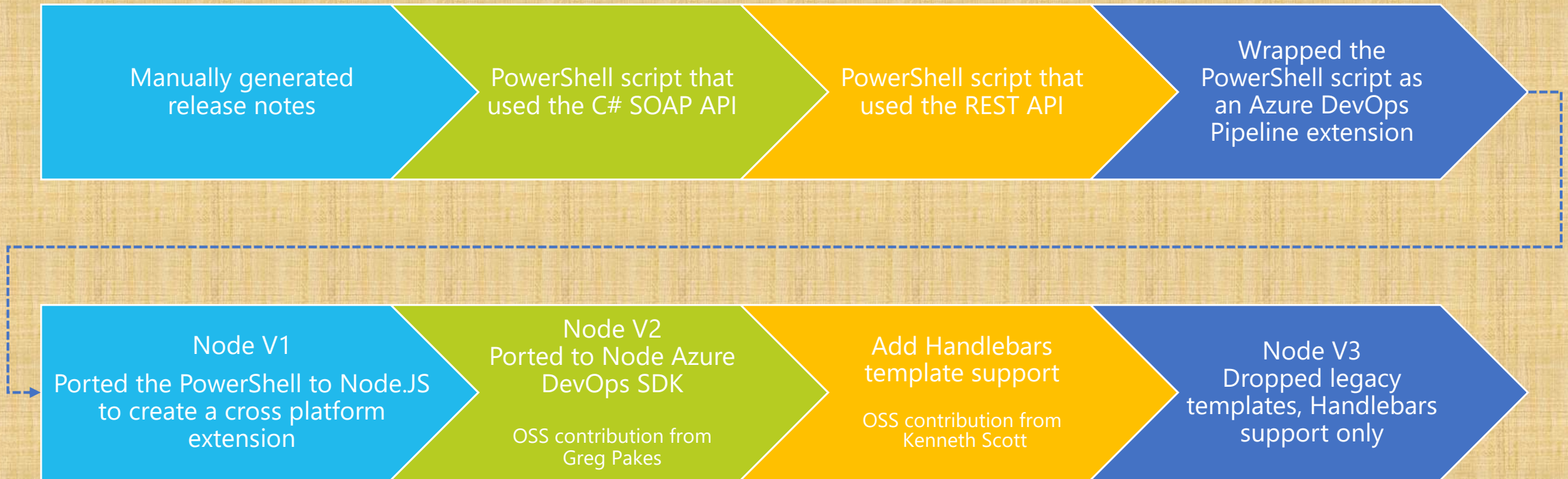
Skill: DevOps Engineer Lead



When all else fails, read the instructions

Cahn's Axiom: Anonymous

My Azure DevOps release notes journey



A Handlebars Template

```
## Build {{buildDetails.buildNumber}}
* **Branch**: {{buildDetails.sourceBranch}}
* **Completed**: {{buildDetails.finishTime}}
* **Previous Build**: {{compareBuildDetails.buildNumber}}

## Associated Pull Requests ({{pullRequests.length}})
{{#foreach pullRequests}}
* **[{{this.pullRequestId}}]({{replace (replace this.url "_apis/git/repositories" "_git")
                                                                    "pullRequests" "pullRequest"}})} ** {{this.title}}

  * Associated Work Items
  {{#foreach this.associatedWorkitems}}
    {{#with (lookup_a_work_item ../../relatedWorkItems this.url)}}
      - [{{this.id}}]({{replace this.url "_apis/wit/workItems" "_workitems/edit"}})
      - {{lookup this.fields 'System.Title'}}
    {{/with}}
  {{/foreach}}

  * Associated Commits (this includes commits on the PR source branch not associated directly with the build)
  {{#foreach this.associatedCommits}}
    - [{{this.commitId}}]({{this.remoteUrl}}) - {{this.comment}}
  {{/foreach}}
{{/foreach}}
```

Objects available to the template

Common objects

- workItems
- relatedWorkItems
- commits
- pullRequests
- inDirectlyAssociatedPullRequests
- tests
- builds
- manualTests
- manualTestConfiguration

Build objects

Available for Classic UI based Builds and YAML based pipelines

- buildDetails
- compareBuildDetails
- currentStage

Release objects

Only available in a Classic UI based Releases

- releaseDetails
- compareReleaseDetails
- releaseTests

Handlebars is Extensible

- The task include 120+extensions from 'Handlebars Helpers'
<https://github.com/nholuongut/handlebars-helpers>
- Plus a few I have added
 - **json** that will dump the contents of any object. This is useful when working out what can be displayed in a template
 - **lookup_a_work_item** this looks up a work item in the global array of work items based on a work item relations URL
 - **lookup_a_pullrequest** this looks up a pull request item in the global array of pull requests based on a work item relations URL
 - **get_only_message_firstline** this gets just the first line of a multi-line commit message

Handlebars is Extensible

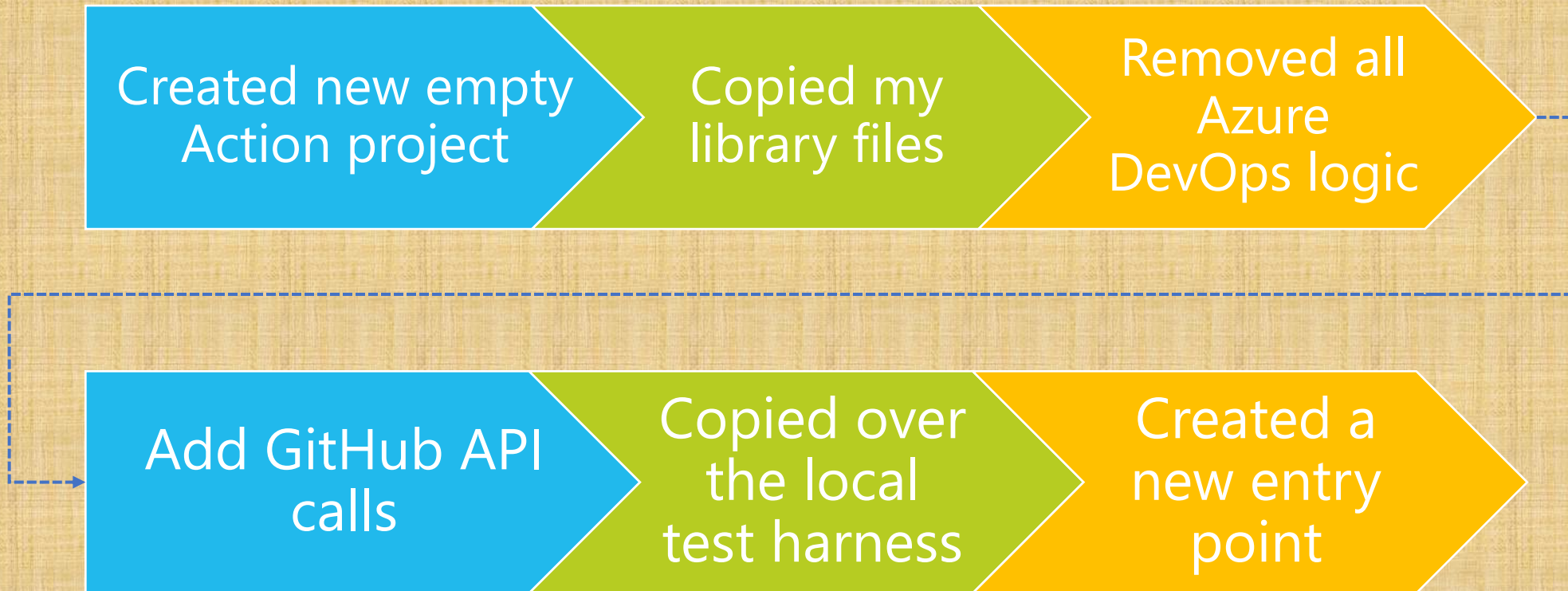
You can write your own extensions

```
module.exports = {  
  get_only_message_firstline (msg) {  
    return msg.split(`\n`)[0]; }  
};
```

And use them like this

```
{{ get_only_message_firstline this.message }}
```

Migrating my task to GitHub Actions



GitHub Action Usage

```
- uses: rfennell/ReleaseNotesAction@v1
  env:
    GITHUB_TOKEN: ${ secrets.GITHUB_TOKEN } # This token is provided automatically, no need to create your own
  with:
    templateFile: '${ github.workspace }//template.md'
    outputfile: '${ github.workspace }//releasenotes.md'
    extensionsFile: '${ github.workspace }//customextensions.js'
```

Still uses a Handlebars Template

```
# Release Notes
## Run Details
- Workflow: {{runDetails.name}}
- Head Branch: {{runDetails.head_branch}}
- Head SHA: {{runDetails.head_sha}}

## Pull Requests
{{#forEach runDetails.pull_requests}}
**{{this.number}}** {{this.title}}

### Commits
{{#forEach this.commits}}
- **{{this.sha}}** {{this.commit.message}}
{{/forEach}}
### Comments
{{#forEach this.comments}}
- {{this.body}}
{{/forEach}}
### linkedIssues
{{#forEach this.linkedIssues}}
- **{{this.number}}** {{this.title}}
{{/forEach}}

{{/forEach}}
```

But the objects available are different

Objects

- runDetails
 - pull_requests
 - commits
 - comments
 - linkedIssues

Summary

- The migration of the Azure DevOps task to a GitHub Action was not too difficult, as the source task was
 - Node.JS based
 - Designed in a modular manner
- I am not sure how many Azure DevOps Pipeline Extension could be ported in this way, many are just not relevant on GitHub
- The available objects to the Action are very different to those available to the Azure DevOps task.
- The lack of a Marketplace means I can't see my usage

Resources

- Release Notes GitHub Action

<https://github.com/marketplace/actions/generate-release-notes-using-handlebars-template>

<https://github.com/rfennell/ReleaseNotesAction>

- Porting my Release Notes Azure DevOps Pipelines Extension to GitHub Actions

<https://blogs.blackmarble.co.uk/rfennell/2020/12/31/porting-my-release-notes-azure-devops-pipelines-extension-to-github-actions/>



Thank You