

MICHIGAN STATE

UNIVERSITY

Beta Presentation Infinity Gauntlet

The Capstone Experience

Team Kohl's

Andrew Gardner

Gary M. Service

John Foss

Kaiwen Jiang

Srikar Kante

Department of Computer Science and Engineering

Michigan State University

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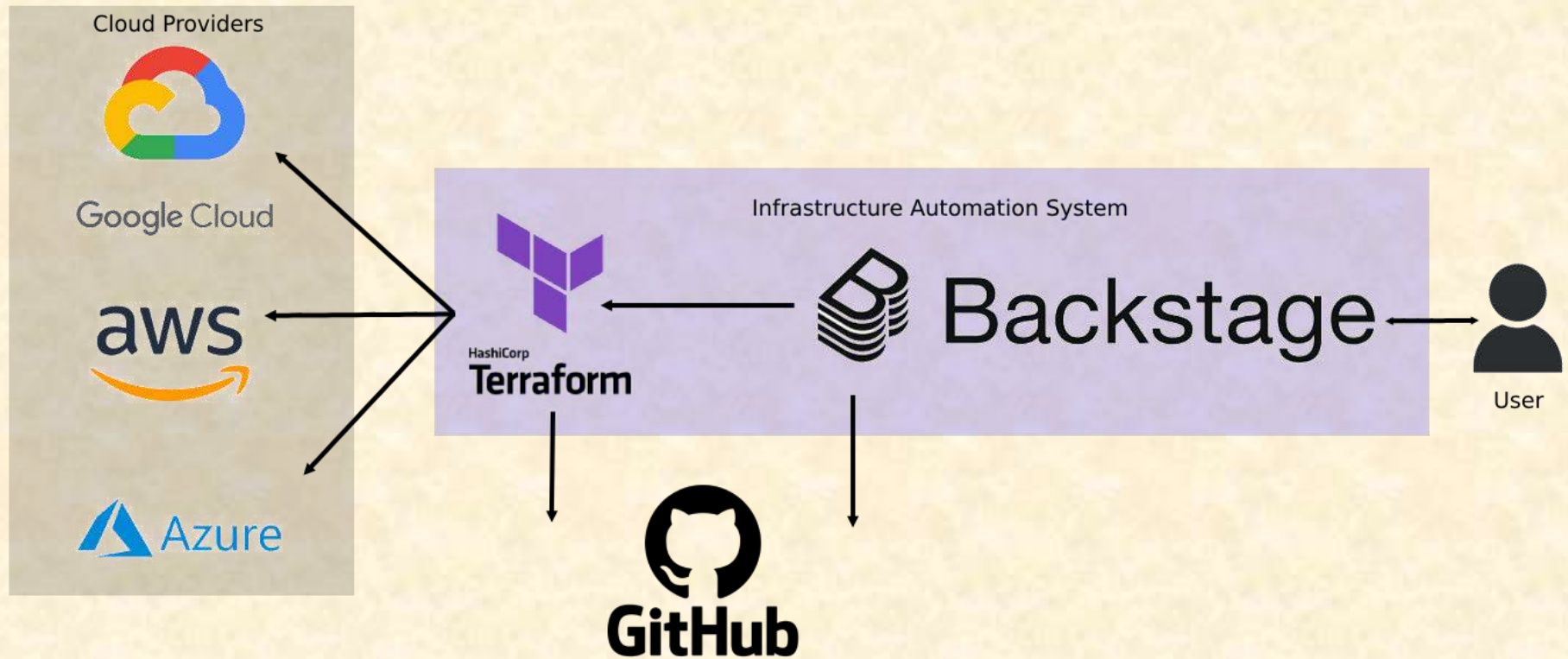
*From Students...
...to Professionals*

Project Overview

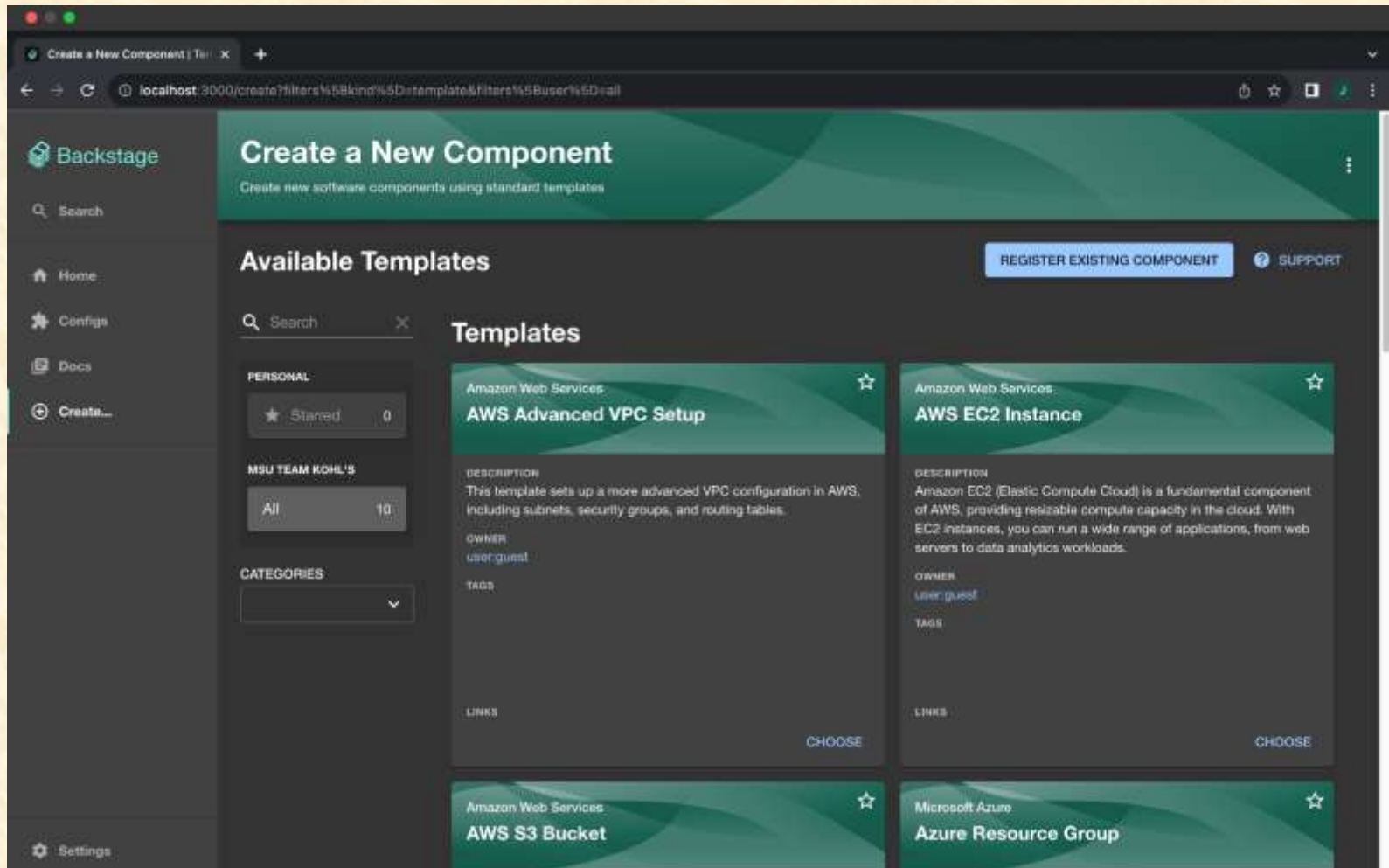
- Kohl's does much development in house
- Managing cloud service providers is hard
 - Amazon Web Services
 - Google Cloud Platform
 - Microsoft Azure
- The Infinity Gauntlet streamlines this process
- Developers can spin up a server with only a few clicks
- This saves developers time



System Architecture



Backstage Templates



Input within a Template

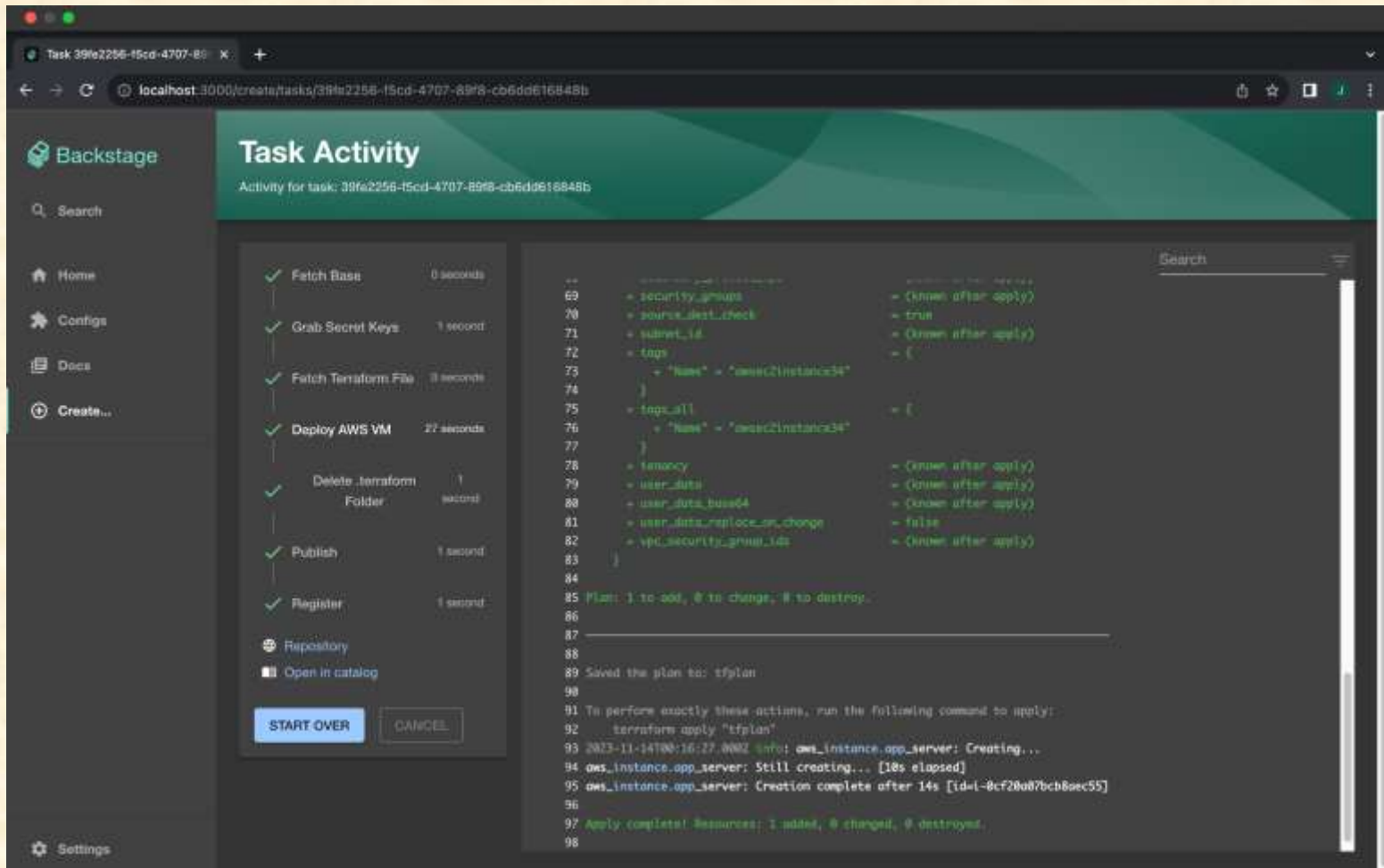
The screenshot shows a web browser window with the URL `localhost:3000/creates/templates/default/gcp-compute-engine-vm`. The page title is "Create a New Component" with the subtitle "Create new software components using standard templates". The left sidebar contains navigation links: Search, Home, Configs, Docs, and Create... (highlighted). The main content area is titled "GCP Compute Engine (VM)" and features a form with the following elements:

- Step 1:** "Fill in ProjectId, Region, Zone, Machine Type." (indicated by a blue circle with '1')
- Project ID:** A text input field with the placeholder "Project ID (Ex. 'virtual-machine-1')*" and a sub-label "Name of Compute Engine VM".
- Region:** A dropdown menu with "us-central" selected and a sub-label "Pick a region".
- Zone:** A dropdown menu with "A" selected and a sub-label "Zone information from region".
- Navigation:** "BACK" and "NEXT STEP" buttons.
- Step 2:** "Machine Type" (indicated by a blue circle with '2') is partially visible at the bottom.

At the bottom left of the sidebar, there is a "Settings" link with a gear icon.



Template Actions & Output



The screenshot shows the Backstage 'Task Activity' page for a specific task. The left sidebar contains navigation options: Home, Configs, Docs, Create..., and Settings. The main content area is divided into two panels. The left panel lists the actions performed, each with a green checkmark and a duration:

- Fetch Base (0 seconds)
- Grab Secret Keys (1 second)
- Fetch Terraform File (3 seconds)
- Deploy AWS VM (27 seconds)
- Delete .terraform Folder (1 second)
- Publish (1 second)
- Register (1 second)

Below the list are buttons for 'START OVER' and 'CANCEL', and a 'Repository' section with 'Open in catalog'.

The right panel displays the output of the task, showing a Terraform configuration snippet and the execution log:

```
69 > security_groups = (known after apply)
70 > source_dest_check = true
71 > subnet_id = (known after apply)
72 > tags = {
73   + "Name" = "awssec2instances34"
74 }
75 > tags_all = {
76   + "Name" = "awssec2instances34"
77 }
78 > tenancy = (known after apply)
79 > user_data = (known after apply)
80 > user_data_base64 = (known after apply)
81 > user_data_replace_on_change = false
82 > vpc_security_group_ids = (known after apply)
83
84
85 Plan: 1 to add, 0 to change, 0 to destroy.
86
87
88 Saved the plan to: tfplan
89
90 To perform exactly these actions, run the following command to apply:
91 terraform apply "tfplan"
92 2023-11-14T00:16:27.000Z info: aws_instance.app_server: Creating...
93 aws_instance.app_server: Still creating... [10s elapsed]
94 aws_instance.app_server: Creation complete after 14s [id=L-0cf20a07bcb8a6c55]
95
96 Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
97
98
```



Home Page with Components

The screenshot displays the Backstage Catalog For Cloud interface. The browser address bar shows the URL: localhost:3000/catalog?filters%5Bkind%5D=component&filters%5Buser%5D=owned. The page features a dark theme with a green header bar. On the left, a sidebar contains navigation options: Search, Home, Config, Docs, Create..., and Settings. The main content area is titled 'Catalog For Cloud' and includes a 'Kind' dropdown menu set to 'Component' and a 'Type' dropdown menu set to 'all'. Below these, there are filters for 'PERSONAL' (Owned, Starred) and 'MSU TEAM KOHL'S' (All). The central focus is a table titled 'Owned components (3)' with columns for NAME, DESCRIPTION, and ACTIONS. The table lists three components: component:awssec2instance34, component:gcpstoragebucket824, and component:gcpvirtualmachine80, each with a circular action icon.

NAME	DESCRIPTION	ACTIONS
component:awssec2instance34		○
component:gcpstoragebucket824		○
component:gcpvirtualmachine80		○



What's left to do?

- Stretch Goals
 - Backstage theme
 - Docs page
 - Output URLs
 - Expand catalog pages
- Other Tasks
 - Fix persistence issues
 - Ensure everything is destroyed
 - Unregister components in catalog
 - Make templates consistent
 - Clean up code



Questions?

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