IES Platform Development Team
Candidate Challenge

Introduction

Infrastructure Engineering Services is, at our core, an Infrastructure team. We build, monitor, run, and operate a wide variety of Infrastructure for our Global Industry Units partners. With a variety of lifecycle maturities, multiple provisioning processes, and a heterogeneous environment, our automation platforms must be flexible and adaptable. We also know there are many ways to approach a problem; the status quo may not always be the best solution. In this challenge, we want to see how you approach a problem and make sense of what some people may see as a mess. Code is important, but the thinking behind the code is more important.

Goal

Using any automated provisioning method that you choose, create a variety of infrastructure components. You must include at least one compute instance (and any components required to provision the compute instance). Then, using a *different* automation method, discover the infrastructure components that you provisioned and present an inventory in a human-readable format. Include all pertinent and relevant data about the provisioned instances including any permitted connectivity between them.

This small proof of concept solution should be able to scale out across many more instances, different component types, or additional, unrelated environments, with minimal human interaction.

Technique

- You may use any combination of languages, processes, and automations to complete this task.
- You may use any open-source library, automation suite, or tool to complete this task.
- You may create the infrastructure components in any cloud provider that you like.

Proof

- We do not expect you to create a large pool of instances, nor do we want you to spend *any* money relying on a cloud provider to complete this task.
- You should be able to demonstrate how this proof of concept solution can scale to a larger deployment with minimal code refactoring.
- You can use screenshots, source code, and a live code review to share with us how your solution would be scaled up to additional cloud resources, different component types, or new environments.

Suggestions

- We are looking for how you would solve the problem, not a production ready solution.
- As mentioned before, we don't want you to spend any money. If you have an account on a cloud provider and want to use it, feel free. Oracle Cloud Infrastructure offers a free tier of service: https://www.oracle.com/cloud/free.

Expectations

Please do not spend more than 4 hours on this task. We understand that you don't work for Oracle just yet, we are totally fine with a Proof-of-Concept document and rudimentary code examples. We want to understand how you think, not how fast you can deploy a group of instances.

Lastly, have fun! We look forward to seeing your solution, and talking it through with you. Please be prepared to show your work in an interactive review session where you will be expected to answer questions about your approach and demonstrate the results.