

ProLUG Automation

Unit 6 Worksheet

Instructions

Fill out this sheet as you progress through the lab and discussions. Hold your worksheets until the end to turn them in as a final submission packet.

Discussion Questions:

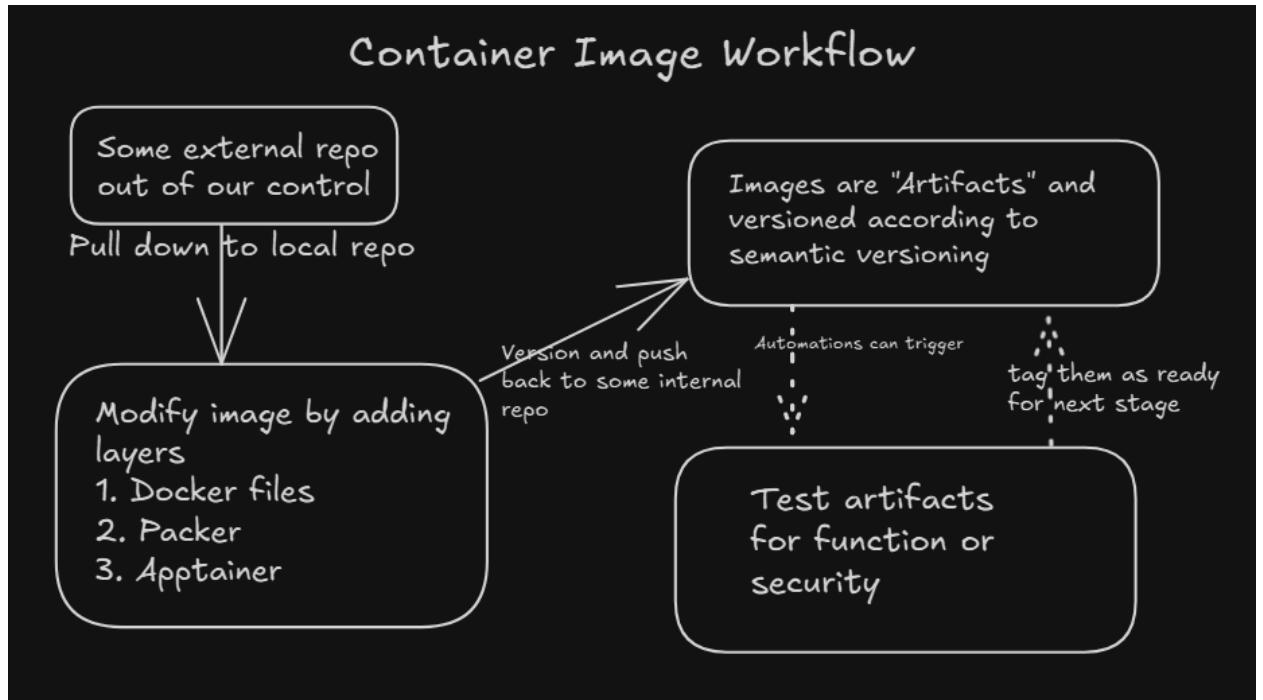
Unit 6 Discussion Post 1: Your infrastructure engineering teams have been experiencing problems re-creating environments. The main problems have been around reliably building the exact same environment and also making those builds happen in a timely manner.

Read <https://sre.google/sre-book/release-engineering/> and <https://sre.google/workbook/canarying-releases/> to answer the following questions.

1. What is release engineering?
2. What are the release engineering principles?
3. How do the tools we've discussed this week, Apptainer, Packer, Terraform, or even Ansible fit into these topics?

Unit 6 Discussion Post 2: Your team is trying to decide between the Apptainer and Packer tools for container deployments. You've been tasked with making the decision between the two packages. Read the following: <https://developer.hashicorp.com/packer/docs/intro> and <https://apptainer.org/docs/user/latest/introduction.html#why-use-apptainer>

1. Can you describe apptainer and packer?
2. How would you make the decision between the two of these tools? (You may want to make a table)
 1. What do they both do?
 2. What do only one or the other do?
 3. What are the strengths and weaknesses of each?
3. Modify or fix the drawing to show how your team will deploy containers.



Definitions/Terminology

Notes During Lecture/Class:

Links:

- Apptainer: <https://apptainer.org/docs/user/latest/>
- Packer Tutorial Library:
https://developer.hashicorp.com/tutorials/library?product=packer&edition=open_source
 - Packer with github actions:
<https://developer.hashicorp.com/packer/tutorials/cloud-production/github-actions>
 - Provisioning: <https://developer.hashicorp.com/packer/tutorials/docker-get-started/docker-get-started-provision>
- Terraform
 - With Docker: <https://developer.hashicorp.com/terraform/tutorials/docker-get-started>

Terms:

Docker Images

Docker processes

Container/Runtime Environment

CI/CD

Release engineering

- Releases
- Code base
- Code changes
- Build configuration
 - Building
 - Branching
 - Testing

Useful tools:

Lab and Assignment

Unit6 Lab from Lab book

Digging Deeper

1.

Reflection Questions

1. What questions do you still have about this week?

2. How are you going to use what you've learned in your current role?