Activity 4

Locate the template in the GitHub repository, save it locally, and open it in VS Code for edits. Add a Mappings section for a RegionImages map, defining AMIs for eu-west-1 and us-east-1 under the ImageId key. Replace the ImageId parameter with Fn::FindInMap, referencing the map, AWS::Region, and ImageId. Add a Metadata section to group and label parameters into Web Server Settings and VPC Settings. Save and test by creating stacks in AWS Ireland and North Virginia, verifying AMI selection and parameter grouping. Delete both stacks to clean up resources after validation.

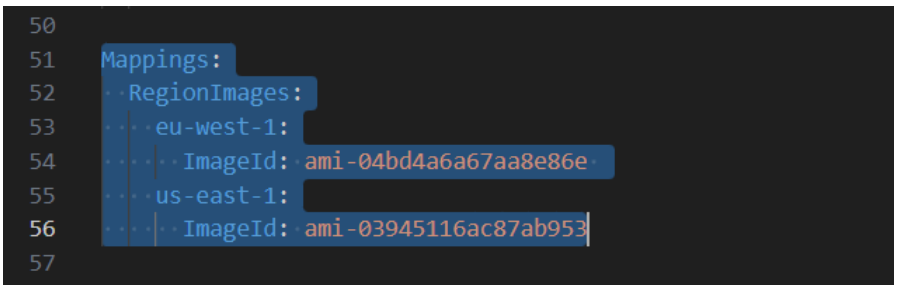
What we have Done in this Activity:

1. **Dynamic Region Mapping:**
   - Defined a Mappings section to provide region-specific AMIs for EC2 instances and used the Fn::FindInMap function to dynamically retrieve AMIs based on the AWS region.
2. **Improved Parameter Management:**
   - Introduced a Metadata section to organize parameters into logical groups (Web Server Settings and VPC Settings) and applied custom labels to improve user clarity.
3. **Validation Across Regions:**
   - Verified the template's functionality by successfully creating and testing stacks in multiple AWS regions (Ireland and North Virginia) and ensured the mappings worked correctly.
4. **Simplified User Experience:**
   - Removed redundant parameters (like ImageId) to streamline the stack creation process.

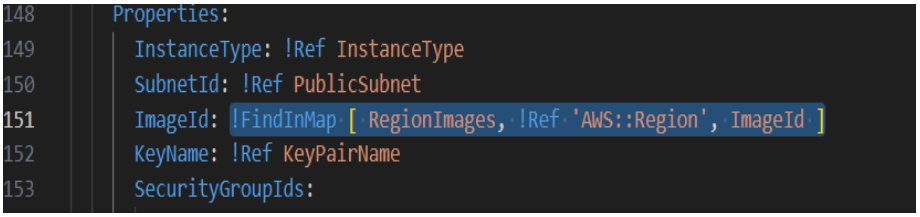
Activity

1. Find the template files in our GitHub repository under the same name as the heading for easy access and edits. Find and Save the attached template locally, open it in VS Code for edits.

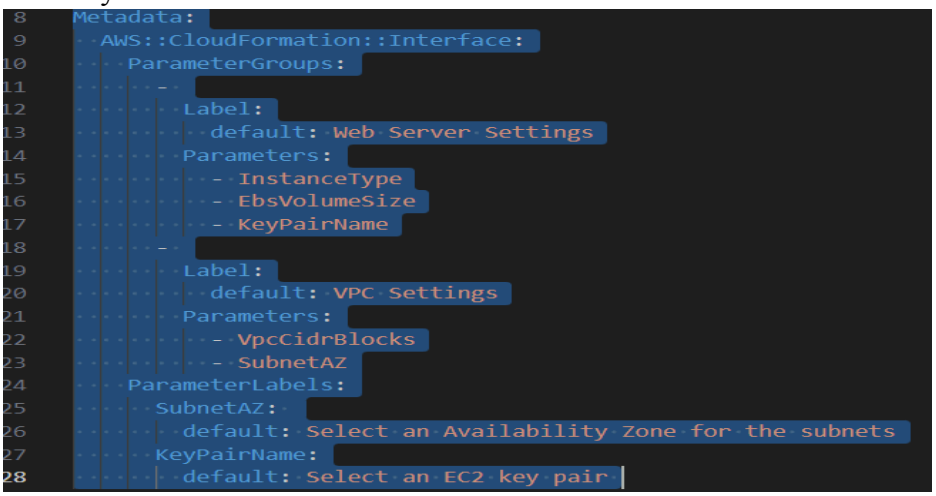
2. Define a Mappings section between Parameters and Resources. Create a map named RegionImages with top-level keys for eu-west-1 and us-east-1.



3. Add a second-level key ImageId with valid AMIs for each region. Update the WebServerInstance resource's ImageId to use the Fn::FindInMap function, referencing the map, the AWS::Region pseudo parameter, and the ImageId key.
4. Remove the existing ImageId parameter from the template and add the highlighted data.

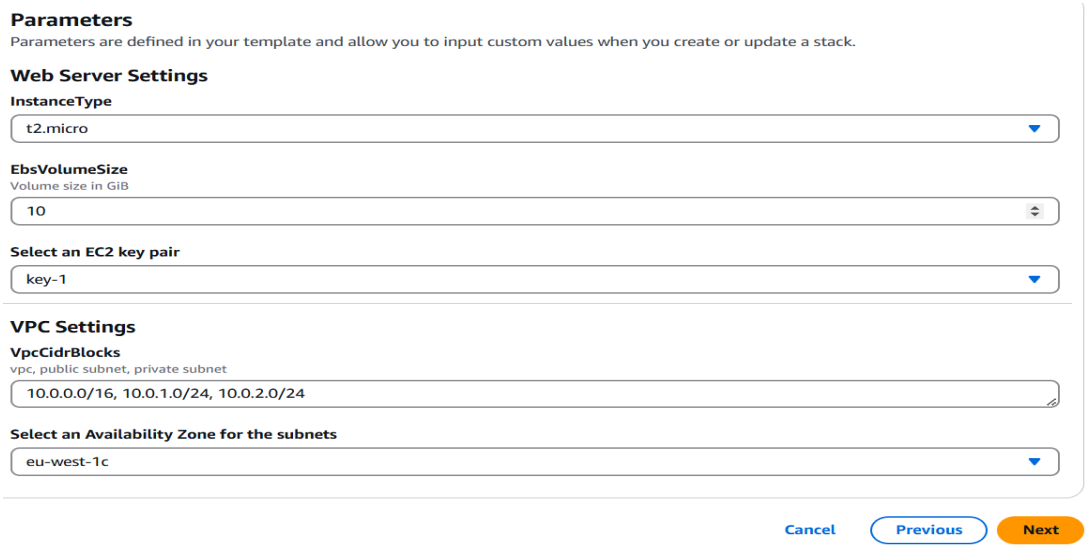


5. Add a Metadata section for parameter grouping and labeling before Parameters. Define ParameterGroups for Web Server Settings and VPC Settings, assigning relevant parameters to each. Customize labels for specific parameters like SubnetAZ and KeyPairName under ParameterLabels in the metadata.

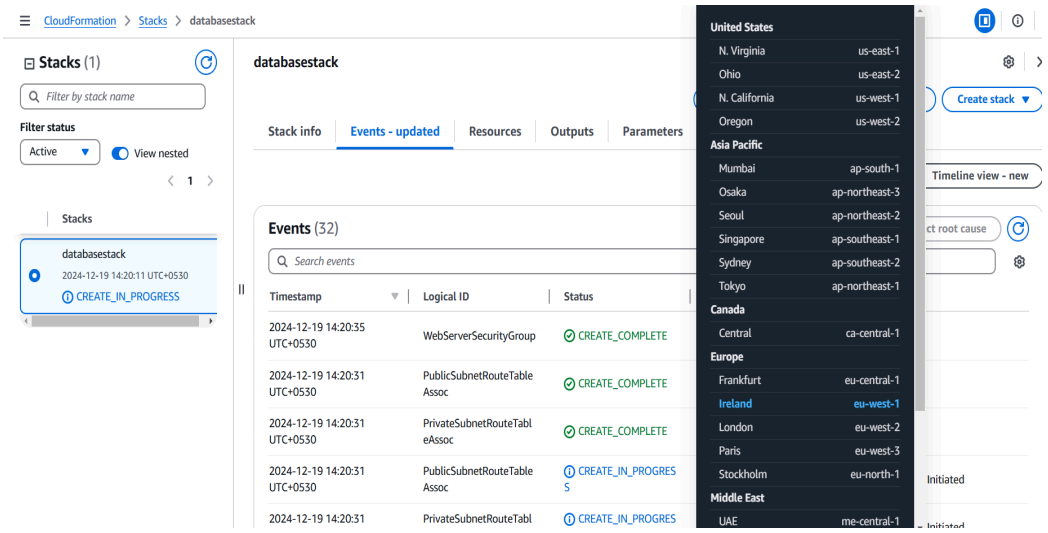


6. Save the updated template and test it by creating a stack in AWS Ireland.

7. Verify correct parameter grouping, labels, and stack creation.



8. Switch to AWS North Virginia, upload the template, and create another stack.
9. Validate stack functionality and verify the correct AMI is used for each region.



10. Delete stacks in both regions to clean up resources.