



Lab - ARM Templates - Troubleshooting Templates and Deployments


 Please note that the lab environment is restricted by policy. You will be able to create only the Azure resources required by the lab.

This lab will guide you through troubleshooting a variety of template deployment failures that you may encounter in the real world.

The templates have already been written and need to be carefully reviewed to determine what is causing their deployment failure. The templates can be found in `C:\Lab_Files\M04\S06` along with an error-free version of the templates. Also, there will be links throughout the lab that can be clicked to reveal the answer.

Remember that each Azure resource is typically deployed in its own operation and therefore can be a very useful method for troubleshooting. To see each operation's request & response (for helping determine which area of the template is erroring out) use the following example:

 This will only work if the deployment is submitted to ARM. For pre-validation errors, the deployment will not exist.

1. Sign into  StandardVM as `LabUser` using `Pa$$w0rd` as the password.
2. The deployment must use the flag `-DeploymentDebugLogLevel All`

a. Example:

```
powershell
New-AzResourceGroupDeployment -Name PIP -ResourceGroupName '{RESOURCE_GROUP
```

3. Pull back each operation by referencing the original deployment's name

a. Example:


```
powershell
$operations = Get-AzResourceGroupDeploymentOperation -DeploymentName PIP -R
foreach ($operation in $operations)
{
    Write-Host $operation.id
    Write-Host "Request:"
    $operation.Properties.Request | ConvertTo-Json -Depth 10


    Write-Host "Response:"
    $operation.Properties.Response | ConvertTo-Json -Depth 10
}
```

```
}

```


Lab 1


1. Deploy  **Lab1.json** and when prompted, enter values of your choosing.
2. Did the deployment fail and if so, why did it fail? If the deployment succeeded, can you find ways the deployment would have failed?


 Check for template validation failure message. It will detail if the values provided were invalid and why.

3. [Click for the answer](#)
4. Attempt to redeploy  **Lab1.json** using valid values



Lab 2


1. Deploy  **Lab2.json**
2. Why did the deployment fail?


 The error should return the JSON path with the line and character position that failed parsing.

3. Review the template file in VS Code and use the Problems panel at the bottom (or use Ctrl+Shift+M shortcut) to view issues VS Code has identified
4. Remediate all of the JSON structure issues in the template and redeploy. [Click for the answer](#)
5. With the errors resolved, attempt to redeploy  **Lab2.json**

Lab 3

1. Review  **Lab3.json** . Will you be prompted for parameters?
2. Deploy  **Lab3.json**
3. Why did the deployment fail?

 This time, the underlying error is not surfaced in the initial error. You will have to dig into the inner errors further down to find the cause of the first failure.

4. How can the error be resolved for all future deployments? [Click for the answer](#)
5. Resolve the error and attempt to redeploy  **Lab3.json**
6. Why did the deployment fail?

💡 Because pre-deployment validation succeeded, you can use the Get-AzResourceGroupDeploymentOperation script at the beginning of the guide to gather deployment errors. Were all dependent resources deployed in time? How can resource dependency be defined?

7. [Click for the answer](#)

8. Resolve the error and attempt to redeploy  **Lab3.json**

Lab 4

1. Deploy  **Lab4.json**

2. Why did the deployment fail? [Click for the answer](#)

3. Resolve the error and attempt to redeploy  **Lab4.json**

4. Why did the deployment fail? [Click for the answer](#)

5. Resolve the error and attempt to redeploy  **Lab4.json**

Lab 5

1. Delete the App Service and Plan to prevent a conflict with Windows and Linux App Service Plans in the same Resource Group.

2. Deploy  **Lab5.json**

3. Why did the deployment fail? [Click for the answer](#)

4. Resolve the error and attempt to redeploy  **Lab5.json**

5. Why did the deployment fail? [Click for the answer](#)

6. Resolve the error and attempt to redeploy  **Lab5.json**

Lab 6

1. Deploy  **Lab6.json**

2. Why did the deployment fail? [Click for the answer](#)

3. Resolve the error and attempt to redeploy  **Lab6.json**