考试地点：居家（只能有一个显示器，必须保证有话筒、摄像头、网络访问，需要下载专门的考试使用应用）

考试时长：1个小时

考试类型：选择题（单选/多选/填空）

考试题数量：57题

考试价格：USD 70.50 （没有免费重考，一年只能考最多三次）

考试范围：

1.0  Understand infrastructure as code (IaC) concepts

2.0  Understand Terraform's purpose (vs other IaC)

3.0  Understand Terraform basics

4.0  Use the Terraform CLI (outside of core workflow)

5.0  Interact with Terraform modules

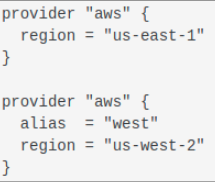
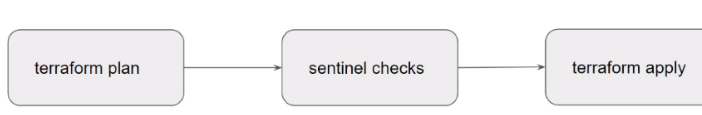
6.0  Navigate Terraform workflow

7.0  Implement and maintain state

8.0  Read, generate, and modify configuration

9.0  Understand Terraform Cloud and Enterprise capabilities

真题考点

1. What is “terraform state rm” for?
2. There is a requirement to create a security group for the database servers. There is a list created that has more than 50 IP addresses that needs to be added to the security group rule. What functionality in terraform can be used to iterate over a list of required IP addresses to add to the new security group? (Answer: dynamic block)
3. By running command “terraform refresh” what will not be processed? ( Answer: Infrastructure Modification)
4. What is the default backend configuration for terraform? (Answer: local)
5. How to upgrade the provider version to the latest acceptable one? (Answer: terraform init -upgrade)
6. What are the steps to iteratively develop the Terraform code for your intended infrastructure? (Answer: Write Terraform code, terraform plan to view planned infrastructure changes, and terraform apply create the infrastructure)
7. When “terraform refresh” command is run, what are the operations that happen? (Answer: terraform refresh sync the state file with the real world infrastructure)
8. What is the easiest and recommended way for Terraform to read secrets from HashiCorp Vault? (Answer: Vault Provider)
9. How to list all existing workspaces? (Answer: terraform workspace list)
10. What does “terraform workspace show” do? (Answer: It is used to output the current workspace)
11. Does all backend support state locking? (Answer: Not all backends are supporting state locking.Some backends act like plain "remote disks" for state files; others support locking the state while operations are being performed, which helps prevent conflicts and inconsistencies. <https://www.terraform.io/docs/language/settings/backends/index.html>)
12. Can multiple terraform providers be used within a single Terraform configuration? (Answer: yes. For example:  
    
13. Can “terraform apply” import any resource? (Answer: No, terrform apply can change, destroy and provision resources but cannot import any resource.)
14. What do you need to do next after configuring a backend? (Answer: terraform init. When configuring a backend for the first time or moving from no defined backend to explicitly configuring one, Terraform will give you the option to migrate your state to the new backend)
15. What backend is used by terraform by default? (Answer: local)
16. What will allow data to be fetched or computed for use elsewhere in Terraform configuration? (Answer: data sources)
17. What type is not included in terraform? string/list/map/set/object/tree/array? (Answer: tree and array https://www.terraform.io/docs/language/expressions/types.html)
18. What command is used to generate a DOT format image (a visual representation of either a configuration or execution plan)? (Answer: terraform graph)
19. What does “terraform init” command do? (Answer: Initializeds downloaded and/or installed providers; Download the declared providers which are supported by HashiCorp)
20. What the flag can be used to upgrade modules and plugins a part of their respective installation steps? (Answer: terraform init -upgrade)
21. Who is a mandatory thing before running terraform import? (Answer: It is necessary to write a resource configuration block for the resource manually, to which the imported object will be attached)
22. What is necessary in variable block? (Answer: “type”)
23. How to output the aws\_instance resource server private\_ip? (Answer:  
    
24. Which version expression in terraform is correct? version = “~> 1.0”/ version = ~> 1.0? (Answer: version = “~> 1.0”)
25. What does “terrafrom refresh” do? (Answer: It is used to reconcile the state Terraform knows about via its state file with the real-world infrastructure)
26. Is “terraform destroy” the only command through which infrastructure can be destroyed? (Answer: no)
27. What does terraform destroy do? (Answer: It is used to destroy the Terraform-mageed infrastructure)
28. What flag is used to define a specific version of the provider? (Answer: required\_version)
29. If a creation-time provisioner fails, the resource is marked as tained. Is it true? (Answer: Yes. Creation-time provisioners are only run during creation, not during updating or any other lifecycle. If a creation-time provisioner fails, the resource is marked as tained)
30. By default, provisioner that fail will also cause the Terraform apply itself to fail. Is it true? (Answer: Yes. The on\_failure setting can be used to change this. )
31. What type connections are supported by the remote-exec provisioner? (Answer: ssh and winrm)
32. What does “terraform state rm” do? (Answer: Remove items form the Terraform state)
33. What does “terraform state show” do? (Answer: Show the attributes of a single resource in the state)
34. What does “terraform state list” do? (Answer: List resources within terraform state file)
35. How can we inspect the current state of the infrastructure applied? (Answer: terraform show)
36. When using the Terraform provider for Vault, the tight integration between these HashiCorp tools provides the ability to mask secrets in the terraform plan and state files. Is it true? (Answer: No. As of now, there is no mechanism to protect secrets in terrform.)
37. What are the ways in which certain data like secrets can be omitted s they are not shared with others?(Answer: 1. Command-line key/value pairs. 2. Use the -backend-config=PATH to specify a separate config file. 3. Interactively on the command line)
38. In what step is sentinel executed? (Answer: before “terraform apply”)  
    
39. What does terraform taint do? (Answer: The terraform taint command manually marks a Terraform-managed resource as tainted, forcing it to be destroyed and recreated on the next apply. Note that tainting a resource for recreation may affect resources that depend on the newly tainted resource)
40. What does Terraform validate do? (Answer: It primarily checks whether a configuration is syntactically valid. It can check various aspects including unsupported arguments, undeclared variables and other)

以下内容没有考到，但是值得了解

1. How to enable DEBUG mode? (Answer: set TF\_LOG=DEBUG and TF\_LOG\_PATH=/path/to/file)
2. What command will format your terraform code? (Answer: terraform fmt)
3. In which folder are the custom workspace state files are stored? (Answer: terraform.tfstate.d)
4. Matthew has declared a variable name user\_name in terraform configuration but missed defining the value associated with it.   
   variable user\_name{}  
   On a terraform plan, will the output give an error since variable is not defined in code? (Answer: no)
5. Will terrform validate be blocked when the Terraform state file is locked? (Answer: No)
6. What command is used to save a terraform plan to a file? (Answer:terraform plan -out=<filename>
7. After executing a terraform apply, you notice that a resource has a tilde (~) next to it. What does this infer? (Answer: The resource will be updated in place)
8. What is the correct format for setting up environment variables? (Answer: TF\_VAR\_)
9. “Lookup” function retrieves the value of a single element from which data type? (Answer: Map)
10. What tasks are achieved while running a terraform plan? (Answer: Create an execution plan by evaluating the difference between the configuration file and state file)
11. What feature of Terraform Cloud that is NOTfree to customers? (Answer: Roles and Team Management)
12. What is the approach to install Teraform in location where internet connectivity is not present? (Answer: Air Gapped)
13. Terraform Enterprise requires what type of backend database for a clustered deployment? (Answer: PostgresSQL)
14. What is the most accurate statement to describe the Terraform language? (Answer: Therraform is an immutable, declarative, Infrastructure as Code provisioning launguate based on Hashicorp Configuration Language, or optionally JSON)
15. What VCS providers is supported by Terraform cloud? (Answer: Github./Gitlab/Bitbucket/Azure DevOps)
16. What operating system is supported by terraform enterprise? (Answer: Debian 9-10/ Ubuntu 14 - 20.04/Read Hat Enterprise Linux 7-8/CentOS 7-8/Amazon Linux/Oracle Linux)