HashiCorp

Exam Questions TA-002-P

HashiCorp Certified: Terraform Associate

NEW QUESTION 1
- (Exam Topic 1)
You have a simple Terraform configuration containing one virtual machine (VM) in a cloud provider. You run terraform apply and the VM is created successfully. What will happen if you delete the VM using the cloud provider console, and run terraform apply again without changing any Terraform code?

A. Terraform will remove the VM from state file
B. Terraform will report an error
C. Terraform will not make any changes
D. Terraform will recreate the VM

Answer: D

NEW QUESTION 2
- (Exam Topic 1)
Which of the following is not a valid string function in Terraform?

A. split
B. join
C. slice
D. chomp

Answer: C

Explanation:

https://www.terraform.io/language/functions

NEW QUESTION 3
- (Exam Topic 1)
Terraform provisioners can be added to any resource block.

A. True
B. False

Answer: A

Explanation:
https://www.phillipsj.net/posts/introduction-to-terraform-provisioners/
As you continue learning about Terraform, you will start hearing about provisioners. Terraform provisioners can be created on any resource and provide a way to execute actions on local or remote machines.
https://www.terraform.io/language/resources/provisioners/local-exec

NEW QUESTION 4
- (Exam Topic 1)
You need to deploy resources into two different cloud regions in the same Terraform configuration. To do that, you declare multiple provider configurations as follows:

```
provider “aws” {
  region = “us-east-1”
}
provider “aws” {
  alias = “west”
  region = “us-west-2”
}
```

What meta-argument do you need to configure in a resource block to deploy the resource to the “us-west-2” AWS region?

A. alias = west
B. provider = west
C. provider = aws.west
D. alias = aws.west

Answer: C

Explanation:

https://www.terraform.io/language/providers/configuration

NEW QUESTION 5
- (Exam Topic 1)
You have used Terraform to create an ephemeral development environment in the cloud and are now ready to destroy all the infrastructure described by your Terraform configuration. To be safe, you would like to first see all the infrastructure that will be deleted by Terraform.
Which command should you use to show all of the resources that will be deleted? (Choose two.)

A. Run terraform plan -destroy.
B. This is not possibl
C. You can only show resources that will be created.
D. Run terraform state rm *.
E. Run terraform destroy and it will first output all the resources that will be deleted before prompting for approval.

Answer: AD

Explanation:

Reference: https://www.terraform.io/docs/cli/commands/state/rm.html

NEW QUESTION 6
- (Exam Topic 1)
The terraform.tfstate file always matches your currently built infrastructure.

A. True
B. False

Answer: B

Explanation:
Reference: https://www.terraform.io/docs/language/state/index.html

NEW QUESTION 7
- (Exam Topic 1)
How can terraform plan aid in the development process?

A. Validates your expectations against the execution plan without permanently modifying state
B. Initializes your working directory containing your Terraform configuration files
C. Formats your Terraform configuration files
D. Reconciles Terraform’s state against deployed resources and permanently modifies state using the current status of deployed resources

Answer: A

Explanation:
"The terraform plan command creates an execution plan, which lets you preview the changes that Terraform plans to make to your infrastructure. By default, when Terraform creates a plan it:
Reads the current state of any already-existing remote objects to make sure that the Terraform state is up-to-date.
Compares the current configuration to the prior state and noting any differences.
Proposes a set of change actions that should, if applied, make the remote objects match the configuration."
"The plan command alone will not actually carry out the proposed changes, and so you can use this command to check whether the proposed changes match what you expected before you apply the changes or share your changes with your team for broader review.
If Terraform detects that no changes are needed to resource instances or to root module output values, terraform plan will report that no actions need to be taken."
https://www.terraform.io/cli/commands/plan

NEW QUESTION 8
- (Exam Topic 1)
In contrast to Terraform Open Source, when working with Terraform Enterprise and Cloud Workspaces, conceptually you could think about them as completely separate working directories.

A. True
B. False

Answer: A

Explanation:
https://www.terraform.io/cloud-docs/workspaces
"When run locally, Terraform manages each collection of infrastructure with a persistent working directory, which contains a configuration, state data, and variables. Since Terraform CLI uses content from the directory it runs in, you can organize infrastructure resources into meaningful groups by keeping their configurations in separate directories.

NEW QUESTION 9
- (Exam Topic 1)
terraform init initializes a sample main.tf file in the current directory.

A. True
B. False

Answer: B

Explanation:
Reference: https://www.terraform.io/docs/cli/commands/init.html

NEW QUESTION 10
- (Exam Topic 1)
A terraform apply can not _____ infrastructure.

A. change
B. destroy
C. provision
D. import

Answer: D

Explanation:
https://www.educative.io/answers/what-is-the-command-to-destroy-infrastructure-in-terraform

NEW QUESTION 10
- (Exam Topic 1)
You're building a CI/CD (continuous integration/ continuous delivery) pipeline and need to inject sensitive variables into your Terraform run.
How can you do this safely?

A. Pass variables to Terraform with a –var flag
B. Copy the sensitive variables into your Terraform code
C. Store the sensitive variables in a secure_vars.tf file
D. Store the sensitive variables as plain text in a source code repository

Answer: A

Explanation:
https://blog.gruntwork.io/a-comprehensive-guide-to-managing-secrets-in-your-terraform-code-1d586955ace1

NEW QUESTION 11
- (Exam Topic 1)
Only the user that generated a plan may apply it.

A. True
B. False

Answer: B

NEW QUESTION 14
- (Exam Topic 1)
Which of the following is not a key principle of infrastructure as code?

A. Versioned infrastructure
B. Golden images
C. Idempotence
D. Self-describing infrastructure

Answer: B

Explanation:
Reference: https://docs.microsoft.com/en-us/azure/devops/learn/what-is-infrastructure-as-code#:~:text=Idempotence%20is%20a%20principle%20of,of%20the%20environment's%20starting%20state.

NEW QUESTION 19
- (Exam Topic 1)
Which provisioner invokes a process on the resource created by Terraform?

A. remote-exec
B. null-exec
C. local-exec
D. file

Answer: A

Explanation:
"The local-exec provisioner invokes a local executable after a resource is created. This invokes a process on the machine running Terraform, not on the resource."
https://www.terraform.io/language/resources/provisioners/local-exec
"The remote-exec provisioner invokes a script on a remote resource after it is created." https://www.terraform.io/language/resources/provisioners/remote-exec

NEW QUESTION 23
- (Exam Topic 1)
Module variable assignments are inherited from the parent module and do not need to be explicitly set.

A. True
B. False

Answer: B

NEW QUESTION 27
- (Exam Topic 1)

How would you reference the "name" value of the second instance of this fictitious resource?

```
resource "aws_instance" "web" {
  count = 2
  name = "terraform-${count.index}"
}
```

A. element(aws_instance.web, 2)
B. aws_instance.web[1].name
C. aws_instance.web[1]
D. aws_instance.web[2].name
E. aws_instance.web.*.name

Answer: B

Explanation:
https://www.terraform.io/language/meta-arguments/count#referring-to-instances Reference: https://www.terraform.io/docs/configuration-0-11/interpolation.html

NEW QUESTION 29
- (Exam Topic 1)
FILL BLANK
Which flag would you add to terraform plan to save the execution plan to a file?
Type your answer in the field provided. The text field is not case-sensitive and all variations of the correct answer are accepted.

A. Mastered
B. Not Mastered

Answer: A

Explanation:
"You can use the optional -out=FILE option to save the generated plan to a file on disk, which you can later execute by passing the file to terraform apply as an extra argument. This two-step workflow is primarily intended for when running Terraform in automation. If you run terraform plan without the -out=FILE option then it will create a speculative plan, which is a description of the effect of the plan but without any intent to actually apply it." https://www.terraform.io/cli/commands/plan

NEW QUESTION 33
- (Exam Topic 1)
You would like to reuse the same Terraform configuration for your development and production environments with a different state file for each.
Which command would you use?

A. terraform import
B. terraform workspace
C. terraform state
D. terraform init

Answer: B

Explanation:
https://www.terraform.io/language/state/workspaces#when-to-use-multiple-workspaces

NEW QUESTION 34
- (Exam Topic 1)
What is the workflow for deploying new infrastructure with Terraform?

A. terraform plan to import the current infrastructure to the state file, make code changes, and terraform apply to update the infrastructure
B. Write a Terraform configuration, run terraform show to view proposed changes, and terraform apply to create new infrastructure.
C. terraform plan to import the current infrastructure to the state file, make code changes, and terraform apply to update the infrastructure
D. Write a Terraform configuration, run terraform init, run terraform plan to view planned infrastructure changes, and terraform apply to create new infrastructure.

Answer: D

Explanation:
Reference: https://www.google.com/search?q=Write+a+Terraform+configuration%2C+run+terraform+init%2C+run+terraform+plan+to+view+planned+infrastructure+changes%2C+and+terraform+apply+to+create+new+infrastructure.&oq=Write+a+Terraform+configuration%2C+run+terraform+init%2C+run+terraform+plan+to+view+planned+infrastructure+changes%2C+and+terraform+apply+to+create+new+infrastructure.&aqs=chrome..69i57.556j0j7&sourceid=chrome&ie=UTF-8

NEW QUESTION 37
- (Exam Topic 1)
If a module declares a variable with a default, that variable must also be defined within the module.

A. True
B. False

Answer: B

NEW QUESTION 38
- (Exam Topic 1)
HashiCorp Configuration Language (HCL) supports user-defined functions.

A. True
B. False

Answer: B

Explanation:
https://www.terraform.io/language/functions
The Terraform language does not support user-defined functions, and so only the functions built into the language are available for use

NEW QUESTION 41
- (Exam Topic 1)
What is not processed when running a terraform refresh?

A. State file
B. Configuration file
C. Credentials
D. Cloud provider

Answer: B

Explanation:
"The terraform refresh command reads the current settings from all managed remote objects and updates the Terraform state to match."

NEW QUESTION 45
- (Exam Topic 1)
If writing Terraform code that adheres to the Terraform style conventions, how would you properly indent each nesting level compared to the one above it?

A. With four spaces
B. With a tab
C. With three spaces
D. With two spaces

Answer: D

Explanation:
https://www.terraform.io/language/syntax/style#style-conventions

NEW QUESTION 50
- (Exam Topic 1)
In Terraform 0.13 and above, outside of the required_providers block, Terraform configurations always refer to providers by their local names.

A. True
B. False

Answer: A

Explanation:
Outside of the required_providers block, Terraform configurations always refer to providers by their local names.
Reference: https://www.terraform.io/docs/language/providers/requirements.html https://www.terraform.io/language/providers/requirements#local-names

NEW QUESTION 54
- (Exam Topic 1)
Terraform and Terraform providers must use the same major version number in a single configuration.

A. True
B. False

Answer: B

Explanation:
https://www.terraform.io/language/expressions/version-constraints#terraform-core-and-provider-versions

NEW QUESTION 57
- (Exam Topic 1)
What is terraform refresh intended to detect?

A. Terraform configuration code changes
B. Empty state files
C. State file drift
D. Corrupt state files

Answer: C

Explanation:
"The terraform refresh command reads the current settings from all managed remote objects and updates the Terraform state to match. Warning: This command is deprecated, because its default behavior is unsafe if you have misconfigured credentials for any of your providers. See below for more information and recommended alternatives." https://www.terraform.io/cli/commands/refresh

NEW QUESTION 58
- (Exam Topic 1)
Which of the following is not an action performed by terraform init?

A. Create a sample main.tf file
B. Initialize a configured backend
C. Retrieve the source code for all referenced modules
D. Load required provider plugins

Answer: A

NEW QUESTION 62
- (Exam Topic 1)
If you manually destroy infrastructure, what is the best practice reflecting this change in Terraform?

A. Run terraform refresh
B. It will happen automatically
C. Manually update the state fire
D. Run terraform import

Answer: A

Explanation:
https://www.terraform.io/cli/commands/refresh#:~:text=The%20terraform%20refresh%20command%20reads%

NEW QUESTION 66
- (Exam Topic 1)
You have multiple team members collaborating on infrastructure as code (IaC) using Terraform, and want to apply formatting standards for readability.
How can you format Terraform HCL (HashiCorp Configuration Language) code according to standard Terraform style convention?

A. Run the terraform fmt command during the code linting phase of your CI/CD process
B. Designate one person in each team to review and format everyone's code
C. Manually apply two spaces indentation and align equal sign "=" characters in every Terraform file (*.tf)
D. Write a shell script to transform Terraform files using tools such as AWK, Python, and sed

Answer: A

Explanation:
https://www.terraform.io/cli/commands/fmt

NEW QUESTION 70
- (Exam Topic 2)
True or False: A list(...) contain a number of values of the same type while an object(...) can contain a number of values of different types.

A. False
B. True

Answer: B

Explanation:
Collection Types
A collection type allows multiple values of one other type to be grouped together as a single value. The type of value within a collection is called its element type. All collection types must have an element type, which is provided as the argument to their constructor.
For example, the type list(string) means "list of strings", which is a different type than list(number), a list of numbers. All elements of a collection must always be of the same type.
The three kinds of collection type in the Terraform language are:
* list(...): a sequence of values identified by consecutive whole numbers starting with zero.
The keyword list is a shorthand for list(any), which accepts any element type as long as every element is the same type. This is for compatibility with older configurations; for new code, we recommend using the full form.
* map(...): a collection of values where each is identified by a string label.
The keyword map is a shorthand for map(any), which accepts any element type as long as every element is the same type. This is for compatibility with older configurations; for new code, we recommend using the full form.
* set(...): a collection of unique values that do not have any secondary identifiers or ordering. https://www.terraform.io/docs/configuration/types.html
Structural Types
A structural type allows multiple values of several distinct types to be grouped together as a single value. Structural types require a schema as an argument, to specify which types are allowed for which elements.
The two kinds of structural type in the Terraform language are:
* object(...): a collection of named attributes that each have their own type.
The schema for object types is { <KEY> = <TYPE>, <KEY> = <TYPE>, ... } — a pair of curly braces containing a comma-separated series of <KEY> = <TYPE> pairs. Values that match the object type must contain all of the specified keys, and the value for each key must match its specified type. (Values with additional keys can still match an object type, but the extra attributes are discarded during type conversion.)
* tuple(...): a sequence of elements identified by consecutive whole numbers starting with zero, where each element has its own type.
The schema for tuple types is [<TYPE>, <TYPE>, ...] — a pair of square brackets containing a
comma-separated series of types. Values that match the tuple type must have exactly the same number of elements (no

more and no fewer), and the value in each position must match the specified type for that position.
For example: an object type of object({ name=string, age=number }) would match a value like the following:
{
name = "John" age = 52
}
Also, an object type of object({ id=string, cidr_block=string }) would match the object produced by a reference to an aws_vpc resource, like aws_vpc.example_vpc; although the resource has additional attributes, they would be discarded during type conversion.
Finally, a tuple type of tuple([string, number, bool]) would match a value like the following: ["a", 15, true]
https://www.terraform.io/docs/configuration/types.html

NEW QUESTION 74
- (Exam Topic 2)
The Terraform language does not support user-defined functions, and so only the functions built in to the language are available for use.

A. False
B. True

Answer: B

Explanation:
https://www.terraform.io/docs/configuration/functions.html

NEW QUESTION 77
- (Exam Topic 2)
Environment variables can be used to set variables. The environment variables must be in the format " "_<variablename>. Select the correct prefix string from the following list.

A. TF_CLI_ARGS
B. TF_VAR
C. TF_VAR_
D. TF_VAR_ENV

Answer: C

Explanation:
Environment variables can be used to set variables. The environment variables must be in the format TF_VAR_name and this will be checked last for a value. For example:
export TF_VAR_region=us-west-1
export TF_VAR_ami=ami-049d8641 export TF_VAR_alist='[1,2,3]'
export TF_VAR_amap='{ foo = "bar", baz = "qux" }' https://www.terraform.io/docs/commands/environment-variables.html

NEW QUESTION 79
- (Exam Topic 2)
You want to use different AMI images for different regions and for the purpose you have defined following code block.
* 1.variable "images"
* 2.{
* 3. type = "map"
* 4.
* 5. default = {
* 6. us-east-1 = "image-1234"
* 7. us-west-2 = "image-4567"
* 8. us-west-1 = "image-4589"
* 9. }
* 10.}
What of the following approaches needs to be followed in order to select image-4589?

A. var.images["us-west-1"]
B. var.images[3]
C. var.images[2]
D. lookup(var.images["us-west-1"]

Answer: A

NEW QUESTION 83
- (Exam Topic 2)
In regards to deploying resources in multi-cloud environments, what are some of the benefits of using Terraform rather than a provider's native tooling? (select three)

A. Terraform can help businesses deploy applications on multiple clouds and on-premises infrastructure.
B. Terraform is not cloud-agnostic and can be used to deploy resources across a single public cloud.
C. Terraform simplifies management and orchestration, helping operators build large-scale, multi-cloud infrastructure.
D. Terraform can manage cross-cloud dependencies.

Answer: ACD

Explanation:
Terraform is cloud-agnostic and allows a single configuration to be used to manage multiple providers, and to even handle cross-cloud dependencies. This simplifies management and orchestration, helping operators build large-scale multi-cloud infrastructures.
https://www.terraform.io/intro/use-cases.html

NEW QUESTION 86
- (Exam Topic 2)
Which of the following clouds does not have a provider maintained HashiCorp?

A. IBM Cloud
B. DigitalOcean
C. OpenStack
D. AWS

Answer: A

Explanation:
IBM Cloud does not have a provider maintained by HashiCorp, although IBM Cloud does maintain their own Terraform provider.
https://www.terraform.io/docs/providers/index.html

NEW QUESTION 90
- (Exam Topic 2)
terraform state subcommands such as list are read-only commands, do read-only commands create state backup files?

A. Yes
B. No

Answer: B

Explanation:
Subcommands that are read-only (such as list) do not write any backup files since they aren't modifying the state.
All terraform state subcommands that modify the state write backup files. The path of these backup file can be controlled with -backup.
https://www.terraform.io/docs/commands/state/index.html#backups

NEW QUESTION 94
- (Exam Topic 2)
You have created 2 workspaces PROD and RQA. You have switched to RQA and provisioned RQA infrastructure from this workspace. Where is your state file stored?

A. terraform.tfstate.d
B. terraform.d
C. terraform.tfstate.RQA
D. terraform.tfstate

Answer: A

NEW QUESTION 96
- (Exam Topic 2)
What is the default backend for Terraform?

A. consul
B. gcs
C. local
D. etcd

Answer: C

Explanation:
By default, Terraform uses the "local" backend, which is the normal behavior of Terraform you're used to. https://www.terraform.io/docs/backends/index.html

NEW QUESTION 101
- (Exam Topic 2)
The current implementation of Terraform import can only import resources into the state. It does not generate configuration.

A. False
B. True

Answer: B

Explanation:
The current implementation of Terraform import can only import resources into the state. It does not generate configuration. A future version of Terraform will also generate configuration.
Because of this, prior to running terraform import it is necessary to write manually a resource configuration block for the resource, to which the imported object will be mapped.
While this may seem tedious, it still gives Terraform users an avenue for importing existing resources. https://www.terraform.io/docs/import/index.html#currently-state-only

NEW QUESTION 105
- (Exam Topic 2)
Which of the following Terraform files should be ignored by Git when committing code to a repo? (select Three)

A. Files named exactly terraform.tfvars or terraform.tfvars.json.
B. Any files with names ending in .auto.tfvars or .auto.tfvars.json.
C. input.tf
D. terraform.tfstate
E. output.tf

Answer: ABD

Explanation:
The .gitignore file should be configured to ignore Terraform files that either contain sensitive data or are not required to save.
Terraform state (terraform.tfstate) can contain sensitive data, depending on the resources in use and your definition of "sensitive." The state contains resource IDs and all resource attributes. For resources such as databases, this may contain initial passwords.
When using local state, state is stored in plain-text JSON files.
The terraform.tfvars file may contain sensitive data, such as passwords or IP addresses of an environment that you may not want to share with others.

NEW QUESTION 108
- (Exam Topic 2)
Workspaces in Terraform provides similar functionality in the open-source, Terraform Cloud, and Enterprise versions of Terraform.

A. True
B. False

Answer: B

Explanation:
https://www.terraform.io/docs/cloud/migrate/workspaces.html
Workspaces, managed with the terraform workspace command, aren't the same thing as Terraform Cloud's workspaces. Terraform Cloud workspaces act more like completely separate working directories; CLI workspaces are just alternate state files.

NEW QUESTION 111
- (Exam Topic 2)
terraform refresh will update the state file?

A. True
B. False

Answer: A

Explanation:
The terraform refresh command is used to reconcile the state Terraform knows about (via its state file) with the real-world infrastructure. This can be used to detect any drift from the last-known state, and to update the state file.
This does not modify infrastructure, but does modify the state file. If the state is changed, this may cause changes to occur during the next plan or apply.

NEW QUESTION 115
- (Exam Topic 2)
You want to get involved in the development of Terraform. As this is an open source project, you would like to contribute a fix for an open issue of Terraform. What programming language will need to use to write the fix?

A. It depends on which command issue related to.
B. Python
C. Go
D. Java

Answer: C

Explanation:
Basic programming knowledge. Terraform and Terraform Plugins are written in the Go programming language, but even if you've never written a line of Go before, you're still welcome to take a dive into the code and submit patches. The community is happy to assist with code reviews and offer guidance specific to Go.

NEW QUESTION 117
- (Exam Topic 2)
By default, a defined provisioner is a creation-time provisioner.

A. True
B. False

Answer: A

Explanation:
https://www.terraform.io/docs/provisioners/index.html

NEW QUESTION 118
- (Exam Topic 2)
Please identify the offerings which are unique to Terraform Enterprise, and not available in either Terraform OSS, or Terraform Cloud. Select four.

A. Audit Logs
B. Private Network Connectivity

C. VCS Integration
D. Sentinel
E. Clustering

Answer: ABE

Explanation:
https://www.hashicorp.com/products/terraform/pricing/

NEW QUESTION 119
- (Exam Topic 2)
Which of the following best describes a Terraform provider?

A. A plugin that Terraform uses to translate the API interactions with the service or provider.
B. Serves as a parameter for a Terraform module that allows a module to be customized.
C. Describes an infrastructure object, such as a virtual network, compute instance, or other components.
D. A container for multiple resources that are used together.

Answer: A

Explanation:
A provider is responsible for understanding API interactions and exposing resources. Providers generally are an IaaS (e.g. Alibaba Cloud, AWS, GCP, Microsoft Azure, OpenStack), PaaS (e.g. Heroku), or SaaS services (e.g.Terraform Cloud, DNSimple, Cloudflare).
https://www.terraform.io/docs/providers/index.html

NEW QUESTION 121
- (Exam Topic 2)
Which of the below terraform commands do not run terraform refresh implicitly before taking actual action of the command?

A. terraform apply
B. terraform destroy
C. terraform init
D. terraform import
E. terraform plan

Answer: CD

Explanation:
https://www.terraform.io/docs/commands/refresh.html

NEW QUESTION 122
- (Exam Topic 2)
What does terrafom plan do ?

A. Create an execution plan by evaluating the difference between configuration file and state file.
B. Performs a refresh, unless explicitly disabled, and then apply the changes that are necessary to achieve the desired state specified in the configuration files.
C. Create an execution plan by evaluating the difference between configuration file and actual infrastructure.
D. Checks whether the execution plan for a set of changes matches your expectations by making changes to real resources or to the state.

Answer: A

NEW QUESTION 123
- (Exam Topic 2)
Terraform must track metadata such as resource dependencies. Where is this data stored?

A. workspace
B. backend
C. state file
D. metadata store

Answer: C

Explanation:
Terraform typically uses the configuration to determine dependency order. However, when you delete a resource from a Terraform configuration, Terraform must know how to delete that resource. Terraform can see that a mapping exists for a resource not in your configuration and plan to destroy. However, since the configuration no longer exists, the order cannot be determined from the configuration alone.
To ensure correct operation, Terraform retains a copy of the most recent set of dependencies within the state. Now Terraform can still determine the correct order for destruction from the state when you delete one or more items from the configuration.
https://www.terraform.io/docs/state/purpose.html#metadata

NEW QUESTION 126
- (Exam Topic 3)
In Terraform Enterprise, a workspace can be mapped to how many VCS repos?

A. 5
B. 2
C. 3

D. 1

Answer: D

Explanation:
A workspace can only be configured to a single VCS repo, however, multiple workspaces can use the same repo.
https://www.terraform.io/docs/cloud/workspaces/vcs.html

NEW QUESTION 129
- (Exam Topic 3)
You have created two workspaces PROD and DEV. You have switched to DEV and provisioned DEV infrastructure from this workspace. Where is your state file stored?

A. terraform.d
B. terraform.tfstate
C. terraform.tfstate.DEV
D. terraform.tfstate.d

Answer: D

Explanation:
Terraform stores the workspace states in a directory called terraform.tfstate.d. This directory should be treated similarly to default workspace state file terraform.tfstate main.tf
provider.tf terraform.tfstate.d DEV
terraform.tfstate # DEV workspace state file PROD
terraform.tfstate # PROD workspace state file terraform.tfvars # Default workspace state file variables.tf

NEW QUESTION 131
- (Exam Topic 3)
Your manager has instructed you to start using terraform for your day-to-day operations, but your security team is concerned about the terraform state files. They have heard it contains confidential information, and are worried that it will not be securely protected. What should be your response to the security team in this regard?

A. Inform the security team that using terraform state is optional . There are ways to avoid it , and you will do the same.
B. Ensure that the state is managed in a remote backend , preferably an enterprise grade state management system like Terraform Cloud.
C. Mask the confidential entries in the terraform state file , using Vault Enterprise, another Hashicorp product , while keeping it locally.
D. Keep the state file locally on each developer machine , and ensure that there is a local protection software like KeyPass protecting it.

Answer: B

Explanation:
https://www.terraform.io/docs/state/index.html
State is very important topic for exam. Please read all of the below subtopics Purpose
Import Existing Resources Locking
Workspaces Remote State Sensitive Data

NEW QUESTION 135
- (Exam Topic 3)
Which of the following value will be accepted for var1? variable "var1" {
type = string
}

A. None of the above
B. Both A and B
C. "5"
D. 5

Answer: B

Explanation:
Terraform automatically converts number and bool values to strings when needed.

NEW QUESTION 140
- (Exam Topic 3)
Your company has been using Terraform Cloud for a some time now . But every team is creating their own modules , and there is no standardization of the modules , with each team creating the resources in their own unique way . You want to enforce a standardization of the modules across the enterprise . What should be your approach.

A. Create individual workspaces for each team , and ask them to share modules across workspaces.
B. Implement a Private module registry in Terraform cloud , and ask teams to reference them.
C. Upgrade to Terraform enterprise , since this is not possible in terraform cloud.
D. Upload the modules in the terraform public module registry , and ask teams to reference them

Answer: B

Explanation:
Terraform Cloud's private module registry helps you share Terraform modules across your organization. It includes support for module versioning, a searchable and filterable list of available modules, and a configuration designer to help you build new workspaces faster.

By design, the private module registry works much like the public Terraform Registry. If you're already used the public registry, Terraform Cloud's registry will feel familiar.
Understand the different offerings in Terraform OS, Terraform Cloud and Terraform Enterprise. Terraform Cloud's private module registry helps you share Terraform modules across your organization.
https://www.terraform.io/docs/cloud/registry/index.html https://www.terraform.io/docs/cloud/registry/publish.html

NEW QUESTION 142
- (Exam Topic 3)
After running into issues with Terraform, you need to enable verbose logging to assist with troubleshooting the error. Which of the following values provides the MOST verbose logging?

A. ERROR
B. INFO
C. WARN
D. TRACE
E. DEBUG

Answer: D

Explanation:
Terraform has detailed logs that can be enabled by setting the TF_LOG environment variable to any value. This will cause detailed logs to appear on stderr.
You can set TF_LOG to one of the log levels TRACE, DEBUG, INFO, WARN or ERROR to change the verbosity of the logs. TRACE is the most verbose and it is the default if TF_LOG is set to something other than a log level name.
Examples:
export TF_LOG=DEBUG export TF_LOG=TRACE

NEW QUESTION 143
- (Exam Topic 3)
Ric wants to enable detail logging and he wants highest verbosity of logs. Which of the following environment variable settings is correct option for him to select.

A. Set TF_LOG = DEBUG
B. Set VAR_TF = TRACE
C. Set TF_LOG = TRACE
D. Set VAR_TF_LOG = TRACE

Answer: C

Explanation:
https://www.terraform.io/docs/internals/debugging.html

NEW QUESTION 148
- (Exam Topic 3)
The Security Operations team of ABC Enterprise wants to mandate that all the Terraform configuration that creates an S3 bucket must have encryption feature enabled. What is the best way to achieve it?

A. Use Sentinel Policies.
B. Use S3 bucket policy.
C. Create a script that checks the encryption parameter is enabled on every git commit.
D. Shared a SOP to engineers to mandate encryption feature on S3.

Answer: A

Explanation:
Sentinel is an embedded policy-as-code framework integrated with the HashiCorp Enterprise products. It enables fine-grained, logic-based policy decisions, and can be extended to use information from external sources.
Using Sentinel with Terraform Cloud involves:
* Defining the policies - Policies are defined using the policy language with imports for parsing the Terraform plan, state and configuration.
* Managing policies for organizations - Users with permission to manage policies can add policies to their organization by configuring VCS integration or uploading policy sets through the API. They also define which workspaces the policy sets are checked against during runs. (More about permissions.)
* Enforcing policy checks on runs - Policies are checked when a run is performed, after the terraform plan but before it can be confirmed or the terraform apply is executed.
* Mocking Sentinel Terraform data - Terraform Cloud provides the ability to generate mock data for any run within a workspace. This data can be used with the Sentinel CLI to test policies before deployment.
https://www.terraform.io/docs/cloud/sentinel/index.html

NEW QUESTION 149
- (Exam Topic 3)
You cannot publish your own modules on the Terraform Registry.

A. False
B. True

Answer: A

Explanation:
Anyone can publish and share modules on the Terraform Registry. https://www.terraform.io/docs/registry/modules/publish.html

NEW QUESTION 151

- (Exam Topic 3)
What happens when a terraform apply command is executed?

A. Creates the execution plan for the deployment of resources.
B. Applies the changes required in the target infrastructure in order to reach the desired configuration.
C. The backend is initialized and the working directory is prepped.
D. Reconciles the state Terraform knows about with the real-world infrastructure.

Answer: B

Explanation:
The terraform apply command is used to apply the changes required to reach the desired state of the configuration, or the pre-determined set of actions generated by a terraform plan execution plan.
https://www.terraform.io/docs/commands/apply.html

NEW QUESTION 153
- (Exam Topic 3)
When multiple engineers start deploying infrastructure using the same state file, what is a feature of remote state storage that is critical to ensure the state doesn't become corrupt?

A. Object Storage
B. State Locking
C. WorkSpaces
D. Encryption

Answer: B

Explanation:
If supported by your backend, Terraform will lock your state for all operations that could write state. This prevents others from acquiring the lock and potentially corrupting your state.
State locking happens automatically on all operations that could write state. You won't see any message that it is happening. If state locking fails, Terraform will not continue. You can disable state locking for most commands with the -lock flag but it is not recommended.
If acquiring the lock is taking longer than expected, Terraform will output a status message. If Terraform doesn't output a message, state locking is still occurring if your backend supports it.
Not all backends support locking. Please view the list of backend types for details on whether a backend supports locking or not.
https://www.terraform.io/docs/state/locking.html

NEW QUESTION 154
- (Exam Topic 3)
You want terraform plan and terraform apply to be executed in Terraform Cloud's run environment but the output is to be streamed locally. Which one of the below you will choose?

A. Local Backends.
B. Terraform Backends.
C. This can be done using any of the local or remote backends.
D. Remote Backends.

Answer: D

Explanation:
When using full remote operations, operations like terraform plan or terraform apply can be executed in Terraform Cloud's run environment, with log output streaming to the local terminal. Remote plans and applies use variable values from the associated Terraform Cloud workspace.
Terraform Cloud can also be used with local operations, in which case only state is stored in the Terraform Cloud backend.
https://www.terraform.io/docs/backends/types/remote.html

NEW QUESTION 158
- (Exam Topic 3)
Complete the following sentence:
For local state, the workspaces are stored directly in a _____.

A. a file called terraform.tfstate.backup
B. directory called terraform.workspaces.tfstate
C. a file called terraform.tfstate
D. directory called terraform.tfstate.d

Answer: D

Explanation:
For local state, Terraform stores the workspace states in a directory called terraform.tfstate.d. https://www.terraform.io/docs/state/workspaces.html#workspace-internals

NEW QUESTION 160
- (Exam Topic 3)
Taint the resource "aws_instance" "baz" resource that lives in module bar which lives in module foo.

A. terraform taint module.foo.module.bar.baz
B. terraform taint module.foo.bar.aws_instance.baz
C. terraform taint module.foo.module.bar.aws_instance.baz
D. terraform taint foo.bar.aws_instance.baz

Answer: C

Explanation:
Check resource addressing https://www.terraform.io/docs/internals/resource-addressing.html

NEW QUESTION 163
- (Exam Topic 3)
Command terraform refresh will update state file?

A. False
B. True

Answer: B

Explanation:
The terraform refresh command is used to reconcile the state Terraform knows about (via its state file) with the real-world infrastructure. This can be used to detect any drift from the last-known state, and to update the state file.
This does not modify infrastructure, but does modify the state file. If the state is changed, this may cause changes to occur during the next plan or apply.
https://www.terraform.io/docs/commands/refresh.html

NEW QUESTION 166
- (Exam Topic 3)
You cannot publish your own modules on the Terraform Registry.

A. False
B. True

Answer: A

Explanation:
https://www.terraform.io/docs/registry/modules/publish.html
You have a Terraform configuration file where a variable itemNum is defined as follows: variable "itemNum" { default = 3}

NEW QUESTION 167
- (Exam Topic 3)
The terraform state command can be used to _____

A. Update current state
B. Refresh existing state file
C. Print the current state file in console
D. It is not a valid command

Answer: A

Explanation:
The terraform state command is used for advanced state management. Rather than modify the state directly, the terraform state commands can be used in many cases instead.
https://www.terraform.io/docs/commands/state/index.html

NEW QUESTION 168
- (Exam Topic 3)
You can migrate the Terraform backend but only if there are no resources currently being managed.

A. False
B. True

Answer: A

Explanation:
If you need to migrate to another backend, such as Terraform Cloud, so you can continue managing it. By migrating your Terraform state, you can hand off infrastructure without de-provisioning anything.
https://www.terraform.io/docs/cloud/migrate/index.html

NEW QUESTION 169
- (Exam Topic 3)
Terraform-specific settings and behaviors are declared in which configuration block type?

A. provider
B. terraform
C. resource
D. data

Answer: B

Explanation:
The special terraform configuration block type is used to configure some behaviors of Terraform itself, such as requiring a minimum Terraform version to apply your configuration.

Example terraform {
required_version = "> 0.12.0"
}
https://www.terraform.io/docs/configuration/terraform.html

NEW QUESTION 172
- (Exam Topic 3)
By default, provisioners that fail will also cause the Terraform apply itself to error. How can you change this default behavior within a provisioner?

A. provisioner "local-exec" { on_failure = "next" }
B. provisioner "local-exec" { when = "failure" terraform apply }
C. provisioner "local-exec" { on_failure = "continue" }
D. provisioner "local-exec" { on_failure = continue }

Answer: C

Explanation:
https://www.terraform.io/docs/provisioners/index.html

NEW QUESTION 173
- (Exam Topic 3)
You have created a terraform script that uses a lot of new constructs that have been introduced in terraform v0.12. However, many developers who are cloning the script from your git repo, are using v0.11, and getting errors. What can be done from your end to solve this problem?

A. Force developer to use v0.12 by using terraform setting 'required_version' and set it to >=0.12.
B. Refactor the code to support both v0.11, and v0.12. It might be a difficult process, but there is no other way.
C. Add a condition in front of each such specific construct, to check whether the running terraform version id v0.11 or v0.12, and ,work accordingly.
D. Add comments in your code to tell developers to use v0.12 . If they use v0.11 , that should be their problem , which they need to figure out.

Answer: A

Explanation:
https://www.terraform.io/docs/configuration/terraform.html

NEW QUESTION 174
- (Exam Topic 3)
What does terraform refresh command do?

A. terraform refresh can be used to selectively update sections of the state file, using terraform resource level addressing.
B. terraform refresh command basically updates the configuration file with the current state of the actual infrastructure
C. terraform refresh is use to change/modify the infrastructure based on the existing state file, at that moment.
D. terraform refresh can be used to selectively update sections of the state file, using terraform resource level addressing.
E. terraform refresh syncs the state file with the real world infrastructure.

Answer: E

NEW QUESTION 175
- (Exam Topic 3)
A user has created three workspaces using the command line - prod, dev, and test. The user wants to create a fourth workspace named stage. Which command will the user execute to accomplish this?

A. terraform workspace new stage
B. terraform workspace -new stage
C. terraform workspace -create stage
D. terraform workspace create stage

Answer: A

Explanation:
The terraform workspace new command is used to create a new workspace. https://www.terraform.io/docs/commands/workspace/new.html

NEW QUESTION 178
- (Exam Topic 4)
Using the terraform state rm command against a resource will destroy it.

A. True
B. False

Answer: B

NEW QUESTION 179
- (Exam Topic 4)
You have decided to create a new Terraform workspace to deploy a development environment. What is different about this workspace?

A. It uses a different branch of code It uses a different backend
B. It has its own state file

C. It pulls in a different terraform.tvars file

Answer: C

NEW QUESTION 184
- (Exam Topic 4)
What is the result of the following terraform function call?

A. True
B. False

Answer: B

Explanation:

https://www.terraform.io/docs/configuration/functions/index.html

NEW QUESTION 185
- (Exam Topic 4)
A user has created a module called "my_test_module" and committed it to GitHub. Over time, several commits have been made with updates to the module, each tagged in GitHub with an incremental version number. Which of the following lines would be required in a module configuration block in terraform to select tagged version v1.0.4?

A. source = "git::https://example.com/my_test_module.git@tag=v1.0.4"
B. source = "git::https://example.com/my_test_module.git&ref=v1.0.4"
C. source = "git::https://example.com/my_test_module.git#tag=v1.0.4"
D. source = "git::https://example.com/my_test_module.git?ref=v1.0.4"

Answer: D

Explanation:
https://www.terraform.io/docs/modules/sources.html#selecting-a-revision

NEW QUESTION 190
- (Exam Topic 4)
Terraform is currently being used by your organisation to create resources on AWS for the development of a web application. One of your coworkers wants to change the instance type to "t2.large" while keeping the default set values.
What adjustments does the teammate make in order to meet his goal?

A. Issue Terraform plan instance.type".t2.large" and it deploys the instance
B. Modify the tf.variableswith the instance type and issue terraform apply
C. Create a new file my.tfvars and add the type of the instance and issue terraform plan and apply
D. Modify the terraform.tfvars with the instance type and issue terraform plan and then terraform apply to deploy the instances

Answer: D

NEW QUESTION 192
- (Exam Topic 4)
To check if all code in a Terraform configuration with multiple modules is properly formatted without making changes, what command should be run?

A. terraform fmt -check
B. terraform fmt -write-false
C. terraform fmt "list -recursive
D. terraform fmt -check -recursive

Answer: D

Explanation:
-check Check if the input is formatted. Exit status will be 0 if all input is properly formatted and non-zero otherwise.
-recursive Also process files in subdirectories. By default, only the given directory (or current directory) is processed.

NEW QUESTION 196
- (Exam Topic 4)
A user runs terraform init on their RHEL based server and per the output, two provider plugins are downloaded: $ terraform init
Initializing the backend... Initializing provider plugins...
- Checking for available provider plugins...
- Downloading plugin for provider "aws" (hashicorp/aws) 2.44.0...
- Downloading plugin for provider "random" (hashicorp/random) 2.2.1...
:
Terraform has been successfully initialized! Where are these plugins downloaded to?

A. The .terraform.plugins directory in the directory terraform init was executed in.
B. The .terraform/plugins directory in the directory terraform init was executed in.
C. /etc/terraform/plugins
D. The .terraform.d directory in the directory terraform init was executed in.

Answer: B

NEW QUESTION 201
- (Exam Topic 4)
True or False? 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.

A. False
B. True

Answer: A

Explanation:

Currently, Terraform has no mechanism to redact or protect secrets that are returned via data sources, so secrets read via this provider will be persisted into the Terraform state, into any plan files, and in some cases in the console output produced while planning and applying. These artifacts must, therefore, all be protected accordingly.

NEW QUESTION 202
- (Exam Topic 4)
True or False. The terraform refresh command is used to reconcile the state Terraform knows about (via its state file) with the real-world infrastructure. If drift is detected between the real-world infrastructure and the last known-state, it will modify the infrastructure to correct the drift.

A. False
B. True

Answer: A

Explanation:
https://www.terraform.io/docs/commands/refresh.html

NEW QUESTION 204
- (Exam Topic 4)
Your risk management organization requires that new AWS S3 buckets must be private and encrypted at rest. How can Terraform Enterprise automatically and proactively enforce this security control?

A. With a Sentinel policy, which runs before every apply
B. By adding variables to each TFE workspace to ensure these settings are always enabled
C. With an S3 module with proper settings for buckets
D. Auditing cloud storage buckets with a vulnerability scanning tool

Answer: A

Explanation:
https://docs.hashicorp.com/sentinel/intro/what
https://medium.com/hashicorp-engineering/enforcing-aws-s3-security-best-practice-using-terraform-sentinel-dd

NEW QUESTION 206
- (Exam Topic 4)
Open source Terraform can only import publicly-accessible and open-source modules.

A. True
B. False

Answer: B

Explanation:
Terraform can load modules from a public or private registry. This makes it possible to publish modules for others to use, and to use modules that others have published. Also, members of your organization might produce modules specifically crafted for your own infrastructure needs. Terraform Cloud and Terraform Enterprise both include a private module registry for sharing modules internally within your organization. Source: https://www.terraform.io/language/modules

NEW QUESTION 211
- (Exam Topic 4)
Terraform console provides an interactive command-line console for evaluating and experimenting with expressions. You can use it to test interpolations before using them in configurations and to interact with any values currently saved in state.
Which configuration consistency errors does terraform validate report?

A. A mix of spaces and tabs in configuration files
B. Differences between local and remote state
C. Terraform module isn't the latest version
D. Declaring a resource identifier more than once

Answer: D

Explanation:
validate will look for syntax errors "Declaring a resource identifier more than once" is a syntax error

NEW QUESTION 216

- (Exam Topic 4)
Any user can publish modules to the public Terraform Module Registry.

A. True
B. False

Answer: B

NEW QUESTION 217
- (Exam Topic 4)
Which of the following statements about Terraform modules is not true?

A. Modules must be publicly accessible
B. Modules can be called multiple times
C. Module is a container for one or more resources
D. Modules can call other modules

Answer: A

Explanation:
In addition to modules from the local filesystem, Terraform can load modules from a public or private registry. Also, members of your organization might produce modules specifically crafted for your own infrastructure needs. Source: https://www.terraform.io/language/modules

NEW QUESTION 222
- (Exam Topic 4)
Which of the following is not a benefit of adopting infrastructure as code?

A. Automation
B. Versioning
C. Reusability of code
D. Interpolation

Answer: D

NEW QUESTION 225
- (Exam Topic 4)
Which parameters does terraform import require? Choose two correct answers.

A. Provider
B. Path
C. Resource address
D. Resource ID

Answer: CD

Explanation:
https://www.terraform.io/cli/commands/import#usage

NEW QUESTION 227
- (Exam Topic 4)
Which task does teraform init not perform?

A. Sources any modules and copies the configuration locally
B. Validates all required variables are present
C. Connects to the backend
D. Sources all providers present in the configuration and ensures they are downloaded and available locally

Answer: B

NEW QUESTION 232
- (Exam Topic 4)
From the code below, identify the implicit dependency:

A. The EIP with an id of ami-2757f631
B. The AMI used for the EC2 instance
C. The EC2 instance labeled web_server
D. The S3 bucket labeled company_data

Answer: C

NEW QUESTION 235
- (Exam Topic 4)
Talal is a DevOps engineer and he has deployed the production infrastructure using Terraform. He is using a very large configuration file to maintain and update the actual infrastructure. As the infrastructure have grown to a very complex and large, he has started experiencing slowness when he run runs terraform plan. What are the options for him to resolve this slowness?

A. Use -refresh=true flag as well as the -target flag with terraform plan in order to work around this.
B. Run terraform refresh every time before running terraform plan.
C. Break large configurations into several smaller configurations that can each be independently applied.
D. Use -refresh=false flag as well as the -target flag with terraform plan in order to work around this.

Answer: CD

Explanation:
For larger infrastructures, querying every resource is too slow. Many cloud providers do not provide APIs to query multiple resources at once, and the round trip time for each resource is hundreds of milliseconds. On top of this, cloud providers almost always have API rate limiting so Terraform can only request a certain number of resources in a period of time. Larger users of Terraform make heavy use of the -refresh=false flag as well as the -target flag in order to work around this. In these scenarios, the cached state is treated as the record of truth.
Although 'Use -refresh=false flag as well as the -target flag with terraform plan in order to work around this.' is a solution, but its not always recommended. Instead of using -target as a means to operate on isolated portions of very large configurations, prefer instead to break large configurations into several smaller configurations that can each be independently applied. Data sources can be used to access information about resources created in other configurations, allowing a complex system architecture to be broken down into more manageable parts that can be updated independently.
Option 'Run terraform refresh every time before running terraform plan.' and 'Use -refresh=true flag as well as the -target flag with terraform plan in order to work around this.' is not correct because in both the cases terraform will query every resources of the infrastructure.

NEW QUESTION 236
- (Exam Topic 4)
What resource dependency information is stored in Terraform's state?

A. Only implicit dependencies are stored in state.
B. Both implicit and explicit dependencies are stored in state.
C. Only explicit dependencies are stored in state.
D. No dependency information is stored in state.

Answer: B

Explanation:
Terraform state captures all dependency information, both implicit and explicit. One purpose for state is to determine the proper order to destroy resources. When resources are created all of their dependency information is stored in the state. If you destroy a resource with dependencies, Terraform can still determine the correct destroy order for all other resources because the dependencies are stored in the state. https://www.terraform.io/docs/state/purpose.html#metadata

NEW QUESTION 239
- (Exam Topic 4)
Anyone can publish and share modules on the Terraform Public Module Registry, and meeting the requirements for publishing a module is extremely easy. Select from the following list all valid requirements. (select three)

A. The module must be PCI/HIPPA compliant.
B. Module repositories must use this three-part name format, terraform-- .
C. The registry uses tags to identify module versions.
D. Release tag names must be for the format x.y.z, and can optionally be prefixed with a v .
E. The module must be on GitHub and must be a public repo.

Answer: CDE

Explanation:
https://www.terraform.io/docs/registry/modules/publish.html#requirements

NEW QUESTION 244
- (Exam Topic 4)
What is the result of the following terraform function call?

A. hello
B. what?
C. goodbye

Answer: B

Explanation:
https://www.terraform.io/docs/configuration/functions/lookup.html

NEW QUESTION 246
- (Exam Topic 4)
You have created a custom variable definition file my_vars.tfvars. How will you use it for provisioning infrastructure?

A. terraform apply -var-state-file ="my_vars.tfvars"
B. terraform apply var-file="my_vars.tfvars"
C. terraform plan -var-file="my_vars.tfvar"
D. terraform apply -var-file="my_vars.tfvars"

Answer: D

Explanation:
To set lots of variables, it is more convenient to specify their values in a variable definitions file (with a filename ending in either .tfvars or .tfvars.json) and then specify that file on the command line with -var-file:

terraform apply -var-file="my_vars.tfvars" https://www.terraform.io/docs/configuration/variables.html#variable-definitions-tfvars-files

NEW QUESTION 249
- (Exam Topic 4)
True or False? Each Terraform workspace uses its own state file to manage the infrastructure associated with that particular workspace.

A. False
B. True

Answer: B

Explanation:
The persistent data stored in the backend belongs to a workspace. Initially, the backend has only one workspace, called "default", and thus there is only one Terraform state associated with that configuration.

NEW QUESTION 254
- (Exam Topic 4)
Your team uses terraform OSS . You have created a number of resuable modules for important , independent network components that you want to share with your team to enhance consistency . What is the correct option/way to do that?

A. Terraform modules cannot be shared in OSS version . Each developer needs to maintain their own modules and leverage them in the main tf file.
B. Upload your modules with proper versioning in the terraform public module registry . Terraform OSS is directly integrated with the public module registry , and can reference the modules from the code in the main tf file.
C. Terraform module sharing is only available in Enterprise version via terraform private module registry , so no way to enable it in OSS version.
D. Store your modules in a NAS/ shared file server , and ask your team members to directly reference thecode from ther
E. This is the only viable option in terraform OSS ,which is better than individually maintaining module versions for every developer.

Answer: B

Explanation:
Software development encourages code reuse through reusable artifacts, such as libraries, packages and modules. Most programming languages enable developers to package and publish these reusable components and make them available on a registry or feed. For example, Python has Python Package Index and PowerShell has PowerShell Gallery.
For Terraform users, the Terraform Registry enables the distribution of Terraform modules, which are reusable configurations. The Terraform Registry acts as a centralized repository for module sharing, making modules easier to discover and reuse.
The Registry is available in two variants:
* Public Registry houses official Terraform providers -- which are services that interact with an API to expose and manage a specific resource -- and community-contributed modules.
* Private Registry is available as part of the Terraform Cloud, and can host modules internally within an organization.
https://www.terraform.io/docs/registry/index.html

NEW QUESTION 256
- (Exam Topic 4)
colleagues is new toTerraform and wants to add a new workspace named new-hire. What command he should execute from the following?

A. terraform workspace-new-new-hire
B. terraform workspace new new hire
C. terraform workspace init new-hire
D. terraform workspace new-hire

Answer: B

NEW QUESTION 259
- (Exam Topic 4)
Your developers are facing a lot of problem while writing complex expressions involving difficult interpolations . They have to run the terraform plan every time and check whether there are errors , and also check terraform apply to print the value as a temporary output for debugging purposes. What should be done to avoid this?

A. Use terraform console command to have an interactive UI with full access to the underlying terraform state to run your interpolations , and debug at real-time.
B. Add a breakpoint in your code, using the watch keyword , and output the value to console for temporary debugging.
C. Use terraform zipmap function , it will be able to easily do the interpolations without complex code.
D. Use terraform console command to have an interactive UI , but you can only use it with local state , and it does not work with remote state.

Answer: A

Explanation:
The terraform console command provides an interactive console for evaluating expressions. This is useful for testing interpolations before using them in configurations, and for interacting with any values currently saved in state.
https://www.terraform.io/docs/commands/console.html

NEW QUESTION 263
- (Exam Topic 4)
In a Terraform Cloud workspace linked to a version control repository, speculative plan runs start automatically when you merge or commit changes to version control.

A. True
B. False

Answer: B

NEW QUESTION 265
- (Exam Topic 4)
You wanted to destroy some of the dependent resources from real infrastructure. You choose to delete those resources from your configuration file and run terraform plan and then apply. Which of the following way your resources would be destroyed?

A. Terraform can still determine the correct order for destruction from the state even when you delete one or more items from the configuration.
B. Those would be destroyed in the order in which they were written in the configuration file previously before you have deleted them from configuration file.
C. The resource will be destructed in random order as you have already deleted them from configuration.
D. You can not destroy resources by deleting them from configuration file and running plan and apply.

Answer: A

Explanation:
Terraform typically uses the configuration to determine dependency order. However, when you delete a resource from a Terraform configuration, Terraform must know how to delete that resource. Terraform can see that a mapping exists for a resource not in your configuration and plan to destroy. However, since the configuration no longer exists, the order cannot be determined from the configuration alone.
To ensure correct operation, Terraform retains a copy of the most recent set of dependencies within the state. Now Terraform can still determine the correct order for destruction from the state when you delete one or more items from the configuration.

NEW QUESTION 269
- (Exam Topic 4)
A single terraform resource file that defines an aws_instance resource can simple be renamed to azurerm_virtual_machine in order to switch cloud providers

A. True
B. False

Answer: B

Explanation:
Providers usually require some configuration of their own to specify endpoint URLs, regions, authentication settings.
Providers Initialization can be done by either explicitly via a provider block or by adding a resource from that provide
https://www.terraform.io/docs/configuration/providers.html

NEW QUESTION 271
- (Exam Topic 4)
Which of the following terraform subcommands could be used to remove the lock on the state for the current configuration?

A. Unlock
B. force-unlock
C. Removing the lock on a state file is not possible
D. state-unlock

Answer: B

Explanation:

https://www.terraform.io/docs/commands/force-unlock.html

NEW QUESTION 274
- (Exam Topic 4)
Which of the following statements about local modules is incorrect:

A. Local modules are not cached by terraform init command
B. Local modules are sourced from a directory on disk
C. Local modules support versions
D. All of the above (all statements above are incorrect
E. None of the above (all statements above are correct)

Answer: C

Explanation:
Version constraints are supported only for modules installed from a module registry, such as the public Terraform Registry or Terraform Cloud's private module registry. Other module sources can provide their own versioning mechanisms within the source string itself, or might not support versions at all. In particular, modules sourced from local file paths do not support version; since they're loaded from the same source repository, they always share the same version as their caller.
https://www.terraform.io/language/modules/syntax

NEW QUESTION 275
- (Exam Topic 4)
The following is a snippet from a Terraform configuration file: Which, when validated, results in the following error:
Fill in the blank in the error message with the correct string from the list below.

A. version
B. multi
C. label

D. alias

Answer: D

Explanation:

https://www.terraform.io/docs/configuration/providers.html#alias-multiple-providerinstances

NEW QUESTION 278
- (Exam Topic 4)
All Terraform Cloud tiers support team management and governance.

A. True
B. False

Answer: B

Explanation:
https://www.terraform.io/cloud-docs/overview
Terraform Cloud is a commercial SaaS product developed by HashiCorp. Many of its features are free for small teams, including remote state storage, remote runs, and VCS connections. We also offer paid plans for larger teams that include additional collaboration and governance features. Each higher paid upgrade plan is a strict superset of any lower plans — for example, the Team & Governance plan includes all of the features of the Team plan.

NEW QUESTION 283
- (Exam Topic 4)
You have written a terraform IaC script which was working till yesterday , but is giving some vague error from today , which you are unable to understand . You want more detailed logs that could potentially help you troubleshoot the issue , and understand the root cause. What can you do to enable this setting? Please note , you are using terraform OSS.

A. Terraform OSS can push all its logs to a syslog endpoin
B. As such, you have to set up the syslog sink, and enable TF_LOG_PATH env variable to the syslog endpoint and all logs will automatically start streaming.
C. Detailed logs are not available in terraform OSS, except the crash messag
D. You need to upgrade to terraform enterprise for this point.
E. Enable the TF_LOG_PATH to the log sink file location, and logging output will automatically be stored there.
F. Enable TF_LOG to the log level DEBUG, and then set TF_LOG_PATH to the log sink file location.Terraform debug logs will be dumped to the sink path, even in terraform OSS.

Answer: D

Explanation:
Terraform has detailed logs which can be enabled by setting the TF_LOG environment variable to any value. This will cause detailed logs to appear on stderr.
You can set TF_LOG to one of the log levels TRACE, DEBUG, INFO, WARN or ERROR to change the verbosity of the logs. TRACE is the most verbose and it is the default if TF_LOG is set to something other than a log level name.
To persist logged output you can set TF_LOG_PATH in order to force the log to always be appended to a specific file when logging is enabled. Note that even when TF_LOG_PATH is set, TF_LOG must be set in order for any logging to be enabled.

NEW QUESTION 284
- (Exam Topic 4)
In order to reduce the time it takes to provision resources, Terraform uses parallelism. By default, how many resources will Terraform provision concurrently?

A. 5
B. 50
C. 10
D. 20

Answer: C

NEW QUESTION 285
- (Exam Topic 4)
Choose the answer that correctly completes the sentence: _____ backends support state locking.

A. All
B. No
C. Only local
D. Some

Answer: D

NEW QUESTION 287
- (Exam Topic 4)
Which feature of Terraform allows multiple state files for a single configuration file depending upon the environment?

A. Terraform Modules
B. Terraform Enterprise
C. Terraform Workspaces
D. Terraform Remote Backends

Answer:

C

NEW QUESTION 290
- (Exam Topic 4)
You're writing a Terraform configuration that needs to read input from a local file called id_rsa.pub. Which built-in Terraform function can you use to import the file's contents as a string?

A. fileset("id_rsa.pub")
B. filebase64("id_rsa.pub")
C. templatefile("id_rsa.pub")
D. file("id_rsa.pub")

Answer: D

Explanation:
https://www.terraform.io/language/functions/file

NEW QUESTION 291
- (Exam Topic 4)
Which of the following is considered a Terraform plugin?

A. Terraform language
B. Terraform tooling
C. Terraform logic
D. Terraform provider

Answer: D

Explanation:
Terraform is built on a plugin-based architecture. All providers and provisioners that are used in Terraform configurations are plugins, even the core types such as AWS and Heroku. Users of Terraform are able to write new plugins in order to support new functionality in Terraform.
https://www.terraform.io/docs/plugins/basics.html

NEW QUESTION 292
- (Exam Topic 4)
Select the feature below that best completes the sentence:
The following list represents the different types of _____ available in Terraform.
* 1. max
* 2. min
* 3. join
* 4. replace
* 5. list
* 6. length
* 7. range

A. Backends
B. Data sources
C. Named values
D. Functions

Answer: D

Explanation:
The Terraform language includes a number of built-in functions that you can call from within expressions to transform and combine values. The Terraform language does not support user-defined functions, and only the functions built into the language are available for use.
https://www.terraform.io/docs/configuration/functions.html

NEW QUESTION 296
- (Exam Topic 4)
Select all Operating Systems that Terraform is available for. (select five)

A. Linux
B. macOS
C. Unix
D. Solaris
E. Windows
F. FreeBSD

Answer: ABDEF

Explanation:

Terraform is available for macOS, FreeBSD, OpenBSD, Linux, Solaris, Windows https://www.terraform.io/downloads.html

NEW QUESTION 301
- (Exam Topic 4)
Using multi-cloud and provider-agnostic tools provides which of the following benefits?

A. Operations teams only need to learn and manage a single tool to manage infrastructure, regardless of where the infrastructure is deployed.
B. Increased risk due to all infrastructure relying on a single tool for management.
C. Can be used across major cloud providers and VM hypervisors.
D. Slower provisioning speed allows the operations team to catch mistakes before they are applied.

Answer: AC

Explanation:
Using a tool like Terraform can be advantageous for organizations deploying workloads across multiple public and private cloud environments. Operations teams only need to learn a single tool, single language, and can use the same tooling to enable a DevOps-like experience and workflows.

NEW QUESTION 304
- (Exam Topic 4)
After executing a terraform apply, you notice that a resource has a tilde (~) next to it. What does this infer?

A. The resource will be updated in place.
B. The resource will be created.
C. Terraform can't determine how to proceed due to a problem with the state file.
D. The resource will be destroyed and recreated.

Answer: A

Explanation:
The prefix -/+ means that Terraform will destroy and recreate the resource, rather than updating it in-place. The prefix ~ means that some attributes and resources can be updated in-place.
$ terraform apply
aws_instance.example: Refreshing state... [id=i-0bbf06244e44211d1] An execution plan has been generated and is shown below.
Resource actions are indicated with the following symbols:
-/+ destroy and then create replacement Terraform will perform the following actions:
# aws_instance.example must be replaced
-/+ resource "aws_instance" "example" {
~ ami = "ami-2757f631" -> "ami-b374d5a5" # forces replacement
~ arn = "arn:aws:ec2:us-east-1:130490850807:instance/i-0bbf06244e44211d1" -> (known after apply)
~ associate_public_ip_address = true -> (known after apply)
~ availability_zone = "us-east-1c" -> (known after apply)
~ cpu_core_count = 1 -> (known after apply)
~ cpu_threads_per_core = 1 -> (known after apply)
- disable_api_termination = false -> null
- ebs_optimized = false -> null get_password_data = false
+ host_id = (known after apply)
~ id = "i-0bbf06244e44211d1" -> (known after apply)
~ instance_state = "running" -> (known after apply) instance_type = "t2.micro"
~ ipv6_address_count = 0 -> (known after apply)
~ ipv6_addresses = [] -> (known after apply)
+ key_name = (known after apply)
- monitoring = false -> null
+ network_interface_id = (known after apply)
+ password_data = (known after apply)
+ placement_group = (known after apply)
~ primary_network_interface_id = "eni-0f1ce5bdae258b015" -> (known after apply)
~ private_dns = "ip-172-31-61-141.ec2.internal" -> (known after apply)
~ private_ip = "172.31.61.141" -> (known after apply)
~ public_dns = "ec2-54-166-19-244.compute-1.amazonaws.com" -> (known after apply)
~ public_ip = "54.166.19.244" -> (known after apply)
~ security_groups = [
- "default",
] -> (known after apply) source_dest_check = true
~ subnet_id = "subnet-1facdf35" -> (known after apply)
~ tenancy = "default" -> (known after apply)
~ volume_tags = {} -> (known after apply)
~ vpc_security_group_ids = [
- "sg-5255f429",
] -> (known after apply)
- credit_specification {
- cpu_credits = "standard" -> null
}
+ ebs_block_device {
+ delete_on_termination = (known after apply)
+ device_name = (known after apply)
+ encrypted = (known after apply)
+ iops = (known after apply)
+ snapshot_id = (known after apply)
+ volume_id = (known after apply)
+ volume_size = (known after apply)
+ volume_type = (known after apply)
}
+ ephemeral_block_device {
+ device_name = (known after apply)
+ no_device = (known after apply)
+ virtual_name = (known after apply)
}
+ network_interface {

+ delete_on_termination = (known after apply)
+ device_index = (known after apply)
+ network_interface_id = (known after apply)
}
~ root_block_device {
~ delete_on_termination = true -> (known after apply)
~ iops = 100 -> (known after apply)
~ volume_id = "vol-0079e485d9e28a8e5" -> (known after apply)
~ volume_size = 8 -> (known after apply)
~ volume_type = "gp2" -> (known after apply)
}
}
Plan: 1 to add, 0 to change, 1 to destroy.

NEW QUESTION 309
- (Exam Topic 4)
When using parent/child modules to deploy infrastructure, how would you export a value from one module to import into another module.
For example, a module dynamically deploys an application instance or virtual machine, and you need the IP address in another module to configure a related DNS record in order to reach the newly deployed application.

A. Export the value using terraform export and input the value using terraform input.
B. Configure the pertinent provider's configuration with a list of possible IP addresses to use.
C. Configure an output value in the application module in order to use that value for the DNS module.
D. Preconfigure the IP address as a parameter in the DNS module.

Answer: C

Explanation:
Output values are like the return values of a Terraform module, and have several uses:
* A child module can use outputs to expose a subset of its resource attributes to a parent module.
* A root module can use outputs to print certain values in the CLI output after running terraform apply.
* When using remote state, root module outputs can be accessed by other configurations via a terraform_remote_state data source.
https://www.terraform.io/docs/configuration/outputs.html

NEW QUESTION 312
- (Exam Topic 4)
You have a simple Terraform configuration containing one virtual machine (VM) in a cloud provider. You run terraform apply and the VM is created successfully.
What will happen if you terraform apply again immediately afterwards without changing any Terraform code?

A. Terraform will terminate and recreate the VM
B. Terraform will create another duplicate VM
C. Terraform will apply the VM to the state file
D. Nothing

Answer: D

NEW QUESTION 314
- (Exam Topic 4)
During a terraform plan, a resource is successfully created but eventually fails during provisioning. What happens to the resource?

A. Terraform attempts to provision the resource up to three times before exiting with an error
B. the terraform plan is rolled back and all provisioned resources are removed
C. it is automatically deleted
D. the resource is marked as tainted

Answer: D

Explanation:
If a resource successfully creates but fails during provisioning, Terraform will error and mark the resource as "tainted". A resource that is tainted has been physically created, but can't be considered safe to use since provisioning failed. Terraform also does not automatically roll back and destroy the resource during the apply when the failure happens, because that would go against the execution plan: the execution plan would've said a resource will be created, but does not say it will ever be deleted.

NEW QUESTION 318
- (Exam Topic 4)
Which provider authentication method prevents credentials from being stored in the state file?

A. Using environment variables
B. Specifying the login credentials in the provider block
C. Setting credentials as Terraform variables
D. None of the above

Answer: A

NEW QUESTION 319
- (Exam Topic 4)
You want to define multiple data disks as nested blocks inside the resource block for a virtual machine. What Terraform feature would help you define the blocks using the values in a variable?

A. Local values
B. Dynamic blocks
C. Count arguments
D. Collection functions

Answer: B

NEW QUESTION 320
- (Exam Topic 4)
A module can always refer to all variables declared in its parent module.

A. True
B. False

Answer: B

Explanation:
Modules do not inherit variables from the parent module. All modules are self-contained units. So you have to explicitly define variables in the child module, and then explicit set these variables in the parent module, when you instantiate the child module.

NEW QUESTION 323
- (Exam Topic 4)
A variable az has the following default value. What will be the datatype of the variable? az=["us-west-1a","us-east-1a"]

A. Object
B. List
C. Map
D. String

Answer: B

NEW QUESTION 327
- (Exam Topic 4)
Which of the following is not an advantage of using infrastructure as code operations?

A. Self-service infrastructure deployment
B. Troubleshoot via a Linux diff command
C. Public cloud console configuration workflows
D. Modify a count parameter to scale resources
E. API driven workflows

Answer: B

Explanation:
terraform is used to deploy the infrastructure, not to troubleshoot it

NEW QUESTION 332
- (Exam Topic 4)
What command can you run to generate DOT (Document Template) formatted data to visualize Terraform dependencies?

A. terraform refresh
B. terraform show
C. terraform graph
D. terraform output

Answer: C

Explanation:
The terraform graph command is used to generate a visual representation of either a configuration or execution plan. The output is in the DOT format, which can be used by GraphViz to generate charts.

NEW QUESTION 334
- (Exam Topic 4)
What does Terraform use .terraform.lock.hcl file for?

A. Tracking provider dependencies Most Voted
B. There is no such file
C. Preventing Terraform runs from occurring
D. Storing references to workspaces which are locked

Answer: A

Explanation:
https://www.terraform.io/language/files/dependency-lock
"hcl , and this name is intended to signify that it is a lock file for various items that Terraform caches in the . terraform subdirectory of your working directory. Terraform automatically creates or updates the dependency lock file each time you run the terraform init command."

NEW QUESTION 338
- (Exam Topic 4)
Your team lead does not trust the junior terraform engineers who now have access to the git repo . So , he wants you to have some sort of a checking layer , whereby , you can ensure that the juniors will not create any non-compliant resources that might lead to a security audit failure in future. What can you do to efficiently enforce this?

A. Create a design /security document (in PDF) and share to the team , and ask them to always follow that document , and never deviate from it.
B. Since your team is using Hashicorp Terraform Enterprise Edition , enable Sentinel , and writePolicy-As-Code rules that will check for non-compliant resource provisioning , and prevent/report them.
C. Use Terraform OSS Sentinel Lite version , which will save cost , since there is no charge for OSS , but it can still check for most non-compliant rules using Policy-As-Code.
D. Create a git master branch , and implement PR . Every change needs to be reviewed by you , before being merged to the master branch.

Answer: B

Explanation:
Sentinel is an embedded policy-as-code framework integrated with the HashiCorp Enterprise products. It enables fine-grained, logic-based policy decisions, and can be extended to use information from external sources.
https://www.terraform.io/docs/cloud/sentinel/index.html

NEW QUESTION 342
- (Exam Topic 4)
Terraform Enterprise (also referred to as pTFE) requires what type of backend database for a clustered deployment?

A. PostgreSQL
B. Cassandra
C. MySQL
D. MSSQL

Answer: A

Explanation:

External Services mode stores the majority of the stateful data used by the instance in an external PostgreSQL database and an external S3-compatible endpoint or Azure blob storage. There is still critical data stored on the instance that must be managed with snapshots. Be sure to check the PostgreSQL Requirements for information that needs to be present for Terraform Enterprise to work. This option is best for users with expertise managing PostgreSQL or users that have access to managed PostgreSQL offerings like AWS RDS.

NEW QUESTION 343
- (Exam Topic 4)
Choose the best option from below to make Terraform code more user configuration-centric.

A. Variables
B. Local values
C. Input Variable
D. Modules

Answer: C

NEW QUESTION 347
- (Exam Topic 4)
In the below configuration, how would you reference the module output vpc_id?

```
module "vpc" {
  source = "terraform-and-modules/vpc/aws"
  cidr = "10.0.0.0/16"
  name = "test-vpc"
}
```

Type your answer in the field provided. The text field is not case sensitive and all variations of the correct answer are accepted.

A. Mastered
B. Not Mastered

Answer: A

Explanation:

https://cloudcasts.io/course/terraform/community-vpc-module

NEW QUESTION 348
- (Exam Topic 4)
When Terraform needs to be installed in a location where it does not have internet access to download the installer and upgrades, the installation is generally known as to be _____ .

A. a private install

B. disconnected
C. air-gapped
D. non-traditional

Answer: D

Explanation:

A Terraform Enterprise install that is provisioned on a network that does not have Internet access is generally known as an air-gapped install. These types of installs require you to pull updates, providers, etc. from external sources vs. being able to download them directly.

NEW QUESTION 349
- (Exam Topic 4)
Your firm employs a version control system (for example, git) and has requested that you commit all terraform code to it. During the commit, you must be cautious with sensitive information. Which of the following files should be left out of the commit?

A. main.tf
B. variables.tf
C. provisioner.tf
D. terraform.tfstate

Answer: D

NEW QUESTION 351
- (Exam Topic 4)
Which argument(s) are required when declaring a Terraform variable?

A. type
B. default
C. description
D. All of the above
E. None of the above

Answer: E

Explanation:
Terraform CLI defines the following OPTIONAL arguments for variable declarations: default - A default value which then makes the variable optional. type - This argument specifies what value types are accepted for the variable. description - This specifies the input variable's documentation. validation - A block to define validation rules, usually in addition to type constraints. sensitive - Limits Terraform UI output when the variable is used in configuration. nullable - Specify if the variable can be null within the module. https://www.terraform.io/language/values/variables#arguments

NEW QUESTION 352
- (Exam Topic 4)
terraform apply is failing with the following error. What next step should you take to determine the root cause of the problem?
Error loading state: AccessDenied: Access Denied status code: 403, request id: 288766CE5CCA24A0, host id: FOOBAR

A. Set TF_LOG=DEBUG
B. Review syslog for Terraform error messages
C. Run terraform login to reauthenticate with the provider
D. Review /var/log/terraform.log for error messages

Answer: A

Explanation:
Terraform has detailed logs which can be enabled by setting the TF_LOG environment variable to any value. This will cause detailed logs to appear on stderr. You can set TF_LOG to one of the log levels (in order of decreasing verbosity) TRACE, DEBUG, INFO, WARN or ERROR to change the verbosity of the logs.

NEW QUESTION 355
- (Exam Topic 4)
What Terraform feature is shown in the example below?

A. conditional expression
B. local values
C. dynamic block
D. data source

Answer: C

NEW QUESTION 359
- (Exam Topic 4)
Which of the following is not a valid Terraform string function?

A. replace
B. format
C. join
D. tostring

Answer:

D

Explanation:
https://www.terraform.io/docs/configuration/functions/tostring.html

NEW QUESTION 363
- (Exam Topic 4)
When writing Terraform code, HashiCorp recommends that you use how many spaces between each nesting level?

A. 1
B. 2
C. 4

Answer: C

Explanation:
The Terraform parser allows you some flexibility in how you lay out the elements in your configuration files, but the Terraform language also has some idiomatic style conventions which we recommend users always follow for consistency between files and modules written by different teams. Automatic source code formatting tools may apply these conventions automatically.
Indent two spaces for each nesting level.
When multiple arguments with single-line values appear on consecutive lines at the same nesting level, align their equals signs:
ami = "abc123" instance_type = "t2.micro"
When both arguments and blocks appear together inside a block body, place all of the arguments together at the top and then place nested blocks below them.
Use one blank line to separate the arguments from the blocks.
Use empty lines to separate logical groups of arguments within a block.
For blocks that contain both arguments and "meta-arguments" (as defined by the Terraform language semantics), list meta-arguments first and separate them from other arguments with one blank line. Place meta-argument blocks last and separate them from other blocks with one blank line.
resource "aws_instance" "example" { count = 2 # meta-argument first
ami = "abc123" instance_type = "t2.micro" network_interface {
# ...
}
lifecycle { # meta-argument block last create_before_destroy = true
}
}
Top-level blocks should always be separated from one another by one blank line. Nested blocks should also be separated by blank lines, except when grouping together related blocks of the same type (like multiple provisioner blocks in a resource).
Avoid separating multiple blocks of the same type with other blocks of a different type, unless the block types are defined by semantics to form a family. (For example: root_block_device, ebs_block_device and
ephemeral_block_device on aws_instance form a family of block types describing AWS block devices, and can therefore be grouped together and mixed.)

NEW QUESTION 364
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