



HashiCorp

Exam Questions TA-002-P

HashiCorp Certified: Terraform Associate

NEW QUESTION 1

- (Exam Topic 1)

What features stops multiple admins from changing the Terraform state at the same time?

- A. Version control
- B. Backend types
- C. Provider constraints
- D. State locking

Answer: D

Explanation:

Somewhat ambiguous question however the key phrase is "feature". You need a remote backend first with a State Locking feature available to avoid this scenario.
<https://blog.gruntwork.io/how-to-manage-terraform-state-28f5697e68fa>

NEW QUESTION 2

- (Exam Topic 1)

Which of the following is available only in Terraform Enterprise or Cloud workspaces and not in Terraform CLI?

- A. Secure variable storage
- B. Support for multiple cloud providers
- C. Dry runs with terraform plan
- D. Using the workspace as a data source

Answer: A

Explanation:

Reference: <https://www.terraform.io/docs/language/providers/configuration.html>

NEW QUESTION 3

- (Exam Topic 1)

What is the provider for this fictitious resource?

```
resource "aws_vpc" "main" {  
    name = "test"  
}
```

- A. vpc
- B. main
- C. aws
- D. test

Answer: C

Explanation:

Reference: <https://docs.aws.amazon.com/cloudformation-cli/latest/userguide/resource-types.html>

NEW QUESTION 4

- (Exam Topic 1)

When you initialize Terraform, where does it cache modules from the public Terraform Module Registry?

- A. On disk in the /tmp directory
- B. In memory
- C. On disk in the .terraform sub-directory
- D. They are not cached

Answer: C

Explanation:

"A hidden .terraform directory, which Terraform uses to manage cached provider plugins and modules, record which workspace is currently active, and record the last known backend configuration in case it needs to migrate state on the next run. This directory is automatically managed by Terraform, and is created during initialization." <https://www.terraform.io/cli/init>

NEW QUESTION 5

- (Exam Topic 1)

A fellow developer on your team is asking for some help in refactoring their Terraform code. As part of their application's architecture, they are going to tear down an existing deployment managed by Terraform and deploy new. However, there is a server resource named `aws_instance.ubuntu[1]` they would like to keep to perform some additional analysis.

What command should be used to tell Terraform to no longer manage the resource?

- A. `terraform apply rm aws_instance.ubuntu[1]`
- B. `terraform state rm aws_instance.ubuntu[1]`

- C. terraform plan rm aws_instance.ubuntu[1]
- D. terraform delete aws_instance.ubuntu[1]

Answer: B

Explanation:

"You can use terraform state rm in the less common situation where you wish to remove a binding to an existing remote object without first destroying it, which will effectively make Terraform "forget" the object while it continues to exist in the remote system." <https://www.terraform.io/cli/commands/state/rm>

NEW QUESTION 6

- (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 7

- (Exam Topic 1)

When should you use the force-unlock command?

- A. You see a status message that you cannot acquire the lock
- B. You have a high priority change
- C. Automatic unlocking failed
- D. Your apply failed due to a state lock

Answer: C

Explanation:

Be very careful with this command. If you unlock the state when someone else is holding the lock it could cause multiple writers. Force unlock should only be used to unlock your own lock in the situation where automatic unlocking failed. Source: <https://www.terraform.io/language/state/locking>
<https://www.terraform.io/cli/commands/force-unlock>

NEW QUESTION 8

- (Exam Topic 1)

terraform validate validates the syntax of Terraform files.

- A. True
- B. False

Answer: A

Explanation:

<https://www.terraform.io/cli/commands/validate>

The terraform validate command validates the syntax and arguments of the Terraform configuration files. Reference:

<https://www.terraform.io/docs/cli/code/index.html>

NEW QUESTION 9

- (Exam Topic 1)

Terraform can only manage resource dependencies if you set them explicitly with the depends_on argument.

- A. True
- B. False

Answer: A

Explanation:

"Use the depends_on meta-argument to handle hidden resource or module dependencies that Terraform cannot automatically infer. You only need to explicitly specify a dependency when a resource or module relies on another resource's behavior but does not access any of that resource's data in its arguments."

https://www.terraform.io/language/meta-arguments/depends_on

NEW QUESTION 10

- (Exam Topic 1)

What information does the public Terraform Module Registry automatically expose about published modules?

- A. Required input variables
- B. Optional inputs variables and default values
- C. Outputs
- D. All of the above
- E. None of the above

Answer: D

Explanation:

<https://www.terraform.io/registry/modules/publish>

"The registry extracts information about the module from the module's source. The module name, provider, documentation, inputs/outputs, and dependencies are all parsed and available via the UI or API, as well as the same information for any submodules or examples in the module's source repository."

NEW QUESTION 10

- (Exam Topic 1)

Terraform providers are always installed from the Internet.

- A. True
- B. False

Answer: B

Explanation:

Terraform configurations must declare which providers they require, so that Terraform can install and use them.

Reference: <https://www.terraform.io/docs/language/providers/configuration.html>

NEW QUESTION 13

- (Exam Topic 1)

Which task does terraform init not perform?

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

Answer: D

Explanation:

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

NEW QUESTION 18

- (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 23

- (Exam Topic 1)

What value does the Terraform Cloud/Terraform Enterprise private module registry provide over the public Terraform Module Registry?

- A. The ability to share modules with public Terraform users and members of Terraform Enterprise Organizations
- B. The ability to tag modules by version or release
- C. The ability to restrict modules to members of Terraform Cloud or Enterprise organizations
- D. The ability to share modules publicly with any user of Terraform

Answer: C

Explanation:

Terraform Cloud's private registry works similarly to the public Terraform Registry and helps you share Terraform providers and Terraform modules across your organization. It includes support for versioning and a searchable list of available providers and modules.

NEW QUESTION 25

- (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 27

- (Exam Topic 1)

A provider configuration block is required in every Terraform configuration. Example:

```
provider "provider_name" {  
    . . .  
}
```

A. True

B. False

Answer: B

Explanation:

Unlike many other objects in the Terraform language, a provider block may be omitted if its contents would otherwise be empty. Terraform assumes an empty default configuration for any provider that is not explicitly configured. <https://www.terraform.io/language/providers/configuration>

NEW QUESTION 31

- (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 34

- (Exam Topic 1)

You want to know from which paths Terraform is loading providers referenced in your Terraform configuration (files). You need to enable debug messages to find this out.

Which of the following would achieve this?

A. Set the environment variable `TF_LOG=TRACE`

B. Set verbose logging for each provider in your Terraform configuration

C. Set the environment variable `TF_VAR_log=TRACE`

D. Set the environment variable `TF_LOG_PATH`

Answer: A

Explanation:

Although this will only output to stderr and if you need to review log file you will need to include `TF_LOG_PATH=pathToFile`

<https://www.terraform.io/internals/debugging>

NEW QUESTION 35

- (Exam Topic 1)

Which statement describes a goal of infrastructure as code?

A. An abstraction from vendor specific APIs

B. Write once, run anywhere

C. A pipeline process to test and deliver software

D. The programmatic configuration of resources

Answer: D

Explanation:

The purpose of infrastructure as code is to enable developers or operations teams to automatically manage, monitor and provision resources, rather than manually configure discrete hardware devices and operating systems. Infrastructure as code is sometimes referred to as programmable or software-defined infrastructure.

NEW QUESTION 40

- (Exam Topic 1)

You have declared a variable called `var.list` which is a list of objects that all have an attribute `id`. Which options will produce a list of the IDs? (Choose two.)

A. `{ for o in var.list : o => o.id }`

B. `var.list[*].id`

C. `[var.list[*].id]`

D. `[for o in var.list : o.id]`

Answer: BD

Explanation:

<https://www.terraform.io/language/expressions/splat>

A splat expression provides a more concise way to express a common operation that could otherwise be performed with a for expression.

NEW QUESTION 44

- (Exam Topic 1)

Where does the Terraform local backend store its state?

- A. In the /tmp directory
- B. In the terraform.tfvars file
- C. In the terraform.tfstate file
- D. In the user's .terraformrc file

Answer: C

Explanation:

<https://www.terraform.io/language/state>

The local backend stores state on the local filesystem, locks that state using system APIs, and performs operations locally.

Reference: <https://www.terraform.io/docs/language/settings/backends/local.html>

NEW QUESTION 45

- (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 48

- (Exam Topic 1)

Your security team scanned some Terraform workspaces and found secrets stored in a plaintext in state files. How can you protect sensitive data stored in Terraform state files?

- A. Delete the state file every time you run Terraform
- B. Store the state in an encrypted backend
- C. Edit your state file to scrub out the sensitive data
- D. Always store your secrets in a secrets.tfvars file.

Answer: B

NEW QUESTION 51

- (Exam Topic 1)

Terraform validate reports syntax check errors from which of the following scenarios?

- A. Code contains tabs indentation instead of spaces
- B. There is missing value for a variable
- C. The state files does not match the current infrastructure
- D. None of the above

Answer: B

Explanation:

The terraform validate command is used to validate the syntax of the terraform files. Terraform performs a syntax check on all the terraform files in the directory, and will display an error if any of the files doesn't validate. This command does not check formatting (e.g. tabs vs spaces, newlines, comments etc.). The following can be reported: invalid HCL syntax (e.g. missing trailing quote or equal sign) invalid HCL references (e.g. variable name or attribute which doesn't exist) same provider declared multiple times same module declared multiple times same resource declared multiple times invalid module name interpolation used in places where it's unsupported (e.g. variable, depends_on, module.source, provider) missing value for a variable (none of -var foo=... flag, -var-file=foo.vars flag, TF_VAR_foo environment variable, terraform.tfvars, or default value in the configuration) <https://www.typeerror.org/docs/terraform/commands/validate> <https://learning-ocean.com/tutorials/terraform/terraform-validate>

NEW QUESTION 53

- (Exam Topic 1)

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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 56

- (Exam Topic 1)

Setting the TF_LOG environment variable to DEBUG causes debug messages to be logged into syslog.

- A. True
- B. False

Answer: B

Explanation:

TF_LOG_PATH IS NOT REQUIRED, in the docs, they do not mention HAVE TO SET TF_LOG_PATH, it is optional, therefore without TF_LOG_PATH will cause detailed logs to appear on stderr.

<https://www.computerhope.com/jargon/s/stderr.htm#:~:text=Stderr%2C%20also%20known%20as%20standard,>

NEW QUESTION 60

- (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 63

- (Exam Topic 1)

A Terraform provider is not responsible for:

- A. Understanding API interactions with some service
- B. Provisioning infrastructure in multiple clouds
- C. Exposing resources and data sources based on an API
- D. Managing actions to take based on resource differences

Answer: B

Explanation:

<https://www.terraform.io/language/providers>

NEW QUESTION 64

- (Exam Topic 1)

All standard backend types support state storage, locking, and remote operations like plan. apply and destroy.

- A. True
- B. False

Answer: B

Explanation:

<https://www.terraform.io/language/settings/backends/configuration>

"Some of these backends act like plain remote disks for state files, while others support locking the state while operations are being performed. This helps prevent conflicts and inconsistencies. The built-in backends listed are the only backends. You cannot load additional backends as plugins."

NEW QUESTION 67

- (Exam Topic 1)

Where in your Terraform configuration do you specify a state backend?

- A. The terraform block
- B. The resource block
- C. The provider block
- D. The datasource block

Answer: A

Explanation:

Backends are configured with a nested backend block within the top-level terraform block. Reference:

<https://www.terraform.io/docs/language/settings/backends/configuration.html> <https://www.terraform.io/language/settings/backends/configuration#using-a-backend-block>

NEW QUESTION 72

- (Exam Topic 1)

How is the Terraform remote backend different than other state backends such as S3, Consul, etc.?

- A. It can execute Terraform runs on dedicated infrastructure on premises or in Terraform Cloud
- B. It doesn't show the output of a terraform apply locally
- C. It is only available to paying customers
- D. All of the above

Answer: A

Explanation:

Backends define where Terraform's state snapshots are stored. A given Terraform configuration can either specify a backend, integrate with Terraform Cloud, or do neither and default to storing state locally.

If you and your team are using Terraform to manage meaningful infrastructure, we recommend using the remote backend with Terraform Cloud or Terraform Enterprise.

Reference: <https://www.terraform.io/docs/language/settings/backends/index.html>

NEW QUESTION 73

- (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 77

- (Exam Topic 2)

When TF_LOG_PATH is set, TF_LOG must be set in order for any logging to be enabled.

- A. False
- B. True

Answer: B

Explanation:

TF_LOG_PATH specifies where the log should persist its output to. Note that even when TF_LOG_PATH is set, TF_LOG must be set in order for any logging to be enabled.

For example, to always write the log to the directory you're currently running terraform from: export TF_LOG_PATH=./terraform.log

export TF_LOG=TRACE

NEW QUESTION 78

- (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 83

- (Exam Topic 2)

Matt wants to import a manually created EC2 instance into terraform so that he can manage the EC2 instance through terraform going forward. He has written the configuration file of the EC2 instance before importing it to Terraform. Following is the code:

```
resource "aws_instance" "matt_ec2" { ami = "ami-bg2640de" instance_type = "t2.micro" vpc_security_group_ids = ["sg-6ae7d613", "sg-53370035"] key_name = "mysecret" subnet_id = "subnet-9e3cfbc5" }
```

The instance id of that EC2 instance is i-0260835eb7e9bd40 How he can import data of EC2 to state file?

- A. terraform import aws_instance.id = i-0260835eb7e9bd40
- B. terraform import i-0260835eb7e9bd40
- C. terraform import aws_instance.i-0260835eb7e9bd40
- D. terraform import aws_instance.matt_ec2 i-0260835eb7e9bd40

Answer: D

Explanation:

<https://www.terraform.io/docs/import/usage.html>

NEW QUESTION 85

- (Exam Topic 2)

Provisioners should only be used as a last resort.

- A. False
- B. True

Answer: B

Explanation:

Provisioners are a Last Resort

Terraform includes the concept of provisioners as a measure of pragmatism, knowing that there will always be certain behaviors that can't be directly represented in Terraform's declarative model.

However, they also add a considerable amount of complexity and uncertainty to Terraform usage. Firstly, Terraform cannot model the actions of provisioners as part of a plan because they can in principle take any action. Secondly, successful use of provisioners requires coordinating many more details than Terraform usage usually requires: direct network access to your servers, issuing Terraform credentials to log in, making sure that all of the necessary external software is installed, etc.

The following sections describe some situations which can be solved with provisioners in principle, but where better solutions are also available. We do not recommend using provisioners for any of the use-cases described in the following sections.

Even if your specific use-case is not described in the following sections, we still recommend attempting to solve it using other techniques first, and use provisioners only if there is no other option.

<https://www.terraform.io/docs/provisioners/index.html>

NEW QUESTION 87

- (Exam Topic 2)

You want terraform plan and 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. This can be done using any of the local or remote backends
- C. Remote Backends
- D. Terraform Backends

Answer: C

Explanation:

The remote backend stores Terraform state and may be used to run operations in Terraform Cloud. 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. <https://www.terraform.io/docs/backends/types/remote.html>

NEW QUESTION 92

- (Exam Topic 2)

You want to use terraform import to start managing infrastructure that was not originally provisioned through infrastructure as code. Before you can import the resource's current state, what must you do in order to prepare to manage these resources using Terraform?

- A. Run terraform refresh to ensure that the state file has the latest information for existing resources.
- B. Update the configuration file to include the new resources.
- C. Shut down or stop using the resources being imported so no changes are inadvertently missed.
- D. Modify the Terraform state file to add the new resources.

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.

The terraform import command is used to import existing infrastructure.

To import a resource, first write a resource block for it in our configuration, establishing the name by which it will be known to Terraform.

Example:

```
resource "aws_instance" "import_example" {  
# ...instance configuration...  
}
```

Now terraform import can be run to attach an existing instance to this resource configuration.

```
$ terraform import aws_instance.import_example i-03efafa258104165f aws_instance.import_example: Importing from ID "i-03efafa258104165f"...
```

```
aws_instance.import_example: Import complete!
```

```
Imported aws_instance (ID: i-03efafa258104165f) aws_instance.import_example: Refreshing state... (ID: i-03efafa258104165f) Import successful!
```

The resources that were imported are shown above. These resources are now in your Terraform state and will henceforth be managed by Terraform.

This command locates the AWS instance with ID i-03efafa258104165f (which has been created outside Terraform) and attaches its existing settings, as described by the EC2 API, to the name aws_instance.import_example in the Terraform state.

NEW QUESTION 97

- (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 99

- (Exam Topic 2)

Terraform init can indeed be run only a few times, because, every time terraform init will initialize the project , and download all plugins from the internet repository , regardless of whether they were present or not , and this increases the waiting time

- A. True
- B. False

Answer: B

Explanation:

Re-running init with modules already installed will install the sources for any modules that were added to configuration since the last init, but will not change any already-installed modules. Use -upgrade to override this behavior, updating all modules to the latest available source code.
<https://www.terraform.io/docs/commands/init.html>

NEW QUESTION 101

- (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 104

- (Exam Topic 2)

terraform refresh command will not modify infrastructure, but does modify 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.
<https://www.terraform.io/docs/commands/refresh.html>

NEW QUESTION 105

- (Exam Topic 2)

Terraform works well in Windows but a Windows server is required.

- A. False
- B. True

Answer: A

Explanation:

You may see this QUESTION NO: in actual exam. Please remember : Terraform does not require GO language to be installed as a prerequisite and it does not require a Windows Server as well.

NEW QUESTION 107

- (Exam Topic 2)

Refer to the below code where developer is outputting the value of the database password but has used sensitive parameter to hide the output value in the CLI.
output "db_password" { value = aws_db_instance.db.password description = "The password for logging in to the database." sensitive = true}
Since sensitive is set to true, the value associated with db password will not be present in state file as plain-text?

- A. False
- B. True

Answer: A

Explanation:

Sensitive output values are still recorded in the state, and so will be visible to anyone who is able to access the state data.

NEW QUESTION 108

- (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 109

- (Exam Topic 2)

Which of the following command can be used to view the specified version constraints for all providers used in the current configuration.

- A. terraform providers
- B. terraform state show
- C. terraform provider
- D. terraform plan

Answer: A

Explanation:

Use the terraform providers command to view the specified version constraints for all providers used in the current configuration.
<https://www.terraform.io/docs/configuration/providers.html>

NEW QUESTION 111

- (Exam Topic 3)

Your manager has instructed you to start using terraform for the entire infra provisioning of the application stack. There are 4 environments – DEV, QA, UAT, and PROD. The application team has asked for complete segregation between these environments including the backend, state, and also configurations, since there will be unique resources in different environments. What is the possible way to structure the terraform code to facilitate that.

- A. Completely separate the working directories, keep one for each environment. For each working directory, maintain a separate configuration file, variables file, and map to a different backend.
- B. Completely separate the working directories, keep one for each environment. For each working directory, maintain a separate configuration file, variables file, and map to the same backend.
- C. Implement terraform workspaces, and map each environment with one workspace.
- D. Enable remote backend storage. Configure 4 different backend storages, one for each environment.

Answer: A

Explanation:

In particular, organizations commonly want to create a strong separation between multiple deployments of the same infrastructure serving different development stages (e.g. staging vs. production) or different internal teams. In this case, the backend used for each deployment often belongs to that deployment, with different credentials and access controls. Named workspaces are not a suitable isolation mechanism for this scenario.
<https://www.terraform.io/docs/state/workspaces.html>

NEW QUESTION 114

- (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 115

- (Exam Topic 3)

The canonical format may change in minor ways between Terraform versions, so after upgrading Terraform it is recommended to proactively run.

- A. terraform fmt

- B. terraform init
- C. terraform validate
- D. terraform plan

Answer: A

NEW QUESTION 117

- (Exam Topic 3)

Once a resource is marked as tainted, the next plan will show that the resource will be _____ and _____ and the next apply will implement this change.

- A. recreated and tainted
- B. destroyed and not recreated
- C. tainted and not destroyed
- D. destroyed and recreated

Answer: D

NEW QUESTION 119

- (Exam Topic 3)

Which flag would be used within a Terraform configuration block to identify the specific version of a provider required?

- A. required-provider
- B. required-version
- C. required_providers
- D. required_versions

Answer: C

Explanation:

For production use, you should constrain the acceptable provider versions via configuration file to ensure that new versions with breaking changes will not be automatically installed by terraform init in the future.

```
Example terraform {  
  required_providers { aws = ">= 2.7.0"  
}  
}
```

NEW QUESTION 120

- (Exam Topic 3)

Which of the following variable definition files will terraform load automatically?

- A. terraform.tfvar
- B. Any files with names ending in .auto.tfvars.json
- C. terraform.tfvars
- D. terraform.tfvars.json

Answer: BCD

Explanation:

Terraform also automatically loads a number of variable definitions files if they are present: Files named exactly terraform.tfvars or terraform.tfvars.json.

Any files with names ending in .auto.tfvars or .auto.tfvars.json. <https://www.terraform.io/docs/configuration/variables.html>

<https://www.terraform.io/docs/configuration/variables.html#variable-definitions-tfvars-files>

NEW QUESTION 121

- (Exam Topic 3)

Which of the below datatype is not supported by Terraform.

- A. Array
- B. List
- C. Object
- D. Map

Answer: A

NEW QUESTION 122

- (Exam Topic 3)

A data block requests that Terraform read from a given data source and export the result under the given local name.

- A. False
- B. True

Answer: B

NEW QUESTION 123

- (Exam Topic 3)

You have already set TF_LOG = DEBUG to enable debug log. Now you want to always write the log to the directory you're currently running terraform from. what should you do to achieve this.

- A. Run the command `export TF_LOG_FILE=./terraform.log`.
- B. Run the command `export TF_LOG_PATH=./terraform.log`.
- C. Run the command `export TF_DEBUG_PATH=./terraform.log`.
- D. No explicit action require
- E. Terraform will take care of this as you have enable TF_LOG.

Answer: B

Explanation:

<https://www.terraform.io/docs/commands/environment-variables.html>

NEW QUESTION 124

- (Exam Topic 3)

What kind of resource dependency is stored in `terraform.tfstate` file?

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

Answer: A

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 128

- (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 129

- (Exam Topic 3)

Every region in AWS has a different AMI ID for Linux and these are keep on changing. What is the best approach to create the EC2 instances that can deal with different AMI IDs based on regions?

- A. Use data source `aws_ami`.
- B. Create a map of region to ami id.
- C. Create different configuration file for different region.
- D. None of the above

Answer: A

Explanation:

<https://www.terraform.io/docs/configuration/data-sources.html>

NEW QUESTION 131

- (Exam Topic 3)

A single terraform resource file that defines an `aws_instance` resource can simply be renamed to `vsphere_virtual_machine` in order to switch cloud providers.

- A. True
- B. False

Answer: B

Explanation:

Every provider has its own required and allowed declarations none of which match between cloud providers.

NEW QUESTION 132

- (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 134

- (Exam Topic 3)

Why is it a good idea to declare the required version of a provider in a Terraform configuration file?

- * 1. terraform
- * 2. {
- * 3. required_providers
- * 4. {
- * 5. aws = "~> 1.0"
- * 6. }
- * 7. }

- A. To remove older versions of the provider.
- B. To ensure that the provider version matches the version of Terraform you are using.
- C. Providers are released on a separate schedule from Terraform itself; therefore a newer version could introduce breaking changes.
- D. To match the version number of your application being deployed via Terraform.

Answer: C

NEW QUESTION 137

- (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 142

- (Exam Topic 4)

A Terraform output that sets the "sensitive" argument to true will not store that value in the state file.

- A. True
- B. False

Answer: B

Explanation:

Reference: <https://www.terraform.io/language/values/outputs>

NEW QUESTION 146

- (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.tvvars file

Answer: C

NEW QUESTION 147

- (Exam Topic 4)

Select the most accurate statement to describe the Terraform language from the following list.

- A. Terraform is an immutable, declarative, Infrastructure as Code provisioning language based on Hashicorp Configuration Language, or optionally JSON.
- B. Terraform is a mutable, declarative, Infrastructure as Code configuration management language based on Hashicorp Configuration Language, or optionally JSON.
- C. Terraform is an immutable, procedural, Infrastructure as Code configuration management language based on Hashicorp Configuration Language, or optionally JSON.
- D. Terraform is a mutable, procedural, Infrastructure as Code provisioning language based on Hashicorp Configuration Language, or optionally YAML.

Answer: A

Explanation:

Terraform is not a configuration management tool - <https://www.terraform.io/intro/vs/chefpuppet.html> Terraform is a declarative language -

<https://www.terraform.io/docs/configuration/index.html> Terraform supports a syntax that is JSON compatible <https://www.terraform.io/docs/configuration/syntax-json.html>

Terraform is primarily designed on immutable infrastructure principles - <https://www.hashicorp.com/resources/what-is-mutable-vs-immutable-infrastructure>

NEW QUESTION 150

- (Exam Topic 4)

In the example below, the depends_on argument creates what type of dependency?

- A. implicit dependency
- B. internal dependency
- C. explicit dependency
- D. non-dependency resource

Answer: C

NEW QUESTION 151

- (Exam Topic 4)

How would you reference the attribute "name" of this fictitious resource in HCL?

```
resource "kubernetes_namespace" "example" {  
  name = "test"  
}
```

- A. resource.kubrnetes_namespace>example.name
- B. kubernetes_namespace.test.name
- C. kubernetes_namespace.example.name
- D. data kubernetes_namespace.name
- E. None of the above

Answer: C

Explanation:

<https://www.terraform.io/language/expressions/references#references-to-resource-attributes>

NEW QUESTION 154

- (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 155

- (Exam Topic 4)

Where can Terraform not load a provider from?

- A. Plugins directory
- B. Provider plugin cache
- C. Official HashrCorp distribution on releases, hashicorp.com
- D. Source code

Answer: D

NEW QUESTION 159

- (Exam Topic 4)

Terra form installs its providers during which phase?

- A. Man
- B. Init
- C. Refresh
- D. All of the above

Answer: B

Explanation:

Providers are installed in the init phase

NEW QUESTION 160

- (Exam Topic 4)

Why should secrets not be hard coded into Terraform code? Choose two correct answers

- A. All passwords should be rotated on a quarterly basis.

- B. The Terraform code is copied to the target resources to be applied locally and could expose secrets if a target resource is compromised.
- C. Terraform code is typically stored in version control, as well as copied to the systems from h it's run. Any of those may not have robust security mechanisms.
- D. It makes the code less reusable.

Answer: BC

NEW QUESTION 162

- (Exam Topic 4)

Which of the following arguments are required when declaring a Terraform output?

- A. sensitive
- B. description
- C. default
- D. value

Answer: D

NEW QUESTION 163

- (Exam Topic 4)

Running terraform fmt without any flags in a directory with Terraform configuration files will check the formatting of those files without changing their contents.

- A. True
- B. False

Answer: B

Explanation:

The terraform fmt command is used to rewrite Terraform configuration files to a canonical format and style.

NEW QUESTION 164

- (Exam Topic 4)

True or False? terraform init cannot automatically download Community providers.

- A. False
- B. True

Answer: B

NEW QUESTION 169

- (Exam Topic 4)

How would you be able to reference an attribute from the vsphere_datacenter data source for use with the argument within the vsprere_folder resource in the following configuration?

```
data "vsphere_datacenter" "dc" {}

resource "vsphere_folder" "parent" {
    path = "Production"
    type = "vm"
    datacenter id = _____
}
```

- A. vsphere_datacenter.dc.id
- B. data.vsphere_datacenter.dc
- C. data.dc,id
- D. data.vsphere_datacenter.dc.id

Answer: D

NEW QUESTION 174

- (Exam Topic 4)

Multiple provider instances blocks for AWS can be part of a single configuration file?

- A. False
- B. True

Answer: B

Explanation:

You can optionally define multiple configurations for the same provider, and select which one to use on a per-resource or per-module basis. The primary reason for this is to support multiple regions for a cloud platform; other examples include targeting multiple Docker hosts, multiple Consul hosts, etc.

To include multiple configurations for a given provider, include multiple provider blocks with the same provider name, but set the alias meta-argument to an alias name to use for each additional configuration. For example:

```
# The default provider configuration provider "aws" {
region = "us-east-1"
}
```

```
# Additional provider configuration for west coast region provider "aws" {  
alias = "west" region = "us-west-2"  
}
```

The provider block without alias set is known as the default provider configuration. When alias is set, it creates an additional provider configuration. For providers that have no required configuration arguments, the implied empty configuration is considered to be the default provider configuration.

<https://www.terraform.io/docs/configuration/providers.html#alias-multiple-provider-instances>

NEW QUESTION 178

- (Exam Topic 4)

Resources in terraform can have same identifiers(Resource type + Block name).

- A. True
- B. False

Answer: B

NEW QUESTION 180

- (Exam Topic 4)

All modules published on the official Terraform Module Registry have been verified by HashiCorp.

- A. True
- B. False

Answer: B

Explanation:

<https://registry.terraform.io/>

Only modules considered "Verified Modules" are reviewed by Hashicorp, otherwise anyone can publish modules on the Terraform Registry.

Reference: <https://www.terraform.io/registry/modules/verified> <https://www.terraform.io/registry/modules/publish>

NEW QUESTION 183

- (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 186

- (Exam Topic 4)

Your team uses terraform OSS . You have created a number of reusable 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 188

- (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 193

- (Exam Topic 4)

Do terraform workspaces help in adding/allowing multiple state files for a single configuration?

- A. True
- B. False

Answer: A

NEW QUESTION 197

- (Exam Topic 4)

How would you reference the Volume IDs associated with the ebs_block_device blocks in this configuration?

```
resource "aws_instance" "example" {
  ami = "ami-abc123"
  instance_type = "t2.micro"

  ebs_block_device {
    device_name = "sda2"
    volume_size = 16
  }

  ebs_block_device {
    device_name = "sda3"
    volume_size = 20
  }
}
```

- A. aws_instance.example.ebs_block_device.[*].volume_id
- B. aws_instance.example.ebs_block_device.volume_id
- C. aws_instance.example.ebs_block_device[sda2,sda3].volume_id
- D. aws_instance.example.ebs_block_device.*.volume_id

Answer: A

Explanation:

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/device_naming.html

NEW QUESTION 198

- (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 199

- (Exam Topic 4)

By default, where does Terraform store its state file?

- A. Amazon S3 bucket
- B. shared directory

- C. remotely using Terraform Cloud
- D. current working directory

Answer: D

Explanation:

By default, the state file is stored in a local file named "terraform.tfstate", but it can also be stored remotely, which works better in a team environment.

NEW QUESTION 200

- (Exam Topic 4)

A terraform apply can not _____ infrastructure.

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

Answer: A

NEW QUESTION 205

- (Exam Topic 4)

You can reference a resource created with for_each using a Splat (*) expression.

- A. True
- B. False

Answer: B

Explanation:

Splat Expressions with Maps The splat expression patterns shown above apply only to lists, sets, and tuples. To get a similar result with a map or object value you must use for expressions. Resources that use the for_each argument will appear in expressions as a map of objects, so you can't use splat expressions with those resources. For more information, see Referring to Resource Instances. https://www.terraform.io/language/meta-arguments/for_each#referring-to-instances
<https://www.terraform.io/language/expressions/references>

NEW QUESTION 208

- (Exam Topic 4)

How does Terraform determine dependencies between resources?

- A. Terraform automatically builds a resource graph based on resources, provisioners, special meta-parameters, and the state file, if present.
- B. Terraform requires all dependencies between resources to be specified using the depends_on parameter
- C. Terraform requires resources in a configuration to be listed in the order they will be created to determine dependencies
- D. Terraform requires resource dependencies to be defined as modules and sourced in order

Answer: A

Explanation:

<https://learn.hashicorp.com/tutorials/terraform/dependencies>

NEW QUESTION 211

- (Exam Topic 4)

You have modified your local Terraform configuration and ran terraform plan to review the changes. Simultaneously, your teammate manually modified the infrastructure component you are working on. Since you already ran terraform plan locally, the execution plan for terraform apply will be the same.

- A. True
- B. False

Answer: B

NEW QUESTION 213

- (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 214

- (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 219

- (Exam Topic 4)

terraform apply will fail if you have not run terraform plan first to update the plan output.

- A. True
- B. False

Answer: B

NEW QUESTION 222

- (Exam Topic 4)

In order to make a Terraform configuration file dynamic and/or reusable, static values should be converted to use what?

- A. Input Parameters
- B. Module
- C. Regular Expressions
- D. Output Value

Answer: A

Explanation:

Input variables serve as parameters for a Terraform module, allowing aspects of the module to be customized without altering the module's own source code, and allowing modules to be shared between different configurations.

<https://www.terraform.io/docs/configuration/variables.html>

NEW QUESTION 227

- (Exam Topic 4)

Which of the following is not supported backend types in Terra form?

- A. consul
- B. gcs
- C. manta
- D. bitbucket

Answer: D

NEW QUESTION 228

- (Exam Topic 4)

Jack is a newbiesto Terraform and wants to enable detailed logging to find all the details. Which environment variable does he need to set?

- A. TF_help
- B. TF LOG
- C. TF_Debug
- D. TF_var_log

Answer: B

NEW QUESTION 231

- (Exam Topic 4)

Which of the following is a meta-argument defined in the configuration files of Terraform?

- A. tfvar
- B. depends_on
- C. instance aws
- D. varl

Answer: B

NEW QUESTION 232

- (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 234

- (Exam Topic 4)

While Terraform is generally written using the HashiCorp Configuration Language (HCL), what other syntax can Terraform are expressed in?

- A. JSON
- B. YAML
- C. TypeScript
- D. XML

Answer: A

Explanation:

The constructs in the Terraform language can also be expressed in JSON syntax, which is harder for humans to read and edit but easier to generate and parse programmatically.

NEW QUESTION 239

- (Exam Topic 4)

Named workspaces are not a suitable isolation mechanism for strong separation between staging and production?

- A. True
- B. False

Answer: A

Explanation:

Organizations commonly want to create a strong separation between multiple deployments of the same infrastructure serving different development stages (e.g. staging vs. production) or different internal teams. In this case, the backend used for each deployment often belongs to that deployment, with different credentials and access controls. Named workspaces are not a suitable isolation mechanism for this scenario.

<https://www.terraform.io/docs/state/workspaces.html#when-to-use-multiple-workspaces>

NEW QUESTION 243

- (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 247

- (Exam Topic 4)

What kind of configuration block will create an infrastructure object with settings specified in the block?

- A. state
- B. provider
- C. resource
- D. data

Answer: C

NEW QUESTION 252

- (Exam Topic 4)

If a DevOps team adopts AWS Cloud Formation as their standardized method for provisioning public cloud resources, which of the following scenarios poses a challenge for this team?

- A. The team is asked to manage a new application stack built on AWS-native services
- B. The organization decides to expand into Azure and wishes to deploy new infrastructure using their existing codebase
- C. The team is asked to build a reusable code base that can deploy resources into any AWS region
- D. The DevOps team is tasked with automating a manual provisioning process

Answer: B

NEW QUESTION 254

- (Exam Topic 4)

A "backend" in Terraform determines how state is loaded and how an operation such as apply is executed. Which of the following is not a supported backend type?

- A. Terraform enterprise
- B. Consul
- C. Github
- D. S3
- E. Artifactory

Answer: C

Explanation:

Github is not a supported backend type. <https://www.terraform.io/docs/backends/types/index.html>

NEW QUESTION 259

- (Exam Topic 4)

What does terraform refresh modify?

- A. Your cloud infrastructure
- B. Your Terraform plan
- C. Your state file
- D. Your Terraform configuration

Answer: C

NEW QUESTION 263

- (Exam Topic 4)

Which are examples of infrastructure as code? (Choose two.)

- A. Cloned virtual machine images
- B. Change management database records
- C. Versioned configuration files
- D. Docker files

Answer: CD

NEW QUESTION 266

- (Exam Topic 4)

Consider the following Terraform 0.12 configuration snippet:

```
* 1. variable "vpc_cidrs" {
* 2. type = map
* 3. default = {
* 4. us-east-1 = "10.0.0.0/16"
* 5. us-east-2 = "10.1.0.0/16"
* 6. us-west-1 = "10.2.0.0/16"
* 7. us-west-2 = "10.3.0.0/16"
* 8. }
* 9. }
* 10.
* 11. resource "aws_vpc" "shared" {
* 12. cidr_block = _____
* 13. }
```

How would you define the cidr_block for us-east-1 in the aws_vpc resource using a variable?

- A. var.vpc_cidrs.0
- B. vpc_cidrs["us-east-1"]
- C. var.vpc_cidrs["us-east-1"]
- D. var.vpc_cidrs[0]

Answer: C

NEW QUESTION 271

- (Exam Topic 4)

Which are forbidden actions when the Terraform state file is locked? (Choose three.)

- A. terraform destroy
- B. terraform fmt
- C. terraform state list
- D. terraform apply
- E. terraform plan
- F. terraform validate

Answer: ADE

NEW QUESTION 272

- (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 275

- (Exam Topic 4)

You want to share Terraform state with your team, store it securely and provide state locking. How would you do this? Choose three correct answers.

- A. Using the consul Terraform backend.
- B. Using the remote Terraform backend with Terraform Cloud / Terraform Enterprise.
- C. Using the local backend.
- D. Using the s3 terraform backen
- E. The dynamodb_field option e not needed.
- F. Using an s3 terraform backend with an appropriate IAM policy and dynamodb_field option configured.

Answer: ABE

NEW QUESTION 279

- (Exam Topic 4)

What is a downside to using the Vault provider to read secrets from Vault?

- A. Secrets are persisted to the state file and plans.
- B. Terraform and Vault must be running on the same version.
- C. Terraform and Vault must be running on the same physical host.
- D. Terraform requires a unique auth method to work with Vault.

Answer: A

Explanation:

The Vault provider allows Terraform to read from, write to, and configure Hashicorp Vault.

Interacting with Vault from Terraform causes any secrets that you read and write to be persisted in both Terraform's state file and in any generated plan files. For any Terraform module that reads or writes Vault secrets, these files should be treated as sensitive and protected accordingly.

NEW QUESTION 283

- (Exam Topic 4)

In the below configuration, how would you reference the module output vpc_id ?

```
module "vpc" {  
  source = "terraform-aws-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:

module.vpc.id

NEW QUESTION 285

- (Exam Topic 4)

You need to specify a dependency manually. What resource meta-parameter can you use lo make sure Terraform respects thee dependency?

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:

depends_on

NEW QUESTION 288

- (Exam Topic 4)

Which type of block fetches or computes information for use elsewhere in a Terraform configuration?

- A. provider
- B. resource
- C. local
- D. data

Answer: D

Explanation:

Data sources allow data to be fetched or computed for use elsewhere in Terraform configuration. Use of data sources allows a Terraform configuration to build on information defined outside of Terraform, or defined by another separate Terraform configuration.

NEW QUESTION 292

- (Exam Topic 4)

Which of the following is the safest way to inject sensitive values into a Terraform Cloud workspace?

- A. Write the value to a file and specify the file with the -var-file flag
- B. Set a value for the variable in the UI and check the "Sensitive" check box
- C. Edit the state file directly just before running terraform apply
- D. Set the variable value on the command line with the -var flag

Answer: B

Explanation:

-var and -var-file overwrite workspace-specific and variable set variables that have the same key. From the workspace, variable can be added and checked off as being sensitive. Reference: <https://www.terraform.io/cloud-docs/workspaces/variables/managing-variables#loading-variables-from-files>
<https://www.terraform.io/cloud-docs/workspaces/variables>

NEW QUESTION 295

- (Exam Topic 4)

What advantage does an operations team that uses infrastructure as code have?

- A. The ability to delete infrastructure
- B. The ability to reuse best practice configurations and settings
- C. The ability to autoscale a group of servers
- D. The ability to update existing infrastructure

Answer: B

NEW QUESTION 297

- (Exam Topic 4)

Which of the following does terraform apply change after you approve the execution plan? Choose two correct answers.

- A. The execution plan
- B. Terraform code
- C. Cloud infrastructure
- D. State file
- E. The .terraform directory

Answer: CD

NEW QUESTION 301

- (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 302

- (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 303

- (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 304

- (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 305

- (Exam Topic 4)

What does Terraform use providers for? (Choose three.)

- A. Provision resources for on-premises infrastructure services
- B. Simplify API interactions
- C. Provision resources for public cloud infrastructure services
- D. Enforce security and compliance policies
- E. Group a collection of Terraform configuration files that map to a single state file

Answer: ABC

NEW QUESTION 306

- (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 310

- (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 313

- (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 317

- (Exam Topic 4)

You are using a networking module in your Terraform configuration with the name label my_network. In your main configuration you have the following code:

```
output: "net_id" {  
  value = module.my_network.vnet_id  
}
```

When you run terraform validate, you get the following error:

```
Error: Reference to undeclared output value  
  
on main.tf line 12, in output "net_id":  
12:   value = module.my_network.vnet_id
```

What must you do to successfully retrieve this value from your networking module?

- A. Define the attribute vnet_id as a variable in the networking module
- B. Change the referenced value to module.my_network.outputs.vnet_id
- C. Define the attribute vnet_id as an output in the networking module
- D. Change the referenced value to my_network.outputs.vnet_id

Answer: C

Explanation:

In a parent module, outputs of child modules are available in expressions as module.<MODULE NAME>.<OUTPUT NAME>. For example, if a child module named web_server declared an output named instance_ip_addr, you could access that value as module.web_server.instance_ip_addr.

NEW QUESTION 320

- (Exam Topic 4)

In the following code snippet, the block type is identified by which string?

- A. "aws_instance"
- B. resource
- C. "db"
- D. instance_type

Answer: B

NEW QUESTION 322

- (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 327

- (Exam Topic 4)

As a member of an operations team that uses infrastructure as code (IaC) practices, you are tasked with making a change to an infrastructure stack running in a public cloud. Which pattern would follow IaC best practices for making a change?

- A. Make the change via the public cloud API endpoint
- B. Make the change programmatically via the public cloud CLI
- C. Submit a pull request and wait for an approved merge of the proposed changes
- D. Use the public cloud console to make the change after a database record has been approved
- E. Clone the repository containing your infrastructure code and then run the code

Answer: C

NEW QUESTION 332

- (Exam Topic 4)

Which of the following is not a way to trigger terraform destroy ?

- A. Passing ---destroy at the end of apian request
- B. Running terraform destroy from the correct directory and then typing "yes" when prompted in the CLI
- C. Using the destroy command with auto approve
- D. Delete the state file and run terraform apply

Answer: A

NEW QUESTION 337

- (Exam Topic 4)

Given the Terraform configuration below, in which order will the resources be created?

- A. Larger image
- B. resources will be created simultaneously
- C. aws_eip will be created first aws_instance will be created second
- D. aws_instance will be created first aws_eip will be created second

Answer: D

Explanation:

The aws_instance will be created first, and then aws_eip will be created second due to the aws_eip's resource dependency of the aws_instance id

NEW QUESTION 339

- (Exam Topic 4)

What is a key benefit of the Terraform state file?

- A. A state file represents a source of truth for resources provisioned with a public cloud console
- B. A state file represents a source of truth for resources provisioned with Terraform
- C. A state file represents the desired state expressed by the Terraform code files
- D. A state file can be used to schedule recurring infrastructure tasks

Answer: C

NEW QUESTION 344

- (Exam Topic 4)

You have been working in a Cloud provider account that is shared with other team members. You previously used Terraform to create a load balancer that is listening on port 80. After some application changes, you updated the Terraform code to change the port to 443.

You run terraform plan and see that the execution plan shows the port changing from 80 to 443 like you intended, and step away to grab some coffee.

In the meantime, another team member manually changes the load balancer port to 443 through the Cloud provider console before you get back to your desk.

What will happen when you terraform apply upon returning to your desk?

- A. Terraform will not make any changes to the Load Balancer and will update the state file to reflect any changes made.
- B. Terraform will change the port back to 80 in your code
- C. Terraform will change the load balancer port to 80, and) then change it back to 443
- D. Terraform will fail with in error because the state file is no longer accurate

Answer: A

NEW QUESTION 347

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