**Terraform MCQ’s**

1. **What is Terraform primarily used for?**
   1. Continuous Integration
   2. Infrastructure as Code (IaC)
   3. Application Development
   4. Software Testing
2. **Which company developed Terraform?**
   1. Red Hat
   2. Microsoft
   3. HashiCorp
   4. Amazon
3. **Which language is primarily used in Terraform configuration files?**
   1. Python
   2. YAML
   3. JSON
   4. HCL
4. **What is the main purpose of the terraform init command?**
   1. To initialize a Terraform configuration
   2. To apply configuration changes
   3. To destroy resources
   4. To validate configuration files
5. **Which of the following is NOT a Terraform command?**
   1. terraform apply
   2. terraform destroy
   3. terraform validate
   4. terraform compile
6. **Which feature of Terraform allows you to create, update, and delete infrastructure resources consistently?**
   1. Orchestration
   2. Automation
   3. Provisioning
   4. State Management
7. **What does Terraform use to track the state of resources?**
   1. Logs
   2. Configuration files
   3. State files
   4. Version control
8. **In Terraform, what is a provider?**
   1. A resource manager
   2. A cloud service
   3. A plugin that interacts with APIs
   4. A code repository
9. **Which command initializes the providers defined in a configuration?**
   1. terraform plan
   2. terraform init
   3. terraform apply
   4. terraform destroy
10. **How are providers specified in Terraform code?**
    1. Using resource blocks
    2. Using module blocks
    3. Using provider blocks
    4. Using data blocks
11. **Which command would you use to see the available versions of a provider?**
    1. terraform version
    2. terraform providers
    3. terraform search
    4. terraform provider list
12. **What is the correct syntax to define a string variable in HCL?**
    1. variable { "type" = "string" }
    2. variable "name" { type = string }
    3. var "name" = string
    4. define variable { type = string }
13. **How are lists represented in HCL?**
    1. [item1, item2]
    2. {item1, item2}
    3. (item1, item2)
    4. item1, item2
14. **What command is used to create resources defined in a local Terraform configuration?**
    1. terraform init
    2. terraform apply
    3. terraform validate
    4. terraform output
15. **Which block is used to define a local resource in Terraform?**
    1. resource
    2. module
    3. provider
    4. data
16. **Where is the state of local resources stored by default?**
    1. In a remote backend
    2. In a .tfstate file
    3. In the cloud
    4. In Terraform Cloud
17. **What is required to authenticate Terraform with AWS for creating an EC2 instance?**
    1. AWS credentials
    2. API keys
    3. SSH keys
    4. AWS account ID
18. **Which block defines the EC2 instance resource in Terraform?**
    1. resource "aws\_instance"
    2. resource "ec2"
    3. instance "aws\_ec2"
    4. provider "aws"
19. **Which argument specifies the type of instance to create?**
    1. instance\_type
    2. type
    3. size
    4. machine\_type
20. **Which Terraform attribute is used to specify the AMI for an EC2 instance?**
    1. ami\_id
    2. ami
    3. image
    4. image\_id
21. **Which block defines an input variable in Terraform?**
    1. variable
    2. input
    3. var
    4. define
22. **Which block defines an output variable in Terraform?**
    1. output
    2. print
    3. return
    4. export
23. **How do you reference an input variable within a Terraform configuration?**
    1. var.<variable\_name>
    2. input.<variable\_name>
    3. ${<variable\_name>}
    4. <variable\_name>
24. **Which argument in the output block defines what to display?**
    1. value
    2. output
    3. print
    4. show
25. **Which type is not a valid variable type in Terraform?**
    1. string
    2. map
    3. char
    4. list
26. **Which source of variable values has the highest precedence in Terraform?**
    1. Environment variables
    2. .tfvars files
    3. Default values
    4. Command-line flags
27. **How do you specify a variable type in Terraform?**
    1. type = string
    2. var type = string
    3. variable "type" = string
    4. kind = string
28. **What is the purpose of a data source in Terraform?**
    1. To create resources
    2. To fetch data from providers
    3. To store variables
    4. To log execution details
29. **Which command is used to refresh data sources in Terraform?**
    1. terraform apply
    2. terraform refresh
    3. terraform init
    4. terraform data
30. **How is a data source defined in Terraform?**
    1. Using the data block
    2. Using the resource block
    3. Using the source block
    4. Using the input block
31. **What does the local block in Terraform do?**
    1. Creates temporary variables
    2. Defines local functions
    3. Stores configuration files
    4. Defines local variables
32. **Which function converts a string to uppercase in Terraform?**
    1. upper()
    2. uppercase()
    3. to\_upper()
    4. up()
33. **What is the correct way to define a local variable in Terraform?**
    1. local { var\_name = "value" }
    2. locals { var\_name = "value" }
    3. variable { var\_name = "value" }
    4. define { var\_name = "value" }
34. **What does the terraform init command do?**
    1. Initializes the Terraform state file
    2. Initializes the provider plugins and modules
    3. Destroys the existing infrastructure
    4. Creates a plan file
35. **What is the primary purpose of the terraform plan command?**
    1. To apply configuration changes to resources
    2. To validate Terraform syntax
    3. To create an execution plan without making changes
    4. To destroy resources
36. **What does the terraform apply command do?**
    1. Formats Terraform code
    2. Validates the configuration files
    3. Applies the changes required to reach the desired state of the configuration
    4. Initializes the Terraform environment
37. **Which command is used to format Terraform code according to HashiCorp's style conventions?**
    1. terraform plan
    2. terraform validate
    3. terraform fmt
    4. terraform tidy
38. **What does the terraform validate command do?**
    1. Checks the code for syntax errors
    2. Applies the configuration
    3. Initializes the working directory
    4. Deletes the state file
39. **What is the primary purpose of the terraform destroy command?**
    1. To refresh the current state
    2. To format the configuration files
    3. To remove all resources defined in the configuration
    4. To output the resource plan
40. **Which flag would you use with terraform apply to save the execution plan to a file?**
    1. -save
    2. -out
    3. -store
    4. -plan
41. **What does the -auto-approve flag do when used with terraform apply or terraform destroy?**
    1. Requires manual approval
    2. Automatically applies changes without confirmation
    3. Validates the configuration before applying
    4. Only plans the changes without applying
42. **Where is the Terraform state backup file stored by default?**
    1. backup.tf
    2. .terraform/backup.tfstate
    3. terraform.tfstate.backup
    4. backup/terraform.tfstate
43. **What is the function of the terraform show command?**
    1. Shows the formatted code
    2. Shows the current state of the infrastructure
    3. Shows the Terraform version
    4. Shows the provider details
44. **Which command would you use to reformat all .tf files in a directory?**
    1. terraform reformat
    2. terraform fmt
    3. terraform validate
    4. terraform plan
45. **What does the terraform plan -out=planfile command do?**
    1. Saves the plan output to a file named planfile
    2. Applies the changes described in planfile
    3. Deletes the current plan file
    4. Shows the current state of planfile
46. **Which Terraform command is used to confirm that your configuration is syntactically valid?**
    1. terraform check
    2. terraform init
    3. terraform validate
    4. terraform inspect
47. **Which of the following commands will destroy the infrastructure without prompting for confirmation?**
    1. terraform destroy -force
    2. terraform destroy -auto-approve
    3. terraform destroy -y
    4. terraform destroy -no-prompt
48. **Which command displays the changes made by a previously saved execution plan file?**
    1. terraform plan -show
    2. terraform show planfile
    3. terraform display -plan
    4. terraform show -out=planfile
49. **Which command can be used to verify the output format and values from the Terraform state file?**
    1. terraform plan
    2. terraform output
    3. terraform validate
    4. terraform fmt
50. **Which of the following cloud providers can be managed with Terraform?**
    1. AWS
    2. Azure
    3. Google Cloud Platform
    4. All of the above
51. **Terraform displays idempotence property. An example would be** 
    1. Config file declares 4 t2.micro windows instances. The state file shows 2 windows instances are already present. Hence terraform will create 2 t2.micro windows instances newly
    2. Config file declares 4 t2.micro windows instances. The state file shows 2 are already present. Hence terraform will destroy the existing two and create 4 newly
    3. Config file declares 4 t2.micro windows instances. The state file shows 2 t2.micro Ubuntu instances are already present. And terraform creates 2 t2.micro windows instances newly
    4. Config file declares 4 t2.micro windows instances. The state file shows 4 t2.micro RHEL instances are already present. And terraform does not take any action as 4 are already present
52. **What is Infra as code?**
    1. Deploying your code in infrastructure provided by cloud provider
    2. Its just another name for setting up auto scaling in cloud
    3. Provisioning of infrastructure using code instead of through manual processes.
    4. Using secret codes to access important IT infrastructure
53. **Format of terraform.tfstate file**
    1. yaml
    2. JSON
    3. CSV
    4. xml

1. **What is the primary purpose of Terraform remote state?**
   1. To speed up Terraform plan execution
   2. To store Terraform state files on the local machine
   3. To share state between multiple workspaces and users
   4. To enforce compliance policies on infrastructure

**Answer:** C) To share state between multiple workspaces and users

1. **Which of the following backends is commonly used for Terraform remote state management?**
   1. Google Drive
   2. AWS S3
   3. GitHub
   4. MySQL Database

**Answer:** B) AWS S3

1. **Which command is used to configure remote state in Terraform?**
   1. terraform init
   2. terraform remote
   3. terraform state
   4. terraform config

**Answer:** A) terraform init

1. **In Terraform, why is it important to lock remote state during updates?**
   1. To prevent simultaneous updates by multiple users
   2. To optimize performance during state retrieval
   3. To secure state files from unauthorized access
   4. To enable versioning of state files

**Answer:** A) To prevent simultaneous updates by multiple users

1. **What feature in Terraform remote state can be used to reference data from one state file into another?**
   1. State merging
   2. Data import
   3. State sharing
   4. Data sources

**Answer:** D) Data sources

1. **Which Terraform backend configuration block is used to define the remote state storage location?**
   1. backend
   2. remote
   3. state
   4. provider

**Answer:** A) backend

1. **What must be defined in the backend configuration to connect Terraform to a remote state storage?**
   1. Credentials, region, and bucket details
   2. Database connection string
   3. Resource group name
   4. API endpoint and access token

**Answer:** A) Credentials, region, and bucket details

1. **When using a remote state, which component handles state locking in Terraform?**
   1. The Terraform CLI
   2. Backend provider (e.g., S3, GCS)
   3. Terraform Cloud only
   4. Local state file manager

**Answer:** B) Backend provider (e.g., S3, GCS)

1. **Which of the following is a benefit of using Terraform remote state?**
   1. Improved local storage efficiency
   2. Easier state file versioning
   3. Collaboration among team members on the same infrastructure
   4. Automated state cleanup and archiving

**Answer:** C) Collaboration among team members on the same infrastructure

1. Bottom of Form
2. **What is the primary purpose of using modules in Terraform?**
   * A. To increase code repetition.
   * B. To modularize, organize, and reuse configuration code.
   * C. To decrease the performance of Terraform.
   * D. To ensure every resource is defined only once.

**Answer:** B. To modularize, organize, and reuse configuration code.

1. **Which command initializes a Terraform module and its required dependencies?**
   * A. terraform apply
   * B. terraform init
   * C. terraform plan
   * D. terraform validate

**Answer:** B. terraform init

1. **Which block is used within a Terraform module to expose input variables?**
   * A. output
   * B. provider
   * C. variable
   * D. resource

**Answer:** C. variable

1. **How can you source a module from the Terraform Registry?**
   * A. Using the URL of the module directly.
   * B. Using the source attribute with "registry" keyword.
   * C. Specifying the module name with source = "terraform.io/registry/module".
   * D. Using the source attribute with the module's unique identifier.

**Answer:** D. Using the source attribute with the module's unique identifier.

1. **Which of the following commands is used to view the output of a Terraform module after deployment?**
   * A. terraform output
   * B. terraform show
   * C. terraform state
   * D. terraform view

**Answer:** A. terraform output

1. **What is the main purpose of Terraform Cloud?**
   * A. To store Terraform binary files.
   * B. To provide a collaborative environment for Terraform workflows.
   * C. To replace Terraform CLI.
   * D. To host Terraform documentation.

**Answer:** B. To provide a collaborative environment for Terraform workflows.

1. **Which feature of Terraform Cloud allows for version-controlled infrastructure as code?**
   * A. Remote state storage
   * B. VCS Integration
   * C. API access
   * D. Team management

**Answer:** B. VCS Integration

1. **Which Terraform Cloud component is used to store and manage sensitive information such as API keys?**
   * A. Variables
   * B. Workspaces
   * C. Remote State
   * D. Sentinel

**Answer:** A. Variables

1. **Which execution mode in Terraform Cloud allows you to run Terraform commands from your local machine while still using Terraform Cloud’s state management?**
   * A. Local Execution Mode
   * B. Remote Execution Mode
   * C. Hybrid Execution Mode
   * D. CLI-driven Execution Mode

**Answer:** D. CLI-driven Execution Mode

1. **What happens when you use the count attribute within a module?**
   * A. It repeats the module configuration multiple times.
   * B. It sets the number of resources inside the module.
   * C. It adds a count to each output variable.
   * D. It only works with resource blocks, not modules.

**Answer:** A. It repeats the module configuration multiple times.

1. **In Terraform Cloud, which feature allows multiple configurations to share the same state data?**
   * A. Workspaces
   * B. Teams
   * C. API tokens
   * D. Modules

**Answer:** A. Workspaces

1. **What is the purpose of Terraform Cloud's workspace "locking" feature during a run?**
   * A. To prevent other users from viewing the run.
   * B. To ensure that only one run modifies the state at a time.
   * C. To restrict access to the workspace settings.
   * D. To backup the state file automatically.

**Answer:** B. To ensure that only one run modifies the state at a time.

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