**TERRAFORM  
  
OVERALL TERRAFORM INTERVIEW QUESTIONS**

1. **How does Terraform differ from other IaC tools like CloudFormation or Ansible?**
2. **What is the role of the state file in Terraform?**
3. **How would you handle sensitive information like secrets in Terraform?**
4. **What are Terraform Modules, and why are they used?**
5. **How would you explain Terraform to someone from a non-technical background?**
6. **Can you explain the difference between Terraform and configuration management tools like Ansible, Chef, or Puppet?**
7. **How does Terraform ensure that the infrastructure remains in the desired state?**
8. **How would you explain Terraform to someone from a non-technical background?**
9. **Can you explain the difference between Terraform and configuration management tools like Ansible, Chef, or Puppet?**
10. **How does Terraform ensure that the infrastructure remains in the desired state?**
11. **How does Terraform ensure that the infrastructure remains in the desired state?**
12. **What is the role of the Terraform state file, and why is it important?**
13. **What is a provider in Terraform, and how does it work?**
14. **How does Terraform handle multi-cloud environments, and why is this beneficial?**
15. **What is the purpose of terraform plan, and why is it important in the Terraform workflow?**
16. **What is the difference between terraform apply and terraform destroy?**
17. **How does Terraform ensure consistency when managing infrastructure across multiple team members?**
18. **What are some challenges you might face when using Terraform, and how would you address them?**
19. **What is the difference between a data block and a resource block in Terraform?**
20. **What is the purpose of terraform output, and how is it used?**
21. **What are Terraform workspaces, and how do they help in managing different environments?**
22. **What is the purpose of the terraform fmt command, and why is it important?**
23. **What is the terraform validate command used for, and when would you use it?**
24. **What is terraform init, and why is it necessary before running other Terraform commands?**
25. **Terraform EC2 Setup:**
    1. What is the importance of the ami and instance\_type parameters when creating an EC2 instance in Terraform?
    2. How would you modify the Terraform code to create an EC2 instance in a specific region?
    3. What is the purpose of using the aws\_security\_group in a Terraform EC2 configuration?
    4. What happens if you forget to specify a key pair for your EC2 instance in the Terraform script?
26. **Resource Blocks in Terraform:**
    1. What is the purpose of the resource block in Terraform, and how does it relate to AWS EC2 instances?
    2. What is the lifecycle of a resource in Terraform, and how does Terraform handle changes to existing resources?
    3. What are some common parameters you would include in a resource block for EC2 instances?
    4. Explain the difference between the aws\_instance resource and the aws\_security\_group resource in Terraform.
27. **Output Blocks in Terraform:**
    1. How can you use the output block to display the public IP of the EC2 instance after Terraform applies the configuration?
    2. What would happen if you tried to use an output block without referencing an existing resource?
    3. Can you modify the output block to display multiple attributes of a resource (for example, both public and private IPs of an EC2 instance)?
28. **Simplified Terraform Code for EC2 Creation:**
    1. What are the benefits of using a simplified Terraform configuration for creating an EC2 instance versus a more complex one?
    2. What limitations might you encounter when using a simplified version of the Terraform code for creating resources?
29. **. Terraform Variables:**
    1. What is the difference between default and description within a variable block?
    2. How do you pass variables to a Terraform script when executing it?
    3. Can you explain the use of a terraform.tfvars file in managing variables?
    4. What happens if you don't provide a value for a required variable in your Terraform configuration?
    5. How would you reference a variable in your resource block for creating an EC2 instance?

**6. Terraform State Files & Backends:**

1. What is the purpose of a state file in Terraform, and how does it impact the infrastructure management process?
2. How does Terraform ensure that your infrastructure is in the desired state when you use the terraform apply command?
3. What happens if you accidentally delete the Terraform state file?
4. What is the difference between using a local state file and a remote backend for storing Terraform state?