# Step 1: Introduction:

* As a new associate in our company, you will be responsible for deploying secure AWS landing zones for our clients.
* A landing zone is a set of AWS best practices and automated solutions that enables customers to set up a secure, multi-account environment and a baseline network architecture to deploy their applications. In this document, we will provide you with a detailed overview of the key components and best practices for designing a landing zone, options for automating the deployment, and tools and services that can be used to implement and support the landing zone.
* Additionally, we will also discuss the steps involved in implementing a landing zone and deploying it for a client, as well as providing ongoing support for the client. With this knowledge, you will be equipped to successfully deploy AWS landing zones for our clients, providing them with a secure and scalable infrastructure to support their business needs.
* Provide a brief overview of the different stages involved in the process.

# Step 2: Gathering Information from the Client's Current Cloud State:

* Explain the importance of understanding the client's current cloud state before deploying a landing zone. This information will help to identify any existing resources, security controls and compliance requirements which will be important to take into consideration when designing and implementing the landing zone.
* Outline the different types of information that should be gathered:
  + **Current infrastructure**: This includes the existing VPCs, subnets, security groups, routing tables, and other network resources.
  + **Security controls**: This includes the existing IAM policies, roles, and users, as well as any security groups, security tokens, and encryption keys.
  + **Compliance requirements**: This includes any compliance standards that the client must adhere to, such as HIPAA, SOC 2, and PCI-DSS.
* Describe the tools and methods that can be used to gather this information:
  + **AWS Config**: This service provides a detailed view of the configuration of resources in an AWS account. It can be used to track changes to resources, assess compliance with specific rules, and generate reports.
  + **CloudTrail**: This service logs all AWS API calls made to an account, providing a detailed history of activity. It can be used to track changes to resources and identify any unauthorized access.
  + **AWS Systems Manager**: This service allows you to view and manage resources in an AWS account. It can be used to view the configuration of resources, assess compliance with specific rules, and generate reports.

## 15 Potential Questions to Ask to Help Conduct Step 2:

1. What is the current state of the client's VPCs, subnets, and routing tables?
2. What security controls are currently in place, such as security groups, IAM policies, and encryption keys?
3. Are there any existing compliance requirements that the client must adhere to?
4. Are there any resources or services currently in use that will need to be considered during the deployment of the landing zone?
5. Are there any existing networks or resources that will need to be integrated with the new landing zone?
6. Are there any specific data sovereignty or compliance requirements that need to be taken into consideration?
7. Are there any specific performance or scalability requirements that need to be taken into account?
8. Are there any existing cost constraints that need to be considered during the deployment?
9. Are there any existing disaster recovery or business continuity plans that need to be integrated with the new landing zone?
10. Are there any existing security incidents or vulnerabilities that need to be addressed during the deployment?
11. Are there any existing monitoring and logging solutions that need to be integrated with the new landing zone?
12. Are there any specific regulatory or compliance requirements that need to be considered during the deployment?
13. Are there any existing service level agreements (SLAs) that need to be considered during the deployment?
14. Are there any specific security or compliance requirements that need to be considered for the specific industry or application that the client is working on?
15. Are there any specific requirements related to privacy or data protection that need to be considered during the deployment?

# Step 3: Designing the Landing Zone:

* Discuss the different components of an AWS landing zone, including:
  + VPCs: Virtual Private Clouds are the fundamental building blocks of the AWS network. They define the network boundary and provide a way to segment the network.
  + Subnets: Subnets are a way to segment the VPCs into smaller, more manageable chunks. They allow for better control over security, traffic, and access to resources.
  + Security groups: Security groups are used to control inbound and outbound traffic to resources within the landing zone. They can be used to restrict access to specific ports and protocols and provide an additional layer of security.
* Routing tables: Routing tables are used to control the flow of traffic within the landing zone. They determine the path that traffic takes to reach its destination and can be used to segment the network and control access to resources.
* Outline the best practices for designing a landing zone:
  + **Using multiple accounts**: By using multiple accounts, it is possible to separate resources into different environments and provide a more secure and manageable solution.
  + **Implementing guardrails**: Guardrails are policies and controls that are put in place to prevent users from making unintended changes to resources. They can be used to limit access to specific resources and prevent the accidental deletion of resources.
  + **Utilizing AWS Control Tower**: AWS Control Tower is a service that provides a set of best practices for setting up and managing multi-account AWS environments. It can be used to automate the deployment of the landing zone and provide a more secure and manageable solution.
* Describe the different options for automating the deployment of the landing zone:
  + **AWS CloudFormation**: This service allows you to use templates to describe and provision resources. It can be used to automate the deployment of the landing zone and provide a more repeatable and consistent solution.
  + **AWS CDK**: The AWS Cloud Development Kit (CDK) is an open-source software development framework to define cloud infrastructure in code and provision it through AWS CloudFormation. It allows you to use programming languages such as TypeScript, Python, Java, or C# to define and provision resources.

## 15 Potential Questions to ask to Help Conduct Step 3:

1. What are the main components of an AWS landing zone?
2. What is the best practice for designing an AWS landing zone?
3. Are there any specific requirements for the network architecture that need to be considered when designing the landing zone?
4. Are there any specific security requirements that need to be considered when designing the landing zone?
5. How will the landing zone be segmented and what resources will be grouped together?
6. How will the landing zone be protected against unauthorized access?
7. How will the landing zone be configured to ensure compliance with specific standards or regulations?
8. What is the best practice for automating the deployment of the landing zone?
9. How will the landing zone be configured to ensure scalability and performance?
10. How will the landing zone be configured to ensure disaster recovery and business continuity?
11. How will the landing zone be monitored and logged?
12. How will the landing zone be configured to ensure cost efficiency?
13. What are the best practices for ongoing management and maintenance of the landing zone?
14. Are there any specific regulatory or compliance requirements that need to be considered during the deployment?
15. What are the specific requirements for the landing zone related to privacy or data protection?

# Step 4: Implementing the Landing Zone:

* Explain the different steps involved in implementing the landing zone, including setting up the initial environment, configuring security controls, and testing the deployment.
  + Setting up the initial environment: This includes creating the necessary accounts, VPCs, subnets, security groups, and routing tables. It also involves configuring the necessary services such as AWS Organizations and AWS SSO.
  + Configuring security controls: This includes setting up IAM policies, roles, and users, as well as configuring security groups and encryption keys.
  + Testing the deployment: This includes testing the connectivity and accessibility of resources, as well as testing the security controls and compliance requirements.
* Outline the different tools and services that can be used to implement the landing zone, such as AWS Organizations, AWS SSO, and AWS Service Catalog.
  + AWS Organizations: This service allows you to create and manage multiple AWS accounts as a single entity. It can be used to set up the initial environment and provide a more secure and manageable solution.
  + AWS SSO: This service allows you to set up single sign-on (SSO) for multiple AWS accounts. It can be used to provide easy access to resources and improve security.
  + AWS Service Catalog: This service allows you to create and manage portfolios of AWS services. It can be used to provide a more consistent and repeatable solution for deploying resources.
* Describe the different options for monitoring and logging the deployment, including AWS CloudWatch and AWS CloudTrail.
  + AWS CloudWatch: This service allows you to monitor resources and applications in real-time. It can be used to monitor the performance of resources and identify any issues that may arise.
  + AWS CloudTrail: This service logs all AWS API calls made to an account, providing a detailed history of activity. It can be used to track changes to resources and identify any unauthorized access.
  + AWS Config: This service provides a detailed view of the configuration of resources in an AWS account. It can be used to track changes to resources, assess compliance with specific rules, and generate reports.
  + AWS Systems Manager: This service allows you to view and manage resources in an AWS account. It can be used to view the configuration of resources, assess compliance with specific rules, and generate reports.

# Step 5: Managing and Maintaining the Landing Zone:

* Discuss the different steps involved in deploying the landing zone for the client:
  + Communicating the plan: This includes providing the client with a detailed plan of the deployment, including the resources that will be created, the security controls that will be implemented, and the timeline for the deployment.
  + Training the client: This includes providing the client with training on how to use and manage the new resources and services that have been deployed.
  + Go-live support: This includes providing the client with support during the go-live phase of the deployment, including troubleshooting any issues that may arise and providing assistance with any problems that may arise.
* Outline the different options for providing ongoing support for the client:
  + AWS Support: This service provides technical support for AWS products and services. It can be used to provide the client with ongoing support and assistance with any issues that may arise.
  + AWS Managed Services: This service provides a range of services to help customers manage their AWS resources. It can be used to provide the client with ongoing support and assistance with any issues that may arise.
  + AWS Professional Services: This service provides a range of services, including consulting, training, and support, to help customers with their AWS deployments. It can be used to provide the client with ongoing support and assistance with any issues that may arise.

## 15 Potential Questions to ask to Help Conduct Step 4 and 5:

1. What is the client's preferred method of communication for the deployment plan?
2. What kind of training does the client need in order to manage the new resources and services?
3. What are the client's specific requirements for go-live support?
4. What is the client's preferred method of communication for ongoing support?
5. How will the client be alerted of any issues that arise during the deployment?
6. What are the client's specific requirements for monitoring and logging the deployment?
7. How will the client be informed of changes to the resources and services during the deployment?
8. How will the client be informed of any compliance or security issues that arise during the deployment?
9. How will the client be informed of any scalability or performance issues that arise during the deployment?
10. How will the client be informed of any cost issues that arise during the deployment?
11. How will the client be informed of any disaster recovery or business continuity issues that arise during the deployment?
12. What are the client's specific requirements for ongoing support and maintenance of the deployment?
13. How will the client be informed of any updates or changes to the resources and services?
14. How will the client be informed of any cost changes or savings resulting from the deployment?
15. How will the client be informed of any security or compliance changes resulting from the deployment?