1. Purchase a Domain:

Choose a domain registrar (like AWS Route 53, GoDaddy, Namecheap, etc.).

Search for the domain you want and purchase it.

2. Set Up Route 53:

Log in to your AWS Management Console.

Go to the Route 53 dashboard.

3. Create a Hosted Zone:

Click "Create Hosted Zone."

Enter your domain name (e.g., example.com).

Route 53 will assign you name servers. Note these for later.

4. Configure DNS Records:

Inside your hosted zone, create records to map the domain/subdomain to your ALB.

Click "Create Record Set."

For the main domain (example.com), create an 'A' record:

Name: Leave blank (or use @ to represent the root domain).

Type: Choose "A - IPv4 address."

Value: Enter the ALB's DNS name or its IP address.

For the subdomain (subdomain.example.com), create a 'CNAME' record:

Name: Enter "subdomain" (or any desired subdomain name).

Type: Choose "CNAME - Canonical name."

Value: Enter the ALB's DNS name.

5. Link Domain with Name Servers:

If you purchased the domain from AWS Route 53, you can skip this step. Otherwise, if you bought it from another registrar, you need to replace the registrar's default name servers with the ones provided by Route 53. This step may vary depending on the registrar.

6. Update ALB Configuration:

Log in to your AWS Management Console.

Go to the EC2 Dashboard and select the ALB you want to connect to your domain.

Ensure your ALB's listener rules are correctly set to route traffic to your application.

7. Request an SSL Certificate in AWS Certificate Manager:

Go to the AWS Certificate Manager in the AWS Management Console.

Click "Request a certificate" and enter your domain name (e.g., example.com, *.example.com for wildcard certificates).

8. Approve Certificate Issuance:

Once the domain validation is successful, approve the issuance of the SSL certificate.

9. Attach SSL Certificate to ALB:

Go to the AWS EC2 Dashboard and select your ALB.

Under the "Listeners" tab, edit the listener associated with port 443 (HTTPS).

Add a new or edit the existing HTTPS listener.

For "SSL certificate," select the certificate you just issued from ACM.

Configure other settings as required (security policies, protocols, etc.).

10. Testing:

After setting up Route 53 and linking it to your ALB, it may take some time for DNS changes to propagate. Use tools like **nslookup** or **dig** to check if your domain/subdomain resolves to the ALB's address.