Login to your AWS Account using AWS management console.

1. Requirements to deploy the ECS Cluster in AWS Console

As part of the deployment process first we need to download the Cloudformation template from the Marketplace, after clicking "Continue to launch" you need to download the CloudFormation template (CFT) provided in the deployment template section.

1.1 Network Requirements

- VPC Structure:

- Deploy a VPC with 3 private subnets and 3 public subnets for high availability across multiple Availability Zones (AZs)

- CIDR Range:

- Document the VPC CIDR range (e.g., 10.0.0.0/16) for security group configurations to allow traffic between components.

1.2 DNS Resources

- Navigate to Route 53 resource from the AWS console

- Hosted Zones:

- Private Hosted Zone: For internal resources

- SSL Certificate: Go to the AWS Certifivate manager

- Obtain the ARN of the SSL certificate from AWS Certificate Manager (ACM) to enable  $\ensuremath{\mathsf{HTTPS}}$ 

- Internal Zone ID:

- Document the Hosted Zone ID for internal DNS configuration

- Subdomain Approach:

- Case 1: Domain is in the AWS root account.

- Case 2: Domain is in the same account as AVRIO deployment

- Case 3: Using a public hosted zone without a subdomain.

## 1.3 SMTP Configuration

- Navigate to AWS Secret manager from the console and select the SMTP secret and create the secret

### 2. Usage Instructions

- we need to navigate to the ECS resource page from the AWS console and verify
- 2.1 Post-Deployment Verification
  - Check DNS Configuration:
    - Verify Route53 records are created.
    - Edit the hosted zone with VPC associations if needed
    - Ensure a DNS record points to the load balancer
  - Access the Application:
    - Retrieve admin credentials from AWS Secrets Manager
    - Wait for DNS propagation (15 mins)
    - Access the application via the configured URL(e.g, envname.avrio.trianz.com)

# 2.2 Resource Validation

- Confirm the following are deployed correctly:

- verify the cluster is created with the CFTstackname which we have provided in the same region

- Navigate to ECS dashboard click on any of the serviec and check the target status in Health and metrics section and verify all the Services Running without errors(if the target staus is Healthy it means that service is deployed without any errors)

- Application Load Balancers (ALBs): Internal/external ALBs configured
- PostgreSQL RDS: Operational and accessible
- Security Groups & IAM Roles: Correct permissions applied
- KMS & Secrets Manager: Encryption keys and secrets properly stored

- Lambda & Glue: Functions and databases created
- Route53: DNS records propagated.

- verify all the required secrets are created like admin secrets,DB secrets in the AWS secretmanager dashboard((e.g , secret name will create with the name extrica/admin-creds-CFTstackname)

### 3. Upgrade Instructions

- Backup Data:
  - Take snapshots of RDS databases
- Update CloudFormation Stack:
  - Upload the new template version via the AWS Console
- Monitor Rollout:
  - Check CloudFormation events for errors
- Post-Upgrade Checks:
  - Re-validate DNS, ALB, and application functionality.

### 4. CloudFormation Delivery Instructions

- 4.1 Launching the Stack
  - Access CloudFormation:
    - Navigate to the AWS CloudFormation Console
    - Click "Create Stack" > "Upload a template file" (AVRIO AMP template)
      - select template resource as Amazon s3 URL, enter the parameters
- 4.2 Configure Stack Inputs
  - Stack Name: Unique identifier (e.g., avrio-prod)
  - Network Configuration:
  - Stack Type: Select External or Internal

- VPC ID: Enter the VPC ID from preparation
- CIDR Ranges: Specify for network segmentation
- Subnets: Select the 3 public/3 private subnets
- SSL Certificate ARN: Enter the ACM ARN.
- RDS Configuration:
  - Initial Storage: Set starting volume size (e.g., 100 GB)
  - Instance Type: Choose based on workload (e.g., db.m5.large).
- DNS Configuration:
- Hosted Zone ID: Enter the documented ID
- Application URL: User-facing domain (e.g., app.avrio.example.com).
- SMTP Configuration:
  - Secrets Manager Name: SMTP credentials secret name.

### 4.3 Finalize Deployment

- Review Parameters and Click "Create Stack" and monitor progress in the Events tab.