AWS ECS Documentation

Home

Welcome to the AWS ECS (Elastic Container Service) documentation. This guide covers all essential ECS components, including Clusters, Fargate Services, Task Definitions, Auto Scaling, Environment Variables, and Load Balancers.

Navigate through the sections to find structured documentation with CDK implementation and JSON configurations for easy reference.

ECS Cluster

Overview
An ECS cluster is a logical grouping of tasks and services.

CDK Implementation
```python
import aws_cdk.aws_ecs as ecs

cluster = ecs.Cluster(
    self,
    "MyEcsCluster",
    vpc=self.vpc_resource,
    cluster_name="my-cluster",
    container_insights=True
)
```

JSON Configuration
```json
{
  "ecs_cluster": {
    "name": "my-cluster",
    "vpc": "vpc-123456",
    "container_insights": true
  }
}
```

```
```

Fargate Service

Overview

An ECS Fargate Service runs containers without managing EC2 instances.

CDK Implementation
```python
service = ecs.FargateService(
    self,
    "MyFargateService",
    cluster=cluster,
    desired_count=2,
    task_definition=task_definition,
    vpc_subnets=self.vpc_resource.select_subnets(subnet_type=SubnetType.PUBLIC),
    security_groups=[self.security_group]
)
```

JSON Configuration
```json
{
  "fargate_service": {
    "cluster": "my-cluster",
    "desired_count": 2,
    "subnets": ["subnet-123456", "subnet-654321"],
    "security_group": "sg-987654"
  }
}
```

Task Definition

Overview

A task definition specifies the container configurations, including CPU, memory, and execution roles.

CDK Implementation
```python
```

```python
task_definition = ecs.FargateTaskDefinition(
    self,
    "MyTaskDefinition",
    task_role=iam.Role.from_role_arn(self, "TaskRole", role_arn="arn:aws:iam::123456789012:role/ecsTaskRole"),
                                    execution_role=iam.Role.from_role_arn(self,          "ExecutionRole",
role_arn="arn:aws:iam::123456789012:role/ecsExecutionRole"),
    cpu=1024,
    memory_limit_mib=2048
)
```

JSON Configuration
```json
{
  "task_definition": {
    "task_role": "arn:aws:iam::123456789012:role/ecsTaskRole",
    "execution_role": "arn:aws:iam::123456789012:role/ecsExecutionRole",
    "cpu": 1024,
    "memory_limit": 2048
  }
}
```