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CloudFormation Template: test.yaml

# test.yaml

# Description

A stack for deploying containerized applications in AWS Fargate. This stack runs containers in a public VPC subnet, and includes a public facing load balancer to register the services in.

# Parameters

The list of parameters for this template:

|  |  |
| --- | --- |
| Parameter Name | Type |

No Parameters defined in template

## Parameter Breakdown

The following sections outlines the parameter definitions for this template: No Parameters defined in template

# Resources

The following resources form part of this template:

|  |  |
| --- | --- |
| Resource Name | Type |
| VPC | AWS::EC2::VPC |
| PublicSubnetOne | AWS::EC2::Subnet |
| PublicSubnetTwo | AWS::EC2::Subnet |
| InternetGateway | AWS::EC2::InternetGateway |
| GatewayAttachement | AWS::EC2::VPCGatewayAttachment |
| PublicRouteTable | AWS::EC2::RouteTable |
| PublicRoute | AWS::EC2::Route |
| PublicSubnetOneRouteTableAssociation | AWS::EC2::SubnetRouteTableAssociation |
| PublicSubnetTwoRouteTableAssociation | AWS::EC2::SubnetRouteTableAssociation |
| ECSCluster | AWS::ECS::Cluster |
| FargateContainerSecurityGroup | AWS::EC2::SecurityGroup |
| EcsSecurityGroupIngressFromPublicALB | AWS::EC2::SecurityGroupIngress |
| EcsSecurityGroupIngressFromSelf | AWS::EC2::SecurityGroupIngress |
| PublicLoadBalancerSG | AWS::EC2::SecurityGroup |
| PublicLoadBalancer | AWS::ElasticLoadBalancingV2::LoadBalancer |
| DummyTargetGroupPublic | AWS::ElasticLoadBalancingV2::TargetGroup |
| PublicLoadBalancerListener | AWS::ElasticLoadBalancingV2::Listener |
| ECSRole | AWS::IAM::Role |
| ECSTaskExecutionRole | AWS::IAM::Role |

## Resource Definitions

The following sections breaks down each resource and their properties:

### VPC Resource

#### Resource Type

AWS::EC2::VPC

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| EnableDnsSupport | True |

### PublicSubnetOne Resource

#### Resource Type

AWS::EC2::Subnet

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| AvailabilityZone | {‘Fn::Select’: [0, {‘Fn::GetAZs’: {‘Ref’: ‘AWS::Region’}}]} |

### PublicSubnetTwo Resource

#### Resource Type

AWS::EC2::Subnet

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| AvailabilityZone | {‘Fn::Select’: [1, {‘Fn::GetAZs’: {‘Ref’: ‘AWS::Region’}}]} |

### InternetGateway Resource

#### Resource Type

AWS::EC2::InternetGateway

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |

No Properties defined

### GatewayAttachement Resource

#### Resource Type

AWS::EC2::VPCGatewayAttachment

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| VpcId | {‘Ref’: ‘VPC’} |

### PublicRouteTable Resource

#### Resource Type

AWS::EC2::RouteTable

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| VpcId | {‘Ref’: ‘VPC’} |

### PublicRoute Resource

#### Resource Type

AWS::EC2::Route

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| RouteTableId | {‘Ref’: ‘PublicRouteTable’} |

### PublicSubnetOneRouteTableAssociation Resource

#### Resource Type

AWS::EC2::SubnetRouteTableAssociation

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| SubnetId | {‘Ref’: ‘PublicSubnetOne’} |

### PublicSubnetTwoRouteTableAssociation Resource

#### Resource Type

AWS::EC2::SubnetRouteTableAssociation

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| SubnetId | {‘Ref’: ‘PublicSubnetTwo’} |

### ECSCluster Resource

#### Resource Type

AWS::ECS::Cluster

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |

No Properties defined

### FargateContainerSecurityGroup Resource

#### Resource Type

AWS::EC2::SecurityGroup

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| GroupDescription | Access to the Fargate containers |

### EcsSecurityGroupIngressFromPublicALB Resource

#### Resource Type

AWS::EC2::SecurityGroupIngress

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| Description | Ingress from the public ALB |

### EcsSecurityGroupIngressFromSelf Resource

#### Resource Type

AWS::EC2::SecurityGroupIngress

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| Description | Ingress from other containers in the same security group |

### PublicLoadBalancerSG Resource

#### Resource Type

AWS::EC2::SecurityGroup

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| GroupDescription | Access to the public facing load balancer |

### PublicLoadBalancer Resource

#### Resource Type

AWS::ElasticLoadBalancingV2::LoadBalancer

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| Scheme | internet-facing |

### DummyTargetGroupPublic Resource

#### Resource Type

AWS::ElasticLoadBalancingV2::TargetGroup

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| HealthCheckIntervalSeconds | 6 |

### PublicLoadBalancerListener Resource

#### Resource Type

AWS::ElasticLoadBalancingV2::Listener

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| DefaultActions | [{‘TargetGroupArn’: {‘Ref’: ‘DummyTargetGroupPublic’}, ‘Type’: ‘forward’}] |

### ECSRole Resource

#### Resource Type

AWS::IAM::Role

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| AssumeRolePolicyDocument | {‘Statement’: [{‘Effect’: ‘Allow’, ‘Principal’: {‘Service’: [‘ecs.amazonaws.com’]}, ‘Action’: [‘sts:AssumeRole’]}]} |

### ECSTaskExecutionRole Resource

#### Resource Type

AWS::IAM::Role

#### Description

Test

#### Properties:

|  |  |
| --- | --- |
| Property Name | Value |
| AssumeRolePolicyDocument | {‘Statement’: [{‘Effect’: ‘Allow’, ‘Principal’: {‘Service’: [‘ecs-tasks.amazonaws.com’]}, ‘Action’: [‘sts:AssumeRole’]}]} |

# Outputs

The list of outputs this template exposes are:

|  |  |  |  |
| --- | --- | --- | --- |
| Output Name | Description | Export name | Value |
| ClusterName | The name of the ECS cluster | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘ClusterName’]]} | {‘Ref’: ‘ECSCluster’} |
| ExternalUrl | The url of the external load balancer | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘ExternalUrl’]]} | {‘Fn::Join’: [’’, [‘http://’, {‘Fn::GetAtt’: [‘PublicLoadBalancer’, ‘DNSName’]}]]} |
| ECSRole | The ARN of the ECS role | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘ECSRole’]]} | {‘Fn::GetAtt’: [‘ECSRole’, ‘Arn’]} |
| ECSTaskExecutionRole | The ARN of the ECS role | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘ECSTaskExecutionRole’]]} | {‘Fn::GetAtt’: [‘ECSTaskExecutionRole’, ‘Arn’]} |
| PublicListener | The ARN of the public load balancer’s Listener | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘PublicListener’]]} | {‘Ref’: ‘PublicLoadBalancerListener’} |
| VPCId | The ID of the VPC that this stack is deployed in | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘VPCId’]]} | {‘Ref’: ‘VPC’} |
| PublicSubnetOne | Public subnet one | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘PublicSubnetOne’]]} | {‘Ref’: ‘PublicSubnetOne’} |
| PublicSubnetTwo | Public subnet two | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘PublicSubnetTwo’]]} | {‘Ref’: ‘PublicSubnetTwo’} |
| FargateContainerSecurityGroup | A security group used to allow Fargate containers to receive traffic | {‘Fn::Join’: [‘:’, [{‘Ref’: ‘AWS::StackName’}, ‘FargateContainerSecurityGroup’]]} | {‘Ref’: ‘FargateContainerSecurityGroup’} |