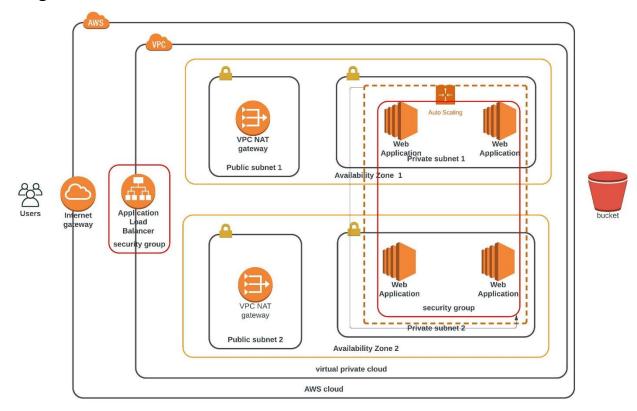# Deploy a High-Availability Web App using CloudFormation

1. Diagram:

2. Parameters:

Parameters (6)

Key ▲	Value ▽	Resolved value ▽
EnvironmentName	UdacityProject	-
PrivateSubnet1CIDR	10.0.2.0/24	-
PrivateSubnet2CIDR	10.0.3.0/24	-
PublicSubnet1CIDR	10.0.0.0/24	-
PublicSubnet2CIDR	10.0.1.0/24	-
VpcCIDR	10.0.0.0/16	-

Parameters (7)

Key ▲	Value ▽	Resolved value ▽
AMItoUse	ami-0cfa91bdbc3be780c	-
AutoScaleMax	6	-
AutoScaleMin	4	-
EBS	10	-
EnvironmentName	UdacityProject	-
InsType	t3.medium	-
KeyPair	Project2-KeyPair	-

3. Resources:

Stacks (3)

Filter by stack name

Active | View nested
< 1 >

Project2-Server
2022-05-26 17:32:09 UTC+0200
⊘ CREATE_COMPLETE

Project2-S3Bucket
2022-05-26 16:26:46 UTC+0200
⊘ CREATE_COMPLETE

Project2
2022-05-26 15:41:24 UTC+0200
⊘ CREATE_COMPLETE

Resources (21)

Search resources

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽	Status reason ▽	Module
NatGateway2	nat-0b51569771 2e9cd87	AWS::EC2 ::NatGate way	⊘ CREA TE_COM PLETE	-	-
NatGateway EIP1	54.200.45.72 ↗	AWS::EC2 ::EIP	⊘ CREA TE_COM PLETE	-	-
NatGateway EIP2	52.89.99.175 ↗	AWS::EC2 ::EIP	⊘ CREA TE_COM PLETE	-	-
PrivateRoute Table1	rtb-0175e2d1b50 5caf80	AWS::EC2 ::RouteTa ble	⊘ CREA TE_COM PLETE	-	-
PrivateRoute Table2	rtb-08d6fc962fe5 16ea0	AWS::EC2 ::RouteTa ble	⊘ CREA TE_COM PLETE	-	-
PrivateSubn et1	subnet-02c26d57663 fb147f ↗	AWS::EC2 ::Subnet	⊘ CREA TE_COM PLETE	-	-
PrivateSubn et1RouteTab leAssociatio n	rtbassoc-084157957e5 471945	AWS::EC2 ::SubnetR outeTabl eAssociat ion	⊘ CREA TE_COM PLETE	-	-
PrivateSubn et2	subnet-033cdf57ddc 7f14ea ↗	AWS::EC2 ::Subnet	⊘ CREA TE_COM PLETE	-	-

Stacks (3)

Filter by stack name

Active | View nested
< 1 >

Project2-Server
2022-05-26 17:32:09 UTC+0200
⊘ CREATE_COMPLETE

Project2-S3Bucket
2022-05-26 16:26:46 UTC+0200
⊘ CREATE_COMPLETE

Project2
2022-05-26 15:41:24 UTC+0200
⊘ CREATE_COMPLETE

Resources (21)

Search resources

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽	Status reason ▽	Module
PrivateSubn et2	subnet-033cdf57ddc 7f14ea ↗	AWS::EC2 ::Subnet	⊘ CREA TE_COM PLETE	-	-
PrivateSubn et2RouteTab leAssociatio n	rtbassoc-0a2194fe137 43ca8f	AWS::EC2 ::SubnetR outeTabl eAssociat ion	⊘ CREA TE_COM PLETE	-	-
PublicRoute Table	rtb-026d2f3dbb2 bc893d	AWS::EC2 ::RouteTa ble	⊘ CREA TE_COM PLETE	-	-
PublicSubne t1	subnet-0c603cc4c02 76cfcb ↗	AWS::EC2 ::Subnet	⊘ CREA TE_COM PLETE	-	-
PublicSubne t1RouteTabl eAssociation	rtbassoc-09eef207519 786e80	AWS::EC2 ::SubnetR outeTabl eAssociat ion	⊘ CREA TE_COM PLETE	-	-
PublicSubne t2	subnet-07ca9126b04 8a154b ↗	AWS::EC2 ::Subnet	⊘ CREA TE_COM PLETE	-	-
PublicSubne t2RouteTabl eAssociation	rtbassoc-035266f4af4 d73a80	AWS::EC2 ::SubnetR outeTabl eAssociat ion	⊘ CREA TE_COM PLETE	-	-

Stacks (3)

Filter by stack name

Active | View nested
< 1 >

Project2-Server
2022-05-26 17:32:09 UTC+0200
⊘ CREATE_COMPLETE

Project2-S3Bucket
2022-05-26 16:26:46 UTC+0200
⊘ CREATE_COMPLETE

Project2
2022-05-26 15:41:24 UTC+0200
⊘ CREATE_COMPLETE

Project2-S3Bucket

Stack info | Events | Resources | Outputs | Parameters | Template | Change sets

Resources (2)

Search resources

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽	Status reason ▽	Module
S3Bucket	project-301638121B 85-bucket ↗	AWS::S3:: Bucket	⊘ CREA TE_COM PLETE	-	-
S3ReadOnly Role	Project2-S3Bucket-S3ReadOnlyR ole-1X010GAT5N 62U ↗	AWS::IAM ::Role	⊘ CREA TE_COM PLETE	-	-

Screenshot 1

⊟ Stacks (3)   ⟳

Filter by stack name

Active ▾   ● View nested   < 1 >

Project2-Server
2022-05-26 17:32:09 UTC+0200
✓ CREATE_COMPLETE   ◉

Project2-S3Bucket
2022-05-26 16:26:46 UTC+0200
✓ CREATE_COMPLETE   ○

Project2
2022-05-26 15:41:24 UTC+0200
✓ CREATE_COMPLETE   ○

Project2-Server

Stack info | Events | **Resources** | Outputs | Parameters | Template | Change sets

Resources (9)

Search resources

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽	Status reason ▽	Module
ALBListenerRule	arn:aws:elasticloadbalancing:us-west-2:301638121885:listener-rule/app/Proje-WebAp-1CCCGCCFHHK4G/caa774e9b4bfc7da/1ce33687e2c9747e/72aef1e33dda796a	AWS::ElasticLoadBalancingV2::ListenerRule	✓ CREATE_COMPLETE	-	-
LBSecGroup	sg-01bedebc1f0a8e59b ⧉	AWS::EC2::SecurityGroup	✓ CREATE_COMPLETE	-	-
Listener	arn:aws:elasticloadbalancing:us-west-2:301638121885:listener/app/Proje-WebAp-1CCCGCCFHH	AWS::ElasticLoadBalancingV2::List	✓ CREATE_COMPLETE	-	-

Screenshot 2

⊟ Stacks (3)   ⟳

Filter by stack name

Active ▾   ● View nested   < 1 >

Project2-Server
2022-05-26 17:32:09 UTC+0200
✓ CREATE_COMPLETE   ◉

Project2-S3Bucket
2022-05-26 16:26:46 UTC+0200
✓ CREATE_COMPLETE   ○

Project2
2022-05-26 15:41:24 UTC+0200
✓ CREATE_COMPLETE   ○

Resources (9)

Search resources

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽	Status reason ▽	Module
Listener	arn:aws:elasticloadbalancing:us-west-2:301638121885:listener/app/Proje-WebAp-1CCCGCCFHHK4G/caa774e9b4bfc7da/1ce33687e2c9747e	AWS::ElasticLoadBalancingV2::Listener	✓ CREATE_COMPLETE	-	-
ProfileWithRolesForOurApp	Project2-Server-ProfileWithRolesForOurApp-MJRAw3XkQcfK	AWS::IAM::InstanceProfile	✓ CREATE_COMPLETE	-	-
WebAppGroup	Project2-Server-WebAppGroup-1JGR8FEL64YTC ⧉	AWS::AutoScaling::AutoScalingGroup	✓ CREATE_COMPLETE	-	-
WebAppLB	arn:aws:elasticloadbalancing:us-west-2:301638121885:loadbalancer/app/Proje	AWS::ElasticLoadBalancingV2::Loa	✓ CREATE_COMPLETE	-	-

Screenshot 3

⊟ Stacks (3)   ⟳

Filter by stack name

Active ▾   ● View nested   < 1 >

Project2-Server
2022-05-26 17:32:09 UTC+0200
✓ CREATE_COMPLETE   ◉

Project2-S3Bucket
2022-05-26 16:26:46 UTC+0200
✓ CREATE_COMPLETE   ○

Project2
2022-05-26 15:41:24 UTC+0200
✓ CREATE_COMPLETE   ○

Resources (9)

Search resources

Logical ID ▲	Physical ID ▽	Type ▽	Status ▽	Status reason ▽	Module
WebAppLB	cloadbalancing:us-west-2:301638121885:loadbalancer/app/Proje-WebAp-1CCCGCCFHHK4G/caa774e9b4bfc7da	AWS::ElasticLoadBalancingV2::LoadBalancer	✓ CREATE_COMPLETE	-	-
WebAppLaunchConfig	Project2-Server-WebAppLaunchConfig-IK0ZXV9QtMYu ⧉	AWS::AutoScaling::LaunchConfiguration	✓ CREATE_COMPLETE	-	-
WebAppTargetGroup	arn:aws:elasticloadbalancing:us-west-2:301638121885:targetgroup/Proje-WebAp-1EIU8C3U17WE1/6c80b9804e135a60	AWS::ElasticLoadBalancingV2::TargetGroup	✓ CREATE_COMPLETE	-	-
WebServerSecGroup	sg-0c9277ab7ceb7914a ⧉	AWS::EC2::SecurityGroup	✓ CREATE_COMPLETE	-	-

4. Outputs:

Project2

Stack info | Events | Resources | **Outputs** | Parameters | Template | Change sets

Delete | Update | Stack actions ▼ | Create sta

Outputs (10)

Search outputs

Key ▲	Value	Description ▽	Export name
PrivateSubnet1	subnet-02c26d57663fb147f	A reference to the private subnet in the 1st Availability Zone	UdacityProject-PRI1-SN
PrivateSubnet2	subnet-033cdf57ddc7f14ea	A reference to the private subnet in the 2nd Availability Zone	UdacityProject-PRI2-SN
PrivateSubnets	subnet-02c26d57663fb147f,subnet-033cdf57ddc7f14ea	A list of the private subnets	UdacityProject-PRIV-NETS
PublicSubnet1	subnet-0c603cc4c0276cfcb	A reference to the public subnet in the 1st Availability Zone	UdacityProject-PUB1-SN
PublicSubnet2	subnet-07ca9126b048a154b	A reference to the public subnet in the 2nd Availability Zone	UdacityProject-PUB2-SN
PublicSubnets	subnet-0c603cc4c0276cfcb,subnet-07ca9126b048a154b	A list of the public subnets	UdacityProject-PUB-NETS
VPC	vpc-0c9c734baab136617	A reference to the created VPC	UdacityProject-VPCID
VPCPrivateRouteTable1	rtb-0175e2d1b505caf80	Private Routing AZ1	UdacityProject-PRI1-RT
VPCPrivateRouteTable2	rtb-08d6fc962fe516ea0	Private Routing AZ2	UdacityProject-PRI2-RT
VPCPublicRouteTable	rtb-026d2f3dbb2bc893d	Public Routing	UdacityProject-PUB-RT

Activate Wi...

Project2-S3Bucket

Stack info | Events | Resources | **Outputs** | Parameters | Template | Change sets

Delete | Update | Stack actions ▼ | Create stack ▼

Outputs (2)

Search outputs

Key ▲	Value	Description ▽	Export name ▽
BucketName	project-301638121885-bucket	S3 Bucket Name	UdacityProject-BucketName
S3Role	Project2-S3Bucket-S3ReadOnlyRole-1X010GAT5N62U	S3 Bucket Read Only Role	UdacityProject-S3ReadOnlyRole

Project2-Server

Stack info | Events | Resources | **Outputs** | Parameters | Template | Change sets

Delete | Update | Stack actions ▼ | Create stack ▼

Outputs (1)

Search outputs

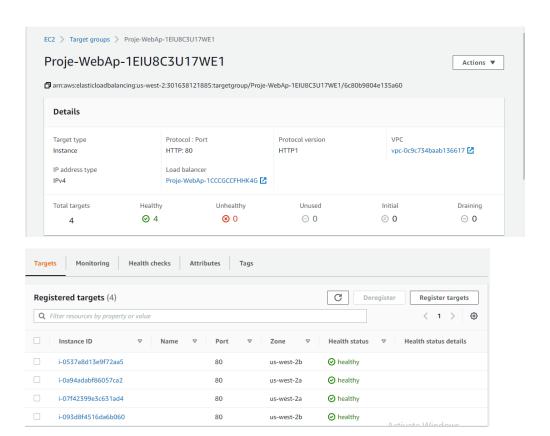| Key ▲	Value	Description ▽	Export name ▽
AppLB	http://Proje-WebAp-1CCCGCCFHHK4G-1424818985.us-west-2.elb.amazonaws.com	A reference to Load Balancer URL	UdacityProject-Load-Balancer-URL

5. Load Balancer:

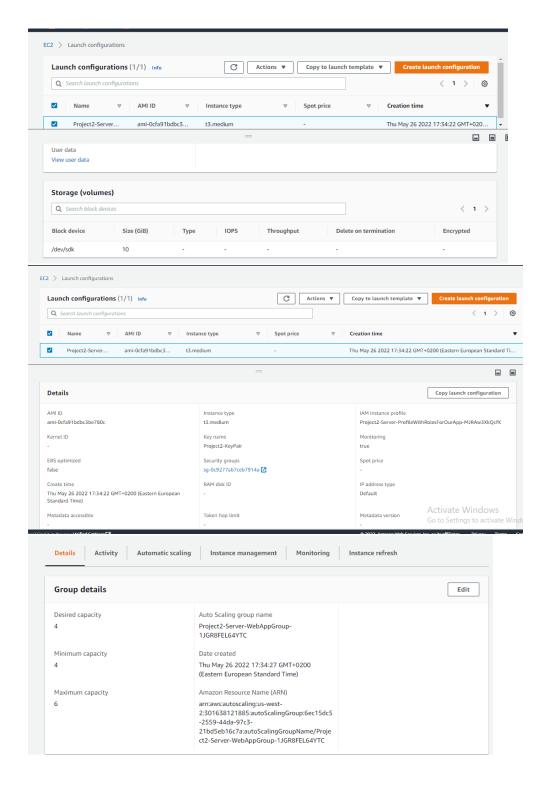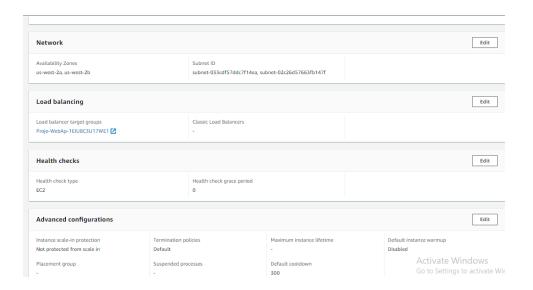http://proje-webap-1cccgccfhhk4g-1424818985.us-west-2.elb.amazonaws.com/

- **Health Check:**

Security Groups (1/5) Info

Actions ▼ | Export security groups to CSV ▼ | **Create security group**

🔍 Filter security groups

< 1 > ⚙

☐	Name ▽	Security group ID ▽	Security group name ▽	VPC ID ▽	Description ▽	Owner ▽	Inbound rule
☑	–	sg-01bedebc1f0a8e59b	Project2-Server-LBSec...	vpc-0c9c734baab136617 ↗	Allow http to our load ...	301638121885	1 Permission
☐	–	sg-0412ba78c62b0df35	default	vpc-0c9c734baab136617 ↗	default VPC security gr...	301638121885	1 Permission

〓 ▭ ▭ ▣

Details | Inbound rules | Outbound rules | Tags

ⓘ You can now check network connectivity with Reachability Analyzer | Run Reachability Analyzer | ✕

Details

Security group name	Security group ID	Description	VPC ID
Project2-Server-LBSecGroup-K748OC8QR2RW	sg-01bedebc1f0a8e59b	Allow http to our load balancer	vpc-0c9c734baab136617 ↗

Owner	Inbound rules count	Outbound rules count	
301638121885	1 Permission entry	1 Permission entry	

Activate Windows
Go to Settings to activate Windows

Security Groups (1/5) Info

Actions ▼ | Export security groups to CSV ▼ | **Create security group**

🔍 Filter security groups

< 1 > ⚙

☐	Name ▽	Security group ID ▽	Security group name ▽	VPC ID ▽	Description ▽	Owner ▽	Inbound rule
☑	–	sg-01bedebc1f0a8e59b	Project2-Server-LBSec...	vpc-0c9c734baab136617 ↗	Allow http to our load ...	301638121885	1 Permission
☐	–	sg-0412ba78c62b0df35	default	vpc-0c9c734baab136617 ↗	default VPC security gr...	301638121885	1 Permission

〓 ▭ ▭ ▣

sg-01bedebc1f0a8e59b - Project2-Server-LBSecGroup-K748OC8QR2RW

Details | Inbound rules | **Outbound rules** | Tags

ⓘ You can now check network connectivity with Reachability Analyzer | Run Reachability Analyzer | ✕

Outbound rules (1/1)

Manage tags | Edit outbound rules

🔍 Filter security group rules

< 1 > ⚙

☑	Name ▽	Security group rule... ▽	IP version ▽	Type ▽	Protocol ▽	Port range ▽	Destination
☑	–	sgr-0dc977f57e700c47e	IPv4	HTTP	TCP	80	0.0.0.0/0

6. Launch Configurations & Autoscaling:

Network			Edit
Availability Zones	Subnet ID		
us-west-2a, us-west-2b	subnet-033cdf57ddc7f14ea, subnet-02c26d57663fb147f		

Load balancing			Edit
Load balancer target groups	Classic Load Balancers		
Proje-WebAp-1EIU8C3U17WE1 ☑	-		

Health checks			Edit
Health check type	Health check grace period		
EC2	0		

Advanced configurations			Edit
Instance scale-in protection	Termination policies	Maximum instance lifetime	Default instance warmup
Not protected from scale in	Default	-	Disabled
Placement group	Suspended processes	Default cooldown	
-	-	300	

Activate Windows
Go to Settings to activate Win

7. Working Test:

Not secure | proje-webap-1cccgccfhhk4g-1424818985.us-west-2.elb.amazonaws.com

it works! Udagram, Udacity

http://proje-webap-1cccgccfhhk4g-1424818985.us-west-2.elb.amazonaws.com/