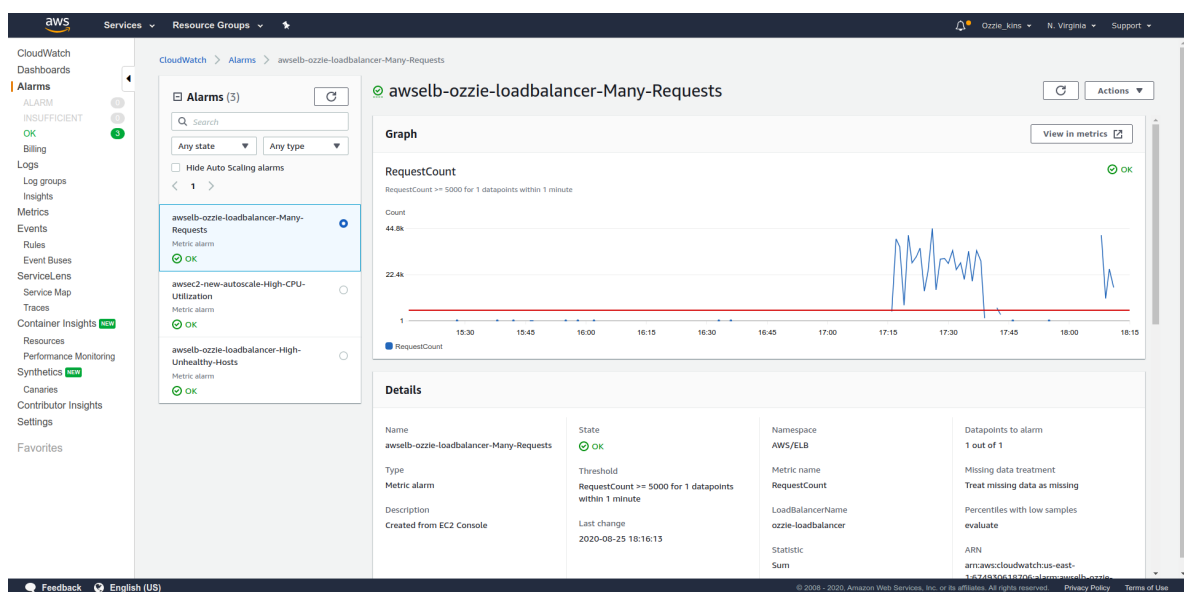


DS Assignment 2- Ozioma Okonicha

Create protection against DDoS attacks for your infrastructure. To do this, you need to create a CloudWatch alarm and use the AutoScaling group on your Load Balancer. This alarm should send you an e-mail every time the sum of the number of requests to your web server exceeds 5000 per minute. The AutoScaling group should add a new instance when an alarm occurs and delete the instance when your state is OK. Use any load testing tool (for example,) to test your settings.

Screenshots

The CloudWatch alarm window:



The work of my load testing tool:

The screenshot shows the configuration interface of a load testing tool. It is divided into 'Basic' and 'Advanced' tabs. Under the 'Basic' tab, the 'Web Server' section is visible, showing the protocol set to 'http', the server name or IP as 'ozzie-loadbalancer-1026888069.us-east-1.elb.amazonaws.com', and the port number. The 'HTTP Request' section shows the method set to 'GET' and the path. There are checkboxes for 'Redirect Automatically', 'Follow Redirects', 'Use KeepAlive', 'Use multipart/form-data', and 'Browser-compatible headers'. The 'Parameters' section is also visible, with a table for sending parameters with the request.

Name	Value	URL Encode?	Content-Type	Include Equals?
------	-------	-------------	--------------	-----------------

6867	22:01:50.298	Thread Group 1...	HTTP Request	303	11222	159	301	154
6868	22:01:49.686	Thread Group 1...	HTTP Request	917	11222	159	481	143
6869	22:01:50.323	Thread Group 1...	HTTP Request	282	11222	159	282	139
6870	22:01:50.302	Thread Group 1...	HTTP Request	306	11222	159	305	154
6871	22:01:50.314	Thread Group 1...	HTTP Request	296	11222	159	296	145
6872	22:01:49.872	Thread Group 1...	HTTP Request	740	11222	159	465	137
6873	22:01:50.330	Thread Group 1...	HTTP Request	294	11222	159	282	141
6874	22:01:49.820	Thread Group 1...	HTTP Request	804	11222	159	296	147
6875	22:01:49.562	Thread Group 1...	HTTP Request	1062	11222	159	308	158
6876	22:01:50.338	Thread Group 1...	HTTP Request	287	11222	159	286	139
6877	22:01:49.402	Thread Group 1...	HTTP Request	1224	11222	159	356	184
6878	22:01:50.346	Thread Group 1...	HTTP Request	281	11222	159	280	137
6879	22:01:50.340	Thread Group 1...	HTTP Request	295	11222	159	293	145
6880	22:01:49.748	Thread Group 1...	HTTP Request	896	11222	159	290	144
6881	22:01:50.339	Thread Group 1...	HTTP Request	306	11222	159	304	146
6882	22:01:49.889	Thread Group 1...	HTTP Request	756	11222	159	296	144
6883	22:01:50.368	Thread Group 1...	HTTP Request	283	11222	159	281	139
6884	22:01:50.369	Thread Group 1...	HTTP Request	284	11222	159	284	142
6885	22:01:49.236	Thread Group 1...	HTTP Request	1420	11222	159	504	151
6886	22:01:50.358	Thread Group 1...	HTTP Request	300	11222	159	298	146
6887	22:01:50.374	Thread Group 1...	HTTP Request	284	11222	159	284	140
6888	22:01:49.740	Thread Group 1...	HTTP Request	920	11222	159	296	146
6889	22:01:50.374	Thread Group 1...	HTTP Request	286	11222	159	286	142
6890	22:01:50.366	Thread Group 1...	HTTP Request	295	11222	159	295	146
6891	22:01:49.715	Thread Group 1...	HTTP Request	949	11222	159	310	155
6892	22:01:50.374	Thread Group 1...	HTTP Request	292	11222	159	290	144
6893	22:01:50.373	Thread Group 1...	HTTP Request	296	11222	159	296	146

☐ Scroll automatically?
 ☐ Child samples?
 No of Samples 10830
 Latest Sample 6473
 Average 775
 Deviation 1217

The alarm notification:

CloudWatch

Dashboards

Alarms

ALARM

INSUFFICIENT

OK

Billing

Logs

Log groups

Insights

Metrics

Events

Rules

Event Buses

ServiceLens

Service Map

Traces

Container Insights

Resources

Performance Monitoring

Synthetics

Canaries

Contributor Insights

Settings

Favorites

CloudWatch > Alarms

Switch to your original interface

Alarms (5)

☐ Hide Auto Scaling alarms

Clear selection

Create composite alarm

Actions

Create alarm

Any state Any type

<input type="checkbox"/>	Name	State	Last state update	Conditions	Actions
<input type="checkbox"/>	awselb-ozzie-loadbalancer-Many-Requests	⚠ In alarm	2020-08-25 21:09:13	RequestCount >= 5000 for 1 datapoints within 1 minute	1 action(s)
<input type="checkbox"/>	aws-ec2-new-autoscale-High-CPU-Utilization	✅ OK	2020-08-25 19:45:01	CPUUtilization > 10 for 1 datapoints within 5 minutes	2 action(s)
<input type="checkbox"/>	awselb-ozzie-loadbalancer-High-Unhealthy-Hosts	✅ OK	2020-08-25 19:00:02	UnHealthyHostCount > 10 for 1 datapoints within 5 minutes	1 action(s)

Feedback

English (US)

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The email notification:

ALARM: "awselb-ozzie-loadbalancer-Many-Requests" in US East (N. Virginia)

Inbox x

AWS Notifications <no-reply@sns.amazonaws.com>

21:09 (0 minutes ago) ☆ ↶ ⋮

You are receiving this email because your Amazon CloudWatch Alarm "awselb-ozzie-loadbalancer-Many-Requests" in the US East (N. Virginia) region has entered the ALARM state, because "Threshold Crossed: 1 datapoint [41608.0 (25/08/20 18:08:00)] was greater than or equal to the threshold (5000.0)." at "Tuesday 25 August, 2020 18:09:13 UTC".

View this alarm in the [AWS Management Console](#):
<https://us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1fs=Alarms&alarm=awselb-ozzie-loadbalancer-Many-Requests>

Alarm Details:

- Name: awselb-ozzie-loadbalancer-Many-Requests
- Description: Created from EC2 Console
- State Change: INSUFFICIENT_DATA -> ALARM
- Reason for State Change: Threshold Crossed: 1 datapoint [41608.0 (25/08/20 18:08:00)] was greater than or equal to the threshold (5000.0).
- Timestamp: Tuesday 25 August, 2020 18:09:13 UTC
- AWS Account: 674930618706
- Alarm Arn: arn:aws:cloudwatch:us-east-1:674930618706:alarm:awselb-ozzie-loadbalancer-Many-Requests

Threshold:

- The alarm is in the ALARM state when the metric is GreaterThanOrEqualToThreshold 5000.0 for 60 seconds.

Monitored Metric:

- MetricNamespace: AWS/ELB
- MetricName: RequestCount
- Dimensions: [LoadBalancerName = ozzie-loadbalancer]
- Period: 60 seconds
- Statistic: Sum
- Unit: not specified

State Change Actions:

- OK:
- ALARM: [arn:aws:sns:us-east-1:674930618706:HIGH-NUMBER-OF-REQUESTS]
- INSUFFICIENT_DATA:

--

If you wish to stop receiving notifications from this topic, please click or visit the link below to unsubscribe:
<https://sns.us-east-1.amazonaws.com/unsubscribe.html?SubscriptionArn=aws:sns:us-east-1:674930618706:HIGH-NUMBER-OF-REQUESTS:76d19bab-c171-4422-9a6b-c5d7ec0962c0&Endpoint=menubarizioma@gmail.com>

The created instances after testing:

New EC2 Experience

Tell us what you think

EC2 Dashboard

Events

Tags

Limits

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Launch Instance

Connect

Actions

Filter by tags and attributes or search by keyword

1 to 6 of 6

	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring	La
<input type="checkbox"/>		i-016761ed225796dc	t2.micro	us-east-1e	running	2/2 checks ...	None	ec2-54-237-84-86.com...	54.237.84.86	-	ozzie-ds	disabled	Aug
<input type="checkbox"/>		i-041e7e9b8405772ea	t2.micro	us-east-1e	running	2/2 checks ...	None	ec2-54-146-188-88.co...	54.146.188.98	-	ozzie-ds	disabled	Aug
<input type="checkbox"/>		i-084a174c7ca0a0ea0	t2.micro	us-east-1e	running	2/2 checks ...	None	ec2-54-88-52-248.com...	54.88.52.248	-	ozzie-ds	disabled	Aug
<input type="checkbox"/>		i-0953238529f32eef	t2.micro	us-east-1e	running	2/2 checks ...	None	ec2-100-25-165-60.co...	100.25.165.60	-	ozzie-ds	disabled	Aug
<input type="checkbox"/>		i-0d73b7d55257b0d4	t2.micro	us-east-1e	running	2/2 checks ...	None	ec2-3-90-82-123.comp...	3.90.82.123	-	ozzie-ds	disabled	Aug
<input type="checkbox"/>		i-0db2b259bd593bf3	t2.micro	us-east-1e	running	2/2 checks ...	None	ec2-54-145-239-242.co...	54.145.239.242	-	ozzie-ds	disabled	Aug

Select an instance above

Feedback

English (US)

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