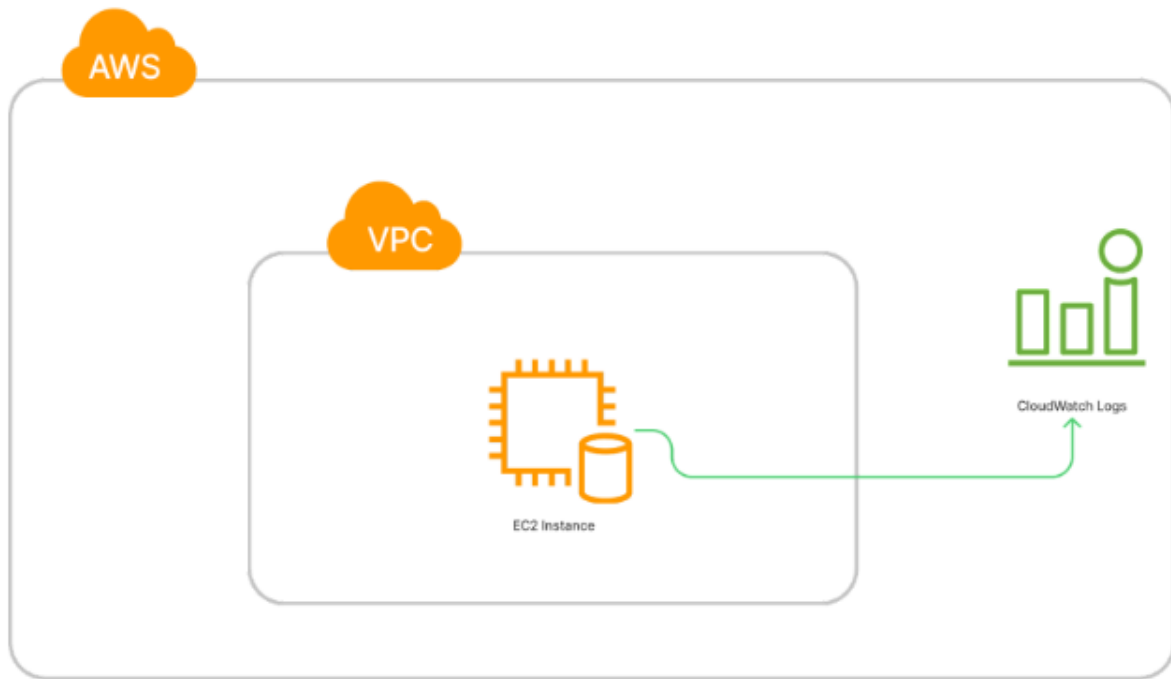


ASSIGNMENT -12



following the AWS architecture diagram

created vpc by following the diagram

Activities Google Chrome Jan 27 10:24

Instance details | EC2 Man... x VPC Management Console x CloudWatch Management x +

us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#VpcDetails:VpcId=vpc-00ada4b3d40d52c32

aws Services Search [Alt+S] N. Virginia Abineshkumar

VPC dashboard x

EC2 Global View New

Filter by VPC:

Select a VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only Internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

vpc-00ada4b3d40d52c32 / assignment-12 Actions

Details Info

VPC ID vpc-00ada4b3d40d52c32	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-052808951273687a5	Main route table rtb-0c0e6c9dcf589e5b1	Main network ACL acl-0ff09ac1c06f721cf
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 456532073387	

CIDRs Flow logs Tags

CIDRs Info

Address type	CIDR	Network Border Group	Pool	Status
IPv4	10.0.0.0/16	-	-	Associated

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Created a Ec2 instance inside my (assignment-12) vpc

The screenshot shows the AWS Management Console for an EC2 instance named 'assignment-12' (ID: i-06b0e77ec95f1ecb8). The instance is in the 'Running' state. Key details include:

- Instance ID:** i-06b0e77ec95f1ecb8 (assignment-12)
- Public IPv4 address:** 3.92.30.174 | [open address](#)
- Private IPv4 addresses:** 10.0.0.150
- Instance state:** Running
- Private IP DNS name (IPv4 only):** ip-10-0-0-150.ec2.internal
- Instance type:** t2.micro
- VPC ID:** vpc-00ada4b3d40d52c32 (assignment-12)
- Subnet ID:** subnet-0c4c640ee31cd9400 (for-assignment-12)
- IAM Role:** cw-full-assignment
- Auto-assigned IP address:** 3.92.30.174 [Public IP]

The console also shows a 'Connect' button, 'Instance state' dropdown, and 'Actions' dropdown. The left sidebar lists various AWS services, and the bottom navigation bar includes 'Details', 'Security', 'Networking', 'Storage', 'Status checks', 'Monitoring', and 'Tags'.

Created a database and attached to my ec2 instance

The screenshot shows the AWS Management Console for an Amazon RDS database instance named 'assignment-12'. The instance is in the 'Available' state. Key details include:

- DB Identifier:** assignment-12
- CPU:** 3.87%
- Status:** Available
- Class:** db.t2.micro
- Role:** Instance
- Current activity:** 0 Connections
- Engine:** MySQL Community
- Region & AZ:** us-east-1a

The console also shows a 'Modify' button and 'Actions' dropdown. The left sidebar lists various AWS services, and the bottom navigation bar includes 'Connectivity & security', 'Monitoring', 'Logs & events', 'Configuration', 'Maintenance & backups', and 'Tags'.

Connectivity & security details:

- Endpoint & port:** Endpoint: assignment-12.cvbg7tqcjdb.us-east-1.rds.amazonaws.com; Port: 3306
- Networking:** Availability Zone: us-east-1a; VPC: vpc-00ada4b3d40d52c32 (assignment-12)
- Security:** VPC security groups: launch-wizard-5 (sg-0f381d296836dc505) and rds-ec2-3 (sg-0f381d296836dc505); Status: Active

Activities Google Chrome Jan 27 10:27

Instance details | EC2 Man x VPC Management Consol x RDS Management Consol x CloudWatch Management x +

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#database:id=assignment-12;is-cluster=false

aws Services Search [Alt+S]

Amazon RDS

- Dashboard
- Databases
- Query Editor
- Performance Insights
- Snapshots
- Exports in Amazon S3
- Automated backups
- Reserved Instances
- Proxies

- Subnet groups
- Parameter groups
- Option groups
- Custom engine versions

- Events
- Event subscriptions

Filter by proxies

Proxy identifier Status Engine family

No proxies
You don't have any proxies.
[Create proxy](#)

Connected compute resources (1) [Info](#)
Connections to compute resources that were created automatically by RDS are shown here. Connections to compute resources that were created manually aren't shown.

Filter by compute resources

Resource identifier	Resource type	Availability zone	RDS security group	Compute resource security group
I-06b0e77ec95f1ecb8	EC2 Instance	us-east-1a	rds-ec2-3	ec2-rds-3

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Created a IAM role and attached to my instance

Activities Google Chrome Jan 27 11:20

Instance de x IAM Manag x IAM Manag x RDS Manag x CloudWatch x Metric filte x Assignment x Quick Start x +

us-east-1.console.aws.amazon.com/iamv2/home#/roles/details/cw-full-assignment?section=permissions

aws Services Search [Alt+S]

Identity and Access Management (IAM)

- Dashboard
- Access management
 - User groups
 - Users
 - Roles
 - Policies
 - Identity providers
 - Account settings
- Access reports
 - Access analyzer
 - Archive rules
 - Analyzers
 - Settings
 - Credential report
 - Organization activity
 - Service control policies (SCPs)

IAM > Roles > cw-full-assignment

cw-full-assignment

Allows EC2 instances to call AWS services on your behalf.

[Delete](#) [Edit](#)

Summary

Creation date January 26, 2023, 12:11 (UTC+05:30)	ARN arn:aws:iam::456532073387:role/cw-full-assignment	Instance profile ARN arn:aws:iam::456532073387:instance-profile/cw-full-assignment
Last activity 16 minutes ago	Maximum session duration 1 hour	

[Permissions](#) [Trust relationships](#) [Tags](#) [Access Advisor](#) [Revoke sessions](#)

Permissions policies (1) [Info](#)
You can attach up to 10 managed policies.

[Filter policies by property or policy name and press enter.](#)

Policy name	Type	Description
CloudWatchFullAccess	AWS managed	Provides full access to CloudWatch.

[Terms](#)

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Installing cloudwatch logs agent in my instance

```
Activities Google Chrome Jan 26 13:06
Assignment x Instances x CloudWatch x EC2 Instance x RDS Manag x Installing t x Quick Start x how to cha x +
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-06b0e77ec95f1ecb8&osUser=ec2-user&sshP...
aws Services Search [Alt+S] N. Virginia Abineshkumar

[ec2-user@ip-10-0-0-150 ~]$ sudo yum install -y awslogs
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package awslogs.noarch 0:1.1.4-3.amzn2 will be installed
--> Processing Dependency: aws-cli-plugin-cloudwatch-logs for package: awslogs-1.1.4-3.amzn2.noarch
--> Running transaction check
--> Package aws-cli-plugin-cloudwatch-logs.noarch 0:1.4.6-1.amzn2.0.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package Arch Version Repository Size
=====
Installing:
awslogs noarch 1.1.4-3.amzn2 amzn2-core 8.2 k
Installing for dependencies:
aws-cli-plugin-cloudwatch-logs noarch 1.4.6-1.amzn2.0.1 amzn2-core 62 k
=====

Transaction Summary
-----
Install 1 Package (+1 Dependent package)

Total download size: 70 k
Installed size: 243 k
Downloading packages:
(1/2): awslogs-1.1.4-3.amzn2.noarch.rpm | 8.2 kB 00:00:00
(2/2): aws-cli-plugin-cloudwatch-logs-1.4.6-1.amzn2.0.1.noarch.rpm | 62 kB 00:00:00
-----
Total 497 kB/s | 70 kB 00:00:00
Running transaction check
Running transaction test
```

```
Activities Google Chrome Jan 26 13:07
Assignment x Instances x CloudWatch x EC2 Instance x RDS Manag x Installing t x Quick Start x how to cha x +
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-06b0e77ec95f1ecb8&osUser=ec2-user&sshP...
aws Services Search [Alt+S] N. Virginia Abineshkumar

Transaction Summary
-----
Install 1 Package (+1 Dependent package)

Total download size: 70 k
Installed size: 243 k
Downloading packages:
(1/2): awslogs-1.1.4-3.amzn2.noarch.rpm | 8.2 kB 00:00:00
(2/2): aws-cli-plugin-cloudwatch-logs-1.4.6-1.amzn2.0.1.noarch.rpm | 62 kB 00:00:00
-----
Total 497 kB/s | 70 kB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : aws-cli-plugin-cloudwatch-logs-1.4.6-1.amzn2.0.1.noarch 1/2
  Installing : awslogs-1.1.4-3.amzn2.noarch 2/2
  Verifying : awslogs-1.1.4-3.amzn2.noarch 1/2
  Verifying : aws-cli-plugin-cloudwatch-logs-1.4.6-1.amzn2.0.1.noarch 2/2

Installed:
awslogs.noarch 0:1.1.4-3.amzn2

Dependency Installed:
aws-cli-plugin-cloudwatch-logs.noarch 0:1.4.6-1.amzn2.0.1

Complete!
[ec2-user@ip-10-0-0-150 ~]$ sudo nano /etc/awslogs/awscli.conf
[ec2-user@ip-10-0-0-150 ~]$ sudo systemctl start awslogsd
[ec2-user@ip-10-0-0-150 ~]$ sudo systemctl enable awslogs.service
Created symlink from /etc/systemd/system/multi-user.target.wants/awslogsd.service to /usr/lib/systemd/system/awslogsd.service.
[ec2-user@ip-10-0-0-150 ~]$
```

Created a log group via awslogs agent

The screenshot shows the AWS CloudWatch console interface. The left sidebar contains navigation options: Dashboards, Alarms (0 in alarm, 1 all alarms), Logs (Log groups, Logs Insights), Metrics, X-Ray traces, Events, Application monitoring, and Insights. The main content area displays the details for the log group `/var/log/messages`. The log group details include:

- ARN: `arn:aws:logs:us-east-1:456532073387:log-group:/var/log/messages:*`
- Creation time: 22 hours ago
- Retention: Never expire
- Stored bytes: 188.73 KB
- Metric filters: 1
- Subscription filters: 0
- Contributor Insights rules: -
- Data protection - new: Inactive
- Sensitive data found - new: -
- KMS key ID: -

Below the details, there are tabs for Log streams, Metric filters, Subscription filters, Contributor Insights, Tags, and Data protection - new. The Log streams tab is active, showing 1 log stream. A search bar is present with the text "Filter log streams or try prefix search".

The URL in the browser is `https://us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#logsV2:log-groups/log-group/$252Fvar$252Flog$252Fmessages`.

The screenshot shows the AWS CloudWatch console interface, displaying the log events for the log group `/var/log/messages`. The left sidebar is the same as the previous screenshot. The main content area displays the log events. The log events table has two columns: Timestamp and Message. The events are listed in chronological order, starting from the oldest event at the top. The events include:

- 2023-01-27T10:00:01.000+05:30: Jan 27 04:30:01 ip-10-0-0-150 systemd: Created slice User Slice of root.
- 2023-01-27T10:00:01.000+05:30: Jan 27 04:30:01 ip-10-0-0-150 systemd: Started Session 200 of user root.
- 2023-01-27T10:00:01.000+05:30: Jan 27 04:30:01 ip-10-0-0-150 systemd: Removed slice User Slice of root.
- 2023-01-27T10:01:33.000+05:30: Jan 27 04:31:33 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 117100ms.
- 2023-01-27T10:03:30.000+05:30: Jan 27 04:33:30 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 115430ms.
- 2023-01-27T10:05:26.000+05:30: Jan 27 04:35:26 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 130880ms.
- 2023-01-27T10:07:37.000+05:30: Jan 27 04:37:37 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 127840ms.
- 2023-01-27T10:09:44.000+05:30: Jan 27 04:39:44 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 114390ms.
- 2023-01-27T10:10:01.000+05:30: Jan 27 04:40:01 ip-10-0-0-150 systemd: Created slice User Slice of root.
- 2023-01-27T10:10:01.000+05:30: Jan 27 04:40:01 ip-10-0-0-150 systemd: Started Session 201 of user root.
- 2023-01-27T10:10:01.000+05:30: Jan 27 04:40:01 ip-10-0-0-150 systemd: Removed slice User Slice of root.
- 2023-01-27T10:11:39.000+05:30: Jan 27 04:41:39 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 128510ms.
- 2023-01-27T10:13:48.000+05:30: Jan 27 04:43:48 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 123910ms.
- 2023-01-27T10:15:52.000+05:30: Jan 27 04:45:52 ip-10-0-0-150 dhclient[2926]: XMT: Solicit on eth0, interval 122830ms.

The URL in the browser is `https://us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#logsV2:log-groups/log-group/$252Fvar$252Flog$252Fmessages/log-events/1-06b0e77...`.

creating metric filter and alarm

The screenshot shows the AWS CloudWatch console in the 'us-east-1' region. The left sidebar contains navigation links for Dashboards, Alarms (0), Logs, Metrics, X-Ray traces, Events, Application monitoring, and Insights. The main content area displays the configuration for a metric filter named 'assignment-12'. The filter pattern is 'ERROR'. The metric is 'assignment-logs' with a value of 100. The default value is 50, and the unit is Megabytes. The dimensions are empty. The alarm is named 'assignment-12'.

CloudWatch

Find metric filters

assignment-12

Filter pattern
ERROR

Metric
assignment-logs / logs-assign

Metric value
100

Default value
50

Unit
Megabytes

Dimensions
-

Alarms
assignment-12

https://us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#

The screenshot shows the AWS CloudWatch console in the 'us-east-1' region, displaying the configuration for an alarm named 'assignment-12'. The left sidebar contains navigation links for Dashboards, Alarms (1), Logs, Metrics, X-Ray traces, Events, Application monitoring, and Insights. The main content area displays the configuration for the alarm. The name is 'assignment-12', the type is 'Metric alarm', and the description is 'No description'. The state is 'OK'. The threshold is 'logs-assign > 100 for 1 datapoints within 5 minutes'. The last change was on 2023-01-27 04:50:48. The actions are 'Actions enabled'. The namespace is 'assignment-logs', the metric name is 'logs-assign', and the statistic is 'Average'. The period is 5 minutes. The datapoints to alarm are 1 out of 1. The missing data treatment is 'Treat missing data as missing'. The percentiles with low samples evaluate are 'ARN:arn:aws:cloudwatch:us-east-1:456532073387:alarm:assignment-12'.

CloudWatch

Alarms

assignment-12

Details

Name assignment-12	State OK	Namespace assignment-logs	Datapoints to alarm 1 out of 1
Type Metric alarm	Threshold logs-assign > 100 for 1 datapoints within 5 minutes	Metric name logs-assign	Missing data treatment Treat missing data as missing
Description No description	Last change 2023-01-27 04:50:48	Statistic Average	Percentiles with low samples evaluate
	Actions Actions enabled	Period 5 minutes	ARN arn:aws:cloudwatch:us-east-1:456532073387:alarm:assignment-12

View EventBridge rule

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