

Issue subject : We received multiple outages and service down on the legacy server during 3:00 p.m. and we need a proper report on the cause of what happened. Currently we are highly suspicious about an issue with connecting to the DBs RDS & MongoDB Atlas.

Utilization of the server Prod-360VUZ-Web was normal at the time of the event.
After checking

/var/log/messages. We found nothing suspicious.

Too many errors for endpoint

'https://7-32-3-app.agent.datadoghq.com/intake/?api_key=*****01d9f': retrying later

[https://ap-south-1.console.aws.amazon.com/cloudwatch/home?region=ap-south-1#logsV2:log-groups/log-group/SystemLogs/log-events/360VUZ-WEB-message-Log\\$3Fstart\\$3D-86400000\\$26filterPattern\\$3D](https://ap-south-1.console.aws.amazon.com/cloudwatch/home?region=ap-south-1#logsV2:log-groups/log-group/SystemLogs/log-events/360VUZ-WEB-message-Log$3Fstart$3D-86400000$26filterPattern$3D)

However, in RDS logs we have captured timeout reading communication packets .

RDS error logs:

start log :- 2022-01-12T17:35:52.039+05:30

2022-01-12T12:05:52.039335Z 5355334 [Note] Aborted connection 5355334 to db: 'unconnected' user: 'unauthenticated' host: '172.31.15.230' **(Got timeout reading communication packets)**

2022-01-12T12:05:52.563127Z 195345205 [Note] Aborted connection 195345205 to db: 'unconnected' user: 'unauthenticated' host: '172.31.15.230' **(Got timeout reading communication packets)**

2022-01-12T12:05:52.564466Z 195345208 [Note] Aborted connection 195345208 to db: 'unconnected' user: 'unauthenticated' host: '172.31.15.230' **(Got timeout reading communication packets)**

2022-01-12T12:05:52.572532Z 195345202 [Note] Aborted connection 195345202 to db: 'unconnected' user: 'unauthenticated' host: '172.31.15.230' (Got timeout reading communication packets)

2022-01-12T12:05:57.418317Z 195345334 [Note] Aborted connection 195345334 to db: 'unconnected' user: 'unauthenticated' host: '172.31.15.230' (Got timeout reading communication packets)

2022-01-12T12:05:57.996308Z 5355360 [Note] Aborted connection 5355360 to db: 'unconnected' user: 'unauthenticated' host: '172.31.15.230' (Got timeout reading communication packets)

Findings:

Factors that can trigger the Aborted connection warning include (but aren't limited to) the following:

- Client or driver incompatibility
- Firewalls or proxies, which can close idle connections or block a connection.
- Improper closing of a client-server connection, resulting in a higher number of sleeping connections inside Amazon RDS MySQL.
- Idle connections that exceed the [wait_timeout](#) or [interactive_timeout](#) thresholds.
- A client application that improperly terminates a connection.
- A client connection that exceeds the [connect_timeout](#) seconds threshold when obtaining a connection packet.
- The [max_allowed_packet](#) parameter value is exceeded. If queries require more memory than what the instance has allocated for Amazon RDS MySQL, then the Aborted connection warning will get triggered.

Resolution :

Current parameter values of the RDS : **prod-360-database** are as below :

DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Curr
prod-360vuz-database	Regional cluster	Aurora MySQL	ap-south-1	2 instances	Available	-	
prod-360vuz-database-instance-1	Writer instance	Aurora MySQL	ap-south-1b	db.r5.4xlarge	Available	9.37%	
prod-360vuz-database-reader	Reader instance	Aurora MySQL	ap-south-1a	db.r5.2xlarge	Available	2.55%	

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

Tags

Database

Configuration

DB cluster role

Regional cluster

Engine version

5.7.mysql_aurora.2.04.5

Resource ID

cluster-T05JHXFSKXJW5J77EQKYYOED7Q

Amazon Resource Name (ARN)

arn:aws:rds:ap-south-1:817879235465:cluster:prod-360vuz-database

Capacity type

Provisioned: single-master

DB cluster ID

prod-360vuz-database

DB cluster parameter group

aurora-db-mysql57-pg

Deletion protection

Enabled

Availability

IAM DB authentication

Not enabled

Master username

root

Master password

Multi-AZ

2 Zones

Encryption

Encryption

Enabled

AWS KMS key

aws/rds

Published logs

CloudWatch Logs

Audit

Error

General

Parameters								Edit parameters
<input type="text" value="connect_timeout"/>								< 1 >
<input type="checkbox"/>	Name	Values	Allowed values	Modifiable	Source	Apply type	Data type	
<input type="checkbox"/>	connect_timeout	2-31536000		true	engine-default	dynamic	integer	

Parameters								Edit parameters
<input type="text" value="max_allowed_packet"/>								< 1 >
<input type="checkbox"/>	Name	Values	Allowed values	Modifiable	Source	Apply type	Data type	
<input type="checkbox"/>	max_allowed_packet	1024-1073741824		true	engine-default	dynamic	integer	

Parameters								Edit parameters
<input type="text" value="interactive_timeout"/>								< 1 >
<input type="checkbox"/>	Name	Values	Allowed values	Modifiable	Source	Apply type	Data type	
<input type="checkbox"/>	interactive_timeout	1-31536000		true	engine-default	dynamic	integer	

Parameters								Edit parameters
<input type="text" value="wait_timeout"/>								< 1 >
<input type="checkbox"/>	Name	Values	Allowed values	Modifiable	Source	Apply type	Data type	Description
<input type="checkbox"/>	innodb_lock_wait_timeout		1-1073741824	true	engine-default	dynamic	integer	Timeout in seconds an innodb transaction may wait for a row lock before giving up
<input type="checkbox"/>	lock_wait_timeout		1-31536000	true	engine-default	dynamic	integer	Specifies the timeout in seconds for attempts to acquire metadata locks
<input type="checkbox"/>	wait_timeout		1-31536000	true	engine-default	dynamic	integer	The number of seconds the server waits for activity on a non-interactive TCP/IP or UNIX File connection before closing it.

Currently , parameters like **wait_timeout** , **interactive_timeout** , **connect_timeout** , **max_allowed_packet** are set to be its default value .

As per the guideline we can increase the parameter values to its maximum .

Please refer AWS official support document for more information:

<https://aws.amazon.com/premiumsupport/knowledge-center/rds-mysql-communication-packet-error/>