

## RDS Management using AWS API

- Authenticate AWS credentials
- List the available instances
- Stop the running instances
- Start the instances after stopping

In order to do this task we need AWS secrets so that we can connect on to the aws account and do the specified actions from ruby script. Since our aws account has client instances I am providing you the code written which will work once the valid aws credentials have provided.

### Authenticate AWS credentials

Authentication should be done by using a valid AWS Access Key and a AWS Secret Key.

```
#Loading aws secrets (Created an json file which contains the credentials)
aws_credentials = JSON.load(File.read('secrets.json'))
puts aws_credentials

#connecting to AWS using secrets
Aws.config.update({
  credentials: Aws::Credentials.new(aws_credentials['AccessKeyId'], aws_credentials['SecretAccessKey'])
})
```

### List the available instances

```
#Empty Array to hold active RDS instances details
active_instances = []

#Printing both status and names of the instances
rds.db_instances.each do |i|
  puts "Name (ID) : #{i.id}"
  puts "Status : #{i.db_instance_status}"
  puts "DB Identifier : #{i.db_instance_identifier}"
  puts "DB snapshot : #{i.db_snapshot_identifier}"
  active_instances.append([i.db_instance_identifier, i.db_snapshot_identifier]) if i.db_instance_status == "available"
end
```

### Stop the running instances

```
if active_instances.nil?
  puts "No Active Instances Found."
  exit
else
  active_instances.each do |instance|
    resp = rds.stop_db_instance({
      db_instance_identifier: instance[0], #required
      db_snapshot_identifier: instance[1]
    })
  end
  puts "Successfully stopped all RDS Active Instances"
end
```

## Starting the stopped processes

```
#Starting RDS instances after 100 seconds
active_instances.each do |instance|
  ..resp = rds.start_db_instance({
    ...db_instance_identifier: instance[0], ..# required
    ..})
end
```

## Sample code Used

```
#Requiring needed gems
require 'aws-sdk-rds'
require 'aws-sdk-s3'
require 'json'

#Loading aws secrets (Created an json file which contains the credentials)
aws_credentials = JSON.load(File.read('secrets.json'))
puts aws_credentials

#connecting to AWS using secrets
Aws.config.update({
  ..credentials: Aws::Credentials.new(aws_credentials['AccessKeyId'], aws_credentials['SecretAccessKey'])
})

#Listing DB Instances
rds = Aws::RDS::Resource.new(region: 'us-west-1')

#Empty Array to hold active RDS instances details
active_instances = []

#Printing both status and names of the instances
rds.db_instances.each do |i|
  ..puts "Name (ID) .....: #{i.id}"
  ..puts "Status .....: #{i.db_instance_status}"
  ..puts "DB Identifier: #{i.db_instance_identifier}"
  ..puts "DB snapshot: ..: #{i.db_snapshot_identifier}"
  ..active_instances.append([i.db_instance_identifier, i.db_snapshot_identifier]) if i.db_instance_status == "available"
end

if active_instances.nil?
  ..puts "No Active Instances Found."
  ..exit
else
  ..active_instances.each do |instance|
    ..resp = rds.stop_db_instance({
      ...db_instance_identifier: instance[0], ..# required
      ...db_snapshot_identifier: instance[1]
      ..})
    ..end
    ..puts "Successfully stopped all RDS Active Instances"
  end

  #Sleeping for 100 seconds
  sleep 100

  #Starting RDS instances after 100 seconds
  active_instances.each do |instance|
    ..resp = rds.start_db_instance({
      ...db_instance_identifier: instance[0], ..# required
      ..})
    ..end
  end

  #References:-
  ..#https://docs.aws.amazon.com/AmazonRDS/latest/APIReference/API_StopDBInstance.html
  ..#https://docs.aws.amazon.com/sdk-for-ruby/v3/api/Aws/RDS/Client.html#stop_db_instance-instance_method
```

**Json file should be like this**

```
{  
  "AccessKeyId": "XXXXXXX",  
  "SecretAccessKey": "XXXXXXXXXX"  
}
```

References:-

1. [https://docs.aws.amazon.com/AmazonRDS/latest/APIReference/API\\_StopDBInstance.html](https://docs.aws.amazon.com/AmazonRDS/latest/APIReference/API_StopDBInstance.html)
2. [https://docs.aws.amazon.com/sdk-for-ruby/v3/api/Aws/RDS/Client.html#stop\\_db\\_instance-instance\\_method](https://docs.aws.amazon.com/sdk-for-ruby/v3/api/Aws/RDS/Client.html#stop_db_instance-instance_method)