

# GP2 to GP3 Migration

## Instruction Sheet

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## Introduction

An AWS Step function has been developed to facilitate the migration of GP2 to GP3.

This feature is also available through the Cloudwiry interface with some small differences.

## Installation

To install the Step Function, it's necessary to install the **serverless** framework following instructions on <https://www.serverless.com/framework/docs/getting-started/> .

To check that the **serverless** application is installed, it's possible to execute this:

```
$ serverless version
Framework Core: 2.15.0 (standalone)
Plugin: 4.2.0
SDK: 2.3.2
Components: 3.4.3
```

Then install the Step Function plugin for serverless

```
npm install --save-dev serverless-step-functions
serverless-python-requirements serverless-pseudo-parameters
```

Export the AWS credentials for the master account.

```
export AWS_ACCESS_KEY_ID="ASIAXXXXXXXXXXXXXXXXXX"
export AWS_SECRET_ACCESS_KEY="YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY"
export AWS_SESSION_TOKEN="ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ"
```



Once the serverless application is installed, to install the Step function, go to the source code path, untar it and type “*serverless deploy*”.

[Link to download the source code](#)

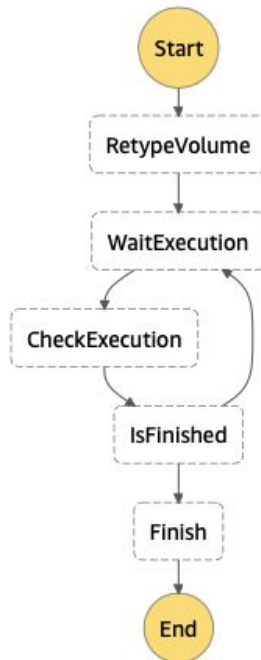
```
$ serverless deploy
Serverless: Packaging service...
Serverless: Excluding development dependencies...
Serverless: Injecting required Python packages to package...
Serverless: Uploading CloudFormation file to S3...
Serverless: Uploading artifacts...
Serverless: Uploading service gp3enabler.zip file to S3 (3.36 MB)...
Serverless: Validating template...
Serverless: Updating Stack...
Serverless: Checking Stack update progress...
.....
Serverless: Stack update finished...
Service Information
service: gp3enabler
stage: dev
region: us-east-1
stack: gp3enabler-dev
resources: 11
api keys:
  None
endpoints:
  None
functions:
  convert_volumes: gp3enabler-dev-convert_volumes
  get_conversion_progress: gp3enabler-dev-get_conversion_progress
layers:
  None
```

# Instructions

## Manual Execution

Go to Step Functions console

(<https://console.aws.amazon.com/states/home?region=us-east-1#/statemachines>) and locate the convertToGP3 Step Function. The defined workflow is as follows:



To execute it manually, click **Start execution** button:



Start execution

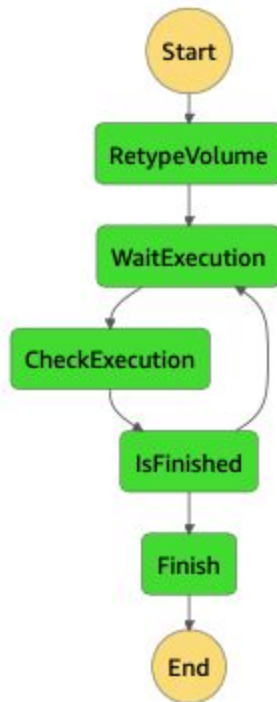
And include the following information on it.

```
{
  "account_id": "111111111111",
  "volume_id": "vol-XXXXXX",
  "region": "us-east-1",
  "role_name": "OrganizationAccountAccessRole"
}
```



**Note:** the Lambda functions use AssumeRole, so most probably it won't work with volumes in the Master Account (in any case, it's not a good practice having a workload in Master Account). Role\_name is the name of the role that the Lambda function will try to assume in the target account. By default, the role name is "OrganizationAccountAccessRole", but it might be different. If this one doesn't work, you can go to the IAM console in the target account and check which Role has "Account: <MASTER\_ACCOUNT>" as the trusted entity. Once the work is done, it's possible to check the execution in the console.

### Graph inspector



■ In Progress ■ Succeeded ■ Failed ■ Cancelled ■ Caught Error

And check the Output and Exception Logs in case of failure.



**Trick:** to check the current progress on an ongoing conversion, just click on "CheckExecution" Output, and look for "Progress" in the "result" section of the json.

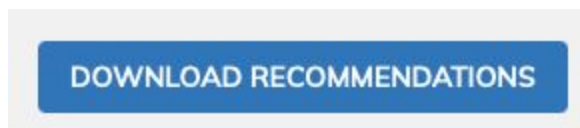
## Automated Execution

From the Opportunities detected, we're going to generate the execution commands for each Volume. So it's possible to launch it in batches (AWS will execute some of them in parallel, so it's possible to watch the execution in the Step Function console).

### Step 1 Download recommendations

Go to <https://app.cloudwiry.com/#/app/recommendation-engine/>

Click "Download Recommendations"



Open file and go to the **GP2Volume** tab

### Step 2 Generate Script

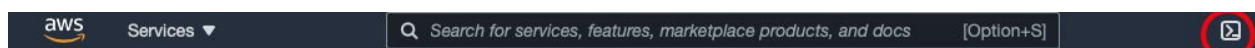
Add this formula to the latest column of the second row (the first row with data), replacing <MASTER> with the account ID of the Master Account.

```
=aws stepfunctions start-execution --state-machine-arn  
arn:aws:states:us-east-1:<MASTER>:stateMachine:convertToGP3 --input '{  
  "account_id": "&A2 &'", "volume_id": "&D2&'", "role_name":  
  "organizationaccountaccessrole", "region": "&C2&'" }'
```

Copy formula to all the cells below to generate the AWS API calls to execute the Step Function with the correct Input.

### Step 3 Execute script

The easiest way to do this is by login into the console of the master account, with permissions to execute the Step Function. Then, open the new AWS functionality Cloud Shell



```

AWS CloudShell

us-east-1

Preparing your terminal...
Try these commands to get started:
aws help or aws <command> help or aws <command> --cli-auto-prompt
[cloudshell-user@ip-10-0-41-109 ~]$ aws stepfunctions start-execution --state-machine-arn arn:aws:states:us-east-1:<MASTER>:stateMachine:convertToGP3 --input '{ "account_id": "136"
"role_name": "organizationaccountaccessrole", "region": "eu-central-1" }'

```

Then, click Enter.

## Step 4 Verify

Use the Step Function console to verify the success/failure of each execution.

Step Functions > State machines

State machines (11) View details Edit Copy to new Delete Create state machine

Q convert X Any type < 1 > ⚙

|   | Name ▲       | Type ▼   | Creation date ▼             | Status | Logs | Running | Succeeded | Failed | Timed out | Aborted |
|---|--------------|----------|-----------------------------|--------|------|---------|-----------|--------|-----------|---------|
| ⓘ | convertToGP3 | Standard | Jan 5, 2021 10:18:00.148 PM | Active | -    | 0       | 2         | 3      | 0         | 0       |

For more strategies on how to optimize your cloud, [schedule a call](#) with our cloud experts or drop us an email at [hello@cloudwiry.com](mailto:hello@cloudwiry.com).