DynamoDB Basics

Hands-on Lab

1. Download the application code

* Go to <https://github.com/awslabs/eb-node-express-signup>
* Choose Clone or Download, then choose **Download ZIP**
* Unzip the file in a directory of your choice

1. Create an IAM Policy and Role
   * Log in to the AWS Console and choose AWS Identity and Access Management (IAM)
   * In the navigation pane, choose Policies.
   * Choose Create policy. Next to Create Your Own Policy, choose Select.
   * For Policy Name, enter gsg-signup-policy.
   * Open the iam\_policy.json file from the eb-node-express-signup-master directory and copy its contents. Paste the contents into the Policy Document box.
   * Choose Create Policy.
   * In the navigation pane, choose Roles.
   * Choose Create new role.
   * On the Select role type page, next to Amazon EC2, choose Select to allow EC2 instances to use the role to call AWS services on your behalf.
   * On the Attach Policy page, attach the following policies:
     + gsg-signup-policy – The policy that you created earlier.
     + AWSElasticBeanstalkWebTier – Elastic Beanstalk provided role that allows the instances in your environment to upload logs to Amazon S3.
   * For Role name, enter gsg-signup-role.
   * Choose Create role.
2. Create a DynamoDB table
   * Open the DynamoDB service from your AWS console
   * In the menu bar, ensure that the region is set to US West (Oregon).
   * Choose Create table.
   * For Table name, type gsg-signup-table.
   * For the Primary key, type email. Choose Create.
3. In the eb-node-express-signup-master folder that you extracted from the sample archive, open the app\_config.json file.
   * Change the value for STARTUP\_SIGNUP\_TABLE to gsg-signup-table:

"STARTUP\_SIGNUP\_TABLE": "gsg-signup-table",

* Change the value of AWS\_REGION to us-west-2 for US West (Oregon) Region

"AWS\_REGION": "us-west-2",

* Save your edits to the file. You can leave the file open, because we'll make one more change to it in the next step.

1. Set up Amazon SNS notifications
   * Open the Amazon SNS service on your AWS console
   * Choose Create topic.
   * For Topic name, type gsg-signup-notifications. Choose Create topic.
   * Choose Create subscription.
   * For Protocol, choose Email
   * For Endpoint, enter your email address. (You’ll get an email whenever someone signs up to the service.)
   * Choose Create Subscription.
   * To confirm the subscription, Amazon SNS sends you an email named AWS Notification — Subscription Confirmation. Open the link in the email to confirm your subscription.
   * Add the unique identifier for the SNS topic to the configuration file for the app
     + On the topic details page, copy the string from Topic ARN. Note that each Amazon Resource Name (ARN) has the following syntax:

arn:aws:service:region:accountid:resourceType/resourcePath

* + Open the app\_config.json file in a text editor, if it's not already open.
  + Insert the ARN of your SNS topic.

"NEW\_SIGNUP\_TOPIC": "arn:aws:sns:us-west-2:123456789012:gsg-signup-notifications",

* + Your final configuration file should look similar to the following. Save your edits to the file and close the file.

{

"AWS\_REGION": "us-west-2",

"STARTUP\_SIGNUP\_TABLE": "gsg-signup-app",

"NEW\_SIGNUP\_TOPIC": "arn:aws:sns:us-west-2:123456789012:gsg-signup-notifications"

}

1. Create an Elastic Beanstalk Environment
   * Open the Elastic Beanstalk service on your AWS console
   * For Platform, choose Node.js.
   * For Application code, choose Sample application.
   * Choose Review and launch.
   * On the Security card, choose Modify.
   * For IAM instance profile, choose the role that you created earlier (gsg-signup-role).
   * Choose Create app.
2. Create the source bundle
   * Open the application folder eb-node-express-signup-master.
   * Select all the items in the folder, including the subfolders. **Do not select the top-level folder.**
     + The signup application includes a hidden folder named .ebextensions that contains a configuration file that configures Node.js platform settings. You may need to configure your file browser to show hidden files to see this folder.
   * Right-choose the selected items and select the option to compress them, such as Send to > Compressed (zipped) Folder (Windows) or Compress Items (macOS).
3. Deploy the Signup Application
   * Return to the environment that you created in the Elastic Beanstalk console.
   * Choose Upload and Deploy.
   * Choose Browse and upload the source bundle that you created in the previous section.
   * Choose Deploy.
4. When the deployment is finished and the environment health is listed as **Green**, open the URL of the app. Enter some data.
5. Look at the DynamoDB console to see the data represented in the database.
   * Extra Credit: make your DynamoDB table a global table, replicating to the region of your choice