**Developing on AWS**

**Resource Links**

**Module 1**

|  |  |
| --- | --- |
| What is Cloud Computing | https://aws.amazon.com/what-is-cloud-computing |
| Hybrid Deployments | https://aws.amazon.com/enterprise/hybrid/ |
| AWS Regional Services | http://aws.amazon.com/about-aws/  global-infrastructure/regional-product-services/ |
| AWS Regions and Zones | http://docs.aws.amazon.com/AWSEC2/  latest/UserGuide/using-regions-availability-zones.html |
| AWS Global Infrastructure | http://aws.amazon.com/about-aws/  globalinfrastructure/ |
| AWS Global Infrastructure | https://infrastructure.aws |
| AWS Data Centers | https://aws.amazon.com/compliance/data-center/ |
| AWS Regions | https://aws.amazon.com/about-aws/  global-infrastructure/#reglink-pr |
| AWS Edge Locations – CloudFront as the CDN | https://aws.amazon.com/cloudfront/features/ |
| Latency Checker Tool | http://www.cloudping.info/ |
| EC2 Instance Types | http://docs.aws.amazon.com/AWSEC2/  latest/WindowsGuide/instance-types.html |
| EC2 Instance Types | http://docs.aws.amazon.com/AWSEC2/latest/  UserGuide/instance-types.html |
| EC2 Instance Types | http://aws.amazon.com/ec2/instance-types/ |
| Query API: AWS SDKs | https://aws.amazon.com/tools/#SDKs |
| Query API: Application Load Balancer | http://docs.aws.amazon.com/elasticloadbalancing/  latest/APIReference/Welcome.html |
| Query API: Classic Load Balancer | http://docs.aws.amazon.com/elasticloadbalancing/  2012-06-01/APIReference/Welcome.html |
| Elastic Load Balancer | https://aws.amazon.com/elasticloadbalancing/ |
| EC2 Auto Scaling | https://aws.amazon.com/autoscaling/ |
| AWS Well-Architected Framework | https://aws.amazon.com/architecture/well-architected/?wa-lens-whitepapers.sort-by=item.additionalFields.sortDate&wa-lens-whitepapers.sort-order=desc |
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**Module 2**

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| AWS CLI | http://aws.amazon.com/cli/ |
| AWS Tools | https://aws.amazon.com/tools/ |
| AWS Toolkit for Visual Code | https://aws.amazon.com/visualstudiocode/ |
| AWS Toolkit for Visual Code | https://aws.amazon.com/about-aws/  whats-new/2019/07/announcing-aws-  toolkit-for-visual-studio-code/ |
| AWS Toolkit for IntelliJ | https://aws.amazon.com/intellij/ |
| AWS Toolkit for IntelliJ | https://aws.amazon.com/about-aws/  whats-new/2019/03/the-aws-toolkit-  for-intellij-is-now-generally-available/ |
| CLI Reference | http://docs.aws.amazon.com/cli/latest/reference/ |
| SDK Information for Python | https://boto3.readthedocs.org/en/  latest/guide/quickstart.html |
| SDK Information for .NET | http://docs.aws.amazon.com/AWSSdkDocsNET/  latest/V3/DeveloperGuide/net-dg-install-assemblies.html |
| SDK Information for .NET | http://docs.aws.amazon.com/AWSSdkDocsNET/  latest/V3/DeveloperGuide/net-dg-start-new-project.html |
| SDK Information for Java | http://docs.aws.amazon.com/  AWSSdkDocsJava/latest/DeveloperGuide/  java-dg-install-sdk.html |
| SDK Information for Amplify | https://docs.amplify.aws/ |
| SDK Information for Ruby | https://aws.amazon.com/sdk-for-ruby/ |
| SDK Information for JavaScript in Node.js | https://aws.amazon.com/sdk-for-node-js/ |
| SDK Information for Go | https://docs.aws.amazon.com/sdk-for-go/  v1/developer-guide/welcome.html |
| SDK Information for JavaScript | https://docs.aws.amazon.com/  AWSJavaScriptSDK/latest/ |
| SDK Information for PHP | https://docs.aws.amazon.com/sdk-for-php/  v3/developer-guide/welcome.html |
| SDK Information for C++ | https://aws.amazon.com/sdk-for-cpp/ |
| Boto3 | http://boto3.readthedocs.org/en/latest/guide/resources.html |
| Boto3 | http://boto3.readthedocs.org/en/latest/guide/clients.html |
| Region Retrieval from Metadata - Java | http://docs.aws.amazon.com/AWSSdkDocsJava/  latest/DeveloperGuide/java-dg-region-selection.html |
| Region Retrieval from Metadata - .NET | http://docs.aws.amazon.com/AWSSdkDocsNET/  latest/V3/DeveloperGuide/net-dg-config.html |
| Region Retrieval from Metadata – Boto3 | http://boto3.readthedocs.org/en/latest/  guide/quickstart.html#configuration |
| API Retries Configuration | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/ErrorHandling.html#APIRetries |
| Java Exceptions | http://docs.aws.amazon.com/AWSSdkDocsJava/latest/DeveloperGuide/java-dg-exceptions.html |
| Interacting with AWS X-Ray SDK | https://github.com/aws?q=xray-sdk |
| AWS X-Ray API Actions | https://docs.aws.amazon.com/xray/latest/api/API\_Operations.html |
| CloudTrail Supported Services | http://docs.aws.amazon.com/awscloudtrail/latest/userguide/cloudtrail-supported-services.html |
| CloudTrail Events History | https://docs.aws.amazon.com/awscloudtrail/latest/userguide/view-cloudtrail-events.html |
| AWS Amplify | https://docs.amplify.aws/ |
| AWS Amplify (Workshop) | https://amplify-workshop.go-aws.com/ |
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**Module 3**

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| Services that Work with IAM | http://docs.aws.amazon.com/IAM/  latest/UserGuide/reference\_aws-  services-that-work-with-iam.html |
| Allowed ARN Namespaces | http://docs.aws.amazon.com/general/  latest/gr/aws-arns-and-namespaces.html |
| Permissions Supported by each Service | http://docs.aws.amazon.com/IAM  /latest/UserGuide/Using\_SpecificProducts.html |
| IAM Policies Evaluation Logic | http://docs.aws.amazon.com/IAM/latest/  UserGuide/AccessPolicyLanguage\_  EvaluationLogic.html |
| AWS Management Console | http://docs.aws.amazon.com/IAM/  latest/UserGuide/console.html |
| IAM CLI Reference | http://docs.aws.amazon.com/cli/latest/  userguide/cli-chap-welcome.html |
| Sign Requests with Credentials | http://docs.aws.amazon.com/  general/latest/gr/  signing\_aws\_api\_requests.html |
| Security (Workshops) | https://awssecworkshops.com/workshops/ |
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**Module 4**

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| EC2 Key Pairs | http://docs.aws.amazon.com/ AWSEC2/latest/  UserGuide/ec2-key-pairs.html |
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**Module 5**

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| Amazon S3 | https://aws.amazon.com/s3/ |
| Case Study: 6 Waves Limited | https://aws.amazon.com/  solutions/case-studies/6waves/ |
| Case Study: Classle | https://aws.amazon.com/  solutions/case-studies/classle/ |
| Bucket Restrictions: Amazon S3 | https://docs.aws.amazon.com/  AmazonS3/latest/dev/  BucketRestrictions.html |
| Regions for Amazon S3 | http://docs.aws.amazon.com/  general/latest/gr/rande.html#s3\_region |
| Metadata and Object Key: Amazon S3 | http://docs.aws.amazon.com/AmazonS3/  latest/dev/UsingMetadata.html |
| URLs for Objects in Amazon S3 | http://docs.aws.amazon.com/AmazonS3/  latest/dev/VirtualHosting.html |
| Amazon S3 Changes to Object Storage Class | http://docs.aws.amazon.com/AmazonS3/  latest/dev/ChgStoClsOfObj.html |
| Amazon S3 Object Prefixes and Delimiters | http://docs.aws.amazon.com/AmazonS3/  latest/dev/ListingKeysHierarchy.html |
| Amazon S3 Client-side Encryption | http://docs.aws.amazon.com/AmazonS3/  latest/dev/UsingClientSideEncryption.html |
| Amazon S3 Server-side Encryption | http://docs.aws.amazon.com/AmazonS3/  latest/dev/serv-side-encryption.html |
| Cross-Origin Resource Sharing (CORS) | http://docs.aws.amazon.com/AmazonS3/  latest/dev/cors.html  http://docs.aws.amazon.com/AmazonS3/  latest/dev/ManageCorsUsing.html |
| Troubleshooting in Amazon S3 | http://docs.aws.amazon.com/AmazonS3/  latest/dev/troubleshooting.html |
| How Amazon S3 Authorizes a Request | http://docs.aws.amazon.com/AmazonS3/  latest/dev/how-s3-evaluates-access-control.html |
| Logging AWS SDK for Java Calls | http://docs.aws.amazon.com/AWSSdkDocsJava/  latest/DeveloperGuide/java-dg-logging.html |
| Server Access Logging in S3 | http://docs.aws.amazon.com/AmazonS3/  latest/dev/ServerLogs.html |
| Amazon S3 Error Responses | http://docs.aws.amazon.com/AmazonS3/  latest/API/ErrorResponses.html |
| Error Retries and Exponential Backoff | http://docs.aws.amazon.com/general/  latest/gr/api-retries.html |
| Deprecation of Path Style URLs in S3 | https://aws.amazon.com/blogs/aws/amazon-s3-path-deprecation-plan-the-rest-of-the-story/ |
| Advantages of indexing the contents of an S3 bucket using a DynamoDB table | https://aws.amazon.com/blogs/big-data/building-and-maintaining-an-amazon-s3-metadata-index-without-servers/ |
| New: S3 Now Delivers Strong Read-After-Write Consistency | https://aws.amazon.com/about-aws/whats-new/2020/12/amazon-s3-now-delivers-strong-read-after-write-consistency-automatically-for-all-applications/ |
| New: S3 Replication Adds Support for Two-way Replication | https://aws.amazon.com/about-aws/whats-new/2020/12/amazon-s3-replication-adds-support-two-way-replication/ |
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**Module 6**

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| SQL vs NoSQL | https://en.wikipedia.org/wiki/NoSQL |
| SQL vs NoSQL | https://www.mongodb.com/nosql-explained |
| What is NoSQL | http://www.planetcassandra.org/what-is-nosql/ |
| ACID | https://en.wikipedia.org/wiki/ACID |
| DynamoDB Data Model | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.Partitions.html |
| Working with Tables | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithTables.html |
| Read and Write Consistency | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadConsistency.html |
| Request Service Quota Increases | https://aws.amazon.com/support |
| Service Quotas | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Limits.html |
| DynamoDB Global Secondary Indexes | https://aws.amazon.com/about-aws/whats-new/2018/12/amazon-dynamodb-increases-the-number-of-global-secondary-indexes-and-projected-index-attributes-you-can-create-per-table/ |
| DynamoDB Streams | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Streams.html |
| Higher-Level Programming Interfaces for DynamoDB | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/ORM.html |
| Optimistic Locking with Version Number (Java) | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/JavaVersionSupportHLAPI.html |
| Optimistic Locking with Version Number (.NET) | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DynamoDBContext.VersionSupport.html |
| Creating a Table: DynamoDB’s API | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_CreateTable.html |
| Creating an Item: DynamoDB’s API (**PutItem**) | https://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_PutItem.html |
| Reading an Item: DynamoDB’s API (**GetItem**) | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.html#WorkingWithItems.ReadingData |
| Reading an Item: DynamoDB’s API (**GetItem**) | htttp://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_GetItem.html |
| Updating an Item: DynamoDB’s API (**UpdateItem**) | https://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_UpdateItem.html |
| Deleting an Item: DynamoDB’s API (**DeleteItem**) | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_DeleteItem.html |
| Querying a DynamoDB Table | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Query.html |
| Querying a DynamoDB Table – API Reference | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_Query.html |
| Scanning a DynamoDB Table | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Scan.html |
| DynamoDB Parallel Scan | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Scan.html#Scan.ParallelScan |
| DynamoDB API Scan | http://docs.aws.amazon.com/amazondynamodb/  latest/APIReference/API\_Scan.html |
| DynamoDB Reserved Words | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/ReservedWords.html |
| DynamoDB Expressions | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Expressions.ExpressionAttributeNames.html |
| DynamoDB Conditional Writes | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Expressions.ConditionExpressions.html |
| DynamoDB – Limiting Amount of Data Returned | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Query.html#Query.Limit |
| DynamoDB – Limiting Amount of Data Returned | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Query.html#Query.Pagination |
| Batch Operations in DynamoDB | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.html#WorkingWithItems.BatchOperations |
| Batch Operations in DynamoDB (**BatchGetItem**) | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_BatchGetItem.html |
| Batch Operations in DynamoDB (**BatchWriteItem**) | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_BatchWriteItem.html |
| DynamoDB Local Secondary Indexes | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-indexes-general.html |
| DynamoDB Global Secondary Indexes | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-indexes-general.html |
| Troubleshooting in DynamoDB:  Error Handling | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Programming.Errors.html#APIError |
| Troubleshooting in DynamoDB:  Error Handling | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/ErrorHandling.html |
| Troubleshooting in DynamoDB:  Error Handling (Batch **GetItem**) | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_BatchGetItem.html |
| Troubleshooting in DynamoDB:  Error Handling (Batch **WriteItem**) | http://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_BatchWriteItem.html |
| Troubleshooting in DynamoDB:  Monitoring with CloudWatch | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/MonitoringDynamoDB.html |
| Troubleshooting in DynamoDB:  Logging API Operations using CloudTrail | http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/logging-using-cloudtrail.html |
| CloudWatch Available Metrics for use with DynamoDB | http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/dynamo-metricscollected.html |
| Searching with DynamoDB and CloudSearch | http://docs.aws.amazon.com/cloudsearch/latest/developerguide/searching-dynamodb-data.html |
| From Zero to NoSQL Hero | https://www.youtube.com/watch?v=tDqLwzQEOmM |
| Video: DynamoDB Deep Dive | https://www.youtube.com/  watch?v=VuKu23oZp9Q |
| Video: DynamoDB Streams | https://www.youtube.com/  watch?v=yHSuK\_k3dxU |
| Data Distribution and Partitions | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.Partitions.html |
| Working with Tables | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithTables.html |
| PartiQL | https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/ql-reference.html |
| DynamoDB Labs | https://amazon-dynamodb-labs.com/ |

**Module 7**

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| AWS Serverless | https://aws.amazon.com/serverless/ |
| AWS Lambda Functions | https://docs.aws.amazon.com/lambda/  latest/dg/invoking-lambda-function.html |
| How AWS Lambda Works | https://docs.aws.amazon.com/lambda/  latest/dg/current-supported-versions.html |
| AWS Toolkit for Eclipse | http://docs.aws.amazon.com/AWSToolkitEclipse/  latest/GettingStartedGuide/lambda.html |
| AWS Toolkit for Visual Studio | https://blogs.aws.amazon.com/net/post/  Tx381XNNQALP8BA/AWS-Lambda-  Support-in-Visual-Studio |
| AWS Toolkit for Python | https://plugins.jetbrains.com/plugin/  11349-aws-toolkit |
| AWS Lambda **push** event model | http://docs.aws.amazon.com/lambda/  latest/dg/API\_Invoke.html |
| AWS Lambda **pull** event model | http://docs.aws.amazon.com/lambda/  latest/dg/API\_CreateEventSourceMapping.html |
| AWS Lambda direct invocation | http://docs.aws.amazon.com/lambda/  latest/dg/API\_Invoke.html |
| AWS Lambda Execution Permissions | http://docs.aws.amazon.com/lambda/  latest/dg/intro-permission-model.html |
| Specifying Permissions in a Policy | http://docs.aws.amazon.com/AmazonS3/  latest/dev/using-with-s3-actions.html |
| Use of Roles: Delegation and Federation | http://docs.aws.amazon.com/IAM/latest/  UserGuide/roles-toplevel.html |
| Invocation Permissions Model - DynamoDB | http://docs.aws.amazon.com/lambda  /latest/dg/intro-permission-model.html |
| Invocation Permissions Model - DynamoDB | http://docs.aws.amazon.com/lambda/  latest/dg/API\_AddPermission.html |
| AWS Lambda Pricing | https://aws.amazon.com/lambda/pricing/ |
| AWS Lambda: Function Scheduling | http://docs.aws.amazon.com  /lambda/latest/dg/getting-started-  scheduled-events.html |
| AWS Lambda Versioning | http://docs.aws.amazon.com/  lambda/latest/dg/versioning-intro.html |
| AWS Lambda Aliases | http://docs.aws.amazon.com/  lambda/latest/dg/aliases-intro.html |
| AWS Lambda Functions – Best Practices | https://docs.aws.amazon.com/  lambda/latest/dg/limits.html |
| Video: AWS Lambda | https://www.youtube.com/watch?v=UFj27laTWQA |
| Video: Lambda and the Serverless Cloud | https://www.youtube.com/watch?v=pBLdMCksM3A |
| Video: Event-driven Code in the Cloud | https://www.youtube.com/watch?v=copO\_JQQsBs |
| New: Lambda Supports up to 10 GB of Memory and 6 vCPU cores | https://aws.amazon.com/about-aws/whats-new/2020/12/aws-lambda-supports-10gb-memory-6-vcpu-cores-lambda-functions/ |
| New: Lambda changes duration billing granularity from 100ms down to 1ms | https://aws.amazon.com/about-aws/whats-new/2020/12/aws-lambda-changes-duration-billing-granularity-from-100ms-to-1ms/ |
| New: Lambda now supports container images as a packaging format | https://aws.amazon.com/about-aws/whats-new/2020/12/aws-lambda-now-supports-container-images-as-a-packaging-format/ |
| New: Lambda support for EFS now generally available | https://aws.amazon.com/about-aws/whats-new/2020/06/aws-lambda-support-for-amazon-elastic-file-system-now-generally-/ |
| Lambda Execution Context | https://docs.aws.amazon.com/lambda/latest/dg/best-practices.html |
| Cold Starts Mitigation Strategies | https://aws.amazon.com/blogs/compute/new-for-aws-lambda-predictable-start-up-times-with-provisioned-concurrency/ |
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**Module 8**

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| API Gateway | https://docs.aws.amazon.com/  apigateway/latest/developerguide/  api-gateway-basic-concept.html |
| Video: API Gateway | https://www.youtube.com/watch?v=e9B-eIAirZ4 |
| Video: API Gateway and Lambda Integration | https://www.youtube.com/watch?v=ZBxWZ9bgd44 |
| AWS SAM – CloudFormation Extension | https://github.com/awslabs/  serverless-application-model |
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**Module 9**

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| Video: SQS and SNS | https://www.youtube.com/watch?v=UesxWuZMZqI |
| Standard Queues | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/SQSDeveloperGuide/  standard-queues.html |
| FIFO Queues | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/SQSDeveloperGuide/FIFO-queues.html |
| Queuing Chain Pattern | http://en.clouddesignpattern.org/index.php/  CDP:Queuing\_Chain\_Pattern |
| Message Attributes | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/SQSDeveloperGuide/  SQSMessageAttributes.html#SQSMessage  Attributes.DataTypes |
| SQS Extended Client Library | https://github.com/awslabs/amazon-  sqs-java-extended-client-lib |
| SQS API Reference | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/APIReference/Welcome.html |
| SQS Developer’s Guide | http://docs.aws.amazon.com/  AWSSimpleQueueService  /latest/SQSDeveloperGuide/AboutVT.html |
| SQS Queue Operations | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/APIReference/Welcome.html |
| SQS Dead Letter Queue | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/SQSDeveloperGuide/  SQSDeadLetterQueue.html |
| SQS Server-side Encryption | https://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/SQSDeveloperGuide/sqs-server-side-  encryption.html#sqs-what-permissions-for-sse |
| SQS Throughput – Developer’s Guide | http://docs.aws.amazon.com/  AWSSimpleQueueService/  latest/SQSDeveloperGuide/throughput.html |
| Sending SNS Messages to SQS Queues | http://docs.aws.amazon.com/sns/latest  /dg/SendMessageToSQS.html#  SendMessageToSQS.test |
| Raw Message Delivery | http://docs.aws.amazon.com/sns/latest/  dg/large-payload-raw-message.html |
| SNS Operations | http://docs.aws.amazon.com/sns/  latest/api/API\_Operations.html |
| SNS: FAQs | https://aws.amazon.com/sns/faqs/ |
| Amazon MQ | https://aws.amazon.com/blogs/compute/  running-activemq-in-a-hybrid-cloud-  environment-with-amazon-mq/ |
| Amazon SNS, Amazon SQS, and Amazon MQ-related API in the SDK for Java | * Amazon SNS client: http://docs.aws.amazon.com/   AWSJavaSDK/latest/javadoc/  com/amazonaws/  services/sns/AmazonSNSClient.html   * Amazon SQS client: http://docs.aws.amazon.com/   AWSJavaSDK/latest/Javadoc  /com/amazonaws/  services/sqs/AmazonSQSClient.html   * Amazon MQ Interface: http://docs.aws.amazon.com/   AWSJavaSDK/latest/javadoc/  com/amazonaws/  services/mq/AmazonMQClient.html |
| Amazon SNS, Amazon SQS, and Amazon MQ-related API in the SDK for .NET | * Amazon SNS client: http://docs.aws.amazon.com/   sdkfornet/v3/apidocs/items/  SNS/TSNSClient.html   * Amazon SQS client: http://docs.aws.amazon.com/   sdkfornet/v3/apidocs/items/  SQS/TSQSClient.html   * Amazon MQ client: http://docs.aws.amazon.com/   sdkfornet/v3/apidocs/items/  MQ/TMQClient.html |
| Amazon SNS, Amazon SQS, and Amazon MQ-related API in the SDK for Python | * Amazon SNS client: http://boto3.readthedocs.org/   en/latest/reference/services/sns.html   * Amazon SQS client: http://boto3.readthedocs.org/   en/latest/reference/services/sqs.html   * Amazon MQ client: http://boto3.readthedocs.org   /en/latest/reference/services/mq.html |
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**Module 10**

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| Video: Step Functions | https://www.youtube.com/watch?v=75MRve4nv8s |
| Step Functions (Workshop) | https://step-functions-workshop.go-aws.com/ |
| Step Functions | https://docs.aws.amazon.com/step-functions/latest/dg/input-output-example.html |
| Amazon States Language | https://states-language.net/spec.html |
| Serverless (Workshop) | https://image-processing.serverlessworkshops.io/ |
| Amazon States Language | https://docs.aws.amazon.com/step-functions/latest/dg/concepts-states.html |
| Amazon States Language | https://github.com/awslabs/statelint |
| Use Case: Image Processing | https://github.com/aws-samples/lambda-refarch-imagerecognition |
| Use Case: Activity for Human Interaction | https://aws.amazon.com/blogs/compute/implementing-serverless-manual-approval-steps-in-aws-step-functions-and-amazon-api-gateway/ |
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**Module 11**

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| --- | --- |
| AWS ElastiCache | https://aws.amazon.com/blogs/aws/  amazon-elasticache-distributed-in-memory-caching/ |
| Video: ElastiCache Deep Dive | https://www.youtube.com/watch?v=\_YYBdsuUq2M |
| Memcached vs Redis | https://docs.aws.amazon.com/  AmazonElastiCache/latest/mem-ug/SelectEngine.html |
| Redis | http://redis.io/ |
| AWS ElastiCache | http://docs.aws.amazon.com/  AmazonElastiCache/latest/UserGuide/  Replication.Redis.Groups.html |
| Caching Strategies | https://docs.aws.amazon.com/AmazonElastiCache/latest/mem-ug/Strategies.html |
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**Module 12**

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| --- | --- |
| Docker | https://docs.docker.com/get-started/#docker-concepts |
| History of Containerization | http://www.worldshipping.org/about-the-industry/history-of-containerization/the-birth-of-intermodalism |
| Video: ECS Deep Dive | https://www.youtube.com/watch?v=qbEPae8YNbs |
| Video: Docker on AWS | https://www.youtube.com/watch?v=NMhacj2n0gk |
| ECR for Docker | https://aws.amazon.com/blogs/compute/  authenticating-amazon-ecr-repositories-  for-docker-cli-with-credential-helper/ |
| Dockerfile Best Practices | https://docs.docker.com/develop/develop-images/dockerfile\_best-practices/#label |
| ECS (Workshop) | https://ecsworkshop.com |
| EKS (Workshop) | https://www.eksworkshop.com |
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**Module 13**

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| Security Operations on AWS | https://aws.amazon.com/training/course-descriptions/security-operations/ |
| Sample IIS Authentication Proxy Code | http://aws.amazon.com/code/1288653099190193 |
| Developer-Authenticated Identities | http://mobile.awsblog.com/post/  Tx1YVAQ4NZKBWF5/Amazon-Cognito-  Announcing-Developer-Authenticated-Identities |
| Developer-Authenticated Identities | https://docs.aws.amazon.com/cognito/latest/  developerguide/amazon-cognito-user-pools-authentication-flow.html |
| Secrets Manager (Advanced Workshop) | https://secrets-manager.awssecworkshops.com/ |
| Amazon Cognito (Workshop) | https://serverless-idm.awssecworkshops.com/ |
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**Module 14**

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| AWS CodeStar | https://aws.amazon.com/codestar/ |
| AWS CodePipeline | https://aws.amazon.com/codepipeline/ |
| AWS CodeCommit | https://aws.amazon.com/codecommit/ |
| AWS CodeBuild | https://aws.amazon.com/codebuild/ |
| AWS CodeDeploy | https://aws.amazon.com/codedeploy/ |
| AWS X-Ray | https://aws.amazon.com/xray/ |
| AWS CloudWatch | https://aws.amazon.com/cloudwatch/ |
| Auto Scaling Instance Termination | http://docs.aws.amazon.com/AutoScaling/  latest/DeveloperGuide/AutoScalingBehavior.Instance  Termination.html. |
| Dev Cycle with AWS Elastic Beanstalk | http://docs.aws.amazon.com/elasticbeanstalk/  latest/dg/eb-cli3-install.html |
| Initializing Local Development Environment with AWS Elastic Beanstalk | http://docs.aws.amazon.com/elasticbeanstalk/  latest/dg/chapter-devenv.html |
| Customizing Default Environment for Linux Servers | http://docs.aws.amazon.com/  elasticbeanstalk/latest/dg/  customize-containers-ec2.html |
| Customizing Default Environment for Windows Servers | http://docs.aws.amazon.com/  elasticbeanstalk/latest/dg/  customize-containers-windows-ec2.html |
| AWS Elastic Beanstalk Namespace and Configuration Options | http://docs.aws.amazon.com/elasticbeanstalk/  latest/dg/command-options.html |
| AWS Elastic Beanstalk Version Options | http://docs.aws.amazon.com/  elasticbeanstalk/latest/dg/using-features.CNAMESwap.html |
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Other Resource Links

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| --- | --- |
| Brief History of AWS | https://techcrunch.com/2016/07/02/  andy-jassys-brief-history-of-the-genesis-of-aws/ |
| Video: Six Advantages of Cloud Computing | https://www.youtube.com/  watch?v=yMJ75k9X5\_8 |
| Security Pillar of the Well-Architected Framework | https://d1.awsstatic.com/whitepapers/  architecture/AWS-Security-Pillar.pdf |
| Reliability Pillar of the Well-Architected Framework | https://d1.awsstatic.com/whitepapers/  architecture/AWS-Reliability-Pillar.pdf |
| Cost Optimization Pillar of the Well-Architected Framework | https://d1.awsstatic.com/whitepapers/  architecture/AWS-Cost-Optimization-Pillar.pdf |
| Operational Excellence Pillar of the Well-Architected Framework | https://d1.awsstatic.com/whitepapers/  architecture/AWS-Operational-Excellence-Pillar.pdf |
| Performance Efficiency Pillar of the Well-Architected Framework | https://d1.awsstatic.com/whitepapers/  architecture/AWS-Performance-Efficiency-Pillar.pdf |
| Security Pillar of the Well-Architected Framework | https://d1.awsstatic.com/whitepapers/  architecture/AWS-Security-Pillar.pdf |
| Developing Cloud Apps | http://www.opendatacenteralliance.org/  docs/DevCloudCapApp.pdf |
| AWS Tips | https://wblinks.com/notes/aws-tips-i-  wish-id-known-before-i-started/ |
| Developing in the Cloud is Different | http://www.theserverside.com/feature/  Developing-for-the-Cloud-How-Developing-  in-the-Cloud-is-Different |
| Nine Gotcha’s | http://www.infoworld.com/article/2683270/  development-environments/cloud-  development--9-gotchas-to-know-before-you-jump-in.html |
| Resource APIs for Java | http://java.awsblog.com/post/  Tx1XFRAN5OWJT6J/Introducing-the-  AWS-Resource-APIs-for-Java |
| Working with Regions | https://java.awsblog.com/post/  Tx3GBOIEN1JJMQ5/Determining-an-  Application-s-Current-Region |
| Boto3 Quickstart Guide | http://boto3.readthedocs.org/en/  latest/guide/quickstart.html#configuration |
| Unchecked Exceptions in AWS SDK for Java | http://aws.amazon.com/articles/3604 |
| Security Operations | https://aws.amazon.com/training/  course-descriptions/security-operations/ |
| Getting Started – AWS SDK for Java | http://docs.aws.amazon.com/AWSSdkDocsJava/  latest/DeveloperGuide/getting-started-signup.html |
| Byte Serving | https://en.wikipedia.org/wiki/Byte\_serving |
| Byte Serving | http://www.coneural.org/  florian/papers/04\_byteserving.php |
| S3 Gotchas with Virtual Hosts | http://shlomoswidler.com/2009/08  /amazon-s3-gotcha-using-virtual-host.html |