

# AMAZON WEB SERVICES CLI GUIDE



Version 0.1.5.5

Damian Ndunda

MUGUMOINI - NAIROBI

Amazon Web Services CLI Guide

Copyright © 2019 BICT Solutions.

Visit <https://businessict.weebly.com/cloud-computing.html>

Trademarks used belong Amazon.com, Inc. Icons used are reproduced from Amazon.com Trademark information about all of the companies and products mentioned herein are provided accordingly but cannot guarantee the accuracy of all information as information changes with time.

## CONTENTS AT A GLANCE

AMAZON WEB SERVICES CLI GUIDE .....	1
CONTENTS AT A GLANCE .....	3
TABLE OF CONTENTS.....	4
INTRODUCTION.....	10
AWS DATA CENTER LOCATIONS.....	10
WHAT IS “CLOUD COMPUTING”? .....	11
AMAZON AND CLOUD COMPUTING .....	12
HOW YOU CAN BENEFIT FROM USING AWS.....	12
CLOUD SERVICE LAYERS DIAGRAM .....	13
CLOUD SERVICE MODEL COMPARISON DIAGRAM .....	14
CHAPTER – COMMAND LINE INTERFACE .....	17
REFERENCES.....	127

## TABLE OF CONTENTS

AMAZON WEB SERVICES CLI GUIDE.....	1
CONTENTS AT A GLANCE .....	3
TABLE OF CONTENTS.....	4
INTRODUCTION.....	10
AWS DATA CENTER LOCATIONS.....	10
WHAT IS “CLOUD COMPUTING”? .....	11
AMAZON AND CLOUD COMPUTING .....	12
HOW YOU CAN BENEFIT FROM USING AWS.....	12
CLOUD SERVICE LAYERS DIAGRAM .....	13
CLOUD SERVICE MODEL COMPARISON DIAGRAM .....	14
AWS GLOBAL INFRASTRUCTURE PICTURE .....	15
AWS COMPUTING PLATFORM DIAGRAM .....	16
CHAPTER – COMMAND LINE INTERFACE.....	17
GETTING STARTED WITH AWS CLI .....	17
MANAGING ACCESS AND SECURITY USING THE AWS CLI.....	19
THE AWS CLI.....	24
GETTING HELP WITH THE AWS CLI.....	24
AWS CLI API DOCUMENTATION .....	31
• Actions.....	31
• Data Types.....	31

• Common Parameters .....	31
• Common Errors .....	31
SERVICE-SPECIFIC CLIS.....	31
COMMAND STRUCTURE IN THE AWS CLI .....	31
SPECIFYING PARAMETER VALUES FOR THE AWS CLI .....	32
COMMON PARAMETER TYPES .....	33
USING JSON FOR PARAMETERS .....	36
USING QUOTATION MARKS WITH STRINGS .....	39
LOADING PARAMETERS FROM A FILE.....	41
BINARY FILES .....	43
REMOTE FILES .....	44
GENERATE THE CLI SKELETON AND INPUT PARAMETERS FROM A JSON INPUT FILE.....	45
CONTROLLING COMMAND OUTPUT FROM THE AWS CLI .....	52
HOW TO SELECT THE OUTPUT FORMAT .....	52
JSON OUTPUT FORMAT .....	53
TEXT OUTPUT FORMAT.....	53
TABLE OUTPUT FORMAT.....	54
HOW TO FILTER THE OUTPUT WITH THE --QUERY OPTION .....	56
USING SHORTHAND SYNTAX WITH THE AWS COMMAND LINE INTERFACE .....	64
STRUCTURE PARAMETERS .....	64
LIST PARAMETERS.....	65
USING AWS CLI PAGINATION OPTIONS .....	67
UNDERSTANDING RETURN CODES FROM THE AWS CLI.....	68

USING THE AWS CLI TO WORK WITH AWS SERVICES .....	71
USING AMAZON DYNAMODB WITH THE AWS CLI.....	71
USING AMAZON EC2 WITH THE AWS CLI.....	75
CREATE, DISPLAY, AND DELETE AMAZON EC2 KEY PAIRS.....	75
CREATING A KEY PAIR .....	75
DISPLAYING YOUR KEY PAIR.....	77
DELETING YOUR KEY PAIR.....	77
CREATE, CONFIGURE, AND DELETE SECURITY GROUPS FOR AMAZON EC2 .....	77
CREATING A SECURITY GROUP .....	78
EC2-VPC.....	78
EC2-CLASSIC .....	79
ADDING RULES TO YOUR SECURITY GROUP .....	80
EC2-VPC.....	81
EC2-CLASSIC .....	83
DELETING YOUR SECURITY GROUP .....	84
EC2-VPC.....	84
EC2-CLASSIC .....	84
LAUNCH, LIST, AND TERMINATE AMAZON EC2 INSTANCES .....	84
LAUNCHING AN INSTANCE.....	85
EC2-VPC.....	85
EC2-CLASSIC .....	88
ADDING A BLOCK DEVICE TO YOUR INSTANCE .....	90
ADDING A TAG TO YOUR INSTANCE .....	90

LISTING YOUR INSTANCES.....	91
TERMINATING AN INSTANCE .....	91
USING AMAZON S3 GLACIER WITH THE AWS CLI .....	92
CREATING AN AMAZON S3 GLACIER VAULT .....	92
PREPARING A FILE FOR UPLOADING.....	93
INITIATING A MULTIPART UPLOAD AND UPLOAD FILES.....	94
COMPLETING THE UPLOAD.....	96
To Calculate A Tree Hash .....	97
USING AWS IDENTITY AND ACCESS MANAGEMENT FROM THE AWS CLI .....	100
CREATING IAM USERS AND GROUPS .....	100
ATTACH AN IAM MANAGED POLICY TO AN IAM USER.....	102
SET AN INITIAL PASSWORD FOR AN IAM USER .....	103
CREATE AN ACCESS KEY FOR AN IAM USER.....	104
USING AMAZON S3 WITH THE AWS CLI.....	104
USING HIGH-LEVEL (S3) COMMANDS WITH THE AWS CLI.....	105
MANAGING BUCKETS.....	105
CREATING A BUCKET .....	105
LISTING YOUR BUCKETS .....	105
DELETING A BUCKET.....	106
MANAGING OBJECTS .....	106
USING API-LEVEL (S3API) COMMANDS WITH THE AWS CLI .....	113
APPLYING A CUSTOM ACL.....	113
CONFIGURING A LOGGING POLICY .....	113

USING AMAZON SNS WITH THE AWS CLI .....	114
CREATE A TOPIC .....	115
SUBSCRIBE TO A TOPIC .....	115
PUBLISH TO A TOPIC .....	116
UNSUBSCRIBE FROM A TOPIC.....	116
DELETE A TOPIC.....	116
USING AMAZON SWF WITH THE AWS CLI .....	117
LIST OF AMAZON SWF COMMANDS BY CATEGORY .....	117
COMMANDS RELATED TO ACTIVITIES.....	117
COMMANDS RELATED TO DECIDERS .....	118
COMMANDS RELATED TO WORKFLOW EXECUTIONS .....	118
COMMANDS RELATED TO ADMINISTRATION .....	118
Activity Management.....	118
Workflow Management.....	118
Domain Management .....	118
Workflow Execution Management .....	119
VISIBILITY COMMANDS .....	119
Activity Visibility .....	119
Workflow Visibility .....	119
Workflow Execution Visibility .....	119
Domain Visibility .....	119
Task List Visibility .....	119
WORKING WITH AMAZON SWF DOMAINS USING THE AWS CLI.....	120



LIST YOUR DOMAINS.....	120
GET INFORMATION ABOUT A DOMAIN .....	121
REGISTER A DOMAIN.....	121
DEPRECATING A DOMAIN .....	122
TROUBLESHOOTING AWS CLI ERRORS.....	123
PERMISSIONS ISSUES .....	123
MAIN CLI PROGRAM MUST HAVE 'RUN' PERMISSION .....	123
YOU MUST USE VALID CREDENTIALS .....	123
YOUR IAM USER MUST BE ABLE TO RUN THE COMMAND .....	124
NEXT STEPS .....	125
• AWSCloudTrail.....	125
• AWSConfig.....	125
• AWS Key Management Service .....	125
RECOMMENDATIONS AND BEST PRACTICES .....	126
REFERENCES .....	127