

USER MANUAL FOR PROVISIONING WEB IDE ON AWS

Accelerate, Improve and plan success with an efficient code.

https://www.nimbal.io/

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NIMBAL AUTO WEB IDE

Start automating your software tests with our comprehensive, out-of-the-box automation framework. The Nimbal Auto Framework combines the best Open-Source tools to make a powerful and comprehensive test automation solution. Our easy-to-learn, high-value, and low-cost solutions are guaranteed to give you quick results that enable you to release your software confidently. Test Automation is daunting, Nimbal makes it Easy.

Why this document is required?

To provision Web IDE on AWS for testers in an organization.

PRODUCT OVERVIEW

Automating software testing does not need to be an expensive and tedious task. With Nimbal Auto we've addressed the main issues with Automation namely time taken to build and maintain a framework, costs involved, complexity, scalability, and skills gaps. Our out-of-the-box and comprehensive framework use a low code, simple English (Gherkin) language to write test cases. We have simplified the process even further by pre-building most of the commonly used test cases. The Nimbal Auto Framework is Java-based; therefore, it can run compiled code easily at scale. Nimbal Auto is agnostic of operating systems, browsers and any other devices, so you can leverage our platform for most use cases, you can run tests for all OS, browsers, and devices. The containerized Web-Integrated Development Environment (IDE) allows you to run your software tests from anywhere and with any device as long as you have internet access.

KEY HIGHLIGHTS

A comprehensive framework that enables you to run end-to-end automation in one single test. No need to be a specialist in Selenium, Appium, Rest Assured, JMeter, Databases etc. Works with any CI/CD, any code repositories and runs on AWS Device Farm.

No Set-up time, Low-learning and Low-Code framework with pre-built tests and dropdowns which enable you to start automation from the first day.

Use the Nimbal Management Portal - Nimbal Tree to tag test cases, schedule, and initiate test cycles using tags, check results at a step level using screenshots, view live test runs, and record with our built-in Selenium Grid (tool for authoring functional tests without the need to learn a test scripting language). Manage Manual tests including push test to AWS Mechanical Turk (Crowd Source) and collate results.

PRE-REQUISITE:

1. Amazon Web Services Cloud computing web offers numerous primary abstract technical infrastructure and constructing blocks and tools

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a. AWS VPC Cloud

Amazon Virtual Private Cloud (Amazon VPC) enables you to launch AWS resources into a virtual network that you've defined. This virtual network closely resembles a traditional network that you'd operate in your own data center, with the benefits of using the scalable infrastructure of AWS.

Official Document: Get started with Amazon VPC - Amazon Virtual Private Cloud

b. Public Subnet

Amazon Elastic Container Service (Amazon ECS) is a highly scalable, fast container management service that makes it easy to run, stop, and manage containers on a cluster. Your containers are defined in a task definition that you use to run individual tasks or tasks within a service. A public subnet is a subnet that's associated with a route table that has a route to an internet gateway. An internet gateways. This connects the VPC to the internet and to other AWS services.

• Official Document: <u>Tutorial: Creating a VPC with Public and Private Subnets for Your Clusters - Amazon</u> <u>Elastic Container Service</u>

c. ECS Cluster

AWS ECS cluster is a **logical grouping of tasks or services**. Amazon ECS can be used to create a consistent build and deployment experience, to manage and scale batch and Extract-Transform-Load (ETL) workloads, and to build sophisticated application architectures

Official Document: Getting started with Amazon ECS - Amazon Elastic Container Service

2. If open internet access is restricted (for downloading), Whitelist the following URLs for Nimbal Web IDE including its subdomains.

- *.bitbucket.org
- *.mvnrepository.comqaq
- *.apache.org
- *.github.com
- *.nimbal.io
- *.nimbal.co.nz
- *.googleapis.com

SUBSCRIPTION PROCESS:

In order to access the Web IDE, a current subscription is required on AWS.

Follow the steps to subscribe to the AWS services of Nimbal: -

1. Login to AWS Console by Clicking Here



Figure 1:Login Page

2. Search "AWS Marketplace Subscriptions" service

Q marked	×									
	Search results for 'market'	_								
Services (11)	Services	See all 11 results								
Peatures (26) Blogs (2,928) Documentation (895)	AWS Marketplace Subscriptions Digital catalog where you can find, buy, and deploy software		I	I Welcome to AWS 🗹 🕴						
Knowledge Articles (30) Tutorials (2) Funnts (29)	Amazon FinSpace Store, catalon, prepare, and analyze financial industry data		mbda	Getting started with AWS Learn the fundamentals and find valuable information to get the most out of AWS.						
Marketplace (3,542)	AWS IQ Complete projects faster with help from third-party AWS Certified e	xperts	pport tivate for Startups	Training and certification						
	Amazon Pinpoint Engage Users via Email, SMS, Push & Analytics	ute 53 VS Organizations		skills and knowledge.						
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	Workloads									
	Target groups		Cost and usage Info	: Top costs for current month						
	Assessment targets Inspector feature		casted month end costs	Amazon Elastic Compute Clou \$1,728.91 Tax \$258.79						
	Quantum tasks Ze Amazon Braket feature	0,853.58 Down 5% from last month month costs		EC2 - Other \$236.01 AWS Support (Business) \$230.12						
	Blogs	iee all 2,928 results ►	.,038.82	Nimbal Auto with Web IDE \$115.50						

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Figure 2: AWS Management Console

3. Click on "**Discover Products**" from left column and then search for "**Nimbal Auto with Web IDE**" under - Search AWS Marketplace products

🔯 EC2 🔯 Elastic Container Registry 🔯 El	lastic Container Service 🛛 Route 53 🔃 53 🖓 VPC	S CloudFormation							
AWS Marketplace \times	AWS Marketplace > Discover products > 9	Search results							
Manage subscriptions Discover products	Refine results	Search AWS Marketplace products							
Product Support Connection 🗹	a de la companya de la	Q Search for any product via AWS Marketplace							
Settings	Categories Infrastructure Software (5613) DevOps (4032) Data Products (3928)	All products (Over 10000 results) showing 1 - 20							
	Business Applications (1835) Professional Services (1750)	Amazon Linux 2 AMI (HVM), SSD Volume Type (64-bit x86) 🗹 By Amazon Web Services 🗹 Ver 2.0.20211223.0							
	Machine Learning (1470)	***** 2 AWS reviews 🗹 1 external review 🗹							
	Industries (1117) IoT (397)	Amazon Linux 2 is a supported and maintained Linux image provided by Ama running on Amazon EC2. It also includes packages							
	Delivery methods Amazon Machine Image (5387) Data Exchange (3928)	Microsoft Windows Server 2019 Base 🗹 By Amazon Web Services 🖸 Ver 2022.01.12							
	 Professional Services (1750) SaaS (1646) SageMaker Model (744) 	Amazon EC2 running Microsoft Windows Server is a fast and dependable env cost-effective, cloud computing platform.							
	Container Image (526) CloudFormation Template (484) SageMaker Algorithm (107)	CentOS 7 (x86_64) - with Updates HVM 🗹 By CentOS.org 🖸 Ver 2002_01							
	 Private Image Build (19) 	***** 70 AWS reviews 🛂 281 external reviews 🗹							
	Helm Chart (10)	This is the Official CentOS 7 x86_64 HVM image that has been built with a m that this is the default CentOS-7 image							
	▼ Publisher								
	Cognosys Inc. (554) Rearc (450)	Red Hat Enterprise Linux 8.4 with High Availability 🛃 By Amaron Web Services 🔽 I Ver 8.4							

Figure 3:Discover Search



Figure 4: Search for Nimbal Web Ide

4. Click on "Continue to Subscribe". Review Terms and Conditions and click on "Accept Terms" and then click on "Continue to Configuration"

a → Your Saved List						Q
N.		Nimbal Auto By: Nimbal.io C Start automating yo framework. The Nim Show more Linux/Unix	D with Web IDE Latest Version: Nimbal Auto 2 ur software tests with our com bal Auto Framework uses the	022 January nprehensive best Open S	y Release. v out-of-the-box automation Source tools to make a powerful	Continue to Subscribe Save to List
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Figure 5: Process for subscription

5. Select Fulfillment option as "Nimbal Auto ECS" and Software version as "Nimbal Auto Latest" and finally click on "Continue to Launch" button



Figure 6: Nimbal Auto with Web IDE

6. Under Container Images click on "ECS Deployment" - This will redirect page to CloudFormation template for Nimbal Auto application deployment on ECS Cluster.

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aws Services	
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Stacks StackSets Step 1	mation > Stacks > Create stack
Exports Step 2 Specify str	Prerequisite - Prepare template
Designer Step 3 Configure	Prepare template Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.
▼ Registry Step 4 Public extensions Review	Template is ready Use a sample template Create template in Designer
Activated extensions Publisher	Specify template A template is a JSON or YAML file that describes your stack's resources and properties.
Feedback	Template source Selecting a template generates an Amazon S3 URL where it will be stored. Amazon S3 URL Upload a template file Amazon S3 URL https://nimbal-console-public.s3.ap-southeast-2.amazonaws.com/Nimbal-CF2.yml Amazon S3 template URL

- Figure 7:Stack Creation
- 7. Fill in the ECS Infrastructure Configuration with nimbal and then click on "Next"

8. Creations of a Stack can be done by following parameters:

- a. ECS cluster name Enter ECS cluster name where you want to deploy Nimbal Auto container.
- b. **ECS cluster security group** Enter security group assigned to the ECS cluster during cluster creation.
- c. VPC ID Enter VPC ID where ECS cluster is deployed

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aws Services 🔻	Q Search for services, features, marketplace products, and docs [Alt+5]
CloudFormation X Stacks StackSets Exports Designer	Parameters Parameters are defined in your template and allow you to input custom values when you create or update a stack. ECS Infrastructure Configuration ECS cluster name Existing ECS cluster name Immbal ECS cluster security proup
Registry Public extensions Activated extensions Publisher	The security group assigned to the ECS cluster during cluster creation VPC ID Vpcl to deploy into VPC CDR For use by load balancer service polling. Enter VPC ClDR. Ex: 10.00.00/16

Figure 8: Configuration

d. VPC CIDR – Enter CIDR range for VPC where ECS cluster is deployed

← → C ↑ ii an-southeast-2.consol	e aws amazon.com/cloudformation/	/home?region=ap-southeast-2#/stacks/create/parameters		* •
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CloudFormation X		vpc-Ocbeee891b9a53437 (10.0.0.0/16) (Getskills-Prod)		•
		VPC CIDR		
Stacks		For use by load balancer service polling. Enter VPC CIDR, Ex: 10.0.0.0/16		
StackSets		10.0.0/16		
Exports		ECS Instance Subnets		
		Select all the subnets ECS utilizes		
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Registry		subnet-03a3c65b4c8e2a492 (10.0.4.0/24) (Getskills-publicsubnet1) X		
Public extensions		Nimbal LB Subnets		
Activated extensions		Select external ones if you need internet access.		
Publisher	100 C 100 C		7	•
		subnet-0b78258f8e4f660ec (10.0.5.0/24) (Getskills-publicsubnet2)	4	
		subnet-03a3c65b4c8e2a492 (10.0.4.0/24) (Getskills-publicsubnet1) 🗙	T	
		Nimbal Security Configuration	-	
Feedback		Web Console Source		
		The IP address or range that may be used to access the Nimbal Console		

Figure 9: Configuration

e. **ECS Instance Subnets** – Select two public subnets created under above selected VPC.

f. Nimbal LB Subnets - Select the subnet where application load balancer will be deployed

g. **Web Console Source** - Enter your network CIDR range or **0.0.0.0/0** to make Nimbal auto application accessible from internet.

h. Click on "Next"

https://nimbal.co.nz

i. "Tags" as per requirements and keep rest options as default and click on "Next".

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aws Services •	Q Search for services, features, marketplace products, and docs [Alt+S] D 🗘 impire gradiants → Sydney ▼ Support ▼
CloudFormation ×	
Stacks	Stack creation options
Exports	Timeout
Designer	Termination protection Disabled
 ▼ Registry Public extensions Activated extensions Publisher 	Quick-create link Capabilities
Feedback	 The following resource(s) require capabilities: [AWS::IAM::Role] This template contains identity and Access Management (IAM) resources. Check that you want to create each of these resources and that they have the minimum required permissions. In addition, they have custom names. Check that the custom names are unique within your AWS account. Learn more [2] I acknowledge that AWS CloudFormation might create IAM resources with custom names.
	Cancel Previous Create change set Create stack

Figure10: Stack Created

j. Review the configuration stack and tick on "Acknowledgement" and then conclude by clicking on "Create Stack".



Figure 11: Outputs

k. Above process will take some time for creation. Once done click on **"Outputs"** tab to review the created stack and check for **"NimbalConsole**" output.

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	nimbal-Ni	50ee1c02a6e8996a0a	RUNNING	709825985650.dkr.ecr.us-east-1.a	sha256:9dab16220409ffddcdbc6a6	0	2048/	true	a5a6bf	1	
	Details										
	Network bindi	ngs									
	Host Port	Container Port Pr	otocol	External Link							
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Figure 12: Check the URL of the sample page

9. Open NimbalConsole URL and this is open Nimbal Auto Web IDE web page. Please find below sample page.



Figure 13:Sample Web Page

REFERENCES

- Cloud Services Amazon Web Services (AWS)
- Video link to stack creation