

Devops Training - 24 hrs

This DevOps Training helps you master Continuous Development , Continuous Testing Continuous Integration ,Continuous Deployment and Continuous Monitoring using DevOps tools - Git, Chef, Docker, Jenkins, Chef, Ansible and Nagios to automate multiple steps in SDLC.

Day 1:

Module 1 - DevOps Essentials

Learning Objectives: In this module, you will learn the reasons for the evolution of DevOps, what is DevOps, the various skills and market trends in DevOps, introduction to the delivery pipeline in DevOps and the DevOps ecosystem.

Topics :

- Why DevOps?
- What is DevOps?
- DevOps Market Trends
- DevOps Engineer Skills
- DevOps Delivery Pipeline
- DevOps Ecosystem & Use Case

Practicals to be covered: Sample use-case for using DevOps practice.

Module 2 -Managing Source Code – GIT and GitHub

Learning Objectives: In this module, you can learn about automatic Source Code Management using GIT and GitHub.

Topics-

- Introduction to CVS and GIT
- GIT File workflow
- Important GIT Commands
- Introduction to GitHub
- Using GIT and GitHub together.

Practicals to be covered : Show the various GIT commands to push and pull a repository, from Github.

Module 3 – Understanding and using Build tools

Learning Objectives: In this module, you can learn how to build an appropriate delivery pipeline and perform test automation on it.

Topics:

- Overview of Various Build tools
- What is Maven
- Maven Plugins
- Maven Archetypes
- Project Object Model (POM)
- Source Control Integration

Practicals to be covered: Create a build pipeline from compilation to deployment of application.

Day 2:

Module 4 - Continuous Integration using Jenkins

Learning Objectives: This module helps you integrate Jenkins, Docker and Puppet, and create an application using them.

Topics:

- Overview of Jenkins
- Jenkins architecture
- Jenkins Management
- Jenkins Build Pipeline

Practicals to be covered:

Installing and configuring Jenkins
Creating a build using Jenkins
Integrating with Jenkins

Module 5 - Containerization using Docker

Learning Objectives: This module will help you identify the difference between containers and VMs. You can learn about virtualization using Docker. You can also deep dive into image and containers concept in Docker.

Topics:

- What and Why of Containers
- Introduction to Docker
- Docker Fundamentals
- Image Distribution
- Docker Containers.

Practicals to be covered: Create First Image: Hello-World, Image Basics and Base Image Maintenance, Manage Containers, Create Images from Containers.

Module 6 -Docker Commands and Use-cases

Learning Objectives: This module deals with the various networking concepts in Docker, the best way to use the and creating a Docker file, working with Docker Compose. We will also learn about Docker Networking and Docker Orcherstration

Topics:

- Docker Files
- Docker Compose
- Docker Networking
- Docker Swarm

Practicals to be covered: Exposing Container Ports to the Host, Adding Content to Containers, Create Docker File , Working with Docker Swarm

Day 3:

Module 7 - Configuration Management using Chef:

Learning Objectives: This module has details the master-agent architecture and workstation configuration in Chef. You will also learn how to chef tools.

Topics:

- Chef Fundamentals
- Chef Architecture & Components – Server, Workstation and Nodes
- Chef Resources
- Recipes and Cookbooks,
- Chef Resources
- Chef tools

Practicals to be covered: Install and Configure Chef Server and Client

Module 8 - Configuration Management using Ansible

Learning Objectives: This module has details about Ansible, Architecture and working of Ansible. You will also learn how to Ansible tools.

Topics:

- Introduction to Ansible
- Installation & Configuration
- Writing Ansible Playbooks
- Using Ansible for Configuration Management tasks.

Practicals to be covered: Write Ansible playbook, Assign different roles in configuration tool

Module 9 - Continuous Monitoring using Nagios

Learning Objectives: This module helps you integrate Jenkins, Docker and Puppet, and create an application using them. You can also learn about system monitoring using Nagios and its components.

Topics:

- Introduction to Nagios
- Nagios Plugins
- Nagios Objects
- Nagios Commands & Nagios Notifications

Practicals to be covered: Configure Nagios to monitor Web server, Setup syslog and verify if logs are getting generated.

Module 10- Mock Test, Interview Questions and FAQ's

To brief the learners on how to prepare for DevOps exam. The session will also focus on discussing the case-studies and questionnaires

DevOps Training- Prerequisites

- Administrator access on the laptop/desktop (64 bit Machine)
- Guest Operating Systems – Preferably minimum Windows 2008 , Windows 7 is also fine.
- Access to internet
- Access to RDP for accessing Remote Machines – Remote Desktop Service must be enabled and port 3389 must be open
- Putty and Puttygen tools on participants systems (If participants are using Windows OS). Screenshots have been provided in the 2nd page for installation
- Latest Java to be installed on the systems
- ssh client (If participants are using Linux/Mac OS). I can also help the participants if required on the first day of the class.
- Latest Dockertoolbox along with Oracle Virtualbox to be installed on Windows OS
Link : https://docs.docker.com/toolbox/toolbox_install_windows/
- Eclipse IDE to be installed and configured on the systems. Please refer the link :
<http://www.eclipse.org/downloads/packages/release/oxygen/r/eclipse-ide-java-ee-developers>
- **All the labs will be done on personal AWS Cloud Free Account (Debit or Credit Card is required) – Screenshots are provided in 2nd and 3rd page**
- Ports to be opened – 22, 3389, 80, 443, 8080, 8443, 3306, 5985, 8140, 3000, 8443,

Appendix:

Installing Putty:

Logon to www.putty.org and click on here button as given below



Download PuTTY

PuTTY is an SSH and telnet client, developed originally by Simon Tatham for the Windows platform. PuTTY is open source software that is available with source code and is developed and supported by a group of volunteers.

You can download PuTTY [here](#).

In the next screen , please click on either 32-bit or 64-bit msi installer file , it will ask you to save file. Save and run the file

Package files

You probably want one of these. They include all the PuTTY utilities.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

MSI ('Windows Installer')

32-bit: [putty-0.70-installer.msi](#) [\(or by FTP\)](#) [\(signature\)](#)

64-bit: [putty-64bit-0.70-installer.msi](#) [\(or by FTP\)](#) [\(signature\)](#)

Unix source archive

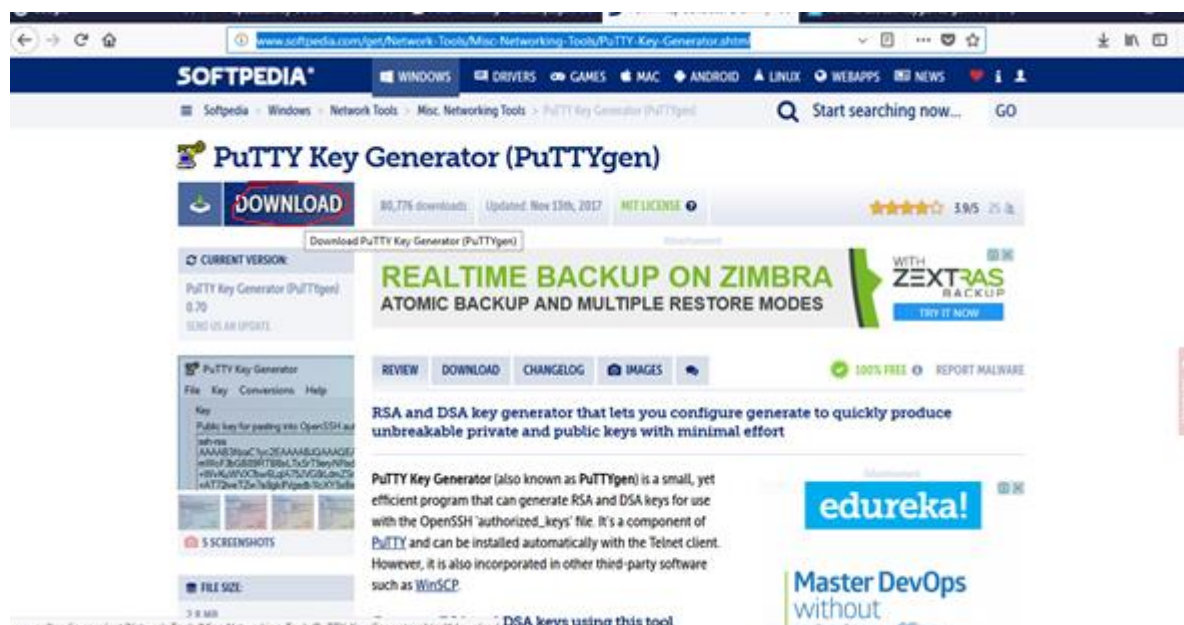
.tar.gz: [putty-0.70.tar.gz](#) [\(or by FTP\)](#) [\(signature\)](#)

Installing Puttygen:

Logon to the below link

<http://www.softpedia.com/get/Network-Tools/Misc-Networking-Tools/PuTTY-Key-Generator.shtml>

Click on DOWNLOAD button in the below link



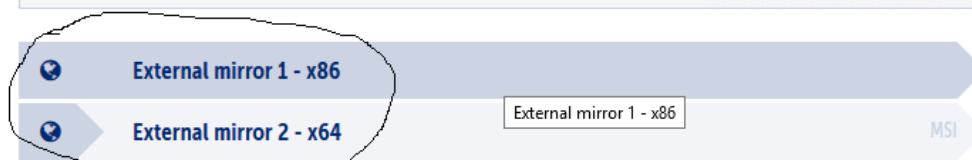
In the next screen which launches , click on either – External mirror 1 or External mirror based on the system architecture , download would start automatically. Save the file and run the file.

[Back to main page](#)

PuTTY Key Generator (PuTTYgen) - Download locations

Advertisement

- 1 | **New Loggly 3.0** Loggly unifies log monitoring, analysis, and the ability to rewrite code in GitHub log-management.loggly.com
- 2 | **Submit Resume Now** Immediate Requirement. Sign up to Apply & Find Jobs monsterindia.com



2.8 MB file size This download is provided to you FREE of charge.

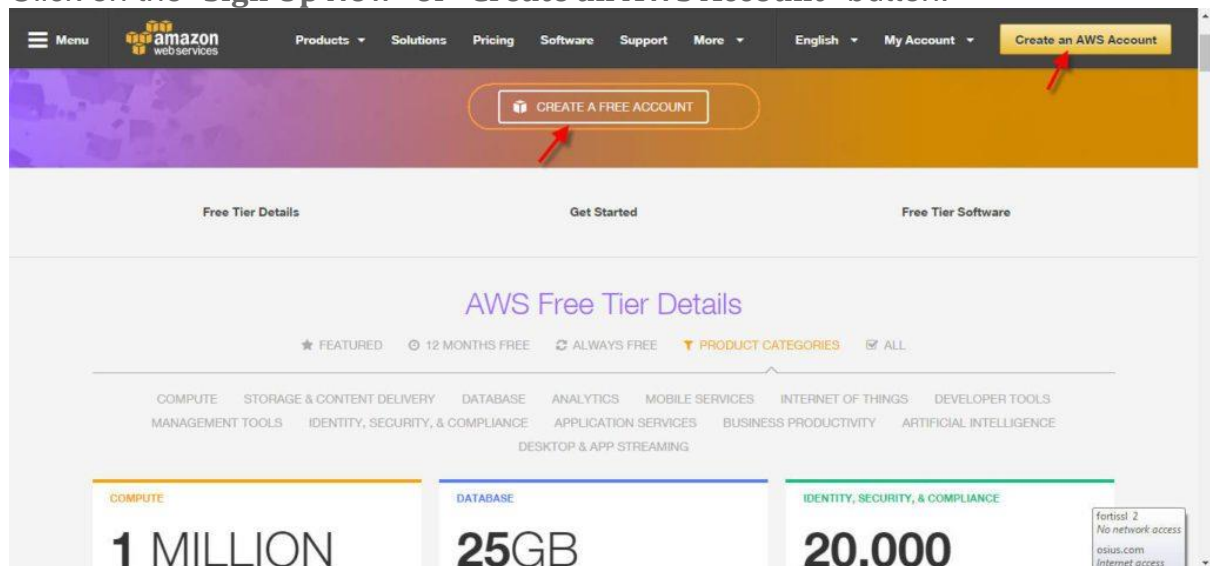
To download the file later, add it to your basket! Get update notifications via email or RSS!

All files are original, Softpedia does not repack or modify downloads in any way.

Creating AWS Free Root Account and Participant AWS Free Accounts (Ref: <https://devopsmates.com/how-to-create-a-new-aws-free-tier-account/>)

Step 1: First Open your web browser and navigate to <https://aws.amazon.com/free/>

1. Click on the “Sign Up Now” or “Create an AWS Account” button.



2. If you already have an Amazon store account you can use the same account to log into Amazon Web services (AWS) and then register for the free tier. If you don't have an Amazon store account you can create a new account here by typing your valid email ID and selecting the “I am a new user” button. Then click the “Sign in using our secure server” button to continue to next

step.

amazon web services

Sign In or Create an AWS Account

What is your email (phone for mobile accounts)?

E-mail or mobile number:

devopsmates@gmail.com

☒ I am a new user.

☐ I am a returning user and my password is:

Sign in using our secure server

[Forgot your password?](#)

Now Available:
Amazon EBS Elastic Volumes

Dynamically modify capacity, performance, and volume types

[Learn More](#)

Learn more about [AWS Identity and Access Management](#) and [AWS Multi-Factor Authentication](#), features that provide additional security for your AWS Account. View full [AWS Free Usage Tier](#) offer terms.

3. **Login Credentials:** Provide the details which you want to use for login your AWS account.

amazon web services

Login Credentials

Use the form below to create login credentials that can be used for AWS as well as Amazon.com.

My name is: DevOpsMates

My e-mail address is: devopsmates@gmail.com

Type it again: devopsmates@gmail.com

note: this is the e-mail address that we will use to contact you about your account

Enter a new password:

Type it again:

Create account

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use](#) and [Privacy Policy](#) linked below. Your use of Amazon Web Services products and services is governed by the [AWS Customer Agreement](#) linked below unless you purchase these products and services from an AWS Value Added Reseller.

4.

Step 2: Contact Information

Select your AWS type, then Fill the correct information to validate your account if you're going to create personal use then click on "personal Account" else use "company Account".

Contact Information

☐ Company Account ☒ Personal Account

* Required Fields

Full Name*

Country*

* If you select India, your country selection cannot be changed after creating the account.

Address*

City*

State / Province or Region*

Postal Code*

Phone Number*

Security Check 

Please type the characters as shown above
477p2a

Amazon Internet Services Pvt. Ltd. Customer Agreement
Customers with an India contact address are now required to contract with Amazon Internet Service Private Ltd. (AISPL). AISPL is the local seller for AWS Infrastructure services in India.

☒ Check here to indicate that you have read and agree to the terms of the AISPL Customer Agreement

Create Account and Continue

Make sure provide proper contact details and mobile no. to get the call from AWS for verification. After completed the form enters the captcha code and click on “create the account and continue”.

Step 3: Payment and PAN information:

In this step, you must fill in your credit card info and billing address. If you have PAN then fill those details here.

amazon
aws

Amazon Web Services Sign Up



Contact Information | Payment & Plan Information | Identity Verification | Select Plan | Confirmation

Payment Information

Please enter your payment information below. You can be asked to do a small set of AWS products for free via the Free Tier. We will only bill your credit card for usage that is not covered by our Free Tier.

† Frequently Asked Questions

Cardholder's Name

Credit/Debit Card Number  

Expiration Date / CVV

☒ Use my current address (221 Connington Rd, Suite 100, Madhavaram, Chennai 600030, India)

☐ Use a new address

Please Note:
As part of our card verification process, we will charge INR 2 on your card when you create the account. This charge will be refunded to you once your card has been verified. Your card will be charged only once the verification process is complete. We will not be able to refund this charge.

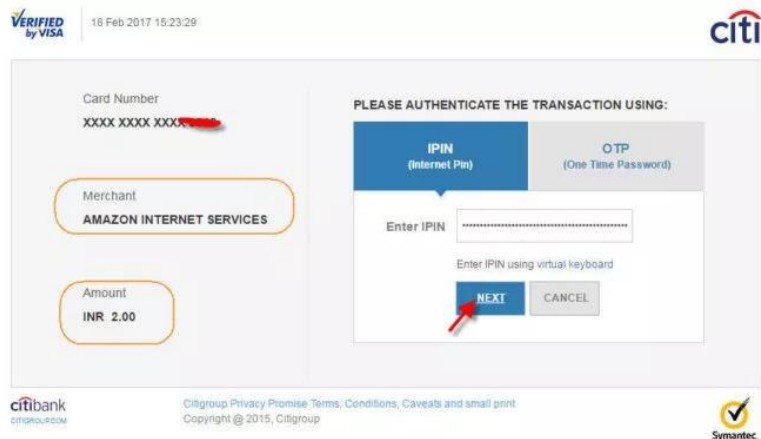
PAN Information

Do you have a PAN? ☒ Yes ☐ No

You can go to the Tax Settings Page on Billing and Cost Management Console to update your PAN information.

Verify Card and Continue

Step4: In this step, it will take you to the payment gateway to validate your payment information and for your credit card verification Amazon will charge the minimal price based on Country. Here I have provided India, so Amazon charged 2 INR.



VERIFIED by VISA | 16 Feb 2017 15:23:29 | citi

Card Number
XXXX XXXX XXXX

Merchant
AMAZON INTERNET SERVICES

Amount
INR 2.00

PLEASE AUTHENTICATE THE TRANSACTION USING:

IPIN (Internet Pin) | OTP (One Time Password)

Enter IPIN

Enter IPIN using virtual keyboard

NEXT | CANCEL

citibank | Citigroup Privacy Promise Terms, Conditions, Caveats and email print Copyright © 2015, Citigroup | Symantec

Waiting for www.citibank.co.in...

Step 5: Identity verification

Here you will be taken to an identity verification page that will already have your phone number, so you just have to click the “**Call me now**” button to continue the process.



Identity Verification

You will be called immediately by an automated system and prompted to enter the PIN number provided.

1. Provide a telephone number

Please enter your information below and click the “Call Me Now” button.

Security Check @

nb6d35

Refresh Image

Please type the characters as shown above

nb6d35

Country Code | Phone Number | Ext

India (+91) | |

Call Me Now

Step 6: Personal Identification number

After receiving a call from AWS, the next page will show your **PIN #** while a call is made to the phone number you have provided. When it ask you to type your **PIN #** the webpage is providing you for identity verification purposes.

The screenshot shows a progress bar at the top with five steps: Contact Information, Payment & PAN Information, Identity Verification, Support Plan, and Confirmation. The first three steps are marked with orange checkmarks, indicating they are complete. The main content area is titled "Identity Verification" and contains the following text:

You will be called immediately by an automated system and prompted to enter the PIN number provided.

1. Provide a telephone number ✓

2. Call in progress

Please follow the instructions on the telephone and key in the following Personal Identification Number (PIN) on your telephone when prompted.

PIN: 2728

If you have not yet received a call at the number indicated above please wait. This page will automatically update with what you need to do next.

3. Identity verification complete

Step 7: Identity Verification complete

Once your verification is complete just click the “Continue” button

This screenshot shows the same "Identity Verification" step as the previous one, but now the progress bar indicates that all three steps (Contact Information, Payment & PAN Information, and Identity Verification) are complete. The main content area shows:

1. Provide a telephone number ✓

2. Call in progress ✓

3. Identity verification complete

Your identity has been verified successfully.

At the bottom, there is a yellow button labeled "Continue to select your Support Plan". A red arrow points to this button.

Step 8: Support plan

AWS support offers a selection of plans to meet your business needs. Select your suitable plan then click continue.

Note: All customers receive free basic support.

Support Plan

AWS Support offers a selection of plans to meet your needs. All plans provide 24x7 access to customer service, AWS documentation, whitepapers, and support forums. For access to technical support and additional resources to help you plan, deploy, and optimize your AWS environment, we recommend selecting a support plan that best aligns with your AWS usage.

All customers receive free Basic Support.

Basic Support

- Basic**
Description: Customer Service for account and billing questions and access to the AWS Community Forums.
Price: Included
- Developer**
Use case: Experimenting with AWS
Description: One primary contact may ask technical questions through Support Center and get a response within 15-24 hours during local business hours.
Price: Starts at \$29/month (scales based on usage)
- Business**
Use case: Production use of AWS
Description: 24x7 support by phone and chat, 1-hour response to urgent support cases, and help with common third-party software. Full access to AWS Trusted Advisor for optimizing your AWS infrastructure, and access to the AWS Support API for automating your support cases and retrieving Trusted Advisor results.
Price: Starts at \$100/month (scales based on usage)

To explore all features and benefits of AWS Support, including plan comparisons and pricing samples, click [here](#).

[Continue](#)

Step 9: Registration Confirmation page.

Once you completed all the above steps and process. You'll get the confirmation page like below. Now your account will be processed for activation. It may take somewhere between 30 minutes to 1 hour for you to receive an email

confirmation that your Amazon Cloud Services account has been activated.

Menu **amazon** web services Products Solutions Pricing Software Support More English My Account [Complete Sign Up](#)

Registration Confirmation

Welcome to Amazon Web Services

Thank you for creating an Amazon Web Services Account. We are activating your account, which should only take a few minutes. You will receive an email when this is complete.

[Sign In to the Console](#)

[Contact Sales](#)


Try AWS with a 10-Minute Tutorial


- [Launch a Linux Virtual Machine](#)
- [Store Your Files in the Cloud](#)
- [Launch a WordPress Website](#)
- [Launch a Web Application](#)

[View all tutorials >>](#)

Step 10: Check out Free Tutorials/Guides – 10 Minute Tutorials

This step will give you 10 minutes tutorials to get hands-on with AWS.

 Menu



Products ▾

Solutions

Pricing

Software

Support

More ▾

English ▾

My Account ▾

Sign In to the Console

10-Minute Tutorials

10-Minute Tutorials are simple "Hello, World!" technical documents to help you get hands-on with AWS.

Compute



10-Minute Tutorial

Launch a Linux Virtual Machine

using Amazon EC2



10-Minute Tutorial

Launch a Windows Virtual Machine

with Amazon EC2



10-Minute Tutorial

Run a Serverless "Hello, World!"

with AWS Lambda



10-Minute Tutorial

Deploy Docker Containers

on Amazon EC2 Container Service

Websites & Web Apps