



# Cloud Computing Roadmap Plan

## Cloud Computing Roadmap (Step-by-Step Guide)

This roadmap will guide you from **beginner to advanced** level in **Cloud Computing** with English and Hindi resources.

### Step 1: Understanding Cloud Computing (1-2 Weeks)

#### ◆ What is Cloud Computing?

Cloud computing delivers computing services (servers, storage, databases, networking, software) over the internet.

#### ◆ Types of Cloud Computing

- **Public Cloud** (AWS, Azure, GCP)
- **Private Cloud** (Used by organizations internally)
- **Hybrid Cloud** (Combination of Public + Private)

#### ◆ Service Models in Cloud

- **IaaS (Infrastructure as a Service)**: AWS EC2, Azure VM
- **PaaS (Platform as a Service)**: AWS Lambda, Google App Engine
- **SaaS (Software as a Service)**: Gmail, Dropbox, Zoom

#### Resources:

- Cloud Computing Basics - IBM
- [Cloud Computing Basics \(Hindi\) - Geeky Shows](#)
- [AWS vs Azure vs GCP Comparison - FreeCodeCamp](#)

### Step 2: Learn Networking & Linux Basics (2-3 Weeks)

Cloud computing relies on networking and Linux fundamentals.

#### ◆ Networking Basics

- IP Addressing, Subnets, DNS
- Load Balancing & VPN

- Firewalls & Security Groups

⌚ **Resources:**

- Networking Basics - Cisco
- [Networking Explained \(Hindi\) - Gate Smashers](#)

◆ **Linux Basics**

- File System, Permissions
- Commands: ls, cd, cp, mv, chmod, grep
- Shell Scripting & Cron Jobs

⌚ **Resources:**

- [Linux Basics - FreeCodeCamp](#)
- [Linux Commands \(Hindi\) - CodeWithHarry](#)

⌚ **Practice:** Set up a Linux Virtual Machine (VM)

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📌 **Step 3: Learn Cloud Platforms (2-3 Months)**

Choose **AWS, Azure, or Google Cloud** as your primary cloud platform.

◆ **Learn AWS (Amazon Web Services)**

- AWS Global Infrastructure
- **Compute:** EC2, Lambda
- **Storage:** S3, EBS, Glacier
- **Database:** RDS, DynamoDB
- **Networking:** VPC, Route 53

⌚ **Resources:**

- [AWS Official Free Training](#)
- [AWS for Beginners \(Hindi\) - Simplilearn](#)

⌚ **Mini Project:** Deploy a website on **AWS S3**

◆ **Learn Microsoft Azure**

- Azure Compute: Virtual Machines, Azure Functions
- Azure Storage: Blob Storage, Table Storage

- Azure Databases: SQL Database, CosmosDB
- Azure Networking: Virtual Networks

⌚ Resources:

- [Azure Fundamentals - Microsoft](#)
- [Azure Basics \(Hindi\) - Azure Cloud by Manoj](#)

◆ **Learn Google Cloud (GCP)**

- Compute Engine, Cloud Run, Kubernetes Engine
- Cloud Storage, BigQuery, Firestore
- Cloud Networking (VPC, Load Balancers)

⌚ Resources:

- GCP Training - Google
- [Google Cloud \(Hindi\) - Geeky Hub](#)

🎯 Mini Project: Host a static website using **Google Cloud Storage**

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📌 Step 4: Learn DevOps & Automation (2-3 Months)

◆ **Infrastructure as Code (IaC) with Terraform**

- **Terraform Basics:** Writing .tf files
- **Managing AWS/Azure/GCP with Terraform**

⌚ Resources:

- [Terraform Course - FreeCodeCamp](#)
- [Terraform Full Course \(Hindi\) - CodeWithHarry](#)

🎯 Practice: Deploy an **AWS EC2 instance using Terraform**

◆ **Learn Docker & Kubernetes**

- **Docker Basics:** Creating Containers
- **Kubernetes Basics:** Pods, Deployments, Services
- **Orchestration with Kubernetes**

⌚ Resources:

- [Docker Crash Course - Traversy Media](#)

- [Kubernetes Full Course \(Hindi\) - KodeKloud](#)

🎯 Practice: Deploy a Dockerized Node.js app on Kubernetes

◆ Learn CI/CD (Jenkins, GitHub Actions, AWS CodePipeline)

- Automate Deployments
- Continuous Integration & Testing

🔗 Resources:

- [CI/CD Pipelines - FreeCodeCamp](#)
- [CI/CD Explained \(Hindi\) - Simplilearn](#)

🎯 Practice: Set up a CI/CD pipeline for an AWS project

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📌 Step 5: Security & Cloud Best Practices (1-2 Months)

◆ Cloud Security

- Identity & Access Management (IAM)
- Encryption & Security Groups
- Compliance & Risk Management

🔗 Resources:

- [AWS Security - AWS Training](#)
- [Cloud Security \(Hindi\) - Simplilearn](#)

◆ Learn Cloud Monitoring & Logging

- AWS CloudWatch, Azure Monitor, GCP Stackdriver
- Log Analysis & Troubleshooting

🔗 Resources:

- Cloud Monitoring - Google
- [AWS CloudWatch Basics \(Hindi\) - Simplilearn](#)

🎯 Practice: Set up CloudWatch monitoring for an EC2 instance

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📌 Final Step: Get Certified & Apply for Jobs

### Recommended Certifications

1. AWS Certified Cloud Practitioner (Beginner)
2. Microsoft Azure Fundamentals (AZ-900)
3. Google Cloud Associate Engineer

### Certification Resources:

- [AWS Certified Cloud Practitioner - FreeCodeCamp](#)
- [AZ-900 Free Course - Microsoft Learn](#)
- [Google Cloud Certification - Coursera](#)

### Apply for Cloud Computing Jobs & Internships

- LinkedIn
- Naukri, Indeed
- AWS/Azure/GCP Career Portals

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### Summary of Learning Plan

Month	Topics Covered
Month 1	Basics of Cloud Computing & Networking
Month 2	AWS/Azure/GCP Services
Month 3	DevOps (Terraform, Docker, Kubernetes)
Month 4	Security & Cloud Best Practices
Month 5	Advanced Projects & Certifications

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### Connect with Me

GitHub: <https://github.com/iankushsingh>

 Start your cloud journey today & build real-world projects!  Let me know if you need any modifications or extra resources. 😊

@ Connect with Me Github : [jankushsingh](https://github.com/jankushsingh)