The ascendance of ***Cloud Computing*** has taken the technological world by storm. With its popularity growing exponentially, everybody wants to cash in on the opportunity of being a part of this seemingly ever rising domain. And hence arises a vital question that is ‘How to become a Cloud Engineer?’. If this question intrigues you then this article will answer all your questions that revolve around this topic.

Before we proceed any further let’s understand **Cloud Computing** in a nutshell, something you should know as a Cloud Engineer.

**What Is Cloud Computing?**

The rise of Internet has led to the rise of IT industry and computing in general. Some Of the Concerns Modern day computing faces are listed below:

* Optimising costly server setups
* Monitoring and governing complete infrastructure
* Taking care of security
* Conveniently scaling up and down

What if someone else could do it for you?  And you could consume all the services just by paying a minimal charge for it. Well Cloud or Cloud Computing does exactly that you. It orchestrates all the above-mentioned tasks for you and you only pay for the services you use just like you do for electricity.

In simple words, Cloud Computing *is the process of Orchestrating storage, computation  and retrieval of data* to optimize and simplify the process of Computing over a huge space online (network of data centres). For more information refer this article: ***What Is Cloud Computing?***

Getting back to the main question in hand ‘How To Become A Cloud Engineer?’,

**How To Become A Cloud Engineer?**

Cloud Engineer is an IT professional responsible for performing technological responsibilities concerning Cloud Computing. He or She is mainly responsible for:

* Maintenance and support
* Management
* Planning and design Of an Infrastructure on Cloud



That means your role as a ***Cloud Engineer*** may vary depending upon the vertical you serve. You may serve as:

* Cloud Security Engineer
* Systems Engineer (Cloud)
* Cloud Developer
* Cloud Architect
* Network Engineer (Cloud)

So, in your quest of becoming a ***Cloud Engineer*** you will have to set a path that meets up some or most of the above mentioned responsibilities. Let us start with a chalked-out approach

**Start With The Basics**

I have already defined Cloud Computing for you but start by understanding ***Cloud Computing*** in little more depth. Focus on following pointers:

* Need For Cloud Computing
* Domains Cloud Computing Impacts
* Cloud Service Models
* Deployment Models
* Cloud Computing Vs On premise Approach
* Different Cloud Service Providers

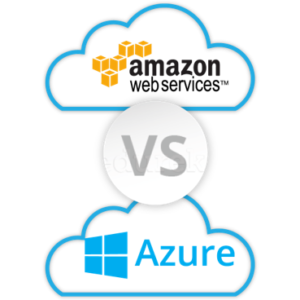
These topics will form the core of your approach towards your goal because these topics will help you understand what role would you like to take up as a ***Cloud Engineer***. It will at same time make you Cloud aware. Please refer this if you want to now more: ***Introduction To Cloud***

**Understand Computing Fundamentals**

Now, whether you are a fresher or a professional, it is expected you have some basics covered. Before you start practicing Cloud Computing, these are some of the fundamentals you would be required to consider:

* Networking (Routing, IP adresses, networking layers, networking protocols etc)
* Computer Security (Basics Of Access Policies, encryption, data security etc)
* Computer Architecture (Try to understand system design principles and fundamentals surrounding it)
* Learn pl/SQL and linux fundamentals

**Learn About Cloud Service Providers**



***Providers***. All these service providers have their portals and consoles made available to you for free. Register for those and get some hands on these Services.

AWS and Azure are two of the most talked about Cloud Service Providers in the market. People often have trouble choosing one of the two. Here is a video: ***AWS Vs Azure*** that would help you compare the two. Frankly speaking, the margin of difference is very less as both of these Service Providers, pack a punch. As mentioned above, practice and get as much hands on as you can.

*Please Note* there are other popular Service Providers in market which you are free to choose from, but these are the most talked about or popular ones, hence the suggestion

**Practical Implementation**

Now that the fundamentals and ***pre-requisites*** are out of the way, let us take a look at what topics you should focus on to gain hands on expertise. Here is a list of topics:



* Compute Services
* Storage Services
* Database Services
* Networks Or VPN
* Load Balancing and Scaling
* Cloud Monitoring
* Application Migration

If you manage to master these services using any of the Service Providers mentioned above. You are 70 percent on the way to becoming a Cloud Engineer in any of the verticals mentioned previously. Wait, did I just say 70 percent?. You heard me correctly.

As a Cloud Developer you may be required to pick up some development skills and understand scripting. As a Cloud Administrator you will be rquired to have knowledge on working of Administrative roles. And as a Solutions Architect you need to have understanding of how Cloud works and how can you design plausible applications for your organisation. So work on these aspects as well.

**Take a Structured Approach**

By now you have a sufficient knowledge as to how to become a cloud engineer? You should take a further a notch. All the Cloud Service Providers have official certifications. Pick the desired certification and a role by browsing respective websites of these providers. Then Start preparing for the certification, this will help you revise your concepts and you will also gain hands on in the process. Try taking up a project in similar domain and try to work on it. Again AWS and Azure both have sufficient **sample** **projects** on their website, enough to get you started.

**Time To Be Invested**

There is no definite timeline for the learning process, different individuals may take up different time to reach their respective goals. However we can always have a rough estimate. Here is one for you:

* Basics (2Weeks/20hours)
* Computing Fundamentals (4weeks/40hours)
* Service Providers with Practical implementation (4Weeks/40hours)
* Projects (2weeks/20hours)
* Certification Preperation tentatively (4weeks/40hours)

We have covered all the bases I wanted you to focus on. This brings us to the end of this article on ‘How To Become A Cloud Engineer’. I hope this article helped you clarify all your doubts and I hope you have a clearer perspective towards what approach to take in becoming a Cloud Engineer.

In case if you wish to take up your learning experience to a new level then you may want to try out ***Edureka’s Cloud Masters Program*** that would certainly help you achieve ascendance and success in Cloud Domain.

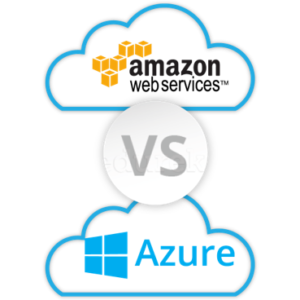
# **Skills You Should Learn To Become A Cloud Engineer**

The popularity of **Cloud Computing** has rocketed sky high. Forecasters have also given it a thumbs up suggesting that **Cloud Computing** is here to stay. No wonder we see a rise in the number of individuals wanting to make a career in this domain. If you too have a similar desire then I am sure you must have questions like what skills you should learn to become a **Cloud Engineer**? This article will help you answer these questions.

## ****Skills You Should Learn To Become A Cloud Engineer****

As a Cloud Engineer you will be working with cross-functional teams which is a mix of software, operations and architecture. This means when it comes to learning these skills, you would have quite a few options in your bag you can choose from. Here are some of the must have **cloud engineer skills:**

## ****1. Cloud Service Providers****

If you are to get started with Cloud Computing, you cannot do that without understanding how different Cloud Service providers work. These Cloud Service providers offer end to end services like **compute, storage, databases, ML, Migration,** that is why almost everything that is related to cloud computing is catered by them making it a vital cloud engineer skill.

It is important you choose atleast one from many that are available. **AWS**, and **Azure**are market leaders and compete neck and neck in the Cloud market. AWS has the experience of holding the top position in the market and is known for its niche. Azure is a microsoft product making it easier to integrate with almost all the stack of microsoft products that are there. **GCP**, **Openstack**have their strangle hold in big data and software development markets respectively. Depending upon the business needs, you would be required to choose one or more.

Each of these service providers have their free tier for usage which is enough to get you started and have sufficient hands on practice.

## ****2. Storage****

Cloud storage can be defined as “**Storing data online on the Cloud**” So company’s data is stored and accessed from multiple distributed and connected resources.

Some of the **benefits** of Cloud Storage are:

* Greater accessibility
* Reliability
* Quick Deployment
* Strong Protection
* Data Backup and Archival
* Disaster Recovery
* Cost Optimisation

Depending upon the needs of an organistion, it may choose from following types of storage:

* Personal Cloud Storage
* Public Cloud Storage
* Private Cloud Storage
* Hybrid Cloud Storage

The fact that data is centric to Cloud Computing. It is important one understands where to store and how to store it. This is because the measures taken to achieve what is mentioned above may vary based on the type and volume of data an organistaion wants to store and use. Hence understanding and learning how Cloud Storges work, would be a good idea making it an important cloud engineer skill.

Again there are various popular storage services that cloud service providers use. To name a few popular ones, we have **S3**, Glacier in AWS, **blobs & Queues**, Data Lakes, in Azure.

## ****3. Networking****

Networking is related to cloud computing, as centralized computing resources are shared for clients over the Cloud. It has spurred **a trend of pushing more network management functions** into the cloud, so that fewer customer devices are needed to manage the network.

Improved Internet access and reliable WAN bandwidth has made it easier to push more networking management functions into the Cloud. This, in turn, has spurred demand for cloud networking, as customers look for **easier ways to build and access networks** using a cloud-based service.

Cloud Engineer may also be responsible for designing ways to make sure the network is responsive to user demands by building automatic adjustment procedures. Hence understanding of networking fundamentals and **Virtual Networks** are very important Cloud engineer skills as they are centric to networking on the Cloud.

## ****4. Virtualisation****

Virtualisation software has allowed many users to reduce their hardware assets, or use them more efficiently, by running multiple “**virtual machines**” side by side on the same hardware, emulating different components of their IT systems.

Virtualization plays a very important role in making scalable, fault tolerant resources available to organisations. So working experience or knowledge of virtualisation or services like virtual machines, **EC2**, **Lambda** would be a big step towards **Serverless Computing.** Thus making it a top notch cloud engineer skill.

## ****5. Linux****

Linux brings in features like **Open source, easy customization, security** etc making it a paradise for programmers. Cloud providers are aware of this fact and hence we see adoption of linux on different cloud platforms.

If we take into consideration the number of s**ervers that power Azure** alone, you would note that around **30% of those are Linux based**.  So if you are a professional with skills like architecting, designing, building, administering, and maintaining **Linux** servers in a cloud environment, you could survive and thrive in the Cloud domain with this single cloud Engineer skill alone.

## ****6. Security and Disaster Recovery****

Cloud security aims at protecting data, applications, and infrastructures involved in cloud computing. Its not much different from from security of On-premise architectures. But the fact that everything is moving to the Cloud, it is important one gets a hang of it.

For any computing environment, cloud security involves maintaining adequate preventive measures like:

* Knowing that the data and systems are safe.
* Tracking current state of security.
* Tracing and responding to unexpected events

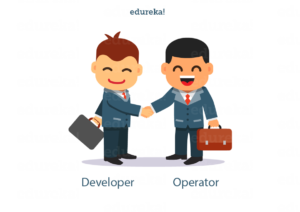
If operations interest you then let me tell you **Security and Disaster Recovery** related concepts will help you immensely as a **Cloud Engineer** Or Cloud Admin. These are methodologies which are central to operating a software in the Cloud, and are cloud engineer skills that would get you lucrative job.

## ****7. Web Services And API****

The underlying foundation is very important to any architecture. Cloud architectures are heavily based on **APIs** and **Web Services**because Web services provide developers with methods of integrating Web applications over the Internet.  **XML**, **SOAP**, **WSDL**and UDDI open standards are used to tag data, transfer data, describe and list services available. Plus you need API to get the required integration done.

Thus having experience of working on websites, and related knowledge would help you have a strong core in developing Cloud Architectures.

## ****8. DevOps****

If you are a software developer or an operations engineer then you are no stranger to the constant issues these individuals deal with as they work in different environments. DevOps brings in **Development and Operations approach in one mold** thus easing their work dependencies and filling in the gap between the two teams.

This cloud engineer skill may look a little out of place on this list. But this development approach has definitely made its presence felt. DevOps gels really well with most of the Cloud Service Providers, AWS in particular making **AWS DevOps** a great skill to have.

## ****9. Containers****

Containers offer a logical packaging mechanism in which **applications can be abstracted from the environment** in which they actually run. This **decoupling** allows container-based applications to be deployed easily and consistently, regardless of whether the target environment is a private data center, public cloud, or even a developer’s personal laptop. Hence understanding how, popular containers like **Kubernetes and Docker** work will give your resume that extra bulk not just for Cloud domain but for software domain in general.

## ****10. Programming Skills****

Talking about cloud engineer skills, you cannot ignore the importance developers play in computing. Developers possess the **ability to build, deploy, and manage applications quickly**. Cloud Computing uses this feature for strengthing, scalability. Hence learning appropriate programming languages or frameworks would be a boon. Here is list of some popular languages and frameworks:

* SQL : Very important for data manipulation and processing
* Python: lets you create, analyze and organize large chunks of data with ease
* XML With Java Programming: Data descripion
* .net: must have framework specially for Azure Developers

Stack up these programming skills and you would be an unstopable Cloud Engineer.

# **Cloud Engineer: Roles Responsibilities and All You Need to Know**

The way Cloud Computing has emerged over the last couple of years and the subsequent rise of Cloud Engineers is nothing short of incredible. So, no surprise that the role continues to grow in prominence with employers. This article will help you understand some of the important Cloud Engineer roles and responsibilities.

Let’s get started.

## Cloud Engineer Roles and Responsibilities

A Cloud Engineer is an IT professional responsible for a number of technological responsibilities under Cloud Computing. I will assume that you are aware of what Cloud Computing is. If not, please go through this article: ***What is Cloud Computing?***

Getting back to the subject at hand, here are some of the responsibilities of a Cloud Engineer:

* Maintenance and support
* Management
* Planning, design and development of an application on Cloud



That means your role as a ***Cloud Engineer*** may vary depending upon the vertical you serve. You may serve as:

* Cloud Security Engineer
* Systems Engineer (Cloud)
* Cloud Developer
* Cloud Architect
* Network Engineer (Cloud)

Just so that I am clear, these are just some of the designations. Nowadays Cloud Service Providers have a lot of services to offer. This means whether you are a Data Scientist, Game Developer, or a Management Consultant, there is something you can do using the Cloud. Because the Cloud is everywhere, there is tremendous variety in roles and designations.

However, if we focus on the fundamentals, we can bucket Cloud Engineers into three overarching categories.