

Introduction to Cloud Computing

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AGENDA

- Welcome & Introduction
- Why Cloud Computing?
- What is Cloud Computing?
- Benefits of Cloud Computing
- Types of Cloud Deployment Models
- Cloud Service Models
- Cloud Adoption Trends & Statistics
- Q&A Session

SITUATION !

Imagine you're working on a big project with your friends. You've got a ton of data, files, software, and tools. Where you can store these data?

POSSIBILITIES

Now think:

- Do you want to buy your own expensive laptop or server?
- Set up the software manually on each of your friends' computers?
- Or worse, lose your files if your system crashes?

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Nahhh, too much headache, right?

SOLUTION!

That's Where Cloud Computing Comes In!

- Cloud computing = **using someone else's powerful computers over the internet.**
- Instead of buying your own server or running heavy software on your laptop, you just log in, and

BOOM  — everything's there, ready to go.

WHAT IS CLOUD COMPUTING?

Cloud Computing means using computers, storage, and services over the internet—instead of owning and managing them yourself.

Think of it like this:

- Just like you use electricity from the power grid without owning a power plant, you use computing power from the cloud without owning servers.

WHAT IS CLOUD COMPUTING?

In Tech Terms:

Cloud computing is the on-demand delivery of IT resources like:

- Servers (virtual machines)
- Storage (like Google Drive)
- Databases
- Networking

Software (like Gmail, Zoom, or Canva) over the internet, with pay-as-you-go pricing.

REAL-LIFE EXAMPLE:

- When you use Google Docs, you're not installing MS Word.
- You're using a cloud-based service that works from any device.
- When Netflix streams a movie, it uses cloud servers to handle all that data—so you can just hit play and relax 😎.



CLOUD COMPUTING! - IN ONE LINE:

- Cloud computing = renting computing stuff online instead of buying it.

WHY COMPANIES ARE MOVING TO CLOUD?

Save Money

- No need to buy expensive hardware or hire huge IT teams. Pay only for what you use.

Super Scalable

- Whether it's 10 users or 10 million, cloud can scale up/down instantly.

Faster Time to Market

- You can build, test, and launch apps way faster with ready-made cloud tools.

WHY COMPANIES ARE MOVING TO CLOUD?

Work From Anywhere

- All your data and apps are online. Work from home, cafe, or college!

Team Collaboration

- Real-time updates, file sharing, and team tools make collab easy (think Google Docs on steroids).

Better Security

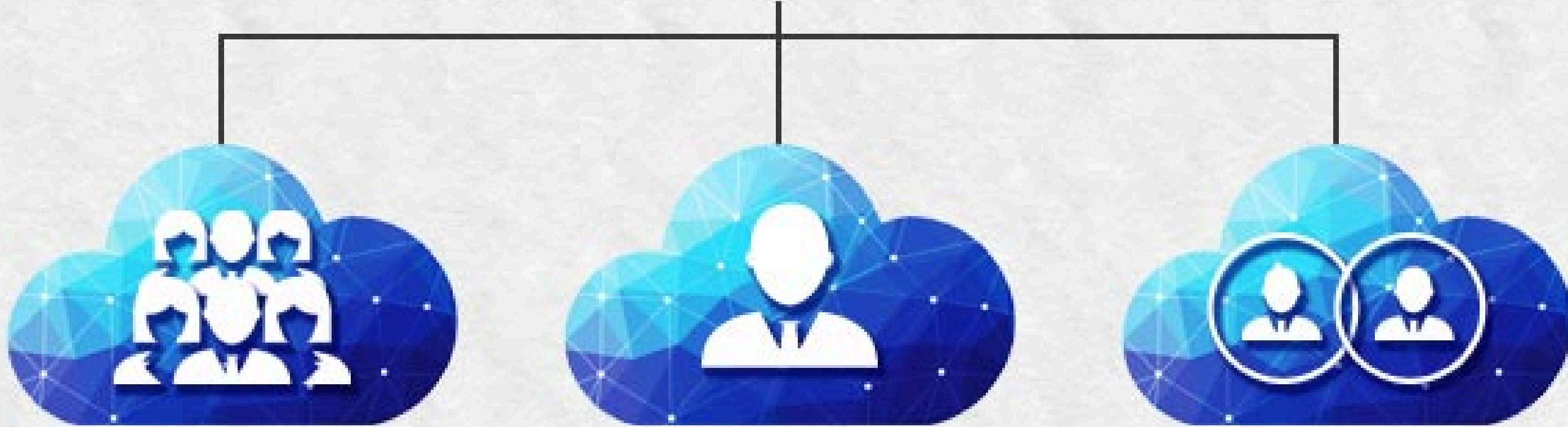
- Top cloud providers have world-class security systems —your data is safer with them than on your pen drive.



REAL-WORLD STATS

- 96% of companies now use at least one form of cloud.
- Public cloud adoption jumped from 89% to 92% in a few years.
- Private cloud adoption also grew to 75%.
- Gartner says most companies will be cloud-first or cloud-only in the future.

TYPES OF CLOUD COMPUTING



PUBLIC

- ✓ Scalable
- ✓ Reliable
- ✓ Inexpensive
- ✓ Location Independent

PRIVATE

- ✓ Scalable
- ✓ Secure
- ✓ Flexible
- ✓ Greater control

HYBRID

- ✓ Scalable
- ✓ Secure
- ✓ Flexible
- ✓ Cost effective

1. PUBLIC CLOUD

 "Dude, it's like using a public gym."

- **What it is:** Shared resources (like servers and storage) offered by big companies like Amazon AWS, Microsoft Azure, or Google Cloud.
- You rent space and share it with others (but your stuff stays private).
- 💰 Cheap to start, no maintenance headaches.

Example: Hosting your app on AWS EC2 or using Google Drive.

2. PRIVATE CLOUD

 "Now imagine building a gym only for you and your squad."

- **What it is:** A dedicated cloud setup just for one company.
- More control, tighter security, but also more \$\$\$ and work.
- Usually used by banks, hospitals, or government agencies.

Example: A bank sets up its own private cloud to store customer data securely.

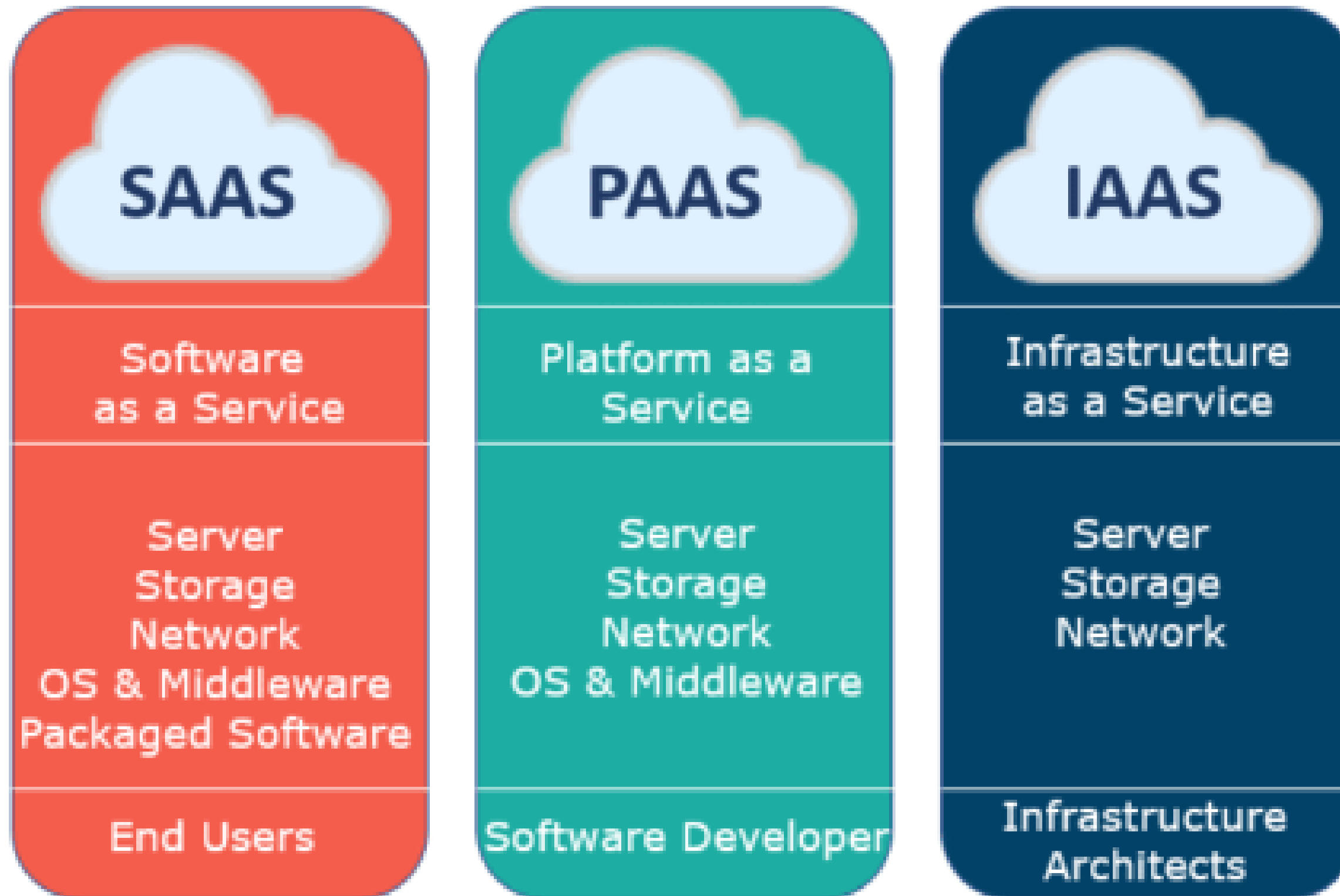
3. HYBRID CLOUD

 "Best of both worlds. Use the public gym, but also have your home setup!"

- **What it is:** Mix of **public + private** cloud.
- You keep sensitive stuff in private cloud, and general tasks in public cloud.
- Great for flexibility and cost saving.

Example: A company stores sensitive client data in a private cloud, but uses public cloud to run its website.

Cloud Service Models



Cloud Service Models

Lets understand these models using a situation!

 *Think of it like ordering pizza.*

Yes, seriously. 



1. IAAS – INFRASTRUCTURE AS A SERVICE



"You do most of the work, but the tools are provided."

- Cloud provider gives you raw ingredients: servers, storage, networking.
- You set up the OS, install software, manage everything else.
- Great for developers who want control, flexibility.

Pizza Version:

- You get the pizza dough, sauce, cheese, and oven.
- You cook it at home.

Example:

-  AWS EC2, Microsoft Azure VM, Google Compute **Engine**



2. PAAS – PLATFORM AS A SERVICE



"They handle the setup. You just focus on making awesome stuff."

- Provider gives you a ready-to-use platform: servers + runtime + tools.
- You just build and deploy your app. No worries about OS, storage, scaling.
- Perfect for coders who want to skip the boring setup

Pizza Version:

- You get a fully set up kitchen. You just add toppings and bake.

Example:

- Heroku, Google App Engine, Firebase, AWS Elastic Beanstalk



3. SAAS – SOFTWARE AS A SERVICE

 **"Everything's done. You just eat."**

- The entire app is ready to use, via browser or app.
- No coding, no setup. Just sign in and go.
- Best for users, not devs.

Pizza Version:

- ➡ You order pizza on Swiggy. It arrives hot. Just eat.

Example:

-  Gmail, Zoom, Google Docs, Canva, Netflix

BENEFITS OF CLOUD COMPUTING

1. Cost-Efficient

 "Why buy a laptop lab when you can rent computers online?"

2. Scalability

 "Built an app? It handles 10 users or 10 million — same code!"

3. Accessibility

 "You can work on your project from hostel, home, or Himalayas."

BENEFITS OF CLOUD COMPUTING

4. Automatic Updates & Maintenance

 "No more 'turn it off and on again' issues."







5. Security

 "Yes, they're watching your back (with encryption, firewalls, etc)."

6. Disaster Recovery & Backup

 "Your project folder won't vanish if your laptop dies."

WHY CLOUD ROCKS FOR EVERYONE !

Benefits	What It Means
 Save Money	No buying/maintaining hardware
 Flexible Use	Scale up/down instantly
 Work Anywhere	Just need internet
 No Maintenance	Providers do the heavy lifting
 Better Security	Top-grade encryption & protection
 Backup Ready	Files are safe even if your laptop isn't

THANK YOU