# Activity: Types of Cloud Services

AWS Academy Introduction to Cloud: Semester 1 | Module 2

## Service types

In the following table, describe each type of cloud service and its benefits. Then, provide examples of each type.

| Type of Cloud Service | What It Is | Benefits | Examples |
| --- | --- | --- | --- |
| Infrastructure as a service (IaaS) | Infrastructure as a Service (IaaS) is a cloud computing service that provides virtualized computing resources over the internet. IaaS is one of three main types of cloud computing services, along with SaaS (software as a service) and PaaS (platform as a service). | Ease and cost savings: IaaS helps businesses operate workloads easier, faster, and more cost-effectively without having to purchase, manage, and support the underlying infrastructure.  Effective for testing and unexpected changes: IaaS is an effective choice for testing new software or unexpected changes. Once tested and refined, businesses can deploy internally or commit to a long-term IaaS deployment. | A business developing a new piece of software can use IaaS to host and test the application, saving costs compared to in-house deployment. |
| Platform as a service (PaaS) | Platform as a Service (PaaS) is a model in the field of cloud computing that provides customers with a complete platform including hardware, software and infrastructure to develop, run and manage applications. applications without requiring them to worry about building and maintaining that infrastructure on-premises platform. | Faster time to market: With PaaS, you don't need to purchase and install hardware and software to build and maintain your application development platform. You simply tap into the cloud provider's PaaS offering to start provisioning resources and growing immediately.  Access to a variety of resources at affordable prices: PaaS platforms typically provide access to a wider selection of up and down application stacks - including the operating system, middleware, databases and development tools - more than most organizations can realistically sustain themselves or afford. | Examples of PaaS could be services like Amazon Elastic Beanstalk, Google App Engine, Microsoft Azure App Service, or Heroku |
| Software as a service (SaaS) | Software as a Service (SaaS) is a software application distribution model in which vendors develop and deliver software applications over the web, then allow users to use them. use it over the Internet. | Accessibility via the Internet: Instead of having to download and install software directly on your computer, SaaS allows you to access the application through a web browser. This simplifies software deployment and usage.  Instant update capabilities: SaaS is run on the cloud, allowing the provider to continuously update the software without affecting users. This is different from traditional software.  Convenience for users: SaaS does not require users to care about owning the software, but only needs to pay a fee to use it. SaaS applications can be used on computers and mobile devices. | Examples of SaaS applications: Office software applications, enterprise management systems (ERP), and many other applications have been converted into SaaS services. |

## Scenarios

Read each of the following scenarios. For each, describe what type of cloud service could benefit the user, and explain how the service would solve the issue. Be sure to incorporate key terminology into your responses.

### Scenario 1

Doug likes to stream his gaming sessions. He has a server set up in his basement that he keeps cool using expensive air conditioners. He also spends a lot of time making sure that his servers are secure and working properly. He has also received feedback from his fans that his stream is very laggy when they are watching.

### Response 1

Doug's situation could greatly benefit from a cloud gaming service. Let’s explore two options that would address his issues:

Boosteroids:

Description: Boosteroid is an affordable cloud gaming service that allows users to play their own games on powerful cloud servers.

Strengths:

Affordability: Boosteroid costs less than $10 per month.

AAA Games: Users can play AAA games like Elden Ring, Red Dead Redemption II, and GTA V.

Limitations:

Standard Resolution: Boosteroid offers up to 1080p/60fps, which may not satisfy users looking for higher resolutions.

No Game Licenses Included: Users need to own the games they want to play or choose from free-to-play games.

Ideal Fit for Doug:

Doug, who loves AAA games and seeks a cost-effective solution, would find Boosteroid suitable for his streaming needs.

Nvidia GeForce Now:

Description: GeForce Now is a cloud gaming service by NVIDIA that allows users to play their purchased games with high-quality streaming.

Strengths:

Quality: Users can experience impeccable game quality.

Affordability: GeForce Now costs $10 per month.

Limitations:

Session Length: Each session lasts up to 6 hours.

Ideal Fit for Doug:

Doug can play his purchased games with excellent quality using GeForce Now, making it a great choice for his streaming setup

### Scenario 2

Tina and Grace enjoy writing stories together. Unfortunately, they live far apart and have to email each other their versions of the story as they add to them. This prevents them from working on a story simultaneously, and it creates a risk of losing track of the latest version.

### Response 2

Google Docs:

Description: Google Docs is a free online general writing application from Google.

Advantage:

Simultaneous editing: Tina and Grace can edit the same document at the same time, and even see each other's changes instantly.

Version history: Google Docs stores version history, helping them track changes and avoid losing originals.

Comment in the document: They can comment directly in the document to exchange ideas and feedback.

For example, Tina and Grace can create a joint Google Docs document to write their story and work together online1.

Microsoft Office

Microsoft Office

Microsoft OneDrive and Office Online:

Description: OneDrive is Microsoft's cloud storage service, combined with Office Online (including Word, Excel, PowerPoint).

Advantage:

Edit simultaneously: Similar to Google Docs, Tina and Grace can edit the same document online.

Version history: OneDrive stores a document's version history.

Comment and share: They can comment, share, and work together in Office Online apps.

### Scenario 3

Ana Carolina wants to develop her own mobile app for helping people in need get access to resources and services. The app will connect to existing maps and databases to find where and when services are available, and then send alerts to people who can use the services.

### Response 3

Mobile Backend as a Service (MBaaS): MBaaS is a cloud service that allows mobile application development without having to worry about infrastructure management. MBaaS provides features such as user management, data storage, authentication, and sending notifications to users. Ana Carolina can use MBaaS to build the backend of the application, connect to the database, and send notifications to users when new resources and services become available.

Cloud Testing Services: To ensure the application functions properly and is compatible across multiple devices and operating systems, Ana Carolina can use cloud testing services. This service enables testing on virtual and physical devices and collects data about application crashes and performance.

Security and Privacy Services: Because Ana Carolina's app will handle sensitive user information, ensuring security and privacy is important. She can use cloud services related to security and access management to protect user data

### Scenario 4

A group of friends likes to meet online to play a role-playing game. They all need to be able to view the game manager’s screen while talking and sharing video feeds with each other. The group also likes to save recordings of its sessions, to look back on if need be. These recordings can be very large files due to the long nature of a session.

### Response 4

### Scenario 5

A business called AnyCompany Power is installing smart power meters in homes to gather data about global energy usage. The meters connect to the web and provide data for when power usage increases and decreases. The company needs to store and analyze this giant amount of data to find patterns in energy usage that might improve efficiency and reduce waste.

### Response 5