

♦ What is an *instance* in AWS?

An **instance** in AWS is like a **virtual computer** that runs in the cloud.

- 🖥️ Just like a computer has a CPU, memory (RAM), and storage, an **AWS instance** has those too—but instead of being on your desk, it's on a server inside Amazon's data center.
- 💡 You can use it to run websites, apps, databases, or anything you'd normally do on a regular computer.

Perfect! You're asking about **EC2 Tenancy types** — specifically:

- **Shared Instances**
- **Dedicated Instances**
- **Dedicated Hosts**

Let me explain each one **very simply**, then tell you what's best for your **eCommerce** project.

🧩 1. Shared Instances (Default — most common ✅)


- Your server runs on the **same physical machine** as other AWS customers.
 - You still get your **own private virtual server** (no one sees your data).
 - ✅ **Cheapest** and good performance.
 - 🔥 Ideal for: **Startups, small-medium apps**, most general usage.
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🏠 2. Dedicated Instances

- You get your **own physical server**, but **only the instance level** is isolated.

- Costs **more** than Shared.
- Used if you have **security/compliance rules** or need **better isolation**.

3. Dedicated Hosts

- You rent the **entire physical server**.
 - You can see and control the **hardware layout** (licensing, CPU control).
 -  Very expensive.
 - Needed for **special compliance needs** or if you bring your own licenses (BYOL).
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Which One for eCommerce?

Tenancy Type	Cost	Security	Best for eCommerce?
Shared Instance	 Low	 Good	   Yes (Recommended)
Dedicated Instance	 Medium	  Higher	 Only if needed
Dedicated Host	 High	 Highest	 Overkill

 **Recommendation:** Go with **Shared Instances** — perfect for most eCommerce sites unless you're in **finance/healthcare with strict data rules**.

Sure! Let's break this image down **very simply** — you're looking at **Amazon EC2 pricing options** for the instance type **t3.small** using Linux. These are **ways to pay** for using a cloud server (EC2 = virtual computer). Here's what each section means:

1. On-Demand

- **What it is:** Pay **only when you use** it. No long-term commitment.
 - **Price shown:**
 - 0.022 USD/hour
 - ~16.06 USD/month if used 100% (24/7).
 - **Best for:** Testing, learning, or short-term projects.
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2. Spot Instances

- **What it is:** Cheapest option. AWS gives you **unused servers**.
 - **BUT:** AWS **can stop it anytime**, so not reliable for critical work.
 - **Price:** Around 0.022/hour, but this **fluctuates**.
 - **Best for:** Experiments, batch jobs, or apps that can handle interruptions.
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3. Reserved Instances

- **What it is:** You **reserve** a server for **1 or 3 years**, and you get a **discount**.
- You choose:
 - ☒ 1 year or 3 year plan
 - ☒ Pay all now, some now, or monthly



Example in the Image:

- **3-Year Plan with Partial Upfront:**

- Pay \$142 upfront
- Then \$3.94/month
- Works out to ~\$8.88/month total
- **Why do it?** Cheaper if you know you'll run the server for a long time.



Summary for You:

Option	Monthly Cost (approx.)	Can stop anytime?	Cheap?	Good for
On-Demand	\$16.06	✓ Yes	✗ Normal	Short-term use, testing
Spot Instance	~\$16.22 (varies)	✗ No (can stop)	✓ Cheapest	Flexible/backup tasks
Reserved (3 yr)	~\$8.88	✗ No	✓ Very good	Long-term use (cheapest)



What is an "AZ"?

AZ = Availability Zone

It's a **data center** inside a region (like `us-east-1` in Virginia, USA).

Each AWS region has **multiple AZs** — isolated buildings with power/network redundancy.



Deployment Options:

✓ 1. Single-AZ

- Your database is hosted in **just one data center (AZ)**
- ✓ Cheaper

- ❌ If that AZ goes down (rare), your DB will also go down



👉 Best for **non-critical, dev, small apps**

2. Multi-AZ

- Your database is **replicated across 2 AZs**
 - One is **primary** (active)
 - One is **standby** (passive copy)
- ✅ Automatic failover if one AZ fails
- ✅ High availability + durability
- ❌ Costs more (because you're using 2 DB instances)

👉 Best for **production apps**, eCommerce, anything that needs uptime

Example Pricing Impact:

Type	Uptime	Cost	Use Case
Single-AZ	~99.5%	 Lower	Small/demo apps
Multi-AZ	~99.99%	 Higher	Real users/live app