

# Types of physical servers

Physical servers are **actual hardware machines** (not virtual).

Below are the **main types of physical servers**, explained **clearly and simply**, with **real data-center examples**.

---

## 1 Tower Server

**Looks like:** Desktop CPU

**Used in:** Small offices, labs

### Features:

- Low cost
- Easy to maintain
- Limited scalability

### Example:

- Dell PowerEdge T40
- HPE MicroServer

☐ Best for: Small business, learning Linux

---

## 2 Rack Server (Most common)

**Looks like:** Flat box mounted in a rack

**Size:** 1U, 2U, 4U

### Features:

- High performance
- Easy to scale
- Used in data centers

### Example:

- Dell PowerEdge R740
- HPE ProLiant DL380

☐ Best for: Web, DB, app servers

---

## 3 Blade Server

**Looks like:** Thin blades inside a chassis

### Features:

- Very high density
- Shared power & cooling
- Expensive

**Example:**

- HPE BladeSystem
- Dell PowerEdge M1000e

☐ Best for: Large enterprises

---

## 4 Modular Server

**Looks like:** Flexible blade-like system

**Features:**

- Mix compute, storage, networking
- Easy upgrades

**Example:**

- HPE Synergy

☐ Best for: Private cloud

---

## 5 Microserver

**Looks like:** Very small physical server

**Features:**

- Low power
- Quiet
- Limited performance

**Example:**

- HPE MicroServer Gen10

☐ Best for: Home labs, edge locations

---

## 6 High-Density Server

**Looks like:** Multiple nodes in one chassis

**Features:**

- Maximum compute per rack
- Used for AI, HPC

**Example:**

- Dell PowerEdge C-Series

☐ Best for: Big data, AI workloads

---

# 7 Storage Server

**Purpose-built for storage**

**Features:**

- Large disk capacity
- RAID, SAN/NAS

**Example:**

- Dell EMC Isilon
- NetApp FAS

☐ Best for: Backups, file storage

---

# 8 GPU Server

**Purpose:** Heavy graphics & AI processing

**Features:**

- Multiple GPUs
- High power & cooling

**Example:**

- NVIDIA DGX
- Dell PowerEdge XE8545

☐ Best for: AI, ML, video rendering

---

# 9 Edge Server

**Used near users (not main DC)**

**Features:**

- Small size
- Rugged design

**Example:**

- Dell Edge Gateway

☐ Best for: IoT, telecom, retail

---

# Physical server size (Rack Units)

Size	Meaning
1U	Very thin

Size	Meaning
2U	Balanced
4U	More disks & expansion

---

## Quick comparison (Exam ready)

Type	Cost	Power	Usage
Tower	Low	Low	Small office
Rack	Medium	Medium	Data center
Blade	High	High	Enterprise

---

## Interview one-line definition ☐

A physical server is a **dedicated hardware machine** designed to run workloads continuously in a data-center environment.