

AWS VPC

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Today I asked ChatGPT 4.0 to answer the following request:

How do I create a VPC on AWS using AWS console? Please provide a brief explanation of all common technical terms for beginners. Provide all necessary instructions.

ChatGPT:

“Creating a **Virtual Private Cloud (VPC)** on AWS using the **AWS Management Console** allows you to set up a private network in AWS where you can launch and manage resources securely. Here’s how to do it:

Common Technical Terms Explained

1. **VPC (Virtual Private Cloud):** A private, isolated network within AWS where you can launch resources like EC2 instances.
 2. **Subnet:** A smaller network within your VPC that determines the IP range for resources.
 3. **CIDR (Classless Inter-Domain Routing):** A method for assigning IP addresses, e.g., 10.0.0.0/16 (provides 65,536 IPs).
 4. **Route Table:** A set of rules that direct network traffic within your VPC.
 5. **Internet Gateway (IGW):** A gateway that allows communication between your VPC and the internet.
 6. **NAT Gateway:** A service that allows private instances (without public IPs) to access the internet securely.
 7. **Security Group:** A firewall that controls inbound and outbound traffic for instances.
 8. **Network ACL (Access Control List):** An optional layer of security for controlling traffic at the subnet level.
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Steps to Create a VPC Using AWS Console

Step 1: Sign in to AWS Management Console

- Go to [AWS Console](#)
- Navigate to **VPC** from the AWS services menu.

Step 2: Create a New VPC

1. Click **Create VPC**.
2. Choose **VPC and more** (simplifies subnet and IGW setup).

3. Enter a **Name tag** for your VPC (e.g., MyVPC).
4. Set the **IPv4 CIDR block** (e.g., 10.0.0.0/16).
5. (Optional) Add **IPv6 CIDR block** if needed.

Step 3: Configure Subnets

1. Choose **Number of Availability Zones** (at least 2 for high availability).
2. Select the number of **public** and **private** subnets.
3. AWS automatically assigns CIDR ranges based on your VPC.

Step 4: Set Up Internet Gateway

1. Choose **Enable internet access** to create and attach an **Internet Gateway (IGW)**.
2. This allows instances in public subnets to communicate with the internet.

Step 5: Route Tables

- AWS automatically creates **route tables** for public and private subnets.
- Public subnets will have a route to the **Internet Gateway**.
- Private subnets can use a **NAT Gateway** (optional) for internet access.

Step 6: Security Groups and Network ACLs

- AWS automatically creates a **default security group**.
- You can customize security groups and **Network ACLs** later for better security.

Step 7: Review and Create

- Review the configurations.
 - Click **Create VPC**.
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Verification

1. Go to **VPC Dashboard** → Check your new VPC.
2. Go to **Subnets** → Ensure subnets were created.
3. Go to **Route Tables** → Verify correct routing configurations.
4. Go to **Internet Gateways** → Ensure it's attached to the VPC.

Your VPC is now ready! You can launch **EC2 instances** in your subnets and configure them as needed.”