VMware Workstation Network Types

1. Bridged Networking

- **Description**: Connects the virtual machine (VM) directly to the physical network via the host's network adapter.
- **Use Case**: Ideal when the VM needs to be accessible by other devices on the same network, such as for web servers or network services.
- **IP Addressing**: The VM obtains its own IP address from the network's DHCP server or can be configured with a static IP.

2. NAT (Network Address Translation)

- **Description**: The VM shares the host's IP address to access external networks, like the internet.
- **Use Case**: Suitable for scenarios where the VM needs internet access but doesn't require inbound connections from other devices.
- **IP Addressing**: The VM uses a private IP address, and the host translates its traffic to the public network.

3. Host-Only Networking

- **Description**: Creates a private network between the host and the VM, isolated from external networks.
- **Use Case**: Useful for testing environments where the VM should not have internet access and should only communicate with the host or other VMs on the same host-only network.
- **IP Addressing**: The VM is assigned a private IP address within a predefined range, and communication is limited to the host and other VMs on the same host-only network.

⚙️ Virtual Network Editor Options

The Virtual Network Editor in VMware Workstation allows for advanced network configurations:

- **VMnet0 (Bridged)**: Connects VMs to the physical network.
- **VMnet1 (Host-Only)**: Establishes a private network between the host and VMs.
- **VMnet8 (NAT)**: Provides NAT services for VMs to access external networks.
- **Custom Networks**: Users can create additional virtual networks (e.g., VMnet2, VMnet3) to segment traffic or simulate complex network topologies.

In the Virtual Network Editor, you can configure:

- **DHCP Settings**: Enable or disable DHCP for each virtual network.
- **Subnet Configuration**: Define IP address ranges and subnet masks.

📝 Summary

- **Bridged**: VMs act as independent devices on the physical network.
- **NAT**: VMs share the host's IP for external communication.
- **Host-Only**: VMs communicate only with the host and other VMs on the same network.

The Virtual Network Editor provides tools to customize and manage these network configurations to suit various testing and development scenarios.