A datacenter is the primary container of inventory objects such as hosts and virtual machines. From the datacenter, you can add and organize inventory objects. Typically, you add hosts, folders, and clusters to a datacenter.

vCenter Server can contain multiple datacenters. Large companies might use multiple datacenters to represent organizational units in their enterprise.

**What is a cluster?**

A cluster is a group of hosts that share resources and a management interface. When you add a host to a cluster, the host’s resources become part of the cluster’s resources. The cluster manages the resources of all hosts within it.

Clusters enable the vSphere Distributed Resource Scheduler (DRS) and vSphere High Availability (HA) solutions. vSphere DRS continuously balances virtual machine workloads across your ESX/ESXi hosts. vSphere HA allows the virtual machines running on ESX/ESXi hosts to automatically recover from host failures.

**What is a resource pool?**

A resource pool provides a way to divide the resources of a stand-alone host or a cluster into smaller pools. A resource pool is configured with a set of CPU and memory resources that the virtual machines that run in the resource pool share. Resource pools are self-contained and isolated from other resource pools.

You can combine multiple physical servers into a single resource pool that aggregates CPU and memory capacity.

Virtual machines execute in, and draw their resources from, resource pools. This arrangement allows virtual machine workloads to continuously balance across resource pools. When the workload increases, the vCenter Server automatically allocates additional resources and transparently migrates virtual machines between hosts in the resource pool.