



How is network virtualization used in cloud computing?

Network [virtualization](#) decouples network services from the underlying hardware and allows virtual provisioning of an entire network. It makes it possible to programmatically create, provision, and manage networks all in software, while continuing to leverage the underlying physical network as the packet-forwarding backplane.

Physical network resources, such as switching, routing, firewalling, load balancing, virtual private networks (VPNs), and more, are pooled, delivered in software, and require only Internet Protocol (IP) packet forwarding from the underlying physical network.

Network and security services in software are distributed to a virtual layer (hypervisors, in the data center) and “attached” to individual workloads, such as your virtual machines (VMs) or containers, in accordance with networking and security policies defined for each connected application.

When a workload is moved to another host, network services and security policies move with it. And when new workloads are created to scale an application, necessary policies are dynamically applied to these new workloads, providing greater policy consistency and network agility.