Module 2: Openstack

Agenda

* What is Openstack
* Understanding Cloud and Openstack
* Openstack API
* Openstack and Hypervisor
* Openstack and network services
* Openstack and Storage
* Openstack and Cloud Terminologies
* Introducting openstack components

What is Openstack

The official OpenStack website (www.openstack.org) describes the framework as “open source software for creating private and public clouds.”

It goes on to say, “OpenStack Software delivers a massively scalable cloud operating system.”

Cloud and Openstack

The economics of private vs. public cloud

Multi-tenancy and full orchestration

Openstack API

Fundamentally, OpenStack abstracts and provides a common API for controlling hardware and software resources provided by a wide range of vendors. The framework provides two very important things:

- **Abstraction of hardware and software resources, which prevents vendor lock-in for any particular component. This is accomplished by managing resources through OpenStack, not directly using the vendor component.**
- **A common API across resources, which allows for complete orchestration of connected components.**

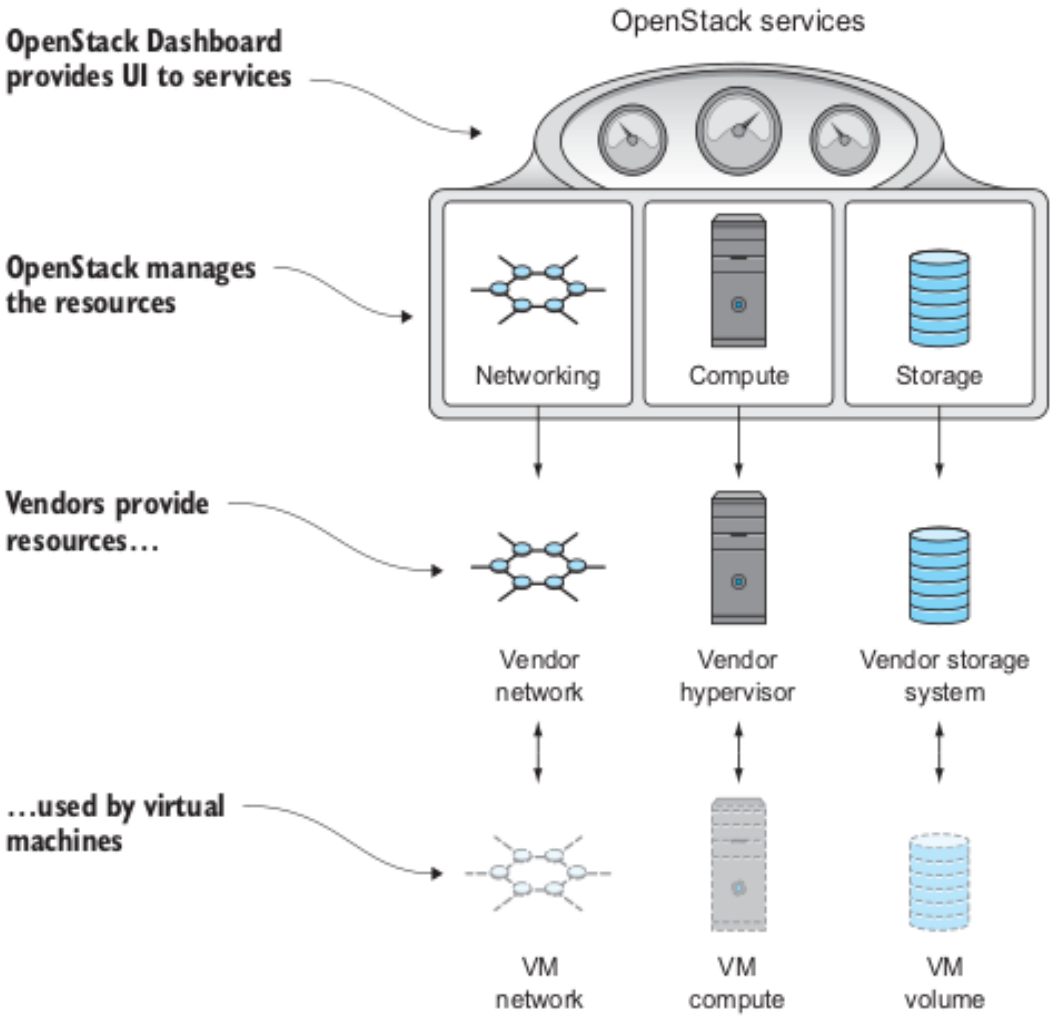
Openstack and Hypervisor

A hypervisor or virtual machine monitor (VMM) is software that manages the emulation of physical hardware for virtual machines.

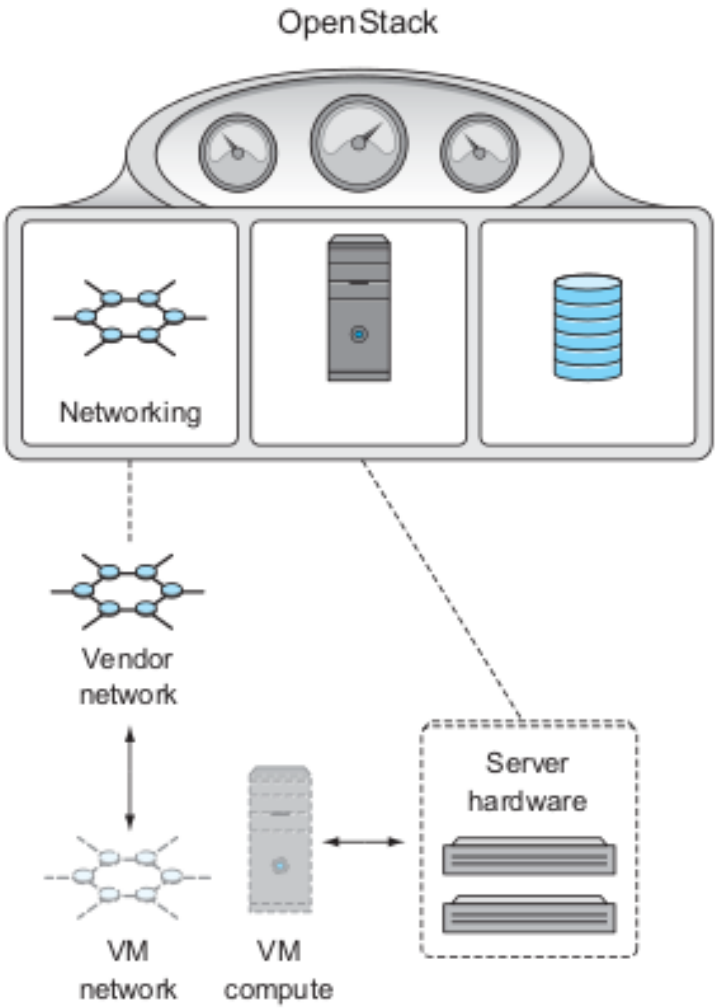
OpenStack is not a hypervisor, but it does control hypervisor operations.

Many hypervisors are supported under the OpenStack framework, including XenServer/ XCP , KVM , QEMU , LXC , ESX i, Hyper-V, BareMetal,

Openstack and Hypervisor



Openstack and Network Service



Openstack and Storage

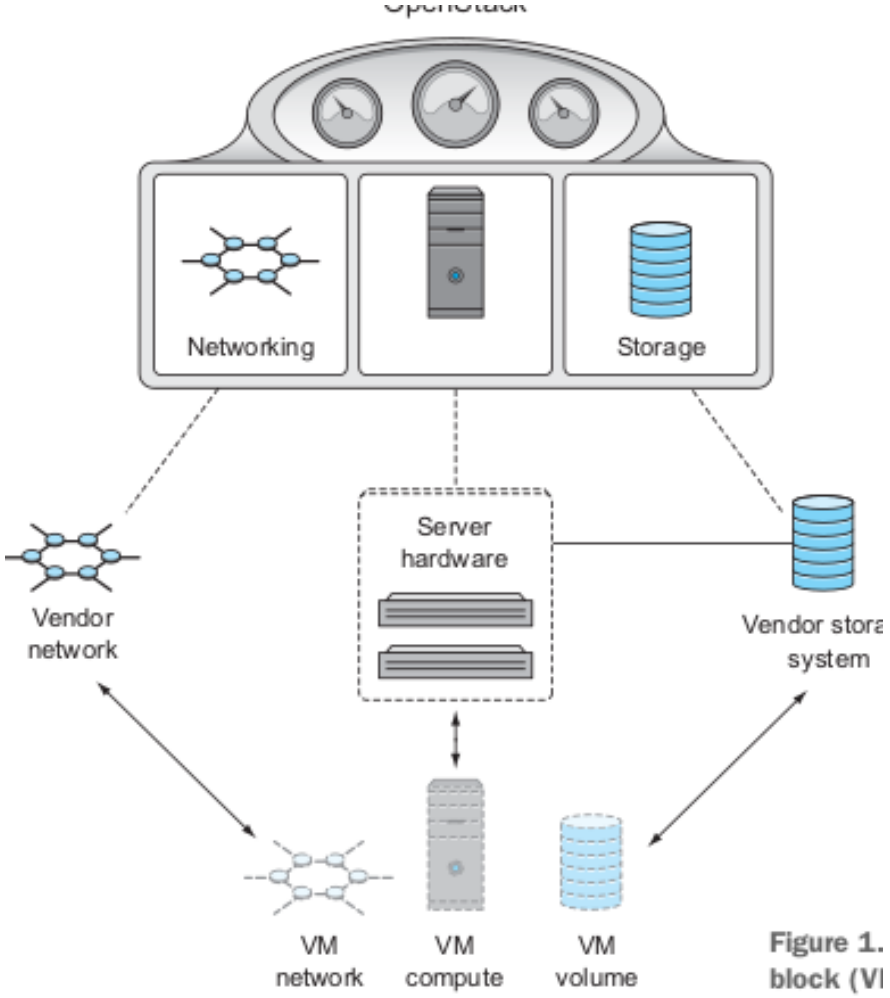


Figure 1.
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Openstack Components