

Introducing OpenStack Storage Architecture

Objectives

After completing this section, you should be able to describe Red Hat OpenStack Platform storage requirements, and compare the architecture choices for using Red Hat Ceph Storage as an RHOSP storage back end.

Red Hat OpenStack Platform Overview

Red Hat OpenStack Platform (RHOSP) is implemented as a collection of interacting services that control compute, storage, and networking resources. Cloud users deploy virtual machines by using resources through a self-service interface. Cloud operators, in cooperation with storage operators, ensure that sufficient storage space is created, configured, and available for each of the OpenStack components that consume or provide storage to cloud users.

Figure 13.1 presents a high-level overview of the core service relationships of a simple RHOSP installation. All services interact with the Identity service (Keystone) to authenticate users, services, and privileges before any operation is allowed. Cloud users can choose to use the command-line interface or the graphical Dashboard service to access existing resources and to create and deploy virtual machines.

The Orchestration service is the primary component for installing and modifying an RHOSP cloud. This section introduces the OpenStack services for integrating Ceph into an OpenStack infrastructure.

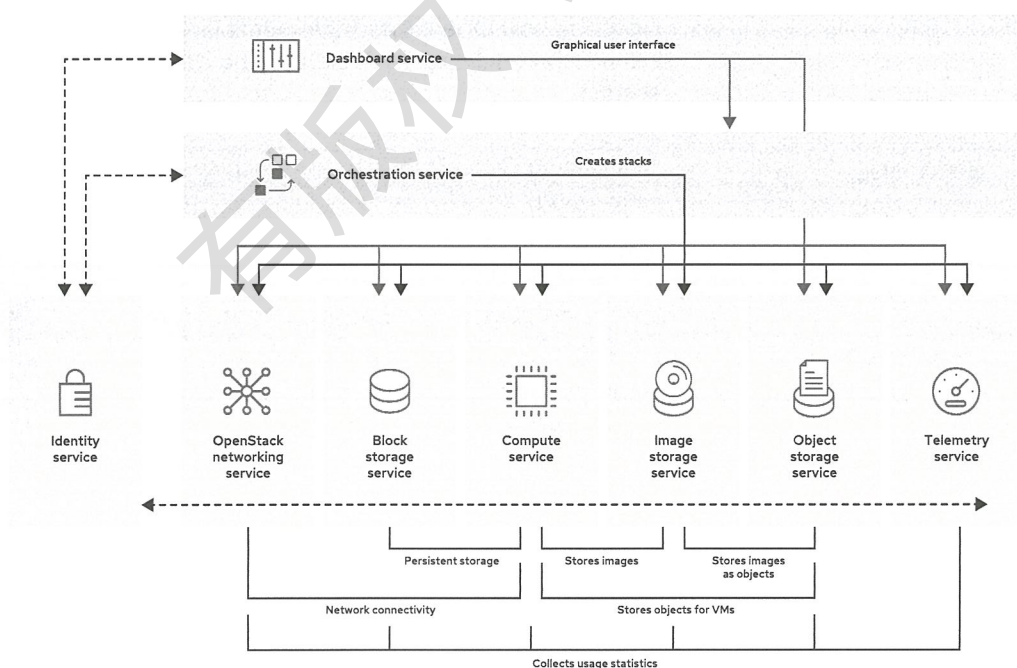


Figure 13.1: A simple set of OpenStack services