

Service	Project name	Description	描述
Dashboard	Horizon	Provides a web-based self-service portal to interact with underlying OpenStack services, such as launching an instance, assigning IP addresses and configuring access controls.	Horizon 提供一个与底层的 OpenStack 服务进行交互的 web 自服务门户，例如，启动实例，分配 IP 地址，配置 ACL。
Compute service	Nova	Manages the lifecycle of compute instances in an OpenStack environment. Responsibilities include spawning, scheduling and decommissioning of virtual machines on demand.	Nova 在 OpenStack 环境中管理实例的生命周期，包括创建、调度和销毁。
Networking service	Neutron	Enables Network-Connectivity-as-a-Service for other OpenStack services, such as OpenStack Compute. Provides an API for users to define networks and the attachments into them. Has a pluggable architecture that supports many popular networking vendors and technologies.	Neutron 为其它 OpenStack 服务提供网络服务。提供给用户用来定义网络及其组件的 API，支持多个厂商和技术。
Object Storage service	Swift	Stores and retrieves arbitrary unstructured data objects via a RESTful, HTTP based API. It is highly fault tolerant with its data replication and scale-out architecture. Its implementation is not like a file server with mountable directories. In this case, it writes objects and files to multiple drives, ensuring the data is replicated across a server cluster.	Swift 通过 RESTful, HTTP 提供非结构化数据的存储和调用。它对数据复制和扩展架构具有高度的容错能力。它的实现不像一个具有可挂载目录的文件服务器。在这种情况下，它将对象和文件写入多个驱动器，确保数据在服务器集群中被复制。

Block Storage service	Cinder	Provides persistent block storage to running instances. Its pluggable driver architecture facilitates the creation and management of block storage devices.	Cinder 为运行实例提供持久的块存储。它的可插拔驱动架构促进了块存储设备的创建和管理。
Identity service	Keystone	Provides an authentication and authorization service for other OpenStack services. Provides a catalog of endpoints for all OpenStack services.	Keystone 为其他 OpenStack 服务提供身份验证和授权服务。为所有的 OpenStack 服务提供一个 endpoints 目录。
Image service	Glance	Stores and retrieves virtual machine disk images. OpenStack Compute makes use of this during instance provisioning.	Glance 存储并检索虚拟机磁盘映像。OpenStack Compute 在实例创建过程中使用它。
Telemetry service	Ceilometer	Monitors and meters the OpenStack cloud for billing, benchmarking, scalability, and statistical purposes.	Ceilometer 用来监控、测试 OpenStack, 用于计费、基准测试、可扩展性、统计的目的。
Orchestration service	Heat	Orchestrates multiple composite cloud applications by using either the native HOT template format or the AWS CloudFormation template format, through both an OpenStack-native REST API and a CloudFormation-compatible Query API.	Heat 通过 OpenStack-native REST API 和 CloudFormation-compatible Query API 使用本地模板或 AWS 模板编排多重复杂云应用
Database service	Trove	Provides scalable and reliable Cloud Database-as-a-Service functionality for both relational and non-relational database engines.	Trove 为关系型和非关系型数据库提供可扩展性和可靠性云服务功能。
Data Processing service	Sahara	Provides capabilities to provision and scale Hadoop clusters in OpenStack by specifying parameters like Hadoop version, cluster topology and nodes hardware details.	Sahara 在 OpenStack 中通过指定 Hadoop 参数, 集群拓扑和, 节点硬件信息, 规定和测量 Hadoop 集群。

