HP Helion OpenStack Object Storage (Swift)

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A Object Storage (Swift) is Software Defined Storage (SDS) architecture, layered on top of industry standard servers, using native storage devices which are typically disk drives. Swift presents an object paradigm using an undelying set of disk drives. The disk drives are managed by a data structure called "ring". Swift also enable you to store, retrieve, and delete objects in a containers through RESTful API.

The services in the Swift cluster are either *access* services or *storage* services.

- The *access* services group is made up of the Swift Proxy Servers, which run Swift-Proxy, Account and Container Services, HTTP/HTTPS load balancers, and OpenStack® Keystone authentication service.
- The *storage* services group is composed of Swift Object Servers and various background services such as replicators.

  Each of the service group can be scaled independently to meet workload and redundancy requirements. The storage service can scaled up as necessary. It can also be horizontally scalable to handle an increased number of simultaneous connections as well as large number of objects.

Based on OpenStack® Object Storage, the HP Helion OpenStack® Object Storage service provides a highly available, resilient, and scalable storage pool for unstructured data. It is highly durable architecture with no single point of failure. Apart from this, HP Helion OpenStack introduces a concept of cloud input model. In this release (**beta1**) we are providing three types of cloud model.

- **hp-ci/padawan** - This cloud model runs in virtual machines. The virtual machines are configured similar to the **one-region-poc-with-vsa**.
- **one-region-poc-with-vsa**- This has a single control plane cluster running all services (Nova, Swift, Glance, etc) with an additional 3 resource nodes used as Nova compute servers. The number and usage of disk drives is fixed in the model. Therefore, Swift is automatically configured for this system and no changes are needed or anticipated for Swift-specific services.
- **mid sized cloud** - This example model describes a system using multiple servers and networks. It provides an example for the configuration of the mid sized cloud. You must use this example model as the basis for building a cloud model for your actual cloud by configuring the server and network that you plan to deploy. To deploy Swift using this model you must make Swift -specific changes to the provided example. For more details, refer to *Swift in the example mid sized cloud model.*