<http://wiki.hpcloud.net/pages/listpages-dirview.action?key=core&openId=51812158#selectedPageInHierarchy>

The purpose of this installation phase is prepare a node for OS installation. At the end of this phase the node should be

* Have its primary NIC connected to the customer's DC network
* Have its BIOS boot options set appropriately, e.g. set to PXE boot if using PXE for the OS installation phase
* System firmware at correct revision
* Local disk controller RAID setup is complete
* Any boot time kernel parameters required for the node are set on the boot options

The initial version of HLM will not provide any automated tooling for this phase. There is an opportunity for HP Professional Services, to provide value added service for HP hardware, e.g. using OneView to discover nodes, produce a node inventory for later phases and to configure BIOS setting as above.

# [Configure Cloud](http://wiki.hpcloud.net/display/core/Helion+Lifecycle+Management%3A+Configure+Cloud)

[Skip to end of metadata](http://wiki.hpcloud.net/display/core/Helion+Lifecycle+Management%3A+Configure+Cloud#page-metadata-end)

* [Attachments:2](http://wiki.hpcloud.net/pages/viewpageattachments.action?pageId=46008343&metadataLink=true)
* Added by [Eamonn O'Toole](http://wiki.hpcloud.net/display/~eamonn.otoole@hp.com), last edited by [Tim Reddin](http://wiki.hpcloud.net/display/~tim.reddin@hp.com) on Feb 03, 2015  ([view change](http://wiki.hpcloud.net/pages/diffpages.action?pageId=46008343&originalId=47743422))

[Go to start of metadata](http://wiki.hpcloud.net/display/core/Helion+Lifecycle+Management%3A+Configure+Cloud#page-metadata-start)

### Overview:

This is the point where the customer provides the detailed specification of their cloud. The specification

* Region organization (if deploying multi-region)
* Deployment topology - how services map to nodes, what services run on specif nodes, (e.g. specific nodes for Nova Compute,  Swift Object servers), control plane organization
* Network mapping: assigning different Helion traffic flows to separate VLANs
* Service configuration values, e.g. Storage types and back-ends for Cinder, Neutron tenant netowrks, plugins
* OS configuration: e.g. conntrack settings,

# [Install](http://wiki.hpcloud.net/display/core/Helion+Life+Cycle+Management%3A+OS+Install)

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* Added by [Tim Reddin](http://wiki.hpcloud.net/display/~tim.reddin@hp.com), last edited by [Tim Reddin](http://wiki.hpcloud.net/display/~tim.reddin@hp.com) on Feb 03, 2015  ([view change](http://wiki.hpcloud.net/pages/diffpages.action?pageId=46008091&originalId=47743388))

[Go to start of metadata](http://wiki.hpcloud.net/display/core/Helion+Life+Cycle+Management%3A+OS+Install#page-metadata-start)

# OS Install

This phase installs the host operating system onto the  Helion nodes, (virtual or bare metal).

### Inputs:

* All nodes  with correct BIOS settings
* Connected to primary network
* Nodes set to PXE boot is required
* List of MAC addresses on primary interface, if using HLM OS Install tooling
* CIDR range for primary interfaces, if using HLM  OS Install tooling

### Outputs:

* All nodes booted from boot disk with target OS installed
* Node is reachable via SSH on primary network with a sudo enabled user configured
* IP address set on primary interface and enumerated

### Tooling:

Customers can use site specific tools to perform this step, e.g.  TripleO, MaaS, Holly/Blacksmith (HP Public Cloud) , Cobbler etc.

The initial version of HLM will provide a Cobbler based utility as part of the HLM-Deploy tooling to install hLinux on the target nodes.

# [Storage Model](http://wiki.hpcloud.net/display/core/Helion+LifeCycle+Management%3A+Disk+Storage+Model)

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* Added by [Tim Reddin](http://wiki.hpcloud.net/display/~tim.reddin@hp.com), last edited by [Tim Reddin](http://wiki.hpcloud.net/display/~tim.reddin@hp.com) on Apr 14, 2015

[Go to start of metadata](http://wiki.hpcloud.net/display/core/Helion+LifeCycle+Management%3A+Disk+Storage+Model#page-metadata-start)

### Introduction

This page describes the HLM model for describing how disk storage can be configured to flexibly support different HOS services. The goal of the model is to provide the flexibility to allow customers express rich and varied configurations that can be optimized for different usage models while at the same time supporting a simple default model for the demo style user.

The disk model specification is used to specify how the storage on various nodes is to be made available to those services that explicitly, or implicitly, consume storage:

* Swift (Account, Container, Object rings)
* VSA
* Ceph
* Nova (implicitly for guest images & ephemeral storage)
* Operating System: (allows creation of different file systems to operate and contain different functions, e.g. /var/log, /var/crash)

### Types of Logical Store

The model allows the expression of the following types of logical stores:

1. Raw disk, e.g. allocate a named raw disk to a Swift ring or a VSA
2. Logical volume: create a logical volume group from raw disks and assign a logical volume to the logical store
3. Path-name: the logical store is a directory in a file system
4. Auto discover: discover the free disks on a node and allocate them a a sequence of  logical stores

### Syntax

The configuration has two major specification sections:

* Storage pools
* Store models

The storage pools is use to define how raw volumes can be aggregated into  storage pools that can subsequently be used to create logical volumes for logical stores. The only aggregation method currently supported is LVM, but  the specification supports the extensible include other methods, such as custom deceive mapper implementations.

The storage models section lists the different logical stores on the node, their backing stores and how they store is consumed by HOS services along with any service specific attributes

The following yaml confugration