



Red Hat OpenStack Platform 17.1

Overcloud parameters

Parameters for customizing the core template collection for a Red Hat OpenStack Platform overcloud

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Abstract

This guide lists parameters that might be used in the deployment of OpenStack using the Orchestration service (heat). The parameters and definitions are extracted from the upstream source code, and not all parameters that are listed can be used in a supported configuration.

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ABOUT THIS GUIDE



WARNING

This guide is automatically generated from comments embedded in the upstream OpenStack source code. Therefore, not all of the parameters listed in this guide are supported in a production environment. To locate information about actual supported parameters, see the relevant guide that describes your supported use-case.

MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see [our CTO Chris Wright's message](#).

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CHAPTER 1. OVERCLOUD PARAMETERS

You can modify overcloud features with overcloud parameters. To set a parameter, include the chosen parameter and its value in an environment file under the **parameter_defaults** section and include the environment file with your **openstack overcloud deploy** command.

CHAPTER 2. CORE OVERCLOUD PARAMETERS

You can modify general overcloud configuration with the core overcloud parameters.

Parameter	Description
AddVipsToEtcHosts	Set to true to append per network VIPs to /etc/hosts on each node. The default value is True .
AdminPassword	The password for the keystone admin account, used for monitoring, querying OpenStack Networking (neutron) etc.
CloudDomain	The DNS domain used for the hosts. This must match the <code>overcloud_domain_name</code> configured on the undercloud. The default value is localdomain .
CloudName	The DNS name of this cloud. The default value is overcloud.localdomain .
CloudNameCtlplane	The DNS name of this cloud's control plane endpoint. The default value is overcloud.ctlplane.localdomain .
CloudNameInternal	The DNS name of this cloud's internal API endpoint. The default value is overcloud.internalapi.localdomain .
CloudNameStorage	The DNS name of this cloud's storage endpoint. For example, <code>ci-overcloud.storage.tripleo.org</code> . The default value is overcloud.storage.localdomain .
CloudNameStorageManagement	The DNS name of this cloud's storage management endpoint. The default value is overcloud.storagemgmt.localdomain .
ControlFixedIPs	Defines a fixed VIP for the Control Plane. Value uses the following format: [[ip_address:'1.2.3.4']]
ControlPlaneSubnet	The name of the undercloud OpenStack Networking (neutron) control plane subnet. The default value is ctlplane-subnet .
ControlPlaneSubnetCidr	The subnet CIDR of the control plane network. The parameter is automatically resolved from the ctlplane subnet's cidr attribute.
DeployedServerPortMap	Used to assign fixed IPs from either the ctlplane network or the IP address range for the overcloud.

Parameter	Description
DeployIdentifier	Setting this to a unique value will re-run any deployment tasks that perform configuration on an OpenStack Orchestration (heat) stack-update .
DeploymentServerBlacklist	List of server hostnames to blacklist from any triggered deployments.
EndpointMapOverride	Can be used to override the calculated EndpointMap.
ExternalVirtualFixedIPs	Control the IP allocation for the ExternalVirtualInterface port. For example, <code>[{ip_address:'1.2.3.4'}]</code> .
ExtraConfig	Additional hiera configuration to inject into the cluster.
ExtraHostFileEntries	List of extra hosts entries to be appended to <code>/etc/hosts</code> .
GlobalConfigExtraMapData	Map of extra <code>global_config_settings</code> data to set on each node.
HypervisorNeutronPhysicalBridge	An Open vSwitch bridge to create on each hypervisor. This defaults to br-ex , which is the same as the control plane nodes. This ensures uniform configuration of the Open vSwitch agent. Typically should not need to be changed. The default value is br-ex .
HypervisorNeutronPublicInterface	What interface to add to the HypervisorNeutronPhysicalBridge . The default value is nic1 .
InternalApiVirtualFixedIPs	Control the IP allocation for the InternalApiVirtualInterface port. Value uses the following format: <code>[{ip_address:'1.2.3.4'}]</code>
KeystoneRegion	OpenStack Identity (keystone) region for endpoint. The default value is regionOne .
NetConfigDataLookup	Configures os-net-config mappings for specific nodes if you are using pre-provisioned nodes. The configuration of the NetConfigDataLookup heat parameter is equivalent to the net_config_data_lookup property in your node definition file, overcloud-baremetal-deploy.yaml . If you are not using pre-provisioned nodes, you must configure the NIC mappings in your node definition file.

Parameter	Description
NetworkConfigWithAnsible	NetworkConfig with ansible flag. The default value is True .
NeutronControlPlaneID	ID or name for Control Plane ctlplane network. The default value is ctlplane .
NeutronPhysicalBridge	An OVS bridge to create for accessing external networks. The default value is br-ex .
NeutronPublicInterface	The interface to attach to the external bridge. The default value is nic1 .
NodeCreateBatchSize	Maximum batch size for creating nodes. It is recommended to not exceed a batch size of 32 nodes. The default value is 30 .
NovaAdditionalCell	Whether this is an cell additional to the default cell. The default value is false .
NovaLocalMetadataPerCell	Indicates that the nova-metadata API service has been deployed per-cell, so that we can have better performance and data isolation in a multi-cell deployment. Users should consider the use of this configuration depending on how OpenStack Networking (neutron) is setup. If networks span cells, you might need to run nova-metadata API service globally. If your networks are segmented along cell boundaries, then you can run nova-metadata API service per cell. When running nova-metadata API service per cell, you should also configure each OpenStack Networking (neutron) metadata-agent to point to the corresponding nova-metadata API service. The default value is false .
PublicVirtualFixedIPs	Control the IP allocation for the PublicVirtualInterface port. Value uses the following format: [{ip_address:'1.2.3.4'}]
RabbitCookieSalt	Salt for the RabbitMQ cookie. Change to force the randomly generated RabbitMQ cookie to change. The default value is unset .
RootStackName	The name of the stack/plan.
ServerMetadata	Extra properties or metadata passed to OpenStack Compute (nova) for the created nodes in the overcloud. Accessible through the OpenStack Compute (nova) metadata API.

Parameter	Description
StorageMgmtVirtualFixedIPs	Control the IP allocation for the StorageMgmtVirtualInterface port. Value uses the following format: [{ip_address:'1.2.3.4'}]
StorageVirtualFixedIPs	Control the IP allocation for the StorageVirtualInterface port. Value uses the following format: [{ip_address:'1.2.3.4'}]
UndercloudHostsEntries	List of undercloud hosts entries to be appended to /etc/hosts. The value is populated with the HEAT_HOSTS entries on the undercloud by tripleoclient when running deploy.
UpdateIdentifier	Set to a previously unused value during stack-update triggers package update on all nodes.

CHAPTER 3. ROLE-BASED PARAMETERS

You can modify the behavior of specific overcloud composable roles with overcloud role-based parameters. Substitute `_ROLE_` with the name of the role. For example, for `_ROLE_Count` use `ControllerCount`.

Parameter	Description
<code>_ROLE_AnyErrorsFatal</code>	Sets the any_errors_fatal value when running config-download Ansible playbooks. The default value is yes .
<code>_ROLE_ControlPlaneSubnet</code>	Name of the subnet on ctlplane network for this role. The default value is ctlplane-subnet .
<code>_ROLE_Count</code>	The number of nodes to deploy in a role. The default value is 1 .
<code>_ROLE_ExtraConfig</code>	Role specific additional hiera configuration to inject into the cluster.
<code>_ROLE_ExtraGroupVars</code>	Optional extra Ansible group vars.
<code>_ROLE_HostnameFormat</code>	Format for node hostnames. Note that %index% is translated into the index of the node (e.g 0/1/2) and %stackname% is replaced with the stack name (e.g overcloud). The default value is %stackname%_-_role_%index% .
<code>_ROLE_LocalMtu</code>	MTU to use for the Undercloud local_interface. The default value is 1500 .
<code>_ROLE_MaxFailPercentage</code>	Sets the max_fail_percentage value when running config-download Ansible playbooks. The default value is 0 .
<code>_ROLE_NetConfigOverride</code>	Custom JSON data to be used to override the <code>os-net-config</code> config. This is meant to be used by <code>net_config_override</code> parameter in <code>tripleoclient</code> to provide an easy means to pass in custom net configs for the Undercloud.
<code>_ROLE_NetworkConfigTemplate</code>	<i>ROLE</i> NetworkConfig Template.
<code>_ROLE_NetworkConfigUpdate</code>	When set to "True", existing networks will be updated on the overcloud. This parameter replaces the functionality previously provided by <code>NetworkDeploymentActions</code> . Defaults to "False" so that only new nodes will have their networks configured. This is a role based parameter. The default value is False .

Parameter	Description
_ROLE_Parameters	Optional Role Specific parameters to be provided to service.
_ROLE_ReplacementPolicies	List of resources to be removed from the role's ResourceGroup when doing an update that requires removal of specific resources.
_ROLE_ReplacementPoliciesMode	How to handle change to ReplacementPolicies for <i>ROLE</i> ResourceGroup when doing an update. Default mode <i>append</i> will append to the existing blocklist and <i>update</i> would replace the blocklist. The default value is append .
_ROLE_SchedulerHints	Optional scheduler hints to pass to OpenStack Compute (nova).
_ROLE_ServiceNetMap	Role specific ServiceNetMap overrides, the map provided will be merged with the global ServiceNetMap when passing the ServiceNetMap to the <i>ROLE_ServiceChain</i> resource and the <i>_ROLE</i> resource group. For example: _ROLE_ServiceNetMap: NovaLibvirtNetwork: internal_api_leaf2.
_ROLE_Services	A list of service resources (configured in the OpenStack Orchestration (heat) resource_registry) which represent nested stacks for each service that should get installed on the <i>ROLE</i> role.

CHAPTER 4. DEBUG PARAMETERS

These parameters allow you to set debug mode on a per-service basis. The **Debug** parameter acts as a global parameter for all services and the per-service parameters can override the effects of global parameter on individual services.

Parameter	Description
BarbicanDebug	Set to True to enable debugging OpenStack Key Manager (barbican) service. The default value is false .
CinderDebug	Set to True to enable debugging on OpenStack Block Storage (cinder) services. The default value is false .
ConfigDebug	Whether to run configuration management (e.g. Puppet) in debug mode. The default value is false .
Debug	Set to True to enable debugging on all services. The default value is false .
DesignateDebug	Set to True to enable debugging Designate services. The default value is false .
GlanceDebug	Set to True to enable debugging OpenStack Image Storage (glance) service. The default value is false .
HeatDebug	Set to True to enable debugging OpenStack Orchestration (heat) services. The default value is false .
HorizonDebug	Set to True to enable debugging OpenStack Dashboard (horizon) service. The default value is false .
IronicDebug	Set to True to enable debugging OpenStack Bare Metal (ironic) services. The default value is false .
KeystoneDebug	Set to True to enable debugging OpenStack Identity (keystone) service. The default value is false .
ManilaDebug	Set to True to enable debugging OpenStack Shared File Systems (manila) services. The default value is false .
MemcachedDebug	Set to True to enable debugging Memcached service. The default value is false .

Parameter	Description
NeutronDebug	Set to True to enable debugging OpenStack Networking (neutron) services. The default value is false .
NovaDebug	Set to True to enable debugging OpenStack Compute (nova) services. The default value is false .
OctaviaDebug	Set to True to enable debugging OpenStack Load Balancing-as-a-Service (octavia) services. The default value is false .

CHAPTER 5. KERNEL PARAMETERS

You can modify the kernel behaviour with kernel parameters.

Parameter	Description
BridgeNfCallArpTables	Configures <code>sysctl net.bridge.bridge-nf-call-arp</code> key. The default value is 1 .
BridgeNfCallIp6Tables	Configures <code>sysctl net.bridge.bridge-nf-call-ip6tables</code> key. The default value is 1 .
BridgeNfCallIpTables	Configures <code>sysctl net.bridge.bridge-nf-call-iptables</code> key. The default value is 1 .
ExtraKernelModules	Hash of extra kernel modules to load.
ExtraKernelPackages	List of extra kernel related packages to install.
ExtraSysctlSettings	Hash of extra <code>sysctl</code> settings to apply.
FsAioMaxNumber	The kernel allocates aio memory on demand, and this number limits the number of parallel aio requests; the only drawback of a larger limit is that a malicious guest could issue parallel requests to cause the kernel to set aside memory. Set this number at least as large as $128 * (\text{number of virtual disks on the host})$. Libvirt uses a default of 1M requests to allow 8k disks, with at most 64M of kernel memory if all disks hit an aio request at the same time. The default value is 0 .
InotifyInstancesMax	Configures <code>sysctl fs.inotify.max_user_instances</code> key. The default value is 1024 .
InotifyIntancesMax	Configures <code>sysctl fs.inotify.max_user_instances</code> key. The default value is 1024 .
KernelDisableIPv6	Configures <code>sysctl net.ipv6.{default/all}.disable_ipv6</code> keys. The default value is 0 .
KernelIpForward	Configures <code>net.ipv4.ip_forward</code> key. The default value is 1 .
KernelIpNonLocalBind	Configures <code>net.ipv{4,6}.ip_nonlocal_bind</code> key. The default value is 1 .
KernelIpv4ConfAllRpFilter	Configures the <code>net.ipv4.conf.all.rp_filter</code> key. The default value is 1 .

Parameter	Description
KernelIpv6ConfAllForwarding	Configures the net.ipv6.conf.all.forwarding key. The default value is 0 .
KernelPidMax	Configures sysctl kernel.pid_max key. The default value is 1048576 .
NeighbourGcThreshold1	Configures sysctl net.ipv4.neigh.default.gc_thresh1 value. This is the minimum number of entries to keep in the ARP cache. The garbage collector will not run if there are fewer than this number of entries in the cache. The default value is 1024 .
NeighbourGcThreshold2	Configures sysctl net.ipv4.neigh.default.gc_thresh2 value. This is the soft maximum number of entries to keep in the ARP cache. The garbage collector will allow the number of entries to exceed this for 5 seconds before collection will be performed. The default value is 2048 .
NeighbourGcThreshold3	Configures sysctl net.ipv4.neigh.default.gc_thresh3 value. This is the hard maximum number of entries to keep in the ARP cache. The garbage collector will always run if there are more than this number of entries in the cache. The default value is 4096 .

CHAPTER 6. DNS (DESIGNATE) PARAMETERS

You can modify the designate service with DNS parameters.

Parameter	Description
DesignateBindQueryLogging	Set to true to enable logging of queries on BIND. The default value is false .
DesignateManagedResourceEmail	Configure email address to be set in zone SOAs. Leaving unset results in service defaults being used.
DesignateMdnsProxyBasePort	Configure the base port for the MiniDNS proxy endpoints on the external/public access network. The default value is 16000 .
DesignateMinTTL	Configure the minimum allowable TTL in seconds. The default value is 0 which leaves the parameter unset. The default value is 0 .
DesignateWorkers	Number of workers for Designate services. The default value is 0 .
UnboundAllowedCIDRs	A list of CIDRs allowed to make queries through Unbound. Example, <code>[192.0.2.0/24, 198.51.100.0/24]</code> .
UnboundAllowRecursion	When false, Unbound will not attempt to recursively resolve the request. It will only answer for queries using local information. The default value is true .
UnboundDesignateIntegration	Set to false to disable configuring neutron using the deployed unbound server as the default resolver. The default value is true .
UnboundForwardFallback	When true, if the forwarded query receives a SERVFAIL, Unbound will process the request as a standard recursive resolution. The default value is true .
UnboundForwardResolvers	A list of DNS resolver IP addresses, with optional port, that Unbound will forward resolution requests to if Unbound does not have the answer. Example, <code>[192.0.2.10, 192.0.2.20@53]</code> .
UnboundLogQueries	If true, Unbound will log the query requests. The default value is false .
UnboundSecurityHarden	When true, Unbound will block certain queries that could have security implications to the Unbound service. The default value is true .

CHAPTER 7. BARE METAL (IRONIC) PARAMETERS

You can modify the ironic service with bare metal parameters.

Parameter	Description
AdditionalArchitectures	List of additional architectures to enable.
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
IPImageURLs	IPA image URLs, the format should be ["http://path/to/kernel", "http://path/to/ramdisk"].
IronicAutomatedClean	Enables or disables automated cleaning. Disabling automated cleaning might result in security problems and deployment failures on rebuilds. Do not set to False unless you understand the consequences of disabling this feature. The default value is true .
IronicCleaningDiskErase	Type of disk cleaning before and between deployments. full for full cleaning. metadata to clean only disk metadata (partition table). The default value is full .
IronicCleaningNetwork	Name or UUID of the overcloud network used for cleaning bare metal nodes. Set to provisioning during the initial deployment (when no networks are created yet) and change to an actual UUID in a post-deployment stack update. The default value is provisioning .
IronicConductorGroup	The name of an OpenStack Bare Metal (ironic) Conductor Group.
IronicConfigureSwiftTempUrlKey	Whether to configure Swift temporary URLs for use with the "direct" and "ansible" deploy interfaces. The default value is true .

Parameter	Description
IronicCorsAllowedOrigin	Indicate whether this resource may be shared with the domain received in the request "origin" header.
IronicDefaultBootInterface	Boot interface implementation to use by default. Leave empty to set none. This may not work if a hardware type does not support the set boot interface. This overrides create-time defaults. The ordered union of the enabled boot interfaces and hardware type determines, under normal circumstances, what the default will be.
IronicDefaultBootMode	Default boot mode to use when no boot mode is explicitly requested in node's driver_info, capabilities or in the "instance_info" configuration. One of <i>bios</i> or <i>uefi</i> . The default value is uefi .
IronicDefaultBootOption	How to boot the bare metal instances. Set to local to use local bootloader (requires grub2 for partition images). Set to netboot to make the instances boot from controllers using PXE/iPXE. The default value is local .
IronicDefaultDeployInterface	Deploy interface implementation to use by default. Leave empty to use the hardware type default.
IronicDefaultInspectInterface	Inspect interface implementation to use by default. Leave empty to use the hardware type default.
IronicDefaultNetworkInterface	Network interface implementation to use by default. Set to flat to use one flat provider network. Set to neutron to make OpenStack Bare Metal (ironic) interact with the OpenStack Networking (neutron) ML2 driver to enable other network types and certain advanced networking features. Requires IronicProvisioningNetwork to be correctly set. The default value is flat .
IronicDefaultRescueInterface	Default rescue implementation to use. The "agent" rescue requires a compatible ramdisk to be used. The default value is agent .
IronicDefaultResourceClass	Default resource class to use for new nodes.
IronicDeployLogsStorageBackend	Backend to use to store ramdisk logs, either "local" or "swift". The default value is local .

Parameter	Description
IronicDhcpv6StatefulAddressCount	Number of IPv6 addresses to allocate for ports created for provisioning, cleaning, rescue or inspection on DHCPv6-stateful networks. Different stages of the chain-loading process will request addresses with different CLID/IAID. Due to non-identical identifiers multiple addresses must be reserved for the host to ensure each step of the boot process can successfully lease addresses. The default value is 4 .
IronicEnabledBiosInterfaces	Enabled BIOS interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['no-bios'] .
IronicEnabledBootInterfaces	Enabled boot interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['ipxe', 'pxe'] .
IronicEnabledConsoleInterfaces	Enabled console interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['ipmitool-socat', 'no-console'] .
IronicEnabledDeployInterfaces	Enabled deploy interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['direct'] .
IronicEnabledHardwareTypes	Enabled OpenStack Bare Metal (ironic) hardware types. The default value is ['ipmi', 'redfish'] .
IronicEnabledInspectInterfaces	Enabled inspect interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['no-inspect'] .
IronicEnabledManagementInterfaces	Enabled management interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['ipmitool', 'noop', 'redfish'] .
IronicEnabledNetworkInterfaces	Enabled network interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['flat', 'neutron'] .

Parameter	Description
IronicEnabledPowerInterfaces	Enabled power interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['ipmitool', 'redfish'] .
IronicEnabledRaidInterfaces	Enabled RAID interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['no-raid', 'agent'] .
IronicEnabledRescueInterfaces	Enabled rescue interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['no-rescue', 'agent'] .
IronicEnabledStorageInterfaces	Enabled storage interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['cinder', 'noop'] .
IronicEnabledVendorInterfaces	Enabled vendor interface implementations. Each hardware type must have at least one valid implementation enabled. The default value is ['ipmitool', 'no-vendor'] .
IronicEnableNovaPowerNotifications	Enable/Disable the support for power state change callbacks to nova. The default value is true .
IronicEnableStagingDrivers	Whether to enable use of staging drivers. The default value is false .
IronicForcePowerStateDuringSync	Whether to force power state during sync. The default value is true .
IronicImageDownloadSource	Image delivery method for the "direct" deploy interface. Use "swift" for the Object Storage temporary URLs, use "http" for the local HTTP server (the same as for iPXE). The default value is http .
IronicInspectorCollectors	Comma-separated list of IPA inspection collectors. The default value is default,logs .
IronicInspectorDiscoveryDefaultDriver	The default driver to use for newly discovered nodes (requires IronicInspectorEnableNodeDiscovery set to True). This driver is automatically added to enabled_drivers. The default value is ipmi .

Parameter	Description
IronicInspectorEnableNodeDiscovery	Makes ironic-inspector enroll any unknown node that PXE-boots introspection ramdisk in OpenStack Bare Metal (ironic). The default driver to use for new nodes is specified by the <code>IronicInspectorDiscoveryDefaultDriver</code> parameter. Introspection rules can also be used to specify it. The default value is false .
IronicInspectorExtraProcessingHooks	Comma-separated list of processing hooks to append to the default list. The default value is extra_hardware,lldp_basic,local_link_connection,physnet_cidr_map .
IronicInspectorInterface	Network interface on which inspection dnsmasq will listen. The default value is br-ex .
IronicInspectorIpRange	Temporary IP range that will be given to nodes during the inspection process. This should not overlap with any range that OpenStack Networking (neutron) DHCP allocates, but it has to be routeable back to ironic-inspector . This option has no meaningful defaults, and thus is required.
IronicInspectorIPXEnabled	Whether to use iPXE for inspection. The default value is true .
IronicInspectorKernelArgs	Kernel args for the OpenStack Bare Metal (ironic) inspector. The default value is ipa-inspection-dhcp-all-interfaces=1 ipa-collect-lldp=1 ipa-debug=1 .
IronicInspectorStorageBackend	Storage backend for storing introspection data. The default value is none .
IronicInspectorSubnets	Temporary IP ranges that will be given to nodes during the inspection process. These ranges should not overlap with any range that OpenStack Networking (neutron) DHCP provides, but they need to be routeable back to the ironic-inspector API. This option has no meaningful defaults and is required.
IronicInspectorUseSwift	DEPRECATED: Use <code>IronicInspectorStorageBackend</code> instead. Whether to use Swift for storing introspection data. The default value is true .
IronicIpVersion	The IP version that will be used for PXE booting. The default value is 4 .

Parameter	Description
IronicIPXEEnabled	Whether to use iPXE instead of PXE for deployment. The default value is true .
IronicIPXEPort	Port to use for serving images when iPXE is used. The default value is 8088 .
IronicIPXETimeout	IPXE timeout in second. Set to 0 for infinite timeout. The default value is 60 .
IronicIPXEUefiSnponly	Whether to use SNP (Simple Network Protocol) iPXE EFI, or not. When set to true ipxe-snponly EFI is used. The default value is true .
IronicPassword	The password for the Bare Metal service and database account.
IronicPowerStateChangeTimeout	Number of seconds to wait for power operations to complete, i.e., so that a baremetal node is in the desired power state. If timed out, the power operation is considered a failure. The default value is 60 .
IronicProvisioningNetwork	Name or UUID of the overcloud network used for provisioning of bare metal nodes if IronicDefaultNetworkInterface is set to neutron . Set to provisioning during the initial deployment (when no networks are created yet) and change to an actual UUID in a post-deployment stack update. The default value is provisioning .
IronicRescuingNetwork	Name or UUID of the overcloud network used for rescuing of bare metal nodes, if IronicDefaultRescueInterface is not set to "no-rescue". The default value of "provisioning" can be left during the initial deployment (when no networks are created yet) and should be changed to an actual UUID in a post-deployment stack update. The default value is provisioning .
IronicRpcTransport	The remote procedure call transport between conductor and API processes, such as a messaging broker or JSON RPC.
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .

Parameter	Description
PortPhysnetCidrMap	Mapping of IP subnet CIDR to physical network. When the <code>physnet_cidr_map</code> processing hook is enabled the <code>physical_network</code> property of baremetal ports is populated based on this mapping. Example: <code>PortPhysnetCidrMap: 10.10.10.0/24:physnet_a 2001:db8::/64:physnet_b.</code>

CHAPTER 8. BLOCK STORAGE (CINDER) PARAMETERS

You can modify the cinder service with block storage parameters.

Parameter	Description
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
AuthCloudName	Entry in clouds.yaml to use for authentication.
CephClusterFSID	The Ceph cluster FSID. Must be a UUID.
CephClusterName	The Ceph cluster name. The default value is ceph .
CephConfigPath	The path where the Ceph Cluster configuration files are stored on the host. The default value is /var/lib/tripleo-config/ceph .
CephExternalMultiConfig	List of maps describing extra overrides which will be applied when configuring extra external Ceph clusters. If this list is non-empty, ceph-ansible will run an extra count(list) times using the same parameters as the first run except each parameter within each map will override the defaults. If the following were used, the second run would configure the overcloud to also use the ceph2 cluster with all the previous parameters except <code>/etc/ceph/ceph2.conf</code> would have a <code>mon_host</code> entry containing the value of <code>external_cluster_mon_ips</code> below, and not the default <code>CephExternalMonHost</code> . Subsequent ceph-ansible runs are restricted to just ceph clients. <code>CephExternalMultiConfig</code> may not be used to deploy additional internal Ceph clusters within one OpenStack Orchestration (heat) stack. The map for each list should contain not <code>tripleo-heat-template</code> parameters but ceph-ansible parameters. - cluster: <code>ceph2</code> fsid: <code>e2cba068-5f14-4b0f-b047-acf375c0004a</code> external_cluster_mon_ips: <code>172.18.0.5,172.18.0.6,172.18.0.7</code> keys: - name: <code>"client.openstack"</code> caps: mgr: <code>"allow *"</code> mon: <code>"profile rbd"</code> osd: <code>"osd: profile rbd pool=volumes, profile rbd pool=backups, profile rbd pool=vms, profile rbd pool=images"</code> key: <code>"AQCwmeRcAAAAABAA6SQU/bGqFjflRo5KxrB1Q="</code> mode: <code>"0600"</code> dashboard_enabled: <code>false</code> .

Parameter	Description
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
CinderApiWsgiTimeout	The number of seconds until a OpenStack Block Storage (cinder) API WSGI connection times out. The default value is 60 .
CinderBackupOptVolumes	List of optional volumes to be mounted.
CinderCronDbPurgeAge	Cron to purge database entries marked as deleted and older than \$age - Age. The default value is 30 .
CinderCronDbPurgeDestination	Cron to purge database entries marked as deleted and older than \$age - Log destination. The default value is /var/log/cinder/cinder-rowsflush.log .
CinderCronDbPurgeHour	Cron to purge database entries marked as deleted and older than \$age - Hour. The default value is 0 .
CinderCronDbPurgeMaxDelay	Cron to purge database entries marked as deleted and older than \$age - Max Delay. The default value is 3600 .
CinderCronDbPurgeMinute	Cron to purge database entries marked as deleted and older than \$age - Minute. The default value is 1 .
CinderCronDbPurgeMonth	Cron to purge database entries marked as deleted and older than \$age - Month. The default value is * .
CinderCronDbPurgeMonthday	Cron to purge database entries marked as deleted and older than \$age - Month Day. The default value is * .
CinderCronDbPurgeUser	Cron to purge database entries marked as deleted and older than \$age - User. The default value is cinder .
CinderCronDbPurgeWeekday	Cron to purge database entries marked as deleted and older than \$age - Week Day. The default value is * .
CinderDefaultVolumeType	The name of the OpenStack Block Storage (cinder) default volume type. The default value is tripleo .

Parameter	Description
CinderEnableDBPurge	Whether to create cron job for purging soft deleted rows in OpenStack Block Storage (cinder) database. The default value is true .
CinderEnableIscsiBackend	Whether to enable or not the Iscsi backend for OpenStack Block Storage (cinder). The default value is true .
CinderEnableNfsBackend	Whether to enable or not the NFS backend for OpenStack Block Storage (cinder). The default value is false .
CinderEnableNVMeOFBackend	Whether to enable or not the NVMeOF backend for OpenStack Block Storage (cinder). The default value is false .
CinderEnableRbdBackend	Whether to enable or not the Rbd backend for OpenStack Block Storage (cinder). The default value is false .
CinderEtcdLocalConnect	When running OpenStack Block Storage (cinder) A/A, whether to connect to Etcd via the local IP for the Etcd network. If set to true, the ip on the local node will be used. If set to false, the VIP on the Etcd network will be used instead. Defaults to false. The default value is false .
CinderImageConversionNfsOptions	NFS mount options when using an NFS share for the OpenStack Block Storage (cinder) image conversion directory. The default value is _netdev,bg,intr,context=system_u:object_r:container_file_t:s0 .
CinderImageConversionNfsShare	When set, the NFS share to be used for the OpenStack Block Storage (cinder) image conversion directory.
CinderISCSIAvailabilityZone	The availability zone of the Iscsi OpenStack Block Storage (cinder) backend. When set, it overrides the default CinderStorageAvailabilityZone.
CinderISCSHelper	The iSCSI helper to use with cinder. The default value is lioadm .
CinderISCSIProtocol	Whether to use TCP (<i>iscsi</i>) or iSER RDMA (<i>iser</i>) for iSCSI. The default value is iscsi .

Parameter	Description
CinderLVMConfigureVG	Whether to configure the <i>cinder-volumes</i> VG used by the LVM driver. When disabled (set to <code>False</code>), the LVM driver will work as long as the <i>cinder-volumes</i> VG has been created through some other means. The default value is true .
CinderLVMLoopDeviceSize	The size of the loopback file used by the cinder LVM driver. The default value is 10280 .
CinderNasSecureFileOperations	Controls whether security enhanced NFS file operations are enabled. Valid values are <i>auto</i> , <i>true</i> or <i>false</i> . Effective when <code>CinderEnableNfsBackend</code> is true. The default value is false .
CinderNasSecureFilePermissions	Controls whether security enhanced NFS file permissions are enabled. Valid values are <i>auto</i> , <i>true</i> or <i>false</i> . Effective when <code>CinderEnableNfsBackend</code> is true. The default value is false .
CinderNfsAvailabilityZone	The availability zone of the NFS OpenStack Block Storage (cinder) backend. When set, it overrides the default <code>CinderStorageAvailabilityZone</code> .
CinderNfsMountOptions	Mount options for NFS mounts used by OpenStack Block Storage (cinder) NFS backend. Effective when <code>CinderEnableNfsBackend</code> is true. The default value is context=system_u:object_r:container_file_t:s0 .
CinderNfsServers	NFS servers used by OpenStack Block Storage (cinder) NFS backend. Effective when <code>CinderEnableNfsBackend</code> is true.
CinderNfsSnapshotSupport	Whether to enable support for snapshots in the NFS driver. Effective when <code>CinderEnableNfsBackend</code> is true. The default value is false .
CinderNVMeOFAvailabilityZone	The availability zone of the NVMeOF OpenStack Block Storage (cinder) backend. When set, it overrides the default <code>CinderStorageAvailabilityZone</code> .
CinderNVMeOFTargetProtocol	The target protocol, supported values are <code>nvmet_rdma</code> and <code>nvmet_tcp</code> . The default value is nvmet_rdma .
CinderPassword	The password for the cinder service and database account.

Parameter	Description
CinderRbdAvailabilityZone	The availability zone of the RBD OpenStack Block Storage (cinder) backend. When set, it overrides the default CinderStorageAvailabilityZone.
CinderRbdBackendName	A list of OpenStack Block Storage (cinder) RBD backend names. The default value is tripleo_ceph .
CinderRbdExtraPools	List of extra Ceph pools for use with RBD backends for OpenStack Block Storage (cinder). An extra OpenStack Block Storage (cinder) RBD backend driver is created for each pool in the list. This is in addition to the standard RBD backend driver associated with the CinderRbdPoolName.
CinderRbdFlattenVolumeFromSnapshot	Whether RBD volumes created from a snapshot should be flattened in order to remove a dependency on the snapshot. The default value is false .
CinderRbdMultiConfig	Dictionary of settings when configuring multiple RBD backends. The hash key is the backend name, and the value is a dictionary of parameter values unique to that backend. The following parameters are required, and must match the corresponding value defined in CephExternalMultiConfig. CephClusterName (must match the CephExternalMultiConfig entry's <i>cluster</i>) CephClusterFSID (must match the CephExternalMultiConfig entry's <i>fsid</i>) The following parameters are optional, and override the corresponding parameter's default value. CephClientUserName CinderRbdPoolName CinderRbdExtraPools CinderRbdAvailabilityZone CinderRbdFlattenVolumeFromSnapshot.
CinderRbdPoolName	The Ceph pool to use for cinder volumes. The default value is volumes .
CinderRpcResponseTimeout	Cinder's RPC response timeout, in seconds. The default value is 60 .
CinderStorageAvailabilityZone	The OpenStack Block Storage (cinder) service's storage availability zone. The default value is nova .
CinderVolumeCluster	The cluster name used for deploying the cinder-volume service in an active-active (A/A) configuration. This configuration requires the OpenStack Block Storage (cinder) backend drivers support A/A, and the cinder-volume service not be managed by pacemaker. If these criteria are not met then the cluster name must be left blank.

Parameter	Description
CinderVolumeOptEnvVars	Hash of optional environment variables.
CinderVolumeOptVolumes	List of optional volumes to be mounted.
CinderWorkers	Set the number of workers for the block storage service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. It is recommended to choose a suitable non-default value on systems with high CPU core counts. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node. The default value is equal to the number of vCPU cores on the physical node.
ClusterCommonTag	When set to false, a pacemaker service is configured to use a floating tag for its container image name, e.g. <i>REGISTRY/NAMESPACE/IMAGENAME:pcmklatest</i> . When set to true, the service uses a floating prefix as well, e.g. <i>cluster.common.tag/IMAGENAME:pcmklatest</i> . The default value is false .
ClusterFullTag	When set to true, the pacemaker service uses a fully constant tag for its container image name, e.g. <i>cluster.common.tag/SERVICENAME:pcmklatest</i> . The default value is true .
DockerCinderVolumeUlimit	Ulimit for OpenStack Block Storage (cinder) Volume Container. The default value is ['nofile=131072'] .
EnableEtcInternalTLS	Controls whether etcd and the cinder-volume service use TLS for cinder's lock manager, even when the rest of the internal API network is using TLS. The default value is true .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .
MultipathdEnable	Whether to enable the multipath daemon. The default value is false .
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .

CHAPTER 9. CEPH STORAGE PARAMETERS

You can modify your Ceph Storage cluster with Ceph Storage parameters.

Parameter	Description
CephAnsibleDisksConfig	Disks configuration settings. The default value is <code>{'devices': [], 'osd_scenario': 'lvm', 'osd_objectstore': 'bluestore'}</code> .
CephAnsibleEnvironmentVariables	Mapping of Ansible environment variables to override defaults.
CephAnsibleExtraConfig	Extra vars for the ceph-ansible playbook.
CephAnsiblePlaybook	List of paths to the ceph-ansible playbooks to execute. If not specified, the playbook will be determined automatically depending on type of operation being performed (deploy/update/upgrade). The default value is <code>['default']</code> .
CephAnsiblePlaybookVerbosity	The number of <code>-v</code> , <code>-vv</code> , etc. passed to <code>ansible-playbook</code> command. The default value is 1 .
CephAnsibleRepo	The repository that should be used to install the right ceph-ansible package. This value can be used by tripleo-validations to double check the right ceph-ansible version is installed. The default value is centos-ceph-nautilus .
CephAnsibleSkipClient	This boolean (when true) prevents the ceph-ansible client role execution by adding the ceph-ansible tag <code>ceph_client</code> to the <code>--skip-tags</code> list. The default value is true .
CephAnsibleSkipTags	List of ceph-ansible tags to skip. The default value is package-install,with_pkg .
CephAnsibleWarning	In particular scenarios we want this validation to show the warning but don't fail because the package is installed on the system but repos are disabled. The default value is true .
CephCertificateKeySize	Override the private key size used when creating the certificate for this service.
CephClientKey	The Ceph client key. Currently only used for external Ceph deployments to create the openstack user keyring. Can be created with: ceph-authtool --gen-print-key

Parameter	Description
CephClusterFSID	The Ceph cluster FSID. Must be a UUID.
CephClusterName	The Ceph cluster name. The default value is ceph .
CephConfigOverrides	Extra configuration settings to dump into ceph.conf.
CephConfigPath	The path where the Ceph Cluster configuration files are stored on the host. The default value is /var/lib/tripleo-config/ceph .
CephDashboardAdminPassword	Admin password for the dashboard component.
CephDashboardAdminRO	Parameter used to set a read-only admin user. The default value is true .
CephDashboardAdminUser	Admin user for the dashboard component. The default value is admin .
CephDashboardPort	Parameter that defines the ceph dashboard port. The default value is 8444 .
CephEnableDashboard	Parameter used to trigger the dashboard deployment. The default value is false .
CephExternalMonHost	List of externally managed Ceph Mon Host IPs. Only used for external Ceph deployments.

Parameter	Description
CephExternalMultiConfig	<p>List of maps describing extra overrides which will be applied when configuring extra external Ceph clusters. If this list is non-empty, ceph-ansible will run an extra count(list) times using the same parameters as the first run except each parameter within each map will override the defaults. If the following were used, the second run would configure the overcloud to also use the ceph2 cluster with all the previous parameters except <code>/etc/ceph/ceph2.conf</code> would have a <code>mon_host</code> entry containing the value of <code>external_cluster_mon_ips</code> below, and not the default <code>CephExternalMonHost</code>. Subsequent ceph-ansible runs are restricted to just ceph clients. <code>CephExternalMultiConfig</code> may not be used to deploy additional internal Ceph clusters within one OpenStack Orchestration (heat) stack. The map for each list should contain not tripleo-heat-template parameters but ceph-ansible parameters. - cluster: <code>ceph2 fsid:e2cba068-5f14-4b0f-b047-acf375c0004a external_cluster_mon_ips: 172.18.0.5,172.18.0.6,172.18.0.7 keys: - name: "client.openstack" caps: mgr: "allow *" mon: "profile rbd" osd: "osd: profile rbd pool=volumes, profile rbd pool=backups, profile rbd pool=vms, profile rbd pool=images" key: "AQCwmeRcAAAAABAA6SQU/bGqFjLro5KxrB1Q=" mode: "0600" dashboard_enabled: false.</code></p>
CephExtraKeys	<p>List of maps describing extra keys which will be created on the deployed Ceph cluster. Uses ceph-ansible/library/ceph_key.py ansible module. Each item in the list must be in the following example format - name: "client.glance" caps: mgr: "allow *" mon: "profile rbd" osd: "profile rbd pool=images" key: "AQBRgQ9eAAAAABAAv84zEiIJYZPNuJOIwn9Ndg==" mode: "0600".</p>
CephGrafanaAdminPassword	Admin password for grafana component.
CephIPv6	Enables Ceph daemons to bind to IPv6 addresses. The default value is False .
CephManilaClientKey	The Ceph client key. Can be created with: ceph-authtool --gen-print-key
CephMsgrSecureMode	Enable Ceph msgr2 secure mode to enable on-wire encryption between Ceph daemons and also between Ceph clients and daemons. The default value is false .

Parameter	Description
CephOsdPercentageMin	The minimum percentage of Ceph OSDs which must be running and in the Ceph cluster, according to <code>ceph osd stat</code> , for the deployment not to fail. Used to catch deployment errors early. Set this value to 0 to disable this check. Deprecated in Wallaby because of the move from ceph-ansible to <code>cephadm</code> ; the later only brings up OSDs out of band and deployment does not block while waiting for them to come up, thus we cannot do this anymore. The default value is 0 .
CephPoolDefaultPgNum	Default placement group size to use for the RBD pools. The default value is 16 .
CephPoolDefaultSize	Default minimum replication for RBD copies. The default value is 3 .
CephPools	Override settings for one of the predefined pools or to create additional ones. Example: <code>{ "volumes": { "size": 5, "pg_num": 128, "pgp_num": 128 } }</code>
CephRbdMirrorConfigure	Perform mirror configuration between local and remote pool. The default value is true .
CephRbdMirrorCopyAdminKey	Copy the admin key to all nodes. The default value is false .
CephRbdMirrorPool	Name of the local pool to mirror to remote cluster.
CephRbdMirrorRemoteCluster	The name given to the remote Ceph cluster from the local cluster. Keys reside in the <code>/etc/ceph</code> directory. The default value is not-ceph .
CephRbdMirrorRemoteUser	The <code>rbid-mirror</code> daemon needs a user to authenticate with the remote cluster. By default, this key should be available under <code>/etc/ceph/<remote_cluster>.client.<remote_user>.keyring</code> .
CephRgwCertificateKeySize	Override the private key size used when creating the certificate for this service.
CephRgwClientName	The client name for the RADOSGW service." The default value is radosgw .
CephRgwKey	The <code>cephx</code> key for the RADOSGW client. Can be created with <code>ceph-authtool --gen-print-key</code> .
CephValidationDelay	Interval (in seconds) in between validation checks. The default value is 30 .

Parameter	Description
CephValidationRetries	Number of retry attempts for Ceph validation. The default value is 40 .
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
CinderBackupBackend	The short name of the OpenStack Block Storage (cinder) Backup backend to use. The default value is swift .
CinderBackupRbdPoolName	Pool to use if Block Storage (cinder) Backup is enabled. The default value is backups .
CinderEnableRbdBackend	Whether to enable or not the Rbd backend for OpenStack Block Storage (cinder). The default value is false .
CinderRbdExtraPools	List of extra Ceph pools for use with RBD backends for OpenStack Block Storage (cinder). An extra OpenStack Block Storage (cinder) RBD backend driver is created for each pool in the list. This is in addition to the standard RBD backend driver associated with the CinderRbdPoolName.
CinderRbdPoolName	Pool to use for Block Storage (cinder) service. The default value is volumes .
DeploymentServerBlacklist	List of server hostnames to blacklist from any triggered deployments.
GlanceBackend	The short name of the OpenStack Image Storage (glance) backend to use. Set to rbd to use Ceph Storage. The default value is swift .

Parameter	Description
GlanceMultistoreConfig	Dictionary of settings when configuring additional glance backends. The hash key is the backend ID, and the value is a dictionary of parameter values unique to that backend. Multiple rbd and cinder backends are allowed, but file and swift backends are limited to one each. Example: # Default glance store is rbd. GlanceBackend: rbd GlanceStoreDescription: <i>Default rbd store</i> # GlanceMultistoreConfig specifies a second rbd backend, plus a cinder # backend. GlanceMultistoreConfig: rbd2_store: GlanceBackend: rbd GlanceStoreDescription: <i>Second rbd store</i> CephClusterName: ceph2 # Override CephClientUserName if this cluster uses a different # client name. CephClientUserName: client2 cinder1_store: GlanceBackend: cinder GlanceCinderVolumeType: <i>volume-type-1</i> GlanceStoreDescription: <i>First cinder store</i> cinder2_store: GlanceBackend: cinder GlanceCinderVolumeType: <i>volume-type-2</i> GlanceStoreDescription: <i>Seconde cinder store</i> .
GlanceRbdPoolName	Pool to use for Image Storage (glance) service. The default value is images .
GnocchiBackend	The short name of the OpenStack Telemetry Metrics (gnocchi) backend to use. Should be one of swift, rbd, file or s3. The default value is swift .
GnocchiRbdPoolName	Pool to use for Telemetry storage. The default value is metrics .
LocalCephAnsibleFetchDirectoryBackup	Filesystem path on undercloud to persist a copy of the data from the ceph-ansible fetch directory. Used as an alternative to backing up the fetch_directory in Swift. Path must be writable and readable by the user running ansible from config-download, e.g. the mistral user in the mistral-executor container is able to read/write to /var/lib/mistral/ceph_fetch.
ManilaCephFSCephFSAuthId	The CephFS user ID for Shared Filesystem Service (manila). The default value is manila .
ManilaCephFSDataPoolName	Pool to use for file share storage. The default value is manila_data .
ManilaCephFSMetadataPoolName	Pool to use for file share metadata storage. The default value is manila_metadata .

Parameter	Description
ManilaCephFSShareBackendName	Backend name of the CephFS share for file share storage. The default value is cephfs .
NodeExporterContainerImage	Ceph NodeExporter container image.
NovaEnableRbdBackend	Whether to enable the Ceph backend for Compute (nova). The default value is false .
NovaRbdPoolName	Pool to use for Compute storage. The default value is vms .

CHAPTER 10. COMPUTE (NOVA) PARAMETERS

You can modify the nova service with compute parameters.

Parameter	Description
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
AuthCloudName	Entry in clouds.yaml to use for authentication.
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
ContainerNovaLibvirtPidsLimit	Tune nova_libvirt container PID limit (set to 0 for unlimited) (defaults to 65536). The default value is 65536 .
ContainerNovaLibvirtUlimit	Ulimit for OpenStack Compute (nova) Libvirt Container. The default value is ['nofile=131072', 'nproc=126960'] .
CustomProviderInventories	<p>Array of hashes describing the custom providers for the compute role. Format: name/uuid - Resource providers to target can be identified by either UUID or name. In addition, the value \$COMPUTE_NODE can be used in the UUID field to identify all nodes managed by the service. Exactly one of uuid or name is mandatory. If neither uuid or name is provided, the special uuid \$COMPUTE_NODE gets set in the template.</p> <p>inventories - (Optional) Hash of custom provider inventories. <i>total</i> is a mandatory property. Any other optional properties not populated will be given a default value by placement. If overriding a pre-existing provider values will not be preserved from the existing inventory.</p> <p>traits - (Optional) Array of additional traits. Example: ComputeParameters: CustomProviderInventories: - uuid: \$COMPUTE_NODE inventories: CUSTOM_EXAMPLE_RESOURCE_CLASS: total: 100 reserved: 0 min_unit: 1 max_unit: 10 step_size: 1 allocation_ratio: 1.0 CUSTOM_ANOTHER_EXAMPLE_RESOURCE_CLASSES: total: 100 traits: - CUSTOM_P_STATE_ENABLED - CUSTOM_C_STATE_ENABLED.</p>

Parameter	Description
DockerNovaComputeUlimit	Ulimit for OpenStack Compute (nova) Compute Container. The default value is ['nofile=131072', 'memlock=67108864'] .
DockerNovaMigrationSshdPort	Port that dockerized nova migration target sshd service binds to. The default value is 2022 .
EnableCache	Enable caching with memcached. The default value is true .
EnableConfigPurge	Remove configuration that is not generated by the director. Used to avoid configuration remnants after upgrades. The default value is false .
EnableInstanceHA	Whether to enable an Instance Ha configurarion or not. This setup requires the Compute role to have the PacemakerRemote service added to it. The default value is false .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
EnforceSecureRbac	Setting this option to True will configure each OpenStack service to enforce Secure RBAC by setting [oslo_policy] enforce_new_defaults and [oslo_policy] enforce_scope to True. This introduces a consistent set of RBAC personas across OpenStack services that include support for system and project scope, as well as keystone's default roles, admin, member, and reader. Do not enable this functionality until all services in your deployment actually support secure RBAC. The default value is false .
GlanceBackendID	The default backend's identifier. The default value is default_backend .

Parameter	Description
GlanceMultistoreConfig	Dictionary of settings when configuring additional glance backends. The hash key is the backend ID, and the value is a dictionary of parameter values unique to that backend. Multiple rbd and cinder backends are allowed, but file and swift backends are limited to one each. Example: # Default glance store is rbd. GlanceBackend: rbd GlanceStoreDescription: <i>Default rbd store</i> # GlanceMultistoreConfig specifies a second rbd backend, plus a cinder # backend. GlanceMultistoreConfig: rbd2_store: GlanceBackend: rbd GlanceStoreDescription: <i>Second rbd store</i> CephClusterName: ceph2 # Override CephClientUserName if this cluster uses a different # client name. CephClientUserName: client2 cinder1_store: GlanceBackend: cinder GlanceCinderVolumeType: <i>volume-type-1</i> GlanceStoreDescription: <i>First cinder store</i> cinder2_store: GlanceBackend: cinder GlanceCinderVolumeType: <i>volume-type-2</i> GlanceStoreDescription: <i>Seconde cinder store.</i>
InstanceNameTemplate	Template string to be used to generate instance names. The default value is instance-%08x .
InternalTLSVncProxyCAFile	Specifies the CA cert to use for VNC TLS. The default value is /etc/ipa/ca.crt .
KernelArgs	Kernel Args to apply to the host.
LibvirtCACert	This specifies the CA certificate to use for TLS in libvirt. This file will be symlinked to the default CA path in libvirt, which is /etc/pki/CA/cacert.pem. Note that due to limitations GNU TLS, which is the TLS backend for libvirt, the file must be less than 65K (so we can't use the system's CA bundle). This parameter should be used if the default (which comes from the InternalTLSCAFile parameter) is not desired. The current default reflects TripleO's default CA, which is FreeIPA. It will only be used if internal TLS is enabled.
LibvirtCertificateKeySize	Override the private key size used when creating the certificate for this service.

Parameter	Description
LibvirtEnabledPerfEvents	This is a performance event list which could be used as monitor. For example: cmt,mbml,mbmt . Make sure you are using Red Hat Enterprise Linux 7.4 as the base and libvirt version is 1.3.3 or above. Also ensure you have enabled the notifications and are using hardware with a CPU that supports the cmt flag.
LibvirtLogFilters	Defines a filter in libvirt daemon to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:libvirt 1:qemu 1:conf 1:security 3:event 3:json 3:file 3:object 1:util .
LibvirtTLSPassword	The password for the libvirt service when TLS is enabled.
LibvirtTLSPriority	Override the compile time default TLS priority string. The default value is NORMAL:-VERS-SSL3.0:-VERS-TLS-ALL:+VERS-TLS1.2 .
LibvirtVirtlogdLogFilters	Defines a filter in virtlogd to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:logging 4:object 4:json 4:event 1:util .
LibvirtVirtnodedevdLogFilters	Defines a filter in virtnodedevd to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:qemu 1:libvirt 4:object 4:json 4:event 1:util .
LibvirtVirtproxydLogFilters	Defines a filter in virtproxyd to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:qemu 1:libvirt 4:object 4:json 4:event 1:util .
LibvirtVirtqemudLogFilters	Defines a filter in virtqemud to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:qemu 1:libvirt 4:object 4:json 4:event 1:util .
LibvirtVirtsecretLogFilters	Defines a filter in virtsecret to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:qemu 1:libvirt 4:object 4:json 4:event 1:util .

Parameter	Description
LibvirtVirtstoragedLogFilters	Defines a filter in virtstoraged to select a different logging level for a given category log outputs, as specified in https://libvirt.org/logging.html . The default value is 1:qemu 1:libvirt 4:object 4:json 4:event 1:util .
LibvirtVncCACert	This specifies the CA certificate to use for VNC TLS. This file will be symlinked to the default CA path, which is /etc/pki/CA/certs/vnc.crt. This parameter should be used if the default (which comes from the InternalTLSEncProxyCAFile parameter) is not desired. The current default reflects TripleO's default CA, which is FreeIPA. It will only be used if internal TLS is enabled.
LibvirtVNCClientCertificateKeySize	Override the private key size used when creating the certificate for this service.
MemcachedTLS	Set to True to enable TLS on Memcached service. Because not all services support Memcached TLS, during the migration period, Memcached will listen on 2 ports - on the port set with MemcachedPort parameter (above) and on 11211, without TLS. The default value is false .
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .
MigrationSshKey	SSH key for migration. Expects a dictionary with keys <i>public_key</i> and <i>private_key</i> . Values should be identical to SSH public/private key files. The default value is {'public_key': '', 'private_key': ''} .
MigrationSshPort	Target port for migration over ssh. The default value is 2022 .
MultipathdEnable	Whether to enable the multipath daemon. The default value is false .
MysqlIPv6	Enable IPv6 in MySQL. The default value is false .
NeutronMetadataProxySharedSecret	Shared secret to prevent spoofing.
NeutronPhysnetNUMANodesMapping	Map of physnet name as key and NUMA nodes as value. For example: NeutronPhysnetNUMANodesMapping: {'foo': [0, 1], 'bar': [1]} where foo and bar are physnet names and corresponding values are list of associated numa_nodes .

Parameter	Description
NeutronTunnelNUMANodes	Used to configure NUMA affinity for all tunneled networks.
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .
NovaAdditionalCell	Whether this is an cell additional to the default cell. The default value is false .
NovaAllowResizeToSameHost	Allow destination machine to match source for resize. The default value is false .
NovaApiHostStatusPolicy	Configures a custom API policy rule or role for the configured value of the NovaShowHostStatus parameter. The cloud user must be granted this role to access the configured level of Compute host status and the role must already be created in your RHOSP deployment. The default value is role:reader . If you set the NovaShowHostStatus parameter to unknown-only , users with the specified NovaApiHostStatusPolicy role can see the limited host status UNKNOWN when a heartbeat is not received within the configured threshold. If you set the NovaShowHostStatus parameter to all , users with the specified role can see the following statuses of the Compute host for an instance: UP, DOWN, MAINTENANCE, UNKNOWN , and NONE . If you set NovaShowHostStatus to hidden , users with the specified role cannot see the status of the Compute host for an instance. Only the RHOSP administrator can view the Compute host status. To use this feature, ensure that SRBAC is enabled in your RHOSP environment. You must have <code>python-openstackclient-6.0.0</code> or greater installed to see the host status when you use the openstack server list --long command. The default value is role:reader .
NovaApiMaxLimit	Max number of objects returned per API query. The default value is 1000 .
NovaAutoDisabling	Max number of consecutive build failures before the nova-compute will disable itself. The default value is 10 .

Parameter	Description
NovaComputeCpuDedicatedSet	A comma-separated list or range of physical host CPU numbers to which processes for pinned instance CPUs can be scheduled. For example, NovaComputeCpuDedicatedSet: [4-12,^8,15] reserves cores from 4-12 and 15, excluding 8. If setting this option, do not set the deprecated NovaVcpuPinSet parameter.
NovaComputeCpuSharedSet	If the deprecated NovaVcpuPinSet option is not set, then NovaComputeCpuSharedSet is set to a comma-separated list or range of physical host CPU numbers used to provide vCPU inventory, determine the host CPUs that unpinned instances can be scheduled to, and determine the host CPUs that instance emulator threads should be offloaded to for instances configured with the share emulator thread policy, hw:emulator_threads_policy=share . If the deprecated NovaVcpuPinSet is set, then NovaComputeCpuSharedSet is set to a list or range of host CPU cores used to determine the host CPUs that instance emulator threads should be offloaded to for instances configured with the share emulator thread policy (hw:emulator_threads_policy=share). In this case, NovaVcpuPinSet is used to provide vCPU inventory and to determine the host CPUs that both pinned and unpinned instances can be scheduled to. For example, NovaComputeCpuSharedSet: [4-12,^8,15] reserves cores from 4-12 and 15, excluding 8.
NovaComputeDisableIrqBalance	Whether to disable irqbalance on compute nodes or not. Especially in Realtime Compute role one wants to keep it disabled. The default value is false .
NovaComputeEnableKsm	Whether to enable KSM on compute nodes or not. Especially in NFV use case one wants to keep it disabled. The default value is false .

Parameter	Description
NovaComputeForceRawImages	Set to "True" to convert non-raw cached base images to raw format. Set to "False" if you have a system with slow I/O or low available space, trading the higher CPU requirements of compression for that of minimized input bandwidth. Notes: - The Compute service removes any compression from the base image during compression, to avoid CPU bottlenecks. Converted images cannot have backing files, which might be a security issue. - The raw image format uses more space than other image formats, for example, qcow2. Raw base images are always used with <code>libvirt_images_type=lv</code> . The default value is true .
NovaComputeImageCacheManagerInterval	Specifies the number of seconds to wait between runs of the image cache manager, which impacts base image caching on Compute nodes. This period is used in the auto removal of unused cached images configured with <code>remove_unused_base_images</code> and <code>remove_unused_original_minimum_age_seconds</code> . Set to "0" to run at the default interval of 60 seconds (not recommended). The default value is 2400 .
NovaComputeImageCachePrecacheConcurrency	Maximum number of Compute nodes to trigger image precaching in parallel. When an image precache request is made, Compute nodes are contacted {by who/which service} to initiate the download. Higher numbers will cause more computes to work in parallel and may result in reduced time to complete the operation, but may also DDoS the image service. Lower numbers will result in more sequential operation, lower image service load, but likely longer runtime to completion. The default value is 1 .
NovaComputeImageCacheRemoveUnusedBaseImages	Set to "True" to automatically remove unused base images from the cache at intervals configured by using <code>image_cache_manager_interval</code> . Images are defined as unused if they have not been accessed during the time specified by using <code>remove_unused_original_minimum_age_seconds</code> . The default value is true .
NovaComputeImageCacheRemoveUnusedResizedMinimumAge	Specifies the minimum age that an unused resized base image must be to be removed from the cache, in seconds. Unused unresized base images younger than this will not be removed. The default value is 3600 .

Parameter	Description
NovaComputeLibvirtPreAllocateImages	<p>Specifies the preallocation mode for libvirt instance disks. Set to one of the following valid values:: - none - No storage is provisioned at instance start. - space - Storage is fully allocated at instance start using fallocate, which can help with both space guarantees and I/O performance.</p> <p>Even when not using CoW instance disks, the copy each instance gets is sparse and so the instance might fail unexpectedly at run time with ENOSPC. By running fallocate(1) on the instance disk images, the Compute service immediately and efficiently allocates the space for them in the file system, if supported. Run time performance should also be improved because the file system does not have to dynamically allocate blocks at run time, which reduces CPU overhead and file fragmentation. The default value is none.</p>
NovaComputeLibvirtType	Libvirt domain type. Defaults to <i>kvm</i> . The default value is kvm .
NovaComputeOptEnvVars	List of optional environment variables.
NovaComputeOptVolumes	List of optional volumes.
NovaComputeStartupDelay	Delays the startup of nova-compute service after compute node is booted. This is to give a chance to ceph to get back healthy before booting instances after and overcloud reboot. The default value is 0 .
NovaComputeUseCowImages	Set to "True" to use CoW (Copy on Write) images in cqow2 format for libvirt instance disks. With CoW, depending on the backing store and host caching, there might be better concurrency achieved by having each instance operate on its own copy. Set to "False" to use the raw format. Raw format uses more space for common parts of the disk image. The default value is true .
NovaCPUALlocationRatio	Virtual CPU to physical CPU allocation ratio. The default value is 0.0 .
NovaCronArchiveDeleteAllCells	Archive deleted instances from all cells. The default value is true .

Parameter	Description
NovaCronArchiveDeleteRowsAge	Cron to archive deleted instances - Age. This will define the retention policy when archiving the deleted instances entries in days. 0 means archive data older than today in shadow tables. The default value is 90 . The default value is 90 .
NovaCronArchiveDeleteRowsDestination	Cron to move deleted instances to another table - Log destination. The default value is /var/log/nova/nova-rowsflush.log .
NovaCronArchiveDeleteRowsHour	Cron to move deleted instances to another table - Hour. The default value is 0 .
NovaCronArchiveDeleteRowsMaxDelay	Cron to move deleted instances to another table - Max Delay. The default value is 3600 .
NovaCronArchiveDeleteRowsMaxRows	Cron to move deleted instances to another table - Max Rows. The default value is 1000 .
NovaCronArchiveDeleteRowsMinute	Cron to move deleted instances to another table - Minute. The default value is 1 .
NovaCronArchiveDeleteRowsMonth	Cron to move deleted instances to another table - Month. The default value is * .
NovaCronArchiveDeleteRowsMonthday	Cron to move deleted instances to another table - Month Day. The default value is * .
NovaCronArchiveDeleteRowsPurge	Purge shadow tables immediately after scheduled archiving. The default value is false .
NovaCronArchiveDeleteRowsUntilComplete	Cron to move deleted instances to another table - Until complete. The default value is true .
NovaCronArchiveDeleteRowsUser	Cron to move deleted instances to another table - User. The default value is nova .
NovaCronArchiveDeleteRowsWeekday	Cron to move deleted instances to another table - Week Day. The default value is * .
NovaCronPurgeShadowTablesAge	Cron to purge shadow tables - Age This will define the retention policy when purging the shadow tables in days. 0 means, purge data older than today in shadow tables. The default value is 14 .
NovaCronPurgeShadowTablesAllCells	Cron to purge shadow tables - All cells. The default value is true .

Parameter	Description
NovaCronPurgeShadowTablesDestination	Cron to purge shadow tables - Log destination. The default value is /var/log/nova/nova-rowspurge.log .
NovaCronPurgeShadowTablesHour	Cron to purge shadow tables - Hour. The default value is 5 .
NovaCronPurgeShadowTablesMaxDelay	Cron to purge shadow tables - Max Delay. The default value is 3600 .
NovaCronPurgeShadowTablesMinute	Cron to purge shadow tables - Minute. The default value is 0 .
NovaCronPurgeShadowTablesMonth	Cron to purge shadow tables - Month. The default value is * .
NovaCronPurgeShadowTablesMonthday	Cron to purge shadow tables - Month Day. The default value is * .
NovaCronPurgeShadowTablesUser	Cron to purge shadow tables - User. The default value is nova .
NovaCronPurgeShadowTablesVerbose	Cron to purge shadow tables - Verbose. The default value is false .
NovaCronPurgeShadowTablesWeekday	Cron to purge shadow tables - Week Day. The default value is * .
NovaCrossAZAttach	Whether instances can attach cinder volumes from a different availability zone. The default value is true .
NovaDefaultFloatingPool	Default pool for floating IP addresses. The default value is public .
NovaDisableComputeServiceCheckForFfu	Facilitate a Fast-Forward upgrade where new control services are being started before compute nodes have been able to update their service record. The default value is false .
NovaDisableImageDownloadToRbd	Refuse to boot an instance if it would require downloading from glance and uploading to ceph instead of a COW clone. The default value is false .
NovaDiskAllocationRatio	Virtual disk to physical disk allocation ratio. The default value is 0.0 .

Parameter	Description
NovaEnableDBArchive	Whether to create cron job for archiving soft deleted rows in OpenStack Compute (nova) database. The default value is true .
NovaEnableDBPurge	Whether to create cron job for purging soft deleted rows in OpenStack Compute (nova) database. The default value is true .
NovaEnableVirtlogdContainerWrapper	Generate a virtlogd wrapper script so that virtlogd launches in a separate container and won't get restarted e.g. on minor updates. The default value is true .
NovaEnableVTPM	Whether to enable support for emulated Trusted Platform Module (TPM) devices. The default value is false .
NovaGlanceEnableRbdDownload	Enable download of OpenStack Image Storage (glance) images directly via RBD. The default value is false .
NovaGlanceRbdCopyPollInterval	The interval in seconds with which to poll OpenStack Image Storage (glance) after asking for it to copy an image to the local rbd store. The default value is 15 .
NovaGlanceRbdCopyTimeout	The overall maximum time we will wait for OpenStack Image Storage (glance) to complete an image copy to our local rbd store. The default value is 600 .
NovaGlanceRbdDownloadMultistoreID	The hash key, which is the backend ID, of the GlanceMultistoreConfig to be used for the role where NovaGlanceEnableRbdDownload is enabled and defaults should be overridden. If CephClientUserName or GlanceRbdPoolName are not set in the GlanceMultistoreConfig, the global values of those parameters will be used.
NovaHWMachineType	Specifies the default machine type for each host architecture. Red Hat recommends setting the default to the lowest RHEL minor release in your environment, for backwards compatibility during live migration. The default value is x86_64=pc-q35-rhel9.0.0 .
NovalmageCacheTTL	Time in seconds that nova compute should continue caching an image once it is no longer used by any instances on the host. The default value is 86400 .

Parameter	Description
NovalmageTypeExcludeList	List of image formats that should not be advertised as supported by the compute service.
NovaLibvirtCPUMode	The libvirt CPU mode to configure. Defaults to <i>host-model</i> if <i>virt_type</i> is set to <i>kvm</i> , otherwise defaults to <i>none</i> . The default value is host-model .
NovaLibvirtCPUModelExtraFlags	This allows specifying granular CPU feature flags when specifying CPU models. Only has effect if <i>cpu_mode</i> is not set to <i>none</i> .
NovaLibvirtCPUModels	The named libvirt CPU model (see names listed in <i>/usr/share/libvirt/cpu_map.xml</i>). Only has effect if <i>cpu_mode</i> ="custom" and <i>virt_type</i> ="kvm qemu".
NovaLibvirtFileBackedMemory	Available capacity in MiB for file-backed memory. When configured, the NovaRAMAllocationRatio and NovaReservedHostMemory parameters must be set to 0. The default value is 0 .
NovaLibvirtMaxQueues	Add parameter to configure the libvirt <i>max_queues</i> . The maximum number of virtio queue pairs that can be enabled when creating a multiqueue guest. The number of virtio queues allocated will be the lesser of the CPUs requested by the guest and the max value defined. Default 0 corresponds to not set. The default value is 0 .
NovaLibvirtMemStatsPeriodSeconds	A number of seconds to memory usage statistics period, zero or negative value mean to disable memory usage statistics. The default value is 10 .
NovaLibvirtNumPciePorts	Set num_pcie_ports to specify the number of PCIe ports an instance will get. Libvirt allows a custom number of PCIe ports (<i>pcie-root-port</i> controllers) a target instance will get. Some will be used by default, rest will be available for hotplug use. The default value is 16 .
NovaLibvirtOptVolumes	List of optional volumes to be mounted.
NovaLibvirtRxQueueSize	Virtio-net RX queue size. Valid values are 256, 512, 1024. The default value is 512 .
NovaLibvirtTxQueueSize	Virtio-net TX queue size. Valid values are 256, 512, 1024. The default value is 512 .

Parameter	Description
NovaLibvirtVolumeUseMultipath	Whether to enable or not the multipath connection of the volumes. The default value is false .
NovaLiveMigrationPermitAutoConverge	Defaults to "True" to slow down the instance CPU until the memory copy process is faster than the instance's memory writes when the migration performance is slow and might not complete. Auto converge will only be used if this flag is set to True and post copy is not permitted or post copy is unavailable due to the version of libvirt and QEMU. The default value is true .
NovaLiveMigrationPermitPostCopy	If "True" activates the instance on the destination node before migration is complete, and to set an upper bound on the memory that needs to be transferred. Post copy gets enabled per default if the compute roles is not a realtime role or disabled by this parameter. The default value is true .
NovaLiveMigrationWaitForVIFPlug	Whether to wait for network-vif-plugged events before starting guest transfer. The default value is true .
NovaLocalMetadataPerCell	Indicates that the nova-metadata API service has been deployed per-cell, so that we can have better performance and data isolation in a multi-cell deployment. Users should consider the use of this configuration depending on how OpenStack Networking (neutron) is setup. If networks span cells, you might need to run nova-metadata API service globally. If your networks are segmented along cell boundaries, then you can run nova-metadata API service per cell. When running nova-metadata API service per cell, you should also configure each OpenStack Networking (neutron) metadata-agent to point to the corresponding nova-metadata API service. The default value is false .

Parameter	Description
NovaMaxDiskDevicesToAttach	Maximum number of disk devices allowed to attach to a single server. Note that the number of disks supported by an server depends on the bus used. For example, the ide disk bus is limited to 4 attached devices. The configured maximum is enforced during server create, rebuild, evacuate, unshelve, live migrate, and attach volume. Operators changing this parameter on a compute service that is hosting servers should be aware that it could cause rebuilds to fail, if the maximum is decreased lower than the number of devices already attached to servers. Operators should also be aware that during a cold migration, the configured maximum is only enforced in-place and the destination is not checked before the move. -1 means unlimited. The default value is -1 .
NovaMkisofsCmd	Name or path of the tool used for ISO image creation. The default value is mkisofs .
NovaNfsEnabled	Whether to enable or not the NFS backend for OpenStack Compute (nova). The default value is false .
NovaNfsOptions	NFS mount options for nova storage (when NovaNfsEnabled is true). The default value is context=system_u:object_r:nfs_t:s0 .
NovaNfsShare	NFS share to mount for nova storage (when NovaNfsEnabled is true).
NovaNfsVersion	NFS version used for nova storage (when NovaNfsEnabled is true). Since NFSv3 does not support full locking a NFSv4 version need to be used. The default value is 4.2 .
NovaOVSBridge	Name of integration bridge used by Open vSwitch. The default value is br-int .
NovaOVSDDBConnection	OVS DB connection string to used by OpenStack Compute (nova).
NovaPassword	The password for the OpenStack Compute (nova) service and database account.
NovaPCIPassthrough	YAML list of PCI passthrough whitelist parameters.

Parameter	Description
NovaPMEMMappings	PMEM namespace mappings as backend for vPMEM feature. This parameter sets Nova's pmem_namespaces configuration options. PMEM namespaces needs to be create manually or with conjunction with NovaPMEMNamespaces parameter. Requires format: \$LABEL:\$NSNAME[\$NSNAME] [\$LABEL:\$NSNAME[\$NSNAME]].
NovaPMEMNamespaces	Creates PMEM namespaces on the host server using ndctl tool through Ansible. Requires format: \$SIZE:\$NSNAME[\$SIZE:\$NSNAME...]. \$SIZE supports the suffixes "k" or "K" for KiB, "m" or "M" for MiB, "g" or "G" for GiB and "t" or "T" for TiB. NOTE: This requires properly configured NVDIMM regions and enough space for requested namespaces.
NovaRAMAllocationRatio	Virtual RAM to physical RAM allocation ratio. The default value is 1.0 .
NovaReservedHostMemory	Reserved RAM for host processes. The default value is 4096 .
NovaReservedHugePages	A list of valid key=value which reflect NUMA node ID, page size (Default unit is KiB) and number of pages to be reserved. Example - NovaReservedHugePages: ["node:0,size:2048,count:64","node:1,size:1GB,count:1"] will reserve on NUMA node 0 64 pages of 2MiB and on NUMA node 1 1 page of 1GiB.
NovaResumeGuestsShutdownTimeout	Number of seconds we're willing to wait for a guest to shut down. If this is 0, then there is no time out (use with caution, as guests might not respond to a shutdown request). The default value is 300 seconds (5 minutes). The default value is 300 .
NovaResumeGuestsStateOnHostBoot	Whether to start running instance on compute host reboot. The default value is false .
NovaSchedulerAvailableFilters	List of available filters for OpenStack Compute (nova) to use to filter nodes.
NovaSchedulerDefaultFilters	(DEPRECATED) An array of filters used by OpenStack Compute (nova) to filter a node. These filters will be applied in the order they are listed, so place your most restrictive filters first to make the filtering process more efficient.

Parameter	Description
NovaSchedulerDiscoverHostsInCellsInterval	This value controls how often (in seconds) the scheduler should attempt to discover new hosts that have been added to cells. The default value of -1 disables the periodic task completely. It is recommended to set this parameter for deployments using OpenStack Bare Metal (ironic). The default value is -1 .
NovaSchedulerEnabledFilters	An array of filters that OpenStack Compute (nova) uses to filter a node. OpenStack Compute applies these filters in the order they are listed. Place your most restrictive filters first to make the filtering process more efficient.
NovaSchedulerEnableIsolatedAggregateFiltering	This setting allows the scheduler to restrict hosts in aggregates based on matching required traits in the aggregate metadata and the instance flavor/image. If an aggregate is configured with a property with key trait:\$TRAIT_NAME and value required, the instance flavor extra_specs and/or image metadata must also contain trait:\$TRAIT_NAME=required to be eligible to be scheduled to hosts in that aggregate. The default value is false .
NovaSchedulerHostSubsetSize	Size of subset of best hosts selected by scheduler. The default value is 1 .
NovaSchedulerLimitTenantsToPlacementAggregate	This value allows to have tenant isolation with placement. It ensures hosts in tenant-isolated host aggregate and availability zones will only be available to specific set of tenants. The default value is false .
NovaSchedulerMaxAttempts	Maximum number of attempts the scheduler will make when deploying the instance. You should keep it greater or equal to the number of bare metal nodes you expect to deploy at once to work around potential race conditions when scheduling. The default value is 3 .
NovaSchedulerPlacementAggregateRequiredForTenants	This setting, when NovaSchedulerLimitTenantsToPlacementAggregate is true, controls whether or not a tenant with no aggregate affinity will be allowed to schedule to any available node. If aggregates are used to limit some tenants but not all, then this should be False. If all tenants should be confined via aggregate, then this should be True. The default value is false .

Parameter	Description
NovaSchedulerQueryImageType	This setting causes the scheduler to ask placement only for compute hosts that support the <code>disk_format</code> of the image used in the request. The default value is true .
NovaSchedulerQueryPlacementForAvailabilityZone	This setting allows the scheduler to look up a host aggregate with metadata key of availability zone set to the value provided by incoming request, and request result from placement be limited to that aggregate. The default value is false .
NovaSchedulerQueryPlacementForRoutedNetworkAggregates	This setting allows the scheduler to verify if the requested networks or port are related to OpenStack Networking (neutron) routed network. This requires that the related aggregates to be reported in placement, so only hosts within the asked aggregates would be accepted. The default value is false .
NovaSchedulerShuffleBestSameWeighedHosts	Enable spreading the instances between hosts with the same best weight. The default value is false .
NovaSchedulerWorkers	Number of workers for OpenStack Compute (nova) Scheduler services. The default value is 0 .
NovaShowHostStatus	Allows the role that is configured with the NovaApiHostStatusPolicy parameter to access the status of a Compute host for an instance. You can set the NovaShowHostStatus parameter to one of the following valid values: hidden (default) allows only RHOSP administrators to access the Compute host status; all shows the UP, DOWN, MAINTENANCE, UNKNOWN, and NONE Compute host statuses to the role configured with NovaApiHostStatusPolicy ; and unknown-only shows the UNKNOWN Compute host status to the role configured with the NovaApiHostStatusPolicy parameter. To use this feature, ensure that SRBAC is enabled in your RHOSP environment. You must have <code>python-openstackclient-6.0.0</code> or greater installed to see the host status when you use the openstack server list --long command. The default value is hidden .
NovaStatedirOwnershipSkip	List of paths relative to <code>nova_statedir</code> to ignore when recursively setting the ownership and selinux context. The default value is ['triliovault-mounts'] .

Parameter	Description
NovaSyncPowerStateInterval	Interval to sync power states between the database and the hypervisor. Set to -1 to disable. Setting this to 0 will run at the default rate(60) defined in oslo.service. The default value is 600 .
NovaVcpuPinSet	(Deprecated) A list or range of physical CPU cores to reserve for virtual machine processes. For example, NovaVcpuPinSet: [4-12,^8] reserves cores from 4-12 excluding 8. This parameter has been deprecated. Use NovaComputeCpuDedicatedSet and NovaComputeCpuSharedSet instead. If you require support for a RHOSP deployment that continues to use NovaVcpuPinSet instead of NovaComputeCpuDedicatedSet and NovaComputeCpuSharedSet , contact the Red Hat Customer Experience and Engagement team to obtain a support exception. For information about how to update NovaVcpuPinSet to the supported parameters NovaComputeCpuDedicatedSet and NovaComputeCpuSharedSet , see Updating CPU pinning parameters in the <i>Framework for upgrades (16.2 to 17.1)</i> guide.
NovaVGPUTypesDeviceAddressesMapping	Map of vgpu type(s) the instances can get as key and list of corresponding device addresses as value. For example, <code>NovaVGPUTypesDeviceAddressesMapping: {nvidia-35: [0000:84:00.0, 0000:85:00.0], nvidia-36: [0000:86:00.0]}</code> where nvidia-35 and nvidia-36 are vgpu types and corresponding values are list of associated device addresses.
NovaVNCCertificateKeySize	Override the private key size used when creating the certificate for this service.
NovaVNCProxySSLCiphers	OpenSSL cipher preference string that specifies what ciphers to allow for TLS connections from clients. See the man page for the OpenSSL <i>ciphers</i> command for details of the cipher preference string format and allowed values.
NovaVNCProxySSLMinimumVersion	Minimum allowed SSL/TLS protocol version. Valid values are <i>default</i> , <i>tls1_1</i> , <i>tls1_2</i> , and <i>tls1_3</i> . A value of <i>default</i> will use the underlying system OpenSSL defaults. The default value is default .

Parameter	Description
NovaWorkers	Number of workers for the Compute's Conductor service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node. The default value is 0 .
OvsDpdkSocketMemory	Sets the amount of hugepage memory to assign per NUMA node. It is recommended to use the socket closest to the PCIe slot used for the desired DPDK NIC. The format should be in "<socket 0 mem>, <socket 1 mem>, <socket n mem>", where the value is specified in MB. For example: "1024,0".
PlacementAPIInterface	Endpoint interface to be used for the placement API. The default value is internal .
PlacementPassword	The password for the Placement service and database account.
QemuCACert	This specifies the CA certificate to use for qemu. This file will be symlinked to the default CA path, which is /etc/pki/qemu/ca-cert.pem. This parameter should be used if the default (which comes from the InternalTLSCAFile parameter) is not desired. The current default reflects TripleO's default CA, which is FreeIPA. It will only be used if internal TLS is enabled.
QemuClientCertificateKeySize	Override the private key size used when creating the certificate for this service.
QemuDefaultTLSVerify	Whether to enable or disable TLS client certificate verification. Enabling this option will reject any client who does not have a certificate signed by the CA in /etc/pki/qemu/ca-cert.pem. The default value is true .
QemuMemoryBackingDir	Directory used for memoryBacking source if configured as file. NOTE: big files will be stored here.
QemuServerCertificateKeySize	Override the private key size used when creating the certificate for this service.
RbdDiskCachemodes	Disk cachemodes for RBD backend. The default value is [network=writeback].

Parameter	Description
UpgradeLevelNovaCompute	OpenStack Compute upgrade level.
UseTLSTransportForNbd	If set to true and if EnableInternalTLS is enabled, it will enable TLS transport for libvirt NBD and configure the relevant keys for libvirt. The default value is true .
UseTLSTransportForVnc	If set to true and if EnableInternalTLS is enabled, it will enable TLS transport for libvirt VNC and configure the relevant keys for libvirt. The default value is true .
VerifyGlanceSignatures	Whether to verify image signatures. The default value is False .
VhostuserSocketGroup	The vhost-user socket directory group name. Defaults to <i>qemu</i> . When vhostuser mode is <i>dpdkvhostuserclient</i> (which is the default mode), the vhost socket is created by qemu. The default value is qemu .

CHAPTER 11. DASHBOARD (HORIZON) PARAMETERS

You can modify the horizon service with dashboard parameters.

Parameter	Description
HorizonAllowedHosts	A list of IP/Hostname for the server OpenStack Dashboard (horizon) is running on. Used for header checks. The default value is <code>*</code> .
HorizonCustomizationModule	OpenStack Dashboard (horizon) has a global overrides mechanism available to perform customizations.
HorizonDomainChoices	Specifies available domains to choose from. We expect an array of hashes, and the hashes should have two items each (name, display) containing OpenStack Identity (keystone) domain name and a human-readable description of the domain respectively.
HorizonHelpURL	On top of dashboard there is a Help button. This button could be used to re-direct user to vendor documentation or dedicated help portal. The default value is <code>http://docs.openstack.org</code> .
HorizonHstsHeaderValue	Enables HTTP Strict-Transport-Security header in response.
HorizonPasswordValidator	Regex for password validation.
HorizonPasswordValidatorHelp	Help text for password validation.
HorizonSecret	Secret key for the webserver.
HorizonSecureCookies	Set <code>CSRF_COOKIE_SECURE</code> / <code>SESSION_COOKIE_SECURE</code> in OpenStack Dashboard (horizon). The default value is <code>false</code> .
HorizonSessionTimeout	Set session timeout for horizon in seconds. The default value is <code>1800</code> .
HorizonVhostExtraParams	Extra parameters for OpenStack Dashboard (horizon) vhost configuration. The default value is <code>{'add_listen': 'true', 'priority': '10', 'access_log_format': '%a %l %u %t \\\"%r\\\" %>s %b \\\"%{{Referer}}i\\\" \\\"%{{User-Agent}}i\\\", 'options': ['FollowSymLinks', 'MultiViews']}</code> .

Parameter	Description
MemcachedIPv6	Enable IPv6 features in Memcached. The default value is false .
TimeZone	The timezone to be set on the overcloud. The default value is UTC .
WebSSOChoices	Specifies the list of SSO authentication choices to present. Each item is a list of an SSO choice identifier and a display message. The default value is [['OIDC', 'OpenID Connect']] .
WebSSOEnable	Enable support for Web Single Sign-On. The default value is false .
WebSSOIDPMapping	Specifies a mapping from SSO authentication choice to identity provider and protocol. The identity provider and protocol names must match the resources defined in keystone. The default value is { 'OIDC': ['myidp', 'openid'] } .
WebSSOInitialChoice	The initial authentication choice to select by default. The default value is OIDC .

CHAPTER 12. IDENTITY (KEYSTONE) PARAMETERS

You can modify the keystone service with identity parameters.

Parameter	Description
AdminToken	The OpenStack Identity (keystone) secret and database password.
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
EnableCache	Enable caching with memcached. The default value is true .
EnablePublicTLS	Whether to enable TLS on the public interface or not. The default value is true .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
EnforceSecureRbac	Setting this option to True will configure each OpenStack service to enforce Secure RBAC by setting [oslo_policy] enforce_new_defaults and [oslo_policy] enforce_scope to True. This introduces a consistent set of RBAC personas across OpenStack services that include support for system and project scope, as well as keystone's default roles, admin, member, and reader. Do not enable this functionality until all services in your deployment actually support secure RBAC. The default value is false .
KeystoneAuthMethods	A list of methods used for authentication.
KeystoneChangePasswordUponFirstUse	Enabling this option requires users to change their password when the user is created, or upon administrative reset.
KeystoneCorsAllowedOrigin	Indicate whether this resource may be shared with the domain received in the request "origin" header.

Parameter	Description
KeystoneCredential0	The first OpenStack Identity (keystone) credential key. Must be a valid key.
KeystoneCredential1	The second OpenStack Identity (keystone) credential key. Must be a valid key.
KeystoneCronTrustFlushDestination	Cron to purge expired or soft-deleted trusts - Log destination. The default value is /var/log/keystone/keystone-trustflush.log .
KeystoneCronTrustFlushEnsure	Cron to purge expired or soft-deleted trusts - Ensure. The default value is present .
KeystoneCronTrustFlushHour	Cron to purge expired or soft-deleted trusts - Hour. The default value is * .
KeystoneCronTrustFlushMaxDelay	Cron to purge expired or soft-deleted trusts - Max Delay. The default value is 0 .
KeystoneCronTrustFlushMinute	Cron to purge expired or soft-deleted trusts - Minute. The default value is 1 .
KeystoneCronTrustFlushMonth	Cron to purge expired or soft-deleted trusts - Month. The default value is * .
KeystoneCronTrustFlushMonthday	Cron to purge expired or soft-deleted trusts - Month Day. The default value is * .
KeystoneCronTrustFlushUser	Cron to purge expired or soft-deleted trusts - User. The default value is keystone .
KeystoneCronTrustFlushWeekday	Cron to purge expired or soft-deleted trusts - Week Day. The default value is * .
KeystoneDisableUserAccountDaysInactive	The maximum number of days a user can go without authenticating before being considered "inactive" and automatically disabled (locked).
KeystoneEnableDBPurge	Whether to create cron job for purging soft deleted rows in OpenStack Identity (keystone) database. The default value is true .
KeystoneEnableMember	Create the <i>member</i> role, useful for undercloud deployment. The default value is False .
KeystoneFederationEnable	Enable support for federated authentication. The default value is false .

Parameter	Description
KeystoneFernetKeys	Mapping containing OpenStack Identity (keystone) fernet keys and their paths.
KeystoneFernetMaxActiveKeys	The maximum active keys in the OpenStack Identity (keystone) fernet key repository. The default value is 5 .
KeystoneLDAPBackendConfigs	Hash containing the configurations for the LDAP backends configured in keystone.
KeystoneLDAPDomainEnable	Trigger to call <code>ldap_backend puppet keystone define</code> . The default value is False .
KeystoneLockoutDuration	The number of seconds a user account will be locked when the maximum number of failed authentication attempts (as specified by <code>KeystoneLockoutFailureAttempts</code>) is exceeded.
KeystoneLockoutFailureAttempts	The maximum number of times that a user can fail to authenticate before the user account is locked for the number of seconds specified by <code>KeystoneLockoutDuration</code> .
KeystoneMinimumPasswordAge	The number of days that a password must be used before the user can change it. This prevents users from changing their passwords immediately in order to wipe out their password history and reuse an old password.
KeystoneNotificationDriver	Comma-separated list of Oslo notification drivers used by OpenStack Identity (keystone).
KeystoneNotificationFormat	The OpenStack Identity (keystone) notification format. The default value is basic .
KeystoneNotificationTopics	OpenStack Identity (keystone) notification topics to enable.
KeystoneOpenIdcClientId	The client ID to use when handshaking with your OpenID Connect provider.
KeystoneOpenIdcClientSecret	The client secret to use when handshaking with your OpenID Connect provider.
KeystoneOpenIdcCryptoPassphrase	Passphrase to use when encrypting data for OpenID Connect handshake. The default value is openstack .

Parameter	Description
KeystoneOpenIdcEnable	Enable support for OpenIDC federation. The default value is false .
KeystoneOpenIdcEnableOAuth	Enable OAuth 2.0 integration. The default value is false .
KeystoneOpenIdcIrpName	The name associated with the IdP in OpenStack Identity (keystone).
KeystoneOpenIdcIntrospectionEndpoint	OAuth 2.0 introspection endpoint for mod_auth_openidc.
KeystoneOpenIdcProviderMetadataUrl	The url that points to your OpenID Connect provider metadata.
KeystoneOpenIdcRemoteldAttribute	Attribute to be used to obtain the entity ID of the Identity Provider from the environment. The default value is HTTP_OIDC_ISS .
KeystoneOpenIdcResponseType	Response type to be expected from the OpenID Connect provider. The default value is id_token .
KeystonePasswordExpiresDays	The number of days for which a password will be considered valid before requiring it to be changed.
KeystonePasswordRegex	The regular expression used to validate password strength requirements.
KeystonePasswordRegexDescription	Describe your password regular expression here in language for humans.
KeystoneSSLCertificate	OpenStack Identity (keystone) certificate for verifying token validity.
KeystoneSSLCertificateKey	OpenStack Identity (keystone) key for signing tokens.
KeystoneTokenProvider	The OpenStack Identity (keystone) token format. The default value is fernet .
KeystoneTrustedDashboards	A list of dashboard URLs trusted for single sign-on.
KeystoneUniqueLastPasswordCount	This controls the number of previous user password iterations to keep in history, in order to enforce that newly created passwords are unique.

Parameter	Description
KeystoneWorkers	Set the number of workers for the OpenStack Identity (keystone) service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. It is recommended to choose a suitable non-default value on systems with high CPU core counts. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node. The default value is equal to the number of vCPU cores on the physical node.
ManageKeystoneFernetKeys	Whether director should manage the OpenStack Identity (keystone) fernet keys or not. If set to True, the fernet keys will get the values from the saved keys repository in OpenStack Workflow (mistral) from the KeystoneFernetKeys variable. If set to false, only the stack creation initializes the keys, but subsequent updates will not touch them. The default value is true .
MemcachedTLS	Set to True to enable TLS on Memcached service. Because not all services support Memcached TLS, during the migration period, Memcached will listen on 2 ports - on the port set with MemcachedPort parameter (above) and on 11211, without TLS. The default value is false .
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .
PublicSSLCertificateAutogenerated	Whether the public SSL certificate was autogenerated or not. The default value is false .
PublicTLSCAFile	Specifies the default CA cert to use if TLS is used for services in the public network.
SSLCertificate	The content of the SSL certificate (without Key) in PEM format.
TokenExpiration	Set a token expiration time in seconds. The default value is 3600 .

CHAPTER 13. IMAGE STORAGE (GLANCE) PARAMETERS

You can modify the glance service with image service parameters.

Parameter	Description
CephClusterName	The Ceph cluster name. The default value is ceph .
CephConfigPath	The path where the Ceph Cluster configuration files are stored on the host. The default value is /var/lib/tripleo-config/ceph .
CinderEnableNVMeOFBackend	Whether to enable or not the NVMeOF backend for OpenStack Block Storage (cinder). The default value is false .
CinderNVMeOFAvailabilityZone	The availability zone of the NVMeOF OpenStack Block Storage (cinder) backend. When set, it overrides the default CinderStorageAvailabilityZone.
CinderNVMeOFTargetProtocol	The target protocol, supported values are <code>nvmet_rdma</code> and <code>nvmet_tcp</code> . The default value is nvmet_rdma .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
EnforceSecureRbac	Setting this option to True will configure each OpenStack service to enforce Secure RBAC by setting [oslo_policy] enforce_new_defaults and [oslo_policy] enforce_scope to True. This introduces a consistent set of RBAC personas across OpenStack services that include support for system and project scope, as well as keystone's default roles, admin, member, and reader. Do not enable this functionality until all services in your deployment actually support secure RBAC. The default value is false .
GlanceApiOptVolumes	List of optional volumes to be mounted.
GlanceBackend	The short name of the OpenStack Image Storage (glance) backend to use. Should be one of <code>swift</code> , <code>rbd</code> , <code>cinder</code> , or <code>file</code> . The default value is swift .
GlanceBackendID	The default backend's identifier. The default value is default_backend .
GlanceCacheEnabled	Enable OpenStack Image Storage (glance) Image Cache. The default value is False .

Parameter	Description
GlanceCinderMountPointBase	The mount point base when glance is using cinder as store and cinder backend is NFS. This mount point is where the NFS volume is mounted on the glance node. The default value is /var/lib/glance/mnt .
GlanceCinderVolumeType	A unique volume type required for each cinder store while configuring multiple cinder stores as glance backends. The same volume types must be configured in OpenStack Block Storage (cinder) as well. The volume type must exist in cinder prior to any attempt to add an image in the associated cinder store. If no volume type is specified then cinder's default volume type will be used.
GlanceCronDbPurgeAge	Cron to purge database entries marked as deleted and older than \$age - Age. The default value is 30 .
GlanceCronDbPurgeDestination	Cron to purge database entries marked as deleted and older than \$age - Log destination. The default value is /var/log/glance/glance-rowsflush.log .
GlanceCronDbPurgeHour	Cron to purge database entries marked as deleted and older than \$age - Hour. The default value is 0 .
GlanceCronDbPurgeMaxDelay	Cron to purge database entries marked as deleted and older than \$age - Max Delay. The default value is 3600 .
GlanceCronDbPurgeMaxRows	Cron to purge database entries marked as deleted and older than \$age - Max Rows. The default value is 100 .
GlanceCronDbPurgeMinute	Cron to purge database entries marked as deleted and older than \$age - Minute. The default value is 1 .
GlanceCronDbPurgeMonth	Cron to purge database entries marked as deleted and older than \$age - Month. The default value is * .
GlanceCronDbPurgeMonthday	Cron to purge database entries marked as deleted and older than \$age - Month Day. The default value is * .
GlanceCronDbPurgeUser	Cron to purge database entries marked as deleted and older than \$age - User. The default value is glance .

Parameter	Description
GlanceCronDbPurgeWeekday	Cron to purge database entries marked as deleted and older than \$age - Week Day. The default value is * .
GlanceDiskFormats	List of allowed disk formats in Glance; all formats are allowed when left unset.
GlanceEnabledImportMethods	List of enabled Image Import Methods. Valid values in the list are <i>glance-direct</i> , <i>web-download</i> , or <i>copy-image</i> . The default value is web-download .
GlanceIgnoreUserRoles	List of user roles to be ignored for injecting image metadata properties. The default value is admin .
GlanceImageCacheDir	Base directory that the Image Cache uses. The default value is /var/lib/glance/image-cache .
GlanceImageCacheMaxSize	The upper limit on cache size, in bytes, after which the cache-pruner cleans up the image cache. The default value is 10737418240 .
GlanceImageCacheStallTime	The amount of time, in seconds, to let an image remain in the cache without being accessed. The default value is 86400 .
GlanceImageConversionOutputFormat	Desired output format for image conversion plugin. The default value is raw .
GlanceImageImportPlugins	List of enabled Image Import Plugins. Valid values in the list are <i>image_conversion</i> , <i>inject_metadata</i> , <i>no_op</i> . The default value is ['no_op'] .
GlanceImageMemberQuota	Maximum number of image members per image. Negative values evaluate to unlimited. The default value is 128 .
GlanceImagePrefetcherInterval	The interval in seconds to run periodic job <i>cache_images</i> . The default value is 300 .
GlanceInjectMetadataProperties	Metadata properties to be injected in image.
GlanceLogFile	The filepath of the file to use for logging messages from OpenStack Image Storage (glance).

Parameter	Description
GlanceMultistoreConfig	Dictionary of settings when configuring additional glance backends. The hash key is the backend ID, and the value is a dictionary of parameter values unique to that backend. Multiple rbd and cinder backends are allowed, but file and swift backends are limited to one each. Example: # Default glance store is rbd. GlanceBackend: rbd GlanceStoreDescription: <i>Default rbd store</i> # GlanceMultistoreConfig specifies a second rbd backend, plus a cinder # backend. GlanceMultistoreConfig: rbd2_store: GlanceBackend: rbd GlanceStoreDescription: <i>Second rbd store</i> CephClusterName: ceph2 # Override CephClientUserName if this cluster uses a different # client name. CephClientUserName: client2 cinder1_store: GlanceBackend: cinder GlanceCinderVolumeType: <i>volume-type-1</i> GlanceStoreDescription: <i>First cinder store</i> cinder2_store: GlanceBackend: cinder GlanceCinderVolumeType: <i>volume-type-2</i> GlanceStoreDescription: <i>Seconde cinder store</i> .
GlanceNetappNfsEnabled	When using GlanceBackend: file , Netapp mounts NFS share for image storage. The default value is false .
GlanceNfsEnabled	When using GlanceBackend: file , mount NFS share for image storage. The default value is false .
GlanceNfsOptions	NFS mount options for image storage when GlanceNfsEnabled is true. The default value is _netdev,bg,intr,context=system_u:object_r:container_file_t:s0 .
GlanceNfsShare	NFS share to mount for image storage when GlanceNfsEnabled is true.
GlanceNodeStagingUri	URI that specifies the staging location to use when importing images. The default value is file:///var/lib/glance/staging .
GlanceNotifierStrategy	Strategy to use for OpenStack Image Storage (glance) notification queue. The default value is noop .
GlancePassword	The password for the image storage service and database account.

Parameter	Description
GlanceShowMultipleLocations	Whether to show multiple image locations e.g for copy-on-write support on RBD or Netapp backends. Potential security risk, see glance.conf for more information. The default value is false .
GlanceSparseUploadEnabled	When using GlanceBackend <i>file</i> and <i>rbd</i> to enable or not sparse upload. The default value is false .
GlanceStagingNfsOptions	NFS mount options for NFS image import staging. The default value is _netdev,bg,intr,context=system_u:object_r:container_file_t:s0 .
GlanceStagingNfsShare	NFS share to mount for image import staging.
GlanceStoreDescription	User facing description for the OpenStack Image Storage (glance) backend. The default value is Default glance store backend.
GlanceWorkers	Set the number of workers for the image storage service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. It is recommended to choose a suitable non-default value on systems with high CPU core counts. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node.
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .
MultipathdEnable	Whether to enable the multipath daemon. The default value is false .
NetappShareLocation	Netapp share to mount for image storage (when GlanceNetappNfsEnabled is true).
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .

CHAPTER 14. KEY MANAGER (BARBICAN) PARAMETERS

You can modify the barbican service with key manager parameters.

Parameter	Description
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
ATOSVars	Hash of atos-hsm role variables used to install ATOS client software.
BarbicanDogtagStoreGlobalDefault	Whether this plugin is the global default plugin. The default value is false .
BarbicanDogtagStoreHost	Hostname of the Dogtag server.
BarbicanDogtagStoreNSSPassword	Password for the NSS DB.
BarbicanDogtagStorePEMPath	Path for the PEM file used to authenticate requests. The default value is /etc/barbican/kra_admin_cert.pem .
BarbicanDogtagStorePort	Port for the Dogtag server. The default value is 8443 .
BarbicanKmipStoreGlobalDefault	Whether this plugin is the global default plugin. The default value is false .
BarbicanKmipStoreHost	Host for KMIP device.
BarbicanKmipStorePassword	Password to connect to KMIP device.
BarbicanKmipStorePort	Port for KMIP device.
BarbicanKmipStoreUsername	Username to connect to KMIP device.
BarbicanPassword	The password for the OpenStack Key Manager (barbican) service account.
BarbicanPkcs11AlwaysSetCkaSensitive	Always set CKA_SENSITIVE=CK_TRUE. The default value is true .
BarbicanPkcs11CryptoAESGCMGenerateIV	Generate IVs for CKM_AES_GCM encryption mechanism. The default value is true .

Parameter	Description
BarbicanPkcs11CryptoATOSEnabled	Enable ATOS for PKCS11. The default value is false .
BarbicanPkcs11CryptoEnabled	Enable PKCS11. The default value is false .
BarbicanPkcs11CryptoEncryptionMechanism	Cryptoki Mechanism used for encryption. The default value is CKM_AES_CBC .
BarbicanPkcs11CryptoGlobalDefault	Whether this plugin is the global default plugin. The default value is false .
BarbicanPkcs11CryptoHMACKeygenMechanism	Cryptoki Mechanism used to generate Master HMAC Key. The default value is CKM_AES_KEY_GEN .
BarbicanPkcs11CryptoHMACKeyType	Cryptoki Key Type for Master HMAC key. The default value is CKK_AES .
BarbicanPkcs11CryptoHMACLabel	Label for the HMAC key.
BarbicanPkcs11CryptoLibraryPath	Path to vendor PKCS11 library.
BarbicanPkcs11CryptoLogin	Password (PIN) to login to PKCS#11 session.
BarbicanPkcs11CryptoLunasaEnabled	Enable Luna SA HSM for PKCS11. The default value is false .
BarbicanPkcs11CryptoMKEKLabel	Label for Master KEK.
BarbicanPkcs11CryptoMKEKLength	Length of Master KEK in bytes. The default value is 256 .
BarbicanPkcs11CryptoOsLockingOk	Set CKF_OS_LOCKING_OK flag when initializing the client library. The default value is false .
BarbicanPkcs11CryptoRewrapKeys	Cryptoki Mechanism used to generate Master HMAC Key. The default value is false .
BarbicanPkcs11CryptoSlotId	Slot Id for the PKCS#11 token to be used. The default value is 0 .
BarbicanPkcs11CryptoThalesEnabled	Enable Thales for PKCS11. The default value is false .
BarbicanPkcs11CryptoTokenLabel	(DEPRECATED) Use BarbicanPkcs11CryptoTokenLabels instead.

Parameter	Description
BarbicanPkcs11CryptoTokenLabels	List of comma separated labels for the tokens to be used. This is typically a single label, but some devices may require more than one label for Load Balancing and High Availability configurations.
BarbicanPkcs11CryptoTokenSerialNumber	Serial number for PKCS#11 token to be used.
BarbicanSimpleCryptoGlobalDefault	Whether this plugin is the global default plugin. The default value is false .
BarbicanSimpleCryptoKek	KEK used to encrypt secrets.
BarbicanWorkers	Set the number of workers for barbican::wsgi::apache. The default value is % {::processorcount} .
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
LunasaClientIPNetwork	(Optional) When set OpenStack Key Manager (barbican) nodes will be registered with the HSMs using the IP from this network instead of the FQDN.
LunasaVars	Hash of lunasa-hsm role variables used to install Lunasa client software.
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .
ThalesHSMNetworkName	The network that the HSM is listening on. The default value is internal_api .
ThalesVars	Hash of thales_hsm role variables used to install Thales client software.

CHAPTER 15. LOAD BALANCER (OCTAVIA) PARAMETERS

Parameter	Description
OctaviaAdminLogFacility	The syslog "LOG_LOCAL" facility to use for the administrative log messages. The default value is 1 .
OctaviaAdminLogTargets	List of syslog endpoints, host:port comma separated list, to receive administrative log messages.
OctaviaAmphoraExpiryAge	The interval in seconds after which an unused Amphora will be considered expired and cleaned up. If left to 0, the configuration will not be set and the system will use the service defaults. The default value is 0 .
OctaviaAmphoraSshKeyDir	OpenStack Load Balancing-as-a-Service (octavia) generated SSH key directory. The default value is /etc/octavia/ssh .
OctaviaAmphoraSshKeyFile	Public key file path. User will be able to SSH into amphorae with the provided key. User may, in most cases, also elevate to root from user <i>centos</i> (CentOS), <i>ubuntu</i> (Ubuntu) or <i>cloud-user</i> (RHEL) (depends on how amphora image was created). Logging in to amphorae provides a convenient way to e.g. debug load balancing services.
OctaviaAmphoraSshKeyName	SSH key name. The default value is octavia-ssh-key .
OctaviaAntiAffinity	Flag to indicate if anti-affinity feature is turned on. The default value is true .
OctaviaCaCert	OpenStack Load Balancing-as-a-Service (octavia) CA certificate data. If provided, this will create or update a file on the host with the path provided in <code>OctaviaCaCertFile</code> with the certificate data.
OctaviaCaKey	The private key for the certificate provided in <code>OctaviaCaCert</code> . If provided, this will create or update a file on the host with the path provided in <code>OctaviaCaKeyFile</code> with the key data.
OctaviaCaKeyPassphrase	CA private key passphrase.
OctaviaClientCert	OpenStack Load Balancing-as-a-Service (octavia) client certificate data. If provided, this will create or update a file on the host with the path provided in <code>OctaviaClientCertFile</code> with the certificate data.

Parameter	Description
OctaviaConnectionLogging	When false, tenant connection flows will not be logged. The default value is true .
OctaviaDefaultListenerCiphers	Default list of OpenSSL ciphers for new TLS-enabled listeners.
OctaviaDefaultPoolCiphers	Default list of OpenSSL ciphers for new TLS-enabled pools.
OctaviaDisableLocalLogStorage	When true, logs will not be stored on the amphora filesystem. This includes all kernel, system, and security logs. The default value is false .
OctaviaEnableDriverAgent	Set to false if the driver agent needs to be disabled for some reason. The default value is true .
OctaviaEnableJobboard	Enable jobboard for the amphorav2 driver, it enables flow resumption for the amphora driver. The default value is false .
OctaviaFlavorId	OpenStack Compute (nova) flavor ID to be used when creating the nova flavor for amphora. The default value is 65 .
OctaviaForwardAllLogs	When true, all log messages from the amphora will be forwarded to the administrative log endpoints, including non-load balancing related logs. The default value is false .
OctaviaGenerateCerts	Enable internal generation of certificates for secure communication with amphorae for isolated private clouds or systems where security is not a concern. Otherwise, use OctaviaCaCert, OctaviaCaKey, OctaviaCaKeyPassphrase, OctaviaClientCert and OctaviaServerCertsKeyPassphrase to configure OpenStack Load Balancing-as-a-Service (octavia). The default value is false .
OctaviaJobboardExpirationTime	Expiry of claimed jobs in jobboard. The default value is 30 .
OctaviaListenerTlsVersions	List of OpenSSL cipher string of TLS versions to use for new TLS-enabled listeners. The default value is ['TLSv1.2', 'TLSv1.3'] .
OctaviaLoadBalancerTopology	Load balancer topology configuration.

Parameter	Description
OctaviaLogOffload	When true, log messages from the amphora will be forwarded to the administrative log endpoints and will be stored with the controller logs. The default value is false .
OctaviaLogOffloadProtocol	The protocol to use for the RSyslog log offloading feature. The default value is udp .
OctaviaMinimumTlsVersion	Minimum allowed TLS version for listeners and pools.
OctaviaMultiVcpuFlavorId	Name of the nova flavor for the amphora with multiple vCPUs. The default value is amphora-mvcpu-ha .
OctaviaMultiVcpuFlavorProperties	Dictionary describing the nova flavor for amphora with active-standby topology and multiple vCPUs for vertical scaling. The default value is {'ram': '4096', 'disk': '3', 'vcpus': '4'} .
OctaviaPoolTlsVersions	List of TLS versions to use for new TLS-enabled pools. The default value is ['TLSv1.2', 'TLSv1.3'] .
OctaviaTenantLogFacility	The syslog "LOG_LOCAL" facility to use for the tenant traffic flow log messages. The default value is 0 .
OctaviaTenantLogTargets	List of syslog endpoints, host:port comma separated list, to receive tenant traffic flow log messages.
OctaviaTimeoutClientData	Frontend client inactivity timeout. The default value is 50000 .
OctaviaTimeoutMemberData	Backend member inactivity timeout. The default value is 50000 .
OctaviaTlsCiphersProhibitList	List of OpenSSL ciphers. Usage of these ciphers will be blocked.
RedisPassword	The password for the redis service account.

CHAPTER 16. MESSAGING PARAMETERS

You can modify the message queue service with messaging parameters.

Parameter	Description
RpcCertificateKeySize	Override the private key size used when creating the certificate for this service.
RpcPassword	The password for messaging backend.
RpcPort	The network port for messaging backend. The default value is 5672 .
RpcUserName	The username for messaging backend. The default value is guest .
RpcUseSSL	Messaging client subscriber parameter to specify an SSL connection to the messaging host. The default value is false .

CHAPTER 17. NETWORKING (NEUTRON) PARAMETERS

You can modify the neutron service with networking parameters.

Parameter	Description
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
ContainerOvnCertificateKeySize	Override the private key size used when creating the certificate for this service.
DerivePciWhitelistEnabled	Whether to enable or not the pci passthrough whitelist automation. The default value is true .
DhcpAgentNotification	Enables DHCP agent notifications. The default value is false .
DockerAdditionalSockets	Additional domain sockets for the docker daemon to bind to (useful for mounting into containers that launch other containers). The default value is ['/var/lib/openstack/docker.sock'] .
DockerNeutronDHCPAgentUlimit	Ulimit for OpenStack Networking (neutron) DHCP Agent Container. The default value is ['nofile=16384'] .
DockerNeutronL3AgentUlimit	Ulimit for OpenStack Networking (neutron) L3 Agent Container. The default value is ['nofile=16384'] .
DockerOpenvswitchUlimit	Ulimit for Openvswitch Container. The default value is ['nofile=16384'] .
DockerPuppetMountHostPuppet	Whether containerized puppet executions use modules from the baremetal host. Defaults to true. Can be set to false to consume puppet modules from containers directly. The default value is true .
DockerSRIOVUlimit	Ulimit for SR-IOV Container. The default value is ['nofile=16384'] .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
EnableVLANTransparency	If True, then allow plugins that support it to create VLAN transparent networks. The default value is false .

Parameter	Description
EnforceSecureRbac	Setting this option to True will configure each OpenStack service to enforce Secure RBAC by setting [oslo_policy] enforce_new_defaults and [oslo_policy] enforce_scope to True. This introduces a consistent set of RBAC personas across OpenStack services that include support for system and project scope, as well as keystone's default roles, admin, member, and reader. Do not enable this functionality until all services in your deployment actually support secure RBAC. The default value is false .
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .
NeutronAgentDownTime	Seconds to regard the agent as down; should be at least twice NeutronGlobalReportInterval, to be sure the agent is down for good. The default value is 600 .
NeutronAgentExtensions	Comma-separated list of extensions enabled for the OpenStack Networking (neutron) agents. The default value is qos .
NeutronAllowL3AgentFailover	Allow automatic l3-agent failover. The default value is True .
NeutronApiOptEnvVars	Hash of optional environment variables.
NeutronApiOptVolumes	List of optional volumes to be mounted.
NeutronBridgeMappings	The logical to physical bridge mappings to use. The default (datacentre:br-ex) maps br-ex (the external bridge on hosts) to a physical name datacentre , which provider networks can use (for example, the default floating network). If changing this, either use different post-install network scripts or be sure to keep datacentre as a mapping network name. The default value is datacentre:br-ex .
NeutronCertificateKeySize	Override the private key size used when creating the certificate for this service.
NeutronCorePlugin	The core plugin for networking. The value should be the endpoint to be loaded from neutron.core_plugins namespace. The default value is ml2 .

Parameter	Description
NeutronDBSyncExtraParams	String of extra command line parameters to append to the neutron-db-manage upgrade head command.
NeutronDefaultAvailabilityZones	Comma-separated list of default network availability zones to be used by OpenStack Networking (neutron) if its resource is created without availability zone hints. If not set, no AZs will be configured for OpenStack Networking (neutron) network services.
NeutronDhcpAgentAvailabilityZone	Availability zone for OpenStack Networking (neutron) DHCP agent. If not set, no AZs will be configured for OpenStack Networking (neutron) network services.
NeutronDhcpAgentDnsmasqDnsServers	List of servers to use as dnsmasq forwarders.
NeutronDhcpAgentDnsmasqEnableAddr6List	Enable dhcp-host entry with list of addresses when port has multiple IPv6 addresses in the same subnet. The default value is true .
NeutronDhcpAgentsPerNetwork	The number of DHCP agents to schedule per network. The default value is 0 .
NeutronDhcpCertificateKeySize	Override the private key size used when creating the certificate for this service.
NeutronDhcpLoadType	Additional to the availability zones aware network scheduler. The default value is networks .
NeutronDhcpOvsIntegrationBridge	Name of Open vSwitch bridge to use.
NeutronDhcpServerBroadcastReply	OpenStack Networking (neutron) DHCP agent to use broadcast in DHCP replies. The default value is false .
NeutronDnsDomain	Domain to use for building the hostnames. The default value is openstacklocal .
NeutronEnableARPResponder	Enable ARP responder feature in the OVS Agent. The default value is false .
NeutronEnableDnsmasqDockerWrapper	Generate a dnsmasq wrapper script so that OpenStack Networking (neutron) launches dnsmasq in a separate container. The default value is true .
NeutronEnableDVR	Enable Distributed Virtual Router.

Parameter	Description
NeutronEnableForceMetadata	If True, DHCP always provides metadata route to VM. The default value is false .
NeutronEnableHaproxyDockerWrapper	Generate a wrapper script so OpenStack Networking (neutron) launches haproxy in a separate container. The default value is true .
NeutronEnableIcmpSnooping	Enable IGMP Snooping. The default value is false .
NeutronEnableInternalDNS	If True, enable the internal OpenStack Networking (neutron) DNS server that provides name resolution between VMs. This parameter has no effect if NeutronDhcpAgentDnsmasqDnsServers is set. The default value is false .
NeutronEnableIsolatedMetadata	If True, DHCP allows metadata support on isolated networks. The default value is false .
NeutronEnableKeepalivedWrapper	Generate a wrapper script so OpenStack Networking (neutron) launches keepalived processes in a separate container. The default value is true .
NeutronEnableL2Pop	Enable/disable the L2 population feature in the OpenStack Networking (neutron) agents. The default value is False .
NeutronEnableMetadataNetwork	If True, DHCP provides metadata network. Requires either NeutronEnableIsolatedMetadata or NeutronEnableForceMetadata parameters to also be True. The default value is false .
NeutronExcludeDevices	List of <network_device>:<excluded_devices> mapping network_device to the agent's node-specific list of virtual functions that should not be used for virtual networking. excluded_devices is a semicolon separated list of virtual functions to exclude from network_device. The network_device in the mapping should appear in the physical_device_mappings list.
NeutronFirewallDriver	Firewall driver for realizing OpenStack Networking (neutron) security group function.
NeutronFlatNetworks	Sets the flat network name to configure in plugins. The default value is datacentre .

Parameter	Description
NeutronGeneveMaxHeaderSize	Geneve encapsulation header size. The default value is 38 .
NeutronGlobalPhysnetMtu	MTU of the underlying physical network. OpenStack Networking (neutron) uses this value to calculate MTU for all virtual network components. For flat and VLAN networks, OpenStack Networking uses this value without modification. For overlay networks such as VXLAN, OpenStack Networking automatically subtracts the overlay protocol overhead from this value. The default value is 0 .
NeutronGlobalReportInterval	Seconds between nodes reporting state to server; should be less than NeutronAgentDownTime, best if it is half or less than NeutronAgentDownTime. The default value is 300 .
NeutronInterfaceDriver	OpenStack Networking (neutron) DHCP Agent interface driver. The default value is neutron.agent.linux.interface.OVSInterfaceDriver .
NeutronL3AgentAvailabilityZone	Availability zone for OpenStack Networking (neutron) L3 agent. If not set, no AZs will be configured for OpenStack Networking (neutron) network services.
NeutronL3AgentExtensions	Comma-separated list of extensions enabled for the OpenStack Networking (neutron) L3 agent.
NeutronL3AgentLoggingBurstLimit	Maximum number of packets per rate_limit. The default value is 25 .
NeutronL3AgentLoggingLocalOutputLogBase	Output logfile path on agent side, default syslog file.
NeutronL3AgentLoggingRateLimit	Maximum number of packets logging per second. The default value is 100 .
NeutronL3AgentMode	Agent mode for L3 agent. Must be legacy or dvr_snat . The default value is legacy .

Parameter	Description
NeutronL3AgentRadvdUser	The username passed to radvd, used to drop root privileges and change user ID to username and group ID to the primary group of username. If no user specified, the user executing the L3 agent will be passed. If "root" specified, because radvd is spawned as root, no "username" parameter will be passed. The default value is root .
NeutronMechanismDrivers	The mechanism drivers for the OpenStack Networking (neutron) tenant network. The default value is ovn .
NeutronMetadataProxySharedSecret	Shared secret to prevent spoofing.
NeutronMetadataWorkers	Sets the number of worker processes for the OpenStack Networking (neutron) OVN metadata agent. The default value results in the configuration being left unset and a system-dependent default will be chosen (usually the number of processors). Please note that this can result in a large number of processes and memory consumption on systems with a large core count. On such systems it is recommended that a non-default value be selected that matches the load requirements.
NeutronML2PhysicalNetworkMtus	A list of mappings of physical networks to MTU values. The format of the mapping is <physnet>: <mtu val> . This mapping allows you to specify a physical network MTU value that differs from the default segment_mtu value in ML2 plugin and overwrites values from global_physnet_mtu for the selected network.
NeutronNetworkSchedulerDriver	The network schedule driver to use for availability zones. The default value is neutron.scheduler.dhcp_agent_scheduler.AZ AwareWeightScheduler .
NeutronNetworkType	The tenant network type for OpenStack Networking (neutron). The default value is geneve . If you change this value, make sure the new value matches the parameter OVNEncapType . For example, if you want to use VXLAN instead of Geneve in an ML2/OVN environment, ensure that both NeutronNetworkType and OVNEncapType are set to vxlan . The default value is geneve .

Parameter	Description
NeutronOvsVnicTypeBlacklist	Comma-separated list of VNIC types for which support in OpenStack Networking (neutron) is administratively prohibited by the OVS mechanism driver.
NeutronPassword	The password for the OpenStack Networking (neutron) service and database account.
NeutronPermittedEthertypes	Set additional ethertypes to to be configured on OpenStack Networking (neutron) firewalls.
NeutronPhysicalDevMappings	List of <physical_network>:<physical device> All physical networks listed in network_vlan_ranges on the server should have mappings to appropriate interfaces on each agent. Example "tenant0:ens2f0,tenant1:ens2f1".
NeutronPluginExtensions	Comma-separated list of enabled extension plugins. The default value is qos,port_security,dns_domain_ports .
NeutronPluginMl2PuppetTags	Puppet resource tag names that are used to generate configuration files with puppet. The default value is neutron_plugin_ml2 .
NeutronPortQuota	Number of ports allowed per tenant, and minus means unlimited. The default value is 500 .
NeutronRouterSchedulerDriver	The router schedule driver to use for availability zones. The default value is neutron.scheduler.l3_agent_scheduler.AZLeastRoutersScheduler .
NeutronRpcWorkers	Sets the number of RPC workers for the OpenStack Networking (neutron) service. If not specified, it'll take the value of NeutronWorkers and if this is not specified either, the default value results in the configuration being left unset and a system-dependent default will be chosen (usually 1).
NeutronSecurityGroupQuota	Number of security groups allowed per tenant, and minus means unlimited. The default value is 10 .
NeutronServicePlugins	Comma-separated list of service plugin endpoints. The default value is qos,ovn-router,trunk,segments,port_forwarding,log .

Parameter	Description
NeutronSriovAgentExtensions	Comma-separated list of extensions enabled for the OpenStack Networking (neutron) SR-IOV agents.
NeutronSriovResourceProviderBandwidths	Comma-separated list of <network_device>:<egress_bw>:<ingress_bw> tuples, showing the available bandwidth for the given device in the given direction. The direction is meant from VM perspective. Bandwidth is measured in kilobits per second (kbps). The device must appear in physical_device_mappings as the value.
NeutronSriovVnicTypeBlacklist	Comma-separated list of VNIC types for which support in OpenStack Networking (neutron) is administratively prohibited by the SR-IOV mechanism driver.
NeutronTunnelIdRanges	Comma-separated list of <tun_min>:<tun_max> tuples enumerating ranges of GRE tunnel IDs that are available for tenant network allocation. The default value is ['1:4094'] .
NeutronTunnelTypes	The tunnel types for the OpenStack Networking (neutron) tenant network. The default value is vxlan .
NeutronTypeDrivers	Comma-separated list of network type driver entrypoints to be loaded. The default value is geneve,vxlan,vlan,flat .
NeutronVhostuserSocketDir	The vhost-user socket directory for OVS.
NeutronVniRanges	Comma-separated list of <vni_min>:<vni_max> tuples enumerating ranges of VXLAN VNI IDs that are available for tenant network allocation. The default value is ['1:65536'] .
NeutronWorkers	Sets the number of API and RPC workers for the OpenStack Networking service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. It is recommended to choose a suitable non-default value on systems with high CPU core counts. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node.
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .

Parameter	Description
OVNAvailabilityZone	The az options to configure in ovs db. eg. [az-0, az-1, az-2].
OVNCMSOptions	The CMS options to configure in ovs db.
OVNContainerCpusetCpus	Limit the specific CPUs or cores a container can use. It can be specified as a single core (ex. 0), as a comma-separated list (ex. 0,1), as a range (ex. 0-3) or a combination if previous methods (ex 0-3,7,11-15). The selected cores should be isolated from guests and hypervisor in order to obtain best possible performance.
OVNControllerImageUpdateTimeout	During update, how long we wait for the container image to be updated, in seconds. The default value is 600 .
OVNControllerUpdateTimeout	During update, how long we wait for the container to be updated, in seconds. The default value is 600 .
OVNDbConnectionTimeout	Timeout in seconds for the OVSDb connection transaction. The default value is 180 .
OvnDBSCertificateKeySize	Override the private key size used when creating the certificate for this service.
OVNDnsServers	List of servers to use as as dns forwarders.
OVNEmitNeedToFrag	Configure OVN to emit "need to frag" packets in case of MTU mismatch. Before enabling this configuration make sure that it's supported by the host kernel (version >= 5.2) or by checking the output of the following command <code>ovs-appctl -t ovs-vswitchd dpif/show-dp-features br-int grep "Check pkt length action"</code> . The default value is false .
OVNEnableHaproxyDockerWrapper	Generate a wrapper script so that haproxy is launched in a separate container. The default value is true .
OVNEncapTos	The value to be applied to OVN tunnel interface's option:tos as specified in the Open_vSwitch database Interface table. This feature is supported from OVN v21.12.0. The default value is 0 .

Parameter	Description
OVNEncapType	Type of encapsulation used in OVN. It can be geneve or vxlan . The default value is geneve . If you change this value, make sure the new value is also listed in the parameter NeutronNetworkType . For example, if you change OVNEncapType to vxlan , ensure that the list in NeutronNetworkType includes vxlan . The default value is geneve .
OvnHardwareOffloadedQos	Enable the QoS support for hardware offloaded ports. The default value is false .
OVNIntegrationBridge	Name of the OVS bridge to use as integration bridge by OVN Controller. The default value is br-int .
OvnMetadataCertificateKeySize	Override the private key size used when creating the certificate for this service.
OVNMetadataEnabled	Whether Metadata Service has to be enabled. The default value is true .
OVNNeutronSyncMode	The synchronization mode of OVN with OpenStack Networking (neutron) DB. The default value is log .
OVNNorthboundClusterPort	Cluster port of the OVN Northbound DB server. The default value is 6643 .
OVNNorthboundServerPort	Port of the OVN Northbound DB server. The default value is 6641 .
OVNOfctrlWaitBeforeClear	Sets the time ovn-controller will wait on startup before clearing all openflow rules and installing the new ones, in ms. The default value is 8000 .
OVNOpenflowProbeInterval	The inactivity probe interval of the OpenFlow connection to the OpenvSwitch integration bridge, in seconds. The default value is 60 .
OVNOvsdbProbeInterval	Probe interval in ms for the OVSDB session. The default value is 60000 .
OVNQosDriver	OVN notification driver for OpenStack Networking (neutron) QOS service plugin. The default value is ovn-qos .
OVNRemoteProbeInterval	Probe interval in ms. The default value is 60000 .

Parameter	Description
OVNSouthboundClusterPort	Cluster port of the OVN Southbound DB server. The default value is 6644 .
OVNSouthboundServerPort	Port of the OVN Southbound DB server. The default value is 6642 .
OVNStaticBridgeMacMappings	Static OVN Bridge MAC address mappings. Unique OVN bridge mac addresses is dynamically allocated by creating OpenStack Networking (neutron) ports. When OpenStack Networking (neutron) isn't available, for instance in the standalone deployment, use this parameter to provide static OVN bridge mac addresses. For example: controller-0: datacenter: 00:00:5E:00:53:00 provider: 00:00:5E:00:53:01 compute-0: datacenter: 00:00:5E:00:54:00 provider: 00:00:5E:00:54:01.
OvsDisableEMC	Disable OVS Exact Match Cache. The default value is false .
OvsHwOffload	Enable OVS Hardware Offload. This feature supported from OVS 2.8.0. The default value is false .
PythonInterpreter	The python interpreter to use for python and ansible actions. The default value is <code>`\$(command -v python3 command -v python)`</code> .
TenantNetPhysnetMtu	MTU of the underlying physical network. OpenStack Networking (neutron) uses this value to calculate MTU for all virtual network components. For flat and VLAN networks, OpenStack Networking (neutron) uses this value without modification. For overlay networks such as VXLAN, OpenStack Networking (neutron) automatically subtracts the overlay protocol overhead from this value. (The mtu setting of the Tenant network in network_data.yaml control's this parameter.). The default value is 1500 .

CHAPTER 18. OBJECT STORAGE (SWIFT) PARAMETERS

You can modify the swift service with object storage parameters.

Parameter	Description
EnforceSecureRbac	Setting this option to True will configure each OpenStack service to enforce Secure RBAC by setting [oslo_policy] enforce_new_defaults and [oslo_policy] enforce_scope to True. This introduces a consistent set of RBAC personas across OpenStack services that include support for system and project scope, as well as keystone's default roles, admin, member, and reader. Do not enable this functionality until all services in your deployment actually support secure RBAC. The default value is false .
MemcachedTLS	Set to True to enable TLS on Memcached service. Because not all services support Memcached TLS, during the migration period, Memcached will listen on 2 ports - on the port set with MemcachedPort parameter (above) and on 11211, without TLS. The default value is false .
SwiftAccountWorkers	Number of workers for Swift account service. The default value is 0 .
SwiftCeilometerIgnoreProjects	Comma-separated list of project names to ignore. The default value is ['service'] .
SwiftCeilometerPipelineEnabled	Set to False to disable the object storage proxy ceilometer pipeline. The default value is false .
SwiftContainerSharderEnabled	Set to True to enable Swift container sharder service. The default value is false .
SwiftContainerWorkers	Number of workers for Swift account service. The default value is 0 .
SwiftCorsAllowedOrigin	Indicate whether this resource may be shared with the domain received in the request "origin" header.
SwiftEncryptionEnabled	Set to True to enable data-at-rest encryption in Swift. The default value is false .
SwiftHashPrefix	A random string to be used as an extra salt when hashing to determine mappings in the ring.
SwiftHashSuffix	A random string to be used as a salt when hashing to determine mappings in the ring.

Parameter	Description
SwiftMinPartHours	The minimum time (in hours) before a partition in a ring can be moved following a rebalance. The default value is 1 .
SwiftMountCheck	Check if the devices are mounted to prevent accidentally writing to the root device. The default value is false .
SwiftObjectWorkers	Number of workers for Swift account service. The default value is 0 .
SwiftPartPower	Partition power to use when building object storage rings. The default value is 10 .
SwiftPassword	The password for the object storage service account.
SwiftProxyNodeTimeout	Timeout for requests going from swift-proxy to account, container, and object services. The default value is 60 .
SwiftProxyRecoverableNodeTimeout	Timeout for GET/HEAD requests going from swift-proxy to swift a/c/o services. The default value is 30 .
SwiftRawDisks	Additional raw devices to use for the object storage backend. For example: {sdb: {}}
SwiftReplicas	Number of replicas to use in the object storage rings. The default value is 3 .
SwiftRingBuild	Whether to manage object storage rings or not. The default value is true .
SwiftRingGetTempurl	A temporary Swift URL to download rings from.
SwiftRingPutTempurl	A temporary Swift URL to upload rings to.
SwiftUseLocalDir	Use a local directory for object storage services when building rings. The default value is true .
SwiftUseNodeDataLookup	Use NodeDataLookup for disk devices in order to use persistent naming. The default value is false .

Parameter	Description
SwiftWorkers	Number of workers for object storage service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. It is recommended to choose a suitable non-default value on systems with high CPU core counts. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node. The default value is 0 .

CHAPTER 19. ORCHESTRATION (HEAT) PARAMETERS

You can modify the heat service with orchestration parameters.

Parameter	Description
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
ClientRetryLimit	Client retries for transient errors. The default value is 2 .
EnableCache	Enable caching with memcached. The default value is true .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
EnforceSecureRbac	Setting this option to True will configure each OpenStack service to enforce Secure RBAC by setting [oslo_policy] enforce_new_defaults and [oslo_policy] enforce_scope to True. This introduces a consistent set of RBAC personas across OpenStack services that include support for system and project scope, as well as keystone's default roles, admin, member, and reader. Do not enable this functionality until all services in your deployment actually support secure RBAC. The default value is false .
HeatApiOptEnvVars	Hash of optional environment variables.
HeatApiOptVolumes	List of optional volumes to be mounted.
HeatAuthEncryptionKey	Auth encryption key for heat-engine.
HeatConfigureDelegatedRoles	Create delegated roles. The default value is false .
HeatConvergenceEngine	Enables the heat engine with the convergence architecture. The default value is true .
HeatCorsAllowedOrigin	Indicate whether this resource may be shared with the domain received in the request "origin" header.

Parameter	Description
HeatCronPurgeDeletedAge	Cron to purge database entries marked as deleted and older than \$age - Age. The default value is 30 .
HeatCronPurgeDeletedAgeType	Cron to purge database entries marked as deleted and older than \$age - Age type. The default value is days .
HeatCronPurgeDeletedDestination	Cron to purge database entries marked as deleted and older than \$age - Log destination. The default value is /dev/null .
HeatCronPurgeDeletedEnsure	Cron to purge database entries marked as deleted and older than \$age - Ensure. The default value is present .
HeatCronPurgeDeletedHour	Cron to purge database entries marked as deleted and older than \$age - Hour. The default value is 0 .
HeatCronPurgeDeletedMaxDelay	Cron to purge database entries marked as deleted and older than \$age - Max Delay. The default value is 3600 .
HeatCronPurgeDeletedMinute	Cron to purge database entries marked as deleted and older than \$age - Minute. The default value is 1 .
HeatCronPurgeDeletedMonth	Cron to purge database entries marked as deleted and older than \$age - Month. The default value is * .
HeatCronPurgeDeletedMonthday	Cron to purge database entries marked as deleted and older than \$age - Month Day. The default value is * .
HeatCronPurgeDeletedUser	Cron to purge database entries marked as deleted and older than \$age - User. The default value is heat .
HeatCronPurgeDeletedWeekday	Cron to purge database entries marked as deleted and older than \$age - Week Day. The default value is * .
HeatEnableDBPurge	Whether to create cron job for purging soft deleted rows in the OpenStack Orchestration (heat) database. The default value is true .
HeatEngineOptEnvVars	Hash of optional environment variables.
HeatEngineOptVolumes	List of optional volumes to be mounted.
HeatEnginePluginDirs	An array of directories to search for plug-ins.

Parameter	Description
HeatMaxJsonBodySize	Maximum raw byte size of the OpenStack Orchestration (heat) API JSON request body. The default value is 4194304 .
HeatMaxNestedStackDepth	Maximum number of nested stack depth. The default value is 6 .
HeatMaxResourcesPerStack	Maximum resources allowed per top-level stack. -1 stands for unlimited. The default value is 1000 .
HeatPassword	The password for the Orchestration service and database account.
HeatReauthenticationAuthMethod	Allow reauthentication on token expiry, such that long-running tasks may complete. Note this defeats the expiry of any provided user tokens.
HeatStackDomainAdminPassword	The admin password for the OpenStack Orchestration (heat) domain in OpenStack Identity (keystone).
HeatWorkers	Number of workers for OpenStack Orchestration (heat) service. Note that more workers creates a larger number of processes on systems, which results in excess memory consumption. It is recommended to choose a suitable non-default value on systems with high CPU core counts. 0 sets to the OpenStack internal default, which is equal to the number of CPU cores on the node. The default value is 0 .
HeatYaqiLimitIterators	The maximum number of elements in collection yaqi expressions can take for its evaluation. The default value is 1000 .
HeatYaqiMemoryQuota	The maximum size of memory in bytes that yaqi expressions can take for its evaluation. The default value is 100000 .
MemcachedTLS	Set to True to enable TLS on Memcached service. Because not all services support Memcached TLS, during the migration period, Memcached will listen on 2 ports - on the port set with MemcachedPort parameter (above) and on 11211, without TLS. The default value is false .
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .

Parameter	Description
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .

CHAPTER 20. SHARED FILE SERVICE (MANILA) PARAMETERS

You can modify the manila service with shared file service parameters.

Parameter	Description
ApacheCertificateKeySize	Override the private key size used when creating the certificate for this service.
ApacheTimeout	The timeout in seconds for Apache, which defines duration Apache waits for I/O operations. The default value is 90 .
CephClusterName	The Ceph cluster name. The default value is ceph .
CephConfigPath	The path where the Ceph Cluster configuration files are stored on the host. The default value is /var/lib/tripleo-config/ceph .
CertificateKeySize	Specifies the private key size used when creating the certificate. The default value is 2048 .
EnableSQLAlchemyCollectd	Set to true to enable the SQLAlchemy-collectd server plugin. The default value is false .
ManilaCephClientUserName	Ceph client username for manila integration. The default value is manila .
ManilaCephFSCephFSProtocolHelperType	Protocol type (<i>CEPHFS</i> or <i>NFS</i>) when cephfs back end is enabled. Set via manila cephfs environment files. The default value is CEPHFS .
ManilaCronDbPurgeAge	Cron to purge database entries marked as deleted and older than \$age - Age. The default value is 30 .
ManilaCronDbPurgeDestination	Cron to purge database entries marked as deleted and older than \$age - Log destination. The default value is /var/log/manila/manila-rowsflush.log .
ManilaCronDbPurgeHour	Cron to purge database entries marked as deleted and older than \$age - Hour. The default value is 0 .
ManilaCronDbPurgeMaxDelay	Cron to purge database entries marked as deleted and older than \$age - Max Delay. The default value is 3600 .
ManilaCronDbPurgeMinute	Cron to purge database entries marked as deleted and older than \$age - Minute. The default value is 1 .

Parameter	Description
ManilaCronDbPurgeMonth	Cron to purge database entries marked as deleted and older than \$age - Month. The default value is <code>*</code> .
ManilaCronDbPurgeMonthday	Cron to purge database entries marked as deleted and older than \$age - Month Day. The default value is <code>*</code> .
ManilaCronDbPurgeUser	Cron to purge database entries marked as deleted and older than \$age - User. The default value is manila .
ManilaCronDbPurgeWeekday	Cron to purge database entries marked as deleted and older than \$age - Week Day. The default value is <code>*</code> .
ManilaEnabledShareProtocols	List of protocols to be allowed for share creation in manila. When not set, the list is inferred via the storage back end/s enabled.
ManilaIPv6	Set to True to enable IPv6 access in manila. The default value is False .
ManilaPassword	The password for the shared file service account.
ManilaStorageAvailabilityZone	The OpenStack Shared File Systems (manila) service's storage availability zone. The default value is nova .
ManilaWorkers	Set the number of workers for manila::wsgi::apache. The default value is equal to the number of vCPU cores on the physical node.
MemcacheUseAdvancedPool	Use the advanced (eventlet safe) memcached client pool. The default value is true .
NotificationDriver	Driver or drivers to handle sending notifications. The default value is noop .

CHAPTER 21. TIME PARAMETERS

You can modify the time synchronization service with time parameters.

Parameter	Description
ChronyAclRules	Access Control List of NTP clients. By default no clients are permitted. The default value is ['deny all'] .
ChronyGlobalPoolOptions	Default pool options for the configured NTP pools in <code>chrony.conf</code> . If this is specified, <code>NtpIburstEnable</code> , <code>MaxPoll</code> , and <code>MinPoll</code> are ignored.
ChronyGlobalServerOptions	Default server options for the configured NTP servers in <code>chrony.conf</code> . If this is specified, <code>NtpIburstEnable</code> , <code>MaxPoll</code> , and <code>MinPoll</code> are ignored.
EnablePackageInstall	Set to true to enable package installation at deploy time. The default value is false .
MaxPoll	Specify maximum poll interval of upstream servers for NTP messages, in seconds to the power of two. Allowed values are 4 to 17. The default value is 10 .
MinPoll	Specify minimum poll interval of upstream servers for NTP messages, in seconds to the power of two. The minimum poll interval defaults to 6 (64 s). Allowed values are 4 to 17. The default value is 6 .
NtpIburstEnable	Specifies whether to enable the <code>iburst</code> option for every NTP peer. If <code>iburst</code> is enabled, when the NTP server is unreachable NTP will send a burst of eight packages instead of one. This is designed to speed up the initial synchronization. The default value is true .
NtpPool	NTP pool list. Defaults to [], so only <code>NtpServer</code> is used by default.
NtpServer	NTP servers list. The default value is ['0.pool.ntp.org', '1.pool.ntp.org', '2.pool.ntp.org', '3.pool.ntp.org'] .
TimeZone	The timezone to be set on the overcloud. The default value is UTC .

CHAPTER 22. UPGRADE PARAMETERS

You can modify the behavior of the upgrade process with upgrade parameters.

Parameter	Description
UpgradeInitCommand	Command or script snippet to run on all overcloud nodes to initialize the upgrade process. For example, a repository switch.
UpgradeInitCommonCommand	Common commands required by the upgrades process. This should not normally be modified by the operator and is set and unset in the <code>major-upgrade-composable-steps.yaml</code> and <code>major-upgrade-converge.yaml</code> environment files.
UpgradeLeappCommandOptions	Additional command line options to append to the Leapp command.
UpgradeLeappDebug	Print debugging output when running Leapp. The default value is false .
UpgradeLeappDevelSkip	Skip Leapp checks by setting env variables when running Leapp in development/testing. For example, <code>LEAPP_DEVEL_SKIP_RHSM=1</code> .
UpgradeLeappEnabled	Use Leapp for operating system upgrade. The default value is false .
UpgradeLeappPostRebootDelay	Maximum (seconds) to wait for machine to reboot and respond to a test command. The default value is 120 .
UpgradeLeappRebootTimeout	Timeout (seconds) for the OS upgrade phase via Leapp. The default value is 3600 .
UpgradeLeappToInstall	List of packages to install after Leapp upgrade.
UpgradeLeappToRemove	List of packages to remove during Leapp upgrade.