
Octavia Tempest Plugin Documentation

Release 2.9.1.dev11

OpenStack Octavia Team

Feb 18, 2025

©2025 OpenStack Foundation

CONTENTS

- 1 Octavia Tempest Plugin** **1**
- 1.1 Team and repository tags 1
- 1.2 Tempest integration of Octavia 1
- 1.2.1 Installing 1
- 1.2.2 Running the tests 1

- 2 Installation** **3**

- 3 Contributing** **4**

- 4 Octavia Tempest Plugin Configuration Options** **5**
- 4.1 load_balancer 5
- 4.2 loadbalancer-feature-enabled 14

OCTAVIA TEMPEST PLUGIN

1.1 Team and repository tags



1.2 Tempest integration of Octavia

This project contains the Tempest plugin for the Octavia project for OpenStack Load Balancing.

For more information about Octavia see: <https://docs.openstack.org/octavia/latest/>

For more information about Tempest plugins see: <https://docs.openstack.org/tempest/latest/plugin.html>

- Free software: Apache license
- Documentation: <https://docs.openstack.org/octavia-tempest-plugin/latest/>
- Source: <https://opendev.org/openstack/octavia-tempest-plugin>
- Bugs: <https://storyboard.openstack.org/#!/project/openstack/octavia-tempest-plugin>

1.2.1 Installing

From the tempest directory, setup the tempest virtual environment for the Octavia tempest plugin:

```
$ tox -e venv-tempest -- pip3 install -e <path to octavia-tempest-plugin>
```

For example, when using a typical devstack setup:

```
$ cd /opt/stack/tempest
$ tox -e venv-tempest -- pip3 install -e /opt/stack/octavia-tempest-plugin
```

1.2.2 Running the tests

To run all the tests from this plugin, call from the tempest repo:

```
$ tox -e all -- octavia_tempest_plugin
```

To run a single test case, call with full path, for example:

```
$ tox -e all -- octavia_tempest_plugin.tests.scenario.v2.test_traffic_ops.
↪TrafficOperationsScenarioTest.test_basic_traffic
```

To retrieve a list of all tempest tests, run:

```
$ testr list-tests
```

INSTALLATION

At the command line:

```
$ pip install octavia-tempest-plugin
```

Or, if you have virtualenvwrapper installed:

```
$ mkvirtualenv octavia-tempest-plugin  
$ pip install octavia-tempest-plugin
```

CONTRIBUTING

If you would like to contribute to the development of OpenStack, you must follow the steps in this page:

<https://docs.openstack.org/infra/manual/developers.html>

If you already have a good understanding of how the system works and your OpenStack accounts are set up, you can skip to the development workflow section of this documentation to learn how changes to OpenStack should be submitted for review via the Gerrit tool:

<https://docs.openstack.org/infra/manual/developers.html#development-workflow>

Pull requests submitted through GitHub will be ignored.

Bugs should be filed on StoryBoard, not GitHub:

<https://storyboard.openstack.org/#!/project/openstack/octavia-tempest-plugin>

OCTAVIA TEMPEST PLUGIN CONFIGURATION OPTIONS

Table of Contents

- *Octavia Tempest Plugin Configuration Options*
 - *load_balancer*
 - *loadbalancer-feature-enabled*

4.1 load_balancer

region

Type
string

Default
''

The region name to use. If empty, the value of identity.region is used instead. If no such region is found in the service catalog, the first found one is used.

catalog_type

Type
string

Default
load-balancer

Catalog type of the Octavia service.

endpoint_type

Type
string

Default
publicURL

Valid Values
public, admin, internal, publicURL, adminURL, internalURL

The endpoint type to use for the load-balancer service

build_interval

Type
floating point

Default
5

Time in seconds between build status checks for non-load-balancer resources to build

build_timeout

Type
integer

Default
300

Timeout in seconds to wait for non-load-balancer resources to build

octavia_svc_username

Type
string

Default
admin

The service_auth username the Octavia services are using to access other OpenStack services.

log_user_roles

Type
boolean

Default
True

Log the user roles at the start of every test.

check_interval

Type
floating point

Default
5

Interval to check for status changes.

check_timeout

Type
integer

Default
120

Timeout, in seconds, to wait for a status change.

test_with_noop

Type
boolean

Default
False

Runs the tests assuming no-op drivers are being used. Tests will assume no actual amphora are created.

lb_build_interval

Type
floating point

Default
10

Time in seconds between build status checks for a load balancer.

lb_build_timeout

Type
integer

Default
900

Timeout in seconds to wait for a load balancer to build.

member_role

Type
string

Default
load-balancer_member

The load balancing member RBAC role.

admin_role

Type
string

Default
load-balancer_admin

The load balancing admin RBAC role.

observer_role

Type
string

Default
load-balancer_observer

The load balancing observer RBAC role.

global_observer_role

Type

string

Default

load-balancer_global_observer

The load balancing global observer RBAC role.

scp_connection_timeout

Type

integer

Default

5

Timeout in seconds to wait for a scp connection to complete.

scp_connection_attempts

Type

integer

Default

20

Retries for scp to attempt to connect.

provider

Type

string

Default

octavia

The provider driver to use for the tests.

RBAC_test_type

Type

string

Default

keystone_default_roles

Valid Values

advanced, keystone_default_roles, owner_or_admin, none

Type of RBAC tests to run. "advanced" runs the octavia default RBAC tests. "owner_or_admin" runs the legacy owner or admin tests. "keystone_default_roles" runs the tests using only the keystone default roles. "none" disables the RBAC tests.

enabled_provider_drivers

Type

dict

Default

```
{'amphora': 'The Octavia Amphora driver.', 'amphorav2':  
'The Octavia Amphora driver that uses taskflow jobboard  
persistence.', 'octavia': 'Deprecated alias of the Octavia  
Amphora driver.'}
```

A comma separated list of dictionaries of the enabled provider driver names and descriptions. Must match the driver name in the octavia.api.drivers endpoint. Example: amphora:The Octavia Amphora driver.,octavia:Deprecated alias of the Octavia Amphora driver.,amphorav2:The Octavia Amphora driver that uses taskflow jobboard persistence.

loadbalancer_topology

Type

string

Default

SINGLE

Valid Values

SINGLE, ACTIVE_STANDBY

Load balancer topology configuration.

expected_flavor_capability

Type

dict

Default

```
{'loadbalancer_topology': 'The load balancer topology. One  
of: SINGLE - One amphora per load balancer. ACTIVE_STANDBY -  
Two amphora per load balancer.'}
```

Defines a provider flavor capability that is expected to be present in the selected provider under test. It is specified in a "name": "description" dict. Example: {"loadbalancer_topology": "The load balancer topology. One of: SINGLE - One amphora per load balancer. ACTIVE_STANDBY - Two amphora per load balancer."}

expected_availability_zone_capability

Type

dict

Default

```
{'compute_zone': 'The compute availability zone.'}
```

Defines a provider availability zone capability that is expected to be present in the selected provider under test. It is specified in a "name": "description" dict. Example: {"compute_zone": "The compute availability zone."}

test_with_ipv6

Type

boolean

Default

True

When true the IPv6 tests will be run.

disable_boot_network

Type

boolean

Default

False

True if your cloud does not allow creating networks or specifying the boot network for instances.

enable_security_groups

Type

boolean

Default

False

When true, security groups will be created for the test servers. When false, port security will be disabled on the created networks.

test_network_override

Type

string

Default

<None>

Overrides network creation and uses this network ID for all tests (VIP, members, etc.). Required if test_subnet_override is set.

test_subnet_override

Type

string

Default

<None>

Overrides subnet creation and uses this subnet ID for all IPv4 tests (VIP, members, etc.). Optional

test_ipv6_subnet_override

Type

string

Default

<None>

Overrides subnet creation and uses this subnet ID for all IPv6 tests (VIP, members, etc.). Optional and only valid if test_network_override is set.

vip_subnet_cidr

Type

string

Default

10.1.1.0/24

CIDR format subnet to use for the vip subnet.

vip_ipv6_subnet_cidr

Type

string

Default

fdde:1a92:7523:70a0::/64

CIDR format subnet to use for the IPv6 vip subnet.

member_1_ipv4_subnet_cidr

Type

string

Default

10.2.1.0/24

CIDR format subnet to use for the member 1 subnet.

member_1_ipv6_subnet_cidr

Type

string

Default

fd7b:f9f7:0fff:4eca::/64

CIDR format subnet to use for the member 1 ipv6 subnet.

member_2_ipv4_subnet_cidr

Type

string

Default

10.2.2.0/24

CIDR format subnet to use for the member 2 subnet.

member_2_ipv6_subnet_cidr

Type

string

Default

fd77:1457:4cf0:26a8::/64

CIDR format subnet to use for the member 1 ipv6 subnet.

default_router

Type

string

Default

router1

The default router connected to the public network.

default_ipv6_subnetpool

Type
string

Default
shared-default-subnetpool-v6

The default IPv6 subnetpool to use when creating the IPv6 VIP subnet.

amphora_ssh_user

Type
string

Default
ubuntu

The amphora SSH user.

amphora_ssh_key

Type
string

Default
/etc/octavia/.ssh/octavia_ssh_key

The amphora SSH key file.

random_server_name_length

Type
integer

Default
0

If non-zero, generate a random name of the length provided for each server, in the format "m[A-Z0-9]*".

availability_zone

Type
string

Default
<None>

Availability zone to use for creating servers.

availability_zone2

Type
string

Default
<None>

A second availability zone to use for creating servers.

availability_zone3

Type
string

Default
<None>

A third availability zone to use for creating servers.

test_reuse_connection

Type
boolean

Default
True

Reuse TCP connections while testing LB with HTTP members (keep-alive).

tenant_flow_log_file

Type
string

Default
/var/log/octavia-tenant-traffic.log

File path, on the tempest system, to the tenant flow log file.

amphora_admin_log_file

Type
string

Default
/var/log/octavia-amphora.log

File path, on the tempest system, to the amphora admin log file.

test_server_path

Type
string

Default
/opt/octavia-tempest-plugin/test_server.bin

Filesystem path to the test web server that will be installed in the web server VMs.

enforce_new_defaults

Type
boolean

Default
False

Does the load-balancer service API policies enforce the new keystone default roles? This configuration value should be same as octavia.conf: [oslo_policy].enforce_new_defaults option.

Warning

This option is deprecated for removal since bobcat. Its value may be silently ignored in the future.

Reason

Consolidated into the RBAC_test_type setting.

4.2 loadbalancer-feature-enabled

`not_implemented_is_error`

Type

boolean

Default

True

When True, not-implemented responses from the API are considered an error and test failure. This should be used when a driver should support all of the Octavia API features, such as the reference driver.

`health_monitor_enabled`

Type

boolean

Default

True

Whether Health Monitor is available with provider driver or not.

`terminated_tls_enabled`

Type

boolean

Default

True

Whether TLS termination is available with provider driver or not.

`l7_protocol_enabled`

Type

boolean

Default

True

Whether L7 Protocols are available with the provider driver or not.

`pool_algorithms_enabled`

Type

boolean

Default

True

Whether pool algorithms are available with providerdriver or not.

l4_protocol

Type

string

Default

TCP

The type of L4 Protocol which is supported with the provider driver.

spare_pool_enabled

Type

boolean

Default

False

Whether spare pool is available with amphora provider driver or not.

session_persistence_enabled

Type

boolean

Default

True

Whether session persistence is supported with the provider driver.

log_offload_enabled

Type

boolean

Default

False

Whether the log offload tests will run. These require the tempest instance have access to the log files specified in the tempest configuration.

prometheus_listener_enabled

Type

boolean

Default

True

Whether the PROMETHEUS listener tests will run.