Octavia Tempest Plugin Documentation

Release 3.2.1.dev25

OpenStack Octavia Team

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OCTAVIA TEMPEST PLUGIN

1.1 Team and repository tags

openstack community project ii best practice passing

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://bugs.launchpad.net/octavia

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 Launchpad, not GitHub or Storyboard:

> https://bugs.launchpad.net/octavia

OCTAVIA TEMPEST PLUGIN CONFIGURATION OPTIONS

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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 usingto 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 entrypoint. 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

Wether 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.