

---

# **OpenStack-Ansible Documentation:**

## **os\_senlin role**

*Release 0.0.1.dev52*

**OpenStack-Ansible Contributors**

**May 11, 2024**



## CONTENTS

<b>1</b>	<b>Dependencies</b>	<b>1</b>
<b>2</b>	<b>Default variables</b>	<b>3</b>
<b>3</b>	<b>Example playbook</b>	<b>11</b>
<b>4</b>	<b>Tags</b>	<b>13</b>
<b>5</b>	<b>Senlin client endpoints</b>	<b>15</b>



## DEPENDENCIES

This role needs `pip >= 7.1` installed on the target host.

To clone or view the source code for this repository, visit the role repository for [os\\_senlin](#).



## DEFAULT VARIABLES

```
# The variables file used by the playbooks in the Senlin-api group.
# These don't have to be explicitly imported by vars_files: they are
↳autopopulated.

# Enable/Disable Ceilometer
senlin_ceilometer_enabled: "{{ (groups['ceilometer_all'] is defined) and
↳(groups['ceilometer_all'] | length > 0) }}"

## Verbosity Options
debug: False

# Set the host which will execute the shade modules
# for the service setup. The host must already have
# clouds.yaml properly configured.
senlin_service_setup_host: "{{ openstack_service_setup_host | default(
↳'localhost') }}"
senlin_service_setup_host_python_interpreter: "{{ openstack_service_setup_
↳host_python_interpreter | default((senlin_service_setup_host == 'localhost
↳') | ternary(ansible_playbook_python, ansible_facts['python']['executable
↳'])) }}"

# Set the package install state for distribution packages
# Options are 'present' and 'latest'
senlin_package_state: "{{ package_state | default('latest') }}"

# Set installation method.
senlin_install_method: "{{ service_install_method | default('source') }}"
senlin_venv_python_executable: "{{ openstack_venv_python_executable | default(
↳'python3') }}"

senlin_git_repo: https://opendev.org/openstack/senlin
senlin_git_install_branch: master
senlin_upper_constraints_url: "{{ requirements_git_url | default('https://
↳releases.openstack.org/constraints/upper/' ~ requirements_git_install_
↳branch | default('master')) }}"
senlin_git_constraints:
- "--constraint {{ senlin_upper_constraints_url }}"
```

(continues on next page)

(continued from previous page)

```

senlin_pip_install_args: "{{ pip_install_options | default('') }}"

# Name of the virtual env to deploy into
senlin_venv_tag: "{{ venv_tag | default('untagged') }}"
senlin_bin: "{{ _senlin_bin }}"

senlin_fatal_deprecations: False

## Database info
senlin_db_setup_host: "{{ openstack_db_setup_host | default('localhost') }}"
senlin_db_setup_python_interpreter: "{{ openstack_db_setup_python_interpreter |
  ↳ default((senlin_db_setup_host == 'localhost') | ternary(ansible_playbook_
  ↳ python, ansible_facts['python']['executable'])) }}"
senlin_galera_address: "{{ galera_address | default('127.0.0.1') }}"
senlin_galera_user: senlin
senlin_galera_database: senlin
senlin_galera_use_ssl: "{{ galera_use_ssl | default(False) }}"
senlin_galera_ssl_ca_cert: "{{ galera_ssl_ca_cert | default('') }}"
senlin_galera_port: "{{ galera_port | default('3306') }}"
senlin_db_max_overflow: "{{ openstack_db_max_overflow | default('50') }}"
senlin_db_max_pool_size: "{{ openstack_db_max_pool_size | default('5') }}"
senlin_db_pool_timeout: "{{ openstack_db_pool_timeout | default('30') }}"
senlin_db_connection_recycle_time: "{{ openstack_db_connection_recycle_time |
  ↳ default('600') }}"

## Oslo Messaging Info
# RPC
senlin_oslomsg_rpc_host_group: "{{ oslomsg_rpc_host_group | default('rabbitmq_
  ↳ all') }}"
senlin_oslomsg_rpc_setup_host: "{{ (senlin_oslomsg_rpc_host_group in groups) |
  ↳ ternary(groups[senlin_oslomsg_rpc_host_group][0], 'localhost') }}"
senlin_oslomsg_rpc_transport: "{{ oslomsg_rpc_transport | default('rabbit') }}"
senlin_oslomsg_rpc_servers: "{{ oslomsg_rpc_servers | default('127.0.0.1') }}"
senlin_oslomsg_rpc_port: "{{ oslomsg_rpc_port | default('5672') }}"
senlin_oslomsg_rpc_use_ssl: "{{ oslomsg_rpc_use_ssl | default(False) }}"
senlin_oslomsg_rpc_userid: senlin
senlin_oslomsg_rpc_vhost: /senlin
senlin_oslomsg_rpc_ssl_version: "{{ oslomsg_rpc_ssl_version | default('TLSv1.2
  ↳ ') }}"
senlin_oslomsg_rpc_ssl_ca_file: "{{ oslomsg_rpc_ssl_ca_file | default('') }}"

# Notify
senlin_oslomsg_notify_host_group: "{{ oslomsg_notify_host_group | default(
  ↳ 'rabbitmq_all') }}"
senlin_oslomsg_notify_setup_host: "{{ (senlin_oslomsg_notify_host_group in
  ↳ groups) | ternary(groups[senlin_oslomsg_notify_host_group][0], 'localhost') |
  ↳ default('') }}"
senlin_oslomsg_notify_transport: "{{ oslomsg_notify_transport | default(
  ↳ 'rabbit') }}"

```

(continues on next page)



(continued from previous page)

```
senlin_oslmsg_notify_servers: "{{ oslmsg_notify_servers | default('127.0.0.1
↪') }}"
senlin_oslmsg_notify_port: "{{ oslmsg_notify_port | default('5672') }}"
senlin_oslmsg_notify_use_ssl: "{{ oslmsg_notify_use_ssl | default(False) }}"
senlin_oslmsg_notify_userid: "{{ senlin_oslmsg_rpc_userid }}"
senlin_oslmsg_notify_password: "{{ senlin_oslmsg_rpc_password }}"
senlin_oslmsg_notify_vhost: "{{ senlin_oslmsg_rpc_vhost }}"
senlin_oslmsg_notify_ssl_version: "{{ oslmsg_notify_ssl_version | default(
↪'TLSv1_2') }}"
senlin_oslmsg_notify_ssl_ca_file: "{{ oslmsg_notify_ssl_ca_file | default('
↪') }}"

## (Qdrouterd) integration
# TODO(ansmith): Change structure when more backends will be supported
senlin_oslmsg_amqp1_enabled: "{{ senlin_oslmsg_rpc_transport == 'amqp' }}"

## Senlin User / Group
senlin_system_user_name: senlin
senlin_system_group_name: senlin
senlin_system_shell: /bin/false
senlin_system_comment: senlin system user
senlin_system_home_folder: "/var/lib/{{ senlin_system_user_name }}"

## Default domain
senlin_project_domain_name: Default
senlin_project_name: admin
senlin_user_domain_name: Default

# osprofiler
senlin_profiler_enabled: false
senlin_profiler_trace_sqlalchemy: false

## Auth
senlin_service_region: "{{ service_region | default('RegionOne') }}"
senlin_service_project_name: "service"
senlin_service_user_name: "senlin"
senlin_service_role_names:
  - admin
  - service
senlin_service_token_roles:
  - service
senlin_service_token_roles_required: "{{ openstack_service_token_roles_
↪required | default(True) }}"
senlin_service_project_domain_id: default
senlin_service_user_domain_id: default
senlin_keystone_auth_plugin: password

## Trustee Auth
senlin_service_trustee_project_name: "service"
```

(continues on next page)

(continued from previous page)

```
senlin_service_trustee_user_name: "senlin"
senlin_service_trustee_password: "{{ senlin_service_password }}"
senlin_service_trustee_project_domain_id: "default"
senlin_service_trustee_user_domain_id: "default"
senlin_keystone_trustee_auth_plugin: "{{ senlin_keystone_trustee_auth_type }}"
senlin_keystone_trustee_auth_type: password

## Senlin api service type and data
senlin_service_name: senlin
senlin_service_description: "Senlin Clustering Service"
senlin_service_port: 8778
senlin_service_proto: http
senlin_service_publicuri_proto: "{{ openstack_service_publicuri_proto |
↳default(senlin_service_proto) }}"
senlin_service_adminuri_proto: "{{ openstack_service_adminuri_proto |
↳default(senlin_service_proto) }}"
senlin_service_internaluri_proto: "{{ openstack_service_internaluri_proto |
↳default(senlin_service_proto) }}"
senlin_service_type: clustering
senlin_service_publicuri: "{{ senlin_service_publicuri_proto }}://{{ external_
↳lb_vip_address }}:{{ senlin_service_port }}"
senlin_service_publicurl: "{{ senlin_service_publicuri }}"
senlin_service_adminuri: "{{ senlin_service_adminuri_proto }}://{{ internal_
↳lb_vip_address }}:{{ senlin_service_port }}"
senlin_service_adminurl: "{{ senlin_service_adminuri }}"
senlin_service_internaluri: "{{ senlin_service_internaluri_proto }}://{{
↳internal_lb_vip_address }}:{{ senlin_service_port }}"
senlin_service_internalurl: "{{ senlin_service_internaluri }}"

## Senlin tunable options
senlin_max_clusters_per_project: 100
senlin_max_nodes_per_cluster: 1000
senlin_periodic_interval: 60
senlin_periodic_interval_max: 120
senlin_periodic_fuzzy_delay: 10
senlin_health_check_interval_min: 60
senlin_check_interval_max: 3600
senlin_max_response_size: 524288
senlin_default_action_timeout: 3600
senlin_default_nova_timeout: 600
senlin_max_actions_per_batch: 0
senlin_batch_interval: 3
senlin_lock_retry_times: 3
senlin_lock_retry_interval: 10
senlin_database_retry_limit: 10
senlin_database_max_retry_interval: 2
senlin_engine_life_check_timeout: 2
senlin_service_down_time: 60
```

(continues on next page)

(continued from previous page)

```
## If the following variables are unset in user_variables, the value set will
↳be half the number of available VCPUs
# senlin_engine_workers: 4
# senlin_api_workers: 4
# senlin_conductor_workers: 4
# senlin_health_manager_workers: 4

## Cap the maximum number of threads / workers when a user value is
↳unspecified.
senlin_api_threads_max: 16
senlin_api_threads: "{{ [(ansible_facts['processor_vcpus']//ansible_facts[
↳'processor_threads_per_core'])|default(1), 1] | max * 2, senlin_api_threads_
↳max] | min }}"

senlin_service_in_ldap: "{{ service_ldap_backend_enabled | default(False) }}"

## Policy vars
# Provide a list of access controls to update the default policy.json with.
↳These changes will be merged
# with the access controls in the default policy.json. E.g.
#senlin_policy_overrides:
# "cloudformation:ListStacks": "rule:deny_stack_user"
# "cloudformation>CreateStack": "rule:deny_stack_user"

# Common pip packages
senlin_pip_packages:
- cryptography
- "git+{{ senlin_git_repo }}@{{ senlin_git_install_branch }}#egg=senlin"
- keystonemiddleware
- osprofiler
- PyMySQL
- pymemcache
- python-memcached
- systemd-python

# Memcached override
senlin_memcached_servers: "{{ memcached_servers }}"

# Specific pip packages provided by the user
senlin_user_pip_packages: []

senlin_optional_oslmsg_amqp1_pip_packages:
- oslo.messaging[amqp1]

senlin_api_init_overrides: {}
senlin_engine_init_overrides: {}
senlin_conductor_init_overrides: {}
senlin_health_manager_init_overrides: {}
```

(continues on next page)

(continued from previous page)

```

## Allow Enable/Disable uWSGI
senlin_use_uwsgi: True

## Service Name-Group Mapping
senlin_services:
  senlin-api:
    group: senlin_api
    service_name: senlin-api
    init_config_overrides: "{{{ senlin_api_init_overrides }}}"
    start_order: 4
    execstarts: "{{{ senlin_bin }}/senlin-api"
    wsgi_app: "{{{ senlin_use_uwsgi }}}"
    wsgi_name: senlin-wsgi-api
    uwsgi_overrides: "{{{ senlin_api_uwsgi_ini_overrides }}}"
    uwsgi_port: "{{{ senlin_service_port }}}"
    uwsgi_bind_address: "{{{ senlin_api_uwsgi_bind_address }}}"
  senlin-engine:
    group: senlin_engine
    service_name: senlin-engine
    execstarts: "{{{ senlin_bin }}/senlin-engine"
    init_config_overrides: "{{{ senlin_engine_init_overrides }}}"
    start_order: 3
  senlin-conductor:
    group: senlin_conductor
    service_name: senlin-conductor
    execstarts: "{{{ senlin_bin }}/senlin-conductor"
    init_config_overrides: "{{{ senlin_conductor_init_overrides }}}"
    start_order: 2
  senlin-health-manager:
    group: senlin_health_manager
    service_name: senlin-health-manager
    execstarts: "{{{ senlin_bin }}/senlin-health-manager"
    init_config_overrides: "{{{ senlin_health_manager_init_overrides }}}"
    start_order: 1

# Required secrets for the role
senlin_required_secrets:
  - keystone_auth_admin_password
  - senlin_galera_password
  - senlin_oslmsg_rpc_password
  - senlin_service_password
  - memcached_encryption_key

# uWSGI Settings
senlin_api_uwsgi_ini_overrides: {}
senlin_wsgi_processes_max: 16
senlin_wsgi_processes: "{{{ [[ansible_facts['processor_vcpus']|default(1), 1]_
↳| max * 2, senlin_wsgi_processes_max] | min }}}"
senlin_wsgi_threads: 1

```

(continues on next page)

(continued from previous page)

```
senlin_api_uwsgi_bind_address: "{{ openstack_service_bind_address | default(
↳ '0.0.0.0') }}"
#senlin_api_cfn_uwsgi_bind_address: "{{ openstack_service_bind_address |
↳ default('0.0.0.0') }}"

senlin_role_project_group: senlin_all

## Tunable overrides
senlin_senlin_conf_overrides: {}
senlin_api_paste_ini_overrides: {}
senlin_default_yaml_overrides: {}
senlin_aws_cloudwatch_alarm_yaml_overrides: {}
senlin_aws_rds_dbinstance_yaml_overrides: {}
senlin_policy_overrides: {}
```



## EXAMPLE PLAYBOOK

```
---  
- name: Install senlin server  
  hosts: senlin_all  
  user: root  
  roles:  
    - { role: "os_senlin", tags: [ "os-senlin" ] }
```





**TAGS**

This role supports two tags: `senlin-install` and `senlin-config`. The `senlin-install` tag can be used to install and upgrade. The `senlin-config` tag can be used to maintain the configuration of the service.



## SENLIN CLIENT ENDPOINTS

When your VMs need to talk to your API, you might have to change the Senlin config. By default Senlin is configured to use the internal API endpoints. Should instances or created containers need to access the API (e.g. Magnum, Senlin Signaling) the public endpoints will need to be used as in the following example:

```
senlin_senlin_conf_overrides:  
  clients_keystone:  
    endpoint_type: publicURL  
    auth_uri: "{{ keystone_service_publicurl }}"
```