
OpenStack-Ansible Documentation:

os_designate role

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OpenStack-Ansible Contributors

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This Ansible role installs and configures OpenStack Designate.

This role will install the following services:

- designate-api
- designate-central
- designate-worker
- designate-producer
- designate-mdns
- designate-sink

The DNS servers Designate will interface with can be defined in the `designate_pools_yaml` variable. This is eventually written to the Designate `pools.yaml` file.

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

DEFAULT VARIABLES

```
## Verbosity Options
debug: false

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

# Set the host which will execute the shade modules
# for the service setup. The host must already have
# clouds.yaml properly configured.
designate_service_setup_host: "{{ openstack_service_setup_host | default(
↳'localhost') }}"
designate_service_setup_host_python_interpreter: >-
  {{
    openstack_service_setup_host_python_interpreter | default(
      (designate_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'
designate_package_state: "{{ package_state | default('latest') }}"

# Set installation method.
designate_install_method: "{{ service_install_method | default('source') }}"
designate_venv_python_executable: "{{ openstack_venv_python_executable |_
↳default('python3') }}"

## The git source/branch
designate_git_repo: https://opendev.org/openstack/designate
designate_git_install_branch: master
designate_upper_constraints_url: >-
  {{ requirements_git_url | default('https://releases.openstack.org/
↳constraints/upper/' ~ requirements_git_install_branch | default('master')) }
↳}
designate_git_constraints:
  - "--constraint {{ designate_upper_constraints_url }}"
```

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

# Name of the virtual env to deploy into
designate_venv_tag: "{{ venv_tag | default('untagged') }}"
designate_bin: "{{ _designate_bin }}"

# Set the etc dir path where designate is installed.
# This is used for role access to the db migrations.
# Example:
# designate_etc_dir: "/usr/local/etc/designate"
designate_etc_dir: "{{ _designate_etc }}/designate"

## System info
designate_system_user_name: designate
designate_system_group_name: designate
designate_system_shell: /bin/false
designate_system_comment: designate system user
designate_system_user_home: "/var/lib/{{ designate_system_user_name }}"

## Coordination info
designate_coordination_driver: "{{ coordination_driver | default('zookeeper') |
  ↪ }}"
designate_coordination_group: "{{ coordination_host_group | default(
  ↪ 'zookeeper_all') }}"
designate_coordination_enable: "{{ designate_coordination_group in groups and
  ↪ groups[designate_coordination_group] | length > 0 }}"
designate_coordination_namespace: designate
designate_coordination_client_ssl: "{{ coordination_client_ssl |
  ↪ default(False) }}"
designate_coordination_verify_cert: "{{ coordination_verify_cert |
  ↪ default(True) }}"
designate_coordination_port: "{{ coordination_port | default(designate_
  ↪ coordination_client_ssl | ternary('2281', '2181')) }}"
designate_coordination_url: "{{ _designate_coordination_url | default() }}"

## Database info
designate_db_setup_host: "{{ openstack_db_setup_host | default('localhost') |
  ↪ }}"
designate_db_setup_python_interpreter: >-
  {{
    openstack_db_setup_python_interpreter | default(
      (designate_db_setup_host == 'localhost') | ternary(ansible_playbook_
  ↪ python, ansible_facts['python']['executable']))
  }}
designate_galera_address: "{{ galera_address | default('127.0.0.1') }}"
designate_galera_user: designate
designate_galera_database: designate
designate_galera_use_ssl: "{{ galera_use_ssl | default(False) }}"
designate_galera_ssl_ca_cert: "{{ galera_ssl_ca_cert | default('') }}"

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designate_galera_port: "{{ galera_port | default('3306') }}"
designate_db_max_overflow: "{{ openstack_db_max_overflow | default('50') }}"
designate_db_max_pool_size: "{{ openstack_db_max_pool_size | default('5') }}"
designate_db_pool_timeout: "{{ openstack_db_pool_timeout | default('30') }}"
designate_db_connection_recycle_time: "{{ openstack_db_connection_recycle_
↪time | default('600') }}"

## Oslo Messaging
# RPC
designate_oslomsg_rpc_host_group: "{{ oslomsg_rpc_host_group | default(
↪'rabbitmq_all') }}"
designate_oslomsg_rpc_setup_host: "{{ (designate_oslomsg_rpc_host_group in
↪groups) | ternary(groups[designate_oslomsg_rpc_host_group][0], 'localhost')
↪ }}"
designate_oslomsg_rpc_transport: "{{ oslomsg_rpc_transport | default('rabbit
↪') }}"
designate_oslomsg_rpc_servers: "{{ oslomsg_rpc_servers | default('127.0.0.1')
↪ }}"
designate_oslomsg_rpc_port: "{{ oslomsg_rpc_port | default('5672') }}"
designate_oslomsg_rpc_use_ssl: "{{ oslomsg_rpc_use_ssl | default(False) }}"
designate_oslomsg_rpc_userid: designate_rpc
# vhost name depends on value of oslomsg_rabbit_quorum_queues. In case quorum
↪queues
# are not used - vhost name will be prefixed with leading `/.
designate_oslomsg_rpc_vhost:
  - name: /designate
    state: "{{ designate_oslomsg_rabbit_quorum_queues | ternary('absent',
↪'present') }}"
  - name: designate
    state: "{{ designate_oslomsg_rabbit_quorum_queues | ternary('present',
↪'absent') }}"
designate_oslomsg_rpc_ssl_version: "{{ oslomsg_rpc_ssl_version | default(
↪'TLSv1_2') }}"
designate_oslomsg_rpc_ssl_ca_file: "{{ oslomsg_rpc_ssl_ca_file | default('') }
↪ }}"
designate_oslomsg_rpc_policies: []

# Notify
designate_oslomsg_notify_configure: "{{ oslomsg_notify_configure |
↪default(designate_ceilometer_enabled) }}"
designate_oslomsg_notify_host_group: "{{ oslomsg_notify_host_group | default(
↪'rabbitmq_all') }}"
designate_oslomsg_notify_setup_host: >-
  {{ (designate_oslomsg_notify_host_group in groups) |
↪ternary(groups[designate_oslomsg_notify_host_group][0], 'localhost') }}
designate_oslomsg_notify_transport: "{{ oslomsg_notify_transport | default(
↪'rabbit') }}"
designate_oslomsg_notify_servers: "{{ oslomsg_notify_servers | default('127.0.
↪0.1') }}"

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designate_oslomsg_notify_port: "{{ oslomsg_notify_port | default('5672') }}"
designate_oslomsg_notify_use_ssl: "{{ oslomsg_notify_use_ssl | default(False) |
  ⇨ }}"
designate_oslomsg_notify_userid: "{{ designate_oslomsg_rpc_userid }}"
designate_oslomsg_notify_password: "{{ designate_oslomsg_rpc_password }}"
designate_oslomsg_notify_vhost: "{{ designate_oslomsg_rpc_vhost }}"
designate_oslomsg_notify_ssl_version: "{{ oslomsg_notify_ssl_version |
  ⇨ default('TLSv1_2') }}"
designate_oslomsg_notify_ssl_ca_file: "{{ oslomsg_notify_ssl_ca_file |
  ⇨ default('') }}"
designate_oslomsg_notify_policies: []

## RabbitMQ integration
designate_oslomsg_rabbit_quorum_queues: "{{ oslomsg_rabbit_quorum_queues |
  ⇨ default(True) }}"
designate_oslomsg_rabbit_stream_fanout: "{{ oslomsg_rabbit_stream_fanout |
  ⇨ default(designate_oslomsg_rabbit_quorum_queues) }}"
designate_oslomsg_rabbit_transient_quorum_queues: "{{ oslomsg_rabbit_
  ⇨ transient_quorum_queues | default(designate_oslomsg_rabbit_stream_fanout) }}"
  ⇨
designate_oslomsg_rabbit_qos_prefetch_count: "{{ oslomsg_rabbit_qos_prefetch_
  ⇨ count | default(designate_oslomsg_rabbit_stream_fanout | ternary(10, 0)) }}"
designate_oslomsg_rabbit_queue_manager: "{{ oslomsg_rabbit_queue_manager |
  ⇨ default(designate_oslomsg_rabbit_quorum_queues) }}"
designate_oslomsg_rabbit_quorum_delivery_limit: "{{ oslomsg_rabbit_quorum_
  ⇨ delivery_limit | default(0) }}"
designate_oslomsg_rabbit_quorum_max_memory_bytes: "{{ oslomsg_rabbit_quorum_
  ⇨ max_memory_bytes | default(0) }}"

## DNS Backend Configuration
# Configuration for the DNS backend that Designate will talk to, Designate
# supports lots of backends, bind9, powerdns, nsd, djbdns, dyn, akamai, etc.
# DNS Backends are configured via a YAML file that Designate reads. The DNS
# server need not be in the actual Designate container, but for development,
# or for some internal addressing use cases, it may make sense.

# YAML to use for the Designate pools.yaml file. If this variable is defined,
# a pools.yaml file will be written to /etc/designate/pools.yaml with the
# provided YAML data.
#
# This is some example pools.yaml information that will work with a
# simple bind9 installation in the same container as Designate.
# designate_pools_yaml:
#   - name: "default"
#     description: Default BIND9 Pool
#     attributes: {}
#     ns_records:
#       - hostname: ns1.example.org.
#         priority: 1

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```

#    nameservers:
#      - host: 127.0.0.1
#        port: 53
#    targets:
#      - type: bind9
#        description: BIND9 Server
#        masters:
#          - host: 127.0.0.1
#            port: 5354
#        options:
#          host: 127.0.0.1
#          port: 53
#          rndc_host: 127.0.0.1
#          rndc_port: 953

## rndc keys for authenticating with bind9
# define this to create as many key files as are required
# designate_rndc_keys
#   - name: "rndc-key"
#     file: /etc/designate/rndc.key
#     algorithm: "hmac-md5"
#     secret: "<key>"

# Owner of all managed resources - like auto-created records etc.
designate_managed_resource_project_name: "{{ designate_service_project_name }}"
↪"

## Service Type and Data
designate_service_region: "{{ service_region | default('RegionOne') }}"
designate_service_endpoint_type: internalURL
designate_service_name: designate
designate_bind_address: "{{ openstack_service_bind_address | default('0.0.0.0
↪') }}"
designate_service_port: 9001
designate_service_proto: http
designate_service_type: dns
designate_service_description: "Designate DNS as a Service"
designate_service_project_domain_id: default
designate_service_user_domain_id: default
designate_service_user_name: designate
designate_keystone_auth_type: password
designate_service_project_name: service
designate_service_role_names:
  - admin
  - service
designate_service_token_roles:
  - service
designate_service_token_roles_required: "{{ openstack_service_token_roles_
↪required | default(True) }}"

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designate_service_publicuri_proto: "{{ openstack_service_publicuri_proto |
  ↳ default(designate_service_proto) }}"
designate_service_internaluri_proto: "{{ openstack_service_internaluri_proto |
  ↳ default(designate_service_proto) }}"
designate_service_adminuri_proto: "{{ openstack_service_adminuri_proto |
  ↳ default(designate_service_proto) }}"

designate_service_publicuri: "{{ designate_service_publicuri_proto |
  ↳ external_lb_vip_address }}:{{ designate_service_port }}"
designate_service_internaluri: "{{ designate_service_internaluri_proto |
  ↳ internal_lb_vip_address }}:{{ designate_service_port }}"
designate_service_adminuri: "{{ designate_service_adminuri_proto |
  ↳ internal_lb_vip_address }}:{{ designate_service_port }}"

designate_service_in_ldap: "{{ service_ldap_backend_enabled | default(False) |
  ↳ }}"

# memcache override
designate_memcached_servers: "{{ memcached_servers }}"

# Common pip packages
designate_pip_packages:
  - cryptography
  - "git+{{ designate_git_repo }}@{{ designate_git_install_branch }}"
  ↳ "#egg=designate"
  - osprofiler
  - python-designateclient
  - PyMySQL
  - pymemcache
  - python-memcached
  - systemd-python
  - "tooz[{{ designate_coordination_driver }}"
  - warlock
designate_user_pip_packages: []

designate_central_init_overrides: {}
designate_worker_init_overrides: {}
designate_producer_init_overrides: {}
designate_mdns_init_overrides: {}
designate_sink_init_overrides: {}
designate_api_init_overrides: {}

## Service Name-Group Mapping
designate_services:
  designate-central:
    group: designate_central
    service_name: designate-central
    init_config_overrides: "{{ designate_central_init_overrides }}"
    execstarts: "{{ designate_bin }}/designate-central"

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    start_order: 3
designate-worker:
  group: designate_worker
  service_name: designate-worker
  init_config_overrides: "{{ designate_worker_init_overrides }}"
  execstarts: "{{ designate_bin }}/designate-worker"
  start_order: 2
designate-producer:
  group: designate_producer
  service_name: designate-producer
  init_config_overrides: "{{ designate_producer_init_overrides }}"
  execstarts: "{{ designate_bin }}/designate-producer"
  start_order: 5
designate-mdns:
  group: designate_mdns
  service_name: designate-mdns
  init_config_overrides: "{{ designate_mdns_init_overrides }}"
  execstarts: "{{ designate_bin }}/designate-mdns"
  start_order: 4
designate-sink:
  group: designate_sink
  service_name: designate-sink
  init_config_overrides: "{{ designate_sink_init_overrides }}"
  execstarts: "{{ designate_bin }}/designate-sink"
  start_order: 6
designate-api:
  group: designate_api
  service_name: designate-api
  init_config_overrides: "{{ designate_api_init_overrides }}"
  execstarts: "{{ designate_bin }}/designate-api"
  start_order: 1

## Tunable overrides
designate_policy_overrides: {}
designate_designate_conf_overrides: {}
designate_api_paste_ini_overrides: {}
designate_rootwrap_conf_overrides: {}

###
### Backend TLS
###

# Define if communication between haproxy and service backends should be
# encrypted with TLS.
designate_backend_ssl: "{{ openstack_service_backend_ssl | default(False) }}"

# Storage location for SSL certificate authority
designate_pki_dir: "{{ openstack_pki_dir | default('/etc/openstack_deploy/pki
→') }}"

```

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```

# Delegated host for operating the certificate authority
designate_pki_setup_host: "{{ openstack_pki_setup_host | default('localhost')
↪ }}"

# designate server certificate
designate_pki_keys_path: "{{ designate_pki_dir ~ '/certs/private/' }}"
designate_pki_certs_path: "{{ designate_pki_dir ~ '/certs/certs/' }}"
designate_pki_intermediate_cert_name: "{{ openstack_pki_service_intermediate_
↪ cert_name | default('ExampleCorpIntermediate') }}"
designate_pki_regen_cert: ""
designate_pki_backend: "{{ openstack_pki_backend | default('standalone') }}"
designate_pki_san: "{{ openstack_pki_san | default({'dns': [ansible_facts[
↪ 'hostname']], 'ip': [management_address]}) }}"
designate_pki_certificates:
- name: "designate_{{ ansible_facts['hostname'] }}"
  cn: "{{ ansible_facts['hostname'] }}"
  san: "{{ designate_pki_san }}"
  # standalone backend only
  provider: ownca
  signed_by: "{{ designate_pki_intermediate_cert_name }}"

# designate destination files for SSL certificates
designate_ssl_cert: /etc/designate/designate.pem
designate_ssl_key: /etc/designate/designate.key

# Installation details for SSL certificates
designate_pki_install_certificates:
- name: "designate_{{ ansible_facts['hostname'] }}"
  type: "certificate_chain"
  dest: "{{ designate_ssl_cert }}"
  owner: "{{ designate_system_user_name }}"
  group: "{{ designate_system_user_name }}"
  # standalone backend only
  src: "{{ designate_user_ssl_cert | default(designate_pki_certs_path ~
↪ 'designate_' ~ ansible_facts['hostname'] ~ '-chain.crt') }}"
- name: "designate_{{ ansible_facts['hostname'] }}"
  type: "private_key"
  dest: "{{ designate_ssl_key }}"
  owner: "{{ designate_system_user_name }}"
  group: "{{ designate_system_user_name }}"
  # standalone backend only
  src: "{{ designate_user_ssl_key | default(designate_pki_keys_path ~
↪ 'designate_' ~ ansible_facts['hostname'] ~ '.key.pem') }}"

# Define user-provided SSL certificates
designate_user_ssl_cert: ""
designate_user_ssl_key: ""

```

ADDING THE SERVICE TO YOUR OPENSTACK-ANSIBLE DEPLOYMENT

To add a new service to your OpenStack-Ansible (OSA) deployment:

- Define `designate_pools_yaml` variable as described above.
- Define `dnssaas_hosts` in your `conf.d` or `openstack_user_config.yml`. For example:

```
dnssaas_hosts:  
  infra1:  
    ip: 172.20.236.111  
  infra2:  
    ip: 172.20.236.112  
  infra3:  
    ip: 172.20.236.113
```

- Create respective LXC containers (skip this step for metal deployments):

```
openstack-ansible openstack.osa.containers_lxc_create --limit designate_  
↪all, dnssaas_hosts
```

- Run service deployment playbook:

```
openstack-ansible openstack.osa.designate
```

For more information, please refer to the [OpenStack-Ansible project documentation](#).

Always verify that the integration is successful and that the service behaves correctly before using it in a production environment.

DEPENDENCIES

This role needs the following variables defined:

```
designate_galera_address  
designate_galera_password  
designate_service_password  
designate_oslmsg_rpc_password  
designate_oslmsg_notify_password
```


EXAMPLE PLAYBOOK

```
---
- name: Install Designate Server
  hosts: designate_all
  user: root
  roles:
    - role: "os_designate"
      tags:
        - "os-designate"
  vars:
    external_lb_vip_address: 172.16.24.1
    internal_lb_vip_address: 192.168.0.1
    designate_galera_address: "{{ internal_lb_vip_address }}"
    designate_galera_password: "SuperSecretePassword1"
    designate_service_password: "SuperSecretePassword3"
    designate_oslmsg_rpc_password: "SuperSecretePassword4"
```

**CHAPTER
FIVE**

TAGS

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