



## Sample neutron-cisco-vts.yaml Configuration

This appendix provides typical sample configuration for different Cisco VTS deployment modes.

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### Sample “neutron-cisco-vts.yaml” for Deploying Cisco VTS Plugin with OVS Agent

```
resource_registry:

    OS::TripleO::Services::NeutronCorePluginVTS:
        /usr/share/openstack-tripleo-heat-templates/puppet/services/neutron-plugin-ml2-cisco-vts.yaml

    OS::TripleO::Services::NeutronCorePlugin: OS::TripleO::Services::NeutronCorePluginVTS

    ## Comment out below line when deploying VTS Agent on compute nodes instead of VPP/VPFA
    OS::TripleO::Services::ComputeNeutronCorePlugin: OS::Heat::None

parameter_defaults:

    #####
    ### VTS General ###
    #####

    VTSUsername: 'admin'
    VTSPassword: 'YLdKnf3qSsKA2JWQT9a0Sg=='
    VTSServer: '10.194.132.26'
    VTSVMID: '691ce4a4-dfa3-4b63-855c-5813519498da'

    #####
    ### Neutron ML2 ###
    #####

    NeutronCorePlugin: 'neutron.plugins.ml2.plugin.Ml2Plugin'
    NeutronMechanismDrivers: 'sriovnicswitch,cisco_vts'
    NeutronTypeDrivers: 'vxlan,vlan,flat'
    NeutronServicePlugins: 'cisco_vts_router,trunk'

    #####
    ### VTS Agent Config ###
```

```
#####
VTSPhysicalNet: 'phys_tenant'
#VTSRetries: 15
#VTSTimeout:
#VTSPollingInterval: 6
```

## Sample "neutron-cisco-vts.yaml" for Deploying Cisco VTS Plugin with Cisco VTS Agent

```
# A Heat environment file which can be used to enable Cisco VTS extensions, configured via
puppet

# By default the configuration has items required to deploy VPP/VPFA on all nodes + the
cisco ML2 VTS driver

resource_registry:

    OS::TripleO::Services::NeutronCorePluginVTS:
/usr/share/openstack-tripleo-heat-templates/puppet/services/neutron-plugin-ml2-cisco-vts.yaml

    OS::TripleO::Services::NeutronCorePlugin: OS::TripleO::Services::NeutronCorePluginVTS

    ## Comment out below line when deploying VTS Agent on compute nodes instead of VPP/VPFA
    #OS::TripleO::Services::ComputeNeutronCorePlugin: OS::Heat::None

    ## Disable Neutron L3 agent that conflict with VPFA
    OS::TripleO::Services::NeutronL3Agent: OS::Heat::None

    ## OVS and VTS Agent sub-section ##

    ## Disable/enable the default OVS Agent for compute and controller
    OS::TripleO::Services::ComputeNeutronOvsAgent: OS::Heat::None
    OS::TripleO::Services::NeutronOvsAgent: OS::Heat::None

    ## Disable/enable VTS agent service. VTS agent and OVS agent are mutually exclusive
    ## NOTE: The OS::TripleO::Services::VTSAgent needs to be added to the deployment role
file
    OS::TripleO::Services::VTSAgent:
/usr/share/openstack-tripleo-heat-templates/puppet/services/neutron-cisco-vts-agent.yaml

parameter_defaults:

    #####
    ### VTS General ###
    #####

    VTSUsername: 'admin'
    VTSPassword: 'YLdKnf3qSsKA2JWQT9a0Sg=='
    VTSServer: '10.194.132.26'
    VTSVMMID: '691ce4a4-dfa3-4b63-855c-5813519498da'

    #####
    ### Neutron ML2 ###
    #####

    NeutronCorePlugin: 'neutron.plugins.ml2.plugin.ML2Plugin'
    NeutronMechanismDrivers: 'sriovnictswitch,cisco_vts'
    NeutronTypeDrivers: 'vxlan,vlan,flat'
    NeutronServicePlugins: 'cisco_vts_router,trunk'
```

```

NeutronOVSAgentDriver:
'neutron.agent.linux.iptables_firewall.OVSHybridIptablesFirewallDriver'

#####
### VTS Agent Config ###
#####

VTSPhysicalNet: 'phys_tenant'
#VTSRetries: 15
#VTSTimeout:
#VTSPollingInterval: 6

```

## Sample "neutron-cisco-vts.yaml" for Deploying Cisco VTS Plugin with VTF

```

# A Heat environment file which can be used to enable Cisco VTS extensions, configured via
puppet

# By default the configuration has items required to deploy VPP/VPFA on all nodes + the
cisco ML2 VTS driver

resource_registry:

    OS::TripleO::Services::NeutronCorePluginVTS:
    /usr/share/openstack-tripleo-heat-templates/puppet/services/neutron-plugin-ml2-cisco-vts.yaml

    OS::TripleO::Services::NeutronCorePlugin: OS::TripleO::Services::NeutronCorePluginVTS

    ## Comment out below line when deploying VTS Agent on compute nodes instead of VPP/VPFA
    OS::TripleO::Services::ComputeNeutronCorePlugin: OS::Heat::None

    ## Disable Neutron L3 agent that conflict with VPFA
    OS::TripleO::Services::NeutronL3Agent: OS::Heat::None

    ## OVS and VTS Agent sub-section ##

    ## Disable/enable the default OVS Agent for compute and controller
    OS::TripleO::Services::ComputeNeutronOvsAgent: OS::Heat::None
    OS::TripleO::Services::NeutronOvsAgent: OS::Heat::None

    ## Disable/enable VTS agent service. VTS agent and OVS agent are mutually exclusive
    ## NOTE: The OS::TripleO::Services::VTSAgent needs to be added to the deployment role
    file
    #OS::TripleO::Services::VTSAgent:
    /usr/share/openstack-tripleo-heat-templates/puppet/services/neutron-cisco-vts-agent.yaml

    ## VPFA Configuration Hook scripts
    #OS::TripleO::ComputeExtraConfigPre:
    /usr/share/openstack-tripleo-heat-templates/puppet/extraconfig/pre_deploy/cisco_vts_vpfa.yaml

    ## Additional hook scripts for controller. Enable/disable as disctated by the scope of
    the deployment
    #OS::TripleO::ControllerExtraConfigPre:
    /usr/share/openstack-tripleo-heat-templates/puppet/extraconfig/pre_deploy/cisco_vts_vpfa.yaml

    ## Same hook scripts as above for all nodes in one. Enable/disable as disctated by the
    scope of the deployment.
    OS::TripleO::NodeExtraConfig:

```

```

/usr/share/openstack-tripleo-heat-templates/puppet/extraconfig/pre_deploy/cisco_vts_vpfa.yaml

## Rsyslog client
OS::TripleO::Services::RSyslogClient:
/usr/share/openstack-tripleo-heat-templates/puppet/services/rsyslog-client.yaml
OS::TripleO::Services::Vpp: OS::Heat::None
OS::TripleO::Services::VppCompute:
/usr/share/openstack-tripleo-heat-templates/puppet/services/vpp-compute.yaml
OS::TripleO::Services::VppController:
/usr/share/openstack-tripleo-heat-templates/puppet/services/vpp-controller.yaml
OS::TripleO::Services::CiscoVpfaCompute:
/usr/share/openstack-tripleo-heat-templates/puppet/services/cisco-vpfa-compute.yaml
OS::TripleO::Services::CiscoVpfaController:
/usr/share/openstack-tripleo-heat-templates/puppet/services/cisco-vpfa-controller.yaml

parameter_defaults:

#####
### VTS General ###
#####

VTSUsername: 'admin'
VTSPassword: 'YLdKnf3qSsKA2JWQT9a0Sg=='
VTSServer: '10.194.132.26'
VTSVMID: '691ce4a4-dfa3-4b63-855c-5813519498da'

#####
### Neutron ML2 ###
#####

NeutronCorePlugin: 'neutron.plugins.ml2.plugin.ML2Plugin'
NeutronMechanismDrivers: 'sriovnicswitch,cisco_vts'
NeutronTypeDrivers: 'vxlan,vlan,flat'
NeutronServicePlugins: 'cisco_vts_router,trunk'

## DHCP Agent interface driver. Uncomment ONLY if/when deploying VPP on the controller
node(s).
NeutronInterfaceDriver: 'cisco_controller.drivers.agent.linux.interface.NamespaceDriver'

#####
### VTS Agent Config ###
#####

VTSPhysicalNet: 'phys_tenant'
#VTSRetries: 15
#VTSTimeout:
#VTSPollingInterval: 6

#####
### VPFA Config ###
#####

UnderlayIpNetworksList: '21.0.0.0/8'
VTSR_u_IPAddressList: '21.1.1.5'
#VPFAHostname: 'foo'
#NetworkConfigMethod: 'static'
#NetworkNameServerIP: ''
VifTypeCompute: 'vhostuser'
VifTypeController: 'tap'

# Set common VTS Network Gateway address or set/override it in PerNodeData below

```

```

VTSNetworkIPv4Gateway: '21.1.1.1'

PerNodeData: |
  {
    "A73EB684-FE95-084D-8260-9052DFD50EEA": {
      "cisco_vpfa::vtf_underlay_ip_v4": "21.1.1.11",
      "cisco_vpfa::vtf_underlay_mask_v4": "24",
      "cisco_vpfa::network_ipv4_gateway": "21.1.1.1"},
    "90117168-52E8-074F-A159-8186CFBF7B5C": {
      "cisco_vpfa::vtf_underlay_ip_v4": "21.1.1.12",
      "cisco_vpfa::vtf_underlay_mask_v4": "24",
      "cisco_vpfa::network_ipv4_gateway": "21.1.1.1"}
  }

#####
### VPP Configuration Parameters ###
#####

## MTU for Tun/tap interfaces
VppTunTapMtu: '9000'

##The CPUs listed below need to be part of the grub isol CPU list (configured elsewhere)
VppCpuMainCoreController: '6'
VppCpuMainCoreCompute: '6'

## Comma delimited workers list
VppCpuCorelistWorkersCompute: '7,8,9'
VppCpuCorelistWorkersController: '7,8,9'

## Avoid dumping vhost-user shared memory segments to core files
#VppVhostUserDontDumpMem: True

#####
### VTS Update Info ###
#####

VTSUpdate: 'true'

RepoProxy: 'http://<>:80/'
VTSUpgradeNewPackages: |
  "cisco-vts-puppet-tripleo", "cisco-vts-puppet-neutron",
  "monit", "cisco-vpfa-collectd-plugin", "cisco-vts-os-net-config",
  "vpp", "vpp-plugins", "vpfa", "cisco-vts-puppet-vpfa", "cisco-vts-puppet-fdio",
  "cisco-vts-os-util"

VTSUpgradeNewForgePackages: |
  "wdec-monit --version 1.1.2", "puppetlabs-limits --version 0.1.0", "saz-rsyslog
--version 5.0.0"

```

# Node Deployment Resources and Parameters

Table 1: Node Deployment Resources and Parameters

| Enable resource type in "neutron-cisco-vts.yaml" environment file |  | Config changes to Node Roles (/usr/share/openstack-tripleo-heat-templates/roles_data.yaml)   |
|---|--|--|
| Cisco VTS plugin with OVS agent                                   | OS::TripleO::Services::NeutronCorePlugin:<br>OS::TripleO::Services::NeutronCorePluginVTS   | None   |
| Cisco VTS plugin with Cisco VTS agent                             | OS::TripleO::Services::NeutronCorePlugin:<br>OS::TripleO::Services::NeutronCorePluginVTSOS::TripleO::Services::NeutronL3Agent:<br>OS::Heat::NoneOS::TripleO::Services::ComputeNeutronOvsAgent:<br>OS::Heat::NoneOS::TripleO::Services::NeutronOvsAgent:<br>OS::Heat::NoneOS::TripleO::Services::VTSAgent:<br>/usr/share/openstack-tripleo-heat-templates/puppet/services/neutron-cisco-vts-agent.yaml<br><br>OS::TripleO::Services::NeutronCorePlugin:<br>OS::TripleO::Services::NeutronCorePluginVTSOS::<br>TripleO::Services::ComputeNeutronCorePlugin:<br>OS::Heat::NoneOS::TripleO::Services::NeutronL3Agent:<br>OS::Heat::NoneOS::TripleO::Services::ComputeNeutronOvsAgent:<br>OS::Heat::NoneOS::TripleO::Services::NeutronOvsAgent:<br>OS::Heat::NoneOS::TripleO::Services::RSyslogClient:<br>/usr/share/openstack-tripleo-heat-templates/puppet/services/rsyslog-client.yaml | #Add VTS agent role for Controller-<br>OS::TripleO::Services::VTSAgent<br>#Add VTS agent role for Compute-<br>OS::TripleO::Services::VTSAgent  |
| Cisco VTS plugin with VTF   | Cisco VTS plugin with VTF#Enable VPFA only on controller<br>OS::TripleO::ControllerExtraConfigPre:<br>/usr/share/openstack-tripleo-heat-templates/puppet/extraconfig/pre_deploy/cisco_vts_vpfa.yaml #Enable VPFA only on compute<br>OS::TripleO::ComputeExtraConfigPre:<br>/usr/share/openstack-tripleo-heat-templates/puppet/extraconfig/pre_deploy/cisco_vts_vpfa.yaml #Enable VPFA on all nodes - Can be used instead of the above two options.<br>OS::TripleO::NodeExtraConfig:<br>/usr/share/openstack-tripleo-heat-templates/puppet/extraconfig/pre_deploy/cisco_vts_vpfa.yaml   | #Add VTFA+VPP+Rsyslog roles for Controller-<br>OS::TripleO::Services::<br>VppController-<br>OS::TripleO::Services::<br>CiscoVpfaController-<br>OS::TripleO::Services::<br>RSyslogClient #Add VTFA+VPP+Rsyslog roles for Compute-<br>OS::TripleO::Services::<br>VppCompute-<br>OS::TripleO::Services::<br>CiscoVpfaCompute-<br>OS::TripleO::Services::<br>RSyslogClient |

Table 2: Parameters/Values to Populate

| Populate parameters in "neutron-cisco-vts.yaml" |  |
|---|--|
| Cisco VTS plugin with OVS agent                 | VTUsername: '<username>'<br>VTSPassword: '<encrypted passphrase>'<br>VTSServer: '<IP-address>'<br>VTSVMMID: '<UUID>'<br>NeutronCorePlugin:<br>'neutron.plugins.ml2.plugin.Ml2Plugin'<br>NeutronMechanismDrivers: 'sriovswitch,cisco_vts'<br>NeutronTypeDrivers: 'vxlan,vlan,flat'<br>NeutronServicePlugins: 'cisco_vts_router,trunk'<br>VTSPhysicalNet: '<physnet name>'<br>VTUsername: '<username>'<br>VTSPassword: '<encrypted passphrase>'<br>VTSServer: '<IP-address>'<br>VTSVMMID: '<UUID>' |

| Populate parameters in "neutron-cisco-vts.yaml" |  |
|---|--|
| Cisco VTS plugin with Cisco VTS agent           | <pre> NeutronCorePlugin: 'neutron.plugins.ml2.plugin.Ml2Plugin'  NeutronMechanismDrivers: 'sriovnicswitch,cisco_vts'  NeutronTypeDrivers: 'vxlan,vlan,flat'  NeutronServicePlugins: 'cisco_vts_router,trunk'  NeutronOVSFirewallDriver: 'neutron.agent.linux.iptables_firewall.OVSHybrid IptablesFirewallDriver'  VTSPhysicalNet: '&lt;physnet name&gt;'  VTSUsername: '&lt;username&gt;'  VTSPassword: '&lt;encrypted passphrase&gt;'  VTSServer: '&lt;IP-address&gt;'  VTSVMMID: '&lt;UUID&gt;'  NeutronCorePlugin: 'neutron.plugins.ml2.plugin.Ml2Plugin'  NeutronMechanismDrivers: 'sriovnicswitch,cisco_vts'  NeutronTypeDrivers: 'vxlan,vlan,flat'  NeutronServicePlugins: 'cisco_vts_router,trunk'  NeutronInterfaceDriver: 'cisco_controller.drivers.agent.linux. interface.NamespaceDriver'  VTSPhysicalNet: '&lt;physnet name&gt;'  UnderlayIpNewtorksList: '10.10.10.0/24,50.50.0.0/16,40.40.0.0/16,42.42.42.0/24'  VTSR_u_IpAddressList: '10.10.10.133,10.10.10.134'  # VPFA Configuration requires the assignment of an underlay IP address for the VPFA per node.  # This needs to be specified against the UUID of the target node in a JSON data blob.  # To derive the UUID, after node introspection execute the following CLI command steps: </pre> |



| Populate parameters in "neutron-cisco-vts.yaml" |   |
|---|---|
|   | <p># 1. 'ironic node-list'. Note Openstack ID of the target node</p> <p># 2. 'openstack baremetal introspection data save &lt;Openstack ID from step1&gt;   jq .extra.system.product.uuid</p> <p># 3. Note the Node UUID and use it in the json configuration blob below. Multiple nodes can be specified.</p>  |
| Cisco VTS plugin with VTF                       | <pre>PerNodeData:     {     "01289991-C0F5-204C-9A71-43A2843F225B":     {       "cisco_vpfa::vtf_underlay_ip_v4":       "10.123.10.10",       "cisco_vpfa::vtf_underlay_mask_v4":       "24",       "cisco_vpfa::network_ipv4_gateway":       "10.123.10.1"},     "37B32CF6-FB12-3742-B709-7605835C33C8":     {       "cisco_vpfa::vtf_underlay_ip_v4":       "31.31.31.30",       "cisco_vpfa::vtf_underlay_mask_v4":       "24",       "cisco_vpfa::network_ipv4_gateway":       "31.31.31.1"},     "5F107171-A2C9-0540-BF5D-D1D904E87039":     {       "cisco_vpfa::vtf_underlay_ip_v4":       "10.123.35.13",       "cisco_vpfa::vtf_underlay_mask_v4":       "24",       "cisco_vpfa::network_ipv4_gateway":       "10.123.35.1"}   } VppTunTapMtu: '8936' VppCpuMainCoreController: '6' VppCpuMainCoreCompute: '6' VppCpuCorelistWorkersCompute: '7,8,9' VppCpuCorelistWorkersController: '7,8,9'  ClientLogFilters:     [     {       "expression": "\$syslogfacility-text == 'local3' and \$syslogseverity-text == 'crit'",       "action": "@[&lt;IP ADDRESS&gt;]:514;forwardFormat"     },   ],</pre> |

**Populate parameters in "neutron-cisco-vts.yaml"**

```
{ "expression": "$syslogfacility-text
== 'local3' and $syslogseverity-text ==
'err'",
  "action": "@[<IP
ADDRESS>]:514;forwardFormat"
},
{ "expression": "$syslogfacility-text
== 'local3' and $syslogseverity-text ==
'warning'",
  "action": "@[<IP
ADDRESS>]:514;forwardFormat"
},
{ "expression": "$syslogfacility-text
== 'local3' and $syslogseverity-text ==
'info'",
  "action": "@[<IP
ADDRESS>]:514;forwardFormat"
}
]
```