

```
#
# Copyright (c) 2017 GigaSpaces Technologies Ltd. All rights reserved.
#
# Licensed under the Apache License, Version 2.0 (the "License"); you may
# not use this file except in compliance with the License. You may obtain
# a copy of the License at
#
# http://www.apache.org/licenses/LICENSE-2.0
#
# Unless required by applicable law or agreed to in writing, software
# distributed under the License is distributed on an "AS IS" BASIS, WITHOUT
# WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the
# License for the specific language governing permissions and limitations
# under the License.
#
tosca_definitions_version: toska_simple_yaml_1_0
```

```
topology_template:
  policies:
    onap-multivim-plugin:
      description: >-
        multivim plugin executes operations.
      type: aria.Plugin
      properties:
        version: 2.0.1
```

```
data_types:

onap.multivim.datatypes.Config:
  description: >-
    multivim configuration
  properties:
    username:
      type: string
    password:
      type: string
    tenant_name:
      type: string
    auth_url:
      type: string
    region:
      type: string
      required: false
    nova_url:
      type: string
      required: false
    neutron_url:
      type: string
      required: false
```

```
onap.multivim.datatypes.Rules:
  description: >-
    multivim security group rules
```

```
properties:
  remote_ip_prefix:
    type: string
    default: 0.0.0.0/0
  port:
    type: integer
    default:
```

```
# source: https://developer.multivim.org/api-ref/compute/
```

```
onap.multivim.datatypes.Server:
```

```
description: >-
  multivim Server args.
```

```
properties:
  security_groups:
    type: list
    entry_schema: string
    required: false
  availability_zone:
    type: string
    required: false
  userdata:
    type: string
    required: false
  metadata:
    type: map
    entry_schema: string
    required: false
```

```
onap.multivim.datatypes.Keypair:
```

```
description: >-
  multivim keypair args.
```

```
properties:
  public_key:
    type: string
    required: false
  type:
    type: string
    required: false
  user_id:
    type: string
    required: false
```

```
# source: https://developer.multivim.org/api-ref/block-storage/v2/index.html
```

```
onap.multivim.datatypes.Volume:
```

```
description: >-
  multivim volume args.
```

```
properties:
  size:
    type: integer
    required: false
  description:
    type: string
    required: false
```

```
availability_zone:
  type: string
  required: false
consistencygroup_id:
  type: string
  required: false
volume_type:
  type: string
  required: false
snapshot_id:
  type: string
  required: false
source_replica:
  type: string
  required: false
tenant_id:
  type: string
  required: false
```

```
# source: https://developer.multivim.org/api-ref/image/
```

```
onap.multivim.datatypes.Image:
```

```
description: >-
  multivim image args.
```

```
properties:
```

```
  id:
    type: string
    required: false
```

```
  min_disk:
    type: integer
    required: false
```

```
  min_ram:
    type: integer
    required: false
```

```
  name:
    type: string
    required: false
```

```
  protected:
    type: boolean
    required: false
```

```
  tags:
    type: list
    entry_schema: string
    required: false
```

```
  visibility:
    type: string
    required: false
```

```
# source: https://developer.multivim.org/api-ref/identity/v3/
```

```
onap.multivim.datatypes.Project:
```

```
description: >-
  multivim image args.
```

```
properties:
```

```
  is_domain:
```

```
  type: boolean
  required: false
description:
  type: string
  required: false
domain_id:
  type: string
  required: false
name:
  type: string
  required: false
enabled:
  type: boolean
  required: false
parent_id:
  type: string
  required: false
```

# source: <https://developer.multivim.org/api-ref/networking/v2/index.html>

onap.multivim.datatypes.Subnet:

```
description: >-
  multivim subnet args.
```

properties:

```
network_id:
  type: string
  required: false
```

```
ip_version:
  type: integer
  required: false
  default: 4
```

```
cidr:
  type: string
  required: false
```

```
gateway_ip:
  type: string
  required: false
```

```
dns_nameservers:
  type: list
  entry_schema: string
  required: false
```

```
enable_dhcp:
  type: boolean
  required: false
```

```
tenant_id:
  type: string
  required: false
```

onap.multivim.datatypes.Port:

```
description: >-
  multivim port args
```

properties:

```
network_id:
  type: string
  required: false
```

```
admin_state_up:
  type: boolean
  required: false
status:
  type: string
  required: false
mac_address:
  type: string
  required: false
device_id:
  type: string
  required: false
device_owner:
  type: string
  required: false
tenant_id:
  type: string
  required: false
```

onap.multivim.datatypes.Network:

```
description: >-
  multivim network args
properties:
  admin_state_up:
    type: boolean
    required: false
  status:
    type: string
    required: false
  subnets:
    type: list
    entry_schema: string
    required: false
  shared:
    type: boolean
    required: false
  tenant_id:
    type: string
    required: false
```

onap.multivim.datatypes.SecurityGroup:

```
description: >-
  multivim network args
properties:
  admin_state_up:
    type: boolean
    required: false
  port_security_enabled:
    type: boolean
    required: false
  project_id:
    type: string
    required: false
  qos_policy_id:
    type: string
```

```
    required: false
segments:
  type: list
  entry_schema: string
  required: false
shared:
  type: boolean
  required: false
vlan_transparent:
  type: boolean
  required: false
tenant_id:
  type: string
  required: false
```

onap.multivim.datatypes.Router:

```
description: >-
  multivim network args
properties:
  bgpvpn_id:
    type: string
    required: false
  router_id:
    type: string
    required: false
```

onap.multivim.datatypes.FloatingIP:

```
description: >-
  multivim network args
properties:
  tenant_id:
    type: string
    required: false
  project_id:
    type: string
    required: false
  floating_network_id:
    type: string
    required: false
  floating_network_name:
    type: string
    required: false
  fixed_ip_address:
    type: string
    required: false
  floating_ip_address:
    type: string
    required: false
  port_id:
    type: string
    required: false
  subnet_id:
    type: string
    required: false
```

interface\_types:

```
onap.multivim.interfaces.validation:
  derived_from: tosca.interfaces.Root
  creation:
    description: >-
      creation operation for the multivim validation interface
  deletion:
    description: >-
      deletion operation for the multivim validation interface
```

node\_types:

```
onap.multivim.nodes.Server:
  derived_from: tosca.nodes.Compute
  properties:
    server:
      default: {}
      type: onap.multivim.datatypes.Server
      required: false
    ip:
      default:
      type: string
    os_family:
      description: >-
        Property specifying what type of operating system family
        this compute node will run.
      default: linux
      type: string
    use_external_resource:
      type: boolean
      default: false
      description: >-
        a boolean for setting whether to create the resource or use an existing one.
        See the using existing resources section.
    create_if_missing:
      default: false
      type: boolean
      description: >-
        If use_external_resource is ``true`` and the resource is missing,
        create it instead of failing.
    resource_id:
      default: ''
      type: string
      description: >-
        name to give to the new resource or the name or ID of an existing resource when the
        ``use_external_resource`` property is set to ``true`` (see the using existing
        resources section). Defaults to '' (empty string).
    image:
      default: ''
      type: string
      description: >-
        The image for the server.
```

May receive either the ID or the name of the image.

note: This property is currently optional for backwards compatibility, but will be modified to become a required property in future versions (Default: '').

flavor:

default: ''

type: string

description: >-

The flavor for the server.

May receive either the ID or the name of the flavor.

note: This property is currently optional for backwards compatibility, but will be modified to become a required property in future versions (Default: '').

use\_password:

default: false

type: boolean

description: >-

A boolean describing whether this server image supports user-password authentication.

Images that do should post the administrator user's password to the Openstack

metadata service (e.g. via cloudbase);

The password would then be retrieved by the plugin,

decrypted using the server's keypair and then saved in the server's runtime properties.

management\_network\_name:

type: string

description: >-

The current implementation of the multivim plugin requires this field. The value of

this field should be set to the multivim name of a network this server is attached to.

multivim\_config:

type: onap.multivim.datatypes.Config

required: false

description: >-

see Openstack Configuraion

interfaces:

Standard:

create:

implementation: onap-multivim-plugin > nova\_plugin.server.create

inputs:

args:

required: false

default: {}

type: onap.multivim.datatypes.Server

start:

implementation: onap-multivim-plugin > nova\_plugin.server.start

inputs:

start\_retry\_interval:

default: 30

type: integer

private\_key\_path:

type: string

default: ''

required: true

stop: onap-multivim-plugin > nova\_plugin.server.stop

delete: onap-multivim-plugin > nova\_plugin.server.delete

Validation:

type: onap.multivim.interfaces.validation

```
creation:
  implementation: onap-multivim-plugin > nova_plugin.server.creation_validation
inputs:
  args:
    required: false
    default: {}
    type: onap.multivim.datatypes.Server
```

requirements:

- floating\_ip:
  - capability: tosca.capabilities.Node
  - node: onap.multivim.nodes.FloatingIP
  - relationship: onap.multivim.server\_connected\_to\_floating\_ip
  - occurrences: [ 0, UNBOUNDED ]
- security\_group:
  - capability: tosca.capabilities.Node
  - node: onap.multivim.nodes.SecurityGroup
  - relationship: onap.multivim.server\_connected\_to\_security\_group
  - occurrences: [ 0, UNBOUNDED ]
- port:
  - capability: tosca.capabilities.Node
  - node: onap.multivim.nodes.Port
  - relationship: onap.multivim.server\_connected\_to\_port
  - occurrences: [ 0, UNBOUNDED ]
- key\_pair:
  - capability: tosca.capabilities.Node
  - node: onap.multivim.nodes.KeyPair
  - relationship: onap.multivim.server\_connected\_to\_keypair
  - occurrences: [ 0, UNBOUNDED ]

capabilities:

```
multivim_container:
  type: Node
```

onap.multivim.nodes.WindowsServer:

```
derived_from: onap.multivim.nodes.Server
```

properties:

```
use_password:
  default: true
  type: boolean
  description: >-
    Default changed for derived type
    because Windows instances need a password for agent installation
os_family:
  default: windows
  type: string
  description: >-
    (updates the os_family default as a convenience)
```

onap.multivim.nodes.KeyPair:

```
derived_from: tosca.nodes.Root
```

properties:

```
keypair:
  default: {}
  type: onap.multivim.datatypes.Keypair
  required: false
```

```

description: >-
  the path (on the machine the plugin is running on) to
  where the private key should be stored. If
  use_external_resource is set to "true", the existing
  private key is expected to be at this path.
private_key_path:
description: >
  the path (on the machine the plugin is running on) to
  where the private key should be stored. If
  use_external_resource is set to "true", the existing
  private key is expected to be at this path.
type: string
use_external_resource:
type: boolean
default: false
description: >-
  a boolean describing whether this resource should be
  created or rather that it already exists on Openstack
  and should be used as-is.
create_if_missing:
default: false
type: boolean
description: >-
  If use_external_resource is ``true`` and the resource is missing,
  create it instead of failing.
resource_id:
default: ''
type: string
description: >-
  the name that will be given to the resource on Openstack (excluding optional prefix).
  If not provided, a default name will be given instead.
  If use_external_resource is set to "true", this exact
  value (without any prefixes applied) will be looked for
  as either the name or id of an existing keypair to be used.
multivim_config:
type: onap.multivim.datatypes.Config
required: false
interfaces:
Standard:
create:
  implementation: onap-multivim-plugin > nova_plugin.keypair.create
  inputs:
    args:
      required: false
      default: {}
      type: onap.multivim.datatypes.Keypair

  delete: onap-multivim-plugin > nova_plugin.keypair.delete

Validation:
type: onap.multivim.interfaces.validation
creation: onap-multivim-plugin > nova_plugin.keypair.creation_validation

capabilities:
keypair:

```

type: tosca.capabilities.Node

onap.multivim.nodes.Subnet:

derived\_from: tosca.nodes.Root

properties:

subnet:

type: onap.multivim.datatypes.Subnet

required: false

default:

cidr: 172.16.0.0/16

use\_external\_resource:

type: boolean

default: false

description: >-

a boolean for setting whether to create the resource or use an existing one.  
See the using existing resources section.

create\_if\_missing:

default: false

type: boolean

description: >-

If use\_external\_resource is ``true`` and the resource is missing,  
create it instead of failing.

resource\_id:

default: ''

type: string

description: >-

name to give to the new resource or the name or ID of an existing resource when the  
``use\_external\_resource`` property is set to ``true`` (see the using existing  
resources section). Defaults to '' (empty string).

multivim\_config:

type: onap.multivim.datatypes.Config

required: false

interfaces:

Standard:

create:

implementation: onap-multivim-plugin > neutron\_plugin.subnet.create

inputs:

args:

required: false

type: onap.multivim.datatypes.Subnet

default:

cidr: 172.16.0.0/16

delete: onap-multivim-plugin > neutron\_plugin.subnet.delete

Validation:

type: onap.multivim.interfaces.validation

creation:

implementation: onap-multivim-plugin > neutron\_plugin.subnet.creation\_validation

inputs:

args:

type: onap.multivim.datatypes.Subnet

required: false

default:

cidr: 172.16.0.0/16

requirements:

```

- router:
  capability: tosca.capabilities.Node
  node: onap.multivim.nodes.Router
  relationship: onap.multivim.subnet_connected_to_router
  occurrences: [ 0, UNBOUNDED ]
- network:
  capability: tosca.capabilities.Node
  node: onap.multivim.nodes.Network
capabilities:
  subnet:
    type: tosca.capabilities.Node

onap.multivim.nodes.SecurityGroup:
  derived_from: tosca.nodes.Root
  properties:
    security_group:
      type: onap.multivim.datatypes.SecurityGroup
      required: false
      default: {}
    description:
      type: string
      default: ''
      description: >-
        SecurityGroup description.
    create_if_missing:
      default: false
      type: boolean
      description: >-
        If use_external_resource is ``true`` and the resource is missing,
        create it instead of failing.
    use_external_resource:
      type: boolean
      default: false
      description: >-
        a boolean for setting whether to create the resource or use an existing one.
        See the using existing resources section.
    resource_id:
      default: ''
      type: string
      description: >-
        name to give to the new resource or the name or ID of an existing resource when the
        ``use_external_resource`` property is set to ``true`` (see the using existing
        resources section). Defaults to '' (empty string).
    multivim_config:
      type: onap.multivim.datatypes.Config
      required: false
    rules:
      default: []
      type: list
      entry_schema: onap.multivim.datatypes.Rules
    disable_default_egress_rules:
      default: false
      type: boolean
      description: >-
        a flag for removing the default rules which

```

<https://wiki.multivim.org/wiki/Neutron/SecurityGroups#Behavior>. If not set to `true`, these rules will remain, and exist alongside any additional rules passed using the `rules` property.

interfaces:

Standard:

create:

implementation: onap-multivim-plugin > neutron\_plugin.security\_group.create

inputs:

args:

type: onap.multivim.datatypes.SecurityGroup

required: false

default: {}

delete: onap-multivim-plugin > neutron\_plugin.security\_group.delete

Validation:

type: onap.multivim.interfaces.validation

creation: onap-multivim-plugin > neutron\_plugin.security\_group.creation\_validation

capabilities:

security:

type: tosca.capabilities.Node

onap.multivim.nodes.Router:

derived\_from: tosca.nodes.Root

properties:

router:

type: onap.multivim.datatypes.Router

required: false

default: {}

external\_network:

default: ''

type: string

description: >-

An external network name or ID.

If given, the router will use this external network as a gateway.

use\_external\_resource:

type: boolean

default: false

description: >-

a boolean for setting whether to create the resource or use an existing one.

See the using existing resources section.

create\_if\_missing:

default: false

type: boolean

description: >-

If use\_external\_resource is ``true`` and the resource is missing, create it instead of failing.

resource\_id:

default: ''

description: >-

name to give to the new resource or the name or ID of an existing resource when the ``use\_external\_resource`` property is set to ``true`` (see the using existing resources section). Defaults to '' (empty string).

type: string

multivim\_config:

```

type: onap.multivim.datatypes.Config
required: false

interfaces:
  Standard:
    create:
      implementation: onap-multivim-plugin > neutron_plugin.router.create
      inputs:
        args:
          default: {}
          type: onap.multivim.datatypes.Router
          required: false
      delete: onap-multivim-plugin > neutron_plugin.router.delete
  Validation:
    type: onap.multivim.interfaces.validation
    creation: onap-multivim-plugin > neutron_plugin.router.creation_validation

capabilities:
  gateway:
    type: tosca.capabilities.Node

onap.multivim.nodes.Port:
  derived_from: tosca.nodes.Root
  properties:
    port:
      type: onap.multivim.datatypes.Port
      required: false
      default: {}
    fixed_ip:
      default: ''
      type: string
      description: >-
        may be used to request a specific fixed IP for the port.
        If the IP is unavailable
        (either already taken or does not belong to a subnet the port is on)
        an error will be raised.
    use_external_resource:
      type: boolean
      default: false
      description: >-
        a boolean for setting whether to create the resource or use an existing one.
        See the using existing resources section.
    create_if_missing:
      default: false
      type: boolean
      description: >-
        If use_external_resource is ``true`` and the resource is missing,
        create it instead of failing.
    resource_id:
      default: ''
      type: string
      description: >-
        name to give to the new resource or the name or ID of an existing resource when the
        ``use_external_resource`` property is set to ``true`` (see the using existing
        resources section). Defaults to '' (empty string).

```

multivim\_config:  
  type: onap.multivim.datatypes.Config  
  required: false

interfaces:  
  Standard:  
    create:  
      implementation: onap-multivim-plugin > neutron\_plugin.port.create  
    inputs:  
      args:  
        default: {}  
        type: onap.multivim.datatypes.Port  
        required: false  
  
    delete: onap-multivim-plugin > neutron\_plugin.port.delete

Validation:  
  type: onap.multivim.interfaces.validation  
  creation: onap-multivim-plugin > neutron\_plugin.port.creation\_validation

requirements:  
  - security\_group:  
    capability: tosca.capabilities.Node  
    node: onap.multivim.nodes.SecurityGroup  
    relationship: onap.multivim.port\_connected\_to\_security\_group  
    occurrences: [ 0, UNBOUNDED ]  
  - floating\_ip:  
    capability: tosca.capabilities.Node  
    node: onap.multivim.nodes.FloatingIP  
    relationship: onap.multivim.port\_connected\_to\_floating\_ip  
    occurrences: [ 0, UNBOUNDED ]  
  - subnet:  
    capability: tosca.capabilities.Node  
    node: onap.multivim.nodes.Subnet  
    relationship: onap.multivim.port\_connected\_to\_subnet  
  - network:  
    capability: tosca.capabilities.Node  
    node: onap.multivim.nodes.Network  
    occurrences: [ 0, UNBOUNDED ]

capabilities:  
  entry\_point:  
    type: tosca.capabilities.Node

onap.multivim.nodes.Network:  
  derived\_from: tosca.nodes.Root  
  properties:  
    network:  
      type: onap.multivim.datatypes.Network  
      required: false  
      default: {}  
  use\_external\_resource:  
    type: boolean  
    default: false  
    description: >-  
      a boolean for setting whether to create the resource or use an existing one.

```

    See the using existing resources section.
create_if_missing:
  default: false
  type: boolean
  description: >-
    If use_external_resource is ``true`` and the resource is missing,
    create it instead of failing.
resource_id:
  default: ''
  type: string
  description: >-
    name to give to the new resource or the name or ID of an existing resource when the
    ``use_external_resource`` property is set to ``true`` (see the using existing
    resources section). Defaults to '' (empty string).
multivim_config:
  type: onap.multivim.datatypes.Config
  required: false
interfaces:
  Standard:
    create:
      implementation: onap-multivim-plugin > neutron_plugin.network.create
      inputs:
        args:
          default: {}
          type: onap.multivim.datatypes.Network
          required: false

      delete: onap-multivim-plugin > neutron_plugin.network.delete

Validation:
  type: onap.multivim.interfaces.validation
  creation: onap-multivim-plugin > neutron_plugin.network.creation_validation

capabilities:
  address_space:
    type: tosca.capabilities.Node

onap.multivim.nodes.FloatingIP:
  derived_from: tosca.nodes.Root
  attributes:
    floating_ip_address:
      type: string
  properties:
    floatingip:
      type: onap.multivim.datatypes.FloatingIP
      required: false
      default: {}
  use_external_resource:
    type: boolean
    default: false
    description: >-
      a boolean for setting whether to create the resource or use an existing one.
      See the using existing resources section.
  create_if_missing:
    default: false

```

```

type: boolean
description: >-
  If use_external_resource is ``true`` and the resource is missing,
  create it instead of failing.
resource_id:
description: IP address of the floating IP
default: ''
type: string
description: >-
  name to give to the new resource or the name or ID of an existing resource when the
  ``use_external_resource`` property is set to ``true`` (see the using existing
  resources section). Defaults to '' (empty string).
multivim_config:
type: onap.multivim.datatypes.Config
required: false

interfaces:
Standard:
create:
  implementation: onap-multivim-plugin > neutron_plugin.floatingip.create
  inputs:
    args:
      default: {}
      type: onap.multivim.datatypes.FloatingIP
      required: false

  delete: onap-multivim-plugin > neutron_plugin.floatingip.delete

Validation:
type: onap.multivim.interfaces.validation
creation: onap-multivim-plugin > neutron_plugin.floatingip.creation_validation

capabilities:
address:
type: tosca.capabilities.Node

onap.multivim.nodes.Volume:
derived_from: tosca.nodes.Root
properties:
  volume:
    default: {}
    type: onap.multivim.datatypes.Volume
    description: >-
      key-value volume configuration as described in
      http://developer.multivim.org/api-ref/blockstorage-v1.html#volumes-v1. (**DEPRECATED
      - Use the `args` input in create operation instead**)
use_external_resource:
type: boolean
default: false
description: >-
  a boolean for setting whether to create the resource or use an existing one.
  See the using existing resources section.
create_if_missing:
default: false
type: boolean

```

```

description: >-
  If use_external_resource is ``true`` and the resource is missing,
  create it instead of failing.
resource_id:
  default:
  type: string
  description: >-
    name to give to the new resource or the name or ID of an existing resource when the
    ``use_external_resource`` property is set to ``true`` (see the using existing
    resources section). Defaults to '' (empty string).
device_name:
  default: auto
  type: string
  description: >-
    The device name this volume will be attached to.
    Default value is *auto*,
    which means multivim will auto-assign a device.
    Note that if you do explicitly set a value,
    this value may not be the actual device name assigned.
    Sometimes the device requested will not be available and multivim will assign it to a
    different device,
    this is why we recommend using *auto*.
multivim_config:
  type: onap.multivim.datatypes.Config
  required: false
boot:
  type: boolean
  default: false
  description: >-
    If a Server instance is connected to this Volume by a relationship,
    this volume will be used as the boot volume for that Server.
interfaces:
  Standard:
    create:
      implementation: onap-multivim-plugin > cinder_plugin.volume.create
      inputs:
        args:
          default: {}
          type: onap.multivim.datatypes.Volume
          required: false

      status_attempts:
        description: >-
          Number of times to check for the creation's status before failing
        type: integer
        default: 20
      status_timeout:
        description: >-
          Interval (in seconds) between subsequent inquiries of the creation's
          status
        type: integer
        default: 15
    delete: onap-multivim-plugin > cinder_plugin.volume.delete

```

Validation:

```
type: onap.multivim.interfaces.validation
creation: onap-multivim-plugin > cinder_plugin.volume.creation_validation
```

requirements:

```
- server:
  capability: tosca.capabilities.Node
  node: onap.multivim.nodes.Server
  relationship: onap.multivim.volume_attached_to_server
```

onap.multivim.nodes.Image:

```
derived_from: tosca.nodes.Root
```

properties:

image:

```
description: >-
```

```
Required parameters are (container_format, disk_format). Accepted
types are available on
http://docs.multivim.org/developer/glance/formats.html
To create an image from the local file its path should be added
in data parameter.
```

```
default: {}
```

```
type: map
```

```
entry_schema: string
```

image\_url:

```
default: ''
```

```
type: string
```

```
description: >-
```

```
The multivim resource URL for the image.
```

use\_external\_resource:

```
default: false
```

```
type: boolean
```

```
description: >-
```

```
a boolean for setting whether to create the resource or use an existing one.
See the using existing resources section.
```

create\_if\_missing:

```
default: false
```

```
type: boolean
```

```
description: >-
```

```
If use_external_resource is ``true`` and the resource is missing,
create it instead of failing.
```

resource\_id:

```
default: ''
```

```
type: string
```

```
description: >-
```

```
name to give to the new resource or the name or ID of an existing resource when the
``use_external_resource`` property is set to ``true`` (see the using existing
resources section). Defaults to '' (empty string).
```

multivim\_config:

```
type: onap.multivim.datatypes.Config
```

```
required: false
```

interfaces:

Standard:

```
create: onap-multivim-plugin > glance_plugin.image.create
```

start:

```
implementation: onap-multivim-plugin > glance_plugin.image.start
```

```
inputs:
  start_retry_interval:
    default: 30
    type: integer
```

```
delete: onap-multivim-plugin > glance_plugin.image.delete
```

Validation:

```
type: onap.multivim.interfaces.validation
creation: onap-multivim-plugin > glance_plugin.image.creation_validation
```

onap.multivim.nodes.Project:

```
derived_from: tosca.nodes.Root
```

properties:

```
project:
  default: {}
  type: onap.multivim.datatypes.Project
  description: >-
    key-value project configuration.
```

users:

```
default: []
type: list
entry_schema: string
description: >-
  List of users assigned to this project in the following format:
  { name: string, roles: [string] }
```

quota:

```
default: {}
type: map
entry_schema: string
description: |
  A dictionary mapping service names to quota definitions for a proejct
```

e.g.:

```
quota:
  neutron: <quota>
  nova: <quota>
```

use\_external\_resource:

```
default: false
type: boolean
description: >-
  a boolean for setting whether to create the resource or use an existing one.
  See the using existing resources section.
```

create\_if\_missing:

```
default: false
type: boolean
description: >-
  If use_external_resource is ``true`` and the resource is missing,
  create it instead of failing.
```

resource\_id:

```
default: ''
type: string
description: >-
  name to give to the new resource or the name or ID of an existing resource when the
```

``use\_external\_resource`` property is set to ``true`` (see the using existing resources section). Defaults to '' (empty string).

multivim\_config:

type: onap.multivim.datatypes.Config  
required: false

interfaces:

Standard:

create: multivim.keystone\_plugin.project.create  
start: multivim.keystone\_plugin.project.start  
delete: multivim.keystone\_plugin.project.delete

Validation:

type: onap.multivim.interfaces.validation  
creation: multivim.keystone\_plugin.project.creation\_validation

relationship\_types:

onap.multivim.port\_connected\_to\_security\_group:

derived\_from: ConnectsTo

interfaces:

Configure:

add\_source: onap-multivim-plugin > neutron\_plugin.port.connect\_security\_group

onap.multivim.subnet\_connected\_to\_router:

derived\_from: ConnectsTo

interfaces:

Configure:

add\_target: onap-multivim-plugin > neutron\_plugin.router.connect\_subnet  
remove\_target: onap-multivim-plugin > neutron\_plugin.router.disconnect\_subnet

onap.multivim.server\_connected\_to\_floating\_ip:

derived\_from: ConnectsTo

interfaces:

Configure:

add\_source:

implementation: onap-multivim-plugin > nova\_plugin.server.connect\_floatingip

inputs:

fixed\_ip:

description: >

The fixed IP to be associated with the floating IP.

If omitted, Openstack will choose which port to associate.

type: string

default: ''

remove\_source: onap-multivim-plugin > nova\_plugin.server.disconnect\_floatingip

onap.multivim.port\_connected\_to\_floating\_ip:

derived\_from: ConnectsTo

interfaces:

Configure:

add\_source: onap-multivim-plugin > neutron\_plugin.floatingip.connect\_port

remove\_source: onap-multivim-plugin > neutron\_plugin.floatingip.disconnect\_port

onap.multivim.server\_connected\_to\_security\_group:

derived\_from: ConnectsTo

interfaces:

```

Configure:
  add_source: onap-multivim-plugin > nova_plugin.server.connect_security_group
  remove_source: onap-multivim-plugin > nova_plugin.server.disconnect_security_group

onap.multivim.server_connected_to_port:
  derived_from: ConnectsTo
  interfaces:
    Configure:
      remove_source: onap-multivim-plugin > neutron_plugin.port.detach

onap.multivim.server_connected_to_keypair:
  derived_from: ConnectsTo

onap.multivim.port_connected_to_subnet:
  derived_from: ConnectsTo

onap.multivim.volume_attached_to_server:
  derived_from: ConnectsTo
  interfaces:
    Configure:
      add_target:
        implementation: onap-multivim-plugin > nova_plugin.server.attach_volume
        inputs:

          status_attempts:
            description: >
              Number of times to check for the attachment's status before failing
            type: integer
            default: 10
          status_timeout:
            description: >
              Interval (in seconds) between subsequent inquiries of the attachment's
              status
            type: integer
            default: 2
      remove_target:
        implementation: onap-multivim-plugin > nova_plugin.server.detach_volume
        inputs:

          status_attempts:
            description: >
              Number of times to check for the detachment's status before failing
            type: integer
            default: 10
          status_timeout:
            description: >
              Interval (in seconds) between subsequent inquiries of the detachment's
              status
            type: integer
            default: 2

```