



# Deploying Virtual Network Functions on Multiple VIMs

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## Deploying Virtual Network Functions on Multiple VIMs

This section describes deployment scenarios for Elastic Services Controller (ESC) and the procedure to deploy different types of VIMs, like OpenStack, Cisco Cloud Services Platform (CSP), and vCloud Director (vCD).



- Note**
- ESC tenant is required for multi VIM type deployment.
  - Deployments from same inter-deployment anti-affinity must be deployed in the same VIM in all the vm\_groups.

The following table shows ESC VM and VNF deployment VIM type supported matrix:

**Table 1: ESC VM and VNF deployment VIM type Support Matrix**

ESC VM Installed On	OpenStack	vCloud Director	Cisco Cloud Services Platform
OpenStack	Supported	Supported	Supported
VMware vCenter	Supported	Supported	Supported

### Sample Deployment Model

```
<?xml version="1.0"?>
<esc_datamodel xmlns="http://www.cisco.com/esc/esc">
  <tenants>
    <tenant>
      <name>VCDNCTestMVTypeDeployment-Tenant</name>
      <vim_mapping>false</vim_mapping>
    </tenant>
  </tenants>
</esc_datamodel>
```

```

<deployment>
  <name>VCDNCTestMVTypeDeployment-Dep</name>
  <vm_group>
    <name>VCDNCTestMVTypeDeployment-VCD-Group</name>
    <vim_vm_name>jenkins-VCDNCTestMVTypeDeployment-VCD-VM</vim_vm_name>
    <locator>
      <!-- vCD vim connector id -->
      <vim_id>VCD1</vim_id>
      <!-- vCD organization -->
      <vim_project>VAR{CFG{TARGET_LAB_0}:VCD_ORG1}</vim_project>
      <!-- vDC name -->
      <vim_vdc>VAR{CFG{TARGET_LAB_0}:VCD_ORG1_VDC1}</vim_vdc>
    </locator>
    <interfaces>
      <interface>
        <nicid>0</nicid>
        <network>VAR{CFG{TARGET_LAB_0}:VCD_MGT_NETWORK}</network>
<ip_address>VAR{CFG{TARGET_LAB_0}:VCD_MGT_NETWORK_IP_BASE}.VAR{CFG{TARGET_LAB_0}:STATIC_IP_RANGE}.0.2</ip_address>
      </interface>
    </interfaces>
  </vm_group>
  <vm_group>
    <name>VCDNCTestMVTypeDeployment-OS-Group</name>
    <vim_vm_name>jenkins-VCDNCTestMVTypeDeployment-OS-VM</vim_vm_name>
    <locator>
      <vim_id>Openstack1</vim_id>
      <!-- VIM Project = OOB Tenant -->
<vim_project>REPLACE_WITH_GENERATED_OOB_PROJECT_NAME_FOR_CFG{TARGET_LAB_1}</vim_project>
    </locator>
    <interfaces>
      <interface>
        <nicid>0</nicid>
        <network>VAR{CFG{TARGET_LAB_1}:MANAGEMENT_NETWORK}</network>
      </interface>
      <interface>
        <nicid>1</nicid>
        <network>VCDNCTestMVTypeDeployment-Net-2</network>
      </interface>
    </interfaces>
  </vm_group>
</deployment>
</deployments>
</tenant>
</tenants>
</esc_datamodel>

```

## Supported Features in Multi VIM deployment

The following tables lists all the supported features in multi VIM deployment enviroment:

**Table 2: Supported Features in Multi VIM deployment**

Features	OpenStack	Cisco Cloud Services Platform	vCloud Director
Deployment with multiple VM group	Supported	Supported	Supported

Features	OpenStack	Cisco Cloud Services Platform	vCloud Director
Multiple Deployment with single VM group	Supported	Supported	Supported
Deployment scaling	Supported	Supported	Supported
Deployment Update	Supported	Supported	Supported
VIM Locators for ephemeral networks	Supported	Supported	Supported
Recovery	Supported	Supported	Supported
LCS Notification	Supported	Supported	Supported
VM Operations <small>start/stop/start/stop/refresh/refresh</small>	Supported	Supported	Supported
ESC on OpenStack with/without default VIM	Supported	Supported	Supported

