**VM Lifecycle management in vRTM**

**Various VM status in vRTM :**

1. **Cancelled VM :** VM whose launch is denied by vRTM. In vRTM it’s status represented by 0.
2. **Started VM :**  VM which is running state on openstack. In vRTM it’s status represented by 1.
3. **Stopped VM :** VM which is stopped state on openstack. In vRTM it’s status represented by 2.
4. **Deleted VM :** VM which is deleted on openstack. In vRTM it’s status represented by 3.

VM related files is stored at location **/var/lib/nova/trustreports/UUID\_OF\_VM/.** Location **/var/lib/nova/** can be configured in vRTM configuration file.

Testcases :

|  |  |
| --- | --- |
| Test Case | Expected Output |
| **Cancelled VM** ( VM verification fails and Launch policy is ME) | entry for Cancelled VM in vRTM table and related files should present **trustreport/VM\_UUID** dir for time specified or field **cancelled\_vm\_max\_age** in vRTM.cfg. After specified time it should be removed from both places. |
| **Started VM** | Neither the vm entry from vRTM table nor related files such as reports should be removed. |
| **Stopped VM** | entry for Stopped VMs in vRTM table and related files should present **trustreport/VM\_UUID** dir and vRTM should not remove these VM entries from its table.  And vRTM should not generate report for stopped VMs. |
| **Deleted VM** | entry for Deleted VM in vRTM table and related files from **trustreport/VM\_UUID** should be removed immediately. |

VM entry removal from vRTM can be seen in vRTM log file **/var/log/vrtm.log** file and it’s related files can be seen under **/var/lib/nova/trustreports/VM\_UUID/.** VM\_UUID is UUID of VM.

If vRTM doesn’t have any entry of VMs’ in cancel state it should not try to remove entries from its table.

**Configurations in vRTM :**

**Configuration File location : /opt/vrtm/configuration/vRTM.cfg**

**Configurations description :**

IP of vRTM :

rpcore\_ip=127.0.0.1

Port of vRTM :

rpcore\_port=16005

Max Thread limit of vRTM :

max\_thread\_limit=63

Root Directory of vRTM :

vrtm\_root=../

Trust Report Directory :

trust\_report\_dir=/var/lib/nova/trustreports/

Clean-up interval is interval after which vRTM should check for; is there any VM whose entry should be removed from vRTM table and it’s related file from trustreport directory.

#VM Entry cleanup interval in seconds

Sleep time of cleanup thread:

entry\_cleanup\_interval=30

#entries maximum age in seconds

Time after which cancelled VM entry should be removed from vRTM table.

Max Life of cancelled VM :

cancelled\_vm\_max\_age=120

**Log Files locations :**

vrtm\_proxy Log location : /var/log/vrtm/vrtm\_proxy.log

vrtm\_listener Log location : /var/log/vrtm/vrtm\_listener.log

vrtmcore Log location : /var/log/vrtm/vrtm.log

**vRTM’s Log Properties File location :**

vrtmcore and vrtm\_listener log properties file : /opt/vrtm/configuration/vrtm\_log.properties

vrtm\_proxy log properties file : /opt/vrtm/configuration/vrtm\_proxylog.properties