How to debug OpenStack Integration

Introduction

Once NetScalers are integrated with OpenStack through NetScaler MAS, OpenStack tenants can use the integrated NetScaler ADCs for load balancing (LBaaS) their virtual machines. When these tenants configure load balancing on OpenStack cloud, OpenStack uses the MAS APIs to push the load balancing configuration to the MAS, which in turn creates the configuration on the NetScaler ADCs assigned to the tenants. During this process, lot of OpenStack API’s, MAS API’s, and NetScaler NITRO API’s are called, database operations are performed, and a lot of information is exchanged between OpenStack, MAS, and NetScaler instances. If part of the OpenStack configuration fails to get pushed to NetScaler instances, finding the location and root cause of the issue becomes very critical.

To easily locate the problems or to monitor the progress of the information exchange between OpenStack, MAS, and NetScaler instances, do the following:

1. Log on to MAS and, on the Orchestration tab, go to Cloud Orchestration > OpenStack > Requests to see the list of configurations that are getting pushed from OpenStack.

As shown above, you can clearly see the requests, such as remove loadbalancers, remove listeners, Create loadbalancers etc along with tenant information, status of the request, and status description. If there is a failure in executing a request, the status of the request is shown in red, and the reason for the failure appears in the status description.

Here for example, Create loadbalancers request has failed and the status of the request is shown in red. Scroll the bar to right to see the error description as shown in the below screenshot. “Tenant ‘52550’ is not part of any service package and there is no default service package.”
2. To resolve the error, make the tenant part of some service package or create a default package and then create a loadbalancer.

3. Select a particular Request Description that has status red and click the Tasks button to drill down on the details of the requests, as shown in the following screen shots.

If a task failed, its status is Error, and the error description describes the reason.

For example in the above screen shot the error says "Instance HA-Node2-pepsi-NetScalerVPX already exists", which means that for a particular tenant instance with same name already exists. Login to SDX and delete the particular instance and repeat the command that failed, to successfully complete the execution of the command.

By using this method, you can easily monitor and debug the interactions between OpenStack, MAS, and NetScaler instances.