

INSTALLATION RUNBOOK FOR NetScaler Management & Analytics System with Mirantis OpenStack 9.0

Application Type:[NetScaler Management
Platform]Application Version:[NetScaler MAS 11.1]MOS Version:[9.0]OpenStack version:[Mitaka]

Content

Document History <u>1 Introduction</u> <u>1.1 Target Audience</u> <u>2 Application overview</u> <u>3 Joint Reference Architecture</u> <u>4 Physical & Logical Network Topology</u> <u>5 Installation & Configuration</u> <u>5.1 Environment preparation</u> <u>5.2 MOS installation</u> <u>5.2.1Health Check Results</u> <u>5.3 < Application name> installation steps</u> <u>5.4 Limitations</u> <u>5.5 Testing</u> <u>5.5.1 Integration Test cases and test results</u> <u>5.5.2 Target Use cases</u>

Document History

Version	Revision Date	Description
1.0	04-10-2016	Initial Version

2.0	13-10-2016	Reworked
3.0	19-10-2016	Reworked

1 Introduction

This document is to serve as a detailed Deployment Guide for NetScaler Management & Analytics System. Citrix offers NetScaler Management & Analytics System. This document describes the reference architecture, installation steps for certified MOS+ NetScaler Management & Analytics System, limitations and testing procedures.

1.1 Target Audience

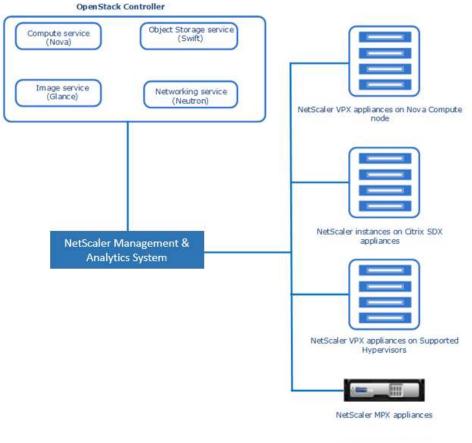
Customers interested in deploying Citrix NetScaler products (release 10.5 and later) with Mirantis OpenStack 9.0 (Mitaka release and later)

2 Application overview

NetScaler Management and Analytics System (MAS) is a centralized management solution that simplifies operations by providing administrators with enterprise-wide visibility and automating management jobs that need to be executed across multiple NetScaler instances. You can manage and monitor Citrix application networking products that include Citrix NetScaler MPX, Citrix NetScaler VPX, Citrix NetScaler Gateway, Citrix NetScaler SDX, Citrix NetScaler CPX, and Citrix NetScaler SD-WAN. You can use NetScaler MAS to manage, monitor, and troubleshoot the entire global application delivery infrastructure from a single, unified console.

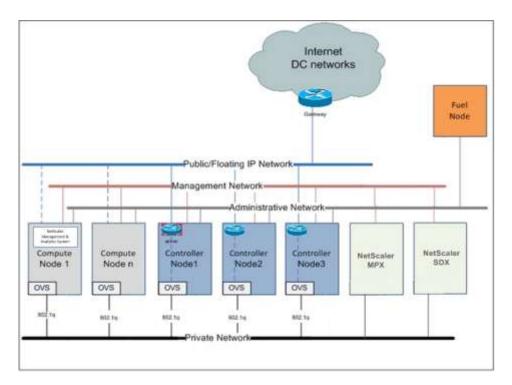
The Cloud Orchestration feature of NetScaler Management and Analytics System (MAS) enables integration of Citrix NetScaler products with Mirantis OpenStack platform. By using this feature with Mirantis OpenStack platform, the Mirantis OpenStack users are able to avail the load balancing feature (LBaaS) of the NetScaler. After this, the Mirantis OpenStack users can deploy their load balancer configurations from Mirantis OpenStack in NetScaler instance.

3 Joint Reference Architecture



Citrix NetScaler ADCs

4 Physical & Logical Network Topology



5 Installation & Configuration

5.1 Environment preparation

Hardware Required:

- 3 bare metal servers with at least 4 core CPU, 48GB RAM, 1 TB HDD for controller nodes
- 2 bare metal servers with at least 12 core CPU, 96GB RAM, 1 TB HDD for compute nodes
- 1 bare metal server with at least 2 core CPU, 3 GB RAM, 350 GB HDD for Fuel node
- NetScaler MPX
- NetScaler SDX

Software Required:

- Mirantis OpenStack 9.0 ISO file
- Neutron LBaaS package from https://github.com/openstack/neutron-lbaas.git
- NetScaler Management & Analytics System 11.1
- NetScaler Software version 10.5 and above

5.2 MOS installation

Fuel server is used to deploy and manage the OpenStack environment. Fuel acts as a DHCP server. The OpenStack nodes are configured to network boot, using PXE. It assigns IP addresses to the OpenStack nodes, performs PXE boot and initial configuration, and provisions the nodes according to their roles in the environment. In the testing environment, Fuel has

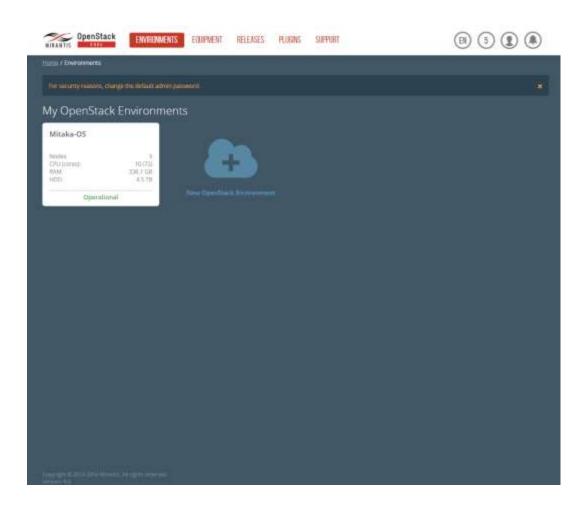
deployed Mirantis OpenStack with an operating system based on Ubuntu Linux. Mirantis OpenStack uses the MySQL/Galera for database replication in HA deployments that use the Ubuntu kernel.

For more information about Mirantis OpenStack Installation, see <u>https://docs.mirantis.com/openstack/fuel/fuel-9.0/</u>

http://docs.openstack.org/developer/fuel-docs/userdocs/fuel-install-guide.html

Creating OpenStack Environment:

http://docs.openstack.org/developer/fuel-docs/userdocs/fuel-user-guide/create-environment.html



5.2.1Health Check Results

	9 tr Chack		
OpenStack Health Check			
Select All		Provide credentials	Ran Testa
Sanity tests. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
Request flavor list	20 s.	1.3	-
Request image list using Minia	20 s.	±2	*
Request Initiance list	20 a.	0.1	1
Request absolute limits has	20 s.	0.1	1
Request snapshot fig.	20 s.	0.2	*
Request volume list	30 s.	0.5	4
Request image list using Glance v1	10 s.	0.0	*
Request image list using Giance v2	10 m.	0.0	1
Request stack list	20 s	0,0	1
Request active services hit	20 s.	1.6	-
Request user list	<u>30</u> s.	12:1	4
Check that required services are running	180 s.	5.4	4
Eneck internet connectivity from a compute	100 s.	0.5	1
Check DNS resolution on compute node	120±	1.0	1
Request lot of networks	20 s.	0.2	4

111	Functional tests. Duration 3 min - 14 min	Expected Duration	Actual Duration	Status
13	Crease instance Rayor	30 s.	0.8	*
100	Chatk meats, update and datate image actions using Glance v2	70 s	3.5	9
123	Crause volume and boot instance from it	350 n.	66.2	1
101	Create volume and attach it to instance	350 m.	23.6	9
123	Check measure convectivity from instance via floating IP	300 n.	41.4	1
101	Crustet lorgestr	25 x	0.4	-
123	Creame security group	25 s	1.0	-
101	Check response parameters	50 s	6.2	1
13	Launch instance	200 s.	25.0	1
101	Laurech Instance with file Injection	200 s.	31.5	-
123	Launch instance, syware snapshot, launch instance from exapsilies.	300 n.	63.4	-
13	Creater uner and authenticate with It	80 s	5.3	1

HA tests. Duration 30 sec - 8 min	Expected Duration	Actual Duration	Status
Check state of haproxy backends on controllers	10 s.	13	1
Check data replication over mysql	10 s.	4.7	1
Check if amount of tables in databases is the same on each node	10 %.	3.8	~
Check galera environment state	10 s.	1.5	-
Check paternaker status	10 s.	2.0	1
RabbitMQ availability	100 s.	13.9	1
RabbirMQ replication	100 s.	27.9	1

8	Platform services functional tests. Duration 3 min - 60 min	Expected Duration	Actual Duration	Status
8	Typical stack actions: create, delete, show details, etc.	720 s.	47.2	1
8	Advanced stack actions: suspend, resume and check	900 s.	78.8	1
1	Check stack rollback	470 s.	101.3	1
0	Update stack actions: inplace, replace and update whole template	1300 s.	103.9	1
8	Check creation of stack with Walt Condition/Handle resources	820 s.	620.9	×
	Time limit exceeded while waiting for stack status becoming "CREATE_COMPLETE" to finish: Please refer to OpenStack logs for more details.			
	Target component: Heat			
	Scenario			
	1. Create test flavor. 2. Create a keypar.			
	3. Save generated private key to file on Controller node. 4. Create a stack using template			
	5. Wait for the stack status to change to 'CREATE_COMPLETE'.			
	 Delete the file with private key. Delete the stack. 			
	B. Wait for the stack to be deleted.			
0	Cloud validation texts. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
13	Check disk space outage on controller and compute nodes	20 s.	1.8	-
۵	Check log rotation configuration on all nodes	20 s.	1.9	1
(1)	Configuration tests. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
01	Check usage of default credentials on master node	20 s		
8	Check if default credentials for OpenStack cluster have changed	20 s.	3275	1.77
0	Check usage of default credentials for keystone on master node	20 ±.	<u>_</u>	
	되는 이번			

5.3 NetScaler MAS installation steps

NetScaler MAS can be downloaded from https://www.citrix.com/downloads/netscaler-mas.html Please download the build 50.XX

For NetScaler MAS installation please refer <u>http://docs.citrix.com/en-us/netscaler-mas/11-1/single-server-deployment.html</u> NetScaler MAS can be deployed on any of the supported hypervisor that are listed in the link above

To register NetScaler MOS with MAS please refer to the below link. <u>http://docs.citrix.com/en-us/netscaler-mas/11-1/integrating-netscaler-mas-with-openstack-platform/preconfiguration-tasks-mas-openstack.html#par_anchortitle_b14e</u>

Note: For MAS builds earlier to 50.XX please follow the below work around for registering MOS with MAS.

Using any of the API tools, please fire the below API.

POST call with URL: http://<MAS IP>/oca/v1/openstacks

Copy the below payload as body:

{

}

"openstack": {
 "name": "Openstack",
 "username": "<OpenStack Admin Username>",
 "password": "<password>",
 "admin_tenant_name": "<Openstack Tenant name>",
 "driver_username": "openstack_driver",
 "driver_password": "<Driver Password>",
 "keystone_uri": "<Keystone IP:port>/",
 "keystone_admin_uri": "<Keystone admin IP:port>",
 "neutron_uri": "<Neutron IP:port>",
 "glance_uri": "<Glance IP:port>",
 "nova_uri": "<Nova IP:port>"

Payload content type: JSON Authentication type: Basic Auth

For example Postman REST client can be used to fire the API.

Postman download link:

https://chrome.google.com/webstore/detail/postman/fhbjgbiflinjbdggehcddcbncdddomop?hl=en

Configurations in Postman

Builder Team Uboary	S 🖸 🗠 👘 🛛	ign In 🔺		
http://www.asimprocedure xi +	No Environment	~	0	0
POST V http:// <ma5.ips oca="" operatacka<="" td="" v1=""><td>Params Send</td><td></td><td>save</td><td>*</td></ma5.ips>	Params Send		save	*
Authorization Readers (2) Body Prevergent Stript Tests				Code
<pre>form-data</pre>				

5.4 Limitations

http://docs.citrix.com/en-us/netscaler-mas/11-1/Before-You-Begin.html http://docs.citrix.com/en-us/netscaler-mas/11-1/single-server-deployment/install-mas-onxenserver.html

5.5 Testing

5.5.1 Integration Test cases and test results

Verify that NetScaler MAS is able to get the Tenants, Images, Networks and Flavors information configured in OpenStack. In NetScaler MAS only Flavors applicable to NetScaler Control Center (vCPU equal to 2 or more) will be displayed. (Screenshots are below)

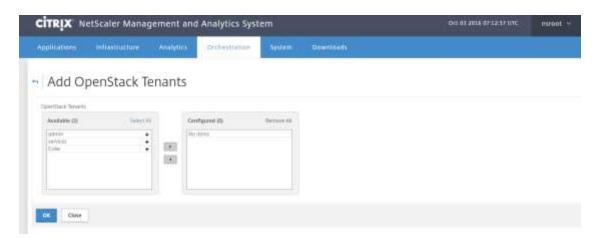
1. Compare the tenants present in MOS and MAS.

Tenants present in OpenStack.

Project		Pr	ojects	8						
Admin			8176			ration	٩	+ Orale fr	and Breathing	-11
Identity	3		NAME	DESCRIPTION	PROJECT ID		DOMAIN NAME	ENABLED	ACTIONS	
	Domains	Ð)	amo	administeriant	5535401011434023420	6740315c3ce03	Default	396	ManageMembers	•
	Wojects	0	HOWERS	Tenant for the opensitack services	6eeb550009054ee9e94	0:3375w7c3496	Default	Tes	Manage Members	•
	Users	-	Cille		d23af23aaedf48d39del	bifd72d37e11c	Default	Vel	Manage Members	
	Groups									

MAS fetches the Tenants from OpenStack.

Note: MAS can be accessed by typing the IP address of the NetScaler MAS server (IP address provided during MAS installation) in the address bar of the browser.



2. Compare the Images present in MOS and MAS.

Images present in OpenStack

WIEANTIS	OpenStack	=	admmy			L_X	X	111, 110			A admin
Project.		In	nages	13							
ADD	(4)					image Nor			- Kitter	+ Crasis image	Billess stages
System		G	PROJECT	IMAGE NAME	TYPE	STATUS	PUBLIC	PROTECTED	FORMAT	54ZE	ACTIONS
	Overview	0	1010200	SHOW	triage	Active	Yes	No.	QCOW3	21.5 MB	6-bx tridge
	Hipervision	0	admin	Will-11-8-88-19	enage	ADV	NI	.N4:	QCGW2	334,4 MIL	Gitthringe +
	Host appropriate	Disp	rløying 2 dørin								
	Distances										
	Votiones.										
	Stature.										
	Import										

MAS fetches the Images from OpenStack

instance Provision Settings	
NetScaler MAS can be configu- Instances on the By	et to create and destroy NetScales instances instances by through movies partages. The settings mechanical being will be alled along with the settings provided in sense partage to rease NetScale
Variagovent Network (Neutro	n Helmork)"
admirt_floating_ret - 10.20	2.121 *
Credentizals configured in Net	Scaler Instances provisioned by NetScaler MAS
Ouring cleation of new NetSica first personnel to login to the in	er network, the default passion is manged to the passion mericoned betwee HatS care HAS will use this passion for configuring the newy counted instance after creation. The admen can also stand after it is created.
Profee Name*	
rs_naroot_profile	· + X
Settings to provision NetScal	n VPX Instances using OpenStack Compute Service (Rova)
License Activation: Colles	
	+
NetScaler VPX Image in Openi	Jarde mitalanne Service (Slance)
	* 0
VPX-11-8-68-10	
TestVM	

3. Compare the Networks present in MOS and MAS.

Networks present in OpenStack.

NIRANTIS	OpenStack		admin -		24+	N		11	Real Property lies	- *	4 ac	tmin
Project.	-	Ne	etwo	rks								
Admin	<u> </u>							Q,	+ Create	Network	B Deines Here	eartin .
System		۵	PROJECT	NETWORK NAME	SUBNETS ASSOCIATED	DHCP AGENTS	SHARED	EXTERNAL	STATUS	ADMIN STATE	ACTIONS	
	Diverview	0	admin	admin-mett	admin-sub1 10.1.1.0/24	1	No	No	Active	NR.C	2dt faiteurs	•
	Hypervisors Host Apgregates	a	admin	admin_floating_net	admin_floating_net_subnet 10.102.122.64/26	2	No	. Yes	Active	UΡ	Edit Network	+
	Instances	0	admin	Public	Public-Subnet 172.16.0.0/16	2	ves	NO	Active	ΰŘ.	101 Network	•
	Volumes		admin	admin_indernal_oet	admin_internal_net_subnet 10.102.122.128/26	2	No	No	Active	UP	Edit Network	•
	Flavors	Deep	laying 4 ite	est)								

MAS fetches Networks from OpenStack

CITRIX .	vetScaler Mana	gement an	d Analytics Syst	em		012 03 2016 08 13 56 UTC Astront -
Application	minanturner	Analytics	Orchestration	System)	Downloads	
Deplo	yment Sett	ings				
ntanne Promos	in Settings					
ertikaler NAL sa utaroau orritek I		وستاخل وستاخذك	extremes typamically these	ger unverse packag	es his settings mentalised below al	a be used party with the setting (provided as service participe to usuale furthings
tanànaman'i No	www.itees.tran.remeakk?*:					
	2_0+C - 10 102 121 * 🔘					
admin-netL+1	0.1.1.0/24 - 518		Hothcaller MARE			
PLONE - 372.54	0.0/16 - 324 Crief - 10.110 122 120/26	- 500			National MAS will one the passed	
admin_Pitema			to provide to pay hereing o	water of the second second		no for configuring the mean challer contains after cardine. The administicar alloc c
	ogen to this wettance: after H					

4. Compare the Flavors present in MOS and MAS.

Flavors present in OpenStack

m1.medium 2	RAM R00 DISP 808 806 408 406	EPHEMERAL DISK	SWAP DISK OMB	RX/TX FACTOR	Filer D	Q +c PUBLIC Yes	METADATA	ACTIONS Edit Player	
FLAVOR VCPUS NAME 4 m1.large 4 m1.medium 2	RAM ROO DISP BGD BGD	EPHEMERAL DISK	DISK	RX/TX FACTOR	4	1. 10/02/05			٠
m1.medium 2						/983	NU	Edit Flavor	٠
	458 40G	0GB	OMB	* # C					
				1.0	3	Ves	No:	50X Flayor	٠
m1.micro 1	64M8 008	098	OMB	1.0	c98c2930.bb33-4532.8e64 6453f968adb0	Yes	300	Edit Flavor	•
m1.smali 1	268 206	0GB	OMB	10	2	Yes	No	Edit Pavor	٠
т упалт	\$12MB 108	068	OMB	1.0	÷.	Tes	NE	Epit Farer	•
m1.xlarge B		e oge	UMB	1.0	5	THE	NO	Edit Flavor	
	т. упали	milling T S12WB TOB millinge 8 1668 1606	milling 7 512WB 108 008	11.5/mg 8 1656 16568 0G8 0M8	NT.DRY T \$12MB TGB 0GB 0MB T.0	NT.DNY T \$12MB 108 008 0MB 1.0 T	W1.00Y T \$12MB TOB DOB DMB T.0 T THIS	WILKING T \$1254B TOB DOB DMB 1.0 t Yes No	W1.07Y T \$12WB T08 008 0MB 1.0 T Yes NO Edit Farm

MAS fetches the Flavors from OpenStack.

^p	plications	Infrastructure:	Analytics	Orchestration	System	Downloads	
1	Service	e Package					
	Basic Settin	gs					
	Name best-	поча				Device Type	dedicated NetScaler VPX OpenStack Compute
	Auto Provisi	ion Settings					
	Resources						
	Maximum Nur 10	iber of Instances to Auto P	rovitiint*				
	Ravoi*						
	m1 medium	2 vcpus, 4096 RAM *					
		2 vcpus, 4096 RAM					
		vcpus, 8192 RAM vcpus, 16384 RAM					

5.5.2 Target Use case(s)

Provide LBaaS service through Mirantis OpenStack by integrating Citrix NetScaler devices through NetScaler MAS.

- Provide LBaaS with pre-provisioned Dedicated NetScaler VPX.
- Provide LBaaS with pre-provisioned NetScaler MPX.
- Provide LBaaS with VPX instances auto-provisioned(both in standalone and HA mode) on a NetScaler SDX appliance,

Deployment modes and configuration options

The following table lists the minimum combination of Mirantis OpenStack deployment options. Example:

OS	Mode	HV	Network	Stor	age
			VLAN	Object	Block
Ubuntu (14.04.5	HA	KVM	Х	Ceph	Cinder

LTS)					
------	--	--	--	--	--

NS Release version	Pre-Provisioned VPX	Pre-Provisioned MPX	SDX	Nova based VPX
10.5	Yes		Yes	
10.5.e	Yes		Yes	
11.0	Yes		Yes	
11.1	Yes		Yes	

Functional testing

- 1) Auto provision on SDX :
 - a. In MAS, add the SDX devices under infrastructure.
 - b. Create a Service package with **SDX** as the platform and **NetScaler VPX** as the device type. Specify the values (integer only) for cores, memory, SSL chips, and throughput.
 - c. Assign the Device and Tenant to the Service package.
 - d. The tenant then creates the Loadbalancer, Listener, pool and VIP from OpenStack.
- 2) LBaaS for Pre provisioned MPX device with dedicated isolation policy :
 - a. In NSMAS, add the MPX device under infrastructure
 - b. Create a Service Package with isolation policy as "dedicated."
 - c. Assign the Device and Tenant to the Service Package.
 - d. The tenant creates the Loadbalancer, Listener, pool and VIP from OpenStack
- 3) LBaaS for Pre provisioned VPX device with dedicated isolation policy
 - a. In NSMAS, add the VPX device under infrastructure
 - b. Create a Service Package with isolation policy as "dedicated."
 - c. Assign the Device and Tenant to the Service Package.
 - d. The tenant creates the Loadbalancer, Listener, pool and VIP from OpenStack

Negative testing

- 1) Verify registering Mirantis OpenStack with NetScaler MAS fails if the OpenStack credentials are incorrect.
- 2) Verify a tenant that does not exist in OpenStack keystone cannot log on to the NetScaler MAS user interface.
- 3) Verify the OpenStack driver cannot communicate with NetScaler MAS without proper credentials in the neutron.conf file.
- 4) Verify VPX provisioning fails if the OpenStack Nova service is down.
- 5) Verify VPX provisioning fails if the OpenStack Keystone service is down.
- 6) Verify if OpenStack Neutron service is down after provisioning the device, VPX device is not connected to the network.
- 7) Verify that insufficient resources on the Compute node cause VPX provisioning to fail.
- 8) Verify that insufficient resources on the SDX device cause VPX provisioning to fail.

Use Case Test Results

1. Pre-provision Dedicated VPX Use case:

LB configuration of a tenant in MOS

Project	*	Loa	ad Bal	ancers					
Compute	- 192	Ο,	PHP (+110	s Lost Balancer	ware load beleven
Network	100	10	NAME *	DESCRIPTION	OPERATING STATUS	PROVISIONING STATUS	IP ADDRESS	LISTENERS	ACTIONS
Network	Tupakagy	а,	hpiliti	<i>N</i>	Online	Active	120.05	Ť.	Eot •
	Routers Routers	Dapay	drig 1 item						
Dechestration	14								
Object Store	-								

LB configuration of a tenant in MAS

CITRIX NO	etScaler Management an	d Analytics Syst	ет		Oct 04 2016 05 10 07 UTC	nsroot 🛩
Applications	Infrastructure Analytics	Orchestration	System	Downloads		
- Cloud I	User Details					
OpenStack Tenant N Tep Description OpenStack Tenants Service Package ap-proprov	lame AANDaATTICAASAIJIMIIJJAYKooBADSDGS1					
Devices Vith	Pouts Littlemin_v2 Pools_v2					
IP Address	Profile Name	Version			Type	State
10.196-43-13	m_minut_profile	NetScaler NSS0.3	0.0458.11.Nr.104	te: kul 14 2015, 18 54 05	to ga	NB.
Close						

Listener details

Contractivities	etScaler Mana	gement and	Analytics Syst	lem.		0	1 04 2056 05 10 33 VTC	nsroot ~
Applications	Infrastructure	Analytics	Orchestration	System	Downloads			
Cloud	User Detail	s						
OpenStack Tenant Ne Description OpenStack Tenant Service Package Ne-proprov	Natter 4489493c4a64339b833e9	90954050401						
Devices VIPs	Pools Listeners_v2	Pools_v2						
THE G SH	vier Veral tarv	es Manmo						
D Net		LE IP /	uddan		Part	Protocol	State	
					-80-	HTTP		

Pool details

CITRIX" N	etScaler Manaç	gement and	Analytics System				Oct 04 2016 05:10:57 UTC	msroot ~
Applications	Infrastructure	Analytics	Orchestration	System	Downloads			
- Cloud	User Detail	s						
OpenStack Tenant Np Description OpenStack Tenant Service Peckage ap-proprov	Name 44/92453c426433f5833d9	ce640506b1						
Devices VPs	Pools Visteoen, sz	Pools_v2						
View Services	men.							
E Nor	ne		Proto	col		Method		
(B) (194	b3-i3-g1		44778			ROUND_ROBIN		
Close								

2. Auto-provision of VPX in HA on SDX use case:

LB configuration of a tenant on MOS

Project -	Lo	ad Bal	ancers					
Compute -	Q	line				+ Day	ne Lavel Ralancer	iner teal tealing
Network -		NAME 🕈	DESCRIPTION	OPERATING STATUS	PROVISIONING STATUS	IP ADDRESS	LISTENERS	ACTIONS
Network Topology	а,	> 11	22	Online	Active	13.0.0.5	1	Edil •
Networka	Deeple	iying 1 item						
Recutory								
Load Belancers								
Orchestration -								
Object Store								
Identity -								

LB configuration of a tenant in MAS

ITRIX N	etScaler Mana	gement and	Analytics Syst	em		Oct 04 2016 06:41:56 UTC	insroot
pplications	Infrastructure	Analytics	Orchestration	System	Downloads		
Cloud	User Detail	ls.					
lipenStack lienaryt f Inke Iwernpficel Incenditack Temarit	latur #234723a.pedf48.strMeb3	1072037e114					
envice Package p-sdz-Ra		and radial results					
Devices VIPt	Pools Litteriors_32	Pools_a2					
		Postle I	lame	Version		Type	State
@ Address							state

Listener details

CITRIX N	etScaler Manag	ement and	Analytics Syst	em			Oct 04 2016 06-42-28 07C	nsroot 👻
Applications	Infrastructure	Analytics	Orchestration	System	Downloads			
- Cloud	User Details	5						
Openitack Renart Calie Description Openitizack Tenien Servez Package sp-sdt-ha	Name 1023a/23aaed/48dd746d11	172107413c						
Devices VPs	Puth Listeners_v2	Pools_st						
tion Ci fue	The Diverse	Bimms	1					
😑 Na		LB IP Address			Port	Protocol	State	
101 ID1	д.	11005			30	HTTP	ALTINE	
Close								

Pool details

CITRIX N	etScaler Manaç	gement and	Analytics Syst	em			Ort 04 2016 06:43 05 UTC	nsroot ~
Applications	Infrastructure	Analytics	Orchestration	System	Downloads			
+ Cloud	User Detail	s						
OpenStack Tenent Service Fachage sp-ody-ha	rt23wt23aaertt48mt9deb5	ht72d87w13r						
Devices VIPs	Pools Luteners_v2	Pools_v2						
U Nor	ie .		Protocol			Method		
III.	ii-pt		64TTP			ROUND_ROBIN		
Close								

3. Pre-provision Dedicated MPX Use case:

LB configuration of a tenant in MOS

Project	Lo	ad Bal	ancers					
Campute -	Q.	Part Dat	ancerb			+ Cieda	und Relation	agusture.
Network -	-	NAME *	DESCRIPTION	OPERATING STATUS	PROVISIONING STATUS	IP ADDRESS	LISTENERS	ACTIONS
Hetwork Topology	-15	> mps.051	2	Online	Active	12.0-0.8	1	681. +
Networks Routers	Displ	ayong 1 Rem						
Losd Balancers								
Orchestration -								
Object Store								
Identity -								

LB configuration of a tenant in MAS

unkiv Me	tScaler Manag	gement and	Analytics Syst	em		(5ct 04 2016 88 53 1	LB VITC	nsroot. ~
pplications	Infrastructure	Analytics	Orthestration	System	Rownloads			
Cloud U	lser Detail	S						
OperStack Terrarit-44 Servico Package	09 192403-44433063249	9ce0405068-1						
sb-tobs								
Devices VIPs /	Pools Lintervers_34	Pools_s2						
	Pools Lotemen_s2 Poolse Na		Venion			5	ype.	State

Listener details

	Infrastructure	Analytics Orchestratio	an System	Downloads		
Cloud	User Detail	s				
ниса Тискади нигра	Allfadi):da6411hd32d fouit: Listeners_v2					
	ere : Vere LB Verein	(mass)				
View CLYNER						
Van C. Van		LB IP Address		Port	Protocal	State

Pool details

CITRIX N	ietScaler Mana	gement and	Analytics Syst	em		Oct 04 2036 08:54:05 UTC	nsroot ~	
Applications.	Infrastructure	Analytics	Orthestration	System	Downloads			
+ Cloud	User Detail	ls						
OpenStack Tenant hp Description OpenStack Tenan Service Fackage sp-impe	Name 1-4495a493c4a4433954324	90004058681						
Devices VPs	Pools Littlers_v2	Pools_v2						
View Services								
i No	118		1	Pretocel		Method		
E 19	19-11-11-21			mit.		BOUND_ROBIN		
Cose								