

```
formatVersion: 1
name: ALB - Web Servers
version: 1
inputs:
  webcount:
    title: "No. of Web Workloads:"
    type: integer
    default: 2
    description: Load Balancer will be deployed <br> if Frontend Workload count <br> is
    >= 2
  environment:
    type: string
    description: Target Environment
    title: Target Environment
  oneOf:
    - title: VCF (VMware Cloud Foundation)
      const: env:dev
username:
  type: string
  description: The username you would like to have for the installation.
  default: demouser
  title: System Admin Account Username
password:
  type: string
  description: The password you would like to use for the ocuser account.
  title: OpenCart Admin Account Password
  pattern: "[a-z0-9A-Z@#$]+"
  encrypted: true
health_monitor:
  type: array
  items:
    type: string
  title: Health Monitors
  default:
    - System-HTTP
  minItems: 1
  maxItems: 10
lb_algorithm:
  type: string
  title: Load Balancer Algorithm
  description: The load balancing algorithm will pick a server within the pool's list of
available servers.
  readOnly: false
  default: LB_ALGORITHM_LEAST_CONNECTIONS
  oneOf:
    - title: Least Connections
```

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const: LB_ALGORITHM_LEAST_CONNECTIONS
- title: Round Robin
const: LB_ALGORITHM_ROUND_ROBIN
- title: Fastest Response
const: LB_ALGORITHM_FASTEST_RESPONSE
- title: Consistent Hash
const: LB_ALGORITHM_CONSISTENT_HASH
- title: Least Load
const: LB_ALGORITHM_LEAST_LOAD
- title: Fewest Servers
const: LB_ALGORITHM_FEWEST_SERVERS
- title: Random
const: LB_ALGORITHM_RANDOM
- title: Fewest Tasks
const: LB_ALGORITHM_FEWEST_TASKS
- title: Core Affinity
const: LB_ALGORITHM_CORE_AFFINITY
resources:
Allocations_CloudZone:
type: Allocations.CloudZone
properties:
accountType: avilb
constraints:
- tag: env:dev
Persistence_Profile:
type: Idem.AVILB.PROFILES.APPLICATION_PERSISTENCE_PROFILE
properties:
name: web-profile-${uuid()}
account: ${resource.Allocations_CloudZone.selectedCloudAccount.name}
persistence_type: PERSISTENCE_TYPE_CLIENT_IP_ADDRESS
# Health_Monitor:
# type: Idem.AVILB.PROFILES.HEALTH_MONITOR
# properties:
# name: web-monitor-${uuid()}
# type: HEALTH_MONITOR_HTTP
# account: ${resource.Allocations_CloudZone.selectedCloudAccount.name}
# monitor_port: 80
VirtualService:
type: Idem.AVILB.APPLICATIONS.VIRTUAL_SERVICE
properties:
name: web-vs-${uuid()}
account: wlkd-domain-avi
cloud_type: CLOUD_VCENTER
services:
- port: "80"
pool_ref: ${resource.Pool.name}
vsvip_ref: ${resource.VIP.name}

```

```

Pool:
type: Idem.AVILB.APPLICATIONS.POOL
properties:
  name: web-pool-${uuid()}
  account: wlkd-domain-avi
  tier1_lr: /infra/tier-1s/T1-VI1-AVIVIP
  default_server_port: "80"
  health_monitor_refs: ${input.health_monitor}
  lb_algorithm: ${input.lb_algorithm}
  application_persistence_profile_ref:
/api/applicationpersistenceprofile/${resource.Persistence_Profile.resource_id}
  servers: '${map_by(resource.Web_Server[*].address, address => {"ip": {"addr": address, "type" : "V4"}})}'

VIP:
type: Idem.AVILB.APPLICATIONS.VS_VIP
properties:
  name: web-vip-${uuid()}
  tier1_lr: /infra/tier-1s/T1-VI1-AVIVIP
  account: wlkd-domain-avi
  vip:
    - vip_id: 0
    auto_allocate_ip: true
    auto_allocate_ip_type: V4_ONLY
    enabled: true
    ipam_network_subnet:
      network_ref: ${resource.Cloud_NSX_Network_1.resourceName}

Web_Server:
type: Cloud.vSphere.Machine
properties:
  name: web
  count: ${input.webcount}
  flavor: medium
  image: ubuntu1804
  cloudConfig: |
    packages:
    - apache2
    - open-vm-tools

runcmd:
  ### update the top of the web page to the web servers resource name
  - sed -i 's/Apache2 Ubuntu Default Page/${self.resourceName}/g'
/var/www/html/index.html

  ### Restart services
  - systemctl reload apache2
  - systemctl restart apache2

```

```

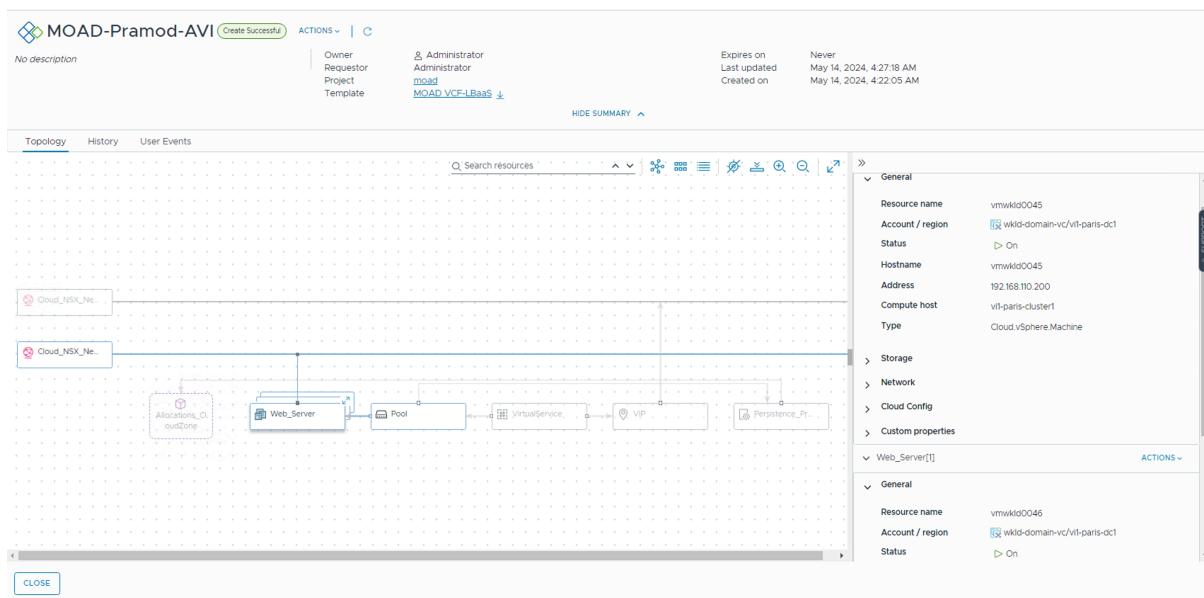
### Log completion
- echo 'Cloud-init is done!' >> /tmp/finished.txt

networks:
- network: ${resource.Cloud_NSX_Network_2.id}
  assignment: static

Cloud_NSX_Network_1:
type: Cloud.NSX.Network
properties:
  networkType: existing
constraints:
- tag: net:avi

Cloud_NSX_Network_2:
type: Cloud.NSX.Network
properties:
  networkType: existing
constraints:
- tag: net:vcfwld

```



vSphere Client | Search in all environments

vmwklid0045

Virtual Machine Details

Power Status	Powered On
Guest OS	Ubuntu Linux (64-bit)
VMware Tools	Running, version:11269 (Guest Managed)
DNS Name (1)	vmwklid0045
IP Addresses (2)	192.168.110.200 fe80::250:56ff:fe89:442d
Encryption	Not encrypted

VM Hardware

CPU	2 CPU(s), 20 MHz used
Memory	8 GB, 0 GB memory active
Hard disk 1	20 GB Thin Provision vit-paris-vsan01
Network adapter 1	aria-vms (connected) 00:50:56:89:44:2d
CD/DVD drive 1	Connected
Compatibility	ESXi 6.7 and later (VM version 14)

PCI Devices

No PCI devices

Related Objects

- Cluster: vit-paris-cluster1
- Host: vcf-vi-paris-esx-03.corp.vmbeans.com
- Networks: aria-vms
- Storage: vit-paris-vsan01

vSphere Client | Search in all environments

vmwklid0046

Virtual Machine Details

Power Status	Powered On
Guest OS	Ubuntu Linux (64-bit)
VMware Tools	Running, version:11269 (Guest Managed)
DNS Name (1)	vmwklid0046
IP Addresses (2)	192.168.110.202 fe80::250:56ff:fe89:f347
Encryption	Not encrypted

VM Hardware

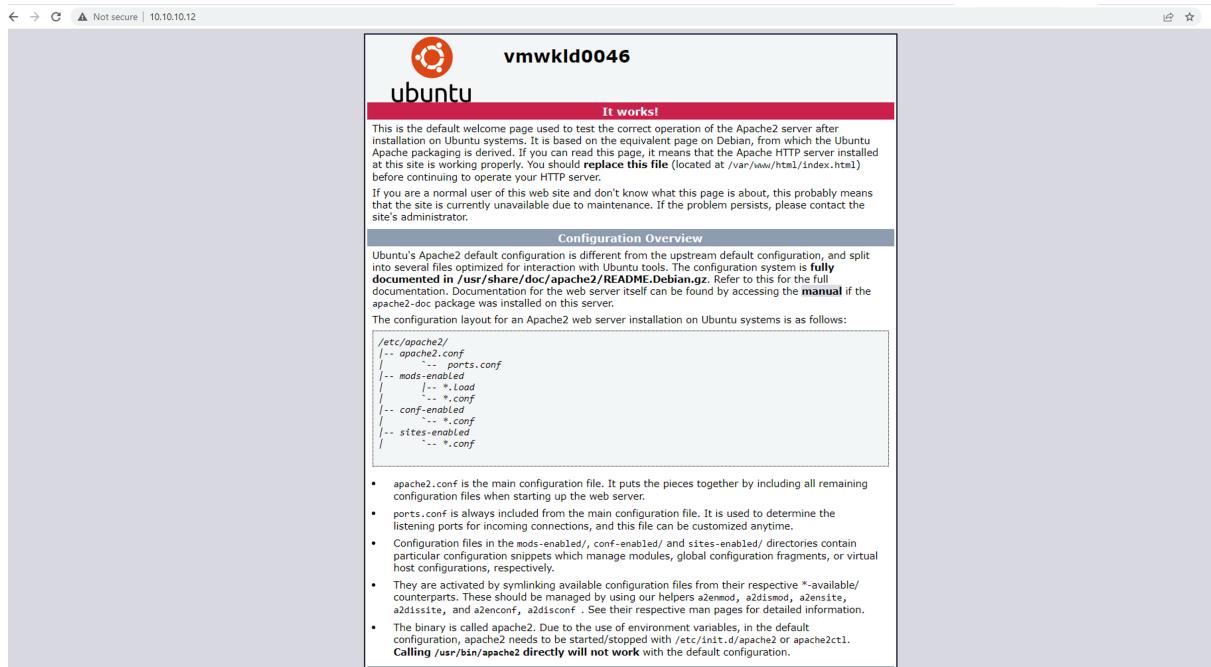
CPU	2 CPU(s), 20 MHz used
Memory	8 GB, 0 GB memory active
Hard disk 1	20 GB Thin Provision vit-paris-vsan01
Network adapter 1	aria-vms (connected) 00:50:56:89:f3:47
CD/DVD drive 1	Connected
Compatibility	ESXi 6.7 and later (VM version 14)

PCI Devices

No PCI devices

Related Objects

- Cluster: vit-paris-cluster1
- Host: vcf-vi-paris-esx-01.corp.vmbeans.com
- Networks: aria-vms
- Storage: vit-paris-vsan01



Network Profiles (7 items)

Name	Status	Account / region	Existing networks	Capability tags
avi network	OK	wkld-domain-vc / vti-paris-dc1	1	netava
db-net	OK	wkld-domain-vc / vti-paris-dc1	1	env:mod-nsx-db
Existing Network	OK	wkld-domain-vc / vti-paris-dc1	1	netexisting
existing-vm-nw	OK	wkld-domain-vc / vti-paris-dc1	1	netvm
NSX On-Demand Network	OK	wkld-domain-vc / vti-paris-dc1	1	netondemand
Production Network	OK	wkld-domain-vc / vti-paris-dc1	1	netvfwid
web-net	OK	wkld-domain-vc / vti-paris-dc1	1	env:mod-nsx-web

Tag – net:vcfwld (2 web VM AVI Blueprint)

Production Network [DELETE](#)

[Summary](#) [Networks](#) [Network Policies](#) [Load Balancers](#) [Security Groups](#)

A network profile defines a group of networks and network settings used when machines are provisioned.

Account / region: wkld-domain-vc / vti-paris-dc1

Name *: Production Network

Description: (empty)

Capabilities

Capability tags listed here are matched to constraint tags in the Template.

Capability tags: [X](#)

[SAVE](#) [CANCEL](#)

Production Network [DELETE](#)

[Summary](#) [Networks](#) [Network Policies](#) [Load Balancers](#) [Security Groups](#)

Networks listed here are used when provisioning to existing, on-demand, or public networks. ⓘ

[+ ADD NETWORK](#) [TAGS](#) [MANAGE IP RANGES](#) [X REMOVE](#)

<input type="checkbox"/>	Name	Account / Region	Zone	Network Domain	CIDR	Support Public IP	Default for Zone	Origin	Tags
<input type="checkbox"/>	aria-vms	wkld-domain-nsx	vti-paris-tz-vlan01	192.168.110.0/24	--	--	--	Discovered	netvcfwld

[Manage Columns](#) 1-1 of 1 networks

[SAVE](#) [CANCEL](#)

aria-vms

Name	aria-vms
Account / region	wkld-domain-nsx
Network domain	vil-paris-tz-vlan01
Domain	corp.vmbeans.com
IPv4 CIDR	192.168.110.0/24
IPv4 default gateway	192.168.110.1
IPv6 CIDR	
IPv6 default gateway	
DNS servers	192.168.110.10
DNS search domains	
<input type="checkbox"/> Support public IP	
CANCEL SAVE	

Manage IP Ranges

Defines the set of IP addresses that can be reserved during provisioning.

<input type="checkbox"/>	Name	Description	Network	Provider	Start IP Address	End IP Address	Tags
<input type="checkbox"/>	Existing IP	aria-vms	Assembler	192.168.110.200	192.168.110.250		

+ NEW X DELETE Q Filter... Manage Columns CLOSE

1 IP ranges

 Production Network [DELETE](#)

Summary Networks **Network Policies** Load Balancers Security Groups

Use these settings when creating outbound, private and routed networks. [\(i\)](#)

Isolation policy [\(i\)](#)

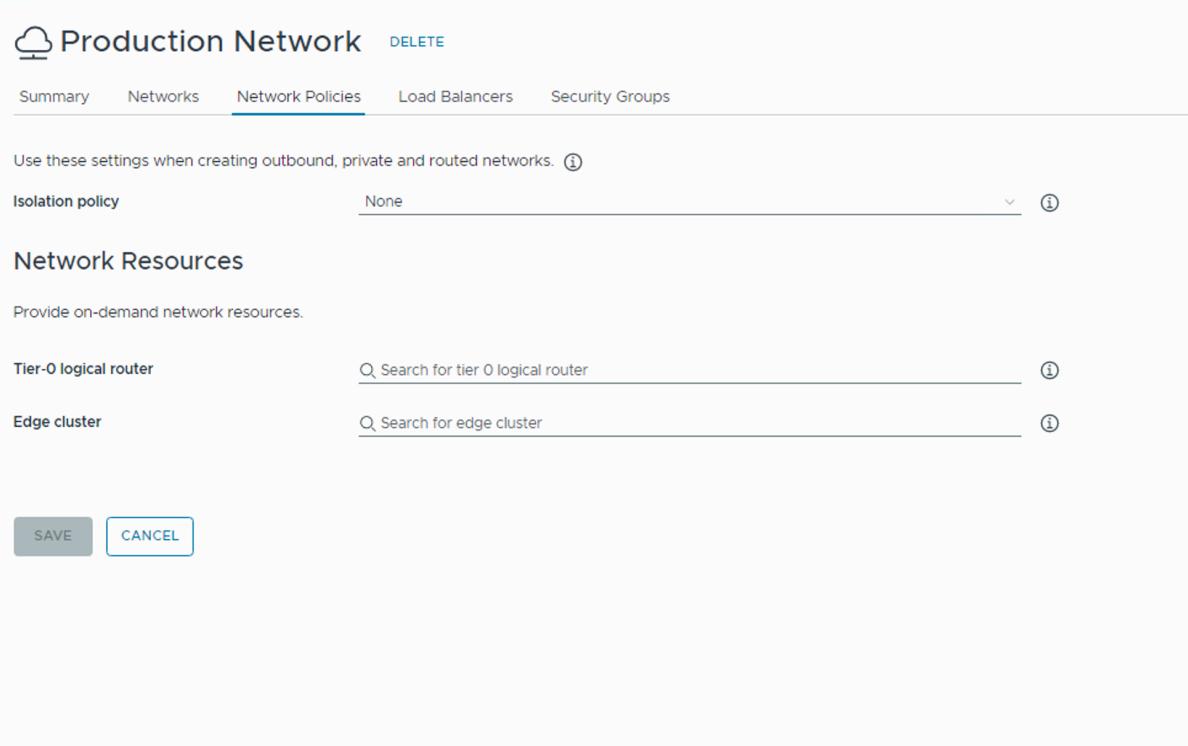
Network Resources

Provide on-demand network resources.

Tier-0 logical router [\(i\)](#)

Edge cluster [\(i\)](#)

[SAVE](#) [CANCEL](#)



2nd Network Tag – net:avi
This is the NSX AVI VIP Network (Data)

avi network [DELETE](#)

[Summary](#) [Networks](#) [Network Policies](#) [Load Balancers](#) [Security Groups](#)

A network profile defines a group of networks and network settings used when machines are provisioned.

Account / region: wld-domain-vc / vlt-paris-dc1

Name:

Description:

Capabilities

Capability tags listed here are matched to constraint tags in the Template.

Capability tags: Q Enter capability tags [ⓘ](#)

[SAVE](#) [CANCEL](#)

avi network [DELETE](#)

[Summary](#) [Networks](#) [Network Policies](#) [Load Balancers](#) [Security Groups](#)

Networks listed here are used when provisioning to existing, on-demand, or public networks. [ⓘ](#)

+ ADD NETWORK	TAGS	MANAGE IP RANGES	X REMOVE					
Name	Account / Region	Zone	Network Domain	CIDR	Support Public IP	Default for Zone	Origin	Tags
avi-vsvip	wld-domain-nsx	vlt-paris-tz-overlay01		10.10.10.0/24	--	--	Discovered	policyPath/intra/segments/avi-vsvip subnet-cidr10.10.10.0/24

[Manage Columns](#) 1-1 of 1 networks

avi-vsvip

Name: avi-vsvip

Account / region: wld-domain-nsx

Network domain: vlt-paris-tz-overlay01 [ⓘ](#)

Domain: corp.vmbeans.com [ⓘ](#)

IPv4 CIDR: 10.10.10.0/24 [ⓘ](#)

IPv4 default gateway: 10.10.10.1

IPv6 CIDR: [ⓘ](#)

IPv6 default gateway: [ⓘ](#)

DNS servers:

DNS search domains: [ⓘ](#)

Support public IP [ⓘ](#)

[CANCEL](#) [SAVE](#)

Manage IP Ranges

Defines the set of IP addresses that can be reserved during provisioning.

+ NEW X DELETE Q Filter... ⓘ ⌂

<input type="checkbox"/>	Name	Description	Network	Provider	Start IP Address	End IP Address	Tags
<input type="checkbox"/>	avi-vsvip		avi-vsvip	Assembler	10.10.10.11	10.10.10.50	

Manage Columns 1 IP ranges

CLOSE

 **avi network** ⌂ DELETE

Summary Networks Network Policies Load Balancers Security Groups

Use these settings when creating outbound, private and routed networks. ⓘ

Isolation policy None ⓘ

Network Resources

Provide on-demand network resources.

Tier-0 logical router ⓘ

Edge cluster ⓘ

SAVE CANCEL

AVI Dashboard :

Virtual Services : web-vs-xxxxxxx

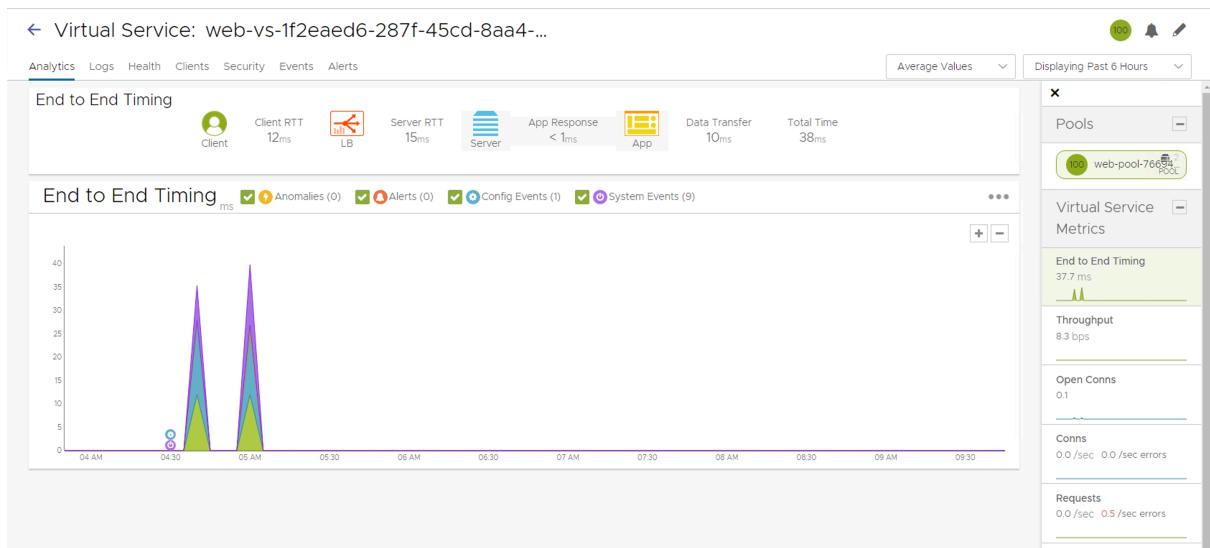
The screenshot shows the VMware Avi Load Balancer interface. The top navigation bar includes 'Applications', 'Operations', 'Templates', 'Infrastructure', 'Administration', and a user 'admin'. A search bar at the top right contains 'View VS Tree' and 'Displaying Past 30 Minutes'. On the left, a sidebar lists 'Dashboard', 'Virtual Services', 'VS VIPs', 'Pools', and 'Pool Groups'. The main content area displays 'Virtual Services (3)'. Three services are listed: 'avi-dns' (green icon), 'oc-vs-9fa49387-a750-47c8-a8f2-4ea39366d707' (yellow icon), and 'web-vs-1f2eaed6-287f-45cd-8aa4-8438a97da4ff' (green icon). A 'CREATE VIRTUAL SERVICE' button is located in the top right corner.



Virtual Services

The screenshot shows the VMware Avi Load Balancer interface. The top navigation bar includes 'Applications', 'Operations', 'Templates', 'Infrastructure', 'Administration', and a user 'admin'. A search bar at the top right contains 'Displaying Past 30 Minutes' and 'Average Values'. On the left, a sidebar lists 'Dashboard', 'Virtual Services', 'VS VIPs', 'Pools', and 'Pool Groups'. The main content area displays a table titled 'Virtual Services'. The table has columns: Name, Health, Address, App Domain..., Service Ports, Pools, Total Service..., RPS, CPS, Open Conns, and Throughput. Three rows are listed: 'avi-dns' (green icon), 'oc-vs-9fa49387-a750-47c8-a8f2-4ea39366d707' (yellow icon), and 'web-vs-1f2eaed6-287f-45cd-8aa4-8438a97da4ff' (green icon). A 'CREATE VIRTUAL SERVICE' button is located in the top right corner.

	Name	Health	Address	App Domain...	Service Ports	Pools	Total Service...	RPS	CPS	Open Conns	Throughput
<input type="checkbox"/>	avi-dns		② 10.10.10.10	N/A	53		1	—	0.0/sec	0	0.0 bps
<input type="checkbox"/>	oc-vs-9fa49387-a750-47c8-a8f2-4ea39366d707		② 10.10.10.11	N/A	80	oc-pool-bbe1...	1	0.0/sec	0.0/sec	1	60.2 bps
<input type="checkbox"/>	web-vs-1f2eaed6-287f-45cd-8aa4-8438a97da4ff		② 10.10.10.12	N/A	80	web-pool-76...	1	0.0/sec	0.0/sec	0	0.0 bps



VS VIPs

The screenshot shows the 'VS VIPs' list in the VMware Avi Load Balancer interface. The top navigation bar includes Applications, Operations, Templates, Infrastructure, and Administration, with 'admin' selected. The left sidebar shows 'VS VIPs' under 'Virtual Services'. The main table lists four entries:

Name	Address	# Virtual Services	Actions
avi-dns-VsVip	10.10.10.10	1	
oc-vb-c0c95886-2b67-4043-a0b5-27a80978b2b	10.10.10.11	1	
web-vip-535557ff-e368-4d77-bfe4-126054fc5882	10.10.10.12	1	

Pools

The screenshot shows the 'Pools' list in the VMware Avi Load Balancer interface. The top navigation bar includes Applications, Operations, Templates, Infrastructure, and Administration, with 'admin' selected. The left sidebar shows 'Pools' under 'Virtual Services'. The main table lists two pools:

Name	Health	Virtual Service	Serv...	Cloud	RPS	Open Conns	Throughput	Actions
oc-pool-bbe19178-2a81-4...		oc-vs-9fa49387-a750-47c8-a8f2-4ea39...	2/2	lm-vit-paris	0.0 /sec	0	912 bps	
web-pool-76694a2a-17e0		web-vs-1f2eaed6-287f-45cd-8aa4-8438...	2/2	lm-vit-paris	0.0 /sec	0	26.6 bps	

