

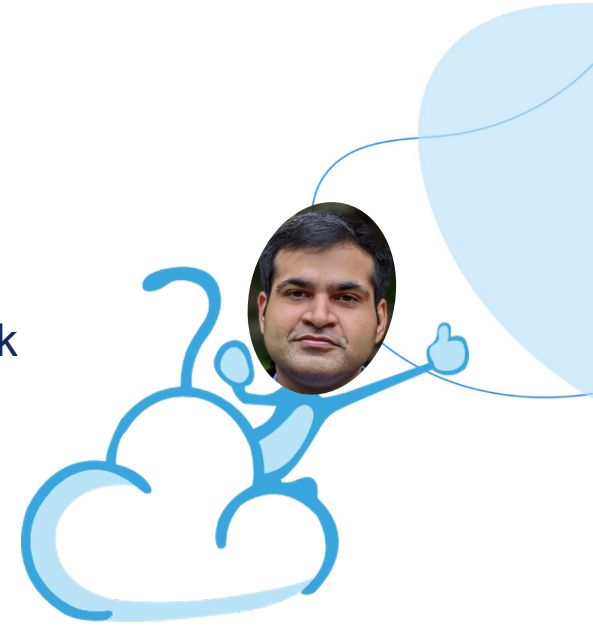
What's New in Apache CloudStack

Rohit Yadav

rohit@apache.org | @rohityadavcloud

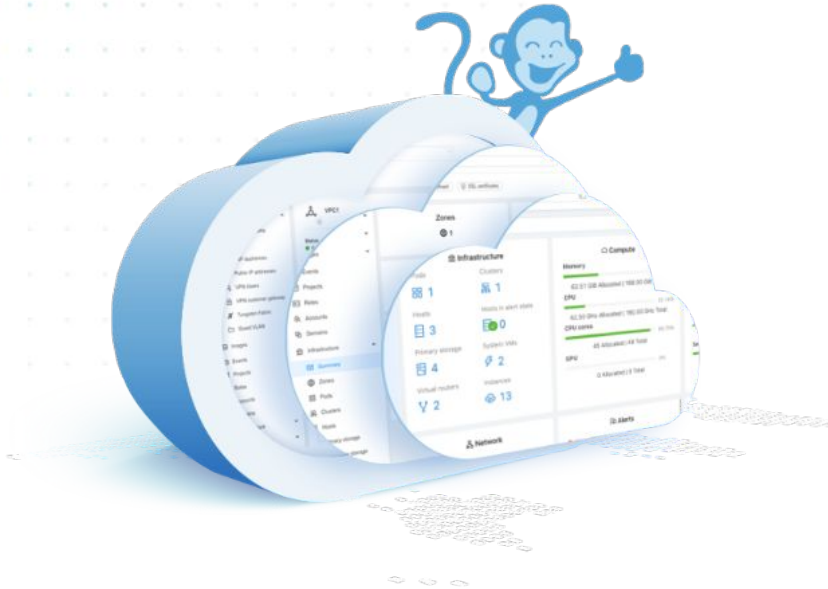
Who is Rohit?

- PMC Member, Committer & ex-VP, Apache CloudStack
- VP Engineering, ShapeBlue
- Mentor & Leader | Author of several flagship CloudStack features, frameworks and tools
- Release Manager of several past releases
- Homelabber, Tinkerer, Cat Servant



Apache CloudStack 2024 Releases

Releases History

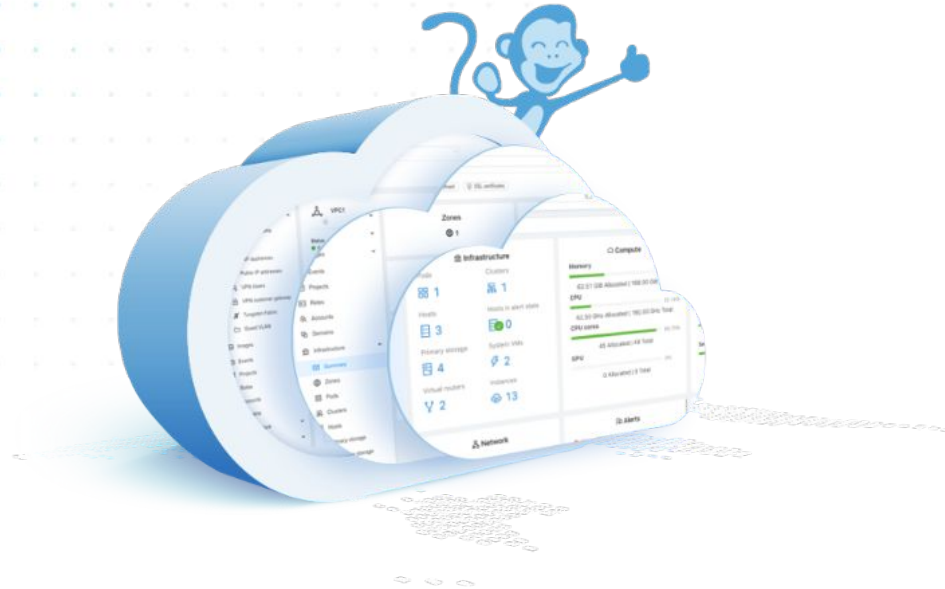


Release	Date/ 2024	Type
4.19.0.0	2 February	LTS
4.19.0.1 & 4.18.1.1	4 April	Security
4.18.2.0	25 April	Maintenance
4.18.2.1 & 4.19.0.2	5 July	Security
4.18.2.2	19 July	Security
4.19.1.0	19 July	Maintenance
4.18.2.3 & 4.19.1.1	6 August	Security
4.18.2.4 & 4.19.1.2	15 October	Security
4.18.2.5 & 4.19.1.3	12 November	Security
4.20.0.0	Voting/RC	LTS

Apache CloudStack 4.19

RECAP

Release Information

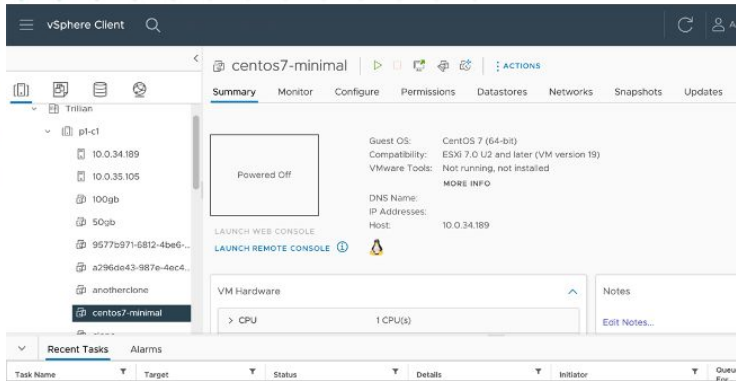


- Released on 2 Feb 2024
- 315 new features, improvements & fixes
- 4.19 is an LTS Release
 - EOL August 2025

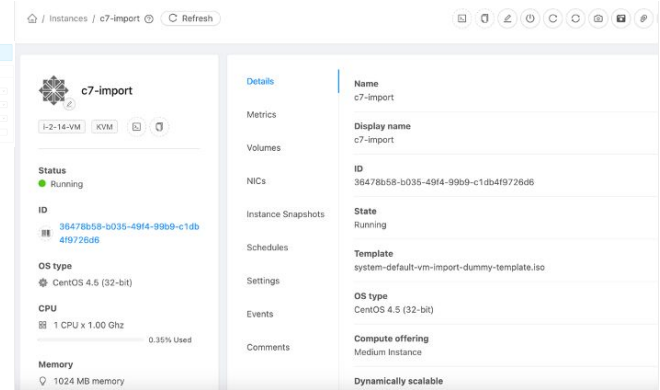
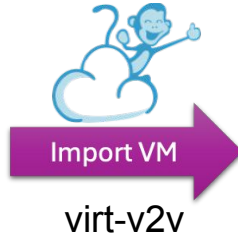
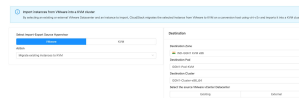
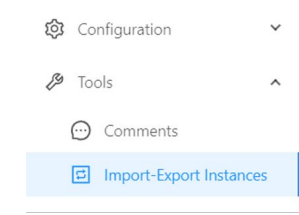
26 New Features!

VMware to KVM Migration

Apache CloudStack 4.19 VMware to KVM Migration



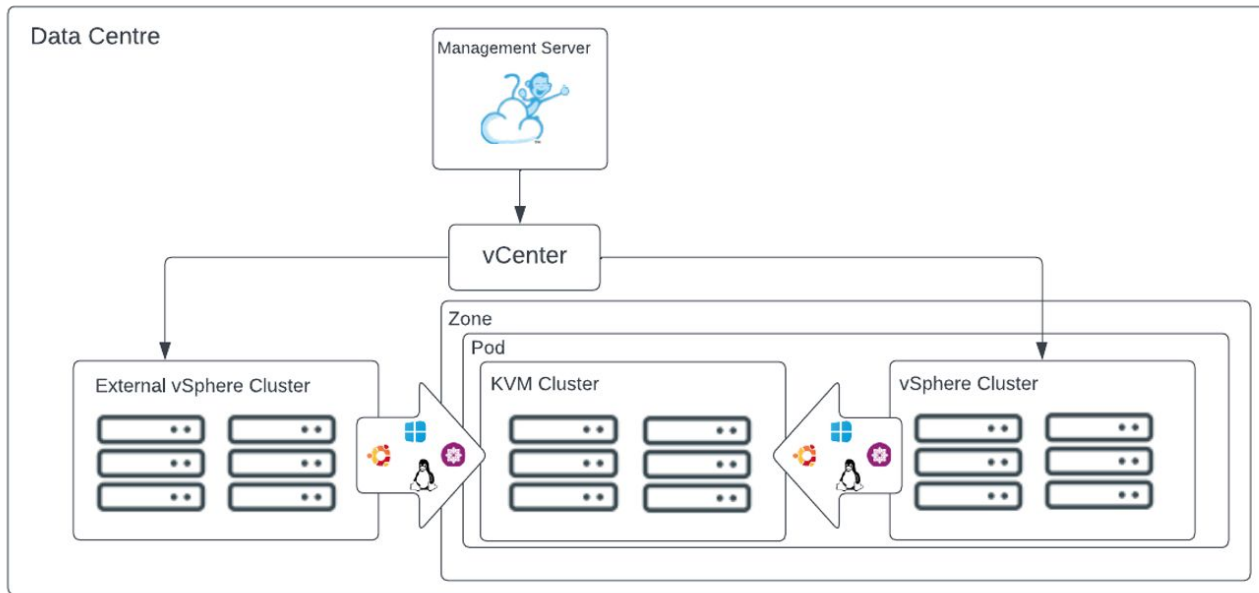
Source Instances on vSphere



Admin(s) convert and import source VMware Instances to run on CloudStack managed KVM hosts

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VMware to KVM Migration



Apache CloudStack 4.19

VMware to KVM Migration



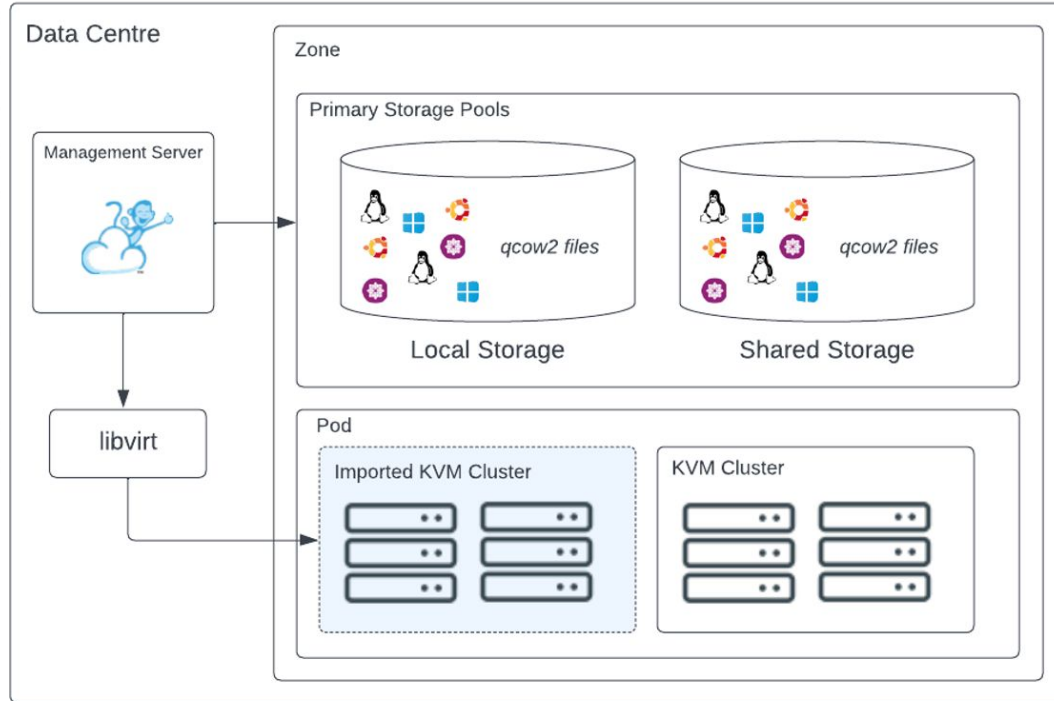
Learn more at Andrija Panic's talk -
"VMware/KVM to CloudStack/KVM
Migration - tools and options within
CloudStack"

(Today/Thursday, 21st Nov 2024)

KVM Import

Apache CloudStack 4.19

KVM Import



Apache CloudStack 4.19

KVM Import

- Configuration
- Tools
- Comments
- Import-Export Instances

Import Instance from remote KVM host
Import libvirt domain from External KVM Host not managed by CloudStack

Select Import-Export Source Hypervisor

VMware

KVM

Action

Import Instance from remote KVM host

* Host

* Username

* Password

Temp Path

Destination

Zone

IND-GGN1 KVM x86

Fetch Instances

CloudStack DRS

Apache CloudStack 4.19

CloudStack DRS

- Hypervisor Agnostic
- DRS automatically moves Instances between Hosts
- Can be set globally or by per Cluster basis
- Supports two algorithms:
 - Balanced
 - Condensed

Details Resources Settings **DRS** Comments Events

The maximum number of live migrations allowed for DRS. Configure DRS under the settings tab before generating a plan or to enable automatic DRS for the cluster.

Algorithm: condensed

Max. migrations 50

Generate DRS plan

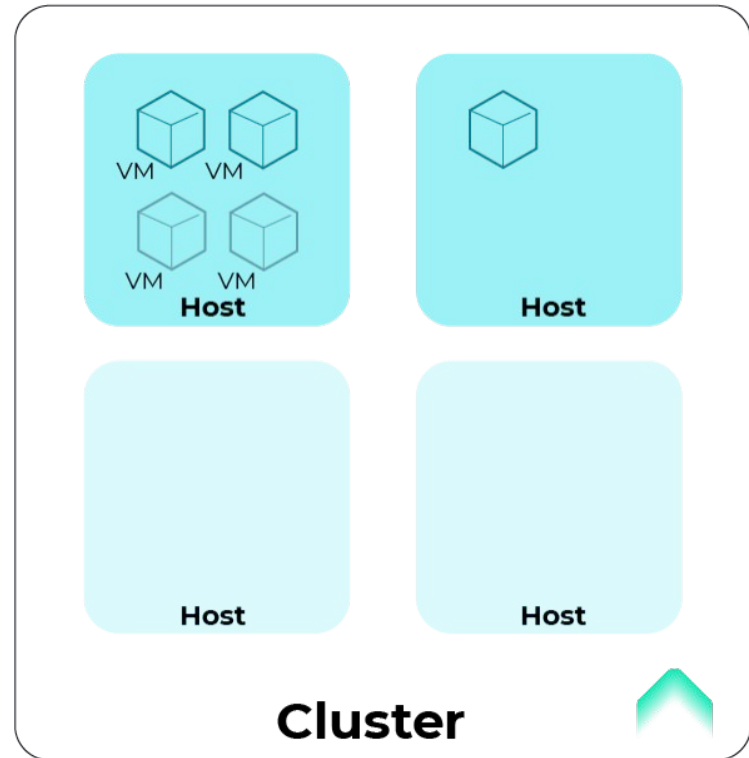
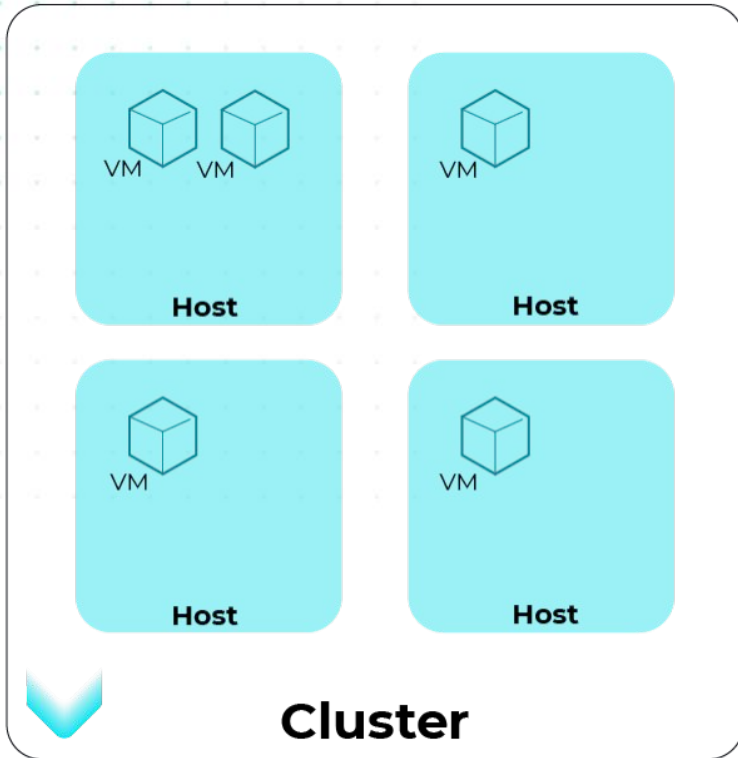
Type	Successful migrations	Status	Created	Events
------	-----------------------	--------	---------	--------



No Data

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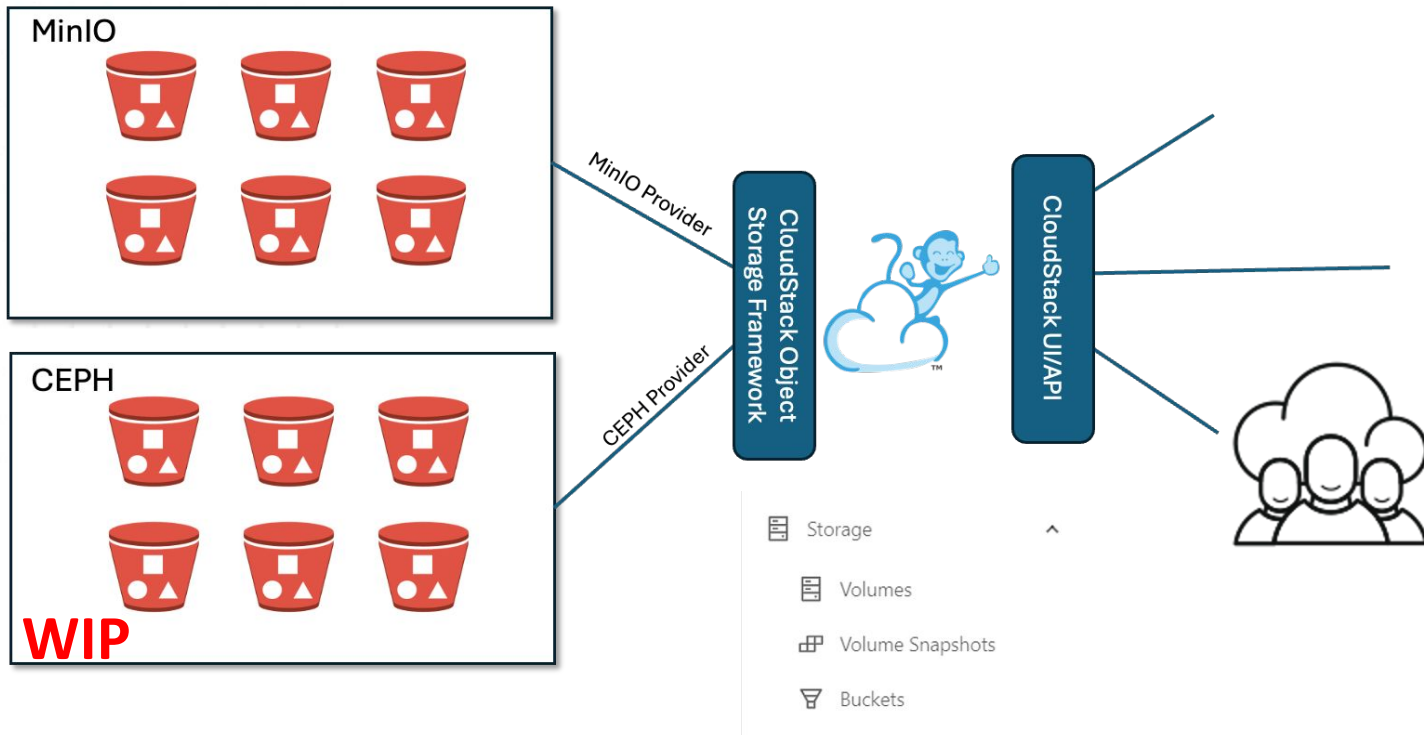
CloudStack DRS



CloudStack Object Storage

Apache CloudStack 4.19

CloudStack Object Storage



Apache CloudStack 4.19

CloudStack Object Storage

The screenshot shows the Apache CloudStack web interface. On the left sidebar, the 'Buckets' menu item is highlighted with a red box and a red arrow. The main content area displays a 'Create Bucket' dialog box with the following fields and options:

- Name:** bucket1
- Object Storage:** OS2 (selected from a dropdown)
- Quota in GB:** Quota (input field)
- Encryption:**
- Versioning:**
- Object Lock:**
- Bucket Policy:** (input field)

Buttons for 'Cancel' and 'OK' are visible at the bottom of the dialog.

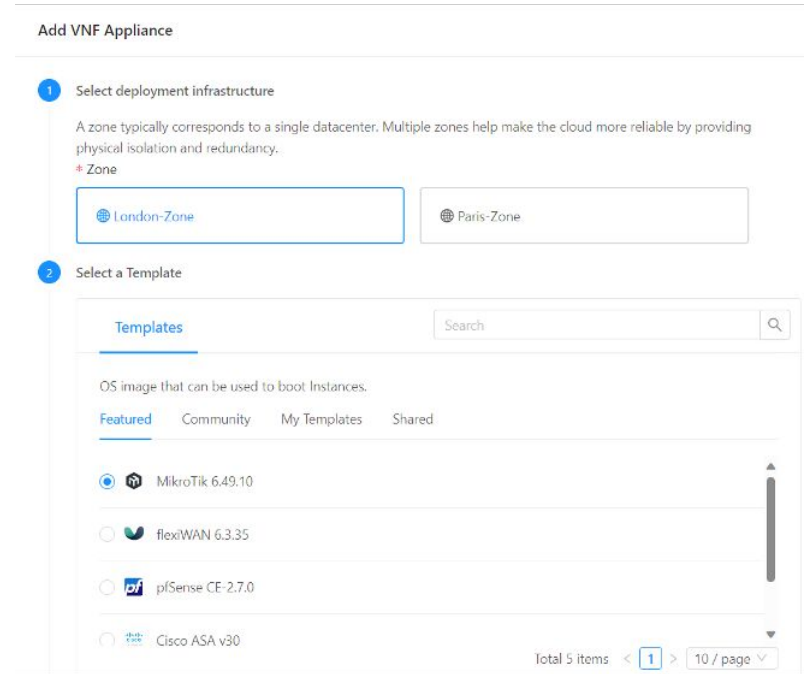
The screenshot shows the 'Upload' dialog box. It features a large dashed box at the top with a cloud icon and the text 'Click or drag file to this area to upload.' Below this, a file named 'cloud.png' is shown with a trash icon. The 'Upload path' section has a text input field with the placeholder 'Path to upload objects at'. The 'Metadata' section contains two rows of 'Name' and 'Value' input fields, with the first row containing 'John' and the second row containing 'Key'. A '+ Add key value pair' button is located below the metadata fields. 'Cancel' and 'Upload' buttons are at the bottom right.

VNF Appliance Support

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VNF Appliance Support

- Allows users to deploy and configure 3rd party VNF appliances in their CloudStack environment, using VNF templates created by admins
- Configures required network interfaces & network rules for access to the Appliance admin console
- Usage recorded for billing by CSP
- Support API and UI Set-up and Deployment



Add VNF Appliance

1 Select deployment infrastructure

A zone typically corresponds to a single datacenter. Multiple zones help make the cloud more reliable by providing physical isolation and redundancy.

* Zone

London-Zone Paris-Zone

2 Select a Template

Templates

OS image that can be used to boot Instances.

Featured Community My Templates Shared

- MikroTik 6.49.10
- flexiWAN 6.3.35
- pfSense CE-2.7.0
- Cisco ASA v30

Total 5 items < 1 > 10 / page

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VNF Appliance Support

Details Zones Settings **VNF settings** Events Comments

VNF Nics + Add VNF nic

Device ID	Name	Required	Management NIC	Description	Action
0	WAN and Management NIC	Yes	Yes	WAN and Management NIC	
1	LAN1 NIC	Yes	No	LAN1 NIC	
2	LAN2 NIC	No	No	LAN2 NIC	

Template NIC Management

- Management
- WAN
- LANs

Template VNF Details

Used to add firewall rules and display VNF details to the Users:

- User credentials
- Service port and protocol
- Vendor and Maintainer
- VNF Version
- Others

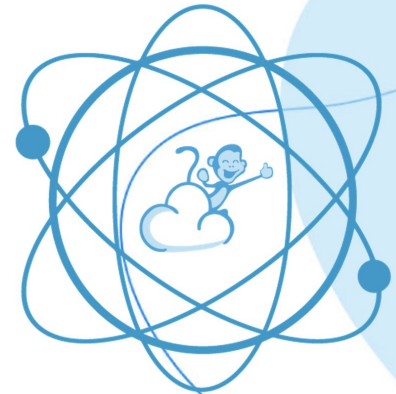
VNF Details ⌵

Name	Value		
access_methods	https		
https_port	443		
vendor	Netgate		
version	2.7.0		
web_password	*****		
web_user	admin		

CloudStack 4.19: Other Mentions

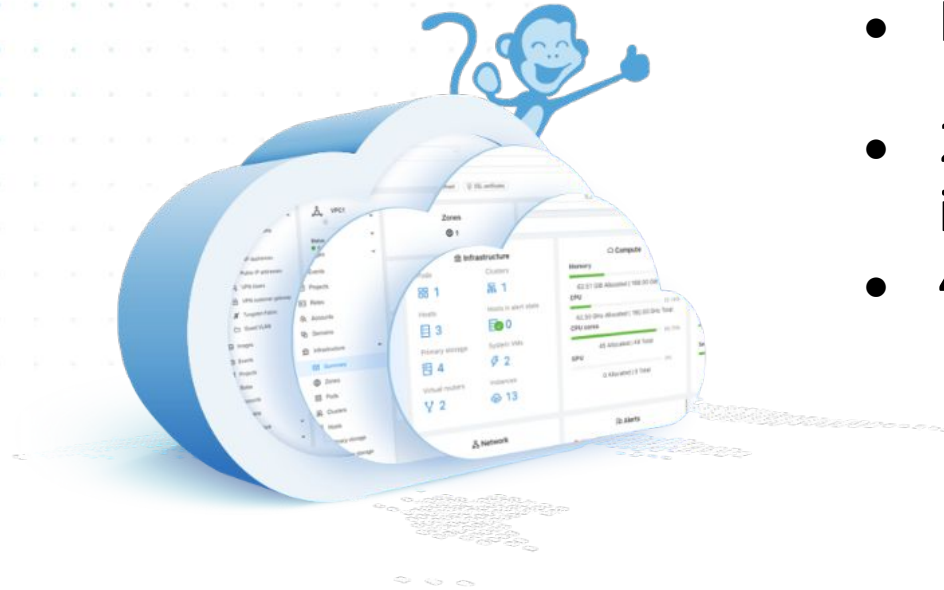
- OAuth2 Authentication
- Scheduled Lifecycle Operations
- Snapshot Copy (Cross-zones)
- Configurable SNAT IP for VR
- Domain migration (Move sum domains between domains)
- Dynamic secondary storage selection
- New Storage Support: HPE Primera & Pure Flasharray
- Redesigned New Dashboard for non-root accounts and projects
- KVM Host HA for StorPool
- CAPC aware CKS
- Granular Storage Management
- Support for vSphere 8.0.0
- Safe ACS Shutdown Feature

New Apache CloudStack 4.20 Release!



Apache CloudStack 4.20

Release Information



- RC/Voting in progress
 - Release expected end-Nov or early-Dec
- 230+ new features, improvements & fixes
- 4.20 is an LTS Release
 - EOL May 2026 (expected)

30+ New Features!

Apache CloudStack 4.20

Resources (available on release)

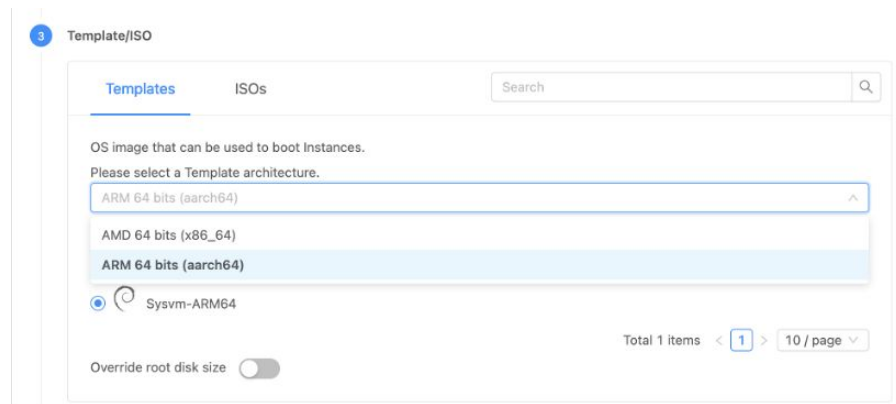


- Source release
<https://cloudstack.apache.org/downloads/>
- Documentation
<https://docs.cloudstack.apache.org/en/4.20.0.0/>
- Convenience Packages
<https://download.cloudstack.org/>
<https://www.shapeblue.com/cloudstack-packages>
- Contribute
<https://github.com/apache/cloudstack>

ARM64 Support & Multi-Architecture Zone

ARM64 Support & Multi-architecture Zone

- When creating an Instance, Users can now choose between x86_64 and ARM64 Architectures
- Architecture type is specified when creating:
 - Templates
 - ISO's
 - Kubernetes Versions
- CloudStack Clusters now have an assigned Architecture type
- A zone can support both types simultaneously





ARM64 Support & Multi-architecture Zone

Register Template from URL

* URL
https://repo.almalinux.org/almalinux/9/cloud/arch64/images/AlmaLinux-9-Generi

* Name
Alma Linux 9

Description
The display text of the template, defaults to 'name'.

* Zone
All zones

Domain
an optional domainid. If the account parameter is used, domainid must also b...

* Hypervisor
KVM

* Format
QCOW2

Direct download

Root disk controller
osdefault

* OS type
AlmaLinux 9

Template type
USER

Arch
the CPU arch of the template. Valid options are: x86_64, aarch64

AMD 64 bits (x86_64)
AMD 64 bits (x86_64)
ARM 64 bits (aarch64)

Userdata
the ID of the userdata that has to...

Userdata link policy
an optional override poli...

Extractable
 Dynamically scalable
 Featured

Password enabled
 HVM
 Public

Can

Add cluster

* Zone name
ref-tr1-7272-k-Ma9-nicolas-vazquez

Hypervisor
KVM

Arch
AMD 64 bits (x86_64)
AMD 64 bits (x86_64)
ARM 64 bits (aarch64)

* Cluster name
the cluster name

Dedicated

3 Template/ISO

Templates ISOs

OS image that can be used to boot instances.
Please select a Template architecture.

ARM 64 bits (aarch64)
AMD 64 bits (x86_64)
ARM 64 bits (aarch64)

Sysvm-ARM64

Total 1 items < 1 > 10 / page

Override root disk size

3 Template/ISO

Templates ISOs

OS image that can be used to boot instances.
Please select a Template architecture.

ARM 64 bits (aarch64)
AMD 64 bits (x86_64)
ARM 64 bits (aarch64)

Sysvm-ARM64

Total 1 items < 1 > 10 / page

Override root disk size

Shared FileSystems

Apache CloudStack 4.20

Shared FileSystems

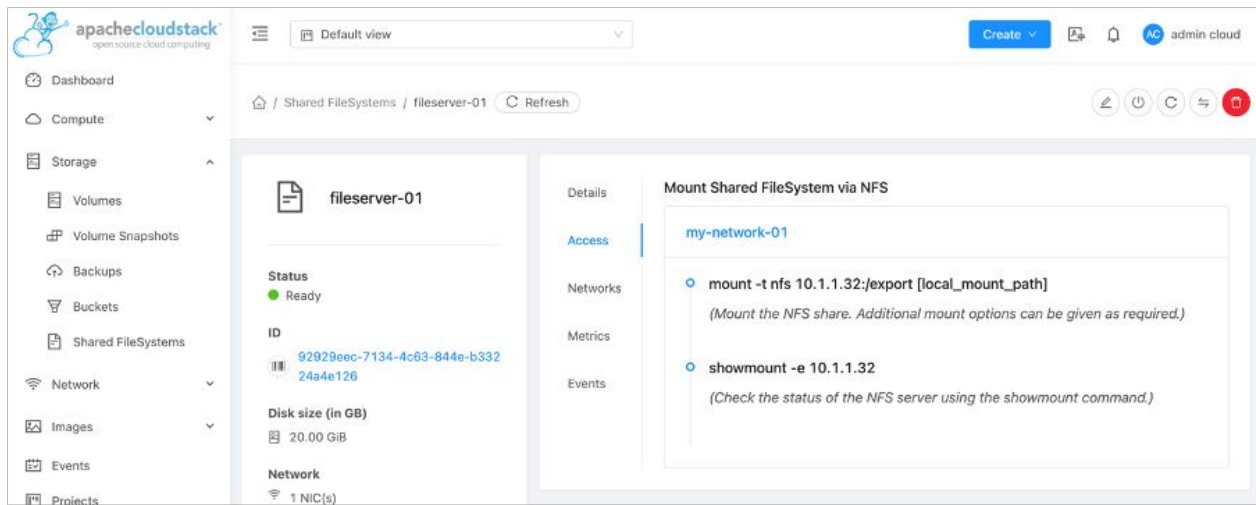
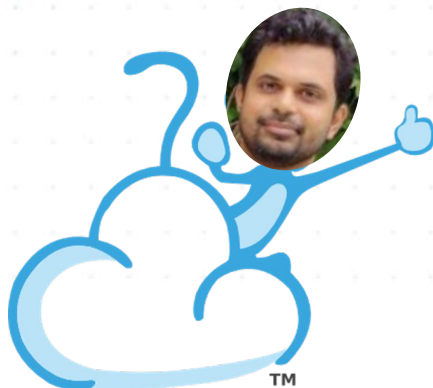
The screenshot shows the Apache CloudStack web interface for managing Shared FileSystems. The left sidebar contains navigation options: Dashboard, Compute, Storage (expanded), Volumes, Volume Snapshots, Buckets, and Shared FileSystems (selected). The main content area displays a table of Shared FileSystems with columns for Name, State, Size, Storage, Account, and Zone. Two items are listed: 'test' and 'User_Fileshare', both in a 'Ready' state with a size of 5.00 GiB. The interface includes a 'Create Shared FileSystem' button, a search bar, and a notification banner at the top indicating 'Shared FileSystem creation in progress.' The bottom of the table shows pagination: 'Showing 1-2 of 2 items' and '20 / page'.

<input type="checkbox"/>	Name	State	Size	Storage	Account	Zone
<input type="checkbox"/>	test	Ready	5.00 GiB	pr9675-t11469-kvm-ol8-kvm-pri1	admin	pr9675-t11469-kvm-ol8
<input type="checkbox"/>	User_Fileshare	Ready	5.00 GiB	pr9675-t11469-kvm-ol8-kvm-pri1	admin	pr9675-t11469-kvm-ol8

- Users can create a file share for consumption in other Instances (think EFS)
- CloudStack orchestrates the creation of an underlying Instance, Volume, etc.
- Hypervisor & Storage Agnostic!

Apache CloudStack 4.20

Shared FileSystems



The screenshot displays the Apache CloudStack management console. The left sidebar shows navigation options: Dashboard, Compute, Storage (Volumes, Volume Snapshots), Network (Backups, Buckets, Shared FileSystems), Images, Events, and Projects. The main content area shows the configuration for a Shared File System named 'fileserver-01'. The status is 'Ready'. The ID is '92929eec-7134-4c63-844e-b33224a4e126'. The disk size is 20.00 GiB. The network configuration shows 1 NIC(s). The 'Mount Shared File System via NFS' section is expanded, showing the following configuration:

```
my-network-01
mount -t nfs 10.1.1.32:/export [local_mount_path]
showmount -e 10.1.1.32
```

Additional instructions are provided: "(Mount the NFS share. Additional mount options can be given as required,)" and "(Check the status of the NFS server using the showmount command.)"

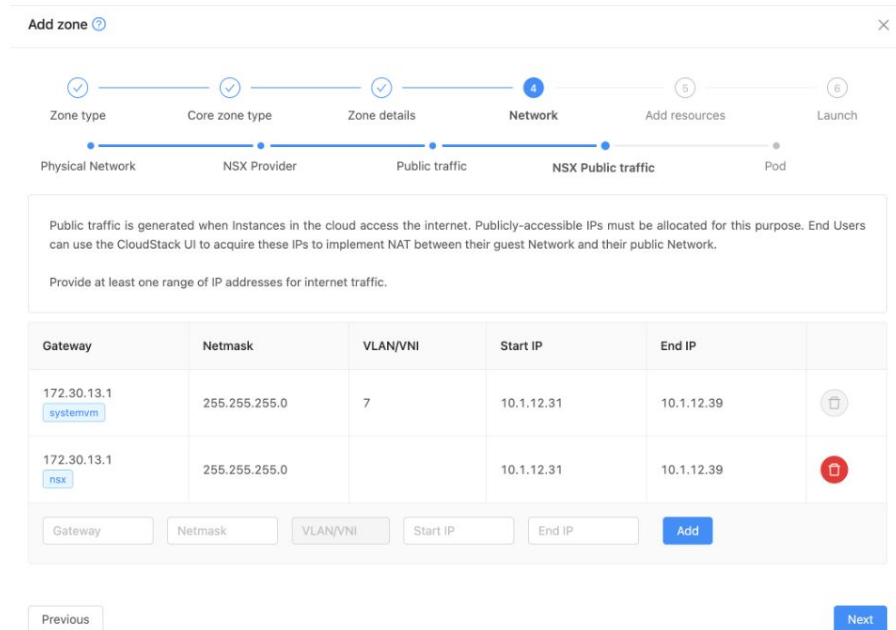
Learn more at Abhisar's talk - "Shared File System as a First Class Feature"
(Tomorrow/Friday, 22nd Nov 2024)

VMware NSX Support

Apache CloudStack 4.20

VMware NSX Support



- New NSX 4 Network Plugin
(Similar as Tungsten Fabric Plugin)
- Enterprise-Grade Networking
to CloudStack env based on
VMware vSphere
- Configured at Zone level
(Isolation method)
- Offloads network operations
from VR to NSX



Physical Network NSX Provider Public traffic NSX Public traffic Pod

Public traffic is generated when instances in the cloud access the internet. Publicly-accessible IPs must be allocated for this purpose. End Users can use the CloudStack UI to acquire these IPs to implement NAT between their guest Network and their public Network.

Provide at least one range of IP addresses for internet traffic.

Gateway	Netmask	VLAN/VNI	Start IP	End IP	
172.30.13.1 systemvm	255.255.255.0	7	10.1.12.31	10.1.12.39	
172.30.13.1 nsx	255.255.255.0		10.1.12.31	10.1.12.39	

Gateway Netmask VLAN/VNI Start IP End IP Add

Previous Next

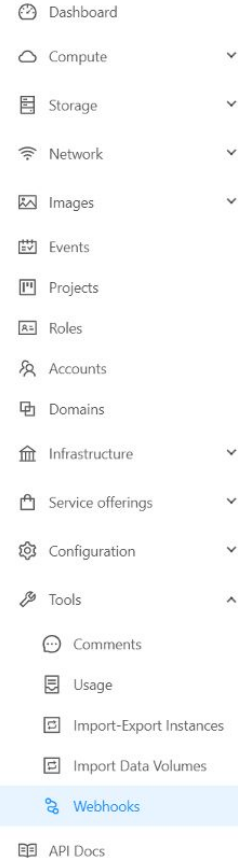
Usage Management UI

CloudStack Webhooks

Apache CloudStack 4.20

CloudStack Webhooks

- Webhooks provide a way for notifications to be delivered to an external web server whenever certain events occur in CloudStack.
- Allows end users to consume CloudStack events
- Use-cases:
 - Notifications
 - Workflow automation
 - Custom integrations
 - Data synchronization
 - Real-time data processing



Apache CloudStack 4.20

CloudStack Webhooks

- Admin accounts can choose scope
- No event further filtering at this stage
- Requires the parser to select the right events

Create Webhook

* Name

Description

Scope Local Domain Global

Domain

* Payload URL

SSL verification

Secret key

Status

Enabled

Cancel OK

Implicit Hardware-based Host Tags

Implicit Hardware-based Host Tags

- Host tags now automatically populated by agent.properties file
- Agent properties file can be created during physical host deployment (via Ansible, etc)

Can be used for:

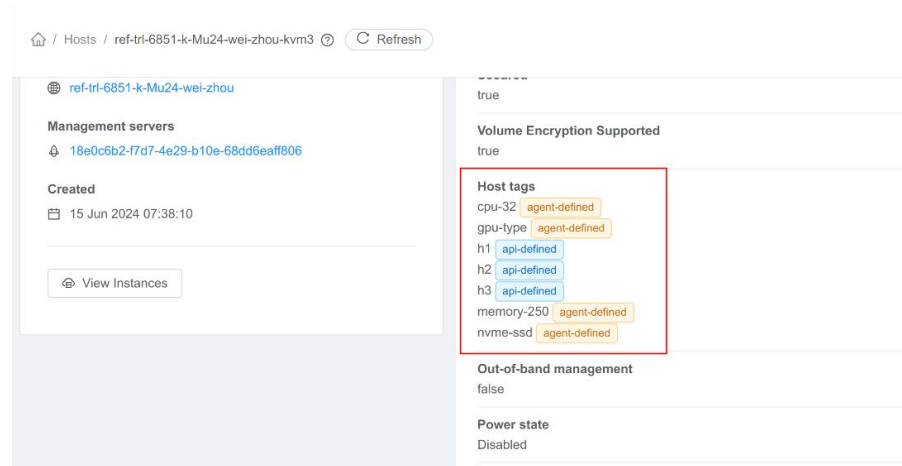
- Different hardware types:
 - GPU
 - GPU type
 - SSD
 - Raid type
 - Network card type
- Different workloads:
 - cpu-intensive application
 - memory-intensive application
 - windows Instances

Apache CloudStack 4.20

Implicit Hardware-based Host Tags

- Explicit tags: The host tags managed by CloudStack API/UI
- Implicit tags: The host tags managed by agent.properties
- Usage: Add tags to agent.properties, restart cloudstack-agent

```
host.tags=cpu-32,memory-250,gpu-type  
,nvme-ssd
```



The screenshot shows the Apache CloudStack interface for a host. The breadcrumb navigation is "/ Hosts / ref-tri-6851-k-Mu24-wei-zhou-kvm3". The host ID is "ref-tri-6851-k-Mu24-wei-zhou" and the management server ID is "18e0c6b2-f7d7-4e29-b10e-68dd6eaff806". The host was created on "15 Jun 2024 07:38:10". A "View Instances" button is visible. The host details on the right include "true", "Volume Encryption Supported: true", and a "Host tags" section. The "Host tags" section is highlighted with a red box and contains the following tags: "cpu-32" (agent-defined), "gpu-type" (agent-defined), "h1" (api-defined), "h2" (api-defined), "h3" (api-defined), "memory-250" (agent-defined), and "nvme-ssd" (agent-defined). Below the tags, "Out-of-band management" is set to "false" and "Power state" is "Disabled".

Granular Resource Limits

Apache CloudStack 4.20

Granular Resource Limits

- Extensible limits based on tagging for Compute & Storage Service Offerings
- Can be User, Account, Domain level
- Configured with 2 global settings and then tags added to Service Offerings:

Resource limit host tags (resource.limit.host.tags)
A comma-separated list of tags for host resource limits

GPU, ARM64

Resource limit storage tags (resource.limit.storage.tags)
A comma-separated list of tags for storage resource limits

Premium SSD, High IOPs disk

Add disk offering ⓘ

* Name ⓘ
Premium SSD Volume

Description ⓘ
An alternate display text of the disk offering, defaults to 'name'.

Storage type ⓘ
Shared Local

Provisioning type ⓘ
Thin provisioning Sparse provisioning Fat provisioning

Encrypt ⓘ

Disk size strictness ⓘ

Custom disk size ⓘ

QoS type
None Hypervisor Storage

Write-cache Type ⓘ
No disk cache Write-back disk caching Write-through

Storage tags ⓘ
Premium SSD ×

Public

Zone ⓘ

Apache CloudStack 4.20

Granular Resource Limits

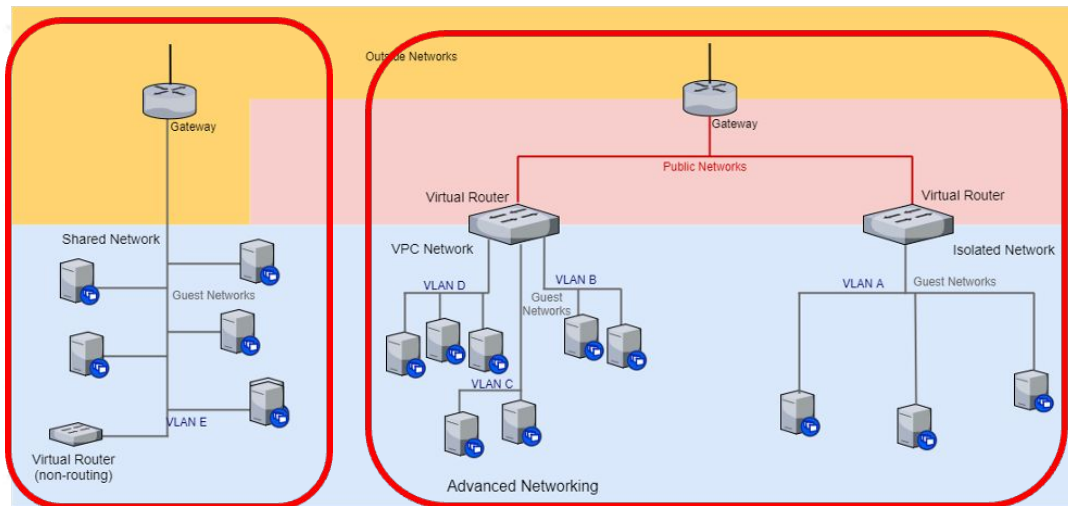
New “Tagged Limits” appear at Account, Domain or Global levels

The screenshot displays the 'Configure limits' page for a user named 'ACSUser'. The interface is divided into a left sidebar and a main content area. The sidebar shows user details: Status (Enabled), ID (77589d51-81a9-4365-b148-21771ab6c7ef), Role (User), Domain (ROOT), and Created (13 Sep 2024 10:10:23). The main content area has tabs for 'Details', 'Limits', 'Configure limits', 'Certificate', 'Settings', and 'Events'. The 'Configure limits' tab is active, showing a list of resource limits. Two sections are highlighted with red boxes: 'Max. User Instances' and 'Max. volumes'. Both sections have a 'Tagged limits' dropdown menu expanded, showing specific limits for ARM64 instances and High IOPS disks/Premium SSDs.

Resource	Value
Max. User Instances	20
Tagged limits	
Max. #ARM64	10
Max. #GPU	5
Max. public IPs	20
Max. volumes	20
Tagged limits	
Max. # High IOPS disk	1
Max. #Premium SSD	1

Dynamic & Static Routing

Dynamic & Static Routing



Shared networks

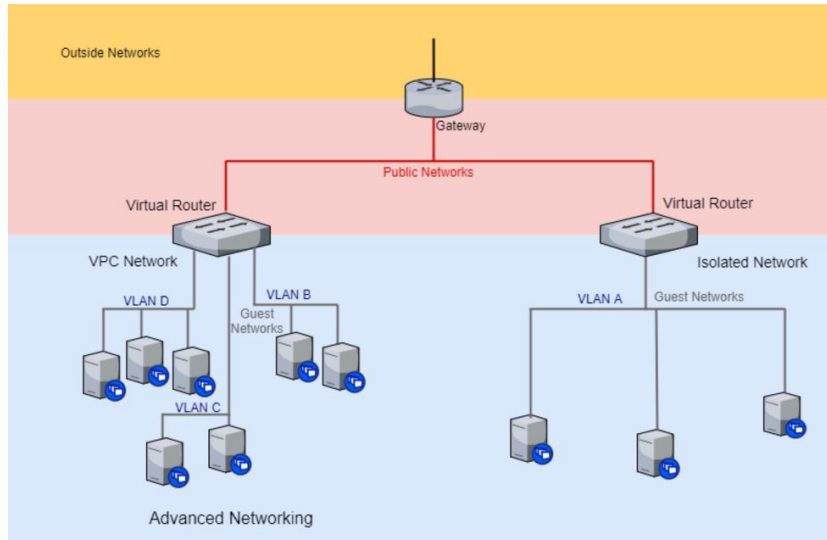
- VMs use direct IPs (public or internal)
- Operators configure gateway on upstream router
- **Can only added by ROOT admin**
- VR provides Dhcp/Dns/Userdata

Isolated networks and VPC

- Can be created by regular users.
- VMs use private IPs.
- **VMs are not directly accessible**
- VMs can be accessed via Static NAT, LB, PF, VPN, etc
- VR as Source NAT gateway (**performance !**)

Apache CloudStack 4.20

Dynamic & Static Routing



ROUTED isolated network and ROUTED VPC:

- Can be created by regular users.
- **VMs are directly accessible**
 - DNAT/Lb/PF/VPN are not needed
- VR as gateway (not Source NAT!)
 - Low overload
 - High throughput (2-2.5X gain)

Dynamic & Static Routing

Challenge: Gateway (upstream router) and CloudStack VR must know how to forward the packets:

- from VMs to outside
- from outside to VMs

Routing mode	What operators need to do
Static	Operators have to add routes for each network manually in gateway (upstream router)
Dynamic	Operators configure dynamic BGP in gateway (upstream router) The routes will be automatically advertised to routers (upstream and virtual) via BGP

Apache CloudStack 4.20

Dynamic & Static Routing

Home / Zones / ref-tr1-6851-k-Mu24-wei-zhou Refresh

Core

ref-tr1-6851-k-Mu24-wei-zhou

Allocation state
● Enabled

ID
1b653d56-15bf-4bd7-8751-9f4c561e6dd8

















CPU
37.80 Ghz
13.12% Used
23.81% Allocated

Memory
20.13 GB Memory
57.05% Used

For dynamic routing

Details Physical Network IPv4 Subnets AS Number BGP Peers System VMs Resources Settings Events Comments

+ Add IPv4 subnet for Routed networks

Subnet	Domain	Account	Project	Actions
192.168.1.0/20				   
192.168.20.0/23	test	testadmin		   
192.168.30.0/24				   
172.16.0.0/24	ROOT		user-project	   

Total 4 items < 1 > 10 / page

Apache CloudStack 4.20

Dynamic & Static Routing

Guest Networks / dynamic-routing Refresh

dynamic-routing
Isolated vlan:/1259 IPv4 + IPv6 (Dual Stack)

Status
● Implemented

ID
11ae3f6d-b439-4bc2-99db-8a2a090a980a

Details BGP Peers IPv4 Routing Firewall IPv6 Firewall Virtual routers VNF appliances Network permissions Events Comments

- 1 Add upstream IPv4 routes
192.168.4.0/25 via 10.0.53.18
- 1 Add upstream IPv6 routes
2024::6:18:8::/64 via fc00:2024-6:18:1:c00:6dff:fe00:12

Guest Networks / dynamic-routing Refresh

dynamic-routing
Isolated vlan:/1259 IPv4 + IPv6 (Dual Stack)

Status
● Implemented

ID
11ae3f6d-b439-4bc2-99db-8a2a090a980a

Network offering
Dynamic routing

Zone
ref-tr1-6851-k-Mu24-wei-zhou

Account

Details BGP Peers IPv4 Routing Firewall IPv6 Firewall Virtual routers VNF appliances Network permissions Events Comments

The default egress policy of this Network is **Allow**
Outgoing traffic matching the following egress rules will be **Denied**

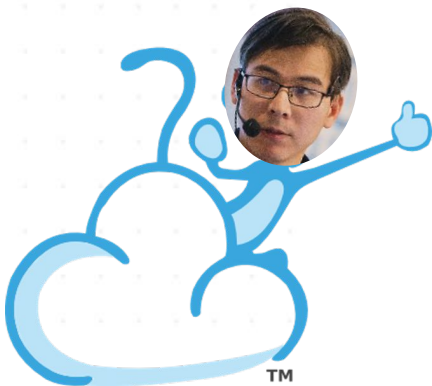
Source CIDR	Destination CIDR	Traffic type	Protocol	Start port	End port	
<input type="text"/>	<input type="text"/>	Ingress	TCP	<input type="text"/>	<input type="text"/>	<input type="button" value="Add"/>

<input type="checkbox"/>	Source CIDR	Destination CIDR	Traffic type	Protocol	ICMP type / Start port	ICMP code / End port	Actions
<input type="checkbox"/>	0.0.0.0/0	0.0.0.0/0	Ingress	TCP	1	65535	<input type="button" value="Remove"/>
<input type="checkbox"/>	0.0.0.0/0	0.0.0.0/0	Ingress	ICMP	-1	-1	<input type="button" value="Remove"/>

Total 2 items < 1 > 10 / page

Apache CloudStack 4.20

Dynamic & Static Routing



Learn more at Wei Zhou's talk - "Routed Mode: Static and Dynamic Routing"

(Tomorrow/Friday, 22nd Nov 2024)

Simple NAS B&R Provider

Apache CloudStack 4.20

Simple NAS B&R Provider

Backup framework provider plugin (backup.framework.provider.plugin)
The backup and recovery provider plugin.

Add backup repository

* Name

* Address

* Type

label.mountopts

* Zone

Cancel

OK

Backup Repository Refresh

Add backup repository +

Search

Name	Provider	Type	Address
NFS Backup Repository	nas	nfs	172.20.0.1:/export/testing/qa1-cs420rc2-kvm-914f6a32-kvm/backup

Showing 1-1 of 1 items < 1 > 20 / page

ubuntu-server-01

I-2-3-VM KVM

Status: Running

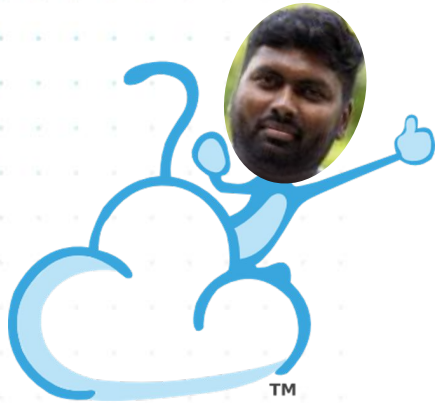
ID: 155dfce7-6836-47ee-8fff-e11853e02495

OS type

Created	Status	Type	Size	Virtual Size
2024-09-27T22:04:20+0000	BackedUp	FULL		
2024-09-28T22:04:20+0000	BackedUp	FULL		
2024-09-29T22:04:52+0000	BackedUp	FULL		
2024-09-30T22:04:52+0000	BackedUp	FULL		

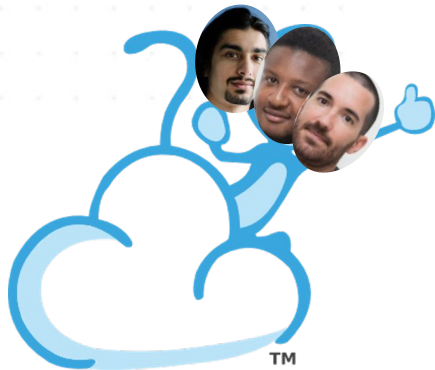
Total 4 items < 1 > 10 / page

Simple NAS-based B&R Provider (for KVM)
(in addition to Veeam, Dell/Networker and Backroll)



Learn more about B&R at Jithin Raju's talk - "Backup & Recovery in CloudStack"

(Tomorrow - Friday, 22nd Nov 2024)



Learn more about Backroll B&R at talk by Matthias/Ousmane/Pierre - "BACKROLL 1.0 is Out!"

(Tomorrow - Friday, 22nd Nov 2024)

Ceph RGW Object Storage Provider

Apache CloudStack 4.20

Ceph RGW Object Storage Provider

Add Object Storage ?

* Name

Provider

* URL

* Access key

* Secret key

Home / Object Storage ?

Name	URL
Ceph RGW	http://192.168.1.10:5501

Object Gateway > Overview

Inventory

2 Gateways	2	✔
1 Realm	1	✔
1 Zone Group	1	✔
1 Zone	1	✔
1 Bucket	1	✔
4 Users	4	✔
3 Objects	3	✔

Performance Statistics

Requests/sec: 0.2

Latency: GET: 0 ms, PUT: 0 ms

Bandwidth: GET: 0 B, PUT: 0 B

Used Capacity

2.3 MiB

Average Object Size

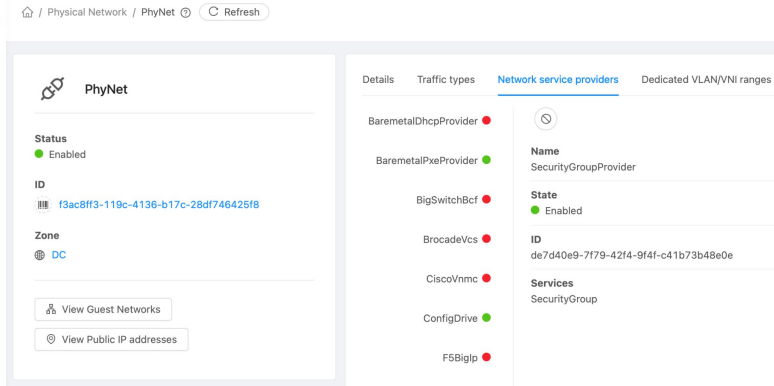
258.7 KiB

CEPH RGW Provider (in addition to Min.IO)

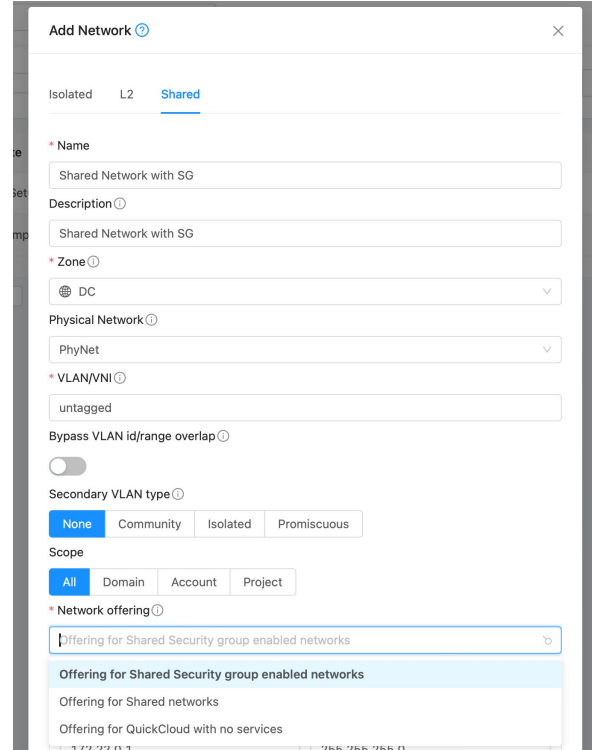
Security Group for Shared Networks in Advanced Zones

Apache CloudStack 4.20

Security Group for Shared Networks in Advanced Zones



- SG for Shared Networks in Advanced Zones
 - Even when SG not enabled for that zone
 - Allows multiple network topologies in that zone
- Simplifying - Zone Deployments



Deletion Protection of Instances & Volumes

Deletion Protection of Instances & Volumes

Instances / VM-072001dc-f46c-4eba-84d4-938036325b79 Refresh

Edit Instance

Update in fields other than name and display name will require the instance to be restarted.

Name
VM-072001dc-f46c-4eba-84d4-938036325b79

Display name
VM-072001dc-f46c-4eba-84d4-938036325b79

OS type
CentOS 5.5 (64-bit)

Dynamically scalable

Set delete protection for the virtual machine. If true, the instance will be protected from deletion. Note: If the instance is managed by another service like autoscaling groups or CKS, delete protection will be ignored.

Delete protection

Cancel OK

Volumes / ROOT-3 Refresh

ROOT-3

Status
Ready

ID
057f4dab-2dca-4427-b9b0-3f89201ed56c

Disk size (in GB)
20.00 GIB

Instance name
VM-072001dc-f46c-4eba-84d4-938036325b79

Template
CentOS 5.5(64-bit) no GUI (KVM)

Set delete protection for the volume. If true, The volume will be protected from deletion. Note: If the volume is managed by another service like autoscaling groups or CKS, delete protection will be ignored.

Delete protection

Cancel OK

Apache CloudStack 4.20

Other Notable Changes

- Quota Improvements
- Purge Expunged Resources
- Enable/Disable Roles
- Users allowed to power off instances
- Notify Admins on New Releases
- Forget Account Password
- Download Volume Snapshot
- Improved VMware to KVM import performance
- Network Metrics for SystemVMs
- Network Data in Config Drive
- Dynamic API Docs in UI

Apache CloudStack 4.20

Other Notable Changes

- 3rd Party/Vendor plugin improvements:
 - Linstor
 - Storpool
 - Powerflex
 - Cloudbian
- VMware 8 u2 & u3 Support
- Ubuntu 24.04 Support as Mgmt server distro & KVM
- Log4J 2.x Upgrade
- JRE17 Support
- SystemVM Template Changes:
 - ARM64 build support
 - Debian 12 as base OS
 - Python3, JRE17

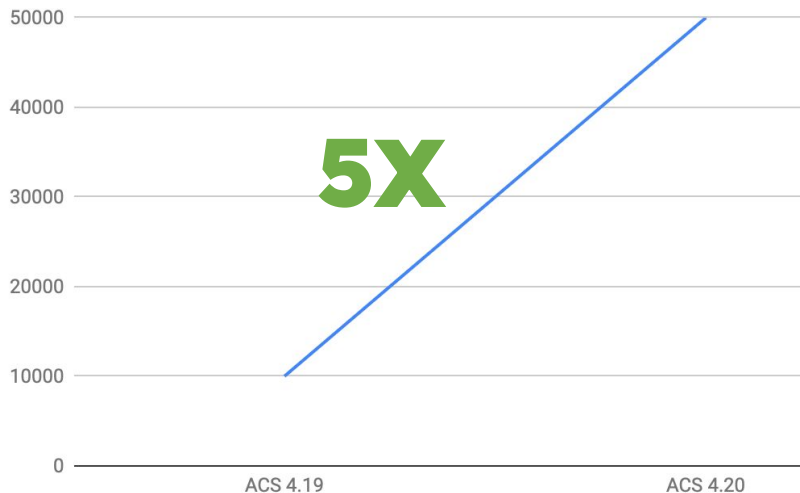
One more thing...

CloudStack HyperScale Scalability

Apache CloudStack 4.20

CloudStack HyperScale Scalability

Max. Hosts Managed By Single Management Server



- We know CloudStack's already massively scalable.
- A collection of scalability improvements to push the boundary even further.

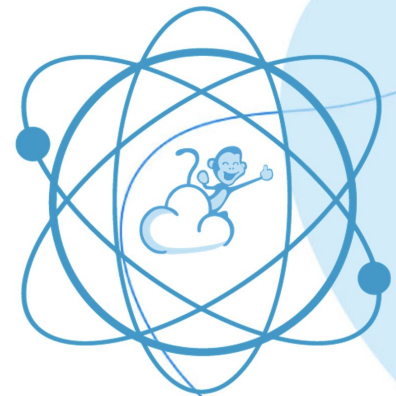
** Illustrative comparison Between ACS 4.19 and 4.20 management server using lab-based simulated hosts

Other Releases

- Cluster API Provider for CloudStack (CAPC) v0.5.0 (4 July 2024)
 - CAPC-Aware CKS Feature (ACS 4.19 & above)
- CloudStack Kubernetes Provider v1.1.0 (25 June 2024)
- CloudStack Go-SDK v2.16.1 (20 May 2024)
- CloudStack Terraform Provider v0.5.0 (9 April 2024)
- CloudStack CloudMonkey CLI v6.4.0 (21 March 2024)
- CloudStack CSBench v0.1.0-alpha (15 Feb 2024) (alpha/test Github Release, not an official release)



Upcoming ACS Releases



Upcoming Releases Schedule**

4.19.2	Early 2025
4.20.1	Q1 2025
4.21	Q2 2025
4.20.2	Q3 2025
4.22 & 4.21.1	Q4 2025

*** Tentative and subject to community discussions & processes*

Also: CloudStack Terraform Provider, CloudMonkey CLI, CAPC and CSBench and CloudStack Go-SDK releases

Gracias!

#CSCollab2024

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