Roadmap

This is the roadmap for CloudStack code development.

Everyone can enter/claim items, collaborate on development and help deliver the fixes/feature/refactor.

Create a JIRA entry for each item and update progress in this table.

Feature /Component	JIRA bug	Participant	Planned Release	Short description	Last Updated	Comments
Upgrades						
 Database upgrade Schema versioning and tooling (jooq, flyw aydb etc) Agent upgrades SystemVM upgrades Component /Plugin level upgrades Config upgrades Rollback support 		Kishan Kavala (Citrix) Rohit Yadav (ShapeBlue) John Burwell (ShapeBlue)		WIP FS: CloudStack Chimp		Is any of this complete? It seems that this covers several projects.
Improved System VM template management		Paul Angus		Process for 'seeding' and updatingsystemVMtemplate s needs revamping. Installation of system VM templates could/should be handled by API. As should the installing of 'updated templates'. Initial seeding of templates can be handled by the create zone wizard - thereby allowing for 'default' templates or custom URLs to be used.		
Poskosing						
Packaging Use embedded jetty		Rohit Yadav	4.11			
Better Log handling		Paul Angus Daan		The CloudStack logs are often difficult to read due to the sheer volume of information which is output. This can be helped by revisiting classifications of log output such logging can be set to 'info' (rather than debug) - without losing important information.		
Storage						

Shared data disk	CLO UDSTAC K-8561 - Jira project doesn't exist or you don't have permissi on to view it.	Paul Angus	Very large percentage of enterprises use clustering for applications such as MS SQL. CloudStack cannot currently present a disk to multiple VMs	
Snapshots on SAN		Mike Tutkowski and Syed Ahmed		
Ability to migrate secondary storage		Daan, Wei Zhou (Leaseweb)		
Snapshot Improvements	CLO UDSTAC K-8663 - Jira project doesn't exist or you don't have permissio n to view it.	Anshul Gangwar (Citrix)	Split volume snapshot process Allow VM snapshot and volume snapshots to exist together	JIRA still open. "Planned Release" needs changing

Deploy user instance from VM snapshot	CLO UDSTAC K-8676 - Jira project doesn't exist or you don't have permissio n to view it.	Sateesh Chodapuneedi		Support quick deployment of user instance from VM snapshot	JIRA still open. "Planned Release" needs changing
Network					
Block creation of Basic Zones		Wido den Hollander	5.0	Advanced Networking with Shared VLANs (vlan://untagged) offers the exact same functionality as Basic networking does. To be able to deprecate Basic Networking in the future we should prevent users from creating new Basic networks	

IPv6	CLO UDSTAC K-8529 -	Wido den Hollander	4.10	IPv6 support in Basic Networking: IPv6 in Basic Networking	
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DST in egress		ShapeBlue			

Netscaler integration	CLO UDSTAC K-8672 - Jira project doesn't exist or you don't have permissio n to view it. CLO UDSTAC K-8673 - Jira project doesn't exist or you don't	Rajesh Battala (Citrix)	4.6	Integrate NCC with CloudStack to leverage ADC functionality and Additional Enterprise Features provided by NetScaler FS link NCC Integration With Auto Provision VPX in CloudStack	JIRAs still open. "Planned Release" needs changing
	it.				
Openswan withstrongswan		Jayapal (Citrix)			
Next Generation Networking (NFV)		Paul Angus		Suite of features to allow users and operators to integrate virtual networking appliances from 3rdparyvendors into ACS networks • More versatile network topology (including service chaining) • Networking device/ Appliance object class • Expose additional processor features • Next Gennetworking SDK	
Visual Network designer		Paul Angus		Visualisation of networks and VM's -allowcreation and modification of networks in a visual way	

OSPF,routed networks		Abhinandan Prateek Rohit Yadav ShapeBlue	Future	Enterprises often require non-NAT/OSPF networks. Dynamically routed VPC	
Configurable MAC address		IDC Frontier		Enable to specify MAC address range to avoid MAC address collision when VMs are connected across zones and regions.	
UI, API					
Billing Quota		Abhinandan Prateek	4.6.0	Quota Service - FS	JIRA fixed in 4.6.
	∆ clo	Rohit Yadav (ShapeBlue)	1.0.0		Can this bedeleted.
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RBAC or add new		ShapeBlue	4.9	Static command.properties	JIRA fixed in 4.9.
roles	~			moved todatabaseand made user definable	Can this be deleted?
	A CLO			(RBAC Lite)	
	UDSTAC				
	K-8562 -				
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Comments		ShapeBlue	4.11		
/annotations to CloudStack elements					
(i.e firewall rules, hypervisors,nics)					

Storage process progress feedback	CLO UDSTAC K-8564 - Jira project doesn't exist or you don't have permissio n to view it.	ShapeBlue		Users/admins cannot seeprogressof storage processes such as snapshot taking, template install or template zone copy can take hours/days. Storing 'time taken' for snapshots would also give admins visibility into their storage performance to identify issues.	
Show (virtual) network typologies to users and Admin.		Paul Angus (ShapeBlue)		It is complicated for cloud admins to see which VM is connected to which network and therefore which VR. Better visibility will give much better understanding when troubleshooting. For users being able to clearly see which guest instances are connected to which network(s) will greatly improve the user experience	
VM operations					
Separation of database object creation and physical object creation		Paul Angus		Ability to create and manipulate objects in DB without physical actions occurring. ie, add a disk (which already exists) change MAC address, add a VM - which already exists	
VM backup/restore		Paul Angus		'Hooks' to enable Backup VM, In-place restore, alternative location, restore when original VM no longer exists. 'Restore'/import VM from alternate source	
Enterprise back/restore		Paul Angus		Integration of backup /recovery applications. i.e. Veeam and CommVault with VM Backup and restore feature	
VM ingestion		Paul Angus		'Scan an existing environment' for VMs and 'import' them. Supporting UI with 'wizards' to simplify moving and mapping of existing VMs.	
Enabling of managed and unmanaged guest instances in xenserver & KVM		Paul Angus		Pre-req of VM ingestion	
Enable multidisc OVA importing and deployment		Paul Angus	4.11	Manage upload and storage multi-disk OVA templates (i.e. templates containing a root disk and one or more data disks), as well as, deployment and restoration of VMs from multi-disk OVA templates.	
User Authenticators					

Improve SAML plugin		Rohit Yadav (ShapeBlue)	4.6.0, 4.5.2	SAML 2.0 Plugin	JIRA fixed in 4.6.
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QA, Drivers and automation					
Better tests		Abhinandan Prateek ShapeBlue	5.0, 4.9+	Simulating faults in real and hybrid environments.	
Test environment (Trillian & Winston)		ShapeBlue	4.9		
QA/CI environment		pdion891 Bharat Kumar (Citrix)	4.6.0	 automatejenkinsslave s creation. build provide package repo for easier deployment automate tests run and test-cloud deployment 	
Plugin driver certification		ShapeBlue			
Crowdsource QA results		ShapeBlue			
Misc					
VNC console (noVNC)		Rohit Yadav (ShapeBlue), Wei Zhou (Leaseweb)	4.11		
Docker/Containers		pdion891	4.6.0	Dockerfiles	

iSCSI and HA support in Hyper-V	CLO UDSTAC K-8444 - Jira project doesn't exist or you don't have permissio n to view it.	Anshul Gangwar (Citrix)	4.6.0	Design document is available at iSCSI and HA support in Hyper-V	JIRAs still open. "Planned Release" needs changing
Support for non-US keyboards in Console Proxy	CLO UDSTAC K-8665 - Jira project doesn't exist or you don't have permissio n to view it.	Anshul Gangwar (Citrix)	4.6.0	Make it easier for CloudStack service providers to add their own keyboards	JIRAs still open. "Planned Release" needs changing
3rd party library updates		all		A lot of libraries are outdated.effortneeds to go into upgrading those	Perhaps too general. Can a specific list be added or can this task be removed since it may be part of any release or bugfiz?
Architecture					

Multi- mangementserver aware agents	CLO UDSTAC K-8563 - Jira project doesn't exist or you don't have permissio n to view it.	Rohit Yadav, Nicolas Vasquez (ShapeBlue)	4.11	Management server(s) should publish a list of active management servers in failover order. The list should be dynamically updated according to load /availability/location ofindirectagent. Agents use this list. May require also fixing management server clustering.	
Optimisation					
Metrics view		Rohit Yadav	4.9	allow users to explore usage of underlying infrastructure (hosts)	
Dynamic resource scheduling for KVM /Xen server		Paul Angus		Presently, CloudStack manages KVM and XenServer hosts and allows for the placement and migration of the VMs via deploy and migrate API calls. Build an engine that can move VMs within a cluster based on CPU and Memory metricsitsalready exposed, to pack hosts, balance load, or move VMs to 'make space' for large VMs.	
out of band management		Rohit Yadav	4.9	power management of underlying hosts for power optimisation	
Customisable algorithms to enable automated power management		Paul Angus			