



## Eucalyptus 3.1 Release Notes

2012-07-11 Eucalyptus Systems

# Contents

<b>New Features.....</b>	<b>3</b>
<b>Resolved Issues.....</b>	<b>4</b>
<b>Resolved Security Issues.....</b>	<b>8</b>
<b>Known Issues.....</b>	<b>9</b>

## New Features

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Eucalyptus 3.1 contains features listed in the following table.

Feature	Description
Eucalyptus FastStart 3.1	FastStart is an automated installer for an entry level Eucalyptus cloud. FastStart is useful for infrastructure administrators who want to get started with an Infrastructure as a Service cloud quickly. FastStart can be configured on CentOS 5 with Xen or CentOS 6 with KVM.
New packaged platform support	Eucalyptus 3.1 has added support for Ubuntu 12.04 (Precise) and CentOS 6.x. These platforms are supported for all Eucalyptus front-end management services as well as Node Controllers.
vSphere 5 support	Eucalyptus VMware Broker now fully supports the latest vSphere 5 API and platform.

## Resolved Issues

Eucalyptus 3.1 resolves issues listed in the following table.

Issue	Description
<a href="#">EUCA-587</a>	Exclude .snapshot directories during upgrade process
<a href="#">EUCA-808</a>	clc: add back support for '--addressing private'
<a href="#">EUCA-1070</a>	Walrus: Overwriting object causes object to become inaccessible
<a href="#">EUCA-1383</a>	Issue when reconfiguring cc vnet ip range and mask
<a href="#">EUCA-1487</a>	eee: euca-describe-property occasionally exits with an OOM
<a href="#">EUCA-1497</a>	cc: centos kernel oops if too many vlan interfaces left enabled
<a href="#">EUCA-1500</a>	deleteOnTerminate=true doesn't delete a volume
<a href="#">EUCA-1514</a>	MySQL connections are refused in some cases
<a href="#">EUCA-1515</a>	initial db sync retry logic can hang
<a href="#">EUCA-1528</a>	review all uses of db queries with LIKE condition
<a href="#">EUCA-1546</a>	CC <-> NC comm fails when number of volume records on an instance exceeds 64
<a href="#">EUCA-1554</a>	IAM: Account admin can not see the policies of users and groups within account
<a href="#">EUCA-1563</a>	euare: uploading new policy with the same name does not overwrite old policy
<a href="#">EUCA-1596</a>	Upgrade needs to migrate images after all users have been migrated
<a href="#">EUCA-1621</a>	StartInstance fails for SYSTEM/STATIC mode
<a href="#">EUCA-1629</a>	if instances are terminated quickly after being launched and then new instances are launched right away, new instances do not get public IPs
<a href="#">EUCA-1647</a>	Upgrade: After upgrade on RHEL5, euca-describe-instances shows public key instead of keypair name
<a href="#">EUCA-1689</a>	CC: metadata redirect is not re-applied in non HA mode if CC is DISABLED/ENABLED and pubinterface == privinterface
<a href="#">EUCA-1694</a>	NC: under load, NC fails to respond to Describe* requests promptly
<a href="#">EUCA-1700</a>	eustore-install-image should not download an image into a predictable filename in /tmp
<a href="#">EUCA-1701</a>	eustore-install-image should not untar and bundle images using predictable dir and filenames in /tmp
<a href="#">EUCA-1710</a>	cluster-pk.pem should not be on NC host

Issue	Description
<a href="#">EUCA-1713</a>	SSL/TLS services should support cipher configuration and disable weak ciphers by default
<a href="#">EUCA-1714</a>	Secret key generation can have insufficient random data
<a href="#">EUCA-1735</a>	CLC Reports incorrect root-device-type
<a href="#">EUCA-1749</a>	Non-SOAP requests can be replayed by changing the Signature "format"
<a href="#">EUCA-1759</a>	Let eucalyptus build when given the jars that it needs, not a file called cloud-lib.tar.gz
<a href="#">EUCA-1766</a>	HA CC upgrade: Disabled CC continues to have NAT rules for an instance
<a href="#">EUCA-1767</a>	Replace --db-home option with a way to supply paths to binaries
<a href="#">EUCA-1768</a>	Configure database binary locations somewhere other than CLOUD_OPTS
<a href="#">EUCA-1778</a>	CC: empty security group iptables chains and rules for disabled security groups may remain in iptables after instances are terminated
<a href="#">EUCA-1781</a>	db: connection timeout does not trigger when remote host is down
<a href="#">EUCA-1786</a>	When changing ADDR_PER_NET, old security groups are no longer usable
<a href="#">EUCA-1787</a>	EBS: snapshot is not protected by permission checking in CreateVolume
<a href="#">EUCA-1788</a>	IAM: user name needs to allow back slash and underscore for AD sync
<a href="#">EUCA-1807</a>	Dashboard: Images page - "EuStore documentation" links to page not found
<a href="#">EUCA-1960</a>	RE: 3.0.1 Released - upgrade failed - netapp .snapshot directory
<a href="#">EUCA-1969</a>	metadata IP address is not added to the private interface when rebooting a single-host frontend
<a href="#">EUCA-1980</a>	HA not working as expected when MySQL process is killed on ENABLED machine
<a href="#">EUCA-1983</a>	Manifest File Larger Than 100K Causes Failed Instance Launch
<a href="#">EUCA-1985</a>	BFEBS Instances Not Reported Correctly => DescribeInstance
<a href="#">EUCA-1990</a>	Stale Rules Left in iptables
<a href="#">EUCA-2001</a>	Instance Fails to Launch Even When There is Enough Disk Space
<a href="#">EUCA-2021</a>	DB init fails when euca.db.home doesn't end with '/'
<a href="#">EUCA-2025</a>	CC: on precise, iptables no longer supports negation with '-d ! <net>' but instead only supports '! -d <net>'

Issue	Description
<a href="#">EUCA-2044</a>	CC: on precise, icmp type must now be specified to iptables for icmp rules to apply
<a href="#">EUCA-2045</a>	JMX management is enabled on port 1099
<a href="#">EUCA-2165</a>	NC crash on startup when configured for MANAGED-NOVLAN
<a href="#">EUCA-2173</a>	Boto 2.4 causes CLC to return XML with euca: namespaces if no api_version is specified
<a href="#">EUCA-2175</a>	Reporting: Storage report shows null where account name should be
<a href="#">EUCA-2176</a>	Reporting: Exception thrown when generating report grouped by account
<a href="#">EUCA-2187</a>	QA failures, file2str needs to handle 0 as a valid fd
<a href="#">EUCA-2189</a>	Add/remove *.LICENSE files for current JARs
<a href="#">EUCA-2201</a>	NC: race condition exists between instance cache copy and operations that update global instance list
<a href="#">EUCA-2209</a>	Cannot "euca_conf --initialize" on Ubuntu Lucid
<a href="#">EUCA-2222</a>	euca-clone-volume fails to bind host / component fields
<a href="#">EUCA-2224</a>	latest eucalytpus-cloud produced error when starting. Causes faststart to fail out.
<a href="#">EUCA-2226</a>	Upgrade to 3.1.0 fails when accounts or users have been deleted from a cloud
<a href="#">EUCA-2228</a>	Failing to create snapshots using netapp
<a href="#">EUCA-2232</a>	Loop device warning message when starting NC on Lucid
<a href="#">EUCA-2237</a>	Outbound request contextual information is not always cleaned up
<a href="#">EUCA-2245</a>	euca-get-credentials result in index out of range error
<a href="#">EUCA-2247</a>	NC: artifact provisioning deadlocks (technically, blocks on a super-long timeout)
<a href="#">EUCA-2249</a>	Standalone walrus /vmware failing during QA runs
<a href="#">EUCA-2257</a>	apparmor needs to be disabled and remove on NCs in order for instances to launch
<a href="#">EUCA-2270</a>	Upgrade: Failure to upgrade image tables
<a href="#">EUCA-2287</a>	NPE during report generation.
<a href="#">EUCA-2288</a>	IllegalArgumentException running S3
<a href="#">EUCA-2294</a>	nc: precise: getstats.pl isn't gathering block data when virtio is enabled
<a href="#">EUCA-2308</a>	Registering VMware broker on a second cluster in a cloud will kill all clusters' SCs if broker libs not installed.
<a href="#">EUCA-2310</a>	euca-describe-* admin tools can generate invalid format strings
<a href="#">EUCA-2314</a>	Upgrade: Unable to attach volume created before upgrade

Issue	Description
<a href="#">EUCA-2318</a>	Upgrade does not handle vmware broker component
<a href="#">EUCA-2319</a>	sc: reporting: cannot generate 'storage' reports
<a href="#">EUCA-2326</a>	Upgrade: Unable to upgrade due to ConstraintViolationException
<a href="#">EUCA-2328</a>	Can not use pre-existing sec groups post 3.0.2 to 3.1 upgrade
<a href="#">EUCA-1693</a>	EUARE: a salt should be used when hashing and storing user passwords
<a href="#">EUCA-2301</a>	Full set of S3 canned-acls should be supported by Walrus

## Resolved Security Issues

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Please refer to the [Eucalyptus Security Advisories page](#) for security vulnerabilities fixed in this release.



## Known Issues

The following known issues exist in Eucalyptus 3.1 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

Issue	Description
LDAP sync failure if the "group-partitions" contains capital letter in group names ( <a href="#">EUCA-2035</a> )	When creating an AD sync license configuration, using capital letters in the "groups-partition" setting can cause sync failures. Using lower-case letters in "groups-partition" will avoid this issue.
Deregistered components still display as present ( <a href="#">EUCA-2037</a> )	When components are de-registered and a failover occurs in HA mode, the de-registered components will still display as present until either a cloud restart or another failover occurs.
Instance remains pending for long periods during failed image downloads ( <a href="#">EUCA-2265</a> )	If an NC is failing to download an image from Walrus, the instance will remain in pending for an extended period of time (2 hours by default).
Unclear error message when attempting to create a volume larger than permitted ( <a href="#">EUCA-2366</a> )	When a volume size limit is exceeded on volume create, the user will be given an error message ("Channel was closed...") that is unclear.
Windows server 2003 x86 does not work on RHEL 6.2, Centos 6.2, and Precise ( <a href="#">EUCA-2358</a> )	The Windows Image preparation tool does not include 32-bit virtio Windows drivers that are compatible with the versions of KVM shipped with RHEL 6, CentOS 6 and Ubuntu Precise.
Instance rebooted with an EBS volume attached may fail to boot ( <a href="#">EUCA-2169</a> )	With KVM hypervisor, with VIRTIO enabled for DISK (EBS) and a volume attached, the VM may prefer the EBS volume on reboot instead of the proper root device (VM configuration specific).
Instance bundling might fail because NC work space does not have enough room ( <a href="#">EUCA-2369</a> )	If an NC does not have enough space allocated to its workspace (as specified by the NC_WORK_SIZE parameter in eucalyptus.conf), instance bundling may fail without a warning if the workspace limit is exceeded by the bundling operation.
Policies with conditions using "numlteq" are rejected ( <a href="#">EUCA-2046</a> )	Policies using the 'numlteq' shorthand will be treated as invalid. Use the longhand 'NumericLessThanEquals' instead.
IP addresses remain mapped if instances are terminated while the CC is down ( <a href="#">EUCA-2295</a> )	If instances are terminated while a cluster controller is down, public IPs will remain mapped even after the instance terminates (after the cluster controller is brought back up). This condition will last until the IP is re-used for a new instance.
The format of the response message to a RunInstances request does not conform to the EC2 XML schema ( <a href="#">EUCA-1090</a> )	The blockDeviceMapping aspect contained in the response from RunInstances does not conform to the latest AWS EC2 format. This may cause some EC2 clients to fail.
The euca-describe-regions command returns an error when the --region parameter is used ( <a href="#">EUCA-1623</a> )	When a 'region' option is passed to 'euca-describe-regions', the command will return an error.

Issue	Description
The euca-describe-clouds command has no output when using HA ( <a href="#">EUCA-2299</a> )	In HA mode, the 'euca-describe-clouds' command will not display output. The 'euca-describe-services' command will contain the correct output.
Instances launched in parallel against vCenter may fail (BROKER-1)	When many instances are launched in parallel against a vCenter backed Eucalyptus deployment, some of the instances may fail to run.
Public IP address can be assigned to instance with private addressing ( <a href="#">EUCA-2204</a> , <a href="#">EUCA-280</a> )	If an instance is run with the '--addressing private' parameter and later assigned an elastic IP, it will be assigned a system IP after the elastic IP is disassociated.
Describe regions contains both EC2 and S3 end-point information ( <a href="#">EUCA-2198</a> )	AWS EC2 describeRegions response does not contain S3 end-point information. In Eucalyptus, describe regions contains both EC2 and S3 end-point information.
Cannot de-register a CC and re-register it with a different name ( <a href="#">EUCA-2304</a> )	If an existing CC is registered, de-registered, and then re-registered with a new name, the CC process will need to be 'clean restarted' in order to return to service.
RunInstance expiration policy does not work ( <a href="#">EUCA-2229</a> )	Specifying an instance run expiration policy in the past will not limit future instance runs.
Kernel and ramdisk images are not owned by the accounts that register them ( <a href="#">EUCA-1756</a> )	Registered kernel/ramdisk images are listed as being owned by the 'nobody' account, instead of the account ID of the user who registered the images.
Special characters in object key for Walrus object handled inconsistently ( <a href="#">EUCA-2024</a> , <a href="#">EUCA-1598</a> , <a href="#">EUCA-1779</a> )	When an object key contains a special character such as a space or tilde (~), Walrus translates it incorrectly, and subsequent key listings will show the encoded equivalent instead of the correct character.
Concurrent snapshot operations can allow the Walrus maximum total snapshot size limit to be exceeded ( <a href="#">EUCA-1527</a> )	The Walrus 'storagemaxtotalsnapshotsizingb' limit may be exceeded temporarily if many snapshots (which, in aggregate will exceed the limit) are in flight concurrently. Subsequent snapshot requests will be limited by the set limit.
UI elements on small screens may not be visible ( <a href="#">EUCA-1544</a> )	WebUI elements may be hidden from view on small (low resolution) screens.
Walrus XML response bodies do not contain XML document header ( <a href="#">EUCA-2182</a> )	AWS S3 includes an XML document header in XML response bodies, while Eucalyptus does not contain a header. This may cause some S3 clients to fail.
Account deletion always requires "-r" even if there are no newly created resources ( <a href="#">EUCA-2332</a> )	Full account deletion requires the use of the '-r' (recursive) parameter for newly created accounts, even if they do not currently own any resources.
Issue with non-actionable IAM policies ( <a href="#">EUCA-1018</a> )	Eucalyptus will accept IAM policies that are not actionable (for example, if a non-existent user is specified in the policy definition).
LDAP user/group synchronization slow ( <a href="#">EUCA-1597</a> )	LDAP user/group synchronization can be very slow if the entropy on the cloud controller is low.
Walrus ListVersions response lists objects in reverse order by date ( <a href="#">EUCA-2342</a> )	AWS S3 returns object versions in the order in which they were stored, with the most recently stored returned first. Eucalyptus will return object versions in the reverse order.

Issue	Description
Orphaned uploads when Walrus max bucket size limit is reached ( <a href="#">EUCA-2275</a> )	When a maximum bucket size is exceeded by a put to Walrus, there may be files left on the backing store after the put is rejected.
Walrus response to HTTP HEAD request includes a body ( <a href="#">EUCA-2241</a> )	When using an HTTP HEAD request to fetch metadata about an object in a Walrus bucket, Walrus may return a body in the response when an error such as an HTTP 404 Not-Found occurs. This only happens in the case of errors where an exception or HTTP error occurs, and does not occur if the object is found. This may cause incorrect client behavior.
Some Euare NotAuthorized error messages are incorrect ( <a href="#">EUCA-2220</a> )	When specifying invalid options to several euare-* commands, the content of the error response may not be accurate; you may get a 'NotAuthorized' when the error is actually regarding an invalid input option.
Web UI dialogs hardcode text field text color but not text field background color ( <a href="#">EUCA-645</a> )	Text fields in the Eucalyptus Web UI may be unreadable if the browser background color is the same or similar to the WebUI text color.
You can not restrict the launch of an image with launch permissions ( <a href="#">EUCA-1929</a> )	Eucalyptus will respect the 'all' user for adding/removing image launch permissions, but will not respect specific user/account IDs (specifying them will have no effect).
Accounts cannot be disabled ( <a href="#">EUCA-1649</a> )	Eucalyptus 3.1 allows the disabling of 'users', but not 'accounts'.
Volume limitation with VMWare hypervisor ( <a href="#">EUCA-1435</a> )	When using the VMWare hypervisor with Eucalyptus, any one instance can only support a total of 14 volumes attached at once.
Issue with vminstancenum quota ( <a href="#">EUCA-2333</a> )	When a vminstancenum quota is specified, a single 'run-instances' command that specifies an instance count that exceeds the quota amount will be accepted, even though only the quota specified max will successfully execute.
Binding error when registering image with multiple device mappings ( <a href="#">EUCA-2264</a> )	When registering an image, the client allows the specification of mappings for devices/snapshots. If more than one mapping is specified then the command will return a binding error.
AD/LDAP sync does not support none latin characters ( <a href="#">EUCA-2036</a> )	When integrating with an AD/LDAP IDS, Eucalyptus sync will fail if the IDS records contain non-latin characters.
WebUI does not honor change in port in presentation of Cloud URL ( <a href="#">EUCA-1777</a> )	Changing the port aspect of the 'Cloud URL' field in the webUI does not have an effect on the port that the to which the cloud controller binds.
The euca-register command currently defaults its architecture parameter to i386 instead of omitting it by default ( <a href="#">EUCA-1504</a> )	The euca-register command currently defaults its architecture parameter to i386. As a workaround, you should always supply an architecture when using the euca-register and euca-bundle-image commands.
Instances are not accessible if CC fails to start dhcpd ( <a href="#">EUCA-432</a> )	If the CC cannot start the DHCP server and instances are not getting addresses, an error will appear in the CC log file that will show the dhcpd command that is being attempted, along with the error return code. Searching the cc.log for EUCAERROR will find such a message.

Issue	Description
Null point exception when accessing <a href="#">http://169.254.169.254/ (EUCA-1556)</a>	In AWS, access to the metadata URL returns a list of namespace versions. In Eucalyptus, the base URL ( <a href="#">http://169.254.169.254</a> ) returns an error value. You must specify ' <a href="#">http://169.254.169.254/latest/meta-data</a> ' as the version to obtain metadata information.
Issue with LOGROLLNUMBER value in euca.conf ( <a href="#">EUCA-2212</a> )	The LOGROLLNUMBER in <code>eucalyptus.conf</code> only applies to the C-based Eucalyptus components (cluster controller, node controller). This configuration option does not have an effect on the java-based Eucalyptus component log behavior.
EBS images default to the wrong architecture ( <a href="#">EUCA-1504</a> )	In AWS, boot from EBS image registration defaults to the 'i386' architecture. In Eucalyptus, the default architecture is 'x86_64'. This is a display issue and does not effect the execution of the image itself.
CLC accepts RunInstances requests with MinCount > MaxCount ( <a href="#">EUCA-1792</a> )	AWS throws an error if mincount is greater than maxcount as options to <code>run-instances</code> . Eucalyptus will not throw an error, and will respect the value specified in maxcount.
Denial of EC2 address resource not taking effect ( <a href="#">EUCA-811</a> )	Specifying a policy that denies a user from being able to assign a specific elastic IP only works for allocated elastic IPs; the policy will not currently apply for system-assigned elastic IPs.
Deregistering some components on Precise HA requires CLC restart ( <a href="#">EUCA-2353</a> )	De-registration of components in HA will work, but may require a restart of CLC in order for de-registered components to no longer display in <code>euca-describe-services</code> .
Issue with security group rules referencing other security groups ( <a href="#">EUCA-1064</a> )	When in multi-cluster, MANAGED or MANAGED-NOVLAN mode, security group rules that reference other security groups will not apply unless an instance from each group is running in each cluster (availability zone).
Issues with INSTANCES_PATH on Ubuntu ( <a href="#">EUCA-2257</a> )	On Ubuntu, the path specified as a parameter to <code>INSTANCES_PATH</code> in <code>eucalyptus.conf</code> on node controllers must not contain a softlink. There is an issue with an <code>apparmor/libvirt</code> configuration that will cause a softlink in the path to result in failure to execute instances.
Incorrect information on the service components page ( <a href="#">EUCA-2324</a> )	The service components page in the web UI may display out-of-date or incorrect information regarding the current service state. Correct and up-to-date information can be obtained using the ' <code>euca-describe-services</code> ' CLI tool.
Problems attaching/detaching volumes ( <a href="#">EUCA-2385</a> )	When using the VMWare hypervisor, attaching and detaching volumes can run more slowly than expected. In particular, updating the state of the volume as returned by ' <code>euca-describe-volumes</code> ' can take up to 30 seconds.
Uploaded images fail to run ( <a href="#">EUCA-2387</a> )	An image uploaded to Walrus with a size that is not a multiple of 512 bytes will fail to run in Eucalyptus.
Image is registered successfully, but fails to run ( <a href="#">EUCA-2386</a> )	An image that is bundled (client-side) using credentials that are no longer valid within Eucalyptus can be successfully uploaded and registered. However, it will not be possible to run instances from this image.

Issue	Description
User loginprofiles reset during 3.0.2 to 3.1 upgrade ( <a href="#">EUCA-2393</a> )	On upgrade from Eucalyptus 3.0.2 to 3.1.0, user email address information will be lost resulting in users being presented the 'first time login' form upon access to the Web UI. The email address information will be stored subsequently.
Instance DNS service cannot be turned on after upgrade from 2.0.3 to 3.1.0 ( <a href="#">EUCA-2396</a> )	On upgrade from eucalyptus (open source) version 2.0.3 to eucalyptus 3.1.0, the user is not able to enable instance DNS feature of Eucalyptus 3.1.0 (bootstrap.webservices.use_instance_dns=true).
Unable to launch public BFEBS image from account other than the one who owns the snapshot ( <a href="#">EUCA-2396</a> )	EBS backed images created/registered by one account will not be executable by users in a different account.