



Eucalyptus Release Notes

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Overview and Help

HPE Helion Eucalyptus is open source software for building Amazon Web Services compatible private and hybrid clouds. The release notes for Eucalyptus are divided by release number, presented in order from current release to past releases. If you are already using Eucalyptus, you can check updates from your older release and compare it with a newer release to help determine if you want to upgrade.

Where to Get More Help

The following resources can help you to learn more, connect with other Eucalyptus users, or get actively involved with Eucalyptus development.

- The Eucalyptus IRC channel is [#eucalyptus](#) on Freenode. This channel is used for real-time communication among users and developers. Information on how to use the network is available from [Freenode](#).
- Subscribe to one or more of the [Eucalyptus mailing lists](#), which provide ways to ask questions and get assistance from the community.
- Search for technical articles in the [Knowledge Base](#) to find answers to your questions and learn about best practices.
- Check out the [Eucalyptus Support](#) pages for more ideas.

How to Upgrade

If you want to upgrade to the current release, you can find upgrade information in the [Eucalyptus Installation Guide](#).

Compatibility

For information compatibilities with your version of Eucalyptus, including:

- Euca2ools
- OS
- Guest OS
- Networking
- Storage
- Hardware

... navigate to the Eucalyptus Release Notes version for your release, and review the Compatibility Matrix for that version.

Comments

For corrections and suggestions about this document, please email us at heliondocs@hpe.com. We look forward to your communication and thank you in advance for helping us improve our documentation and our product.

4.3.0

This section contains release notes for HPE Helion Eucalyptus version 4.3.0.

What's New?

This topic lists new features in HPE Helion Eucalyptus 4.3.0.

New Features

Feature	Description
Red Hat Enterprise Linux 7 (RHEL 7) support.	<p>RHEL7 is the supported deployment OS.</p> <ul style="list-style-type: none"> Libraries repackaged for use with RHEL 7 that alleviate certain dependencies on obsoleted java libraries. Eucalyptus can now run confined by SELinux on RHEL 7. <p>For more information, see Upgrading Eucalyptus and the OS.</p>
Security improvements.	<p>Notable security hardening measures have been implemented in 4.3.0:</p> <ul style="list-style-type: none"> Eucalyptus can now run in confined mode on UFS and other eucalyptus-cloud-based processes. Usage of Jetty is removed along with the Jetty libraries and associated credential download functionality. Eucalyptus can now run confined by SELinux on RHEL 7
Removed reverse DNS dependency of eucanetd in VPCMIDO mode.	Allows administrators to register NCs to a back-end network instead of a routable front-end network. This only affects VPCMIDO mode.
EC2 API Compatibility: Instance termination protection.	Instance termination protection is now supported; allowing you to prevent accidental termination of your EC2 instances via Euca2ools, or API.
Switch multicast from globally scoped to locally scoped address range.	The multicast addresses that the CLC uses for jgroups membership changed from a globally-scoped multicast address range, to a configurable option and the default be addresses that are in the administratively-scoped range.
Support for IAM policy variables.	The use of policy variables simplifies the writing of policies when exact names of resources are unknown.
Virtual Private Cloud (VPC) improvements.	<p>Notable improvements in VPC include:</p> <ul style="list-style-type: none"> Internal ELB in VPC NAT Gateway Custom route table Multiple ENIs
CloudFormation improvements.	Update stack supported both in euca2ools and the Management Console.
CloudWatch in the Management Console.	The Management Console has improved alarms, metrics, and monitoring management.

Feature	Description
View scaling history added to Management Console.	Added the ability to view scaling activity (history) to scaling group details page.
Usability improvements.	Notable improvements in the Management Console include: <ul style="list-style-type: none"> • Left navigation bar • Multi-select check boxes on resource landing pages • Support for sortable tables on landing pages • Tabbed pages display single help relevant to tab contents

Resolved Issues

This section lists previous issues resolved by HPE Helion Eucalyptus 4.3.0.

Issue	Description
EUCA-2171	Unified Logging request... was:jetty-request-2012_05_21.log found in /var/log/eucalyptus What is it for?
EUCA-2220	Some Euare NotAuthorized error messages are incorrect
EUCA-4526	Upgrade hardcodes eucalyptus (database) user
EUCA-6126	Jetty service appears in the list of public services
EUCA-7340	S3 IAM ARN wildcard causes ACL issues for bucket objects
EUCA-7971	After Syncing Large Number of LDAP Users, Timeout Occurs When Attempting to Delete Account
EUCA-8805	500 error that probably should be flagged as server error (5xx)
EUCA-8971	Role names should not be allowed to be longer than 64 characters
EUCA-9047	euca-describe-services with invalid service name hangs
EUCA-10356	physical core/memory overriding logic produces an incorrect warning
EUCA-10503	Remove Jetty / credential download
EUCA-10522	SignalResource support in cloudformation
EUCA-10551	eucanetd -f can spin forever in certain states
EUCA-10754	Running instance in non-existing SG throws InternalFailure
EUCA-10821	CreateRoute requires a mandatory internet gateway ID
EUCA-10890	Trying to delete a nonexistent access key results in 500s
EUCA-11044	Raise a clear error why actions cannot be performed due to migration in progress.
EUCA-11223	Wildcard value for 'account' resources in ARNs Are Not Supported
EUCA-11260	Use of region configuration file with only 'Regions' or misspelled 'Region' element returns vague error
EUCA-11265	Malformed 'CertificateFingerprintDigest' should return more descriptive error
EUCA-11306	EC2 response incorrect when Version parameter not present in request
EUCA-11381	VPC instances require access to user-api machines for DNS service
EUCA-11412	VPC - Max subnet cidr netmask should be limited to 16-28 bits.

Issue	Description
EUCA-11423	Cloudformation: AWS::EC2::Image::Id not allowed as parameter type
EUCA-11506	MANAGED* Network Modes: NC Gate of instance run on network readiness
EUCA-11523	enhance error message: "Migrating instance i-ce0e95fd failed because of: ERROR"
EUCA-11524	ELB access logs collection fails when logs prefix contains an uppercase letter
EUCA-11535	clcadmin-initialize-cloud should print positive message on success
EUCA-11668	selinux check in eucalyptus-nc startup script is too strict
EUCA-11727	Instance manifest was changed after registration
EUCA-11741	DeleteKey Returns Odd Message When Deleting from Non-Native Region
EUCA-11793	Create default VPC if it does not exist before imaging stack creation
EUCA-11804	"snapshot creating" Logged messages need more context.
EUCA-11821	Authentication for users fails when password contains a semicolon
EUCA-11837	PROPERTY MGMT - www properties cleanup
EUCA-11934	eucanetd VPCMIDO - security group rules with ICMP type:code not implemented correctly
EUCA-11960	euca-authorize -t 1:65535 should not be permitted
EUCA-12033	NC fails to adopt instance in case of connect iscsi failure
EUCA-12061	VPC - eucanetd can use incorrect host-port when configuring router with multiple gateways
EUCA-12110	Admin tools that previously emitted deprecation warnings, including euca_conf and those beginning with "euca," have been removed
EUCA-12113	euca-authorize for ICMP/TCP/UDP protocol should throw exception about missing portRange
EUCA-12135	Metadata returns 404 for http://169.254.169.254/ on VPC
EUCA-12143	Cannot detach volume from migrated instance
EUCA-12177	Setting account address quota causes extra addresses to be allocated.
EUCA-12205	Availability Zones have a hard coded maximum of 2048 instances.
EUCA-12206	Updating ELB properties (keyname, emi, ..) does not update the autoscaling groups for existing ELBs
EUCA-12221	The deprecation warnings from commands beginning with "eureport" have been removed.
EUCA-12247	BundleInstance Fails From Remote Client on Federated HTTPS-enabled Setup
EUCA-12269	sensor memory allocation is incorrect in /util/sensor.c
EUCA-12352	elb dns name does not resolve
EUCA-12396	AWS Signature Version 4 url getting "Invalid credential (missing part)" error when using "query strings"
EUCA-12416	EC2 unknown instance not terminated
EUCA-12419	A server error occurred when calling the CopyObject operation
EUCA-12483	IAM region federation cannot administer accounts between regions
GUI-1521	add ability to view scaling activity (history) to scaling group details page

Issue	Description
GUI-1680	Change of password for admin@eucalyptus results in internal server error when new password is less than 6 characters long
GUI-1692	Bucket icons on buckets landing page are misplaced on IE
GUI-1782	Start memcached to listen only on unix domain socket, not network
GUI-2158	ELB security policy dialog doesn't reflect current policy
GUI-2170	Include some page information in title for better browser history.
GUI-2176	No error if Instance Name tag is used when Name field is blank
GUI-2210	Check boxes on Create New User should be checked by default
GUI-2220	Security groups not aligned when creating launch configuration from instance
GUI-2225	JS Error in Launch Instance Wizard
GUI-2226	"Select or type to enter account/user" on Bucket Details page does not inform user that ID is required for sharing with single account
GUI-2249	ELB Wizard 'Next' button always appears enabled.
GUI-2256	"!" in Error icon out of bounds in Windows/IE
GUI-2274	CF invalid link after AWS template import
GUI-2276	Console attempts to create ELB twice using IE11
GUI-2329	Check mark and exclamation point are off centered on alert messages using IE11
GUI-2348	In GUI, wrong message displayed for windows instance under connect to instance option.
GUI-2362	Console throws 500 error when stopping an EBS-backed instance
GUI-2384	Cannot find instance_id from the Elastic IP Detail page dialog box when instance is named
GUI-2400	Duplicate 'Instance type' items shown on instance detail page when using EBS images
GUI-2402	Stack description out of bounds in tile view on Stacks landing page
GUI-2449	Missing field in Capacity area of Scaling Group Wizard General Tab
GUI-2687	In "create stack" wizard cloud formation template does not activate the "next" button
GUI-2697	Create Snapshot page shows detail page help as well as create help.

Resolved Security Issues

This topic describes security issues related to HPE Helion Eucalyptus 4.3.0.

Security Bulletin ID	CVSS Base Score	Affected Products
TBA		

See the [HPE Support Center](#) for further details.



Note: HPE Helion Eucalyptus security bulletins are usually published 2 weeks after the GA date.

Known Issues

This topic lists known issues in HPE Helion Eucalyptus 4.3.0 and its dependencies.

Please contact Eucalyptus Support for known workarounds to these issues.

New known issues for this release:

Issue	Description
No other means to configure CLC service endpoints supported (EUCA-11422)	See linked bug for more information.
esi-* tools have issues with HTTPS endpoints (EUCA-11682)	Workaround: Use non-HTTPS endpoints, for example, use localhost region. See linked bug for procedure.
ImportInstance failed to create booting instance on HTTPS-enabled Eucalyptus Cloud (EUCA-12253)	See linked bug for more information.
Unable to replace copied object (EUCA-12439)	Copied objects are added as a duplicate object. Workaround: Manually delete the unwanted duplicate entry.
Possible modification or rebuilding Windows images needed to run properly. (EUCA-12493)	Windows 2003 no longer supported and images will require modification. Workaround: Manually recreate VMs.
nodeadmin-unpack-instance fails in MANAGED mode. (EUCA-12501)	See linked bug for more information.
euserv-migrate-instances (formerly euca-migrate-instance) fails in MANAGED mode. (EUCA-12509)	See linked bug for more information.
EC2 VPC route status is invalid for Internet gateway. (EUCA-12510)	Route's status for Internet gateway doesn't update when the gateway is detached from VPC.
VPCMIDO: limited connectivity with more than 500 instances/interfaces in a VPC subnet. (EUCA-12552)	Known issue with MidoNet 1.9, which has difficulty handling bridges with high number of ports (> 500). Workaround: Midokura recommendation is to limit bridges (each VPC subnet is mapped to a MidoNet bridge in Eucalyptus) to have less than 500 ports (each ENI takes 1 port).
Failure to unset policies from load balancer listeners. (EUCA-12593)	Clearing a policy before unsetting them causes this failure. Workaround: When changing policies, set the policies to the new value directly rather than clearing them first. See linked bug for specific commands to use.
Bucket object URLs not displayed properly in IE11 (GUI-2215)	Workaround: Use another Internet browser if necessary.

Issue	Description
Metrics landing page display issues (GUI-2503)	In FireFox, if the browser is displayed widely, the Actions menu displays too far right and becomes partially cut off. Workaround: Narrow the width of the browser or use another Internet browser.
ELB Instances page doesn't always automatically select instances in the ELB. (GUI-2567)	Issue appears intermittent. See linked bug for more information.
Memcache is not cleared when user adds a new image or makes image public. (GUI-2669)	When a user adds an image or changes permissions on image, it does not take effect immediately. The refresh time is considerable. Workaround: To make images available sooner, restart the console by running <code>servicectl restart eucaconsole</code> .
Authorize ports for ELB created in VPC. (GUI-2673)	See linked bug for more information.
When a public image is made private, other users can still list it and try launching instance with it resulting in an error. (GUI-2682)	When a user changes permissions on image, it does not take effect immediately. The refresh time is considerable. Workaround: To make images available sooner, restart the console by running <code>servicectl restart eucaconsole</code> .
Internal server error on fresh install of eucaconsole. (GUI-2700)	It has been determined that python-nss cannot be installed on the same system with eucaconsole. Workaround: See Knowledge Base article 210311806 .
Empty error message when trying to change security policy for ELB (GUI-2719)	Empty error message appears when changing a security policy for an ELB.
Unable to change security policy on a load balancer. (GUI-2720)	ELB is always assigned the latest security policy, even when an older one is specified Workaround: When changing policies, set the policies to the new value directly rather than clearing them first.

Special Status Release Features

This topic describes special status release features and their support scope. It also provides a list of features currently in a special status release.

Feature Release Types

There are 3 feature release types, of which 2 have special status:

- Technology Preview - see below for the [definition](#), [policies](#), and [current features](#) in this special status.
- Controlled Availability - see below for the [definition](#), [policies](#), and [current features](#) in this special status.
- General Availability - fully supported features.

Feature Release Type Summary Comparison

Attribute	Technology Preview	Controlled Availability	General Availability
Feature complete	~	~	Yes

Attribute	Technology Preview	Controlled Availability	General Availability
Supported by HPE Helion Eucalyptus	~	~ *	Yes
Feedback welcome	Yes	Yes	Yes
Upgradeable	~	~ *	Yes
Production ready	No	~ *	Yes
Future guaranteed	~	~ *	Yes
What's it like?	Nightly / Alpha	Beta	Production
Performance standards	~	No *	Yes
May be deprecated	Yes	Yes	Yes; defined process

Table legend

* Per agreement – special cases and conditions to define support, upgrade / future path, production-ready status, level of performance to expect.

~ Possible - but **not** guaranteed.

Upgrade Compatibility and Support Scope

During the development of a special status feature, additional components may become available to the public for testing. Because special status features are still under development, HPE cannot guarantee the stability of such features. As a result, if you are using special status features, you may not be able to seamlessly upgrade to subsequent HPE Helion Eucalyptus releases.

Special status features are included in a release to provide early access to features that HPE may support fully in future releases, but HPE cannot guarantee that support will be provided or issues resolved in a future release. Some special status features may only be available for specific hardware architectures.

The HPE Helion Eucalyptus customer success team may create bug reports on behalf of support cases filed by subscribed customers. These bug reports will then be forwarded to HPE Helion Eucalyptus engineering as proposed for inclusion in a future release.

Technology Preview Definition

Technology preview features provide early access to upcoming product innovations, enabling you to test functionality and provide feedback during the development process.

Customers and users should be aware that technology preview features:

- are not fully supported under HPE (formerly Eucalyptus Systems, Inc.) subscription level agreements.
- may not be functionally complete.
- are not intended for production use.

In some cases, this may be applicable to the entire cloud deployment depending on the subsystems affected by the feature in technology preview. As HPE considers making future iterations of technology preview features generally available, we will attempt to resolve any issues that customers experience when using these features.

Current Technology Preview Features

The following features are in technology preview for this HPE Helion Eucalyptus release:

- There are no features in technology preview in this release.

Controlled Availability Definition

A controlled availability release is a conditional release of a product (or products) that does not meet a published standard, or for which Hewlett Packard Enterprise (HPE) is unable to provide support under published policy.

Customers and users should be aware that controlled availability features:

- are used to limit the shipment of a product or a release to a set of customers who agree to specific use conditions, which include migrating to a General Availability (GA) release when it is ready.
- are generally used to deliver early releases of new products or new features of existing products to satisfy customer commitments.
- might not include all time-critical fixes, although some defect repair might be rolled in as necessary.
- can be ordered only with proper approval and for a specified length of time. (The approval process and order start/stop time frame are documented prior to the release in the controlled availability agreement.)

In some cases, this may be applicable to the entire cloud deployment depending on the subsystems affected by the feature in controlled availability. As HPE considers making future iterations of these features generally available, we will attempt to resolve any issues that customers experience when using these features.

Current Controlled Availability Features

The following features are in controlled availability for this HPE Helion Eucalyptus release:

- [Ceph RGW object storage](#)

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HPE Helion Eucalyptus 4.3 software.

Compute compatibility

OS and Hypervisors	Version	Architecture	Notes
CentOS+KVM	6.7	x86_64	This version of the OS is intended to be used only during the initial migration/upgrade of an existing HPE Helion Eucalyptus cloud, which was deployed before the 4.3 release.
CentOS+KVM	7.2	x86_64	This is a fully supported OS for the HPE Helion Eucalyptus 4.3 release.
RHEL+KVM	6.7	x86_64	This version of the OS is intended to be used only during the initial migration/upgrade of an existing HPE Helion Eucalyptus cloud, which was deployed before the 4.3 release.
RHEL+KVM	7.2	x86_64	This is a fully supported OS for the HPE Helion Eucalyptus 4.3 release.

Java

Component	Version	Notes
JVM	1.8.0	Java 8 supported as of the HPE Helion Eucalyptus 4.3 release.

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Deprecated	n/a
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	RedHat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description	Version	Notes
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.	N/A	
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.	N/A	Managed and Managed (No VLAN) networking modes are deprecated as of Eucalyptus 4.3.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.	N/A	Managed and Managed (No VLAN) networking modes are deprecated as of Eucalyptus 4.3.

Networking Mode	Description	Version	Notes
VPCMIDO	AWS VPC on-premise equivalent; in partnership with Midokura. Midokura Enterprise MidoNet (MEM) is a commercial version with 24/7 support - 30 day evaluation available.	1.9	Eucalyptus tested and validated using MEM v1.9 series. (Other versions are not supported.) Incompatible with MEM v5 series. Cassandra22 (dsc22) ver. 2.2.7-1 ZooKeeper ver. 3.4.5-1

Object Storage Compatibility

Storage Array	Type/Series	Version	Notes
Ceph RGW	Open source enterprise	0.94.6	Ceph RGW is a Controlled Availability feature. For information about Controlled Availability features in Eucalyptus, see Special Status Release Features .
RiakCS	Open source enterprise	RiakCS 2.1.1 Stanchion 2.1.1 Riak 2.1.3	The OS for the RiakCS host machine must be CentOS/RHEL 7.2.

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	
HP 3PAR SAN	7000 StoreServ Storage systems	3PAR Release Version 3.2.1 3PAR Web Services API 1.4.2	Virtual copy and thin provisioning features required. Virtual domains feature optional.
Ceph RDB	CentOS/RHEL machine with disk, compute, and network resources	0.94.6	The OS for the Ceph deployment host machine must be CentOS/RHEL 7.2.
Direct attached storage	Any DAS-JBOD	N/A	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	Linux SCSI target framework is required.

Storage Array	Type/Series	Version	Notes
Remote disk	N/A	N/A	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space (multiple disks in a RAID 5/10 recommended).

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.3.1](#) with HPE Helion Eucalyptus version 4.3.

Eucalyptus Management Console

Management Console 4.3 operates with the above compatibilities. See [Browser Support](#) for a list of supported browsers in this release.

Eucalyptus Limitations and Restrictions

This section provides defaults used for known limitations and restrictions associated with Eucalyptus features, services, and accounts as tested and supported by the Eucalyptus Quality Team. Some of these limitations may reflect the supported differences between AWS and Eucalyptus.

Functional Limitations

This section describes features and operations that are not supported by Eucalyptus, and therefore, considered a functional limitation or difference from that of AWS.

- Eucalyptus Cloudformation Update Stack does not support Notification Configurations for given resources since Eucalyptus has not implemented Simple Notification Service (SNS) or Simple Queue Service (SQS).
- Eucalyptus Cloudformation Update Stack supports the UpdatePolicy attribute on the `AWS::AutoScaling::AutoScalingGroup` type but only the `AutoScalingRollingUpdate` condition is supported since Eucalyptus Auto Scaling does not support Scheduled Actions.
- Full access to the Management Console requires a minimum IAM policy. See [Add Access Policy](#) for the recommended minimal IAM policy to apply when creating a group.
- Auto scaling limits are aligned with the AWS limits, except for SNS topics, as SNS is currently not supported in Eucalyptus. The [AWS Auto Scaling Limits](#) are also generally applicable to Eucalyptus.
- API support for object lifecycle in S3 is the same as for AWS S3 except for:
 - **Glacier support.** There is no "transition" operation type to transition objects to Glacier.
 - **Transitions between storage classes.** Eucalyptus allows multiple storage classes but they have no real meaning and do not differentiate either cost or durability of the data. Refer to [AWS Object Lifecycle Management](#) for more information.

Configurable Limitations

This section lists the limitations that are present for configuring certain resources, as tested by Eucalyptus, and may differ from those imposed by AWS.

Description	Default	Maximum
The number of instances that can be started in one cluster.	2048	4096
The number of volumes that can be attached to a VM. Eucalyptus can attach up to 24-25 volumes per VM.	None	Unknown because EBS/HVM/PV instances would have different limits.
The number of access keys a user can have. Configurable in <code>property authentication.access_keys_limit</code> .	2	None
Name restrictions on the values that can be used with IAM.	Same as AWS. The AWS restrictions on names are also generally applicable to Eucalyptus.	n/a
Most default limits are defined via cloud properties.	varies	varies

4.2.2

This section contains release notes for HPE Helion Eucalyptus version 4.2.2.

What's New?

This topic lists new features in HPE Helion Eucalyptus 4.2.2.

New Features

Feature	Description
New object storage provider support	You can now use Ceph-RGW for object storage. For more information, see Configure Object Storage .

Resolved Issues

This section lists previous issues resolved by HPE Helion Eucalyptus 4.2.2.

Issue	Description
EUCA-7886	better error messaging for incorrect metadata URL
EUCA-11517	clusteradmin-copy-keys and clcadmin-copy-keys needs better help message
EUCA-11527	Java components - hung pids during 'stop' if clc is stopped first.
EUCA-11545	HTTPS endpoints for 'identity' cause federated IAM behavior to not work correctly
EUCA-11671	DNS Spoofing Returns Errors for AWS FQDN endpoints when using HTTPS
EUCA-11752	cfn-init fails with validation error saying stack does not exist
EUCA-11778	Migration fails for instance with floppy disk (ELB, imaging worker)
EUCA-11801	EC2 VPC network interface security groups incorrect for ENI created on launch
EUCA-11803	Instance Migration Fails when SELinux is enabled and is in Permissive mode.
EUCA-11813	DEBUG logging causes cloud instability
EUCA-11821	Authentication for users fails when password contains a semicolon
EUCA-11840	ELB not working if webservices port has been changed to something different from 8773
EUCA-11847	Euca ELB does not fire BackendInstanceChecker
EUCA-11850	DeleteStack errors out due to EIP deletion failure
EUCA-12012	Merge fix for EUCA-9765 into later branches
EUCA-12014	Allocated EIP addresses can be duplicated after upgrade to 4.2.x
EUCA-12027	update glibc on service image
EUCA-12038	esi-install-image doesn't support bootstrap URL
EUCA-12068	ELB access logging fails when DNS server is set to non UFS
EUCA-12086	loadbalancer servo leaks file descriptors

Issue	Description
EUCA-12093	Error creating group after assuming AccountAdministrator role
EUCA-12098	When deleting a listener in elb, all listeners with that policy will be deleted
EUCA-12136	Enable service dns name resolution on upgrade
GUI-1821	Unable to view roles from management console
GUI-1839	Precisely-pinned boto version causing new installs to fail to start
GUI-1856	Unable to view Instance or Role details after deleting role from CLI
GUI-2154	User data not pre-populating when creating instance or launch config from existing instance.
GUI-2213	302 response in case of errors
GUI-2222	Extraneous error message when stopping eucacore with Nginx disabled
GUI-2223	Unable to view some CloudFormation Stacks in Console
GUI-2239	working spinner bounces on CF stacks landing page cells when delete stack is in progress
GUI-2246	CloudFormation template is reformatted from original when displayed in GUI
GUI-2250	No warning message when modifying ELB without adding listener.
GUI-2257	Create new Alarm does not work for any AWS/Autoscaling options
GUI-2334	Instance Type for Instance in Console Disappears if Image is Deregistered
GUI-2346	console keep logging out on launch config section
GUI-2428	Cannot create new user from eucalyptus account
GUI-2490	Response to _getfile is cacheable
GUI-2510	add commas to the seven items in the CF unsupported list that aren't being flagged

Resolved Security Issues

This topic describes security issues related to HPE Helion Eucalyptus 4.2.2.

Security Bulletin ID	CVSS Base Score	Affected Products
HPSBGN03547	6.1	EMIs for Load Balancing and Imaging services package "eucalyptus-service-image-1.48-0.87.99" and earlier

See the [HPE Support Center](#) for further details.



Note: HPE Helion Eucalyptus security bulletins are usually published 2 weeks after the GA date.

Known Issues

This topic lists known issues in HPE Helion Eucalyptus 4.2.2 and its dependencies.

Please contact Eucalyptus Support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Cannot login to UI when console.ini setting 'session.cookie_expires' set at or below 28800 (GUI-1592)	Please see linked bug for more information.

Technology Preview

This topic describes technology preview and its support scope. It also provides a list of features currently in technology preview.

Technology Preview Definition

Technology preview features provide early access to upcoming product innovations, enabling you to test functionality and provide feedback during the development process.

Customers and users should be aware that technology preview features:

- **are not fully supported under HPE (formerly Eucalyptus Systems, Inc.) subscription level agreements.**
- **may not be functionally complete.**
- **are not intended for production use.**

In some cases, this may be applicable to the entire cloud deployment depending on the subsystems affected by the feature in technology preview. As HPE considers making future iterations of technology preview features generally available, we will attempt to resolve any issues that customers experience when using these features.

Upgrade Compatibility and Support Scope

During the development of a technology preview feature, additional components may become available to the public for testing. Because technology preview features are still under development, HPE cannot guarantee the stability of such features. As a result, if you are using technology preview features, you may not be able to seamlessly upgrade to subsequent HPE Helion Eucalyptus releases.

Some preview features are included in this release to provide early access to features that HPE may support fully in future releases, but HPE cannot guarantee that support will be provided or issues resolved in a future release. Some technology preview features may only be available for specific hardware architectures.

The HPE Helion Eucalyptus customer success team may create bug reports on behalf of support cases filed by subscribed customers. These bug reports will then be forwarded to HPE Helion Eucalyptus engineering as proposed for inclusion in a future release.

Current Technology Preview Features

The following features are in technology preview for this HPE Helion Eucalyptus release:

- There are no features in technology preview in this release.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HPE Helion Eucalyptus 4.2 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.7	x86_64

OS and Hypervisors	Version	Architecture
RHEL+KVM	6.7	x86_64

Java

Component	Version	Notes
JVM	7	For the CLOUD_OPTS setting in the /etc/eucalyptus/eucalyptus.conf file: either do not set --java-home, or --java-home must point to a version 7 JVM.

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Deprecated	n/a
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.
VPCMIDO	AWS VPC on-premise equivalent; in partnership with Midokura.

Object Storage Compatibility

Storage Array	Type/Series	Version
Ceph RGW	Open source enterprise	0.94.6
Riak CS	Open source enterprise	1.5.1

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	
HP 3PAR SAN	7000 StoreServ Storage systems	3PAR Release Version 3.2.1 3PAR Web Services API 1.4.2	Virtual copy and thin provisioning features required. Virtual domains feature optional.
Ceph RDB	Any CentOS/RHEL machine with disk, compute and network resources	0.94.6	
Direct attached storage	Any DAS-JBOD	N/A	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	Linux SCSI target framework is required.
Remote disk	N/A	N/A	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space (multiple disks in a RAID 5/10 recommended).

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.3.1](#) with HPE Helion Eucalyptus version 4.2.

Eucalyptus Management Console

Management Console 4.2 operates with the above compatibilities. See [Browser Support](#) for a list of supported browsers in this release.

4.2.1

This section contains release notes for HPE Helion Eucalyptus version 4.2.1.

What's New?

This topic lists new features in HPE Helion Eucalyptus 4.2.1.

New Features

HPE Helion Eucalyptus 4.2.1 is a maintenance release and contains no new features.

Resolved Issues

This section lists previous issues resolved by HPE Helion Eucalyptus 4.2.1.

Issue	Description
EUCA-4115	Concurrent address allocations can fail (euca-allocate-address)
EUCA-10892	CloudFormation JSON response messages include internal properties
EUCA-11262	Failed finding service account for service: one-cc-1 error seen in log repeatedly
EUCA-11398	ELB fails to create instance per availability zone
EUCA-11444	Odd Error Returned from ModifyLoadBalancerAttributes
EUCA-11487	Warning logged when starting eucalyptus-nc
EUCA-11498	In a multi-cluster cloud, PV images can not be launched using EKI and ERI options in one AZ
EUCA-11511	PV instance migration doesn't work
EUCA-11513	Failure to multi-delete objects by non-bucket-owning accounts
EUCA-11533	Do not allow upper-case letters in bucket name and prefix in ELB access logs
EUCA-11555	Accounts can delete each others' access keys given the keys' IDs - 4.2.x
EUCA-11623	4.2 upgrade fails with error "duplicate key value violates unique constraint "uk_r165nl545vks5p0miwvks5yb9"
EUCA-11624	4.2 upgrade should handle cloud.identifier_canonicalizer property
EUCA-11628	GNI file does not add ingressRules during 4.1.x to 4.2.0 upgrade
EUCA-11634	Enable instance dns name resolution on upgrade
GUI-1695	Entering password into "Create Image" dialog does not work on Windows/ IE11
GUI-1749	Eucaconsole early output not captured to logfile
GUI-1754	cloudformation.samples.bucket config can break stack wizard
GUI-1843	Update aws instance types based on current EC2 list
GUI-1853	Multi-object delete fails to return errors (if there are any)
GUI-1923	Internal ELB groups not listed in rule widget
GUI-1925	Large number of volumes breaks volumes landing page

Issue	Description
GUI-1926	Upload button should be hidden when uploads are disabled in console.ini
GUI-1993	GUI can't deal with objects that are stored with // in paths
GUI-2137	Notification has text cut off
GUI-2148	Console error thrown after modifying attribute of stopped instance
GUI-2154	User data not pre-populating when creating instance or launch config from existing instance.
GUI-2159	Create Load Balancer button available without selecting required bucket
GUI-2162	Create Bucket link in Create Load Balancer can lose user's entered parameters when uppercase letters are entered for bucket name
GUI-2164	bundling progress should be updated from bundle task progress
GUI-2166	Status bar looks like button on scaling group details "Instances" tab
GUI-2168	Creating an account with 'admin' user entered prevents download of credentials
GUI-2171	Eucaconsole does not always load the latest IE mode
GUI-2173	ELB access logs collection fails when logs prefix contains an uppercase letter
GUI-2174	Console does not allow an empty prefix to be entered for ELB access logs
GUI-2177	bucket landing page: icon in tile header is too big
GUI-2190	Credentials should not be automatically created at account creation

Resolved Security Issues

This topic describes security issues related to HPE Helion Eucalyptus 4.2.1.

Security Bulletin ID	CVSS Base Score	Affected Products
HPSBGN03526	4.6	HPE Helion Eucalyptus 4.1.1 and earlier, HPE Helion Eucalyptus 4.2.0
HPSBGN03527	4.6	HPE Helion Eucalyptus 3.4.0 to 4.2.0

See the [HPE Support Center](#) for further details.



Note: HPE Helion Eucalyptus security bulletins are usually published 2 weeks after the GA date.

Known Issues

This topic lists known issues in HPE Helion Eucalyptus 4.2.1 and its dependencies.

Please contact Eucalyptus Support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Security group rules using instances Public IP are not enforced in MANAGED mode (EUCA-11476)	Security group rules are enforced in the FORWARD chain, which is processed before POSTROUTING (where SNAT happens). Thus, security group rules that use instances public IP addresses will not match in FORWARD chain (packets will have instances' private IP address in the FORWARD chain). See linked bug for more information.
Instance Migration Fails when SELinux is enabled and is in Permissive mode (EUCA-11803)	<p>Instance migration fails when SELinux is enabled and is in permissive mode.</p> <p>Workaround: Disable SELinux and reboot the system. For example:</p> <pre># vi /etc/selinux/config SELINUX=disabled # reboot</pre>

Outstanding known issues from previous releases:

Issue	Description
Cloud restart necessary when removing public IPs (EUCA-9326)	While running TEST-1905 for edge mode, it was discovered that removing a public IP requires a cloud service restart while adding public/private IPs, removing private IPs and changing the subnet does not require a cloud service restart.
Internal loadbalancer is not functional (EUCA-11324)	<p>In VPC, an internal load balancer has ELB instances that is in a private subnet without a public IP. That instance cannot reach ELB service to retrieve information on the ELB, update its status, etc., without configuring a NAT instance in the VPC.</p> <p>Workaround: None at this time.</p>
Non-default security group for ELB/VPC blocks ports for ELBs (EUCA-11374)	<p>In VPC, all egress ports for non-default security groups are blocked. When the non-default security group is used with the ELB, the ELB will not be functional until the required ports are opened.</p> <p>Workaround: Use Eucalyptus to run the following commands to authorize each of the egress ports (TCP:8773 (Web service), UDP:53 (DNS), and UDP:123) for the non-default security group:</p> <pre>euca-authorize --egress -P tcp -p 8773 -s 0.0.0.0/0 sg-f3a511c4 euca-authorize --egress -P udp -p 53 -s 0.0.0.0/0 sg-f3a511c4 euca-authorize --egress -P udp -p 123 -s 0.0.0.0/0 sg-f3a511c4</pre>
euserver-describe-services with secure http endpoint results in python2.6 InsecureRequestWarning. (EUCA-11519)	<p>When an administrator uses HTTPS and doesn't enable certificate verification, running any command thereafter, will display the InsecureRequestWarning message.</p> <p>Workaround: Use a valid certificate and set <code>verify-ssl = true</code> in the region's configuration, or use plain HTTP.</p>

Issue	Description
ELB access logs collection fails when logs prefix contains an uppercase letter (EUCA-11524)	Uppercase characters in a path is invalid, resulting in an error. Workaround: Specify the prefix with lowercase characters.
Unable to launch EBS instance or delete volume when launched in different zone than created. (EUCA-10697)	See linked bug for more information.
Failed EMIs from CreateImage might leave behind orphaned snapshots (EUCA-11184)	<ol style="list-style-type: none"> 1. Use <code>euca-describe-images</code> to see if the EMI associated with CreateImage has a failed status. If any failed, then: 2. Use <code>euca-describe-snapshots</code> to find any snapshot IDs associated with the failed CreateImage EMI ID. The snapshot description includes the EMI ID and Instance ID. Note that the snapshot state can be failed or completed. <p>Workaround: The cloud administrator and/or cloud user (with proper IAM access to the account's snapshots) can simply delete any orphaned snapshots.</p>

Technology Preview

This topic describes technology preview and its support scope. It also provides a list of features currently in technology preview.

Technology Preview Definition

Technology preview features provide early access to upcoming product innovations, enabling you to test functionality and provide feedback during the development process.

Customers and users should be aware that technology preview features:

- **are not fully supported under HPE (formerly Eucalyptus Systems, Inc.) subscription level agreements.**
- **may not be functionally complete.**
- **are not intended for production use.**

In some cases, this may be applicable to the entire cloud deployment depending on the subsystems affected by the feature in technology preview. As HPE considers making future iterations of technology preview features generally available, we will attempt to resolve any issues that customers experience when using these features.

Upgrade Compatibility and Support Scope

During the development of a technology preview feature, additional components may become available to the public for testing. Because technology preview features are still under development, HPE cannot guarantee the stability of such features. As a result, if you are using technology preview features, you may not be able to seamlessly upgrade to subsequent HPE Helion Eucalyptus releases.

Some preview features are included in this release to provide early access to features that HPE may support fully in future releases, but HPE cannot guarantee that support will be provided or issues resolved in a future release. Some technology preview features may only be available for specific hardware architectures.

The HPE Helion Eucalyptus customer success team may create bug reports on behalf of support cases filed by subscribed customers. These bug reports will then be forwarded to HPE Helion Eucalyptus engineering as proposed for inclusion in a future release.

Current Technology Preview Features

The following features are in technology preview for this HPE Helion Eucalyptus release:

- There are no features in technology preview in this release.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HPE Helion Eucalyptus 4.2 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.7	x86_64
RHEL+KVM	6.7	x86_64

Java

Component	Version	Notes
JVM	7	For the CLOUD_OPTS setting in the /etc/eucalyptus/eucalyptus.conf file: either do not set --java-home, or --java-home must point to a version 7 JVM.

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Deprecated	n/a
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.
VPCMIDO	AWS VPC on-premise equivalent; in partnership with Midokura.

Object Storage Compatibility

Storage Array	Type/Series	Version
Ceph RGW	Open source enterprise	0.94.6
Riak CS	Open source enterprise	1.5.1

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	
HP 3PAR SAN	7000 StoreServ Storage systems	3PAR Release Version 3.2.1 3PAR Web Services API 1.4.2	Virtual copy and thin provisioning features required. Virtual domains feature optional.
Ceph RDB	Any CentOS/RHEL machine with disk, compute and network resources	0.94.6	
Direct attached storage	Any DAS-JBOD	N/A	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	Linux SCSI target framework is required.

Storage Array	Type/Series	Version	Notes
Remote disk	N/A	N/A	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space (multiple disks in a RAID 5/10 recommended).

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.3.1](#) with HPE Helion Eucalyptus version 4.2.

Eucalyptus Management Console

Management Console 4.2 operates with the above compatibilities. See [Browser Support](#) for a list of supported browsers in this release.

4.2.0

This section contains release notes for HPE Helion Eucalyptus version 4.2.0.

What's New?

This topic lists new features in HPE Helion Eucalyptus 4.2.0.

New Features

Feature	Description
HP 3PAR SAN support.	This feature enables support for an additional backend SAN storage provider, which can be configured for the Storage Controller. For more information, see Configure the Storage Controller and Use an HP 3PAR SAN .
Updated Management Console design.	The Management Console has an updated look-n-feel. Look for refreshed branding, new navigation, and enhanced search capability. For more information, see Navigate the Dashboard .
ELB, CloudFormation, and VPC support in the Management Console.	Elastic Load Balancing (ELB) can now be configured through the console. Create and manage stacks for CloudFormation is available. Virtual Private Cloud (VPC) options for network configurations throughout various applications are supported. For more information, see: <ul style="list-style-type: none"> • Work with Load Balancers • Work with Stacks
Management Console pre-configured for secured connections.	Installing nginx separately is no longer necessary to enable secured connections. By default, the console is configured to use HTTPS to allow secure connections from a web server to a browser. For more information, see Run the Management Console on nginx .
Additional ELB features.	ELB now has configurable HTTPS/SSL protocols and ciphers, support for backend server authentication, and cross-zone load balancing enabled.
VPC support.	Eucalyptus Virtual Private Cloud (VPC) allows you to run instances inside an isolated virtual network that you define. For more information, see Using Virtual Private Cloud .
Ceph-RBD support.	With this release, Ceph-RBD is now a fully supported backend storage provider; it can be configured for the Storage Controller. For more information, see Configure the Storage Controller and Use Ceph-RBD .
Identity Federation.	Cloud administrators can create a federation of Eucalyptus clouds where a cloud user using their existing credentials can access any of the federated Eucalyptus cloud regions. For more information, see Manage Regions .
IAM quotas.	Added new IAM quota variables. For more information, see Quotas .
Improvements added to Image Management.	User certificates and private keys are longer required for image bundling.

Resolved Issues

This section lists previous issues resolved by HPE Helion Eucalyptus 4.2.0.

Issue	Description
EUCA-2008	euca_conf: excessive credentials warnings should be optional
EUCA-2346	DescribeInstances api call result difference between AWS and Eucalyptus
EUCA-2428	Race condition when adding users
EUCA-3100	DescribeProperties fails to escape right angle braces
EUCA-3856	Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted.
EUCA-4032	euca_conf behaves differently from equivalent euca-__ commands
EUCA-4045	Handling of credentials given at the command line is broken
EUCA-4083	Registration commands duplicate some debug output
EUCA-4341	Stop using M2Crypto for euca-get-credentials
EUCA-4587	Deprecate signature v1
EUCA-4630	euca_conf displays python error when using --debug option
EUCA-4963	boto - conn.get_image incompatibility with EC2
EUCA-5296	Use of boto.utils.find_class buries useful exceptions
EUCA-5339	Unable to download creds with euca_conf after changing https_port parameter
EUCA-5627	Clock skew errors should mention the server's current time
EUCA-5750	ELB: Vague error message when trying to add an instance that is in an AZ that the LB is not listening on
EUCA-5964	No error message when invalid DNS name is ignored
EUCA-6303	Sending multiple filters with same name is rejected
EUCA-6578	Admin tool commands does not behaves in the same way
EUCA-6589	S3 DeleteObjects fails with HTTP 400 error
EUCA-7315	uploading blank policy file throws "failed to marshall type com.eucalyptus.auth.euare.PutUserPolicyType" exception
EUCA-7657	ANY queries for zone apex return SERVFAIL results
EUCA-8089	Deleting Load Balancer That Spans Multiple AZs (clusters) Fails to Delete the Associated Autoscaling Group
EUCA-8135	Multi-AZ ELB deploys autoscaling group on one AZ
EUCA-8366	Security group rules with CIDR source ip ranges should also apply between security groups
EUCA-8508	registering nodes succeeds with throwing error 8777 port
EUCA-8756	Enforce the required minimum heap size when parsing the eucalyptus-cloud options
EUCA-8808	euca-get-console-output fails if cc is not available
EUCA-8951	Error Message When Registration Fails for OSG is a bit verbose
EUCA-9005	OSG S3 quota can be exceeded by concurrent PUTs
EUCA-9079	AWS Error Code InvalidVolume.NotFound Not Supported
EUCA-9460	clean Stuck Volumes error

Issue	Description
EUCA-9481	Simultaneous existence of registered/approved/confirmed and enabled/disabled for users is confusing
EUCA-9491	CLC DBs are getting out of sync
EUCA-9673	DescribeInstanceTypes and DescribeAvailabilityZones expose cloud resource information to regular users
EUCA-9744	Investigate changing refresh intervals for Node states
EUCA-9789	Cannot stop source node controller from running new instances on it
EUCA-9806	S3 GET from browser that includes If-None-Match header fails
EUCA-9959	"MalformedPolicyDocument: Policy document should not specify a principal." Should Be Returned When Using Incorrect Access Policy File During IAM Role Creation
EUCA-10023	NoSuchTagSet exception is not returned properly
EUCA-10028	Remove www.httpproxy cloud properties
EUCA-10040	Possible Resource Leak
EUCA-10041	Possible Resource Leak
EUCA-10125	Imaging VM can't communicate with Imaging service
EUCA-10138	Cloudformation templates do not work with boolean/number fields
EUCA-10157	Log files should be readable by group 'eucalyptus'.
EUCA-10158	Cannot update DNS server once set for a VPC
EUCA-10159	VPC: DNS Search path is not being added to resolv.conf
EUCA-10225	Re-creating an ELB with the same name fails with 'InternalFailure' error
EUCA-10288	VMs lose connectivity to public IPs
EUCA-10296	VPC: Internal ELB assigns itself a public IP, DNS resolves to that IP
EUCA-10323	eucanetd fails to apply network isolation rules
EUCA-10490	Super ugly stack traces on imaging worker launch
EUCA-10505	VPC- Security group src group cidr value not being applied to rules
EUCA-10611	Disable reporting by default
EUCA-10612	GetCertURL is hard coded in getcredentials
EUCA-10614	Cleanup SC async task execution threads/pools
EUCA-10625	CloudFormation JSON incorrectly wraps response
EUCA-10627	DescribeAvailabilityZones should honor the requested zone name when "verbose" is present in the request
EUCA-10630	User API Service registration should be idempotent
EUCA-10643	Condition Function does not work in CloudFormation "Outputs"
EUCA-10645	Metadata fails when running multiple instances at once
EUCA-10649	Block device mapping 'NoDevice' param should not require boolean value
EUCA-10680	In VPC instances can become available before metadata is setup

Issue	Description
EUCA-10689	CLC should exclude VPC resources from the global network view when not used
EUCA-10691	cloud admin cannot delete other account's vpc after the account is deleted
EUCA-10706	Volume from ImportVolume Shown 'Available' Before Importing Task Has Been Completed
EUCA-10708	If Incorrect AZ Used With ImportVolume, Imaging Worker Instances Launch Regardless
EUCA-10722	Property '.cluster.networkmode' needs input validation
EUCA-10731	eucadmin tools fail if HTTP proxy is setup, also ignores no_proxy variable
EUCA-10748	Can not createimage from an instance who's EMI is deregistered.
EUCA-10764	Imaging service should relay failures from lack of VM disk space to the user
EUCA-10777	DescribeProperties should return Default values
EUCA-10779	Stop shipping unused jars in eucalyptus-enterprise
EUCA-10782	Cloud admin services respond to v4-signed requests with 404s
EUCA-10787	Paravirt images are no longer converted by the imaging worker.
EUCA-10792	Reduce default cloud.vmtime.terminated_time to 2
EUCA-10794	Java bootstrapper should set a reasonable heap size by default when starting up
EUCA-10799	Default PermGen should be larger
EUCA-10803	SC clean up of failed volumes/snapshots should not be in CLC->SC describe resources path
EUCA-10813	DescribeProperties should return read/write attributes
EUCA-10822	cloud.vmtime.mac_prefix and 'Cluster:MacPrefix' in the cloud.network.network_configuration JSON must match in order to get instance connectivity.
EUCA-10824	Eucaconsole Package Dependencies
EUCA-10837	DNS server returns SERVFAIL instead of NXDOMAIN
EUCA-10848	DNS names are treated as case sensitive in HTTP Host headers
EUCA-10882	Accounts can delete each others' access keys given the keys' IDs
EUCA-10913	multiple requests to imaging services makes it dysfunctional
EUCA-10917	CLONE - Default PermGen should be larger for 4.2
EUCA-10977	Midonet chains should be cleaned after instance is terminated
EUCA-11001	ELB VM fails to restart haproxy process if there are no listeners configured
EUCA-11023	CLONE - eucanetd can not start dhcpd due to udp port binding conflict from dnsmasq
EUCA-11046	Running 40 ELBs make CLC very slow
EUCA-11047	ELB fails to put cloudwatch data
EUCA-11057	euscale-update-auto-scaling-group accepts invalid zone and makes ASG malfunction
EUCA-11083	Security group rules using an Instance's Public IP will fail if the instances are on the same NC
EUCA-11137	CloudFormation stack creation fails after simple workflow timer error
EUCA-11142	Request log does not log Query API parameters
EUCA-11155	SetLBListenerSSLCert can delete certificates in use

Issue	Description
EUCA-11172	Auto scaling should not replace unhealthy instances when over desired capacity
EUCA-11185	Deleting multiple listeners from ELB can cause failure to restart haproxy
EUCA-11201	Threads from LoadBalancingBackend.##### consuming substantial amounts of CPU
EUCA-11235	EDGE: setting DISABLE_L2_ISOLATION option currently will block all VM traffic
EUCA-11236	EDGE: race between VMs starting and eucanetd applying L2 isolation rules causing no net to VMs4
EUCA-11241	EDGE: race between global network view broadcast, VM run, and eucanetd network implementation causing VMs to come up without net
EUCA-11242	Eucalyptus stats directory has wrong perms on creation
EUCA-11247	Ephemeral space formatting does not match AWS
EUCA-11248	Coordinate health checks when multiple ELB VMs run for an LB
EUCA-11296	ELB dns resolution should be in round-robin basis
EUCA-11309	500 Internal Server Error for S3 GET requests with If-None-Match and If-Modified-Since headers
EUCA-11409	EBS snapshots and volumes from snapshots fail against NetApp Data ONTAP 8.3.1
GUI-1127	Required fields should not be checked if a user clicks the Cancel button
GUI-1146	If logon page is left idle, next initial logon attempt fails
GUI-1169	Upgrade Foundation to latest stable version
GUI-1340	Error for Unauthorized Cloud User Can Be More Accurate
GUI-1457	refactor policy gen tool to lazy load and be zippy
GUI-1524	Forward-slash characters are not allowed in key pairs and trigger HTTP 500
GUI-1545	Action menu is cut off, leaving some options in-accessible
GUI-1549	Issue with the launch instance wizard image loading when CLC is changed
GUI-1565	Invalid/misleading error message when console.ini setting 'session.secure' is set to 'false'.
GUI-1577	monitoring selection in instance and launch config wizards needs to be more specific w/r/t monitoring settings for euca vs AWS
GUI-1587	Allow a user to browse a shared bucket and download shared objects
GUI-1591	revise bubble help on sharing panel for warning re: all users grantee
GUI-1623	Removing a tag in the launch instance wizard's tag editor doesn't update tags list in the summary
GUI-1624	IAM Policy Editor generates a 404 in the JS console when switching to the Custom Policy tab
GUI-1629	About the Team dialog returns a CSP violation in the JS console
GUI-1639	Invalid security group rule warning
GUI-1640	Connect to Instance dialog: conditionally display keypair-related instructions only when instance has key pair
GUI-1641	Switching console locale does not work
GUI-1656	In console.ini we should explain that "clchost" must be assigned the IP or DNS name of machine running User Facing Services and not the CLC
GUI-1670	When user enters incorrect current password (after expiry), internal error

Issue	Description
GUI-1694	Non-latin characters in scaling policy name trigger Internal error
GUI-1696	"Create Image" throws internal error for instances launched from BFEBS image if that image is no longer in the cloud
GUI-1700	When a file is uploaded to an AWS bucket using euca-create-volume the file details can not be viewed with eucaconsole
GUI-1722	Console doesn't support DNS service endpoints
GUI-1795	change clchost to ufshost in console.ini
GUI-1802	Going to IAM user "Add Access Policy" dialog throws javascript error
GUI-1819	add custom protocol for security groups to support sctp
GUI-1869	Field labels on attach volume dialog do not align quite right
GUI-1921	Deleted and failed volumes don't display proper links and action menu items on volumes landing page

Resolved Security Issues

This topic describes security issues related to HPE Helion Eucalyptus 4.2.0.

There are no security bulletins for the 4.2.0 release.

Known Issues

This topic lists known issues in HPE Helion Eucalyptus 4.2.0 and its dependencies.

Please contact Eucalyptus Support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Internal loadbalancer is not functional (EUCA-11324)	In VPC, an internal load balancer has ELB instances that is in a private subnet without a public IP. That instance cannot reach ELB service to retrieve information on the ELB, update its status, etc., without configuring a NAT instance in the VPC. Workaround: None at this time.
Non-default security group for ELB/VPC blocks ports for ELBs (EUCA-11374)	In VPC, all egress ports for non-default security groups are blocked. When the non-default security group is used with the ELB, the ELB will not be functional until the required ports are opened. Workaround: Use Euca2ools to run the following commands to authorize each of the egress ports (TCP:8773 (Web service), UDP:53 (DNS), and UDP:123) for the non-default security group: <pre>euca-authorize --egress -P tcp -p 8773 -s 0.0.0.0/0 sg-f3a511c4 euca-authorize --egress -P udp -p 53 -s 0.0.0.0/0 sg-f3a511c4 euca-authorize --egress -P udp -p 123 -s 0.0.0.0/0 sg-f3a511c4</pre>
PV instance migration doesn't work (EUCA-11511)	Paravirtual instances cannot be migrated using euserv-migrate-instance. There are no workarounds at this time.

Issue	Description
Failure to multi-delete objects by non-bucket-owning accounts (EUCA-11513)	Workaround: You may be able to complete this operation by means of another S3 tool, like Cloudberry Explorer, S3-curl, or S3Organizer, for example.
clcadmin-assume-system-credentials produces unusable output when eucalyptus/admin has more than one active access key (EUCA-11516)	<p>The clcadmin-assume-system-credentials command doesn't handle database queries that return more than one result properly.</p> <p>Workaround:</p> <ol style="list-style-type: none"> When you first run clcadmin-assume-system-credentials, the resulting output shows: <pre>export AWS_IAM_URL=http://127.0.0.1:8773/services/Euare; export EMPYREAN_URL=http://127.0.0.1:8773/services/Empyrean; export PROPERTIES_URL=http://127.0.0.1:8773/services/Properties; export AWS_ACCESS_KEY_ID="AKIAANXD4CQD3EXAMPLE"; export AWS_ACCESS_KEY="AKIAANXD4CQD3EXAMPLE"; export EC2_ACCESS_KEY="AKIAANXD4CQD3EXAMPLE"; export AWS_SECRET_ACCESS_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE AKIABBNYD5CRE4EXAMPLE"; export AWS_SECRET_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE"; AKIABBNYD5CRE4EXAMPLE"; export EC2_SECRET_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE"; AKIABBNYD5CRE4EXAMPLE"; unset AWS_CREDENTIAL_FILE; unset AWS_SESSION_TOKEN; unset AWS_SECURITY_TOKEN; unset EC2_USER_ID;</pre> <div data-bbox="508 1136 553 1188" data-label="Image"></div> <p>Note: Notice the environment variable, AWS_SECRET_ACCESS_KEY returns two words instead of the usual one, as shown in the bolded text.</p> Copy that line without the second word, then paste it in the shell: <pre>export AWS_SECRET_ACCESS_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE"</pre> <p>The following corrected output displays:</p> <pre>export AWS_IAM_URL=http://127.0.0.1:8773/services/Euare; export EMPYREAN_URL=http://127.0.0.1:8773/services/Empyrean; export PROPERTIES_URL=http://127.0.0.1:8773/services/Properties; export AWS_ACCESS_KEY_ID="AKIAANXD4CQD3EXAMPLE"; export AWS_ACCESS_KEY="AKIAANXD4CQD3EXAMPLE"; export EC2_ACCESS_KEY="AKIAANXD4CQD3EXAMPLE"; export AWS_SECRET_ACCESS_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE"; export AWS_SECRET_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE"; export EC2_SECRET_KEY="sfywrHlsRJ4joukXCEfymdEbaNEZH117EXAMPLE"; unset AWS_CREDENTIAL_FILE; unset AWS_SESSION_TOKEN; unset AWS_SECURITY_TOKEN; unset EC2_USER_ID;</pre> Paste the corrected output into the terminal.

Issue	Description
euser-describe-services with secure http endpoint results in python2.6 InsecureRequestWarning. (EUCA-11519)	<p>When an administrator uses HTTPS and doesn't enable certificate verification, running any command thereafter, will display the InsecureRequestWarning message.</p> <p>Workaround: Use a valid certificate and set <code>verify-ssl = true</code> in the region's configuration, or use plain HTTP.</p>
ELB access logs collection fails when logs prefix contains an uppercase letter (EUCA-11524)	<p>Uppercase characters in a path is invalid, resulting in an error.</p> <p>Workaround: Specify the prefix with lowercase characters.</p>
Large number of volumes breaks volumes landing page (GUI-1925)	<p>There is a limit of 5,000 volumes and 10,000 snapshots per account. The filter list limit is 200 items, which is the maximum number of filter values specified in a single call.</p> <p>Workaround: Have less volumes per account, or avoid using the console for viewing them.</p>
Creating an account with 'admin' user entered prevents download of credentials (GUI-2168)	<p>Workaround: Do not create an 'admin' user as it is created automatically for every account.</p>
Eucacore does not always load the latest IE mode (GUI-2171)	<p>In some cases, where console users are running Internet Explorer 11 in an intranet setting, IE will force the console into IE7 Compatibility mode. This affects the page layout, making the console more difficult to use.</p> <p>Workaround #1 - Disable the automatic configuration script in IE11:</p> <ol style="list-style-type: none"> 1. Go to Internet Options > Connections > LAN settings. 2. De-select the checkbox for Use automatic configuration script to disable it. 3. Exit and restart IE. 4. Log back into the Console. <p>Workaround #2 - The console administrator may add a line to the nginx.conf file under the SSL configured server:</p> <pre>server { listen 443 ssl; server_name ~^(?<domain>.+)\$; # SSL configuration ssl_protocols TLSv1 TLSv1.1 TLSv1.2; ssl_certificate /Users/ashamblin/keys/server.crt; ssl_certificate_key /Users/ashamblin/keys/server.key; add_header "X-UA-Compatible" "IE=Edge"; add_header Strict-Transport-Security "max-age=31536000; includeSubDomains"; # end of SSL configuration.</pre>
Console does not allow an empty prefix to be entered for ELB access logs (GUI-2173)	<p>The Prefix field is optional. However, when the field is left blank and saved, the console auto-generates a prefix with uppercase characters, which is invalid, resulting in an error.</p> <p>Workaround: Using all lowercase characters, enter a path in the Prefix text field to specify the path within the bucket to store your log files.</p>

Issue	Description
ELB access logs aren't collected when the logs prefix is left blank (and console auto-generates prefix) (GUI-2174)	The Prefix field is optional. However, when the field is left blank and saved, the console auto-generates a prefix with uppercase characters, which is invalid, resulting in an error. Workaround: Using all lowercase characters, enter a path in the Prefix text field to specify the path within the bucket to store your log files.

Outstanding known issues from previous releases:

Issue	Description
Unable to launch EBS instance or delete volume when launched in different zone than created. (EUCA-10697)	See linked bug for more information.
Failed EMIs from CreateImage might leave behind orphaned snapshots (EUCA-11184)	<ol style="list-style-type: none"> 1. Use <code>euca-describe-images</code> to see if the EMI associated with CreateImage has a failed status. If any failed, then: 2. Use <code>euca-describe-snapshots</code> to find any snapshot IDs associated with the failed CreateImage EMI ID. The snapshot description includes the EMI ID and Instance ID. Note that the snapshot state can be failed or completed. <p>Workaround: The cloud administrator and/or cloud user (with proper IAM access to the account's snapshots) can simply delete any orphaned snapshots.</p>

Technology Preview

This topic describes technology preview and its support scope. It also provides a list of features currently in technology preview.

Technology Preview Definition

Technology preview features provide early access to upcoming product innovations, enabling you to test functionality and provide feedback during the development process.

Customers and users should be aware that technology preview features:

- are not fully supported under HPE (formerly Eucalyptus Systems, Inc.) subscription level agreements.
- may not be functionally complete.
- are not intended for production use.

In some cases, this may be applicable to the entire cloud deployment depending on the subsystems affected by the feature in technology preview. As HPE considers making future iterations of technology preview features generally available, we will attempt to resolve any issues that customers experience when using these features.

Upgrade Compatibility and Support Scope

During the development of a technology preview feature, additional components may become available to the public for testing. Because technology preview features are still under development, HPE cannot guarantee the stability of such

features. As a result, if you are using technology preview features, you may not be able to seamlessly upgrade to subsequent HPE Helion Eucalyptus releases.

Some preview features are included in this release to provide early access to features that HPE may support fully in future releases, but HPE cannot guarantee that support will be provided or issues resolved in a future release. Some technology preview features may only be available for specific hardware architectures.

The HPE Helion Eucalyptus customer success team may create bug reports on behalf of support cases filed by subscribed customers. These bug reports will then be forwarded to HPE Helion Eucalyptus engineering as proposed for inclusion in a future release.

Current Technology Preview Features

The following features are in technology preview for this HPE Helion Eucalyptus release:

- There are no features in technology preview in this release.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HPE Helion Eucalyptus 4.2 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.7	x86_64
RHEL+KVM	6.7	x86_64

Java

Component	Version	Notes
JVM	7	For the CLOUD_OPTS setting in the /etc/eucalyptus/eucalyptus.conf file: either do not set --java-home, or --java-home must point to a version 7 JVM.

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Deprecated	n/a
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.
VPCMIDO	AWS VPC on-premise equivalent; in partnership with Midokura.

Object Storage Compatibility

Storage Array	Type/Series	Version
Ceph RGW	Open source enterprise	0.94.6
Riak CS	Open source enterprise	1.5.1

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	
HP 3PAR SAN	7000 StoreServ Storage systems	3PAR Release Version 3.2.1 3PAR Web Services API 1.4.2	Virtual copy and thin provisioning features required. Virtual domains feature optional.
Ceph RDB	Any CentOS/RHEL machine with disk, compute and network resources	0.94.6	
Direct attached storage	Any DAS-JBOD	N/A	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	Linux SCSI target framework is required.

Storage Array	Type/Series	Version	Notes
Remote disk	N/A	N/A	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space (multiple disks in a RAID 5/10 recommended).

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.3.1](#) with HPE Helion Eucalyptus version 4.2.

Eucalyptus Management Console

Management Console 4.2 operates with the above compatibilities. See [Browser Support](#) for a list of supported browsers in this release.


4.1.2

This section contains release notes for Eucalyptus version 4.1.2.

What's New?

New Features

Eucalyptus 4.1.2 introduces the following new feature.

Feature	Description
Adds the ability to pass SCTP traffic between instances.	<p>This feature enables SCTP traffic passing between instances when using EDGE network mode.</p> <ol style="list-style-type: none"> 1. SCTP requires the conn track modules to be installed on each NC running in EDGE mode: <pre>modprobe nf_conntrack_proto_sctp</pre> 2. Check the underlying network to verify it is configured and capable of passing new types of IP traffic. Perform the test outside the Eucalyptus cloud. 3. Modify the <code>cloud.network.ec2_classic_additional_protocols_allowed</code> property: <pre>euca-modify-property -p cloud.network.ec2_classic_additional_protocols_allowed=132</pre> 4. Set the <code>euca-authorize</code> option to <code>--protocol 132</code> (the <i>IANA-assigned protocol number</i> for SCTP) to enable SCTP for a security group: <pre>euca-authorize mygroup --protocol 132</pre> <p> Note:</p> <ul style="list-style-type: none"> • If you need to remove the rule from a security group, use <code>euca-revoke</code>. • If you want to remove the protocol from the cloud property, all the related security group rules should be revoked first. • All ports are available to SCTP. (Port ranges are ignored.)

Resolved Issues

Eucalyptus 4.1.2 resolves issues listed in the following table.

Issue	Description
DOC-1430	Account Creation page doesn't say how to create an account.
DOC-1566	Remove VMware from the docs (deprecated in 4.1.0).
DOC-1608	Change list for euca2ools 3.2.1, 3.1.3.
DOC-1610	Add OSG documentation defaults.
EUCA-5984	Load Balancer emi property not validated.
EUCA-6947	EBS-backed instances fail to attach non-root EBS volumes when restarting the instance.
EUCA-9239	The cloud request log records the full contents for POST requests (SOAP messages, etc.).
EUCA-9409	Add better message in cases where import-volumes tries to import volumes that are larger than max allowed volume size.
EUCA-10031	Add the ability to pass SCTP traffic between instances. (<i>New functionality</i>)
EUCA-10121	WaitCondition timeout not honored.
EUCA-10166	eucanetd cannot start dhcpd due to udp port binding conflict from dnsmasq.
EUCA-10281	Cannot reset value for scpath/ncpath.
EUCA-10433	Cannot migrate EBS backed instance.
EUCA-10559	Null checks in Equallogic provider command parsing.
EUCA-10695	Generic EDGE Networking Deployment Improvements.
EUCA-10778	Large image fails to run due to 403 Client Error: Forbidden.
EUCA-10799	Default PermGen should be larger.
EUCA-10882	See Eucalyptus Security Advisory ESA-32 .
EUCA-10929	Update the service image for 4.1.2.
EUCA-11001	ELB VM fails to restart haproxy process if there are no listeners configured.
EUCA-11034	Instance ran from PV image fails to get migrated.
EUCA-11047	ELB fails to put CloudWatch data.
EUCA-11062	Unable to resolve CNAME referencing load balancer instance from within an instance.
EUCA-11069	Elastic IP association lost when CLC is restarted.
EUCA-11185	Deleting multiple listeners from ELB can cause a failure to restart haproxy.
GUI-1821	Unable to view roles from management console.
GUI-1839	Precisely-pinned boto version causing new installs to fail to start.

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 4.1.2 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Failed EMIs from CreateImage might leave behind orphaned snapshots (EUCA-11184)	<ol style="list-style-type: none"> 1. Use <code>euca-describe-images</code> to see if the EMI associated with CreateImage has a failed status. If any failed, then: 2. Use <code>euca-describe-snapshots</code> to find any snapshot IDs associated with the failed CreateImage EMI ID. The snapshot description includes the EMI ID and Instance ID. Note that the snapshot state can be failed or completed. <p>Workaround: The cloud administrator and/or cloud user (with proper IAM access to the account's snapshots) can simply delete any orphaned snapshots.</p>

Outstanding known issues from previous releases:

Issue	Description
Unable to launch EBS instance or delete volume when launched in different zone than created. (EUCA-10697)	See linked bug for more information.
Older imaging worker fails to convert paravirt on 4.1.1 (EUCA-10787)	<p>After upgrading from 4.0.2 to 4.1.1 without updating the image worker. Paravirt image conversion fails.</p> <p>Workaround: See linked bug for more information.</p>

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HP Helion Eucalyptus 4.1 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.6	x86_64
RHEL+KVM	6.6	x86_64

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Enterprise	i386/x86_64
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.

Object Storage Compatibility

Storage Array	Type/Series	Version	HA Support
Riak CS	Open source enterprise	1.5.1	Yes

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	HA Support	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	Yes	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	Yes	
Ceph RDB	Any CentOS/RHEL machine with disk, compute and network resources	0.80.5-9	Yes	

Storage Array	Type/Series	Version	HA Support	Notes
EMC	VNX series	FLARE v5.32	Yes	Navisphere CLI 7.32.0.5.54 or higher required.
Direct attached storage	Any DAS-JBOD	N/A	No	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	No	Linux SCSI target framework is required.
Remote disk	N/A	N/A	No	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space. (multiple disks in a RAID 5/10 recommended).

High availability (HA) configurations must be equal in capacity.

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.2](#) with HP Helion Eucalyptus version 4.1.

4.1.1

This section contains release notes for Eucalyptus version 4.1.1.

What's New?

New Features

Eucalyptus 4.1.1 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 4.1.1 resolves issues listed in the following table.

Issue	Description
EUCA-1976	euca-describe-availability-zone allows invalid misspell of verbose
EUCA-4878	euca-create-volume against an invalid availability zone returns bogus error
EUCA-5437	Instance passwordData attribute is broken in Eucalyptus
EUCA-5979	BundleInstance on KVM always produces x86_64 images
EUCA-6367	plea for a nice error message for euca-migrate-instances
EUCA-6570	Deleting a non-existent ELB should succeed
EUCA-7337	EBS image registration ignores user-supplied architecture argument
EUCA-8356	Broker should handle situation where getConfig call return null
EUCA-8578	Allow 0 value in IAM Quota Policy
EUCA-9488	SC/UFS is broken when vmwarebroker lib is installed on the same host
EUCA-9532	Create Image : improve usability of log error messages by offering corrective path and putting main message first
EUCA-9602	UDP handler is not working
EUCA-9762	On address deallocation, instance publicIP can be missing from network XML
EUCA-9795	create-image does not add description to created snapshots
EUCA-9979	Implement import instance in VMDK format
EUCA-10058	Eucalyptus instance's empty user data attribute returns a different value than AWS
EUCA-10092	Vague Error Message from CreateLoadBalancer when using incorrect load balancer port

Issue	Description
EUCA-10155	no error message on invalid keypair name
EUCA-10226	Exception gets thrown when LifecycleReaperJob attempts to update the last_processing_start field
EUCA-10229	Associate address should throw error when instance is terminated or in shutting-down state
EUCA-10278	Stopped Windows EBS instances do not start correctly as DHCP clients request server to respond using L2 Broadcast
EUCA-10297	Don't log 'Volume Size Limit Exceeded' and 'Total Volume Size Limit Exceeded' errors into logs
EUCA-10300	Eucalyptus allows an instance to be launched with multiple security groups from different VPC networks
EUCA-10309	Cloudformation: DeletionPolicy Snapshot for Volume Resource Causing Stack Deletion Failure
EUCA-10310	VPC: Public IP confusion when Cloudformation template with VPC is Used.
EUCA-10325	CreateVolume/AttachVolume results InternalFailure when not authorized
EUCA-10326	Delete snapshot fails with InternalFailure while associated with an image
EUCA-10369	euca-service-image should not be in 4.1 release repo
EUCA-10381	VPC allows AssociateAddress call to succeed with no target (under certain circumstances)
EUCA-10427	euca-describe-snapshots does not support verbose parameter
EUCA-10435	Cloudformation: When resource completes, consistently show CREATE_COMPLETE in stack events - even if stack fails to deploy
EUCA-10447	Cloudformation with VPC: Duplicate Egress/Ingress Rules Not Handled the Same Way As AWS
EUCA-10454	OSG copy object response is incorrect
EUCA-10501	Retrieving creds for (eucalyptus)cloudformation invalidates the current token
EUCA-10511	OSG: grants in headers are not honored
EUCA-10512	Format block storage and object storage java code as per Google style guide
EUCA-10516	in VPC mode, Eucalyptus assigns private IP to 'ip_address' attribute when no public ip is assigned.
EUCA-10520	euca-get-credentials zip file eucarc should always define EC2_PRIVATE_KEY and EC2_CERT
EUCA-10525	Cannot specify stack name and resource name together
EUCA-10538	eulb-describe-lb-policies doesn't support verbose parameter

Issue	Description
EUCA-10554	Inability to view other accounts' snapshot attributes as Cloud Administrator
EUCA-10565	Init scripts enable services unnecessarily
EUCA-10616	LastUpdatedTimestamp not in line with AWS
EUCA-10621	Disabling reporting also disables cloudwatch
EUCA-10623	Cloud becomes unresponsive after a few days of regular use
EUCA-10624	Change in UDP handler thread # doesn't take effect immediately
EUCA-10626	UDP Handler's thread pool is filled up
EUCA-10630	User API Service registration should be idempotent
EUCA-10644	CloudFormation VPC stack creation fails on NetworkAclEntry with empty Icmp/Code property
EUCA-10656	NPE from DownloadManifestFactory.java
EUCA-10690	VPC: Network view can take 10ish seconds to update
EUCA-10692	DescribeVolumes response time is proportional to # of instances running, can be up to 3m
EUCA-10694	VPC: New accounts not getting their default VPC
EUCA-10705	Eucanetd reverse DNS lookup can cause a flood of UDP/DNS traffic
EUCA-10742	Eucanetd doesn't check return value of file2str() which leads to a segfault
EUCA-10774	EDGE mode instances can fail to get an IP because the MAC address is missing in GNI broadcast
EUCA-10755	Post upgrade EBS issues - running EBS instance won't start after upgrade due to invalid connection string
EUCA-10762	No space left on device error on CLC box due to eucanetd
GUI-129	user console proxy should have an option to verify CLC's ssl cert
GUI-800	console needs feature warning for filereader API
GUI-1286	Versioning text is not displaying correctly in Update Versioning modal for a bucket
GUI-1494	empty alert displays when navigating away from page that is waiting for XHR call
GUI-1518	Attach volume failing from landing page when only one instance is available to attach to
GUI-1533	Default termination policy always displays first on scaling group detail page
GUI-1536	Console can't deal with directories that has // in the path
GUI-1543	Private IP address is show in the PUBLIC ADDR column

Issue	Description
GUI-1563	'Create security group' modal window gets stuck when duplicate group is entered during launch instance wizard
GUI-1566	Delete snapshot with non-Latin name/description triggers HTTP 500
GUI-1567	Non-Latin name for security group triggers HTTP 500
GUI-1568	Non-Latin name in the keypair triggers HTTP 500
GUI-1569	Filtering by non-Latin tag name triggers HTTP 500
GUI-1570	Non-Latin names of launch configuration triggers HTTP 500
GUI-1571	Creating auto-scaling group with non-Latin name triggers HTTP 500
GUI-1575	Selecting an autoscaling group results in "Internal Server Error"
GUI-1580	Do not display the private addressing only option on the launch more like this wizard for VPC systems
GUI-1581	"Internal Server Error" is thrown if invalid AutoScaling group is requested via URL
GUI-1583	Console lets user add ephemeral with the same block device mapping as root volume
GUI-1588	Policy Generator has display issues when adding a policy for an account
GUI-1589	User presented with Session Timeout window if denied S3 ListBucket access
GUI-1594	dashboard "instances in scaling groups" shows too many
GUI-1595	server error when viewing volumes tab if volume name has unicode chars
GUI-1601	need to obfuscate memcached keys
GUI-1602	Incorrect ternary operator (?:) in security group rules widget causes JavaScript error
GUI-1605	Unable to create security group in launch instance and launch config wizards when security groups field is emptied
GUI-1608	Instructions on how to connect to an instance via SSH are inaccurate
GUI-1614	RPM spec file should depend on python-boto
GUI-1638	eucacnsole_session cookie should have httponly flag set
GUI-1642	Create new keypair modal throws empty error when non-latin characters are entered for keypair name
GUI-1643	Non-latin characters in security group description trigger internal server error
GUI-1647	Adding a folder with non-latin characters in name breaks bucket content page

Issue	Description
GUI-1658	Instance Type disablement in launch wizard is fault. remove it
GUI-1661	Update tests after navigation change

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 4.1.1 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Generic EDGE Networking Deployment Improvements (EUCA-10695)	See linked bug for more information.
Unable to launch EBS instance or delete volume when launched in different zone than created. (EUCA-10697)	See linked bug for more information.
Older imaging worker fails to convert paravirt on 4.1.1 (EUCA-10787)	After upgrading from 4.0.2 to 4.1.1 without updating the image worker. Paravirt image conversion fails. Workaround: See linked bug for more information.
Reduce default cloud.vmstate.terminated_time to 2 (EUCA-10792)	The <code>cloud.vmstate.terminated_time</code> property default value was previously 60 minutes. This time has been reduced to 2 minutes.
IAM policy settings/modifications with multiple Resource items are not showing up after save (GUI-1710)	After modifying and saving a policy, the modified settings do not show up when viewing the updated policy. Workaround: see linked bug.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HP Helion Eucalyptus 4.1 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.6	x86_64
RHEL+KVM	6.6	x86_64

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Enterprise	i386/x86_64
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.

Object Storage Compatibility

Storage Array	Type/Series	Version	HA Support
Riak CS	Open source enterprise	1.5.1	Yes

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	HA Support	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	Yes	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	Yes	
Ceph RDB	Any CentOS/RHEL machine with disk, compute and network resources	0.80.5-9	Yes	

Storage Array	Type/Series	Version	HA Support	Notes
EMC	VNX series	FLARE v5.32	Yes	Navisphere CLI 7.32.0.5.54 or higher required.
Direct attached storage	Any DAS-JBOD	N/A	No	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	No	Linux SCSI target framework is required.
Remote disk	N/A	N/A	No	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space. (multiple disks in a RAID 5/10 recommended).

High availability (HA) configurations must be equal in capacity.

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.2](#) with HP Helion Eucalyptus version 4.1.

4.1.0

This section contains release notes for Eucalyptus version 4.1.0.

What's New?

New Features

Eucalyptus 4.1.0 introduces the following new features.

Feature	Description
Tech preview support for Virtual Private Cloud (VPC)	This release adds limited technical preview support for Virtual Private Clouds (VPC). For more information, see Using Virtual Private Cloud (VPC) .
Support for CloudFormation	This release adds support for CloudFormation. For more information, see Using CloudFormation .
New Management Console features	We've added or enhanced support for image management, S3 storage management and account administration to the Eucalyptus Management Console. For more information, see Management Console Overview .
Preliminary support for client request log tracking	Client request log tracking makes it easier to troubleshoot issues in your cloud by assigning a unique identifier to each client request. This identifier can be traced throughout the system to help debug problems. For more information, see the Tracking Eucalyptus Requests , Using LogTracker for Troubleshooting , and Using Rsyslog to Aggregate Logs .
Tech preview for Ceph-RBD Integration	This version of Eucalyptus adds limited tech preview support for Ceph-RBD integration. This will provide block-storage services for the Eucalyptus EBS service, which exposes block devices to VM instances for persistent block-level storage. For more information, see Configure the Storage Controller .
New instance status checks	You can now query Eucalyptus for EC2 status information. We also modified the behavior for instance restoration. Cloud users can now find out operational status information on their instances for themselves, and administrators have better visibility of system status. For more information, see the euca-describe-instance-status reference topic in the Euca2ools Guide.

Deprecated Features

The following table lists deprecated Eucalyptus features.

Feature	Description
VMware support	Support for VMWare features in Eucalyptus has been deprecated and will be removed in a future release.

Resolved Issues

Eucalyptus 4.1.0 resolves issues listed in the following table.

Issue	Description
EUCA-23	Support for sharing snapshots
EUCA-2405	Switch from EntityWrapper to Entities class for DB interaction in Walrus & SC
EUCA-2411	Cannot detach EBS volume from stopped instance
EUCA-5033	Cannot detach "root" EBS volume from stopped instance
EUCA-5980	BundleInstance on vmware always produces x86_64 images
EUCA-7860	Block Device Mapping metadata incorrect in HVM image
EUCA-7910	suppress BDM does not work for create image
EUCA-8370	DNS property reset results in broken euca admin commands.
EUCA-8622	'ec2:InstanceType' Not Enforced in IAM Policy
EUCA-8636	Extra block device mapping in meta-data service doesn't match AWS
EUCA-8637	EBS-backed instance shows full device path for ephemeral0 which doesn't match AWS behavior
EUCA-8650	Instance Migration Fails on CentOS/RHEL 6.6
EUCA-8767	Update postgresql from 9.1.9
EUCA-8809	euca-modify-property should give useful error message
EUCA-8837	CID-10303 Resource Leak: The system resource will not be reclaimed and reused, reducing the future availability of the resource
EUCA-9103	need euca_conf command for registering cloudformation service
EUCA-9130	Request to Improve DoRunInstances Error Message on CC
EUCA-9193	TagLimitExceeded Not Returned When Maximum Number of Tags Are Exceeded
EUCA-9194	Error Message For Maximum Key and Value Lengths for Tags Don't Match AWS Behavior
EUCA-9201	Ramdisk registration is requiring machine disk params to be provided.
EUCA-9271	Separated services performance issue

Issue	Description
EUCA-9301	Resource admin persona should not be able to manage resources owned by system accounts
EUCA-9344	Update eucarc variables to current convention
EUCA-9371	Port not updated in eucarc credentials when bootstrap.webservices.port is set
EUCA-9421	Upgrading to Eucalyptus 4.0, objectstorage.providerclient should be set to 'walrus'
EUCA-9444	user-api host shows OutOfMemoryError during S3 load testing
EUCA-9452	EBS backend Instance shouldn't allocate the resource of disk in NCs
EUCA-9459	euca-bundle-instance does not allow you to use existing buckets
EUCA-9467	Create user path differences between Euca and AWS
EUCA-9479	Cannot create resource with Retain for DeletionPolicy
EUCA-9508	Cloudformation shows events of deleted stacks
EUCA-9509	Cloudformation resource status not finalized on errors during delete
EUCA-9510	Need to propagate error messages better in cloudformation
EUCA-9599	EBS backed instances disappear if backing volume fails during creation
EUCA-9602	UDP handler is not working
EUCA-9603	Pending multipart uploads take up disk space even after bucket is deleted
EUCA-9628	unable to attach volume to stopped instance, but success is reported
EUCA-9676	policy denial for IAM call gives different results on AWS vs Eucalyptus
EUCA-9680	Provide OS information via euca-get-console-output
EUCA-9691	Auto Scaling - DescribeMetricCollectionTypes repeats 1Minute granularity
EUCA-9692	iam-instance-profile.arn filter not supported in DescribeInstances
EUCA-9697	ELB uses deprecated HAProxy config options
EUCA-9716	imaging.imaging_worker_enabled property is misleading
EUCA-9732	VNET_MODE should default to the same, non-system mode for all services
EUCA-9745	Bundle Instance returns incorrect error, claims bucket exists when it does not
EUCA-9749	Instance Reservation min-max failing when max is not available

Issue	Description
EUCA-9771	Instance stuck shutting down after AZ has gone down (and has come back)
EUCA-9773	Elastic Load Balancing Connection Timeout Management
EUCA-9782	CNAME resolution behavior does not match AWS behavior for instances running on Eucalyptus DNS-enabled Cloud
EUCA-9788	ValidateTemplate doesn't confirm proper resource mapping
EUCA-9792	Upgrade log messages need timestamps.
EUCA-9793	startup.log file needs timestamps.
EUCA-9886	Add support for S3 Bucket tagging
EUCA-9911	BundleInstance is broken when using session credentials
EUCA-9919	ELB should remove registered instances that have been terminated
EUCA-9938	Parameter Property Type "CommaDelimitedList" Causes InternalFailure Error
EUCA-9943	on NC reboot, eucanetd is unable to manipulate NAT table
EUCA-9947	Snapshots remain exported to SC when upload to OSG is turned off
EUCA-9948	HTTP metadata (Content-Encoding, etc) dropped in object PUT/copy to backend
EUCA-9965	Eucalyptus ELB backend failover performance doesn't match AWS ELB
EUCA-9970	"MalformedPolicyDocument: AssumeRole policy must contain principals." Should Be Returned When Using Incorrect Trust Policy File During IAM Role Creation
EUCA-9977	Discrepancy in error response for invalid canonical ID in PUT acl operation
EUCA-9983	Delete object should always return a unique delete marker if the bucket versioning is enabled
EUCA-9984	Eucalyptus ELB Response in 'Cache-control' field is set to 'private'
EUCA-9985	During upgrade of DB, it should not allow external connections
EUCA-9995	"eucalyptus" and "walrus" DNS results contain cache-poisoning authority records
EUCA-9996	Eucalyptus ELB Doesn't Honor HTTP/1.0 Persistent Connections
EUCA-10024	Eucalyptus ELB Doesn't Add X-Forwarded-Proto and X-Forwarded-Port
EUCA-10047	imaging autoscale group did not launch vm when 1 of 2 clusters had 0 availability

Issue	Description
EUCA-10049	Failing to migrate error msg - 'failed to write instance XML to'
EUCA-10056	Node's state while in Edge networking mode should include eucanetd status
EUCA-10072	Error thrown when binding factory is empty
EUCA-10126	Storage property "storage.lunmigrationtimeout" using minutes not hours with EMC backend
EUCA-10136	Node state is not accurately represented by describe nodes
EUCA-10148	EMC volume from snap creation times out during check for mount point
EUCA-10221	OSG - acl related ops trigger JSON errors in cloud logs
EUCA-10240	No mechanism to adjust default password expiry in eucaconsole
GUI-25	console should allow admin to specify account as part of url, and pre-fill the login page accordingly
GUI-106	A few issue of Eucalyptus-console UI functions
GUI-120	mis-set values in console.ini are hard to diagnose
GUI-395	Tries to associate IP to stopped instances and fails
GUI-436	instance landing page's tiles only display the image ID, could also display image name
GUI-491	Create Launch config and launch instance wizards won't allow adding more than one security group
GUI-495	Instance landing page's table view is missing many menu options
GUI-602	DOC - Image detail page
GUI-695	Launch instance wizard should only show instance types that image can run on
GUI-700	forced clearing of password field is also clearing username field on login screen
GUI-718	inbound rules extend outside their container when security group name in rule is super long
GUI-727	When console is used to log in to AWS and to Euca, AWS log in page gets pre-populated with Euca creds
GUI-734	when an IAM user is created with the name {{1+4}}, no error message shows up.
GUI-736	There is no input validation for negative numbers for volume size in "Advanced options" of Launch instance wizard
GUI-778	2nd attempt to view console output shows blank

Issue	Description
GUI-781	Create security group panel does not check for the duplicated rule when the protocol is changed in the middle of flow
GUI-783	On the instance detail page, there is no link to the currently using elastic IP detail page
GUI-790	On the instance volume page, while a volume is detaching, the detach dialog is still accessible.
GUI-792	The register snapshot dialog is missing the loading icon when the submit is clicked
GUI-799	on the resource detail pages, the 'add tag' button should react to the pressing enter key, not the 'save changes' button
GUI-804	Cannot access the scaling group/launch config's detail page when "/" is used in the name
GUI-810	On the create launch config wizard, after using the image filter, some images get lost
GUI-811	Launchconfig and instance landing pages' keypair filters are missing the option for "None"
GUI-813	Launch config detail page does not display the advanced options
GUI-824	Instance detail page is missing a link to the keypair
GUI-826	In case of a long scaling group name, the landing page table stretches and cannot reach the dropdown menu
GUI-827	on AWS, cannot remove the terminated instances
GUI-828	When a new security group with empty rules is created using the create security group dialog, the warning display is missing the link
GUI-844	Able to create a security group with the name abc`~!@#%\$^&*()_+0-+{ }[]\ ;:<?>,<.,
GUI-890	Disassociate IP dialog on the instance detail page does not pick up the latest IP value if updated
GUI-891	Instance volume page does not update its available volume list when detached on the page
GUI-893	IAM group detail page does not perform live validation on the group's name
GUI-901	revoke_all_rules could leave group without rules if error interrupts
GUI-905	"/" is not escaped in create new key pairs dialog.
GUI-909	in the launch instance wizard, clicking the create key pair button does not open the create key pair dialog the first time, but causes the key pair field to throw a validation error
GUI-916	When new key pair contains "\" in the name it throws a "keypair already exists" error

Issue	Description
GUI-919	On AWS, you cannot launch instance with 'private address only' option
GUI-920	On the create alarm dialog, the instance list displays all instances including the terminated
GUI-932	The instance detail page does not show the correct kernel and ramdisk IDs.
GUI-935	Create Alarm dialog doesn't come up empty if it was already used
GUI-936	Create Alarm may overwrite existing alarm without warning
GUI-978	create scaling group checkbox is not present on step 4 of the launch config wizard
GUI-980	Create key pair operations on launch wizards display unnecessary copy-paste key pair dialog
GUI-996	"add policy" needs to be more specific about the fact that these are scaling policies
GUI-997	browser is not notifying me if I try to move focus away from a page or tab that has unsaved changes
GUI-1001	support sharing images (public and with specific users)
GUI-1006	On IAM user detail page, cannot open the dropdown menu on the group tiles if the group name contains special chars.
GUI-1014	After scaling group is deleted and instances in scaling group were terminated they show in dashboard count for a long while
GUI-1018	On the instance launch wizard, ephemeral device index doesn't get incremented properly
GUI-1022	On IAM policy generator, a validation error message shows up immediately after a template is selected.
GUI-1026	search value not honored when smart refresh in effect
GUI-1029	On IAM user detail page, when a quota value is entered 0, it shows a long error notification, but the value stays 0.
GUI-1030	If username contains + char, add policy page results in "BeakerException: Cookie value is too long to store" error
GUI-1031	scaling group wizard flags error on launch config field when value already seems selected on Firefox
GUI-1039	remove "delete on terminate" flag in launch config wizard bdm editor
GUI-1040	Display user data for instances and launch configs. Support modifying user data for stopped instances.
GUI-1041	Quota policy does not show up until exit and re-enter user detail view

Issue	Description
GUI-1042	policy wizard doesn't handle refresh when session times out
GUI-1050	need an at-a-glance way to indicate in the relevant places that a security group has no rules
GUI-1074	Can't edit ports after selecting protocol for security group rules
GUI-1098	When security group is created, confirmation message does not show s. group name.
GUI-1111	"add user to group" on user detail page button should be disabled until a group is selected in the widget
GUI-1121	smart refresh interferes with actions menu selection
GUI-1123	launch wizard and create launch configuration: security tab create key pair and create security group missing "OR:" text
GUI-1130	Deleted key pair still clickable on instance landing page
GUI-1134	Exceeding quota error takes too long to trigger
GUI-1137	Unable to paste public key into Public SSH Key Contents field using IE 11
GUI-1141	In AWS, Instances, 'Remove from view' doesn't work.
GUI-1142	IAM Policy Generator page loads too slowly
GUI-1148	Cancel links are missing and/or broken in the launch config and launch instance wizards
GUI-1150	Attach volume from instance should provide link to create volume if no volumes in the same AZ exist
GUI-1151	sg rules and IAM users, when added, do not have correct styling applied
GUI-1152	validation error when spaces are not allowed should include the phrase "cannot contain spaces"
GUI-1153	allocate IPs dialog should have "1" as default value
GUI-1154	access policy name in policy gen tool changes when custom tab is selected, even before any change to a templated policy is made
GUI-1179	Internal server error when deleting security group named {,} from landing page
GUI-1182	Unable to enter admin password needed to change user password in IE
GUI-1183	Attempting to add an instance tag longer than allowed removes instance name
GUI-1184	Create Launch Configuration button still enabled after deselecting Key name in LC wizard.
GUI-1191	Delayed error when adding invalid path to IAM User

Issue	Description
GUI-1305	emphasize the SSL warning
GUI-1339	package latest gevent to fix dns lookup issue
GUI-1375	Management Console should log the remote user's IP address in the console log
GUI-1434	labels for password change on manage credentials page do not have correct styling
GUI-1456	IAM User maximum scaling policy quota does not work
TOOLS-294	Bundles generated by euca-bundle-image don't work with EC2
TOOLS-487	euca-describe-groups displays security groups ingressed for a particular security group different than ec2-authorize/aws ec2 describe-security-groups
TOOLS-504	euform-describe-stacks doesn't show parameter values
TOOLS-515	Add euca-modify-subnet-attribute command
TOOLS-516	euform-describe-stack-resources doesn't display resource_status_reason
TOOLS-526	euca-describe-vpcs should output whether vpc is the default
TOOLS-528	euform-validate-template --template-url option looks for a file
TOOLS-529	VPC euca-describe-instances displays poorly
TOOLS-530	euca-run-instances uses inconsistent layout for subnet and security group options
TOOLS-533	euare-servercertupload doesn't upload certificate chain files
TOOLS-534	Using euare-usercreate to add user to a non-existing group fails to show Access/Secret Keys
TOOLS-535	euform-validate-template chokes on responses with capability info
TOOLS-536	euform-create-stack doesn't support '--capabilities' option to create nested Cloudformation stack
TOOLS-538	Add "non-vpc" qualifier to --private option of euca-run-instances
TOOLS-539	euca-create-vpc does not work with --tenancy dedicated
TOOLS-541	euca-create-network-interface does not take security group
TOOLS-542	euare-userlistcerts should print certificate owner

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 4.1.0 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Non-latin characters are not validated in keypair name and triggers HTTP 500 (GUI-1524)	Using non-Latin characters in some object names can trigger an HTTP 500 error. Workaround: avoid using non-Latin characters in resource names.
Ensure unicode strings are used in str.format() calls to avoid HTTP 500 errors with non-Latin characters (GUI-1559)	Non-latin characters in resource names can trigger HTTP 500 errors on various pages. Affected resources include snapshots, key pairs, security groups, scaling groups, and launch configurations". Workaround: avoid using non-Latin characters in resource names.
Cannot login to UI when console.ini setting 'session.cookie_expires' set at or below 28800 (GUI-1592)	See linked bug for more information.
euare-userlistcerts --as-account XXX does not print certificates for this account (EUCA-10401)	Specifying the --as-account parameter with the euare-userlistcerts command only outputs certificates for the user who runs the command (euca-admin). Workaround: use the -u option instead.
Load Balancer Doesn't Register Instances from AutoScaling Group. (EUCA-9419)	If an autoscaling group is created and associated to an ELB, the Load Balancer doesn't register the instances that are part of the autoscaling group.. Workaround: Instances can be added to a Load Balancer by using the <code>eulb-register-instances-with-lb</code> command-line utility.
eucanetd can not start dhcpd due to udp port binding conflict from dnsmasq. (EUCA-10166)	In some instances the dhcpd process for the hypervisor's default network is conflicting with eucanetd's ability to run dhcpd, possibly due to a port conflict. This appears to be a recent change in dhcpd which will not allow the two servers to bind to the same UDP port. Suggested workaround: the default network for the hypervisor should be destroyed and/or the hypervisor's dnsmasq process killed. Please see the attached bug for an example.

Outstanding known issues from previous releases:

Issue	Description
Instances with BDM don't start with direct ESXi connection (EUCA-9724)	The bfEBS instance with BDM does not work in direct ESXi connection configuration. The same command works correctly with connections via vCenter.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HP Helion Eucalyptus 4.1 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.6	x86_64
RHEL+KVM	6.6	x86_64

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Enterprise	i386/x86_64
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.

Object Storage Compatibility

Storage Array	Type/Series	Version	HA Support
Riak CS	Open source enterprise	1.5.1	Yes

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	HA Support	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	Yes	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	Yes	
Ceph RDB	Any CentOS/RHEL machine with disk, compute and network resources	0.80.5-9	Yes	
EMC	VNX series	FLARE v5.32	Yes	Navisphere CLI 7.32.0.5.54 or higher required.
Direct attached storage	Any DAS-JBOD	N/A	No	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	No	Linux SCSI target framework is required.
Remote disk	N/A	N/A	No	Linux SCSI target framework is required.

Minimum Hardware Requirements**Front end components**

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space. (multiple disks in a RAID 5/10 recommended).

High availability (HA) configurations must be equal in capacity.

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.2](#) with HP Helion Eucalyptus version 4.1.

4.0.2

This section contains release notes for Eucalyptus version 4.0.2.

What's New?

New Features

Eucalyptus 4.0.2 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 4.0.2 resolves issues listed in the following table.

Issue	Description
GUI-411	Landing page tile's gear button shows up over the dropdown menu
GUI-1185	EBS snapshot not deleted when image is removed from cloud
GUI-1197	Unchecking 'Delete on terminate' when launching an EBS instance does not work
GUI-1258	Admin password not accepted when changing IAM user password
GUI-1272	Internal error when console is set up with SSL enabled.
GUI-1309	Unable to change password using multi-cluster config
GUI-1353	Please see Eucalyptus Security Advisory ESA-27
GUI-1371	Please see Eucalyptus Security Advisory ESA-28
EUCA-8482	Windows guest limited to 2 cores
EUCA-9165	Using 7 User Facing Services causes slowness on bootstrap
EUCA-9256	Please see Eucalyptus Security Advisory ESA-25
EUCA-9435	Imaging Worker does not work when registration network is isolated from public network
EUCA-9694	Consistent DescribeSensors error in cc.log
EUCA-9707	Instance restore logs ERRORS and failures yet restore succeeds
EUCA-9713	Registering large images taking over 30 seconds to respond
EUCA-9729	euscale-create-auto-scaling-group does not always honor ec2:quota-vminstancenumbers
EUCA-9761	"No such role" logged constantly at DEBUG level
EUCA-9776	Eucalyptus DNS returns SERVFAIL too frequently
EUCA-9779	Ephemeral disk not initialized for Windows 2012

Issue	Description
EUCA-9807	iptables rule ""-A PREROUTING -d 169.254.169.254/32 -p..."may be not applied, when NC restarts
EUCA-9883	A user in the AccountAdministrator privileged role can create IAM resources in the eucalyptus account
EUCA-9887	HVM instance migration fails several hours after instance started
EUCA-9942	eucanetd will fail to remove IPs if total number of public IPs configured is > 1024.
EUCA-9966	last_modified property is missing when fetching objects from Eucalyptus via Boto bucket.get_key()
EUCA-9978	Session tokens in S3 pre-signed URLs should be x-amz-security-token not SecurityToken
EUCA-9980	PUT object acl should return x-amz-version-id header if versioning is enabled/suspended on the bucket
EUCA-9982	Missing headers, x-amz-version-id and x-amz-delete-marker, in delete object/version response
EUCA-9987	Please see Eucalyptus Security Advisory ESA-25
EUCA-10022	Please see Eucalyptus Security Advisory ESA-26 .
EUCA-10080	Please see Eucalyptus Security Advisory ESA-28 .

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 4.0.2 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
When a keypair name is longer than 76 characters, nginx throws 502 Bad Gateway error. (GUI-1364)	When a keypair name is longer than 76 characters, nginx throws a 502 Bad Gateway error. Workaround is to not enter keypair names longer than 76 characters.
Instances with BDM don't start with direct ESXi connection (EUCA-9724)	The bfEBS instance with BDM does not work in direct ESXi connection configuration. The same command works correctly with connections via vCenter.

Outstanding known issues from previous releases:

Issue	Description
The <code>delete on terminate</code> checkbox on the Launch Configuration Wizard of the Eucalyptus Management Console is always enabled. (GUI-1039)	The <code>delete on terminate</code> value is always be set to <code>True</code> despite the checkbox value set in the Device Mapping editor for EBS-backed images.
Setting any quota to 0 for an IAM user causes errors. (GUI-1029)	When setting quotas for a particular IAM user, entering a value of 0 causes errors. Workaround: Some users find it more useful to define a quota limit with the value 0 instead of using a 'Deny' action. Since we currently do not support using 0 as a value, use the CLI commands <code>ec2-deny-vmtypes</code> or <code>ec2-vmquota</code>) instead to enforce the policy at the account level.
The Node Controller (NC) does not support the <code>cancel-bundle-task</code> operation. (EUCA-9351)	The <code>cancel-bundle-task</code> operation has no effect on bundle tasks already under way (on both KVM and VMware), allowing the bundling process to complete and then marking it as failed/canceled.
The Broker does not support the <code>cancel-bundle-task</code> operation. (EUCA-9350)	The <code>cancel-bundle-task</code> operation has no effect on bundle tasks already under way (on both KVM and VMware), allowing the bundling process to complete and then marking it as failed/canceled.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HP Helion Eucalyptus 4.0 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.5	x86_64
RHEL+KVM	6.5	x86_64
VMware ESXi	5.1	x86_64
VMware vCenter	5.1	x86_64

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Enterprise	i386/x86_64
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.

Object Storage Compatibility

Storage Array	Type/Series	Version	HA Support
Riak CS	Open source enterprise	1.4.5	Yes

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	HA Support	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	Yes	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	Yes	
EMC	VNX series	FLARE v5.32	Yes	Navisphere CLI 7.32.0.5.54 or higher required.
Direct attached storage	Any DAS-JBOD	N/A	No	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	No	Linux SCSI target framework is required.
Remote disk	N/A	N/A	No	Linux SCSI target framework is required.

Minimum Hardware Requirements**Front end components**

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space. (multiple disks in a RAID 5/10 recommended).

High availability (HA) configurations must be equal in capacity.

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.1](#) against HP Helion Eucalyptus version 4.0.

4.0.1

This section contains release notes for Eucalyptus version 4.0.1.

What's New?

New Features

Eucalyptus 4.0.1 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 4.0.1 resolves issues listed in the following table.

Issue	Description
EUCA-9595	after upgrade unable to enable cloudwatch service
EUCA-9578	CLONE - for 4.0.1 - Volume deletion on storage controller should be idempotent
EUCA-9574	CLONE - for 4.0.1 - volumes leftover in SC database as "available" after multiple instances fail to run
GUI-966	CLONE - load balancer cannot be added to autoscaling group
EUCA-8906	De-register/Re-register of Cluster with Different Name Doesn't Work
EUCA-8901	CC and NC need to log *something* when they start
EUCA-9443	<KeyMarker/> and <UploadIdMarker/> is not present in ListMultipartUploadsResult
EUCA-8706	WS-Security policies should not be located in /var/lib/eucalyptus/keys
EUCA-9576	CLONE - for 4.0.1 - Storage controller can queue multiple delete tasks for each volume
EUCA-9582	CLONE - for 4.0.1 - Node export volume requests can timeout when load is high
EUCA-9580	CLONE - for 4.0.1 - EqualLogic SAN provider performance poor
DOC-1115	Documentation on instance type is misleading
GUI-933	From the volume page, volumes cannot be attached to stopped instances
GUI-1084	Wireframe de-register image UI
GUI-1082	Console is displaying "Https not detected message" on login page when ssl is configured.

Issue	Description
GUI-1052	Invalid id for Create Security Group button is causing automation to fail
EUCA-9679	Version Bump 4.0.1
EUCA-9334	euca-bundle-instance does not work on vmware
EUCA-9561	Vague Error Message when using euca-import-instance with unsupported file format (VMDK)
SEC-113	Firewall changes in 4.0
EUCA-7877	euca-modify-instance-type can make vmware based cloud non-functional

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 4.0.1 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.


New known issues for this release:

Issue	Description
The delete on terminate checkbox on the Launch Configuration Wizard of the Eucalyptus Management Console is always enabled. (GUI-1039)	The delete on terminate value is always be set to True despite the checkbox value set in the Device Mapping editor for EBS-backed images.
Creating an IAM policy for a user or group whose name contains a + character causes errors. (GUI-1030)	When adding an IAM policy, and the user or group name contains a + character, a 502 Bad Gateway error results. Upon returning to the previous page using the browser's back button, another error message displays on the top of the Management Console. Workaround: Use the CLI commands (e.g. <code>euare-useraddpolicy</code> or <code>euare-groupaddpolicy</code>) instead.
Setting any quota to 0 for an IAM user causes errors. (GUI-1029)	When setting quotas for a particular IAM user, entering a value of 0 causes errors. Workaround: Some users find it more useful to define a quota limit with the value 0 instead of using a 'Deny' action. Since we currently do not support using 0 as a value, use the CLI commands <code>ec2-deny-vmtypes</code> or <code>ec2-vmquota</code>) instead to enforce the policy at the account level.

Issue	Description
No Session Timeout notification displays after the Eucalyptus Management Console times out. (GUI-263)	The default timeout for the admin user is one hour, while the timeout for non-admin users is 12 hours (assuming the 30-minute idle timeout has not already been reached first). However, when either timeout is reached, clicking the dashboard or the screens in the Management Console appears to do nothing. Reloading the page or visiting another page in the application causes the page to be redirected to the login screen without notification that they have timed out.
The Node Controller (NC) does not support the cancel-bundle-task operation. (EUCA-9351)	The cancel-bundle-task operation has no effect on bundle tasks already under way (on both KVM and VMware), allowing the bundling process to complete and then marking it as failed/canceled.
The Broker does not support the cancel-bundle-task operation. (EUCA-9350)	The cancel-bundle-task operation has no effect on bundle tasks already under way (on both KVM and VMware), allowing the bundling process to complete and then marking it as failed/canceled.
Multiple user-facing services nodes cause slowness on bootstrap (EUCA-9165)	If you install multiple user-facing services nodes, you must wait for them to become enabled (during bootstrap or restart), which can take 15-20 minutes.
The default password has been removed from Eucalyptus installs to enhance security. (EUCA-8497)	<p>The default password for the the eucalyptus/admin user has been removed from Eucalyptus installs. To set a password allowing access to the admin/user consoles, run the following commands using your Eucalyptus account credentials:</p> <pre>euare-useraddloginprofile -u admin -p \$PASSWORD euare-userupdateinfo -u admin -k email -i \$EMAIL</pre> <p>Setting the email is not required, but doing so prevents the user from being prompted to change the password upon first log in.</p>
Manual cleanup of cached EMI images are required when upgrading VMWare Broker. (DOC-1220)	After shutting down the VMware Broker, remove all the cached VM images with the name, emi-XXXX-YYYY before starting the upgraded Broker. For details on how to access these images and remove them, see Eucalyptus Upgrade or Migration in the Eucalyptus Installation Guide.

Outstanding known issues from previous releases:

Issue	Description
<p>Instance Migration Fails on CentOS/RHEL 6.5 (EUCA-8650)</p>	<p>Instance live migration does not work with the default qemu-kvm version.</p> <p>Workaround: after installing the eucalyptus-nc package (for a fresh install) or immediately after upgrading the cloud and the base OS to CentOS 6.5, downgrade the qemu-kvm and qemu-img packages by running the following commands on the node controllers:</p> <pre>yum downgrade http://vault.centos.org/6.4/os/x86_64/packages/qemu-kvm-0.12.1.2.2-35.el6.x86_64.rpm \ http://vault.centos.org/6.4/os/x86_64/packages/qemu-img-0.12.1.2.2-35.el6.x86_64.rpm service libvirtd restart</pre>
<p>On Security groups landing page "More actions" button sometimes fails to activate in Windows7 / IE10 (EUCA-8166)</p>	<p>Workaround: refresh the page.</p>
<p>Cannot change launch config of autoscaling group from the user console while running Internet Explorer 10 and Windows 7 (EUCA-7952)</p>	<p>Attempting to change a launch configuration with the user console while running Internet Explorer 10 on Windows 7 results in the error "Failed to update scaling group. Please try again.". Workaround: use the Firefox or Google Chrome browser, or use the command line tools.</p>
<p>EBS image registration ignores user-supplied architecture argument (EUCA-7337)</p>	<p>EBS image registration defaults to x86_64. The default should be i386. In addition, if you attempt to change the architecture explicitly, it's ignored and stays x86_64. The is cosmetic, as the backend ignores the architecture argument.</p>
<p>euca-describe-nodes does not return output in certain distributed topologies (EUCA-7039)</p>	<p>When the CLC, CC, and NCs are distributed components, euca-describe-nodes returns nothing. This is an issue with the CLC. Workaround: see linked bug. Note: This workaround just allows you to figure out how many nodes are attached to running instances as an administrator.</p>
<p>Misleading error from euca_conf --configure-vmware (EUCA-378)</p>	<p>When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: see linked bug.</p>
<p>Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted. (EUCA-3856)</p>	<p>Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted.</p>

Issue	Description
Registering image after euca-bundle-instance differs for vmware. (EUCA-7847)	<p>Name of the manifest file on vmware differs from other virtualization types. Please check content of the bucket used for bundling to find out correct manifest name. Generally it should be bucket/prefix.manifest.xml for instances started from linux paravirtualized images and bucket/prefix.raw.manifest.xml for instances started from all other images. For example:</p> <ul style="list-style-type: none"> • <bundle_name>/<prefix>.manifest.xml for paravirtualized instances • <bundle_name>/<prefix>.raw.manifest.xml for all other instances
Volume attachments fail with EBS backed guests using ephemeral disks post stop/start (EUCA-7460)	Workaround: see linked bug.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb property does not work on VMware even after adding it to the config and euca_imager left cache directory with all files after image creation.
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	In an HA configuration, the eucalyptus-cloud service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to CLOUD_OPTS in eucalyptus.conf to disable hotspot. However, please note that this workaround might have some performance impact.
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, euare-userloginprofiles are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p>

Issue	Description
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <code>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message)</code> In spite of this error the migration has started and should successfully complete.
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.

Issue	Description
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> <code>storage.maxtotalvolumesizeingb</code> <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
Vague error message: Failed to find corresponding class mapping for element: <code>RegisterVMwareBroker</code> in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.

Issue	Description
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the eucalyptus-cloud process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HP Helion Eucalyptus 4.0 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.5	x86_64
RHEL+KVM	6.5	x86_64
VMware ESXi	5.1	x86_64
VMware vCenter	5.1	x86_64

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Enterprise	i386/x86_64
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.

Object Storage Compatibility

Storage Array	Type/Series	Version	HA Support
Riak CS	Open source enterprise	1.4.5	Yes

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	HA Support	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	Yes	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	Yes	
EMC	VNX series	FLARE v5.32	Yes	Navisphere CLI 7.32.0.5.54 or higher required.
Direct attached storage	Any DAS-JBOD	N/A	No	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	No	Linux SCSI target framework is required.
Remote disk	N/A	N/A	No	Linux SCSI target framework is required.

Minimum Hardware Requirements**Front end components**

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space. (multiple disks in a RAID 5/10 recommended).

High availability (HA) configurations must be equal in capacity.

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.1](#) against HP Helion Eucalyptus version 4.0.

4.0.0

This section contains release notes for Eucalyptus version 4.0.0.

What's New?

New Features

Eucalyptus 4.0.0 introduces the following new features.

Feature	Description
New architecture	We made changes to the way the Eucalyptus components are installed and registered. We separated the user-facing services from the database host (the CLC). This makes for better security and for better availability of the user-facing services. For more information, see Plan Your Installation .
New storage architecture	We added an object storage system that provides a S3 API interface. This interface is designed to scale out horizontally. For more information, see Object Storage .
New networking mode	We added support for the new Edge networking mode. For more information, see the Installation Guide..
New default administrator roles	We added support for three default administrator roles. For more information, see Administration Roles .
New ELB features	We added support in elastic load balancing (ELB) to support session stickiness and SSL certificates. For more information about sticky sessions, see Creating Elastic Load Balancing Sticky Sessions . For more information about SSL certificates, see Uploading SSL Certificates for Elastic Load Balancing .
Deprecated console	We deprecated the Administration Console. The IAM functionality was moved to the User Console. The following tasks must now be done using the CLI: change VM types, create accounts, delete accounts, download certificates, and generate reports.
Stock DHCP server package	Previous versions of Eucalyptus applied a private DHCP entry to VNET_DHCPDAEMON for the Cluster Controller (CC) and the Node Controller (NC). In 4.0.0, we recommend that the VNET_DHCPDAEMON file be edited to use the dhcpinstead of the dhcp41 file. For more information, see "Switch to the Stock DHCP Package" in the 4.0.0 Eucalyptus Installation Guide.
New schemas	We created new schemas for the backend services that correspond to the user-facing services. For more information, see the Internal APIs section in Schema Documentation .

Feature	Description
New technical preview feature	We are offering CloudFormation templates in technical preview. For more information about this feature, go to the draft specification . For more information about AWS CloudFormation go to Working with AWS CloudFormation Templates .

Resolved Issues

Eucalyptus 4.0.0 resolves issues listed in the following table.

Issue	Description
INST-131	Increase length of default demo user password
GUI-35	attach volume from instance landing when no volumes exist shows wrong message
GUI-19	eucalyptus-console error on the CLI
EUCA-9413	Improve message logging for user console regarding the wrong version of openssl
EUCA-9070	better error message for euca-create-snapshot is required
EUCA-8999	Walrus Becomes Unresponsive After 50 Simultaneous Connections
EUCA-8917	GroovyScriptEngineImpl usage can lead to PermGen leak
EUCA-8834	ELB health-check issues after NTP sync
EUCA-8812	images bundled without kernel and ramdisk fails
EUCA-8758	AWS Compatibility: euca-describe-keypairs does not throw UnauthorizedOperation when applicable
EUCA-8755	No public IP displayed for instance after an IP address is associated and then disassociated from an instance on AWS
EUCA-8739	CLC reports ENABLED nodes as INITIALIZED
EUCA-8737	Fail to launch EBS-backed instance based on an instance registered with /dev/vda
EUCA-8734	Volume creation status not updated by CLC in timely fashion
EUCA-8732	High concurrency in requests to metadata service causes cloud to become unresponsive
EUCA-8709	cannot delete security group if the associated account is deleted
EUCA-8693	Why is sdb not a valid device name?
EUCA-8692	Unclear error message when attempting to create a volume larger than permitted
EUCA-8640	Recursive option in Eucalyptus DNS Doesn't Support Separate Views (Split-Horizon)

Issue	Description
EUCA-8626	Vague Error When Users Associates Resources Cross-Accounts
EUCA-8614	Log messages in CC in HA config
EUCA-8605	Volume failed to attach on EBS backed run instance
EUCA-8591	Get rid of legacy NetApp provider code and dependency jar
EUCA-8589	Unable to delete snapshots where the original AZ has been removed from the system
EUCA-8569	euca-validator python module dependencies missing
EUCA-8560	Source and destination overlap in strncpy (read_instance_xml)
EUCA-8551	NetApp: Better handling and cleanup of slow flex-clone operations
EUCA-8513	User with no IAM policy is able to access some Service APIs
EUCA-8448	Metadata Service Doesn't Handle Multiple URL Requests Per HTTP Connection
EUCA-8417	euca-run-instances breaks with --instance-count and --client-token
EUCA-8415	Make log messages in NetappCMode differentiate between timeout and clone failure
EUCA-8413	There is no input validation for desired size of AutoScaling group
EUCA-8406	CC restart causes DHCP to offer CLC instead of system.dns.nameserveraddress
EUCA-8402	Windows password changes after migrating
EUCA-8389	IAM service XML namespace is incorrect
EUCA-8346	S3 spoofing enabled by default
EUCA-8165	STS GetSessionToken should support same limits as AWS
EUCA-8097	CMode: LUN Name needs to be configurable
EUCA-8095	CMode: Volume Name on NetApp needs to be configurable (prefix and suffix).
EUCA-7905	After failover of CLC, ELB DNS names are no longer resolvable
EUCA-7870	Instance Profiles Don't Work with IAM Roles that have an IAM Identity and Management Policy
EUCA-7814	VNET_DNS in eucalyptus.conf on CC Has No Meaning in Managed/Managed (NO VLAN) Modes
EUCA-7758	Eucalyptus DNS binds to a specific interface which causes issues in certain topologies

Issue	Description
EUCA-7752	Account policy is seen as user policy for admin user of an account
EUCA-7748	Walrus does not fully comply with "Expect: Continue" headers in PUT requests
EUCA-7686	Cloud controller binds port 443
EUCA-7670	Restarting DNS service causes high CPU usage
EUCA-7655	SOA queries for zone apex result in SERVFAIL errors
EUCA-7642	NetApp Storage leaves eucalyptus snapshots (netapp volumes) in filer
EUCA-7524	Failed to find valid attachment token (SC)
EUCA-7417	Admin UI Can't Handle Large Account/User/Group Entries in Eucalyptus IAM
EUCA-7349	DNS search path in CC does not update with CLC property
EUCA-7228	API support for volume_type in create_volume calls.
EUCA-7182	aws-exec-read ACL is identical to the private ACL
EUCA-7151	euca-describe-nodes shows all instances/nodes that were ever in the cloud
EUCA-6427	DNS TCP handler logs maximum size error
EUCA-6421	Stopped EBS backed instance still reports with euca:node tag
EUCA-6411	Improve error for invalid instance profile when running instance
EUCA-5951	Terminated instances retain their private IP addresses
EUCA-5915	DescribeVMTypes needs to be integrated with IAM
EUCA-5563	Password type input with autocomplete enabled
EUCA-5529	DescribeInstances without instance-ID does not give any output
EUCA-5054	Eucalyptus (EC2) responses omit required requestId element
EUCA-4908	euca-describe-keypairs does not return error message when using non-existent keypair name
EUCA-4879	euca-delete-volume with invalid format for volume ID does not return an error
EUCA-4709	Resource IDs are case-sensitive
EUCA-4528	Reporting user and account caches are not HA safe
EUCA-3206	Walrus Scalability Questions
EUCA-3069	NC: possible FD leak in getConsoleOutput
EUCA-2915	Display inconsistencies with euca-describe-instances when instance times out v. manually terminated

Issue	Description
EUCA-2198	Walrus should not appear in DescribeRegionsResponses
EUCA-2197	cloud user can run euca-describe-regions euca-describe-availability-zones verbose
EUCA-2182	Walrus xml responses lack XML header in response body, S3 includes <?xml> in response bodies
EUCA-1803	Running consecutive unique images eventually fails, possibly a Walrus caching issue?
EUCA-1018	EUARE: Using account id in resource ARN is ignored

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 4.0.0 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.


New known issues for this release:

Issue	Description
The delete on terminate checkbox on the Launch Configuration Wizard of the Eucalyptus Management Console is always enabled. (GUI-1039)	The delete on terminate value is always be set to True despite the checkbox value set in the Device Mapping editor for EBS-backed images.
Creating an IAM policy for a user or group whose name contains a + character causes errors. (GUI-1030)	When adding an IAM policy, and the user or group name contains a + character, a 502 Bad Gateway error results. Upon returning to the previous page using the browser's back button, another error message displays on the top of the Management Console. Workaround: Use the CLI commands (e.g. euare-useraddpolicy or euare-groupaddpolicy) instead.
Setting any quota to 0 for an IAM user causes errors. (GUI-1029)	When setting quotas for a particular IAM user, entering a value of 0 causes errors. Workaround: Some users find it more useful to define a quota limit with the value 0 instead of using a 'Deny' action. Since we currently do not support using 0 as a value, use the CLI commands ec2-deny-vmtypes or ec2-vmquota) instead to enforce the policy at the account level.

Issue	Description
No Session Timeout notification displays after the Eucalyptus Management Console times out. (GUI-263)	The default timeout for the admin user is one hour, while the timeout for non-admin users is 12 hours (assuming the 30-minute idle timeout has not already been reached first). However, when either timeout is reached, clicking the dashboard or the screens in the Management Console appears to do nothing. Reloading the page or visiting another page in the application causes the page to be redirected to the login screen without notification that they have timed out.
The Node Controller (NC) does not support the cancel-bundle-task operation. (EUCA-9351)	The cancel-bundle-task operation has no effect on bundle tasks already under way (on both KVM and VMware), allowing the bundling process to complete and then marking it as failed/canceled.
The Broker does not support the cancel-bundle-task operation. (EUCA-9350)	The cancel-bundle-task operation has no effect on bundle tasks already under way (on both KVM and VMware), allowing the bundling process to complete and then marking it as failed/canceled.
Multiple user-facing services nodes cause slowness on bootstrap (EUCA-9165)	If you install multiple user-facing services nodes, you must wait for them to become enabled (during bootstrap or restart), which can take 15-20 minutes.
The default password has been removed from Eucalyptus installs to enhance security. (EUCA-8497)	<p>The default password for the the eucalyptus/admin user has been removed from Eucalyptus installs. To set a password allowing access to the admin/user consoles, run the following commands using your Eucalyptus account credentials:</p> <pre>euare-useraddloginprofile -u admin -p \$PASSWORD euare-userupdateinfo -u admin -k email -i \$EMAIL</pre> <p>Setting the email is not required, but doing so prevents the user from being prompted to change the password upon first log in.</p>
Manual cleanup of cached EMI images are required when upgrading VMWare Broker. (DOC-1220)	After shutting down the VMware Broker, remove all the cached VM images with the name, emi-XXXX-YYYY before starting the upgraded Broker. For details on how to access these images and remove them, see Eucalyptus Upgrade or Migration in the Eucalyptus Installation Guide.

Outstanding known issues from previous releases:

Issue	Description
<p>Instance Migration Fails on CentOS/RHEL 6.5 (EUCA-8650)</p>	<p>Instance live migration does not work with the default qemu-kvm version.</p> <p>Workaround: after installing the eucalyptus-nc package (for a fresh install) or immediately after upgrading the cloud and the base OS to CentOS 6.5, downgrade the qemu-kvm and qemu-img packages by running the following commands on the node controllers:</p> <pre>yum downgrade http://vault.centos.org/6.4/os/x86_64/packages/qemu-kvm-0.12.1.2.2-35.el6.x86_64.rpm \ http://vault.centos.org/6.4/os/x86_64/packages/qemu-img-0.12.1.2.2-35.el6.x86_64.rpm service libvirtd restart</pre>
<p>On Security groups landing page "More actions" button sometimes fails to activate in Windows7 / IE10 (EUCA-8166)</p>	<p>Workaround: refresh the page.</p>
<p>Cannot change launch config of autoscaling group from the user console while running Internet Explorer 10 and Windows 7 (EUCA-7952)</p>	<p>Attempting to change a launch configuration with the user console while running Internet Explorer 10 on Windows 7 results in the error "Failed to update scaling group. Please try again.". Workaround: use the Firefox or Google Chrome browser, or use the command line tools.</p>
<p>EBS image registration ignores user-supplied architecture argument (EUCA-7337)</p>	<p>EBS image registration defaults to x86_64. The default should be i386. In addition, if you attempt to change the architecture explicitly, it's ignored and stays x86_64. The is cosmetic, as the backend ignores the architecture argument.</p>
<p>euca-describe-nodes does not return output in certain distributed topologies (EUCA-7039)</p>	<p>When the CLC, CC, and NCs are distributed components, euca-describe-nodes returns nothing. This is an issue with the CLC. Workaround: see linked bug. Note: This workaround just allows you to figure out how many nodes are attached to running instances as an administrator.</p>
<p>Misleading error from euca_conf --configure-vmware (EUCA-378)</p>	<p>When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: see linked bug.</p>
<p>Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted. (EUCA-3856)</p>	<p>When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: restart the cloud controller.</p>

Issue	Description
Registering image after euca-bundle-instance differs for vmware. (EUCA-7847)	<p>Name of the manifest file on vmware differs from other virtualization types. Please check content of the bucket used for bundling to find out correct manifest name. Generally it should be bucket/prefix.manifest.xml for instances started from linux paravirtualized images and bucket/prefix.raw.manifest.xml for instances started from all other images. For example:</p> <ul style="list-style-type: none"> • <bundle_name>/<prefix>.manifest.xml for paravirtualized instances • <bundle_name>/<prefix>.raw.manifest.xml for all other instances
Volume attachments fail with EBS backed guests using ephemeral disks post stop/start (EUCA-7460)	Workaround: see linked bug.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb property does not work on VMware even after adding it to the config and euca_imager left cache directory with all files after image creation.
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	In an HA configuration, the eucalyptus-cloud service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to CLOUD_OPTS in eucalyptus.conf to disable hotspot. However, please note that this workaround might have some performance impact.
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, euare-userloginprofiles are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p>

Issue	Description
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <code>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message)</code> In spite of this error the migration has started and should successfully complete.
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.

Issue	Description
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> <code>storage.maxtotalvolumesizeingb</code> <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
Vague error message: Failed to find corresponding class mapping for element: <code>RegisterVMwareBroker</code> in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.

Issue	Description
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the eucalyptus-cloud process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.

Eucalyptus Compatibility Matrix

This compatibility matrix details supported platforms in HP Helion Eucalyptus 4.0 software.

Compute compatibility

OS and Hypervisors	Version	Architecture
Centos+KVM	6.5	x86_64
RHEL+KVM	6.5	x86_64
VMware ESXi	5.1	x86_64
VMware vCenter	5.1	x86_64

Guest operating systems

OS Type	Version/Edition	Architecture
Microsoft Windows Server 2003 R2	Enterprise	i386/x86_64
Microsoft Windows Server 2008	Datacenter	i386/x86_64
Microsoft Windows Server 2008 R2	Datacenter	i386/x86_64
Microsoft Windows Server 2012	Datacenter	x86_64
Microsoft Windows 7	Professional	x86_64
All modern Linux distributions	Redhat, CentOS, Ubuntu, Fedora, Debian, SLES, OpenSUSE, etc.	i386/x86_64

Network modes

Networking Mode	Description
Edge	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires that any external DHCP service be isolated from guest VMs.
Managed	Layer 2 and 3 VM isolation; uses built-in DHCP service. Requires a cloud switch to forward a configurable range of VLAN-tagged packets, and requires that any external DHCP service be isolated from guest VMs.
Managed (No VLAN)	Layer 3 VM isolation; uses built-in DHCP service and requires that any external DHCP service be isolated from guest VMs.

Object Storage Compatibility

Storage Array	Type/Series	Version	HA Support
Riak CS	Open source enterprise	1.4.5	Yes

Elastic Block Storage Compatibility

Storage Array	Type/Series	Version	HA Support	Notes
NetApp SAN	FAS 2000 series FAS 3000 series FAS 6000 series	8.1.2 Clustered Data ONTAP or 7-mode	Yes	FlexClone and iSCSI licenses required.
Dell EqualLogic SAN	PS 4000 series PS 6000 series	Compatible CLI versions	Yes	
EMC	VNX series	FLARE v5.32	Yes	Navisphere CLI 7.32.0.5.54 or higher required.
Direct attached storage	Any DAS-JBOD	N/A	No	Linux SCSI target framework is required.
Local disks	Local overlay filesystem	N/A	No	Linux SCSI target framework is required.
Remote disk	N/A	N/A	No	Linux SCSI target framework is required.

Minimum Hardware Requirements

Front end components

Cloud Controller, Walrus, Storage Controller, Cluster Controller:

8 Cores, 2.4GHz, 8GB RAM, 500GB Disk space. (multiple disks in a RAID 5/10 recommended).

High availability (HA) configurations must be equal in capacity.

Node controllers

4 Cores, 2.4GHz, 8GB RAM, 160GB Disks (multiple disks recommended).

Note: Hardware virtualization must be enabled in the BIOS.

Euca2ools

We recommend using [Euca2ools 3.1](#) against HP Helion Eucalyptus version 4.0.

3.4.3

This section contains release notes for Eucalyptus version 3.4.3.

What's New?

New Features

Eucalyptus 3.4.3 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 3.4.3 resolves issues listed in the following table.

Issue	Description
EUCA-9568	Bump Version in maint/3.4/testing from 3.4.2 to 3.4.3
EUCA-9498	GroovyScriptEngineImpl usage can lead to PermGen leak
EUCA-9497	CC gets killed by OOMkiller when 100+ instances are running
EUCA-9462	DNS TTL is Too Long for ELB
EUCA-9417	canonical ID replaced by NULL value after upgrade from 3.3.2 to 3.4.2
EUCA-9415	invalid SSL packages creates havoc
EUCA-9362	User Console Unable To Display Tags Associated With Large Number of Instances
EUCA-9297	volumes leftover in SC/CLC database as "available" after instance fail to run due to low space on SAN
EUCA-9296	volumes leftover in SC database as "available" after multiple instances fail to run

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.4.3 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Instance Migration Fails on CentOS/RHEL 6.5 (EUCA-8650)	<p>Instance live migration does not work with the default qemu-kvm version.</p> <p>Workaround: after installing the eucalyptus-nc package (for a fresh install) or immediately after upgrading the cloud and the base OS to CentOS 6.5, downgrade the qemu-kvm and qemu-img packages by running the following commands on the node controllers:</p> <pre>yum downgrade http://vault.centos.org/6.4/os/x86_64/ \ Packages/qemu-kvm-0.12.1.2-2.355.el6.x86_64.rpm \ http://vault.centos.org/6.4/os/x86_64/Packages/ \ qemu-img-0.12.1.2-2.355.el6.x86_64.rpm service libvirtd restart</pre>


Outstanding known issues from previous releases:

Issue	Description
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	When running ELB in EDGE networking mode the Servo VM is trying to contact the CLC via the 169.254.169.254 address. For some reason this works in the other networking modes although the only NAT rule that is setup is specifically for port 80. Workaround: Change the default port to 80 in servo/ws/_init_.py.
On Security groups landing page "More actions" button sometimes fails to activate in Windows7 / IE10 (EUCA-8166)	Workaround: refresh the page.
An IAM policy that allows all IAM actions does not work in Eucalyptus 3.4 (EUCA-7870)	Workaround: see linked bug.
Post-upgrade steps for upgrading Load Balancer may be confusing (DOC-1071)	<p>If you already have load balancing enabled on 3.3.x, then there is nothing you "must" do post upgrade for load balancing support. However, the 3.4 release of Eucalyptus includes an updated load balancer image that contains many bugfixes. If you are coming from 3.3.x and already had ELB enabled, you need to run</p> <pre>euca-install-loadbalancer --install-default</pre> <p>after the upgrade. The command will install the current image and set it as the default load balancer image, and all new load balancers will use the new image. The old image is still registered and in S3, and any existing load balancer that may be running at the time of upgrade will still use the old image. If you are coming from a version of Eucalyptus that did not have the load balancing feature, or did not have load balancing enabled on 3.3.x, then after installing the load balancer image you should get new credentials so the load balancer endpoint is defined.</p>

Issue	Description
If a configuration file with the extension .rpmnew already exists when an upgrade is performed, then the user's config file will be overwritten instead of it being copied to a .rpmnew file.(DOC-1081)	Workaround: save contents of the files before upgrade. See attached bug for more information.
Cannot change launch config of autoscaling group from the user console while running Internet Explorer 10 and Windows 7 (EUCA-7952)	Attempting to change a launch configuration with the user console while running Internet Explorer 10 on Windows 7 results in the error " "Failed to update scaing group. Please try again.". Workaround: use the Firefox or Google Chrome browser, or use the command line tools.
EBS image registration ignores user-supplied architecture argument (EUCA-7337)	EBS image registration defaults to x86_64. The default should be i386. In addition, if you attempt to change the architecture explicitly, it's ignored and stays x86_64. The is cosmetic, as the backend ignores the architecture argument.
Cannot stop primary CLC/Walrus (EUCA-7634)	<p>When attemptin to stop the primary CLC/W, it goes into NOTREADY state and it cannot stop the eucalyptus-cloud process.</p> <p>Workaround: You can use kill -9 on the Eucalyptus Cloud process if the following is true: On the CLC machine:</p> <ol style="list-style-type: none"> 1. Verify that "ps aux grep postgres" returns only "grep postgres" This verifies that the Database has shut down and there will be no loss of data 2. Kill -9 <pid-of eucalyptus-cloud-service>
Cannot unbundle image which was bundled with euca-bundle-instance (EUCA-7148)	Even when using the same identity and keys that are used for both the bundle-instance, register and unbundle attempt, the unbundle will fail with a decryption error. Workaround: EMIs created with euca-bundle-instance operation cannot be unbundled with the user's credentials. The workaround for Linux images is to launch an instance from the EMI and perform euca-bundle-volume in it.
euca-describe-nodes does not return output in certain distributed topologies (EUCA-7039)	When the CLC, CC, and NCs are distributed components, euca-describe-nodes returns nothing. This is an issue with the CLC. Workaround: see linked bug. Note: This workaround just allows you to figure out how many nodes are attached to running instances as an administrator.
Misleading error from euca_conf --configure-vmware (EUCA-378)	When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: see linked bug.
Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted. (EUCA-3856)	When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: restart the cloud controller.
Adding nodes to vmware config requires service restart, cluster to become unavailable. (EUCA-1806)	When uploading a new vmware config to the CLC, the update is not pulled by the Broker until it is restarted. As a consequence of the Broker restart the Cluster Controller becomes unavailable. Adding or removing nodes from the config should not cause a service interruption.

Issue	Description
Registering image after euca-bundle-instance differs for vmware. (EUCA-7847)	<p>Name of the manifest file on vmware differs from other virtualization types. Please check content of the bucket used for bundling to find out correct manifest name. Generally it should be bucket/prefix.manifest.xml for instances started from linux paravirtualized images and bucket/prefix.raw.manifest.xml for instances started from all other images. For example:</p> <ul style="list-style-type: none"> • <bundle_name>/<prefix>.manifest.xml for paravirtualized instances • <bundle_name>/<prefix>.raw.manifest.xml for all other instances
Cannot add unit in create custom metric dialog in user console (EUCA-7919)	Workaround: use the euwatch command line tools to add a custom metric.
Volume attachments fail with EBS backed guests using ephemeral disks post stop/start (EUCA-7640)	Workaround: see linked bug.
Instance profiles don't work with IAM roles that have an IAM auto scaling policy (EUCA-7847)	Workaround: see linked bug.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb property does not work on VMware even after adding it to the config and euca_imager left cache directory with all files after image creation.
Maximum image size for euca-register has been increased from 10GB to 30GB (DOC-1011)	<p>The maximum size for an image has been increased from 10GB to 30GB by default. Administrators who want to change this default (for example, to enforce the same 10GB limitation as EC2) can change this value by using the following command:</p> <pre>euca-modify-property -p cloud.images.maximagesizegb=<max size in gigabytes></pre> <p>The value must be an integer; a value of 0 disables the size check and means that there is no limit on the size of images that may be registered by users. Changing the value will not invalidate previously registered images. For upgraded installations, the maximum size is set to '0' if the previous version of Eucalyptus did not include this property (pre-3.4.0) so the admin must explicitly set a limit if one is desired.</p>
Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade (EUCA-7935)	<p>If the /etc/resolv.conf on the CLC has been configured to use itself (i.e. IP of CLC) in a Eucalyptus 3.3.x cloud as a nameserver, after upgrading to Eucalyptus 3.4.0, users will have to define recursive DNS servers in CLOUD_OPTS in the eucalyptus.conf on the CLC. For the workaround, please see Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade.</p>
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.

Issue	Description
VMware Broker requires eucalyptus user to have write access to the <code>/etc/eucalyptus</code> directory (BROKER-9)	If the eucalyptus user does not have write access to the <code>/etc/eucalyptus</code> directory, the VMware Broker will stay in a BROKEN state, and <code>euca-configure-vmware</code> will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
ELBs fail because of lack of internet connection due to NTP (EUCA-7305)	ELB's won't work properly when they don't have internet connectivity. As part of the ELB image, we setup public NTP servers for time sync. In enterprise environments there is no guarantee that instances can reach the internet.
Euca-bundle-instance does not restart instance with VMware (EUCA-7291)	Instances stay in the powered off state on the ESX hosts after the bundle task completes. Eucalyptus reports the state as "running". There are two workarounds: <ul style="list-style-type: none"> • If the user has access to vSphere, the user can power on the VM through a vSphere client • If the user does not have access to vSphere, the user can terminate the instance through Eucalyptus (to get it out of "running" state) and then start a new one using the newly available EMI.
VMware Broker only reporting half of the cores per NC (EUCA-7205)	Eucalyptus uses the physical number of cores on an ESX host as the number of virtual cores. To change the value of your virtual cores, open the configuration file and set <code>maxCores</code> to the desired number of cores. For information about how to set this value, see "Configure VMware Support" in the 3.4.3 Eucalyptus Installation Guide.
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	In an HA configuration, the <code>eucalyptus-cloud</code> service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to <code>CLOUD_OPTS</code> in <code>eucalyptus.conf</code> to disable hotspot. However, please note that this workaround might have some performance impact.

Issue	Description
Cannot log in to User Console with either user or admin account (EUCA-6968)	<p>To access the Eucalyptus User Console in 3.3.1, a user must have a policy that allows access to the services supported by the console. For example:</p> <pre> { "Version": "2012-10-17", "Statement": [{ "Action": ["autoscaling:Describe*", "cloudwatch:Describe*", "cloudwatch:Get*", "cloudwatch:List*", "ec2:Describe*", "elasticloadbalancing:Describe*"], "Effect": "Allow", "Resource": "*" }] }</pre>
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, <code>euare-userloginprofiles</code> are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p> <p>—</p>
LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration (EUCA-6756)	<p>The LDAP/AD integration can't configure the number of items that the Directory search can return during the synchronization process. So, the synchronization process uses the default. However, if a search responds with more entries than the client is configured to accept, the error displays. The workaround is to use the filter sub-element under the selection element for accounting-groups, groups, and users configuration variables in the LIC file.</p>

Issue	Description
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage
Modify service does not work always (EUCA-6389)	In some cases the euca-modify-service command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 BucketNotEmpty. To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message) In spite of this error the migration has started and should successfully complete.
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The euca-bundle-instance command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the --arch option to euca-register.
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the eucalyptus account must use the -a option with euca-describe-images in order to display public images.
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your CLOUD_OPTS settings in the /etc/eucalyptus/eucalyptus.conf file either do not set --java-home, or that --java-home points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.

Issue	Description
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
iptables-preload is not honored when CC are in HA mode and failover happens (EUCA-4253)	When Eucalyptus is in HA mode, the <code>iptables-preload</code> file is not reloaded on failover. To load this file, do the following: <ol style="list-style-type: none"> 1. Clean restart the active CC. 2. Verify that both CCs report the rules when they are going back online. 3. Disable the active CC and verify that the standby CC becomes active with the <code>iptables-preload</code> rules.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.

Issue	Description
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	<p>If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code>, then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties:</p> <ul style="list-style-type: none"> <code>storage.maxtotalvolumesizeingb</code> <code>storage.maxvolumesizeingb</code> <p>Once these values are increased, the instances will launch.</p>
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages iSCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.

Issue	Description
euca-create-image from ebs backed instance fails, returns 0 (EUCA-1333)	euca-create-image is currently unsupported.
Must use user-friendly names for mulitpathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in /etc/multipath.conf.
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code> . The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	The CC should be located with at least on Java component (preferably, the SC) when using ELB. Otherwise, the ELB VM will be unable to contact the CLC.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb does not currently work when using VMware as the hypervisor.

3.4.2

This section contains release notes for Eucalyptus version 3.4.2.

What's New?

New Features

Eucalyptus 3.4.2 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 3.4.2 resolves issues listed in the following table.

Issue	Description
GUI-256	Need the ability to dump stack frames
EUCA-8715	Eucalyptus/vSphere do not agree where my instance is
EUCA-8707	CLC & CC abnormal interactions lead to a steadfastly unfulfilling Future
EUCA-8671	Walrus ListAllMyBuckets (GET / on service) is really slow for non-Eucalyptus/Admin users
EUCA-8657	Getting "unsupported browser version" message in IE 11
EUCA-8633	DNS server runs in single-thread
EUCA-8621	Unable to run instances after running stress test
EUCA-8604	VMware: Failure to start stopped instance
EUCA-8602	AWS and Euca differ in response to run-instances and describe-instances, when no keypair is specified for instance
EUCA-8568	Users not able to view certain available images
EUCA-8565	3.4 testing branch needs version bump to 3.4.2
EUCA-8557	Summary Pane does not update instance type when a new one is selected
EUCA-8548	failure to show "manage instances" dialog from scaling groups landing page
EUCA-8534	User can not change password via UI after it becomes expired
EUCA-8529	Failure to reset instance-types using euca-modify-instance-type tool
EUCA-8521	User Console Conflicts with Euca2ools With Regards to Displaying Images
EUCA-8519	DNS Performance issue with recursive lookup requests

Issue	Description
EUCA-8518	Eucalyptus User Console Doesn't Provide Private Addressing Option in 'Launch More Like This' Window
EUCA-8511	Cannot change "VNET_ADDRSPERNET" configuration
EUCA-8510	Starting multiple instances results in public IP assignment failure
EUCA-8509	SC failure to start in rare cases
EUCA-8476	CLC responses become slower gradually
EUCA-8473	euca-run-instances breaks with --instance-count and --client-token
EUCA-8424	"Manage Instances" dialog is not called from "More actions" menu on Windows 7/ IE 10
EUCA-8382	Windows Migrate failing in Vmware
EUCA-8320	EDGE: CC served files will not be available if /tmp and /var/lib/eucalyptus/dynserv/data are on different mountpoints
EUCA-8206	Cancelling bundle task is not reliable on vmware
EUCA-8162	After running for 5 hours, the proxy's memory usage goes near 4 GB.
EUCA-8057	NPE attempting to detach an available volume
EUCA-7994	Cloud Administrator Can't Control ELB, AS, Cloudwatch Resources of non-eucalyptus account Users
EUCA-7938	CC partitioned and drops into NOTREADY state
EUCA-7917	Recursive option in Eucalyptus DNS Doesn't Support Separate Views (Split-Horizon)
EUCA-7863	Instance Profiles Don't Support Tools/Scripts That Use S3 API Calls
EUCA-7528	Associate IP dialog creates copies of itself.
EUCA-7430	eucalyptus-cloud service hangs on shutdown
EUCA-5722	euca-register returns odd error when registering kernel and ramdisk as non-admin, non-eucalyptus (i.e. cloud admin account) user
EUCA-5721	euca-register returns the same error when registering a ramdisk and kernel with a non-eucalyptus account (i.e. non cloud admin account)

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.4.2 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Instance Migration Fails on CentOS/RHEL 6.5 (EUCA-8650)	<p>Instance live migration does not work with the default qemu-kvm version.</p> <p>Workaround: after installing the eucalyptus-nc package (for a fresh install) or immediately after upgrading the cloud and the base OS to CentOS 6.5, downgrade the qemu-kvm and qemu-img packages by running the following commands on the node controllers:</p> <pre>yum downgrade http://vault.centos.org/6.4/os/x86_64/packages/qemu-kvm-0.12.1.2-2.35.el6.x86_64.rpm \ http://vault.centos.org/6.4/os/x86_64/packages/qemu-img-0.12.1.2-2.35.el6.x86_64.rpm service libvirtd restart</pre>

Outstanding known issues from previous releases:


Issue	Description
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	When running ELB in EDGE networking mode the Servo VM is trying to contact the CLC via the 169.254.169.254 address. For some reason this works in the other networking modes although the only NAT rule that is setup is specifically for port 80. Workaround: Change the default port to 80 in servo/ws/_init_.py.
On Security groups landing page "More actions" button sometimes fails to activate in Windows7 / IE10 (EUCA-8166)	Workaround: refresh the page.
An IAM policy that allows all IAM actions does not work in Eucalyptus 3.4 (EUCA-7870)	Workaround: see linked bug.

Issue	Description
Post-upgrade steps for upgrading Load Balancer may be confusing (DOC-1071)	If you already have load balancing enabled on 3.3.x, then there is nothing you "must" do post upgrade for load balancing support. However, the 3.4 release of Eucalyptus includes an updated load balancer image that contains many bugfixes. If you are coming from 3.3.x and already had ELB enabled, you need to run <code>euca-install-loadbalancer --install-default</code> after the upgrade. The command will install the current image and set it as the default load balancer image, and all new load balancers will use the new image. The old image is still registered and in S3, and any existing load balancer that may be running at the time of upgrade will still use the old image. If you are coming from a version of Eucalyptus that did not have the load balancing feature, or did not have load balancing enabled on 3.3.x, then after installing the load balancer image you should get new credentials so the load balancer endpoint is defined.
If a configuration file with the extension .rpmnew already exists when an upgrade is performed, then the user's config file will be overwritten instead of it being copied to a .rpmnew file. (DOC-1081)	Workaround: save contents of the files before upgrade. See attached bug for more information.
Cannot change launch config of autoscaling group from the user console while running Internet Explorer 10 and Windows 7 (EUCA-7952)	Attempting to change a launch configuration with the user console while running Internet Explorer 10 on Windows 7 results in the error "Failed to update scaling group. Please try again.". Workaround: use the Firefox or Google Chrome browser, or use the command line tools.
EBS image registration ignores user-supplied architecture argument (EUCA-7337)	EBS image registration defaults to x86_64. The default should be i386. In addition, if you attempt to change the architecture explicitly, it's ignored and stays x86_64. The is cosmetic, as the backend ignores the architecture argument.
Cannot stop primary CLC/Walrus (EUCA-7634)	<p>When attemptin to stop the primary CLC/W, it goes into NOTREADY state and it cannot stop the eucalyptus-cloud process.</p> <p>Workaround: You can use kill -9 on the Eucalyptus Cloud process if the following is true: On the CLC machine:</p> <ol style="list-style-type: none"> 1. Verify that "ps aux grep postgres" returns only "grep postgres" This verifies that the Database has shut down and there will be no loss of data 2. Kill -9 <pid-of eucalyptus-cloud-service>
Cannot unbundle image which was bundled with euca-bundle-instance (EUCA-7148)	Even when using the same identity and keys that are used for both the bundle-instance, register and unbundle attempt, the unbundle will fail with a decryption error. Workaround: EMIs created with euca-bundle-instance operation cannot be unbundled with the user's credentials. The workaround for Linux images is to launch an instance from the EMI and perform euca-bundle-volume in it.

Issue	Description
euca-describe-nodes does not return output in certain distributed topologies (EUCA-7039)	When the CLC, CC, and NCs are distributed components, euca-describe-nodes returns nothing. This is an issue with the CLC. Workaround: see linked bug. Note: This workaround just allows you to figure out how many nodes are attached to running instances as an administrator.
Misleading error from euca_conf --configure-vmware (EUCA-378)	When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: see linked bug.
Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted. (EUCA-3856)	When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: restart the cloud controller.
Adding nodes to vmware config requires service restart, cluster to become unavailable. (EUCA-1806)	When uploading a new vmware config to the CLC, the update is not pulled by the Broker until it is restarted. As a consequence of the Broker restart the Cluster Controller becomes unavailable. Adding or removing nodes from the config should not cause a service interruption.
Registering image after euca-bundle-instance differs for vmware. (EUCA-7847)	Name of the manifest file on vmware differs from other virtualization types. Please check content of the bucket used for bundling to find out correct manifest name. Generally it should be bucket/prefix.manifest.xml for instances started from linux paravirtualized images and bucket/prefix.raw.manifest.xml for instances started from all other images. For example: <ul style="list-style-type: none"> • <bundle_name>/<prefix>.manifest.xml for paravirtualized instances • <bundle_name>/<prefix>.raw.manifest.xml for all other instances
Cannot add unit in create custom metric dialog in user console (EUCA-7919)	Workaround: use the euwatch command line tools to add a custom metric.
Volume attachments fail with EBS backed guests using ephemeral disks post stop/start (EUCA-7640)	Workaround: see linked bug.
Instance profiles don't work with IAM roles that have an IAM auto scaling policy (EUCA-7847)	Workaround: see linked bug.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb property does not work on VMware even after adding it to the config and euca_imager left cache directory with all files after image creation.

Issue	Description
Maximum image size for euca-register has been increased from 10GB to 30GB (DOC-1011)	<p>The maximum size for an image has been increased from 10GB to 30GB by default. Administrators who want to change this default (for example, to enforce the same 10GB limitation as EC2) can change this value by using the following command:</p> <pre>euca-modify-property -p cloud.images.maximagesizegb=<max size in gigabytes></pre> <p>The value must be an integer; a value of 0 disables the size check and means that there is no limit on the size of images that may be registered by users. Changing the value will not invalidate previously registered images. For upgraded installations, the maximum size is set to '0' if the previous version of Eucalyptus did not include this property (pre-3.4.0) so the admin must explicitly set a limit if one is desired.</p>
Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade (EUCA-7935)	<p>If the <code>/etc/resolv.conf</code> on the CLC has been configured to use itself (i.e. IP of CLC) in a Eucalyptus 3.3.x cloud as a nameserver, after upgrading to Eucalyptus 3.4.0, users will have to define recursive DNS servers in <code>CLOUD_OPTS</code> in the <code>eucalyptus.conf</code> on the CLC. For the workaround, please see Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade.</p>
Broker does not support some host configurations (BROKER-36)	<p>When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.</p>
VMware Broker requires eucalyptus user to have write access to the <code>/etc/eucalyptus</code> directory (BROKER-9)	<p>If the <code>eucalyptus</code> user does not have write access to the <code>/etc/eucalyptus</code> directory, the VMware Broker will stay in a BROKEN state, and <code>euca-configure-vmware</code> will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the <code>eucalyptus</code> user owns the necessary files.</p>
ELBs fail because of lack of internet connection due to NTP (EUCA-7305)	<p>ELB's won't work properly when they don't have internet connectivity. As part of the ELB image, we setup public NTP servers for time sync. In enterprise environments there is no guarantee that instances can reach the internet.</p>
Euca-bundle-instance does not restart instance with VMware (EUCA-7291)	<p>Instances stay in the powered off state on the ESX hosts after the bundle task completes. Eucalyptus reports the state as "running". There are two workarounds:</p> <ul style="list-style-type: none"> • If the user has access to vSphere, the user can power on the VM through a vSphere client • If the user does not have access to vSphere, the user can terminate the instance through Eucalyptus (to get it out of "running" state) and then start a new one using the newly available EMI.

Issue	Description
VMware Broker only reporting half of the cores per NC (EUCA-7205)	Eucalyptus uses the physical number of cores on an ESX host as the number of virtual cores. To change the value of your virtual cores, open the configuration file and set <code>maxCores</code> to the desired number of cores. For information about how to set this value, see "Configure VMware Support" in the 3.4.2 Eucalyptus Installation Guide.
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	In an HA configuration, the <code>eucalyptus-cloud</code> service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to <code>CLOUD_OPTS</code> in <code>eucalyptus.conf</code> to disable hotspot. However, please note that this workaround might have some performance impact.
Cannot log in to User Console with either user or admin account (EUCA-6968)	<p>To access the Eucalyptus User Console in 3.3.1, a user must have a policy that allows access to the services supported by the console. For example:</p> <pre> { "Version": "2012-10-17", "Statement": [{ "Action": ["autoscaling:Describe*", "cloudwatch:Describe*", "cloudwatch:Get*", "cloudwatch:List*", "ec2:Describe*", "elasticloadbalancing:Describe*"], "Effect": "Allow", "Resource": "*" }] }</pre>

Issue	Description
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, <code>euare-userloginprofiles</code> are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p> <p>—</p>
LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration (EUCA-6756)	The LDAP/AD integration can't configure the number of items that the Directory search can return during the synchronization process. So, the synchronization process uses the default. However, if a search responds with more entries than the client is configured to accept, the error displays. The workaround is to use the filter sub-element under the selection element for accounting-groups, groups, and users configuration variables in the LIC file.
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.

Issue	Description
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <code>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message)</code> In spite of this error the migration has started and should successfully complete.
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the <code>eucalyptus</code> account must use the <code>-a</code> option with <code>euca-describe-images</code> in order to display public images.
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your <code>CLOUD_OPTS</code> settings in the <code>/etc/eucalyptus/eucalyptus.conf</code> file either do not set <code>--java-home</code> , or that <code>--java-home</code> points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.

Issue	Description
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
iptables-preload is not honored when CC are in HA mode and failover happens (EUCA-4253)	When Eucalyptus is in HA mode, the <code>iptables-preload</code> file is not reloaded on failover. To load this file, do the following: <ol style="list-style-type: none"> 1. Clean restart the active CC. 2. Verify that both CCs report the rules when they are going back online. 3. Disable the active CC and verify that the standby CC becomes active with the <code>iptables-preload</code> rules.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> • <code>storage.maxtotalvolumesizeingb</code> • <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.

Issue	Description
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographic keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
<code>euca-create-image</code> from ebs backed instance fails, returns 0 (EUCA-1333)	<code>euca-create-image</code> is currently unsupported.
Must use user-friendly names for multipathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in <code>/etc/multipath.conf</code> .

Issue	Description
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code> . The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	The CC should be located with at least on Java component (preferably, the SC) when using ELB. Otherwise, the ELB VM will be unable to contact the CLC.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb does not currently work when using VMware as the hypervisor.

3.4.1

This section contains release notes for Eucalyptus version 3.4.1.

What's New?

New Features

Eucalyptus 3.4.1 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 3.4.1 resolves issues listed in the following table.

Issue	Description
EUCA-8367	Walrus DNS does not resolve for all subdomains, only existing buckets
EUCA-8357	Instance Launcher freezes in case of a large image set and security groups on Eucalyptus
EUCA-8349	Windows instances failing to migrate with KVM
EUCA-8318	Scaling group count not resolving part deux
EUCA-8310	The proxy gets flooded with error messages related to load balancers
EUCA-8188	Bundle task can block all other operations
EUCA-8187	Security group description is parsed incorrectly by console
EUCA-8177	S3 Compatibility: Delete bucket should fail if the bucket contains one or more DeleteMarker(s)
EUCA-8175	S3 Compatibility: Cannot delete versions when versioning is suspended
EUCA-8172	NC cannot read /nc/cloudIp from nc_state.xml
EUCA-8171	NC does not find nc_state.xml on startup if the state directory isn't /var/lib/eucalyptus
EUCA-8168	Navigating away from the launch instance wizard causes memory leak
EUCA-8163	Deleted Scaling Group lingers on the landing page for 30+ seconds
EUCA-8161	Console error messages lack helpful info from CLC
EUCA-8154	Walrus: Delete object fails with 404 if a DeleteMarker is present
EUCA-8126	Security Group's detail does not get displayed when it has traffic allowed by another group.

Issue	Description
EUCA-8121	Instance restoration fails for instances w/o kernel and/or ramdisk and/or in SYSTEM mode networking
EUCA-8120	S3 Compatibility: List objects does not throw error for negative max-keys
EUCA-8119	S3 Compatibility: List objects response contains MetaData elements
EUCA-8117	Instance names don't show up on Instances landing page after first log in
EUCA-8115	"Launch more like this" always launches instance in default s.group
EUCA-8113	S3 Compatibility: List objects should be exclusive of the object that matches marker
EUCA-8112	S3 compatibility: Common prefixes are not computed and rendered correctly in list objects response
EUCA-8111	S3 Compatibility: Last modified date format in copy object response breaks AWS SDK
EUCA-8110	Images and properties may be lost during HA failover
EUCA-8108	Cannot open the expanded row on the instance landing page on AWS due to missing image.platform attribute
EUCA-8088	S3 compatibility: PUT object removes a previous DeleteMarker
EUCA-8085	S3 compatibility: List object versions does not return the correct values for next-key-marker and next-version-id-marker
EUCA-8083	NC hangs inside get_blkid (e.g., during launch or migration)
EUCA-8079	Instances launched by the scaling group do not inherit the tags
EUCA-8076	AutoScaling Resources Can't Be Controlled by Cloud Admin
EUCA-8075	httpd-cc_error_log filled with troubleshooting messages causing the log to grow out of control
EUCA-8074	Cloudwatch Alarms Unable to be Viewed by Cloud Admin
EUCA-8072	region menu shows when clicking around dashboard
EUCA-8070	Selecting AZ inputbox is broken in the launch instance wizard
EUCA-8063	Sort broken when only 1 page of results
EUCA-7995	Instance public IPs revoked before running.
EUCA-7991	S3 compatibility: List object versions with prefix and delimiter represents common prefixes differently
EUCA-7989	NC init script fails to start on Xen

Issue	Description
EUCA-7986	S3 compatibility: List object versions response is missing VersionIdMarker element
EUCA-7985	S3 compatibility: List object versions should be exclusive of the object that matches key-marker and version-id-marker specified in the request
EUCA-7982	Proxy should not load all image sets for regions
EUCA-7970	NC check for virtualization flag is inverted
EUCA-7947	Sorting instance table by Availability Zone doesn't work
EUCA-7946	Create instance wizard number validation error if number contains zero
EUCA-7944	Search for a non-existing image shows "random" results in instance launch and launch config creation dialogs
EUCA-7943	NC loglevel is set to DEBUG by default
EUCA-7940	volume auto-fill not working in "create snapshot"
EUCA-7939	Cannot view sec group expando when group access granted
EUCA-7937	Firefox gobbles memory when doing normal console tasks
EUCA-7933	Create volume button does not always work on create new volume dialog
EUCA-7931	IPs continue to be displayed after release
EUCA-7930	Displaying help on landing pages resets UI elements
EUCA-7924	Remove add/remove load balancer feature using the dialog "edit properties" on the scale group landing page
EUCA-7921	Launch more like this dialog moves every 10 seconds
EUCA-7919	cannot add unit in create custom metric dialog
EUCA-7915	Deleted keypairs still shown
EUCA-7911	Editing Auto Scaling Group Policy in Web UI removes --unit parameter from Alarms
EUCA-7908	enumerating all images lock up the browser
EUCA-7894	launch times not displaying correctly
EUCA-7893	User does not get logged out after leaving console idle for long period of time.
EUCA-7879	On Launch Config Landing Page, Image Name doesn't get displayed in the expanded row
EUCA-7876	Register As Image Dialog on the Snapshot Landing Page Does Not Validate Image Name
EUCA-7875	can't enumerate aws 'all' images
EUCA-7855	S3 Compatibility: ListBucketResult does not returns canonical ID
EUCA-7845	Load Balancer VM not able to contact CLC when CC is not colocated with at least 1 Java component

Issue	Description
EUCA-7833	console does not work for Eucalyptus users in "aws" account
EUCA-7832	console-in dashboard doesn't pick up zone changes
EUCA-7827	when you click "add another tag" in the manage tags box, the cursor should be placed.
EUCA-7826	The 'create from snapshot' inputbox in the dialog 'Create volume' is not defaulting to select "None"
EUCA-7825	Warning text in Launch instance wizard when security group has no rules in missing
EUCA-7818	DeleteMarker not included in version output of bucket
EUCA-7790	Tests Cannot attach volume in console (multi-cluster)
EUCA-7777	white container showing behind instance landing page when help is flipped (on chrome)
EUCA-7770	Launching instance with name fails to name instance
EUCA-7759	if i add a name to an instance, i have to click the next button twice in the launch wizard to go to the next section
EUCA-7724	S3 compatibility: Canned ACL bucket-owner-read results in an incorrect set of grants in the object ACL
EUCA-7712	S3 compatibility: Canned ACL bucket-owner-full-control results in an incorrect set of grants in the object ACL
EUCA-7708	Walrus BucketLocation constraint should be empty for default location
EUCA-7625	S3 compatibility: Objects and buckets with canned ACL (bucket-owner-read) return incorrect ACL
EUCA-7537	no feedback that the refresh button is doing anything on landing pages
EUCA-7492	Remove code that uses non-stdlib libs from eucaconsole/__init__.py
EUCA-7364	account menu and region menu (all menus in the branding bar not collapsing when the user clicks outside of it
EUCA-7352	resource loading pages all need to display "loading" animation when loading resources
EUCA-7336	Security group is not displayed on Launch Configuration landing page.
EUCA-7312	euca-create-keypair show JDBC batch error with a 406 exception
EUCA-7299	scaling groups landing page needs initial sort set
EUCA-6579	Required Fields marked for some not required fields in User Console
EUCA-6513	when no data is available for a table in the expandos a "This <x> has no <y>" message should be displayed instead of an empty table

Issue	Description
EUCA-6442	In SYSTEM mode the metadata is not accessible
EUCA-6321	Disable button is still clickable on the Attach Volume dialog
EUCA-6266	tag editing focus traversal not ideal for UX
EUCA-6144	Associate IP dialog from instance landing page displays the ID of the instance in autocomplete
EUCA-6069	eucalyptus-cloud fails to start
EUCA-5959	stopped instances show invalid value for public private DNS names
EUCA-5646	grep code to look for/remove aliases and test w/ QA
EUCA-5301	User Console should fail to start if incorrect ssl settings are given
EUCA-4041	security group description should only be allowed to contain a limited set of characters
EUCA-3909	httpd-cc_error_log Grows without bound
EUCA-3704	add CSRF token to login pages
EUCA-3383	euca-describe-instances doesn't seem to be reporting platform
EUCA-3320	bucket.create_bucket has strange behaviour when using Walrus

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.4.1 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	When running ELB in EDGE networking mode the Servo VM is trying to contact the CLC via the 169.254.169.254 address. For some reason this works in the other networking modes although the only NAT rule that is setup is specifically for port 80. Workaround: Change the default port to 80 in servo/ws/_init_.py.
"Manage Instances" dialog is not called from "More actions" menu on Windows 7/ IE 10 (EUCA-8424)	When the Auto Scaling group is check-marked and the "Manage instances" button is clicked in the "More Actions" menu, no dialog appears.

Issue	Description
On Security groups landing page "More actions" button sometimes fails to activate in Windows7 / IE10 (EUCA-8166)	Workaround: refresh the page.
An IAM policy that allows all IAM actions does not work in Eucalyptus 3.4 (EUCA-7870)	Workaround: see linked bug.
Post-upgrade steps for upgrading Load Balancer may be confusing (DOC-1071)	If you already have load balancing enabled on 3.3.x, then there is nothing you "must" do post upgrade for load balancing support. However, the 3.4 release of Eucalyptus includes an updated load balancer image that contains many bugfixes. If you are coming from 3.3.x and already had ELB enabled, you need to run <code>euca-install-loadbalancer --install-default</code> after the upgrade. The command will install the current image and set it as the default load balancer image, and all new load balancers will use the new image. The old image is still registered and in S3, and any existing load balancer that may be running at the time of upgrade will still use the old image. If you are coming from a version of Eucalyptus that did not have the load balancing feature, or did not have load balancing enabled on 3.3.x, then after installing the load balancer image you should get new credentials so the load balancer endpoint is defined.


Outstanding known issues from previous releases:

Issue	Description
If a configuration file with the extension .rpmnew already exists when an upgrade is performed, then the user's config file will be overwritten instead of it being copied to a .rpmnew file. (DOC-1081)	Workaround: save contents of the files before upgrade. See attached bug for more information.
Cannot change launch config of autoscaling group from the user console while running Internet Explorer 10 and Windows 7 (EUCA-7952)	Attempting to change a launch configuration with the user console while running Internet Explorer 10 on Windows 7 results in the error "Failed to update scaling group. Please try again.". Workaround: use the Firefox or Google Chrome browser, or use the command line tools.
EBS image registration ignores user-supplied architecture argument (EUCA-7337)	EBS image registration defaults to x86_64. The default should be i386. In addition, if you attempt to change the architecture explicitly, it's ignored and stays x86_64. This is cosmetic, as the backend ignores the architecture argument.

Issue	Description
Cannot stop primary CLC/Walrus (EUCA-7634)	<p>When attemptin to stop the primary CLC/W, it goes into NOTREADY state and it cannot stop the eucalyptus-cloud process.</p> <p>Workaround: You can use kill -9 on the Eucalyptus Cloud process if the following is true: On the CLC machine:</p> <ol style="list-style-type: none"> 1. Verify that "ps aux grep postgres" returns only "grep postgres" This verifies that the Database has shut down and there will be no loss of data 2. Kill -9 <pid-of eucalyptus-cloud-service>
Cannot unbundle image which was bundled with euca-bundle-instance (EUCA-7148)	<p>Even when using the same identity and keys that are used for both the bundle-instance, register and unbundle attempt, the unbundle will fail with a decryption error. Workaround: EMIs created with euca-bundle-instance operation cannot be unbundled with the user's credentials. The workaround for Linux images is to launch an instance from the EMI and perform euca-bundle-volume in it.</p>
euca-describe-nodes does not return output in certain distributed topologies (EUCA-7039)	<p>When the CLC, CC, and NCs are distributed components, euca-describe-nodes returns nothing. This is an issue with the CLC. Workaround: see linked bug. Note: This workaround just allows you to figure out how many nodes are attached to running instances as an administrator.</p>
Misleading error from euca_conf --configure-vmware (EUCA-378)	<p>When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: see linked bug.</p>
Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted. (EUCA-3856)	<p>When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: restart the cloud controller.</p>
Adding nodes to vmware config requires service restart, cluster to become unavailable. (EUCA-1806)	<p>When uploading a new vmware config to the CLC, the update is not pulled by the Broker until it is restarted. As a consequence of the Broker restart the Cluster Controller becomes unavailable. Adding or removing nodes from the config should not cause a service interruption.</p>
Registering image after euca-bundle-instance differs for vmware. (EUCA-7847)	<p>Name of the manifest file on vmware differs from other virtualization types. Please check content of the bucket used for bundling to find out correct manifest name. Generally it should be bucket/prefix.manifest.xml for instances started from linux paravirtualized images and bucket/prefix.raw.manifest.xml for instances started from all other images. For example:</p> <ul style="list-style-type: none"> • <bundle_name>/<prefix>.manifest.xml for paravirtualized instances • <bundle_name>/<prefix>.raw.manifest.xml for all other instances
Cannot add unit in create custom metric dialog in user console (EUCA-7919)	<p>Workaround: use the euwatch command line tools to add a custom metric.</p>

Issue	Description
Volume attachments fail with EBS backed guests using ephemeral disks post stop/start (EUCA-7640)	Workaround: see linked bug.
Instance profiles don't work with IAM roles that have an IAM auto scaling policy (EUCA-7847)	Workaround: see linked bug.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb property does not work on VMware even after adding it to the config and euca_imager left cache directory with all files after image creation.
Instance profiles don't support roles with IAM S3 policies (EUCA-7863)	See linked bug for details.
Maximum image size for euca-register has been increased from 10GB to 30GB (DOC-1011)	<p>The maximum size for an image has been increased from 10GB to 30GB by default. Administrators who want to change this default (for example, to enforce the same 10GB limitation as EC2) can change this value by using the following command:</p> <pre>euca-modify-property -p cloud.images.maximagesizegb=<max size in gigabytes></pre> <p>The value must be an integer; a value of 0 disables the size check and means that there is no limit on the size of images that may be registered by users. Changing the value will not invalidate previously registered images. For upgraded installations, the maximum size is set to '0' if the previous version of Eucalyptus did not include this property (pre-3.4.0) so the admin must explicitly set a limit if one is desired.</p>
Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade (EUCA-7935)	If the /etc/resolv.conf on the CLC has been configured to use itself (i.e. IP of CLC) in a Eucalyptus 3.3.x cloud as a nameserver, after upgrading to Eucalyptus 3.4.0, users will have to define recursive DNS servers in CLOUD_OPTS in the eucalyptus.conf on the CLC. For the workaround, please see Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade .
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.
VMware Broker requires eucalyptus user to have write access to the /etc/eucalyptus directory (BROKER-9)	If the eucalyptus user does not have write access to the /etc/eucalyptus directory, the VMware Broker will stay in a BROKEN state, and euca-configure-vmware will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
ELBs fail because of lack of internet connection due to NTP (EUCA-7305)	ELB's won't work properly when they don't have internet connectivity. As part of the ELB image, we setup public NTP servers for time sync. In enterprise environments there is no guarantee that instances can reach the internet.

Issue	Description
Euca-bundle-instance does not restart instance with VMware (EUCA-7291)	<p>Instances stay in the powered off state on the ESX hosts after the bundle task completes. Eucalyptus reports the state as "running". There are two workarounds:</p> <ul style="list-style-type: none"> • If the user has access to vSphere, the user can power on the VM through a vSphere client • If the user does not have access to vSphere, the user can terminate the instance through Eucalyptus (to get it out of "running" state) and then start a new one using the newly available EMI.
VMware Broker only reporting half of the cores per NC (EUCA-7205)	<p>Eucalyptus uses the physical number of cores on an ESX host as the number of virtual cores. To change the value of your virtual cores, open the configuration file and set <code>maxCores</code> to the desired number of cores. For information about how to set this value, see "Configure VMware Support" in the 3.4.1 Eucalyptus Installation Guide.</p>
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	<p>In an HA configuration, the <code>eucalyptus-cloud</code> service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to <code>CLOUD_OPTS</code> in <code>eucalyptus.conf</code> to disable hotspot. However, please note that this workaround might have some performance impact.</p>
Cannot log in to User Console with either user or admin account (EUCA-6968)	<p>To access the Eucalyptus User Console in 3.3.1, a user must have a policy that allows access to the services supported by the console. For example:</p> <pre> { "Version": "2012-10-17", "Statement": [{ "Action": ["autoscaling:Describe*", "cloudwatch:Describe*", "cloudwatch:Get*", "cloudwatch:List*", "ec2:Describe*", "elasticloadbalancing:Describe*"], "Effect": "Allow", "Resource": "*" }] }</pre>

Issue	Description
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, <code>euare-userloginprofiles</code> are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p> <p>—</p>
LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration (EUCA-6756)	The LDAP/AD integration can't configure the number of items that the Directory search can return during the synchronization process. So, the synchronization process uses the default. However, if a search responds with more entries than the client is configured to accept, the error displays. The workaround is to use the filter sub-element under the selection element for accounting-groups, groups, and users configuration variables in the LIC file.
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.

Issue	Description
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <code>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message)</code> In spite of this error the migration has started and should successfully complete.
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the <code>eucalyptus</code> account must use the <code>-a</code> option with <code>euca-describe-images</code> in order to display public images.
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your <code>CLOUD_OPTS</code> settings in the <code>/etc/eucalyptus/eucalyptus.conf</code> file either do not set <code>--java-home</code> , or that <code>--java-home</code> points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.

Issue	Description
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
iptables-preload is not honored when CC are in HA mode and failover happens (EUCA-4253)	When Eucalyptus is in HA mode, the <code>iptables-preload</code> file is not reloaded on failover. To load this file, do the following: <ol style="list-style-type: none"> 1. Clean restart the active CC. 2. Verify that both CCs report the rules when they are going back online. 3. Disable the active CC and verify that the standby CC becomes active with the <code>iptables-preload</code> rules.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> • <code>storage.maxtotalvolumesizeingb</code> • <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.

Issue	Description
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
<code>euca-create-image</code> from ebs backed instance fails, returns 0 (EUCA-1333)	<code>euca-create-image</code> is currently unsupported.
Must use user-friendly names for multipathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in <code>/etc/multipath.conf</code> .

Issue	Description
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code> . The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	The CC should be located with at least on Java component (preferably, the SC) when using ELB. Otherwise, the ELB VM will be unable to contact the CLC.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb does not currently work when using VMware as the hypervisor.

3.4.0

This section contains release notes for Eucalyptus version 3.4.0.

What's New?

New Features

Eucalyptus 3.4.0 introduces the following new features.

Feature	Description
Multi-cluster, Multi-hypervisor support	Eucalyptus now supports VMware and KVM in the same cloud. For more information, see
Security Token Service (STS) compatability	Eucalyptus now has limited support for STS. For STS schema documentation, see Schema Documentation .
Support for warm upgrades	Eucalyptus no longer requires that you shut down instances when you upgrade. For information about upgrading Eucalyptus, see Eucalyptus Upgrade .
Deregistered images now automatically cleaned up	<p>Users no longer have to run the <code>euca-deregister</code> command twice. Deregistered images will be automatically cleaned up in the background with an interval configured by a new property in <code>euca.conf</code>:</p> <pre>[cloud.images.cleanupperiod = 10m]</pre> <p>The default value is 10 minutes. An image can only be cleaned up once it is no longer in use by any instances.</p> <p>The cloud administrator can pass <code>verbose</code> to <code>euca-describe-images</code> to see the deregistered images, they will not otherwise be shown. The cloud administrator can also run the <code>deregister</code> command twice to force an immediate attempt at image cleanup.</p>
New configuration property	We added a new configuration property that allows unknown parameters to be ignored for all services or treated as an error for all services. For more information, see the <code>bootstrap.webservices.unknown_parameter_handling</code> property in Eucalyptus Configuration Variables .
New documentation	We added new content to our documentation: Image Management Guide, Hybrid Guide, a new Security section in the Administration Guide, and schema documentation. For more information, see Documentation History .

Technology Preview Features

Technology Preview features provide early access to upcoming product innovations, enabling you to test functionality and provide feedback during the development process. However, these features are not fully supported under Eucalyptus Subscription Level Agreements, may not be functionally complete, and are not intended for production use.

Eucalyptus 3.4.0 introduces the following technology preview feature.

Feature	Description
New Edge networking mode	For more information, go to the wiki page for Edge Networking .

Resolved Issues

Eucalyptus 3.4.0 resolves issues listed in the following table.

Issue	Description
EUCA-7950	UI is churning error messages into terminal when no session is open
EUCA-8060	Windows "Connect to Instance" issue
EUCA-7775	Test code should be removed from packages (VolumeEntitiesTest)
EUCA-7707	Remove "experimental" from DNS property settings as they were validated from 3.3.1 on
EUCA-7643	NetApp Fails To Delete Snapshots During Churn Test
EUCA-7642	NetApp Storage leaves eucalyptus snapshots (netapp volumes) in filer
EUCA-7548	edit scaling group properties does not seem to work
EUCA-7532	Manage Instances Landing page shows incorrect selection of number of instances on page
EUCA-7483	edit scaling group dialog has content for policies and membership tabs reversed
EUCA-7481	created alarm, did not display by default in the alarm dropdown in the policy creator fields
EUCA-7480	Unable to create policies for scaling groups.
EUCA-7474	Snapshot size can sometimes be recorded as 0
EUCA-7421	Odd Component Name Registration Behavior
EUCA-7415	Ephemeral disks not present with Vmware+BFEBs when requested in block device map
EUCA-7358	Valid AWS IAM Policy Document Not Accepted by Eucalyptus
EUCA-7356	create alarm dialog div uses "selected resource" class which messes up body font for validation error display
EUCA-7355	User with Launch Config containing a block device mapping can not log in to UI
EUCA-7338	Can not edit tag in tab of "Create new Security Group" dialog.
EUCA-7330	List of Launch Configurations should display name of security group instead of id in the table
EUCA-7321	ELB fails to update after registered instance address change

Issue	Description
EUCA-7317	TagManager.java:171: unreachable catch clause
EUCA-7313	typo - regaular should be regular in ui Login dialog
EUCA-7305	ELBs fail because of lack of internet connection due to NTP
EUCA-7291	Euca-bundle-instance does not restart instance with vmware
EUCA-7287	Reduce logging level for monitoring enabled message
EUCA-7284	When an Auto Scaling Group is deleted it disappears from the list, then shows up again, then disappears again
EUCA-7283	Help page for Edit Scaling Group dialog has Save and Cancel buttons.
EUCA-7281	No input validation for max and min in Auto Scaling Group edit properties
EUCA-7278	Error message is cut in two parts by image
EUCA-7274	euca-create-keypair allows non-ascii characters
EUCA-7267	Only the edited tag shows up in Create New S. Group dialog called during instance launch, tags from previous launches inherited by new security group
EUCA-7259	iscsi session is left behind after terminating EBS backed instance
EUCA-7256	Remove any unnecessary Jetty dependencies
EUCA-7231	create security group dialog, add another rule button remains disabled even though all rule fields contain data
EUCA-7219	when you open a dialog it creates a horizontal scrollbar and that when you scroll down you get white instead of grey
EUCA-7207	authorize_security_group_deprecated returns 200 from port -1 to -1 on TCP and UDP
EUCA-7205	VMware Broker only reporting half of the cores per NC
EUCA-7184	Cleaning failed volume message printed every 10s per volume
EUCA-7174	Error/stacktrace logged when describing instance types
EUCA-7167	EBS volumes can't be mapped to partitions
EUCA-7150	euca-bundle-instance operations don't persist volume attachments correctly
EUCA-7135	EBS volumes are not found on guest after bundle instance
EUCA-7108	Displaying help wipes out user data on user console dialogs
EUCA-7107	euca-stop-instances returns nothing when instance type is instance-store
EUCA-7102	Remote SC initiates LDAP Sync Upon Start Up
EUCA-7101	axis2c.log contains spurious errors for x509 certificate

Issue	Description
EUCA-7082	Eucalyptus allows euca-register to use the same name for image registration
EUCA-7067	Attach volume dialog does not validate zone
EUCA-7063	Walrus returns different result for authenticated-read ACL
EUCA-7059	Creating a bucket with an empty name does not cause a failure
EUCA-7058	Manage instances widget cannot delete multiple instances
EUCA-7020	User Console login page slow to render
EUCA-7019	Console kicks out the user in when he is in actively doing operations.
EUCA-7003	In Import Keypair dialog the "Name" input field can not be accessed by its id
EUCA-6969	creating volume with negative size results failed volume
EUCA-6968	cannot login to user console with account admin or user
EUCA-6870	GetObjectRequest withRange errors when invalid range is given
EUCA-6866	resource collection updates take too long to show up in console
EUCA-6851	Block devices specied at start up time reported twice in DescribeInstances
EUCA-6782	Instance meta-data service should serve JSON for role security credentials
EUCA-6771	CreateRole api call gives bad request
EUCA-6756	LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration
EUCA-6668	Elements from "More actions" drop-down don't trigger dialog, when clicked by id from Selenium IDE
EUCA-6667	Volume count on dashboard updates slowly
EUCA-6666	Dashboard count shows "0" resources incorrectly and then correct resource count when there are many resources created
EUCA-6665	System Mode run instance frequently error
EUCA-6664	Elements in tool bar (on top of every page) have no ui-id assigned to them.
EUCA-6663	Filters, keywords in search bar have dynamically assigned id that keeps incrementing with each call
EUCA-6587	When tag edit is canceled, the "before cancel" state of tags shows up briefly on resource
EUCA-6585	In Import Keypairs dialog has a duplicate in the background
EUCA-6584	Some elements on Dashboard can not be accessed via ID

Issue	Description
EUCA-6583	Multiple copies of "help" created in the background in all dialogs
EUCA-6582	In the Manage Tag dialog the id of "General" and "Tag" tabs is of form ui-id-<some number> and <some number> is incremented with each call
EUCA-6574	CreateBucket invoked via REST returns a response in the body when it shouldn't
EUCA-6573	Error moving enabled eucalyptus service in HA using disable/enable
EUCA-6572	Eucalyptus service does not stay in the STOPPED state
EUCA-6568	When tags are added/deleted, expando shows new state, then old state, then new state again
EUCA-6566	Long ELB name results in invalid DNS name
EUCA-6565	Tags and security group rules should be displayed each time in the same order
EUCA-6564	the landing page update refreshes the clicked button on the table while opening a dialog
EUCA-6559	euca-deregister needs to be ran twice to de-register an image (doesn't match AWS behavior)
EUCA-6552	In "Manage Tags" dialog may be creating an extra copy of dialog in the background. Input fields need to be assigned ids.
EUCA-6551	Checkboxes on all pages that list resources have to be given ids.
EUCA-6520	User Console session.idle.timeout not honored
EUCA-6505	Cannot reach LB vm after changing listener
EUCA-6482	Rivets-base dialogs assign the same ID to all the big green buttons
EUCA-6479	Failed to marshall response to create volumes request
EUCA-6467	Make Install fails in eucalyptus/clc/eucadmin
EUCA-6462	Issue adding secondary CLC after upgrade
EUCA-6405	Click to sort on a pagnated table causes the table to return to the first page
EUCA-6375	CLC starts also when another postgresl process is running on the same port
EUCA-6319	You can add tags for non-existent groups:
EUCA-6318	Using group name with tagging, does not throw an error
EUCA-6218	vmware- Multiple devices in block device map only root device appears on guest
EUCA-6208	If Eucalyptus DNS is not enabled, AWS compatibility regarding bucket URLs is broken with Walrus

Issue	Description
EUCA-6200	low on heap space memory after few hours of operation
EUCA-6100	Eucalyptus User Console Doesn't Show All Images When There Are a Large Number of Images (over 300)
EUCA-6075	Can't bundle the same instance twice
EUCA-5948	Changing LB VM emi in properties should update ASG launch configs
EUCA-5931	Load balancing module should not depend on cluster-manager or autoscaling modules
EUCA-5930	Auto scaling module should not depend on cluster-manager
EUCA-5845	CLC accepts invalid characters for resource names
EUCA-5818	Remove Guava multiple version hack from BindingCache
EUCA-5514	Walrus Response With Extra GetBucketAccessControlPolicyResponse Elements
EUCA-5513	Bucket ACLs Do Not Use Canonical User IDs
EUCA-5512	Walrus Doesn't Display Canonical User IDs and Display Name Correctly for Bucket ACLs when creating buckets, bucket ACLs with eucalyptus/admin user
EUCA-4710	StartInstances returns incorrect previousStates
EUCA-4399	Exceptions List in CLC references EC2 API Namespace 2008-08-08; Needs to be Updated to Reference the Latest Namespace Supported
EUCA-4269	euca-delete-group against an invalid group doesn't provide AWS compatible error
EUCA-4253	iptables-preload is not honored when CC are in HA mode and failover happens
EUCA-4247	clc takes a long time to respond to non-cloud-admin request vs cloud-admin
EUCA-4224	Errors logged when resources described by user
EUCA-4177	DB resource check exceptions in the log
EUCA-3854	Default kernel and ramdisk associated to BFEBS instances
EUCA-3464	DeregisterImage doesn't work when an instance of the image still exists
EUCA-3326	euca-bundle-instance does not work if the bucket already exists on Walrus
EUCA-3113	Spurious error logged repeatedly - Creating UUID for message which did not have it set correctly
EUCA-2274	Error logged when starting CLC/SC
EUCA-2048	Errors logged on startup for invalid TypeMappers
EUCA-1800	Remove images error message should be improved

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.4.0 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

New known issues for this release:

Issue	Description
If a configuration file with the extension .rpmnew already exists when an upgrade is performed, then the user's config file will be overwritten instead of it being copied to a .rpmnew file. (DOC-1081)	Workaround: save contents of the files before upgrade. See attached bug for more information.
Cannot change launch config of autoscaling group from the user console while running Internet Explorer 10 and Windows 7 (EUCA-7952)	Attempting to change a launch configuration with the user console while running Internet Explorer 10 on Windows 7 results in the error "Failed to update scaing group. Please try again.". Workaround: use the Firefox or Google Chrome browser, or use the command line tools.
EBS image registration ignores user-supplied architecture argument (EUCA-7337)	EBS image registration defaults to x86_64. The default should be i386. In addition, if you attempt to change the architecture explicitly, it's ignored and stays x86_64. The is cosmetic, as the backend ignores the architecture argument.
Cannot stop primary CLC/Walrus (EUCA-7634)	<p>When attemptin to stop the primary CLC/W, it goes into NOTREADY state and it cannot stop the eucalyptus-cloud process.</p> <p>Workaround: You can use kill -9 on the Eucalyptus Cloud process if the following is true: On the CLC machine:</p> <ol style="list-style-type: none"> 1. Verify that "ps aux grep postgress" returns only "grep postgress" This verifies that the Database has shut down and there will be no loss of data 2. Kill -9 <pid-of eucalyptus-cloud-service>
Cannot unbundle image which was bundled with euca-bundle-instance (EUCA-7148)	Even when using the same identity and keys that are used for both the bundle-instance, register and unbundle attempt, the unbundle will fail with a decryption error. Workaround: EMIs created with euca-bundle-instance operation cannot be unbundled with the user's credentials. The workaround for Linux images is to launch an instance from the EMI and perform euca-bundle-volume in it.
euca-describe-nodes does not return output in certain distributed topologies (EUCA-7039)	When the CLC, CC, and NCs are distributed components, euca-describe-nodes returns nothing. This is an issue with the CLC. Workaround: see linked bug. Note: This workaround just allows you to figure out how many nodes are attached to running instances as an administrator.


Issue	Description
Misleading error from euca_conf --configure-vmware (EUCA-378)	When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: see linked bug.
Eucalyptus keeps the previous IPs in VNET_PUBLICIPS even after the field is modified and CC cleanrestarted. (EUCA-3856)	When using VMware Broker with direct connection to ESXi machine - if there is no virtual network created, "euca_conf --configure-vmware" will error out. Workaround: restart the cloud controller.
Adding nodes to vmware config requires service restart, cluster to become unavailable. (EUCA-1806)	When uploading a new vmware config to the CLC, the update is not pulled by the Broker until it is restarted. As a consequence of the Broker restart the Cluster Controller becomes unavailable. Adding or removing nodes from the config should not cause a service interruption.
Registering image after euca-bundle-instance differs for vmware. (EUCA-7847)	Name of the manifest file on vmware differs from other virtualization types. Please check content of the bucket used for bundling to find out correct manifest name. Generally it should be bucket/prefix.manifest.xml for instances started from linux paravirtualized images and bucket/prefix.raw.manifest.xml for instances started from all other images. For example: <ul style="list-style-type: none"> • <bundle_name>/<prefix>.manifest.xml for paravirtualized instances • <bundle_name>/<prefix>.raw.manifest.xml for all other instances
Cannot add unit in create custom metric dialog in user console (EUCA-7919)	Workaround: use the euwatch command line tools to add a custom metric.
Volume attachments fail with EBS backed guests using ephemeral disks post stop/start (EUCA-7640)	Workaround: see linked bug.
Instance profiles don't work with IAM roles that have an IAM auto scaling policy (EUCA-7847)	Workaround: see linked bug.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb property does not work on VMware even after adding it to the config and euca_imager left cache directory with all files after image creation.
Instance profiles don't support roles with IAM S3 policies (EUCA-7863)	See linked bug for details.

Issue	Description
Maximum image size for euca-register has been increased from 10GB to 30GB (DOC-1011)	<p>The maximum size for an image has been increased from 10GB to 30GB by default. Administrators who want to change this default (for example, to enforce the same 10GB limitation as EC2) can change this value by using the following command:</p> <pre>euca-modify-property -p cloud.images.maximagesizegb=<max size in gigabytes></pre> <p>The value must be an integer; a value of 0 disables the size check and means that there is no limit on the size of images that may be registered by users. Changing the value will not invalidate previously registered images. For upgraded installations, the maximum size is set to '0' if the previous version of Eucalyptus did not include this property (pre-3.4.0) so the admin must explicitly set a limit if one is desired.</p>
Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade (EUCA-7935)	<p>If the /etc/resolv.conf on the CLC has been configured to use itself (i.e. IP of CLC) in a Eucalyptus 3.3.x cloud as a nameserver, after upgrading to Eucalyptus 3.4.0, users will have to define recursive DNS servers in CLOUD_OPTS in the eucalyptus.conf on the CLC. For the workaround, please see Recursive DNS Server Behavior Change After 3.3.x to 3.4.0 Upgrade.</p>

Outstanding known issues from previous releases:

Issue	Description
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.
VMware Broker requires eucalyptus user to have write access to the /etc/eucalyptus directory (BROKER-9)	If the eucalyptus user does not have write access to the /etc/eucalyptus directory, the VMware Broker will stay in a BROKEN state, and euca-configure-vmware will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
ELBs fail because of lack of internet connection due to NTP (EUCA-7305)	ELB's won't work properly when they don't have internet connectivity. As part of the ELB image, we setup public NTP servers for time sync. In enterprise environments there is no guarantee that instances can reach the internet.

Issue	Description
Euca-bundle-instance does not restart instance with VMware (EUCA-7291)	<p>Instances stay in the powered off state on the ESX hosts after the bundle task completes. Eucalyptus reports the state as "running". There are two workarounds:</p> <ul style="list-style-type: none"> • If the user has access to vSphere, the user can power on the VM through a vSphere client • If the user does not have access to vSphere, the user can terminate the instance through Eucalyptus (to get it out of "running" state) and then start a new one using the newly available EMI.
VMware Broker only reporting half of the cores per NC (EUCA-7205)	<p>Eucalyptus uses the physical number of cores on an ESX host as the number of virtual cores. To change the value of your virtual cores, open the configuration file and set <code>maxCores</code> to the desired number of cores. For information about how to set this value, see "Configure VMware Support" in the 3.4.0 Eucalyptus Installation Guide.</p>
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	<p>In an HA configuration, the <code>eucalyptus-cloud</code> service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to <code>CLOUD_OPTS</code> in <code>eucalyptus.conf</code> to disable hotspot. However, please note that this workaround might have some performance impact.</p>
Cannot log in to User Console with either user or admin account (EUCA-6968)	<p>To access the Eucalyptus User Console in 3.3.1, a user must have a policy that allows access to the services supported by the console. For example:</p> <pre> { "Version": "2012-10-17", "Statement": [{ "Action": ["autoscaling:Describe*", "cloudwatch:Describe*", "cloudwatch:Get*", "cloudwatch:List*", "ec2:Describe*", "elasticloadbalancing:Describe*"], "Effect": "Allow", "Resource": "*" }] }</pre>

Issue	Description
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, <code>euare-userloginprofiles</code> are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p> <p>—</p>
LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration (EUCA-6756)	The LDAP/AD integration can't configure the number of items that the Directory search can return during the synchronization process. So, the synchronization process uses the default. However, if a search responds with more entries than the client is configured to accept, the error displays. The workaround is to use the filter sub-element under the selection element for accounting-groups, groups, and users configuration variables in the LIC file.
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.

Issue	Description
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Can't bundle the same instance twice (EUCA-6075)	The first attempt to run <code>euca-bundle-instance</code> on an instance will succeed. Subsequent attempts to run this on the same instance will fail. The workaround is to terminate the instance then try again with another instance.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <pre>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message) In spite of this error the migration has started and should successfully complete.</pre>
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the <code>eucalyptus</code> account must use the <code>-a</code> option with <code>euca-describe-images</code> in order to display public images.
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your <code>CLOUD_OPTS</code> settings in the <code>/etc/eucalyptus/eucalyptus.conf</code> file either do not set <code>--java-home</code> , or that <code>--java-home</code> points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.

Issue	Description
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
iptables-preload is not honored when CC are in HA mode and failover happens (EUCA-4253)	When Eucalyptus is in HA mode, the <code>iptables-preload</code> file is not reloaded on failover. To load this file, do the following: <ol style="list-style-type: none"> 1. Clean restart the active CC. 2. Verify that both CCs report the rules when they are going back online. 3. Disable the active CC and verify that the standby CC becomes active with the <code>iptables-preload</code> rules.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> • <code>storage.maxtotalvolumesizeingb</code> • <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.

Issue	Description
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
<code>euca-create-image</code> from ebs backed instance fails, returns 0 (EUCA-1333)	<code>euca-create-image</code> is currently unsupported.
Must use user-friendly names for multipathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in <code>/etc/multipath.conf</code> .

Issue	Description
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code> . The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.
Load Balancer VM not able to contact CLC when CC is not collocated with at least 1 Java component (EUCA-7845)	The CC should be located with at least on Java component (preferably, the SC) when using ELB. Otherwise, the ELB VM will be unable to contact the CLC.
user console does not gracefully prevent you from doing things your permissions don't allow you to do (DOC-1062)	If a user tries to perform operations that they are not allowed to, the user console dialog box may show an empty field, instead of not allowing you to launch the dialog in the first place. For instance, if you cannot describe tags, the user console should not let you try to run instances, because you can't actually see instance types. Currently, it will let you launch the dialog and not show any tags.
euca_imager does not honour cacheDirectoryLimitMb property (EUCA-6531)	The cacheDirectoryLimitMb does not currently work when using VMware as the hypervisor.

3.3.2

This section contains release notes for Eucalyptus version 3.3.2.

What's New?

Eucalyptus 3.3.2 is a maintenance release and contains no new features.

Resolved Issues

Eucalyptus 3.3.2 resolves issues listed in the following table.

Issue	Description
EUCA-7586	Fixed an issue where the DNS server in the CLC stopped answering after a few days of operation.
EUCA-7566	Fixed a problem in Faststart in which volumes did not attach to an instance.

Resolved Security Issues


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

Known Issues

The following known issues exist in Eucalyptus 3.3.2 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

Issue	Description
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result connectivity issues with the Broker.
VMware Broker requires eucalyptus user to have write access to the <code>/etc/eucalyptus</code> directory (BROKER-9)	If the eucalyptus user does not have write access to the <code>/etc/eucalyptus</code> directory, the VMware Broker will stay in a BROKEN state, and <code>euca-configure-vmware</code> will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
ELBs fail because of lack of internet connection due to NTP (EUCA-7305)	ELB's won't work properly when they don't have internet connectivity. As part of the ELB image, we setup public NTP servers for time sync. In enterprise environments there is no guarantee that instances can reach the internet.

Issue	Description
Euca-bundle-instance does not restart instance with VMware (EUCA-7291)	<p>Instances stay in the powered off state on the ESX hosts after the bundle task completes. Eucalyptus reports the state as "running". There are two workarounds:</p> <ul style="list-style-type: none"> • If the user has access to vSphere, the user can power on the VM through a vSphere client • If the user does not have access to vSphere, the user can terminate the instance through Eucalyptus (to get it out of "running" state) and then start a new one using the newly available EMI.
VMware Broker only reporting half of the cores per NC (EUCA-7205)	<p>Eucalyptus uses the physical number of cores on an ESX host as the number of virtual cores. To change the value of your virtual cores, open the configuration file and set <code>maxCores</code> to the desired number of cores. For information about how to set this value, see Configure VMware Support in the Eucalyptus Installation Guide.</p>
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	<p>In an HA configuration, the <code>eucalyptus-cloud</code> service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to <code>CLOUD_OPTS</code> in <code>eucalyptus.conf</code> to disable hotspot. However, please note that this workaround might have some performance impact.</p>
Cannot log in to User Console with either user or admin account (EUCA-6968)	<p>To access the Eucalyptus User Console in 3.3.1, a user must have a policy that allows access to the services supported by the console. For example:</p> <pre> { "Version": "2012-10-17", "Statement": [{ "Action": ["autoscaling:Describe*", "cloudwatch:Describe*", "cloudwatch:Get*", "cloudwatch:List*", "ec2:Describe*", "elasticloadbalancing:Describe*"], "Effect": "Allow", "Resource": "*" }] }</pre>

Issue	Description
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, <code>euare-userloginprofiles</code> are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre>euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre>euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p> <p>—</p>
LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration (EUCA-6756)	The LDAP/AD integration can't configure the number of items that the Directory search can return during the synchronization process. So, the synchronization process uses the default. However, if a search responds with more entries than the client is configured to accept, the error displays. The workaround is to use the filter sub-element under the selection element for accounting-groups , groups , and users configuration variables in the LIC file.
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.

Issue	Description
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Can't bundle the same instance twice (EUCA-6075)	The first attempt to run <code>euca-bundle-instance</code> on an instance will succeed. Subsequent attempts to run this on the same instance will fail. The workaround is to terminate the instance then try again with another instance.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <pre>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message) In spite of this error the migration has started and should successfully complete.</pre>
<code>BundleInstance</code> always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the <code>eucalyptus</code> account must use the <code>-a</code> option with <code>euca-describe-images</code> in order to display public images.
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your <code>CLOUD_OPTS</code> settings in the <code>/etc/eucalyptus/eucalyptus.conf</code> file either do not set <code>--java-home</code> , or that <code>--java-home</code> points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.

Issue	Description
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
iptables-preload is not honored when CC are in HA mode and failover happens (EUCA-4253)	When Eucalyptus is in HA mode, the <code>iptables-preload</code> file is not reloaded on failover. To load this file, do the following: <ol style="list-style-type: none"> 1. Clean restart the active CC. 2. Verify that both CCs report the rules when they are going back online. 3. Disable the active CC and verify that the standby CC becomes active with the <code>iptables-preload</code> rules.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> • <code>storage.maxtotalvolumesizeingb</code> • <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.

Issue	Description
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages iSCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
<code>euca-create-image</code> from ebs backed instance fails, returns 0 (EUCA-1333)	<code>euca-create-image</code> is currently unsupported.
Must use user-friendly names for multipathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in <code>/etc/multipath.conf</code> .

Issue	Description
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	<p>If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code>. The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.</p>

3.3.1

This section contains release notes for Eucalyptus version 3.3.1.

What's New?

Eucalyptus 3.3.1 is a maintenance release and contains the following new feature:

- We now support Auto Scaling in the Eucalyptus User Console. For more information, go to the section, **Working with Auto Scaling Groups** in the Eucalyptus Console Guide or in the online help for the Eucalyptus User Console.

Resolved Issues

Eucalyptus 3.3.1 resolves issues listed in the following table.

Issue	Description
SAN-66	NetApp Cluster Mode - Volume creation fails when aggregates are configured in Eucalyptus
EUCA-7220	models/zone(s) duplicates functionality of models/availabilityzone(s)
EUCA-7137	ListVersions for Bucket returns NPE from WalrusManager line 3461
EUCA-7069	Missing brackets cause vnetAddDev to always return EUCA_INVALID_ERROR
EUCA-7035	UI can't authorize user with @ in a password.
EUCA-7034	Typo in cache refresh causes stale data for users
EUCA-6946	unconfigured ELB responds to some calls properly, but not all
EUCA-6938	NC gives out internal error when trying to terminate a non-existing instance
EUCA-6933	Add support for EC2 2013-06-15 API version
EUCA-6915	After delete operation on Volumes Landing page in Firefox, the volume disappears from landing page, when its state is, in fact "Pending"
EUCA-6907	Equallogic - Volumes fail to attach after CHAP user is modified
EUCA-6865	create snapshot volume field should accept only valid volumes from the drop down list or volume IDs that match something in the drop down list
EUCA-6818	After Upgrading from 3.2.2 to 3.3, RightAWS API call to start EBS-backed instances returned an error
EUCA-6779	Console shows "0 images" while loading
EUCA-6754	non-windows OS not displaying in image expando data

Issue	Description
EUCA-6753	If desired capacity set to zero, once all instances are terminated the > AS group no longer appears in the Scaling Groups tab
EUCA-6697	running and clearing search facets extremely slow on ECC
EUCA-6588	Terminating EBS backed instance during volume creation causes volume to stay in deleting
EUCA-6571	Error modifying service state in HA
EUCA-6550	Installed licences/Jars not consistent
EUCA-6549	Unable to register Walrus - 'NoneType' object is not callable
EUCA-6543	The admin console does not provide the correct error message when a password has expired.
EUCA-6530	Tooltip text incorrect for "Instance name(s)" field on Launch Instance wizard
EUCA-6510	create volume fails on Chrome when "none" set as snapshot Id
EUCA-6504	Hosts.entrySet(): Logging every 2 seconds at INFO
EUCA-6500	instance landing expando: volumes should show name if available
EUCA-6499	should not have to ESC after using magic search bar
EUCA-6492	Authorization fails when using security token with Signature V4
EUCA-6484	the attach volume dialog displays all the volumes regardless of the availability zones
EUCA-6480	Replace dataholder with app.data in launch instance wizard
EUCA-6475	User console dashboard doesn't pick up zones change
EUCA-6456	User should be able to set the limit for request timeouts
EUCA-6400	In multi-cluster configuration, migrations using --source broken for all clusters but first registered.
EUCA-6300	Tag edit does not get canceled when delete/undelete is performed on other tags
EUCA-6242	After Upgrading from 3.2.2 to 3.3.0, Eucalyptus DNS fails to resolve
EUCA-6226	User Console: In Images tab, the "Name" column should be renamed Image to match other screens
EUCA-6215	Get Console Output Dialog breaks on instance's long name
EUCA-6214	Long names in snapshot landing page breaks the table
EUCA-6177	Volume ID validation error message is not aligned with the input box
EUCA-6173	Manage tag dialog's validation error message should be displayed directly under the errored tag

Issue	Description
EUCA-6160	FindBugs: CloudWatch unsafely shares SimpleDateFormat between threads
EUCA-5969	Autocomplete sets "Attach as device" to "/dev/sdf" even when device is in use
EUCA-5863	Attaching volume shows up as available in the drop-down
EUCA-5772	delete_on_terminate fails when instance is stopped before termination
EUCA-5584	instance metadata gives 404 for http://169.254.169.254/1.0
EUCA-5547	launch instance wizard does not validate input for number of instances to launch
EUCA-5430	Bogus Error Message when creating security group that already exists
EUCA-5320	Attach volume to instance: "Attach" button not clickable after volume-id have been pasted in
EUCA-5256	ec2-metadata not grabbing all data
EUCA-4964	instance creation fails on blobstore.c
EUCA-4815	user console should validate size of user data against max allowable size for euca
EUCA-4541	create security group button text should say Create group
EUCA-4504	USER-CONSOLE: When importing keypair, no error message gets displayed to inform that it's not allowed to click "import" button when using ' as part of its name.
EUCA-4338	More Actions button does not pick up on hover styling
EUCA-4337	attach volume from instance landing should filter volumes to those in same AZ as selected instance
EUCA-4329	Metadata Service - hostname should match local-hostname
EUCA-4222	Incorrect error creating volume with large size
EUCA-3110	Cloud controller listen ports should be predictable
EUCA-2770	if eucalyptus controls DNS, there should be an A record to instance-data.<subdomain>.internal and PTR record for 169.254.169.254
EUCA-1556	metadata: null point exception when accessing http://169.254.169.254/
EUCA-1555	metadata: 'mac' category is not supported
BROKER-17	VB: do not assume that VM has a non-empty annotation


Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.3.1 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

Issue	Description
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result in connectivity issues with the Broker.
VMware Broker requires eucalyptus user to have write access to the /etc/eucalyptus directory (BROKER-9)	If the eucalyptus user does not have write access to the /etc/eucalyptus directory, the VMware Broker will stay in a BROKEN state, and euca-configure-vmware will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
ELBs fail because of lack of internet connection due to NTP (EUCA-7305)	ELB's won't work properly when they don't have internet connectivity. As part of the ELB image, we setup public NTP servers for time sync. In enterprise environments there is no guarantee that instances can reach the internet.
Euca-bundle-instance does not restart instance with VMware (EUCA-7291)	Instances stay in the powered off state on the ESX hosts after the bundle task completes. Eucalyptus reports the state as "running". There are two workarounds: <ul style="list-style-type: none"> • If the user has access to vSphere, the user can power on the VM through a vSphere client • If the user does not have access to vSphere, the user can terminate the instance through Eucalyptus (to get it out of "running" state) and then start a new one using the newly available EMI.
VMware Broker only reporting half of the cores per NC (EUCA-7205)	Eucalyptus uses the physical number of cores on an ESX host as the number of virtual cores. To change the value of your virtual cores, open the configuration file and set <code>maxCores</code> to the desired number of cores. For information about how to set this value, see Configure VMware Support in the Eucalyptus Installation Guide.
Eucalyptus cloud service JVM SIGSEGV in HA configuration (EUCA-7030)	In an HA configuration, the eucalyptus-cloud service exits with a SIGSEGV fatal error after a fairly short period. When this occurs the current thread is always "C2 CompilerThread0" and the method under compilation is "java.sql.DriverManager::getDriver". A workaround for this issue is to add "-Xint" to <code>CLOUD_OPTS</code> in <code>eucalyptus.conf</code> to disable hotspot. However, please note that this workaround might have some performance impact.

Issue	Description
Cannot log in to User Console with either user or admin account (EUCA-6968)	<p>To access the Eucalyptus User Console in 3.3.1, a user must have a policy that allows access to the services supported by the console. For example:</p> <pre> { "Version": "2012-10-17", "Statement": [{ "Action": ["autoscaling:Describe*", "cloudwatch:Describe*", "cloudwatch:Get*", "cloudwatch:List*", "ec2:Describe*", "elasticloadbalancing:Describe*"], "Effect": "Allow", "Resource": "*" }] }</pre>
When LDAP/AD integration is enabled, login profiles are not enabled (EUCA-6760)	<p>When LDAP/AD integration is enabled, <code>euare-userloginprofiles</code> are not created. To make sure that users can log into the Administration Console, do the following:</p> <ol style="list-style-type: none"> 1. Create a login profile using a "dummy" password: <pre> euare-useraddloginprofile --delegate account1 -u user03 -p test</pre> 2. Check to see that the user's login profile has been created: <pre> euare-usergetloginprofile --delegate account1 -u user03 user03</pre> <p>The user can now log into the Administration Console using their user ID and LDAP/AD password.</p> <p> Important: This only applies to the Administration Console. You do not need to create login profiles for the User Console.</p> <p>—</p>
LDAP: error code 4 - Sizelimit Exceeded when using LDAP/AD Integration (EUCA-6756)	<p>The LDAP/AD integration can't configure the number of items that the Directory search can return during the synchronization process. So, the synchronization process uses the default. However, if a search responds with more entries than the client is configured to accept, the error displays. The workaround is to use the filter sub-element under the selection element for <i>accounting-groups</i>, <i>groups</i>, and <i>users</i> configuration variables in the LIC file.</p>

Issue	Description
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage
Modify service does not work always (EUCA-6389)	In some cases the euca-modify-service command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Can't bundle the same instance twice (EUCA-6075)	The first attempt to run euca-bundle-instance on an instance will succeed. Subsequent attempts to run this on the same instance will fail. The workaround is to terminate the instance then try again with another instance.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 BucketNotEmpty. To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message) In spite of this error the migration has started and should successfully complete.
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The euca-bundle-instance command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the --arch option to euca-register.
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the eucalyptus account must use the -a option with euca-describe-images in order to display public images.

Issue	Description
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your CLOUD_OPTS settings in the /etc/eucalyptus/eucalyptus.conf file either do not set --java-home, or that --java-home points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
iptables-preload is not honored when CC are in HA mode and failover happens (EUCA-4253)	When Eucalyptus is in HA mode, the <code>iptables-preload</code> file is not reloaded on failover. To load this file, do the following: <ol style="list-style-type: none"> 1. Clean restart the active CC. 2. Verify that both CCs report the rules when they are going back online. 3. Disable the active CC and verify that the standby CC becomes active with the <code>iptables-preload</code> rules.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.

Issue	Description
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
No client side reporting on exceeding <code>maxtotalvolumesizeingb</code> (EUCA-4030)	If an EBS-backed instance is launched that is larger than the cloud property <code>maxtotalvolumesizeingb</code> , then there is no error reported back to the client. The instance is terminated. The workaround is to increase the following cloud properties: <ul style="list-style-type: none"> <code>storage.maxtotalvolumesizeingb</code> <code>storage.maxvolumesizeingb</code> Once these values are increased, the instances will launch.
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages iSCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographic keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: <code>RegisterVMwareBroker</code> in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.

Issue	Description
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the eucalyptus-cloud process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
euca-create-image from ebs backed instance fails, returns 0 (EUCA-1333)	euca-create-image is currently unsupported.
Must use user-friendly names for mulitpathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in /etc/multipath.conf.
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code> . The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.

3.3.0

This section contains the release notes for Eucalyptus version 3.3.0.

What's New?

Eucalyptus 3.3.0 introduces the following new features.

Feature	Description
Tagging and Filtering	Eucalyptus allows you to create metadata for your cloud resources using tags. You can then filter resources based on the tags you created. For information about tagging and filtering, see the Using Tags and Filters in the User Guide.
Scaling	Eucalyptus allows you to automatically add or delete instances based on demand. For information about scaling, see the Using Auto Scaling in the User Guide.
Monitoring	Eucalyptus provides monitoring to manage and publish various metrics, as well as to configure alarm actions based on those metrics. For information about monitoring, see the Using CloudWatch in the User Guide.
Load Balancing	Eucalyptus provides load balancing to distribute incoming traffic across your cloud. For information about load balancing, see the Using Elastic Load Balancing in the User Guide.
New VM Types	Eucalyptus adds support for more VM types. For information about VM types, see the Virtual Machine Types in the User Guide.
EBS-Backed Images and Instances	Eucalyptus introduces improvements in Elastic block store (EBS) backed image registration and instances. For details, please go to Boot from EBS Changes in Eucalyptus 3.3 .

Resolved Issues

Eucalyptus 3.3.0 resolves issues listed in the following table.

Issue	Description
EUCA-5822	Upgrades startup does not initially create new component databases for newly added components
EUCA-5772	delete_on_terminate fails when instance is stopped before termination
EUCA-5737	Console UI has issues with IE 8/9/10
EUCA-5686	RunInstances should enforce minimum boot from EBS snapshot sizes
EUCA-5603	CLC and CC default DNS domains are incompatible

Issue	Description
EUCA-5429	Enable CHAP for NetApp
EUCA-5418	User Console: Unable to assign elastic IP assigned to another instance
EUCA-5368	IAM Policy Uses Account Name Instead of Account ID
EUCA-5340	Paste-in is not working for "Associate IP" from instance landing page
EUCA-5338	Eucalyptus Reporting: Usage information incorrect
EUCA-5337	NC: race for hypervisor connection leads to non-deterministic failures
EUCA-5270	When Instance Fails to Launch it stays in pending indefinitely
EUCA-5132	user console login page not displaying page-level help
EUCA-5130	Volume remains in DELETING state after euca-create-volume/euca-delete-volume test
EUCA-4943	Add support for EC2 2012-12-01 version
EUCA-4932	Failed to launch instance after deleting snapshot associated with an image as non-root ebs mapping
EUCA-4874	remove access key requirement from tokens for user console authentication
EUCA-4845	Link the user console's version to /VERSION in the source tree
EUCA-4750	Cloud property being unset causes euca-describe-properties display to be broken
EUCA-4724	Remove walrus and sc stats log files
EUCA-4542	register snapshot as instance has no help
EUCA-4276	igroup Mis-management Regarding NetApp SAN Adapter
EUCA-4272	walrus_request_timeout may hang and impact unrelated instances
EUCA-4244	Should support images with multiple device mappings
EUCA-4243	User input lost when registering image with multiple device mappings
EUCA-4229	After hitting maximum snapshot limit the cloud still sees snapshots
EUCA-4211	Private network index allocation is not thread safe
EUCA-4136	Remove cluster00.storage.storageinterface because it is vestigial
EUCA-4105	Binding namespace substitution substitutes message content instead of namespace.
EUCA-4081	metadata service incorrect for BFEBS instance
EUCA-3958	NC starts when an invalid VNET_MODE is specified

Issue	Description
EUCA-3703	Reporting subsystem hardcodes lists of VM types
EUCA-3659	Walrus REST API does not canonicalize x-amz-headers properly
EUCA-3405	AuthorizeSecurityGroupIngress doesn't support newer parameter scheme
EUCA-3373	Adding additional keys to eucalyptus admin user, breaks ability to use admin commands with new keys
EUCA-3271	EBS Backed instance always have an ephemeral disk
EUCA-3254	RunInstances api call needs to support multiple block device mappings
EUCA-2402	Remove test code from packages
EUCA-2329	CLC always return A response for AAAA or TXT DNS query
EUCA-1756	Kernel, ramdisk images are not owned by the accounts who register them

Resolved Security Issues

No security vulnerabilities have been fixed in this release.

Known Issues

The following known issues exist in Eucalyptus 3.3 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

Issue	Description
Broker does not support some host configurations (BROKER-36)	When using VMware, all hosts must either be managed by VCenter or the Eucalyptus VMware Broker. Mixed management of the hosts is not supported and will result in connectivity issues with the Broker.
VMware Broker requires eucalyptus user to have write access to the /etc/eucalyptus directory (BROKER-9)	If the eucalyptus user does not have write access to the /etc/eucalyptus directory, the VMware Broker will stay in a BROKEN state, and euca-configure-vmware will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
Requests to create volume fail on startup or initial restart of components (EUCA-6479)	In some cases, a Failed to marshall response error occurs on create volume requests. Restarting the components again solves this issue.
Issue adding secondary CLC after upgrade (EUCA-6462)	It is not possible to move a non-HA CLC to HA after an upgrade to 3.3.0. A fresh install is recommended in this situation. A workaround can be found on Eucalyptus Engage

Issue	Description
User should be able to set the limit for request timeouts (EUCA-6456)	The User Console may time out when displaying resource pages. This occurs when a user has many resources, such as volumes.
In multi-cluster configuration, migrations using <code>--source</code> are broken for all clusters but first registered (EUCA-6400)	In a multi-cluster cloud migrations using <code>--source</code> are broken for all clusters but the first one registered. Use <code>--instance</code> to work around this issue.
Modify service does not work always (EUCA-6389)	In some cases the <code>euca-modify-service</code> command does not work. A subsequent retry of this command should succeed.
NC often goes to NOTREADY state during multiple instance migration (EUCA-6366)	During a multiple instance migration the user may see the source NC transition into NOTREADY state. There is no explicit action required. The NC will transition back to ENABLED and the migration will succeed.
Failure to create backing for instance migration (EUCA-6228)	In some cases the user may see a failure when attempting multiple instance migration. The workaround is to run the migration a second time, which should succeed.
Instances become inaccessible if CC is clean restarted during migration (EUCA-6232)	Performing a clean-restart operation during a migration may cause instances to become inaccessible. It is best to avoid a clean-restart operation during migration.
Can't bundle the same instance twice (EUCA-6075)	The first attempt to run <code>euca-bundle-instance</code> on an instance will succeed. Subsequent attempts to run this on the same instance will fail. The workaround is to terminate the instance then try again with another instance.
Walrus image cache is hidden to the user (EUCA-6068)	When a registered image is deleted from Walrus the cache files stay behind, but they are not shown when listing bucket contents. An attempt to delete the bucket will return a 409 <code>BucketNotEmpty</code> . To workaround this issue de-register the deleted images and then delete the bucket.
Successfully started migration can be reported as failed (EUCA-6043)	The user may see an error message when attempting to migrate an instance: <pre>Error(MigrateInstancesType): Migrating instance i-820A3F02 failed because of: com.eucalyptus.ws.WebServicesException: com.eucalyptus.ws.WebServicesException: Error parsing document (line -1, col -1, in SOAP-message) In spite of this error the migration has started and should successfully complete.</pre>
BundleInstance always produces x86_64 images (EUCA-5979 , EUCA-5980)	The <code>euca-bundle-instance</code> command defaults to the x86_64 architecture for both the NC and VMWare Broker. In order to ensure the appropriate architecture the user must always supply the <code>--arch</code> option to <code>euca-register</code> .
A user in non-eucalyptus account does not see a public image (EUCA-5901)	A user in an account that is not the eucalyptus account must use the <code>-a</code> option with <code>euca-describe-images</code> in order to display public images.
Instance running time instance types in report not consistent with UI and CLI (EUCA-4847)	As of Eucalyptus 3.3.0, the instance summary report will no longer be available from the command line tools nor the User Console

Issue	Description
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages iSCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.

Issue	Description
<code>httpd-cc_error_log</code> Grows without bound (EUCA-3909)	The <code>httpd-cc_error_log</code> is not rotated and can grow quite large. To reduce this file size, do <code>cp /dev/null \$EUCALYPTUS/var/log/eucalyptus/httpd-cc_error_log</code> . This will truncate the file. Removing the file is not recommended.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the eucalyptus-cloud process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
Cloud controller listen ports should be predictable (EUCA-3110)	It is possible to make configuration changes such that CLC port usage is predictable. Detailed changes are required in order to ensure this. Please contact Eucalyptus support for details
<code>euca-create-image</code> from ebs backed instance fails, returns 0 (EUCA-1333)	<code>euca-create-image</code> is currently unsupported.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
Must use user-friendly names for multipathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in <code>/etc/multipath.conf</code> .
ERR-1009 "Mismatched cryptographic keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
Eucalyptus 3.3 now requires JVM version 7 (EUCA-5807)	Eucalyptus 3.3 requires version 7 of the Java Virtual Machine. Make sure that your <code>CLOUD_OPTS</code> settings in the <code>/etc/eucalyptus/eucalyptus.conf</code> file either do not set <code>--java-home</code> , or that <code>--java-home</code> points to a version 7 JVM. This needs to happen before services are started but after the upgraded packages are installed.

Issue	Description
Netapp SAN: admin will have to set chapuser explicitly after upgrade (DOC-791)	If you are a subscriber and use NetApp as the storage SAN backend, you must onfigure the CHAP username to be used by the Eucalyptus on the CLC (the primary CLC in an HA setup) using <code>euca-modify-property -p <partition>.storage.chapuser=<Chap_username></code> . The CHAP username can be any value, however it should be unique when sharing a NetApp Filer across multiple Eucalyptus clusters. The SC will not transition to ENABLED state until the CHAP username is configured.
The admin console does not provide the correct error message when a password has expired. (EUCA-6543)	When attempting a login to the admin console with an expired password, the error message does not provide the correct prescriptive information advising the user reset their password.

3.2.2

This section contains release notes for Eucalyptus version 3.2.2.



Caution: By default, the node controller uses the filesystem to perform key injection. This is potentially an unsafe practice. To disable key injection, set `DISABLE_KEY_INJECTION=1` in `eucalyptus.conf`.

What's New?

Eucalyptus 3.2.2 is a maintenance release and has no new features. However, we would like to point out two changes in 3.2.x that have not been explicitly noted before:

- DRBD needs an explicit mount point in `/etc/fstab` on each Walrus in your cloud. This is covered in the Installation Guide's section, Configure DRBD.
- Images uploaded to Walrus are private by default. To make images public, enter the following:

```
[euca-modify-image-attribute -l -a all [emi-identifier] ]
```

- The `[partition].storage.lunmigrationtimeout` property for EMC VNX SANs now uses hours instead of seconds. The default value is 12 hours.

Resolved Issues

The following tables lists issues that have been resolved since the last release of Eucalyptus.

Issue	Description
EUCA-5463	iSCSI Perl scripts fail to work if hostname is used instead of IP address for the SAN.
EUCA-5324	Allocating an address against quota message is off by one.
EUCA-5306	DataTables warning (table id = 'instances'): Requested unknown parameter 'placement' from the data source for row 0.
EUCA-5040	Reload of iSCSI targets on OverlayManager SC reboot does not occur.
EUCA-4967	Multicast unreliability cripples system; dependence on multicast contra-indicated in some deployments.
EUCA-4924	Uncaught exception in AbstractConfigurableProperty causes <code>euca-describe-properties</code> to return a RuntimeException.
EUCA-4872	Attaching volumes to EBS instance can cause filesystem mounted on backing volume to err or lockup.
EUCA-4696	User Console logins fail after upgrade from 3.2.0 to 3.2.1.
EUCA-4640	Launching an instance failed due to error: failed to allocate artifact prt-159232ext3-09be6495 (8 blobstore.c:2211 no space left) on try 1.
EUCA-4627	Calling "udevadm trigger" is not safe in iSCSI connect scripts.

Issue	Description
EUCA-4128	<code>euca-describe-volumes</code> (verbose) takes a long time to return with results.
EUCA-3456	<code>euca-describe-nodes</code> does not return consistent results
EUCA-3119	Volumes created from a snapshot for EBS have incorrect filesystem permissions.
BROKER-20	VMware imager still fails to install grub.

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.2.2 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues. You can use the support portal <https://engage.eucalyptus.com> or email us directly at support@eucalyptus.com.

Issue	Description
Cannot attach a volume to a VMware host over iSCSI when the datastore uses NFS (DOC-735)	VMware does not support this configuration. For more information, see VMware KB 1001856 .
Launching multiple EBS-backed instances using <code>-n</code> fails (EUCA-2452)	When launching EBS-backed instances using the <code>-n</code> option, instances never go into running state. Use <code>euca-start-instance</code> to start each stopped instance.
<code>clusterXX.storage.storageinterface</code> has no effect (EUCA-4136)	Setting <code>clusterXX.storage.storageinterface</code> will not redirect iSCSI traffic onto a different interface. To redirect traffic, register the Storage Controller with a different IP address.
"Task is already running" dialog appears when repairing Eucalyptus Windows Integration Tool installation on Windows 2008 Datacenter x86_64 (EUCA-4367)	When you run a repair installation operation on the Eucalyptus Windows Integration Tool on Windows 2008 Datacenter x86_64 (without Hyper-V), an error pops up with the message "The specified service already exists". Select "OK" to continue and the installation repair will proceed normally.
Cannot detach <code>root</code> EBS volume from stopped instance (EUCA-5033)	The <code>root</code> EBS volume cannot be detached from an instance that was launched from that volume.
Large SOAP error messages can fill up logs when using Hybridfox or the Eucalyptus User Console (EUCA-5333)	When using Hybridfox or the Eucalyptus 3.2.1 User Console, large SOAP error messages can quickly fill the cloud-output log file.
Raw data reported by VMware Broker does not include meaningful volume names (BROKER-22)	Data reported in the console displays meaningful volume names. Data exported in raw format labels each volume or ephemeral storage unit as <code>scsi0:[N]</code> , and must be translated into meaningful names by another reporting framework.

Issue	Description
Reporting values seem to be in error at first (DOC-707)	Network traffic numbers in columns Total and External might appear to be incorrect. The external numbers can be greater than total numbers. This is because the two types of measurements come from different hosts (external is from the CC and totals from the NC). These hosts sample and deliver numbers to the reporting subsystem at different times. If the report is requested after the external counter is updated but before the total counter is updated, the numbers could appear out of their natural order. In a stable state without network traffic, the numbers will become correct eventually, usually within a few minutes, depending on the polling frequency value specified in the <code>reporting.default_poll_interval_mins</code> and <code>reporting.default_write_interval_mins</code> parameters.
Race condition can cause secondary Walrus to appear ENABLED to the secondary CLC in HA setup (EUCA-4846)	After repeated state changes of various components in a HA setup, the secondary Walrus may not be visible to the primary CLC. Running <code>euca-modify-service -s DISABLED WS-[N]</code> will resolve this issue.
Default cloud properties must have a value (EUCA-4750)	If any of the cloud properties are set with no value, you might experience issues with the output of the <code>euca-describe-properties</code> command.
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
User console hangs when launching an instance with large user data file (EUCA-4223)	Launching an instance through the console may hang if the user data file is too big. Launch instances on the command line if the user data file is larger than 16KB.
A snapshot registered as an image must be deregistered twice to be fully removed (EUCA-4207)	Running <code>deregister-image</code> does not initially delete the image record for a snapshot that was registered as an image. You must run <code>deregister-image</code> twice to ensure the image is deleted.

Issue	Description
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.

Issue	Description
euca-create-image from ebs backed instance fails, returns 0 (EUCA-1333)	euca-create-image is currently unsupported.
Snapshots sometimes fail when using VNX (VNX-38)	This only happens when the Storage Controller sends commands to the storage processor (as specified in the <code>sanhost</code> property) that is not the owner of the volume's LUN.

3.2.1

This section contains release notes for Eucalyptus version 3.2.1.



Caution: There is an issue with the current Eucalyptus EMC SAN adapter in both 3.2.0 and 3.2.1. The EMC SAN adapter, when used in a cluster with two or more Node Controllers, has issues with EBS instances that have EBS volumes attached. These deployments are likely to incur data losses. You can test the EMC adapter with 3.2.x if there is only one NC in the cluster OR there are no EBS instances with attached EBS volumes. For more information, see the entry for EUCA-4872 in [Known Issues](#).

What's New?

Eucalyptus 3.2.1 has the following new feature:

- We added the ability to generate instance usage reports for VMware hypervisor. This feature is supported for vCenter 5.0 and up. For more information, see [EUCA-4616](#).

Eucalyptus 3.2.1 has the following changes:

- The location of the iptables-preload file has changed in 3.2.1 from `/var/run/eucalyptus/net/iptables-preload` to `/etc/eucalyptus/iptables-preload`. If `iptables-preload` exists in the old location during the upgrade to 3.2.1, it will be moved from `/var/run/` to `/etc`. For more information, see [EUCA-3693](#) and [EUCA-4702](#).
- The Cluster Controller now broadcasts a gratuitous ARP message in situations where an IP address is reassigned from one machine to another (for example, after a high availability Cluster Controller failure). We added a new dependency, `arping`, to the Cluster Controller package to support this functionality. For more information, see [EUCA-2973](#) and [EUCA-3540](#).
- We added the following EMC VNX EBS driver enhancements: the ability to set snapshot consistency point immediately at snapshot creation time; support for clone as well as lun migration for snapshots; and hardening of the multipathing functionality.
- We added the ability to configure advanced options for NetApp filers (`snap sched`, `vol autosize`, `no_atime_update`, `create_ucose`, `convert_ucose`, `guarantee`, `try_first`, `fractional_reserve`).



Important: At release 3.2.1, the Node Controller requires that users have Eucalyptus 2.1.3 or higher. To download the latest version of Eucalyptus, go to <https://www.eucalyptus.com/download/euca2tools>.



Tip: Eucalyptus no longer provides commercial support for installations on CentOS 5, RHEL 5, or Ubuntu. We test and commercially support CentOS 6 or RHEL 6 as host operating systems. Because Eucalyptus is open source software, it is possible that someone in the user community will prepare Eucalyptus for other operating systems.

Resolved Issues

Eucalyptus 3.2.1 resolves issues listed in the following table.

Issue	Description
EUCA-4728	partitioned.lock may be created when there is only one CLC
EUCA-4692	User console: Footer copyright text needs updating for 2013
EUCA-4634	Need to fix compilation warnings for c code

Issue	Description
EUCA-4603	console.ini should be packaged as %config(noreplace)
EUCA-4571	User Console hard-codes 8443 for admin GUI link
EUCA-4544	fault 1006.xml is missing
EUCA-4538	text on allocate IP button (IP Addresses landing page) is incorrect
EUCA-4536	associate address dialog missing "*Required fields" text
EUCA-4403	BFEBs instances losing public ips after entering running state
EUCA-4366	Hard failure in an HA setup w/ a shared frontend can lead to interminable failover times
EUCA-4348	Attaching EBS volumes does not work if NCs are registered using hostnames
EUCA-4339	Instance Landing column header for IPs ambiguous after change to support hostnames
EUCA-4271	BFEBs run instance failure. RollbackException: Error while committing the transaction
EUCA-4268	RebootInstances does not work on multiple instances
EUCA-4253	iptables-preload is not honored when CC are in HA mode and failover happens
EUCA-4112	Eternal pending when CC image cache set to Zero
EUCA-3693	Eucalyptus should not use /var/run to save iptables-preload
EUCA-3621	storage.snapperpercent property => description of purpose and how can it be used
EUCA-3540	ARP request should be sent when elastic IP is mapped from one cluster to another
EUCA-2973	new enabled CC in HA does not do ARP announcement after a failure
EUCA-2281	VNET_DNS value is not the only DNS IP in resolv.conf
EUCA-2184	EBS backed stopped instances still reports IPs
EUCA-1970	"error=12" cache problems occur with new blobstore engine
EUCA-1057	second euca-deregister doesn't deregister the image completely

Resolved Security Issues

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

Known Issues

The following known issues exist in Eucalyptus 3.2.1 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues. You can use the support portal <https://engage.eucalyptus.com> or email us directly at support@eucalyptus.com.

Issue	Description
Raw data reported by VMware Broker does not include meaningful volume names (BROKER-22)	Data reported in the console displays meaningful volume names. Data exported in raw format labels each volume or ephemeral storage unit as <code>scsi0:[N]</code> , and must be translated into meaningful names by another reporting framework.
Must use user-friendly names for multipathing (DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in <code>/etc/multipath.conf</code> .
Reporting values seem to be in error at first (DOC-707)	Network traffic numbers in columns Total and External might appear to be incorrect. The external numbers can be greater than total numbers. This is because the two types of measurements come from different hosts (external is from the CC and totals from the NC). These hosts sample and deliver numbers to the reporting subsystem at different times. If the report is requested after the external counter is updated but before the total counter is updated, the numbers could appear out of their natural order. In a stable state without network traffic, the numbers will become correct eventually, usually within a few minutes, depending on the polling frequency value specified in the <code>reporting.default_poll_interval_mins</code> and <code>reporting.default_write_interval_mins</code> parameters.
Problem using EMC, EBS, and multiple NCs in 3.2.1 (EUCA-4872)	When using EMC and multiple NCs within a cluster, connections to the EBS-backed volume are lost if a second volume is attached to any instance on the NC hosting the EBS instance. The result is the EBS instance will eventually fail to operate.
Race condition can cause secondary Walrus to appear ENABLED to the secondary CLC in HA setup (EUCA-4846)	After repeated state changes of various components in a HA setup, the secondary Walrus may not be visible to the primary CLC. Running <code>euca-modify-service -s DISABLED WS-[N]</code> will resolve this issue.
<code>walrus.storagemaxtotalsnapshotsizingb</code> is not honored (EUCA-4838)	As of Eucalyptus 3.2.1, the maximum storage used for snapshots, as set in <code>walrus.storagemaxtotalsnapshotsizingb</code> , is not honored. You should use your existing infrastructure monitoring to ensure that snapshot storage does not exceed an appropriate level for your system. It is recommended that you monitor the total snapshot size and the number of snapshots.
Default cloud properties must have a value (EUCA-4750)	If any of the cloud properties are set with no value, you might experience issues with the output of the <code>euca-describe-properties</code> command.

Issue	Description
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
User console hangs when launching an instance with large user data file (EUCA-4223)	Launching an instance through the console may hang if the user data file is too big. Launch instances on the command line if the user data file is larger than 16KB.
A snapshot registered as an image must be deregistered twice to be fully removed (EUCA-4207)	Running <code>deregister-image</code> does not initially delete the image record for a snapshot that was registered as an image. You must run <code>deregister-image</code> twice to ensure the image is deleted.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.

Issue	Description
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in <code>cc-fault.log</code> (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
<code>euca-describe-nodes</code> does not return consistent results (EUCA-3456)	The output of <code>euca-describe-nodes</code> is not consistent.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
Walrus does not failover in HA if <code>eucalyptus-cloud</code> process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.
<code>euca-create-image</code> from ebs backed instance fails, returns 0 (EUCA-1333)	<code>euca-create-image</code> is currently unsupported.
Command to reset default values for Netapp storage properties doesn't work (SAN-57)	The <code>-r</code> option for resetting Eucalyptus properties using the <code>euca-modify-property</code> does not reset the new Netapp storage properties to a default value.
Property conflicts during volume creation cause creation to fail on cloud but the volume still created on Netapp (SAN-58)	This is not a problem if you use the defaults set by Eucalyptus. However, if you change these defaults, we recommend that you confirm that any volumes that failed to create during this configuration phase do not exist on the SAN.

3.2.0

This section contains release notes for Eucalyptus 3.2.0.

What's New?

Eucalyptus 3.2.0 introduces the following new features.

Feature	Description
Eucalyptus Cloud User Console	The Eucalyptus Cloud User Console is a web-based graphical user interface, which enables self-service provisioning of compute, network, and storage resources for cloud users.
Troubleshooting and Logging	Eucalyptus 3.2.0 simplifies cloud administration by providing Cloud Administrators with improved logging capabilities for faster troubleshooting and issue resolution.
Enhanced Cloud Usage Reporting	Eucalyptus 3.2.0 provides enhanced cloud usage reporting which enables Cloud Administrators to easily understand usage of cloud resources, provide chargeback for resources consumed, and facilitate capacity planning.
EMC VNX SAN Storage Adaptor	Eucalyptus 3.2.0 provides expanded SAN support for EMC VNX Series SANs for Elastic Block Store (EBS) storage.
JBOD Storage Adaptor	Eucalyptus 3.2.0 provides the ability to overlay Elastic Block Store (EBS) functionality on raw block devices, while exposing EBS API for Cloud Users to provision block storage.



Important: At version 3.2.0, Eucalyptus no longer supports installations on CentOS 5, RHEL 5, or Ubuntu. Eucalyptus has only tested and will only support CentOS 6 or RHEL 6.

Resolved Issues

Eucalyptus 3.2.0 resolves issues listed in the following table.

Issue	Description
SAN-1	Make clone timeout for NetApp configurable
EUCA-4330	3.1.X message binding cache causes upgrade operations to fail.
EUCA-4275	A sensor resource (instance) can disappear before recording a sensor timestamp, preventing cache expiration.
EUCA-4257	Usage data reset after instance reboot
EUCA-4251	Sensor cache can erroneously time out a cache entry
EUCA-4242	NC: node controller locks up with one thread in libvirt

Issue	Description
EUCA-4230	After launching Windows image (BFEBS and Walrus-backed), eucalyptus-nc process locks up
EUCA-4203	Shipped eucalyptus.conf describes incorrect default LOGLEVEL
EUCA-4172	Address state updated outside of any transaction
EUCA-4171	Restored instances are missing expiry time
EUCA-4163	reporting: backend logs show sensor data aggregation errors
EUCA-4134	When log level is changed on java components, it gets picked up only on CLC and is not broadcasted to SC, Walrus
EUCA-4129	style progress bar for user console
EUCA-4122	USER-CONSOLE (AFTER MULTI-THREAD FIX) Cannot create security group
EUCA-4118	New fault for the disabled.lock file is missing variables
EUCA-4116	IP address field in security group rules validates my input as wrong before I've even entered it.
EUCA-4099	console - Windows password not showing
EUCA-4097	console - StopInstance hangs
EUCA-4090	User Console: User can request 999 IP allocation on the UI, which can flood the CLC.
EUCA-4089	Recent change in euare policy causing failures when users try to launch instances
EUCA-4087	Troubleshooting "out of memory" ratios allow values greater than 1
EUCA-4085	Instance sensor not gathering usage (due to double free in CC marshaling)
EUCA-4072	After changing cloud.vmstate.instance_subdomain, instances are not able to resolve private instance DNS name
EUCA-4060	creating new key pair in launch instance wizard does not update selection in summary area automatically
EUCA-4059	Long key name makes giant dropdown on the launch dialog page
EUCA-4058	Remove test logging messages (including FATAL, ERROR) from log level change listener
EUCA-4034	Default bucket limit is too low
EUCA-4031	created security group with open port ssh via launch wizard but still getting warning that no rules are defined
EUCA-4022	USER-CONSOLE: When attaching volume to instance, the list of volumes is hard to read due to its transparent background.
EUCA-4021	volumes fail to attach due to libvirt err

Issue	Description
EUCA-4020	Libvirt attachment failures leave iscsi connection behind
EUCA-4019	USER-CONSOLE: In the create new security group box, "Add Another Rule" and "Create" buttons do not get lit when IP is typed.
EUCA-4006	please remove GUI functions that support volume creation at instance launch time (and launch more like this)
EUCA-4000	USER-CONSOLE: Cannot copy-and-paste the error message when failed to delete security group
EUCA-3999	USER-CONSOLE: Failed to delete security groups
EUCA-3998	euca-describe-services --partition doesn't work
EUCA-3988	Cannot delete some inbound rules when managing rules for security group -- It depends on the order of delete operations.
EUCA-3982	"out of memory" fault written a large number of times in cloud-fault.log
EUCA-3951	Copy multipath example into doc dir
EUCA-3947	Fault message for lack of iscsi module in the kernel is incorrect
EUCA-3941	Authentication method for User Console does not support full latin char set
EUCA-3936	when AZ is not specified on run, but existing instances within group are running, clc does not choose AZ with free resources
EUCA-3933	euca-modify-image-attribute allows invalid userId without error.
EUCA-3932	euca-describe-image-attribute does not list all permissions
EUCA-3924	failed to delete security group but doesn't tell me why
EUCA-3916	cloud-fault.log records wrong time when writing fault messages
EUCA-3915	unexpected error adding rules to security group
EUCA-3905	New notifications impl. for multi-ops
EUCA-3879	Instance address restoration fails for "inactive" address
EUCA-3875	Having 58 running instances causes the console proxy server to crash
EUCA-3870	On the instance page, Image IDs should also be hyperlinked to display information on which image is being used by the running instance
EUCA-3869	Timeout or single threading issue in Tornado: Deleting 100 security groups at once causes the delete call to time-out and kicks user out of the console
EUCA-3868	When there exists 200+ security group, creating a new security group causes the user to be forced to log off.

Issue	Description
EUCA-3866	Instance restore does not update state for restored public ip
EUCA-3864	By default, when the button "create volume from snapshot" is selected, the menu should allow user to click the button "create volume" immediately.
EUCA-3862	Cannot delete a snapshot that is in "failed" state
EUCA-3861	Change in log level does not execute correctly on C components
EUCA-3855	Allocating 200+ IPs on a single user crashes the proxy.
EUCA-3852	IPs in the IP Address table are sorted in a lexical order
EUCA-3850	When ntpd is not running no fault message is generated in cc-fault.log and cloud-fault.log
EUCA-3848	cloud-fault log reports the same "Not enough memory" fault many times when actually not running out of memory
EUCA-3834	Instances not restored when image deregistered/no longer present
EUCA-3833	Instances not restored when in terminated state
EUCA-3831	photo should not scroll in easter egg
EUCA-3824	Modifying log level for clc breaks the cloud
EUCA-3822	dimension names for disk-based sensors are wrong
EUCA-3815	When allocating IP addresses, you are allowed to enter a negative number.
EUCA-3813	Security Group is created even when faulty input was used
EUCA-3806	Default log level in cc. log and nc.log is DEBUG instead of INFO
EUCA-3799	launch more like this dialog, advanced section is displaying Select advanced options label multiple times
EUCA-3795	Instance restore fails to complete DB transaction for some errors
EUCA-3779	two different "data loading" messages display on landing pages when data is loading
EUCA-3762	changing security group rules via Manage Rules dialog does not render a success message in the notifications area when I change something and say Save Changes.
EUCA-3757	Admin UI failed to lookup images for non-admin user when non-public images are present
EUCA-3750	launch instance wizard security group rules display shows entity instead of being rendered properly
EUCA-3748	sorting instances by launch time is not working

Issue	Description
EUCA-3709	VMware Broker reporting instances as "pending" state; euca-describe-instances reports instances in "shutting down" state
EUCA-3690	Signature problem with pre-signed URLs
EUCA-3650	Unable to delete user volumes and snapshots
EUCA-3645	NC/VB: blobstore may not clean up after failed downloads
EUCA-3622	CLC does not assign a public IP, DB inconsistency
EUCA-3613	Quota limiting against vmtype doesn't work
EUCA-3549	NC provides false booting report for windows instance due to insufficient cache size
EUCA-3538	Failing to delete volumes on Dell Equallogic using SAN adapter
EUCA-3517	Incorrect image name in describe image response
EUCA-3465	Inconsistence EBS <-> Instance
EUCA-3453	File names with % embedded fail to upload to walrus.
EUCA-3444	duplicate public IP for instances in eucalyptus 3.1.0
EUCA-3398	HashMap never be removed in walrus,cause a Memory overflow problem.
EUCA-3308	Debian Pre-Depend causes issues in Lucid
EUCA-3294	L2TP tunnel does not get established in multi-cluster
EUCA-3288	Eucalyptus repeatedly connects tgttd to non-existent loopback devices.
EUCA-3007	Order of account/user fields is inconsistent in admin UI
EUCA-2982	CC registration: cloud-pk.pem is not transferred to remote cluster, and CC shutdown will not tear down network rules
EUCA-2427	CLC remebers only first allocations of Elastic IPs after restarting CLC.
EUCA-2411	Cannot detach EBS volume from stopped instance
EUCA-2350	Reporting counts a walrus object removed when it has its delete marker removed during a PUT operation
EUCA-2342	Walrus lists object versions in reverse order
EUCA-2329	CLC always return A response for AAAA or TXT DNS query
EUCA-2322	CLC has incorrect default encoding
EUCA-2295	Addrs remain on CC if instances are terminated while service is down
EUCA-2275	Hitting walrus.storagemaxbucketsizeinmb limit creates orphan files on the WS file system
EUCA-2264	Binding error when registering image with multiple device mappings

Issue	Description
EUCA-2251	Canned ACLs do not permit access to buckets/keys as expected and invalid canned ACL names are permitted
EUCA-2211	C-APP Logs rolling does not care for the configured LOGROLLNUMBER value in eucalyptus.conf
EUCA-2208	euca-bundle-instance terminates existing instance
EUCA-2199	After using over 127 groups no longer able to launch instances due to no remaining network tags
EUCA-2185	DescribeInstances api call does not return ip addresses
EUCA-2049	eucalyptus-cloud binary does not honor --bind-addr argument
BROKER-9	VMware Broker requires eucalyptus user to have write access to the /etc/eucalyptus directory

Resolved Security Issues

No security vulnerabilities have been fixed in this release.

Known Issues

The following known issues exist in Eucalyptus 3.2.0 and its dependencies. Please contact Eucalyptus support for known workarounds to these issues.

Issue	Description
VMware Broker requires eucalyptus user to have write access to the /etc/eucalyptus directory (BROKER-9)	If the eucalyptus user does not have write access to the /etc/eucalyptus directory, the VMware Broker will stay in a BROKEN state, and euca-configure-vmware will fail. Run <code>chown -R eucalyptus:eucalyptus /etc/eucalyptus/</code> on the VMware Broker machine to ensure that the eucalyptus user owns the necessary files.
The User Console exhibits odd behavior (EUCA-4530)	The User Console is intended to work with normal user accounts. If you log in with the eucalyptus account, the User Console will not work correctly on some pages, such as Elastic IPs.
Some components are initialized rather than disabled after an unexpected reboot (EUCA-4354)	This only occurs when CLC, Walrus, and SC are located on the same machine in an HA setting. In an unexpected reboot within that setting, when the redundant components switch roles, some secondary components can become initialized rather than disabled. For a workaround, restart the initialized components. We strongly recommend that you use one machine for each Eucalyptus component in HA mode.

Issue	Description
User console requires upload of private key to access a Windows instance password (EUCA-4293)	Passwords for Windows instances are encrypted for a specified key pair. The user console requires that you upload the appropriate private key to access an instance password. We strongly recommend against using this feature without HTTPS! To access the instance password without uploading your private key, use <code>euca-get-password [instance id] -k [keyfile]</code> on the command line.
User console cannot generate new Windows password on restarting a stopped instance (EUCA-4291)	The user console continues to display an old password after a Windows instance is stopped and restarted. You must log out of the user console, log in again, and then generate a password, in order to log in to a Windows instance that has been stopped and restarted.
BFEBs fails in some cases when running new instances, with error <code>RollbackException: Error while committing the transaction</code> (EUCA-4271)	If a new instance is constructed in a group concurrently with network resources being freed in that group, a <code>RollbackException: Error while committing the transaction</code> error is thrown. This also results in an orphaned volume that cannot be deleted until the VM metadata has timed out and the volume is recognised as unused. Running the new instance a second time should succeed.
<code>euca-reboot-instances</code> only reboots one instance, even if multiple instances are specified (EUCA-4268)	<code>euca-reboot-instances</code> reboots the first instance specified. To reboot multiple instances, run <code>euca-reboot-instances</code> once per instance.
Changing LOCALE does not change the language of the fault message in fault logs (EUCA-4233)	Changing the system LOCALE does not change the language of the fault message logged in <code>[component]-fault.log</code> . Create customized fault messages in the <code>/etc/eucalyptus/faults/en_US</code> directory if you do not wish to use the provided messages.
User console hangs when launching an instance with large user data file (EUCA-4223)	Launching an instance through the console may hang if the user data file is too big. Launch instances on the command line if the user data file is larger than 16KB.
A snapshot registered as an image must be deregistered twice to be fully removed (EUCA-4207)	Running <code>deregister-image</code> does not initially delete the image record for a snapshot that was registered as an image. You must run <code>deregister-image</code> twice to ensure the image is deleted.
CC image caching does not work with some symlinks (EUCA-4181)	If <code>CC_IMAGE_PROXY_PATH</code> in <code>eucalyptus.conf</code> is set to a symlink, CC image caching may not work. Ensure the symlink is placed in a path that is readable by the 'eucalyptus' user.
DBResourceCheck exceptions logged at ERROR log level (EUCA-4177)	The DBResourceCheck class frequently polls to determine the number of active database connections for a given alias. This can result in a DBResourceCheck exception. This exception is expected, and is not fatal.

Issue	Description
The reporting feature in the Eucalyptus Administrator Console show no metrics. (EUCA-4168)	This occurs only if you run a report that includes the current date. The metrics that show no data are: CpuUsage% , Net Total In/Out , Disk R/W , Disk IOPS R/W , and DiskTime . For a workaround, use the CLI command, <code>eureport-generate-report</code> , to run reports from the Cloud Controller for a time period that includes the current date. You can also use the Eucalyptus Administrator Console and move the end date up the previous day.
The <code>euca-describe-bundle-tasks</code> command does not keep task status after task completes (EUCA-4140)	When bundling a Windows instance, the task is removed from the task list as soon as the bundle completes, so <code>euca-describe-bundle-tasks</code> never shows a 'complete' status.
Attempts to create an instance from an uncached image stay pending indefinitely (EUCA-4112)	If the cluster controller image cache is set to zero, attempts to create an instance from an uncached image will remain pending indefinitely. To prevent images being cached, remove the <code>CC_IMAGE_PROXY</code> line from <code>eucalyptus.conf</code> .
[error:0290] message printed on upgrade (EUCA-4027)	The Eucalyptus upgrade process requires a large number of file descriptors, and an error may occur if <code>ulimit</code> is not set to an appropriate value. To avoid this error, set <code>ulimit -n 5000</code> before upgrading Eucalyptus. This error is not an indication of a failed upgrade.
Unable to start stopped instances after upgrade (EUCA-4026)	Eucalyptus 3.2.0 manages ISCSI targets in a different way to previous versions. The first attempt to start any stopped instances relying on <code>iscsiadm</code> will fail, but the issue is resolved during cleanup so subsequent requests for that instance will work.
Vague error message: Failed to find corresponding class mapping for element: RegisterVMwareBroker in namespace. (EUCA-3808)	If you get this error message, you need to install the <code>eucalyptus-enterprise-vmware-broker-libs</code> on the CLC. Run <code>yum install eucalyptus-enterprise-vmware-broker-libs</code> on each CLC in your cloud.
Capacity report shows unordered list of VM types (EUCA-3707)	When running a capacity report, the VM types are not ordered from smallest to largest instance type when displayed at the cloud or AZ property level.
Quota limiting run instances against availabilityzone resource does not work (EUCA-3614)	A policy which limits the number of instances which can be run within an availability zone has no effect.
<code>euca-describe-nodes</code> does not return consistent results (EUCA-3456)	The output of <code>euca-describe-nodes</code> is not consistent.
ENABLED CC have two NAT rules about 169.254.169.254 (EUCA-3440)	In HA Mode, ENABLED CC can get into a state where it reports both ENABLED and DISABLED CLC in iptables for the metadata service.
<code>euca-start-instances</code> does not return correct information (EUCA-3311)	<code>euca-start-instances</code> only returns the instance identifier and does not return the previous or the current state of the instance.
Walrus does not failover in HA if eucalyptus-cloud process is forcibly killed on primary (EUCA-3202)	If the <code>eucalyptus-cloud</code> process is forcibly terminated (kill -9) on the primary Walrus, failover to the secondary Walrus is not automatically triggered.

Issue	Description
euca-create-image from ebs backed instance fails, returns 0 (EUCA-1333)	euca-create-image is currently unsupported.
IP pages do not work properly for admin user in Eucalyptus User Console (EUCA-3548)	All user IP addresses are shown, rather than just the admin user's IP addresses.
Must use user-friendly names for mulitpathing(DOC-504)	Eucalyptus connect scripts assume multipathing uses user friendly names instead of WWID for the multipath device names, so the "user_friendly_names" option must be enabled in /etc/multipath.conf.
RollbackException error while committing transaction failure when attempting to run a BFEBS instance(EUCA-4271)	In some cases, network resources (primarily vlan tags for the network group) are freed concurrently while a new instance is being constructed in that same group. If the network group is seen to have no more instances, then the CC can timeout the vlan tag and then inform the CLC, which frees the vlan tag resource. If there is a concurrent instance being constructed, however, an attempt may be made to use that vlan tag, and upon volume attach the database update fails because the vlan/network tag record doesn't exist. When this happens, the instance will stay in a 'pending' state with an IP address of 0.0.0.0 for a very long time. There is no long-term negative effect of this condition. To resolve this issue, you should proceed with terminating the instance, deleting its resulting volume if necessary, and then re-running the instance.
ERR-1009 "Mismatched cryptographical keys" gets written too many times in cc-fault.log (EUCA-3986)	Currently, CC may log this fault once for each process in the pool. This is because the logic that suppresses duplicate faults relies on process-local memory rather than memory regions shared across CC processes.
Eucalyptus Console https redirect doesn't work (EUCA-4104)	When SSL is enabled for the user console, http requests do not automatically redirect to the proper https address, which can result in a blank page.