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# Cloudstack 2.2.9

## Release Notes



open source cloud computing

### Cloudstack Community

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#### Abstract

These Release Notes provide a brief description of new features and known issues for the 2.2.7 release of Cloudstack. Please read [Section 13, "Known Issues"](#) before installing. The Installation Guide provides step by step instructions for installation.

Upgrades from 2.2.0, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.6, 2.2.7 and 2.2.8 to 2.2.9 are supported. The procedure is in the [Section 14, "Upgrade"](#) section of this document

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## 1. Cloudstack 2.2.9

Cloudstack 2.2.9 - OSS was not released due to a number of install bugs discovered post-release.

### 1.1. Issues fixed in Cloudstack 2.2.9

Table 1. Issues fixed in 2.2.9

Bug	Description
<a href="http://bugs.cloud.com/show_bug.cgi?id=10714">10714</a> <sup>1</sup>	A limitation on the number of templates per zone (roughly 300) has been removed.
many	CloudStack has seen significant performance improvement that now allows it to manage up to 20,000 physical hosts.

<sup>1</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10714](http://bugs.cloud.com/show_bug.cgi?id=10714)

Bug	Description
<a href="#">10681</a> <sup>2</sup>	If a secondary storage unmount fails, the CloudStack will no longer delete secondary storage contents
<a href="#">10929</a> <sup>3</sup>	Under some error circumstances, it was possible for VMs to transition to the Error state incorrectly. This could lead to the erroneous deletion of the VMs. This has been fixed.

## 1.2. New features in Cloudstack 2.2.9

There are no new features in CloudStack 2.2.9

## 2. Cloudstack 2.2.8

Cloudstack 2.2.8 was released on 16 June 2011

### 2.1. Issues fixed in Cloudstack 2.2.8

Table 2. Issues fixed in 2.2.8

Bug	Description
<a href="#">9866</a> <sup>4</sup>	Copying a VHD from secondary storage now sets the size properly.
<a href="#">9367</a> <sup>5</sup>	listUsers will now return the API key and secret key.
<a href="#">9371</a> <sup>6</sup>	Multiple console proxies will not be started unnecessarily.
<a href="#">9981</a> <sup>7</sup>	The direct network behavior between XenServer and vSphere is now consistent.
<a href="#">9507</a> <sup>8</sup>	It is now possible to create a template from a snapshot of a deleted volume.
<a href="#">9604</a> <sup>9</sup>	Networks can now be renamed.
<a href="#">9543</a> <sup>10</sup>	Cloud-setup-management will no longer fail with updated sudoers file.
<a href="#">8183</a> <sup>11</sup>	sourceId and sourceType are set on volume creation.
<a href="#">9445</a> <sup>12</sup>	Host status is set to 'Storage down' when a storage failure occurs.
<a href="#">9356</a> <sup>13</sup>	Updating console proxy certificates works correctly.
<a href="#">9519</a> <sup>14</sup>	A performance problem with a large number of usage events has been fixed.

<sup>2</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10681](http://bugs.cloud.com/show_bug.cgi?id=10681)

<sup>3</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10929](http://bugs.cloud.com/show_bug.cgi?id=10929)

<sup>4</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9866](http://bugs.cloud.com/show_bug.cgi?id=9866)

<sup>5</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9367](http://bugs.cloud.com/show_bug.cgi?id=9367)

<sup>6</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9371](http://bugs.cloud.com/show_bug.cgi?id=9371)

<sup>7</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9981](http://bugs.cloud.com/show_bug.cgi?id=9981)

<sup>8</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9507](http://bugs.cloud.com/show_bug.cgi?id=9507)

<sup>9</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9604](http://bugs.cloud.com/show_bug.cgi?id=9604)

<sup>10</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9543](http://bugs.cloud.com/show_bug.cgi?id=9543)

<sup>11</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8183](http://bugs.cloud.com/show_bug.cgi?id=8183)

<sup>12</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9445](http://bugs.cloud.com/show_bug.cgi?id=9445)

<sup>13</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9356](http://bugs.cloud.com/show_bug.cgi?id=9356)

<sup>14</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9519](http://bugs.cloud.com/show_bug.cgi?id=9519)

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Bug	Description
<a href="#">9138</a> <sup>15</sup>	Template limits now work correctly.
<a href="#">10513</a> <sup>16</sup>	Disable accounts will work correctly.
<a href="#">4387</a> <sup>17</sup>	The agent protocol is more robust in the face of bad data.
<a href="#">9059</a> <sup>18</sup>	Host detail information now considers stopped VMs.
<a href="#">9470</a> <sup>19</sup>	Line breaks for events are now properly escaped.
<a href="#">6442</a> <sup>20</sup>	VMs that were transitioned during an HA event will have usage information tracked properly.
<a href="#">9750</a> <sup>21</sup>	listVolumes for the domain administrator will no longer return the virtual router's volume.
<a href="#">10228</a> <sup>22</sup>	When a host is removed the cluster capacity will be updated correctly.
<a href="#">9959</a> <sup>23</sup>	Special characters in passwords are handled properly in the UI.
<a href="#">9182</a> <sup>24</sup>	Newline characters in volume detach descriptions are handled properly.
<a href="#">9920</a> <sup>25</sup>	The SSVM properly handles a much larger amount of templates for a single user.
<a href="#">9655</a> <sup>26</sup>	The same subnet may be made available in multiple VLANs.
<a href="#">9568</a> <sup>27</sup>	On host restarts and in general the hosts are balanced across multiple management servers.
<a href="#">9771</a> <sup>28</sup>	Metadata is now available at the "standard" URL location. The previous location is still provided for backwards compatibility.
<a href="#">9828</a> <sup>29</sup>	Metadata is recreated when the virtual router is recreated.

## 2.2. New features in Cloudstack 2.2.8

Table 3. New features in 2.2.8

Bug	Description
<a href="#">3224</a> <sup>30</sup>	Multiple NFS servers may be used to provide secondary storage for a zone.

<sup>15</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9138](http://bugs.cloud.com/show_bug.cgi?id=9138)

<sup>16</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10513](http://bugs.cloud.com/show_bug.cgi?id=10513)

<sup>17</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4387](http://bugs.cloud.com/show_bug.cgi?id=4387)

<sup>18</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9059](http://bugs.cloud.com/show_bug.cgi?id=9059)

<sup>19</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9470](http://bugs.cloud.com/show_bug.cgi?id=9470)

<sup>20</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6442](http://bugs.cloud.com/show_bug.cgi?id=6442)

<sup>21</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9750](http://bugs.cloud.com/show_bug.cgi?id=9750)

<sup>22</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10228](http://bugs.cloud.com/show_bug.cgi?id=10228)

<sup>23</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9959](http://bugs.cloud.com/show_bug.cgi?id=9959)

<sup>24</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9182](http://bugs.cloud.com/show_bug.cgi?id=9182)

<sup>25</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9920](http://bugs.cloud.com/show_bug.cgi?id=9920)

<sup>26</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9655](http://bugs.cloud.com/show_bug.cgi?id=9655)

<sup>27</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9568](http://bugs.cloud.com/show_bug.cgi?id=9568)

<sup>28</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9771](http://bugs.cloud.com/show_bug.cgi?id=9771)

<sup>29</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9828](http://bugs.cloud.com/show_bug.cgi?id=9828)

<sup>30</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3224](http://bugs.cloud.com/show_bug.cgi?id=3224)

Bug	Description
<a href="http://bugs.cloud.com/show_bug.cgi?id=4942">4942</a> <sup>31</sup>	Networking metering may be performed on direct networks. This is in conjunction with InMon Traffic Sentinel and sFlow/NetFlow enabled switches.
<a href="http://bugs.cloud.com/show_bug.cgi?id=6451">6451</a> <sup>32</sup>	XenServer host passwords may be changed using the CloudStack API.
<a href="http://bugs.cloud.com/show_bug.cgi?id=6873">6873</a> <sup>33</sup>	Clusters, Pods and Zones may be put into a maintenance mode. In this mode no new VM allocations will be made to them. Administrators can still create VMs on this hardware.
<a href="http://bugs.cloud.com/show_bug.cgi?id=7507">7507</a> <sup>34</sup>	KVM now supports local disk for primary storage.
<a href="http://bugs.cloud.com/show_bug.cgi?id=7553">7553</a> <sup>35</sup>	The virtual router is now sized according to a system VM service offering. This allows for increasing virtual hardware available to some users' routers.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8115">8115</a> <sup>36</sup>	Source IP filtering is now available in the virtual router.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8350">8350</a> <sup>37</sup>	The software load balancer in the virtual router has been tuned for performance.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9828">9828</a> <sup>38</sup>	Metadata is recreated when the virtual router is recreated.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8830">8830</a> <sup>39</sup>	The parent template ID is provided for templates created from snapshot. This allows for template usage tracking.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8901">8901</a> <sup>40</sup>	The CloudStack UI will give indication that a snapshot is in progress.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9109">9109</a> <sup>41</sup>	Japanese keymapping is supported for the console viewer.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9158">9158</a> <sup>42</sup>	It is now possible to list instances that are associated with a particular primary storage.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9250">9250</a> <sup>43</sup>	A new guest OS type "Other PV" is available for XenServer. These are other types of templates that are paravirtualized.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9534">9534</a> <sup>44</sup>	In service offerings it is now possible to enforce a hard cap in CPU consumption.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9579">9579</a> <sup>45</sup>	It is now possible to add a custom DNS suffix per direct network.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9651">9651</a> <sup>46</sup>	Two cloud guest networks may be added. Then direct networks may be associated with either network.

<sup>31</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4942](http://bugs.cloud.com/show_bug.cgi?id=4942)

<sup>32</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6451](http://bugs.cloud.com/show_bug.cgi?id=6451)

<sup>33</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6873](http://bugs.cloud.com/show_bug.cgi?id=6873)

<sup>34</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7507](http://bugs.cloud.com/show_bug.cgi?id=7507)

<sup>35</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7553](http://bugs.cloud.com/show_bug.cgi?id=7553)

<sup>36</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8115](http://bugs.cloud.com/show_bug.cgi?id=8115)

<sup>37</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8350](http://bugs.cloud.com/show_bug.cgi?id=8350)

<sup>38</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9828](http://bugs.cloud.com/show_bug.cgi?id=9828)

<sup>39</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8830](http://bugs.cloud.com/show_bug.cgi?id=8830)

<sup>40</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8901](http://bugs.cloud.com/show_bug.cgi?id=8901)

<sup>41</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9109](http://bugs.cloud.com/show_bug.cgi?id=9109)

<sup>42</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9158](http://bugs.cloud.com/show_bug.cgi?id=9158)

<sup>43</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9250](http://bugs.cloud.com/show_bug.cgi?id=9250)

<sup>44</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9534](http://bugs.cloud.com/show_bug.cgi?id=9534)

<sup>45</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9579](http://bugs.cloud.com/show_bug.cgi?id=9579)

<sup>46</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9651](http://bugs.cloud.com/show_bug.cgi?id=9651)

Bug	Description
<a href="#">9724</a> <sup>47</sup>	The listEvents API has been extended to allow specifying hours and minutes on queries.
<a href="#">10152</a> <sup>48</sup>	XenServer 5.6 FP2 is supported, except when used with security groups.

### 3. Cloudstack 2.2.8

Cloudstack 2.2.8 was released on 16 June 2011

#### 3.1. Issues fixed in Cloudstack 2.2.8

Table 4. Issues fixed in 2.2.8

Bug	Description
<a href="#">9866</a> <sup>49</sup>	Copying a VHD from secondary storage now sets the size properly.
<a href="#">9367</a> <sup>50</sup>	listUsers will now return the API key and secret key.
<a href="#">9371</a> <sup>51</sup>	Multiple console proxies will not be started unnecessarily.
<a href="#">9981</a> <sup>52</sup>	The direct network behavior between XenServer and vSphere is now consistent.
<a href="#">9507</a> <sup>53</sup>	It is now possible to create a template from a snapshot of a deleted volume.
<a href="#">9604</a> <sup>54</sup>	Networks can now be renamed.
<a href="#">9543</a> <sup>55</sup>	Cloud-setup-management will no longer fail with updated sudoers file.
<a href="#">8183</a> <sup>56</sup>	sourceId and sourceType are set on volume creation.
<a href="#">9445</a> <sup>57</sup>	Host status is set to 'Storage down' when a storage failure occurs.
<a href="#">9356</a> <sup>58</sup>	Updating console proxy certificates works correctly.
<a href="#">9519</a> <sup>59</sup>	A performance problem with a large number of usage events has been fixed.
<a href="#">9138</a> <sup>60</sup>	Template limits now work correctly.
<a href="#">10513</a> <sup>61</sup>	Disable accounts will work correctly.

<sup>47</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9724](http://bugs.cloud.com/show_bug.cgi?id=9724)

<sup>48</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10152](http://bugs.cloud.com/show_bug.cgi?id=10152)

<sup>49</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9866](http://bugs.cloud.com/show_bug.cgi?id=9866)

<sup>50</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9367](http://bugs.cloud.com/show_bug.cgi?id=9367)

<sup>51</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9371](http://bugs.cloud.com/show_bug.cgi?id=9371)

<sup>52</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9981](http://bugs.cloud.com/show_bug.cgi?id=9981)

<sup>53</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9507](http://bugs.cloud.com/show_bug.cgi?id=9507)

<sup>54</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9604](http://bugs.cloud.com/show_bug.cgi?id=9604)

<sup>55</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9543](http://bugs.cloud.com/show_bug.cgi?id=9543)

<sup>56</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8183](http://bugs.cloud.com/show_bug.cgi?id=8183)

<sup>57</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9445](http://bugs.cloud.com/show_bug.cgi?id=9445)

<sup>58</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9356](http://bugs.cloud.com/show_bug.cgi?id=9356)

<sup>59</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9519](http://bugs.cloud.com/show_bug.cgi?id=9519)

<sup>60</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9138](http://bugs.cloud.com/show_bug.cgi?id=9138)

<sup>61</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10513](http://bugs.cloud.com/show_bug.cgi?id=10513)

Bug	Description
<a href="#">4387</a> <sup>62</sup>	The agent protocol is more robust in the face of bad data.
<a href="#">9059</a> <sup>63</sup>	Host detail information now considers stopped VMs.
<a href="#">9470</a> <sup>64</sup>	Line breaks for events are now properly escaped.
<a href="#">6442</a> <sup>65</sup>	VMs that were transitioned during an HA event will have usage information tracked properly.
<a href="#">9750</a> <sup>66</sup>	listVolumes for the domain administrator will no longer return the virtual router's volume.
<a href="#">10228</a> <sup>67</sup>	When a host is removed the cluster capacity will be updated correctly.
<a href="#">9959</a> <sup>68</sup>	Special characters in passwords are handled properly in the UI.
<a href="#">9182</a> <sup>69</sup>	Newline characters in volume detach descriptions are handled properly.
<a href="#">9920</a> <sup>70</sup>	The SSVM properly handles a much larger amount of templates for a single user.
<a href="#">9655</a> <sup>71</sup>	The same subnet may be made available in multiple VLANs.
<a href="#">9568</a> <sup>72</sup>	On host restarts and in general the hosts are balanced across multiple management servers.
<a href="#">9771</a> <sup>73</sup>	Metadata is now available at the "standard" URL location. The previous location is still provided for backwards compatibility.
<a href="#">9828</a> <sup>74</sup>	Metadata is recreated when the virtual router is recreated.

### 3.2. New features in Cloudstack 2.2.8

Table 5. New features in 2.2.8

Bug	Description
<a href="#">3224</a> <sup>75</sup>	Multiple NFS servers may be used to provide secondary storage for a zone.
<a href="#">4942</a> <sup>76</sup>	Networking metering may be performed on direct networks. This is in conjunction with InMon Traffic Sentinel and sFlow/NetFlow enabled switches.

<sup>62</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4387](http://bugs.cloud.com/show_bug.cgi?id=4387)

<sup>63</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9059](http://bugs.cloud.com/show_bug.cgi?id=9059)

<sup>64</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9470](http://bugs.cloud.com/show_bug.cgi?id=9470)

<sup>65</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6442](http://bugs.cloud.com/show_bug.cgi?id=6442)

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<sup>75</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3224](http://bugs.cloud.com/show_bug.cgi?id=3224)

<sup>76</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4942](http://bugs.cloud.com/show_bug.cgi?id=4942)

## Release Notes

Bug	Description
<a href="http://bugs.cloud.com/show_bug.cgi?id=6451">6451</a> <sup>77</sup>	XenServer host passwords may be changed using the CloudStack API.
<a href="http://bugs.cloud.com/show_bug.cgi?id=6873">6873</a> <sup>78</sup>	Clusters, Pods and Zones may be put into a maintenance mode. In this mode no new VM allocations will be made to them. Administrators can still create VMs on this hardware.
<a href="http://bugs.cloud.com/show_bug.cgi?id=7507">7507</a> <sup>79</sup>	KVM now supports local disk for primary storage.
<a href="http://bugs.cloud.com/show_bug.cgi?id=7553">7553</a> <sup>80</sup>	The virtual router is now sized according to a system VM service offering. This allows for increasing virtual hardware available to some users' routers.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8115">8115</a> <sup>81</sup>	Source IP filtering is now available in the virtual router.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8350">8350</a> <sup>82</sup>	The software load balancer in the virtual router has been tuned for performance.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9828">9828</a> <sup>83</sup>	Metadata is recreated when the virtual router is recreated.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8830">8830</a> <sup>84</sup>	The parent template ID is provided for templates created from snapshot. This allows for template usage tracking.
<a href="http://bugs.cloud.com/show_bug.cgi?id=8901">8901</a> <sup>85</sup>	The CloudStack UI will give indication that a snapshot is in progress.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9109">9109</a> <sup>86</sup>	Japanese keymapping is supported for the console viewer.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9158">9158</a> <sup>87</sup>	It is now possible to list instances that are associated with a particular primary storage.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9250">9250</a> <sup>88</sup>	A new guest OS type "Other PV" is available for XenServer. These are other types of templates that are paravirtualized.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9534">9534</a> <sup>89</sup>	In service offerings it is now possible to enforce a hard cap in CPU consumption.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9579">9579</a> <sup>90</sup>	It is now possible to add a custom DNS suffix per direct network.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9651">9651</a> <sup>91</sup>	Two cloud guest networks may be added. Then direct networks may be associated with either network.
<a href="http://bugs.cloud.com/show_bug.cgi?id=9724">9724</a> <sup>92</sup>	The listEvents API has been extended to allow specifying hours and minutes on queries.

<sup>77</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6451](http://bugs.cloud.com/show_bug.cgi?id=6451)

<sup>78</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6873](http://bugs.cloud.com/show_bug.cgi?id=6873)

<sup>79</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7507](http://bugs.cloud.com/show_bug.cgi?id=7507)

<sup>80</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7553](http://bugs.cloud.com/show_bug.cgi?id=7553)

<sup>81</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8115](http://bugs.cloud.com/show_bug.cgi?id=8115)

<sup>82</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8350](http://bugs.cloud.com/show_bug.cgi?id=8350)

<sup>83</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9828](http://bugs.cloud.com/show_bug.cgi?id=9828)

<sup>84</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8830](http://bugs.cloud.com/show_bug.cgi?id=8830)

<sup>85</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8901](http://bugs.cloud.com/show_bug.cgi?id=8901)

<sup>86</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9109](http://bugs.cloud.com/show_bug.cgi?id=9109)

<sup>87</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9158](http://bugs.cloud.com/show_bug.cgi?id=9158)

<sup>88</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9250](http://bugs.cloud.com/show_bug.cgi?id=9250)

<sup>89</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9534](http://bugs.cloud.com/show_bug.cgi?id=9534)

<sup>90</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9579](http://bugs.cloud.com/show_bug.cgi?id=9579)

<sup>91</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9651](http://bugs.cloud.com/show_bug.cgi?id=9651)

<sup>92</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9724](http://bugs.cloud.com/show_bug.cgi?id=9724)



Bug	Description
<a href="#">10152</a> <sup>93</sup>	XenServer 5.6 FP2 is supported, except when used with security groups.

## 4. Cloudstack 2.2.7

Cloudstack 2.2.7 was released on 28 June 2011

### 4.1. Issues fixed in Cloudstack 2.2.7

Table 6. Issues fixed in 2.2.7

Bug	Description
<a href="#">10456</a> <sup>94</sup>	Create template from volume will work correctly
<a href="#">10093</a> <sup>95</sup>	The default security group is assigned to VMs correctly

### 4.2. New features in Cloudstack 2.2.7

Table 7. New features in 2.2.7

Bug	Description
<a href="#">10435</a> <sup>96</sup>	The VPN feature has been removed from CloudStack. We expect to make the VPN feature available again in approximately one month.

## 5. Cloudstack 2.2.6

Cloudstack 2.2.6 was released on 16 June 2011

### 5.1. Issues fixed in Cloudstack 2.2.6

Table 8. Issues fixed in 2.2.6

Bug	Description
many	Several upgrade bugs from 2.1.x were fixed.
<a href="#">10091</a> <sup>97</sup>	Volume deletion will correctly delete associated snapshots from primary storage.
<a href="#">10094</a> <sup>98</sup>	XenServer: HA may fail to restart some VMs when multiple hosts fail simultaneously or primary storage fails (causing multiple hosts to reboot simultaneously).
<a href="#">9896</a> <sup>99</sup>	KVM: Windows 2008 R2 can now attach data disks.

<sup>93</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10152](http://bugs.cloud.com/show_bug.cgi?id=10152)

<sup>94</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10456](http://bugs.cloud.com/show_bug.cgi?id=10456)

<sup>95</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10093](http://bugs.cloud.com/show_bug.cgi?id=10093)

<sup>96</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10435](http://bugs.cloud.com/show_bug.cgi?id=10435)

<sup>97</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10091](http://bugs.cloud.com/show_bug.cgi?id=10091)

<sup>98</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10094](http://bugs.cloud.com/show_bug.cgi?id=10094)

<sup>99</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9896](http://bugs.cloud.com/show_bug.cgi?id=9896)

## 5.2. New features in Cloudstack 2.2.6

There are no new features in 2.2.6

## 6. Cloudstack 2.2.5

Cloudstack 2.2.5 was released on 01 June 2011

### 6.1. Issues fixed in Cloudstack 2.2.5

Table 9. Issues fixed in 2.2.5

Bug	Description
<a href="#">9873</a> <sup>100</sup>	VMs are now assigned to the default security group
<a href="#">9891</a> <sup>101</sup>	Upgrade from 2.2.3 no longer fails on usage_stats
Many	The upgrade from 2.2.1 to 2.2.2 followed by later version now works
<a href="#">9941</a> <sup>102</sup>	After upgrade to 2.2.5, the UI will now show all available volumes
Many	The detection and use of cloud.version table now works correctly. This fixes many upgrade bugs
<a href="#">8990</a> <sup>103</sup>	Upgrade when Augeas 0.8 is installed now works


foo

### 6.2. New features in Cloudstack 2.2.5

There are no new features in 2.2.5

## 7. Cloudstack 2.2.4

Cloudstack 2.2.4 was released on 16 May 2011

 **Important**

The behavior of storage allocation is more conservative in 2.2.4 than in 2.1.7 and prior releases or 2.2.0-2.2.3. Cloudstack will no longer create volumes on primary storage resources that have a storage percentage used higher than that defined by global configuration. Previously Cloudstack would allocate a primary storage resource up to 100% full. This space reservation is required as a fix to cases where snapshots of VMs could not be taken when the storage had been allocated to 100% full. The use of a threshold setting allows the administrator to reserve space for snapshots in progress for existing volumes. Deployments with primary storage that is close to full should examine the value of this parameter before upgrading. If all primary storage resources are more full than no new volumes can be created after upgrade.

<sup>100</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9873](http://bugs.cloud.com/show_bug.cgi?id=9873)

<sup>101</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9891](http://bugs.cloud.com/show_bug.cgi?id=9891)

<sup>102</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9941](http://bugs.cloud.com/show_bug.cgi?id=9941)

<sup>103</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8990](http://bugs.cloud.com/show_bug.cgi?id=8990)

## 7.1. Issues fixed in Cloudstack 2.2.4

Table 10. Issues fixed in 2.2.4

Bug	Description
<a href="#">9702</a> <sup>104</sup>	KVM: VM live migration will work reliably
<a href="#">9152</a> <sup>105</sup>	Space is reserved on each primary storage volume for snapshots.
<a href="#">8103</a> <sup>106</sup>	Attempts to remove a host with running VMs will correctly fail.
<a href="#">8816</a> <sup>107</sup>	Listing system VM IP addresses will distinguish from .
<a href="#">8898</a> <sup>108</sup>	The service offering upgrade option is now always shown to users. Attempts to upgrade the service offering for a running VM will fail with a clear error message.
<a href="#">9079</a> <sup>109</sup>	Login problems with Safari have been fixed.
<a href="#">9087</a> <sup>110</sup>	Attach/detach of a data disk in a multi-cluster deployment will work correctly. Previously the data disk could be deleted.
<a href="#">9140</a> <sup>111</sup>	ISOs that are not bootable may now be uploaded
<a href="#">8955</a> <sup>112</sup>	KVM: Userdata and instance metadata now work correctly.
<a href="#">8666</a> <sup>113</sup>	The guest network CIDR must be a RFC1918 address.
<a href="#">8959</a> <sup>114</sup>	Port forwarding with the virtual router will now work with IP addresses from multiple VLANs
<a href="#">9106</a> <sup>115</sup>	The VM's metered running time is now correct
<a href="#">9369</a> <sup>116</sup>	IP address releases will not intermittently fail
<a href="#">9370</a> <sup>117</sup>	XenServer: the network throttling values are now correctly applied
<a href="#">8802</a> <sup>118</sup>	Windows password management scripts work correctly in the presence of external network elements
<a href="#">8911</a> <sup>119</sup>	A security vulnerability that allowed download of some files from the console proxy VM has been fixed
<a href="#">8954</a> <sup>120</sup>	End users are no longer allowed access to the console of their virtual router

<sup>104</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9702](http://bugs.cloud.com/show_bug.cgi?id=9702)

<sup>105</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9152](http://bugs.cloud.com/show_bug.cgi?id=9152)

<sup>106</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8103](http://bugs.cloud.com/show_bug.cgi?id=8103)

<sup>107</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8816](http://bugs.cloud.com/show_bug.cgi?id=8816)

<sup>108</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8898](http://bugs.cloud.com/show_bug.cgi?id=8898)

<sup>109</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9079](http://bugs.cloud.com/show_bug.cgi?id=9079)

<sup>110</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9087](http://bugs.cloud.com/show_bug.cgi?id=9087)

<sup>111</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9140](http://bugs.cloud.com/show_bug.cgi?id=9140)

<sup>112</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8955](http://bugs.cloud.com/show_bug.cgi?id=8955)

<sup>113</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8666](http://bugs.cloud.com/show_bug.cgi?id=8666)

<sup>114</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8959](http://bugs.cloud.com/show_bug.cgi?id=8959)

<sup>115</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9106](http://bugs.cloud.com/show_bug.cgi?id=9106)

<sup>116</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9369](http://bugs.cloud.com/show_bug.cgi?id=9369)

<sup>117</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9370](http://bugs.cloud.com/show_bug.cgi?id=9370)

<sup>118</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8802](http://bugs.cloud.com/show_bug.cgi?id=8802)

<sup>119</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8911](http://bugs.cloud.com/show_bug.cgi?id=8911)

<sup>120</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8954](http://bugs.cloud.com/show_bug.cgi?id=8954)

Bug	Description
<a href="#">9130</a> <sup>121</sup>	Security groups are no longer present in the UI in Advanced Networking zones
<a href="#">9192</a> <sup>122</sup>	Performance of the listVirtualMachines API call in the presence of many VMs has been significantly improved.
<a href="#">9663</a> <sup>123</sup>	A security issue that could allow end users to snapshot another user's volume has been fixed
<a href="#">9243</a> <sup>124</sup>	XenServer: a stop VM request will forcefully stop the VM even if qemu has crashed on the XenServer host
<a href="#">7723</a> <sup>125</sup>	Host tagging now works correctly
<a href="#">7935</a> <sup>126</sup>	Usage clients have a path to determining the OS type of a guest booted from a blank VM.
<a href="#">8532</a> <sup>127</sup>	KVM: HA failover works correctly with OCFS2.
<a href="#">8714</a> <sup>128</sup>	Users may again create four parallel snapshot schedules
<a href="#">9180</a> <sup>129</sup>	XenServer: local storage now works correctly
<a href="#">9539</a> <sup>130</sup>	CPU over-provisioning now works correctly
<a href="#">8897</a> <sup>131</sup>	Zone delete now works correctly
<a href="#">8902</a> <sup>132</sup>	Cluster delete now works correctly.
Many	Several bugs around resource limit tracking have been fixed.
<a href="#">9093</a> <sup>133</sup>	Firefox 4 and IE 9 are supported browsers

## 7.2. New features in Cloudstack 2.2.4

Table 11. New features in 2.2.4

Bug	Description
<a href="#">7424</a> <sup>134</sup>	Network throttling may be disabled altogether.
<a href="#">8932</a> <sup>135</sup>	The listTemplates API call will return an md5sum of the template.
<a href="#">3316</a> <sup>136</sup>	Virtual machines may be manually live-migrated by the administrator. The administrator may pick a VM and the host that the VM should be placed on.

<sup>121</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9130](http://bugs.cloud.com/show_bug.cgi?id=9130)

<sup>122</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9192](http://bugs.cloud.com/show_bug.cgi?id=9192)

<sup>123</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9663](http://bugs.cloud.com/show_bug.cgi?id=9663)

<sup>124</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9243](http://bugs.cloud.com/show_bug.cgi?id=9243)

<sup>125</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7723](http://bugs.cloud.com/show_bug.cgi?id=7723)

<sup>126</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7935](http://bugs.cloud.com/show_bug.cgi?id=7935)

<sup>127</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8532](http://bugs.cloud.com/show_bug.cgi?id=8532)

<sup>128</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8714](http://bugs.cloud.com/show_bug.cgi?id=8714)

<sup>129</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9180](http://bugs.cloud.com/show_bug.cgi?id=9180)

<sup>130</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9539](http://bugs.cloud.com/show_bug.cgi?id=9539)

<sup>131</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8897](http://bugs.cloud.com/show_bug.cgi?id=8897)

<sup>132</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8902](http://bugs.cloud.com/show_bug.cgi?id=8902)

<sup>133</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9093](http://bugs.cloud.com/show_bug.cgi?id=9093)

<sup>134</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7424](http://bugs.cloud.com/show_bug.cgi?id=7424)

<sup>135</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8932](http://bugs.cloud.com/show_bug.cgi?id=8932)

<sup>136</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3316](http://bugs.cloud.com/show_bug.cgi?id=3316)

Bug	Description
<a href="#">8831</a> <sup>137</sup>	A network may be dedicated to a domain. Only users in that domain and its children will have access to the network.
<a href="#">8945</a> <sup>138</sup>	The global configuration parameter default.page.limit has been added. This sets the maximum number of results that will be returned by list* API calls. Default is 500.
<a href="#">9098</a> <sup>139</sup>	The UI has been changed to provide clearer monitoring of snapshot progress.
<a href="#">9635</a> <sup>140</sup>	The Java process's has been increased from 28 MB to 1024 MB

## 8. Cloudstack 2.2.3

Cloudstack 2.2.3 was released on 16 June 2011

### 8.1. Issues fixed in Cloudstack 2.2.3

Table 12. Issues fixed in 2.2.3

Bug	Description
<a href="#">8977</a> <sup>141</sup>	The default route for the secondary storage VM will correctly use the public network gateway.

foo

### 8.2. New features in Cloudstack 2.2.3

There are no new features in 2.2.3

## 9. Cloudstack 222

Cloudstack 222 was released on 15 March 2011

### 9.1. Issues fixed in Cloudstack 2.2.2

Table 13. Issues fixed in 2.2.2

Bug	Description
<a href="#">8614</a> <sup>142</sup>	The storage allocator now functions correctly.
<a href="#">8865</a> <sup>143</sup>	It is now possible to start VMs whose networks were shutdown when using 2.2.0.

<sup>137</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8831](http://bugs.cloud.com/show_bug.cgi?id=8831)

<sup>138</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8945](http://bugs.cloud.com/show_bug.cgi?id=8945)

<sup>139</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9098](http://bugs.cloud.com/show_bug.cgi?id=9098)

<sup>140</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9635](http://bugs.cloud.com/show_bug.cgi?id=9635)

<sup>141</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8977](http://bugs.cloud.com/show_bug.cgi?id=8977)

<sup>142</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8614](http://bugs.cloud.com/show_bug.cgi?id=8614)

<sup>143</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8865](http://bugs.cloud.com/show_bug.cgi?id=8865)

Bug	Description
<a href="#">8635</a> <sup>144</sup>	Direct network VM creation will work correctly in the CloudStack UI wizard.
<a href="#">8514</a> <sup>145</sup>	The OS type dropdown is correctly populated when creating a template from a volume.
<a href="#">8892</a> <sup>146</sup>	The DNS server for guests in direct tagged networks is now set properly.
<a href="#">8912</a> <sup>147</sup>	Password management scripts now work correctly with multiple NIC guests in all cases as well as external firewall configurations.
<a href="#">8604</a> <sup>148</sup>	Adding a second management server works reliably.
<a href="#">7935</a> <sup>149</sup>	There is a mechanism to bill differently for guests of different hypervisor type when the guests are started from ISO images.
<a href="#">7762</a> <sup>150</sup>	The snapshot and volume copy logic for vSphere hosts has been moved into the Secondary Storage VM.
<a href="#">8806</a> <sup>151</sup>	The set of hypervisors present in the cloud is now represented correctly by the API and UI.
Many	Several bugs in HA functionality across hypervisors and storage types have been fixed.
Many	Several bugs in internationalization and localization have been fixed.
<a href="#">8632</a> <sup>152</sup>	The dashboard view of domain administrators is now correct.
<a href="#">8104</a> <sup>153</sup>	If the secondary storage VM is down, booting a guest off ISO will work.
Many	Several logging improvements have been made. Logging is less verbose in some cases and more descriptive in others.

## 9.2. New features in Cloudstack 2.2.2

Table 14. New features in 2.2.2

Bug	Description
<a href="#">8349</a> <sup>154</sup>	Routers may be listed by network ID.
<a href="#">8250</a> <sup>155</sup>	KVM: Security groups will work with direct tagged networks.
<a href="#">8664</a> <sup>156</sup>	A maximum page size is enforced. This limits server memory impact from large queries.

<sup>144</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8635](http://bugs.cloud.com/show_bug.cgi?id=8635)

<sup>145</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8514](http://bugs.cloud.com/show_bug.cgi?id=8514)

<sup>146</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8892](http://bugs.cloud.com/show_bug.cgi?id=8892)

<sup>147</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8912](http://bugs.cloud.com/show_bug.cgi?id=8912)

<sup>148</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8604](http://bugs.cloud.com/show_bug.cgi?id=8604)

<sup>149</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7935](http://bugs.cloud.com/show_bug.cgi?id=7935)

<sup>150</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7762](http://bugs.cloud.com/show_bug.cgi?id=7762)

<sup>151</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8806](http://bugs.cloud.com/show_bug.cgi?id=8806)

<sup>152</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8632](http://bugs.cloud.com/show_bug.cgi?id=8632)

<sup>153</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8104](http://bugs.cloud.com/show_bug.cgi?id=8104)

<sup>154</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8349](http://bugs.cloud.com/show_bug.cgi?id=8349)

<sup>155</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8250](http://bugs.cloud.com/show_bug.cgi?id=8250)

<sup>156</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8664](http://bugs.cloud.com/show_bug.cgi?id=8664)

Bug	Description
<a href="#">8263</a> <sup>157</sup>	A domain specific zone may have its scope adjusted to be public.

## 10. Cloudstack 2.2.1

Cloudstack 2.2.1 was released on 16 June 2011

### 10.1. Issues fixed in Cloudstack 2.2.1

Table 15. Issues fixed in 2.2.1

Bug	Description
<a href="#">8574</a> <sup>158</sup>	Account deletion could fail leaving resources orphaned.
<a href="#">8631</a> <sup>159</sup>	The DHCP server would not start in the case of external firewall integration.

### 10.2. New features in Cloudstack 2.2.1

There are no new features in Cloudstack 2.2.1

## 11. Cloudstack 2.2.0

Cloudstack 2.2.0 was not publicly released

### 11.1. New features in Cloudstack 2.2.0

Table 16. New features in 2.2.0

Bug	Description
<a href="#">591</a> <sup>160</sup>	Virtual Machines may have multiple NICs.
<a href="#">6802</a> <sup>161</sup>	Service offerings and disk offerings may be made private to a domain.
<a href="#">1974</a> <sup>162</sup>	The Virtual Router memory may be changed.
<a href="#">2461</a> <sup>163</sup>	A user may VPN into their virtual network using IPSec/L2TP.
<a href="#">3120</a> <sup>164</sup>	1:1 NAT of public IPs is possible.
<a href="#">3346</a> <sup>165</sup>	There is a command line interface (CLI) tool for the CloudStack. It is called cloudadm. This tool is in a beta state and its syntax may change substantially in future releases.
<a href="#">3386</a> <sup>166</sup>	Zones may be dedicated to domains. This allows for hardware dedication and a higher level of isolation.

<sup>157</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8263](http://bugs.cloud.com/show_bug.cgi?id=8263)

<sup>158</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8574](http://bugs.cloud.com/show_bug.cgi?id=8574)

<sup>159</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8631](http://bugs.cloud.com/show_bug.cgi?id=8631)

<sup>160</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=591](http://bugs.cloud.com/show_bug.cgi?id=591)

<sup>161</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6802](http://bugs.cloud.com/show_bug.cgi?id=6802)

<sup>162</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=1974](http://bugs.cloud.com/show_bug.cgi?id=1974)

<sup>163</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=2461](http://bugs.cloud.com/show_bug.cgi?id=2461)

<sup>164</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3120](http://bugs.cloud.com/show_bug.cgi?id=3120)

<sup>165</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3346](http://bugs.cloud.com/show_bug.cgi?id=3346)

<sup>166</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3386](http://bugs.cloud.com/show_bug.cgi?id=3386)

## Release Notes

Bug	Description
<a href="#">3676</a> <sup>167</sup>	Multiple hypervisor types may exist in the same CloudStack cloud. An individual cluster consists of nodes of the same hypervisor type.
<a href="#">4286</a> <sup>168</sup>	Templates may be extracted via HTTP download or HTTP POST.
<a href="#">4774</a> <sup>169</sup>	ISOs may be public.
<a href="#">4836</a> <sup>170</sup>	Limits may be set on a domain basis. This allows an administrator to prescribe aggregate limits that apply to a set of accounts.
<a href="#">5060</a> <sup>171</sup>	Disk offerings can have arbitrary sizes.
<a href="#">5147</a> <sup>172</sup>	Primary storage devices may be placed into a maintenance mode. Then they may be taken offline and later returned to service.
<a href="#">5190</a> <sup>173</sup> , <a href="#">5191</a> <sup>174</sup>	The URL used by the Console Proxy code and its associated SSL certificate may be configured and changed.
<a href="#">5559</a> <sup>175</sup>	Snapshots are supported for local disk storage.
<a href="#">5592</a> <sup>176</sup>	The DNS domain for guests may be configured.
<a href="#">5688</a> <sup>177</sup>	KVM CloudStack nodes now support VLANs for isolation.
<a href="#">5784</a> <sup>178</sup>	KVM CloudStack now supports snapshots.
<a href="#">5800</a> <sup>179</sup>	KVM CloudStack supports cluster functionality, analogous to vSphere and XenServer.
<a href="#">6103</a> <sup>180</sup>	The "look back period" for which the system considers a stopped VM to still be consuming resources is configurable.
<a href="#">6994</a> <sup>181</sup>	XenServer: administrators may add pre-existing SRs as primary storage to CloudStack. This enables support for FiberChannel storage.
<a href="#">7871</a> <sup>182</sup>	KVM: Shared mountpoint storage is available. This enables the use of clustered filesystems like OCFS2 as primary storage.
Many	There have been many API enhancements, including the ability to show the lineage of a volume, show a volume's attachment time, determine a cloud's capabilities, find the OS type of a virtual machine, search for deleted templates, and more.

<sup>167</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=3676](http://bugs.cloud.com/show_bug.cgi?id=3676)

<sup>168</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4286](http://bugs.cloud.com/show_bug.cgi?id=4286)

<sup>169</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4774](http://bugs.cloud.com/show_bug.cgi?id=4774)

<sup>170</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=4836](http://bugs.cloud.com/show_bug.cgi?id=4836)

<sup>171</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5060](http://bugs.cloud.com/show_bug.cgi?id=5060)

<sup>172</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5147](http://bugs.cloud.com/show_bug.cgi?id=5147)

<sup>173</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5190](http://bugs.cloud.com/show_bug.cgi?id=5190)

<sup>174</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5191](http://bugs.cloud.com/show_bug.cgi?id=5191)

<sup>175</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5559](http://bugs.cloud.com/show_bug.cgi?id=5559)

<sup>176</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5592](http://bugs.cloud.com/show_bug.cgi?id=5592)

<sup>177</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5688](http://bugs.cloud.com/show_bug.cgi?id=5688)

<sup>178</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5784](http://bugs.cloud.com/show_bug.cgi?id=5784)

<sup>179</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5800](http://bugs.cloud.com/show_bug.cgi?id=5800)

<sup>180</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6103](http://bugs.cloud.com/show_bug.cgi?id=6103)

<sup>181</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=6994](http://bugs.cloud.com/show_bug.cgi?id=6994)

<sup>182</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7871](http://bugs.cloud.com/show_bug.cgi?id=7871)



## 12. API Changes

The API has had several enhancements for 2.2. There are a large number of small changes to the API. The API was significantly improved and made more consistent. As a result most applications developed against the API will need to be adapted to be compatible with 2.2.

2.2 API documentation is available at:

Global Admin: [http://download.cloud.com/releases/2.2.0/api/TOC\\_Global\\_Admin.html](http://download.cloud.com/releases/2.2.0/api/TOC_Global_Admin.html)

Domain Admin: [http://download.cloud.com/releases/2.2.0/api/TOC\\_Domain\\_Admin.html](http://download.cloud.com/releases/2.2.0/api/TOC_Domain_Admin.html)

User: [http://download.cloud.com/releases/2.2.0/api/TOC\\_User.html](http://download.cloud.com/releases/2.2.0/api/TOC_User.html)

## 13. Known Issues

Table 17. Known issues

Bug	Description
<a href="#">8105</a> <sup>183</sup>	KVM: NFS v4 for primary storage may not work. Use v3.
<a href="#">8076</a> <sup>184</sup>	KVM: Unable to process quoted strings in ifcfg-eth0 when setting up the Cloudstack Agent
<a href="#">8486</a> <sup>185</sup>	XenServer: putting a host into maintenance mode will fail if some guests do not have PV drivers.
<a href="#">5573</a> <sup>186</sup>	KVM: editing the name of a Pod will revert VMs from starting.
many	The internationalization feature of the CloudStack is immature. Some strings have not been extracted and will still render in English.
<a href="#">7145</a> <sup>187</sup> , <a href="#">9912</a> <sup>188</sup>	Basic mode networking: if the Secondary Storage VM's private and public IP ranges are in the same subnet the SSVM will not function properly.
<a href="#">10624</a> <sup>189</sup>	The download volume function is unreliable.
<a href="#">10507</a> <sup>190</sup>	The SSVM does not get assigned a route to the internal DNS server.

<sup>183</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8105](http://bugs.cloud.com/show_bug.cgi?id=8105)

<sup>184</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8076](http://bugs.cloud.com/show_bug.cgi?id=8076)

<sup>185</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=8486](http://bugs.cloud.com/show_bug.cgi?id=8486)

<sup>186</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=5573](http://bugs.cloud.com/show_bug.cgi?id=5573)

<sup>187</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=7145](http://bugs.cloud.com/show_bug.cgi?id=7145)

<sup>188</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=9912](http://bugs.cloud.com/show_bug.cgi?id=9912)

<sup>189</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10624](http://bugs.cloud.com/show_bug.cgi?id=10624)

<sup>190</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10507](http://bugs.cloud.com/show_bug.cgi?id=10507)

## 14. Upgrade



### Warning

The CloudStack upgrade does not preserve UI customizations. Customers with customizations should save altered files before applying the upgrade. Then create a script that will re-apply the changes after the upgrade. Any customizations should be tested on a staging environment prior to upgrade to a new version.

### 14.1. Upgrade from 2.2.0, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.6, 2.2.7, or 2.2.8 to 2.2.9

Perform the following to upgrade from 2.2.0, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.6, 2.2.7 or 2.2.8 to 2.2.9.

1. Stop the Management Servers. Run this on all Management Server hosts.

```
# service cloud-management stop
```

2. Untar the tgz download and cd into the resulting directory. Then update the software on each Management Server

```
# ./install.sh
```

Choose "U" to update packages.

3. Start the management server



### Important

If you have multiple management servers, start only one at this point.

```
# service cloud-management start
```

4. Wait until the UI is accessible



### Note

If you have additional management servers you may start them after the UI is accessible on the first management server.

### 14.1.1. KVM Hosts

Additional steps are required for each KVM host. These steps should be performed after the after the Management server upgrade above. These steps will not impact running guests in the cloud. These steps are required only for clouds using KVM as the hypervisor and only on the KVM hosts.

On each KVM host:

1. Copy the install tarball to each host, untar it, and cd into the resulting directory.
2. Stop the running agent.

```
# service cloud-agent stop
```

3. Update the agent software.

```
# ./install.sh
```

Choose "U" to update the packages.

4. Start the agent.

```
# service cloud-agent start
```

### 14.1.2. Special steps for Ubuntu management servers

In CloudStack 2.2.7 [bug 10343](http://bugs.cloud.com/show_bug.cgi?id=10343)<sup>191</sup> one of our community members alerted us to an Ubuntu-specific upgrade bug. This bug was introduced by our buildsystem configuration for Ubuntu. The following steps will be necessary to successfully upgrade any version of CloudStack prior to 2.2.8.

1. Stop the management server

```
# service cloud-management stop
```

2. Change the database version

Assuming that the version which you are upgrading from is 2.2.7 open a mysql console with:

```
# mysql -u root -t cloud
```

Once connected execute:

```
update version set version='2.2.7' where id=1;
```

3. Upgrade the management server.

This will require manually installing cloud-agent-deps.

```
# dpkg -i --force-overwrite oss/cloud-agent-deps_version_of_2.2.8_amd64.deb
```

<sup>191</sup> [http://bugs.cloud.com/show\\_bug.cgi?id=10343](http://bugs.cloud.com/show_bug.cgi?id=10343)

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4. You can now run `./install.sh` on the management server and select 'U'. The management server will automatically start and upgrade the database.

## A. Revision History

**Revision 0-0**    **Fri Jun 17 2011**

**CloudStack Community**

Initial conversion of book to publican