New features in Xen Cloud Platform 0.1

Xen Cloud Platform 0.1 includes a number of new features and ongoing improvements, including:

• **Improved backup and snapshot support** allows you to perform live snapshot and clone operations on all storage types. This enables better support for backup utilities and practices, and helps to reduce disk space requirements for storing clones of virtual disks. You can now take snapshots from the xe CLI. For more information on this feature, please refer to the *Storage* chapter and the *VM Snapshots* section of the *Backup and recovery* chapter in the *Xen Cloud Platform Administrator's Guide*.

• **Active Directory integration** to allow credentials to be verified against an AD server. This allows granting and revocation of access to Xen Cloud Platform pools easily and securely using existing IT infrastructure. For more information on this feature, please refer to the *Xen Cloud Platform hosts and resource pools* chapter in the *Xen Cloud Platform Administrator's Guide*.

• **Workload Balancing** to optimize VM placement and assist with the balancing of workloads within a pool. This is done using the Workload Balancing server, available as a download with Xen Cloud Platform. For customers interested in creating custom queries on Workload Balancing data, Citrix provides customer accessible SQL views. For more information, see CTX121348. For more information on this feature, please refer to the *Workload Balancing* chapter in the *Xen Cloud Platform Administrator's Guide*.

• **Integration with StorageLink services through the xe CLI** enabling advanced storage management capabilities in the Citrix StorageLink service, available as a download with Xen Cloud Platform. For more information on this feature, please refer to the *Citrix StorageLink Gateway (CSLG) SRs* section of the *Storage* chapter in the *Xen Cloud Platform Administrator's Guide*.

• **Improved operating system support** including new support for Red Hat Enterprise Linux 5.3, Novell SLES 11, and Debian Lenny.
Installation and upgrades

System requirements, preparation, installation, and initial configuration are described in the *Xen Cloud Platform Installation Guide*.

The Windows Xen VSS provider is not installed by default and must be specifically installed into your Windows VMs via the `install-XenProvider.cmd` script to enable quiesced snapshot support. Please refer to the *Virtual Machine Administration Guide* under the Windows section for full details on how to do this.

Known Issues and Errata

This section details known issues with this release and any workarounds that can be applied. Please report any other issues to Xen.org community.

Hardware and Installation

**CA-8767**
Motherboards using the Intel 965 chipset with more than 2GB of memory may fail to boot successfully. This has been identified as a BIOS firmware issue, and appears to happen on any 64-bit operating systems (see Red Hat and Microsoft related bugs). To workaround this, downgrade your BIOS to version 1669, available from the Intel website.

Virtual Machines

**CP-1010**
The Debian Sarge VM has been deprecated and we recommend all customers using this to upgrade to Debian Etch or Debian Lenny.

**CA-9772**
The Windows PV drivers do not send a gratuitous ARP after live relocation if the guest has previously been hibernated. Note that hibernation is not a supported use-case, since direct suspension of a VM is supported instead.

**CA-22247**
In a resource pool, the `xe CLI commands vm-copy and vm-install with the sr-uuid specified will fail intermittently if some hosts are offline when they are attempted. To work around this issue, repeat the command with the hosts powered on. Alternatively, repeat the command until it succeeds. (The latter works because the virtual disk copy operations invoked by these commands are forwarded by the pool master to any of its member hosts, selected at random.)

**CA-28908**
At the time of Xen Cloud Platform release the Windows Server 2008 R2 and Windows 7 operating systems were in release candidate form and therefore will not be added as officially supported guests until a future Xen Cloud Platform release. However, initial testing of the pre-release versions of these operating systems has shown that using a workaround
in combination with the existing Vista and Windows Server templates will allow installation on Xen Cloud Platform 1.0. This workaround can only be performed via the xe CLI, and must be performed before installing the operating system into the guest:

1. Create a new VM from the Windows Vista or Windows Server 2008 templates via normal methods.
2. Using the xe CLI, note the UUID of the new VM using vm-list

   xe vm-list

3. Change the platform:viridian value to false for the new VM

   xe vm-param-set uuid=<UUID of new VM> platform:viridian=false

4. Complete any additional required configuration, start the VM, and install the operating system.

Workload Balancing

CA-28738
When you apply Workload Balancing optimization recommendations, sometimes an error might appear stating that a virtual machine cannot be migrated to a new host due to insufficient memory. If this occurs, wait for the next optimization recommendations (typically within a minute or two) and then reapply the recommendations.

Active Directory

CA-27826
When joining a new server to a pool, you should ensure that it is configured with the same external authentication configuration as the servers in the pool. You will experience incorrect product behavior if the configuration differs. The correct behavior is for the configuration to be transferred automatically.

Storage

CA-30049
When a snapshot of a virtual disk created on a previous version of Xen Cloud Platform on an LVM-based storage repository (SR) is taken and then subsequently deleted this may not free up the expected amount of space in the SR. This is caused by intermediate data required for the snapshot not being deleted. The problem can be worked around by copying the disk, attaching the copy to your virtual machine, and then removing the original.

CA-6966
When using NFS ISO storage repositories, a hard mount is used to communicate with the server. This means that the control domain can hang if the remote NFS server becomes unreachable. The workaround is to use CIFS-based mounts instead.

CA-9208
Xen.org has seen data corruption issues using the iSCSI target provided by Adaptec SnapServers. This appears to be a problem with the SnapServer iSCSI implementation, and has been reproduced by Adaptec using a standard (non-Xen Cloud Platform) Linux distribution. We are currently working with Adaptec to find a solution to this problem. Until this issue is resolved, Xen Cloud Platform users are strongly encouraged to use NFS rather than iSCSI storage repositories when using SnapServer products. In general, when using network-based storage hardware, users should ensure that the software and/or firmware on the devices being used is up to date, as recommended by the manufacturer.

**CA-12866**
Users should avoid attaching read-only VDIs to Windows VMs as this may result in unexpected behaviour and instability of the VM. This includes NetApp snapshot VDIs; users wishing to attach a snapshot VDI to a Windows VM should first make a read-write copy of the snapshot using the **vdi-copy** CLI command.

**CA-22676**
When dedicating a network interface as a storage interface for use with iSCSI or NFS SRs, you must ensure that the dedicated interface uses a separate IP subnet which is not routable from the main management interface. If this is not enforced, then storage traffic may be directed via the main management interface after a host reboot, due to the order in which network interfaces are initialized. If you do require static routing to a shared subnet, then you need to re-plug the storage PBDs after each host restart, or use the **xe pif-forget** command to manually configure up networking rules in the control domain.

**CA-22632**
Snapshots initiated directly from within a Windows guest using the **vshadow** development utility will not be directly bootable. A snapshot taken in this way appears indistinguishable from one taken using the **xe vm-snapshot-with-quiesce** CLI command, but the latter snapshot taken using the Xen Cloud Platform CLI will boot.

**Other**

**CA-20462**
Triggers for alerts are checked at a minimum interval of five minutes (this avoids placing excessive load on the system to check for these conditions and reporting of false positives); setting an alert repeat interval smaller than this will result in the alerts still being generated at the five minute minimum interval.