

XenServer 7.1 Release Notes

Welcome to XenServer 7.1. This document provides important information about the XenServer 7.1 release.

XenServer 7.1 is available in two commercial editions:

- Standard Edition
- Enterprise Edition

XenServer 7.1 is available to download from the [XenServer Product Download page](#).

New Features and Improvements in XenServer 7.1

XenServer 7.1 introduces enhanced features and functionality for application, desktop and server virtualization use cases. Major themes for this release are simplified maintenance, enhancements to Citrix Provisioning Services (PVS) and support for Nutanix Hyperconverged Infrastructure.

All XenServer 7.1 features are now available to all licensed XenApp/XenDesktop customers.

PVS-Accelerator Enterprise Edition

Citrix XenServer and Citrix XenApp/XenDesktop development teams have jointly developed and enhanced the existing Provisioning Services (PVS) solution to maximize the benefits customers receive from their Citrix Application and Desktop Delivery solutions.

The new PVS-Accelerator feature dramatically reduces network traffic in XenApp and XenDesktop deployments in order to achieve greater virtual server and desktop density, faster boot times during boot storms, and overall improved server and desktop performance.

This feature is available when PVS 7.13 is used in conjunction with XenServer 7.1.

XenServer Nutanix Integration

We have worked closely with Nutanix to seamlessly integrate XenServer into the Nutanix Hyperconverged Infrastructure product. This is available within the Nutanix AOS 5.1 release, and enables Nutanix customers to leverage the unique capabilities of XenServer.

Automated Updates Using XenCenter Enterprise Edition

The *Install Update* wizard in XenCenter has got a whole lot smarter, automatically determining which hotfixes are required to bring a pool up-to-date and enabling customers to update multiple pools in a single pass of the wizard.

XenServer Live Patching Enterprise Edition

In an industry-first, XenServer delivers the ability to seamlessly apply patches to a running system without requiring host reboots.

This capability will be applicable for select Linux kernel and Xen hypervisor hotfixes, which will consist of both a live patch, which will be applied to the Control Domain (Dom0) memory of the host, as well as a hotfix to update the disk image of the host (through the Automated Updates mechanism). This ensures that following any future reboots, the applied patches persist.

Long Term Service Release (LTSR)

As a Long Term Service Release, XenServer 7.1 is available with a 10-year servicing option, comprised of 5 years of standard support, plus an optional 5 years of extended support.

For more information about LTSR, see [XenApp, XenDesktop, and XenServer Servicing Options](#).

Additional XenCenter Improvements

- vCPU Hotplug for Linux VMs Standard and Enterprise Editions
- Ability to change the Control Domain (Dom0) memory using XenCenter

Performance Improvements

- Improved SMB performance Enterprise Edition
- Significant reduction in the time taken for VM Import/Export operations

Support for New Guests

XenServer 7.1 supports the following new guest operating systems:

- Windows Server 2016
- SLES 11 SP4
- CentOS 6.8, 7.3
- RHEL 6.8, 7.3
- Oracle Linux 6.8, 7.3
- Scientific Linux 6.8
- NeoKylin Linux Advance Server 6.5
- NeoKylin Linux Advance Server 7

Platform Updates

This release also incorporates the following core platform updates:

- Xen hypervisor v4.7.1
- Dom0 Linux Kernel v4.4

Support for New Processors

- Intel Skylake-H processor

XenServer Conversion Manager Updates Enterprise Edition

- Ability to convert VMs running on VMware ESXi and vSphere hosts
- Support for converting Linux guest operating systems

Interoperability with Citrix Products

XenServer 7.1 is interoperable with Citrix XenApp/XenDesktop 7.6, 7.12 and 7.13.

Localization Support

The localized version of XenCenter (Simplified Chinese and Japanese) is also available in this release.

Installation and Upgrades

Before beginning installation, customers should review the system requirements and installation instructions detailed in the [XenServer 7.1 Installation Guide](#).

Licensing

Customers should upgrade their Citrix License Server to version 11.13.1.2 or higher in order to use the XenServer 7.1 licensed features.

Note: Customers wishing to use the PVS-Accelerator feature are required to upgrade their License Server to 11.14.

For more information about XenServer 7.1 licensing, see [XenServer 7.1 Licensing FAQ](#).

Product Documentation

To access XenServer 7.1 product documentation, see [XenServer 7.1 Product Documentation](#).

For frequently asked questions about XenServer, see [XenServer 7.1 Technical FAQ](#).

Documentation may be updated or changed after the initial release. We suggest that you regularly visit the [XenServer 7.1](#) page on [Citrix Product Documentation](#) to learn about updates.

Advisories and Known Issues

The following section details advisories and minor issues with this release and any workarounds that can be applied.

Graphics Support

- Intel GVT-g is now supported on Intel Skylake processors.
- When the Intel GPU aperture size is set to a very small value in the BIOS (for example, 128MB), an error can prevent the XAPI toolstack from starting. If this issue is encountered when first installing XenServer, the workaround is to access the machine through BMC console and change the aperture size to a sufficiently large value. After installation of the hotfix [XS71E004](#), the Intel GPU aperture size can be changed back to a small value.
- XenServer hosts with large amounts of RAM that use Intel Xeon v4 or higher processors may encounter unexpected crashes when performing certain operations such as concurrently rebooting multiple vGPU-enabled VMs. To work around this issue, add `ept=no-pml` to the Xen command line and reboot the host. For more information, see <https://support.citrix.com/article/CTX220674>.

General

- After upgrading a XenServer host from a previous version to XenServer 7.1, Windows VMs with XenServer Tools installed may incorrectly report as not having the XenServer Tools installed, or display some of the functionalities as unavailable. To work around this issue, install XenServer Tools issued with XenServer 7.1.
- Enabling Active Directory (AD) authentication on a domain controller that has only one vCPU can fail. To resolve this issue, ensure that the AD domain controllers have at least two vCPUs.
- When you import a Windows VM from an ESXi server to XenServer, the IPv4/IPv6 network settings can be lost. To retain the network settings, reconfigure the IPv4/IPv6 settings after completing the conversion.
- After downloading an update from the Citrix Support website, attempts to upload the zip file without unpacking the ISO, or uploading an incomplete ISO file to a pool of XenServer hosts can fail with `VDI_IO_ERROR - Device I/O errors`. To resolve this issue, ensure that you have completely downloaded the zip file and unpack the ISO **before** attempting to upload the update to the XenServer pool.
- If a pool's CPU feature set changes while a VM is running (for example, when a new host is added to an existing pool, or when the VM is migrated to a host in another pool), the VM will continue to use the feature set which was applied when it was started. To update the VM to use the pool's new feature set, the VM must be powered off and then started. Rebooting the VM, for example, by clicking 'Reboot' in XenCenter, does not update the VM's feature set.

- After migrating Container Managed VMs between pools, the Container Management functionality stops working for the VMs. This is because Container Management is implemented using a pool-specific key. To work around this issue, the VM-specific preparation step for "Container Management" needs to be repeated on the new pool. This means:
 - For CoreOS, the Cloud Config Drive needs to be updated by changing the Config Drive configuration in the VM preferences.
 - For RHEL/CentOS/OL 7 and Ubuntu, the `xscontainer-prepare-vm` needs to be re-run. Note that even if the preparation-step is repeated, the old XenServer pool may keep access to the VMs.
- Renaming a container does not trigger the Container Management view to update. Additionally, on Ubuntu 14.04, the pause or unpauses of a container from outside XenCenter does not trigger the view to update. This may mean that XenServer may not show the current (renamed/paused/unpaused) container-status. The underlying cause is that the view only gets refreshed following Docker event notifications. As a workaround, the refresh can be triggered manually by performing an action (that is, start, stop) on an unrelated container that is running on the same VM.

Internationalization

- Non-ASCII characters, such as characters with accents, cannot be used in the host console.
- XenServer root passwords must not contain non-ASCII characters.

Hardware Compatibility

- Customers should refer to the XenServer [Hardware Compatibility List \(HCL\)](#) for the most recent additions and advice for all hardware compatibility questions.

Storage

- XenServer does not offer fully integrated support for SMB Continuous Availability shares. In certain scenarios where an SMB Continuous Availability master node fails, the SMB SR may become unresponsive and requires a host reboot.
- When using Nutanix SRs, the two VDIs (previously used for the HA statefile and pool metadata) that remain after disabling HA will not be reused if HA is subsequently re-enabled. Customers can safely delete these VDIs.
- When the default SR of a XenServer host or a pool is in a disconnected state, attempts to upload an update to that SR can fail.
- It is not possible to attach storage provided by Microsoft iSCSI Software Target versions 3.2 or 3.3. However, attempts to attach storage provided by iSCSI Target Server included in Windows Server 2012 and later will succeed.

Networking

- If you have installed XenServer 7.0 using FCoE Boot-from-SAN, performing a Rolling Pool Upgrade (RPU) to upgrade XenServer 7.0 to XenServer 7.1 fails with the error: `Could not locate the installation specified to be reinstalled`. To work around this issue, upgrade the XenServer host using the XenServer installation media or by using PXE boot with an answerfile.
- In some cases, booting a XenServer host from FCoE SAN using software FCoE stack can cause the host to become unresponsive due to a temporary link disruption in the host initialization phase. If the host appears to be in an unresponsive state for a long time, reboot the host to resolve this issue.
- XenServer does not prevent users from unplugging a NIC used by the FCoE SR.

XenCenter

- Modifying the font size or DPI on the computer on which XenCenter is running can result in the user interface displaying incorrectly. The default font size is 96 DPI; Windows 8 and Windows 10 refer to this as 100%.
- If a hotfix that requires a reboot is applied to some but not all hosts, and is later applied in XenCenter to the whole pool, then the prechecks page of the RPU wizard incorrectly advises that the hosts that already have the hotfix have to be rebooted (although no reboot will actually take place). In addition, if those hosts contain any non-agile VMs, it will also insist that the VMs are suspended before the wizard can proceed. To work around this issue, use the wizard to apply the hotfix to just the remaining hosts, rather than to the whole pool.

Guests

- XenServer's use of new hardware security features may reduce the overall performance of 32-bit PV VMs. Customers impacted by this issue can either:
 - Run a 64-bit version of the PV Linux VM, or
 - Boot Xen with the `{{no-smep no-smap}}` option. Note that we do not recommend this option as it can reduce the depth of security of the host.
- When you export a PVS-Accelerator enabled VM to OVF and then try to import it in the same pool, the PVS-Accelerator settings can be lost. Therefore, the settings are not enabled on the VM and not saved in the OVF appliance during the export. To resolve this, enable PVS-Accelerator on the imported VM using XenCenter or the `xe CLI`.
- The console screen on HVM Linux guests can go blank after a period (typically ten minutes) of inactivity. You can work around this issue by adding `consoleblank=0` to the kernel boot parameters of the guest. Consult your guest OS documentation for information about updating the kernel boot parameters.

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