

# XenServer 7.3 Release Notes

Welcome to XenServer 7.3. This document provides important information about the XenServer 7.3 release.

XenServer 7.3 is a Current Release (CR). The Current Release model allows customers to consume new features at the earliest possible juncture. This contrasts with the Long Term Service Release (XenServer 7.1 LTSR), which guarantees stability in terms of the feature set within XenServer.

XenServer 7.3 is available in two commercial editions:

- Standard Edition
- Enterprise Edition

**Note:** If you use XenServer in an unlicensed<sup>1</sup> state, there are new restrictions on the set of features that are available to you. Before moving to XenServer 7.3, ensure that you review the information in the [Licensing](#) section to see which features now require a license.

XenServer 7.3 is available to download from the [XenServer Product Download page](#).

## New Features and Improvements in XenServer 7.3

XenServer 7.3 introduces enhanced features and functionality for application, desktop, and server virtualization use cases. All XenServer 7.3 features are available to all licensed XenApp/XenDesktop customers.

### Citrix Director Integration

You can now use Citrix Director version 7.16 and later to access consoles of Server and Desktop OS machines hosted on XenServer. This way, XenApp and XenDesktop users don't require XenCenter to troubleshoot issues on XenServer-hosted VDAs.

For more information, see the Director documentation:

- [https://docs.citrix.com/en-us/xenapp-and-xendesktop/current-release/director/troubleshoot-machines.html#machine\\_console](https://docs.citrix.com/en-us/xenapp-and-xendesktop/current-release/director/troubleshoot-machines.html#machine_console)

### Bromium Enhanced Security Enterprise Edition

You can now use Bromium Secure Platform on Windows VMs running on XenServer.

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<sup>1</sup> For your XenServer pool to be licensed, all hosts in the pool must be licensed either by socket licenses or through a XenApp/XenDesktop entitlement.

Bromium Secure Platform provides protection at the endpoint against all advanced malware. This protection is transparent to the end user and has no impact on user experience or system performance. For more information about the advantages of Bromium Enhanced Security, see the [Bromium website](#).

## XenCenter: Host Status Visibility

Improvements in XenCenter make it easier to see the licensing status and patching status of your XenServer hosts and pools.

You can now see the licensing status of your hosts and pools in the title bar for the host or pool. Unlicensed pools also show an icon in the tree view.

The Updates tab can now show the available updates for your hosts sorted by server. This makes it simpler to see the patching status of all your hosts and pools.

## New Guest Operating System Support

XenServer now also supports the following Linux guest templates:

- Asianux Server 4.5 (64-bit)
- Asianux Server 4.4 (64-bit)
- Asianux Server 4.2 (64-bit)
- GreatTurbo Enterprise Server 12.2 (64-bit)
- Linx Linux v6.0 (64-bit)
- Linx Linux v8.0 (64-bit)
- Yinhe Kylin 4.0 (64-bit)
- NeoKylin Linux OS V5.0 (64-bit)
- Debian Stretch 9.0
- RedHat Enterprise Linux 7.4
- Oracle Linux 7.4
- Scientific Linux 7.4
- SUSE Linux Enterprise Server 12 SP2 (PV only)
- SUSE Linux Enterprise Server 12 SP3 (PV only)
- SUSE Linux Enterprise Desktop 12 SP2 (PV only)
- SUSE Linux Enterprise Desktop 12 SP3 (PV only)

## Enablement for XenDesktop Tablet Mode Enterprise Edition

XenServer and XenDesktop are the only desktop virtualization solution to enable Windows 10 Continuum experience in a virtualized environment.

XenServer, in conjunction with XenDesktop 7.14 or later, allows you to experience tablet mode. For information on how to enable XenDesktop tablet mode, see the [XenApp/XenDesktop documentation](#).

Enterprise features are available for XenServer Enterprise edition customers, or those who have access to XenServer through their XenApp/XenDesktop entitlement. To learn more about XenServer editions, and to find out how to upgrade, visit the [Citrix website](#).

## Changed Block Tracking Enterprise Edition

Changed block tracking provides a set of features and APIs that enable third-party software vendors to develop fast and space-efficient incremental backup solutions.

With changed block tracking, you need less disk space because, instead of handling and storing large VDIs, you can just store space-efficient metadata-only snapshot files.

## VLAN Tagging

XenServer supports VLAN tagging on management and storage interfaces. You can create a pool of XenServer hosts to communicate on a VLAN network.

Additionally, you can upgrade or perform a fresh installation of the XenServer host to your management interface on a tagged VLAN. This enables you to provision your XenServer host management interface on a tagged VLAN network and access the host on same VLAN network.

## IGMP Snooping for IPv4 Multicast Support Enterprise Edition

You can now use IPv4 multicast to send data to VMs that are a members of a multicast group built by using the IGMP protocol.

When enabled, this feature prevents multicast traffic being sent to all guest VMs and causing unnecessary load on host devices by requiring them to process packets they have not solicited. Instead, when multicast traffic comes into the XenServer host, XenServer detects the group of this traffic and forwards the traffic to guest VMs that subscribe to this group.

This feature improves the performance of multicast and is especially useful for bandwidth-intensive IP multicast applications such as IPTV.

## Support for SMB version 3 for ISO SRs

XenServer now supports SMB version 3.0 as the default method of connecting to ISO SRs. SMB version 3.0 is more secure and robust than SMB version 1.0

SMB version 1.0 is still supported and XenServer can fallback to using this protocol version if version 3.0 is not available. You can mount ISO SR using SMB version 1.0 using the CLI. For more information see, the [XenServer 7.3 Administrator's Guide](#).

However, we recommend that you use SMB version 3.0 where it is available.

## Localization for Email Performance Alerts

XenCenter 7.3 adds the ability to receive performance alert emails in your preferred language. The languages available are English, Simplified Chinese, and Japanese.

## BIOS Asset Tags

You can now use the xe CLI or the API to specify BIOS asset tags on a per VM basis. This enables you to track assets more easily and leads to smoother management and licensing.

## Installation Options

XenServer 7.3 is available to download from the XenServer Product Download page in the following packages:

- XenServer 7.3 Update ISO. Use this file to update an existing installation of XenServer 7.2 CR.
- XenServer 7.3 Base Installation ISO. Use this file to create a fresh installation of XenServer 7.3 or to upgrade from XenServer 6.2, 6.5, 7.0, or 7.1 Cumulative Update 1.

### Please note:

- If you use XenCenter to update your hosts, you must update your XenCenter installation to the latest version supplied on the XenServer 7.3 download page before beginning.
- Always update the pool master before updating any other hosts in a pool.

The following table shows the available options when moving from an existing version of XenServer to XenServer 7.3.

Installed Version	Update using XenServer 7.3 Update ISO	Upgrade using XenServer 7.3 Base Installation ISO
XenServer 7.2	Yes	No
XenServer 7.1 CU 1	No	Yes
XenServer 7.0	No	Yes
XenServer 6.5	No	Yes
XenServer 6.2	No	Yes

Upgrading from XenServer 7.1 without CU 1 applied is not supported. Ensure that you update your XenServer 7.1 to the latest Cumulative Update before upgrading to XenServer 7.3.

Before beginning installation, review the system requirements and installation instructions detailed in the [XenServer 7.3 Installation Guide](#).

## Changing from the Long Term Service Release to the Current Release

If you're running a XenServer LTSR, but want to take advantage of new features, you can decide to change to the XenServer CR stream. Using the XenServer versions from the CR stream requires you to adopt new CRs regularly to remain in support.

Move to this Current Release by upgrading from XenServer 7.1 CU 1 LTSR.

## Changing from the Current Release to the Long Term Service Release

If you're running a XenServer CR, but instead want to move to a version of XenServer with a guaranteed and stable feature set, you can change to a XenServer LTSR. The latest XenServer LTSR is available to download from the XenServer Product Download page.

Move to the latest LTSR by creating a fresh installation of XenServer 7.1 CU 1 LTSR.

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

Enterprise features are available for XenServer Enterprise edition customers, or those who have access to XenServer through their XenApp/XenDesktop entitlement. To learn more about XenServer editions, and to find out how to upgrade, visit the [Citrix website](#).

## Licensing

If you use XenServer 7.3 in an unlicensed state, you are not eligible for Citrix Support or maintenance.

In addition, the following features are now restricted and require a license:

- Pools of more than three hosts<sup>2</sup>
- High Availability
- Dynamic Memory Control
- Storage Motion
- Role-Based Access Control
- GPU Passthrough
- Site Recovery Manager
- Active Directory Integration
- Rolling Pool Upgrade

You can get a trial license to try XenServer. For more information, see [Getting started with XenServer](#).

Customers should upgrade their Citrix License Server to version 11.14 or higher in order to use all XenServer 7.3 licensed features.

For more information about XenServer 7.3 licensing, see [XenServer 7.3 Licensing FAQ](#).

## Interoperability with Citrix Products

XenServer 7.3 is interoperable with Citrix XenApp/XenDesktop 7.15 (LTSR), and 7.16.

XenServer 7.3 is interoperable with Citrix PVS 7.15 and 7.16.

## Localization Support

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

## Product Documentation

To access XenServer 7.3 product documentation, see [XenServer 7.3 Product Documentation](#). For frequently asked questions about XenServer, see [XenServer 7.3 Technical FAQ](#).

Documentation can be updated or changed after the initial release. We suggest that you regularly visit the [XenServer 7.3](#) page on [Citrix Product Documentation](#) to learn about updates.

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<sup>2</sup> Existing pools that contain three or more hosts are not impacted by this restriction until you attempt to add a new host to the pool.

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## Advisories and Known Issues

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

### General

- 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.
- For Intel Xeon 81xx/61xx/51xx/41xx/31xx CPU-based systems, we strongly recommend that you run XenServer in UEFI boot mode, not legacy boot mode.
- 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, you must power off and then start the VM. 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 unpause 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, trigger the refresh manually by performing an action (that is, start, stop) on an unrelated container that is running on the same VM.
- Do not assign more than 32GB of memory to Dom0, as otherwise intermittent VM freezes can occur, often during boot of VMs.
- When setting up a heartbeat SR for High Availability, you cannot use either SMB or iSCSI when authenticated using CHAP.

### Installation

- If you have previously upgraded your XenServer 7.2 installation from XenServer 6.5 or earlier, with virtual machines using the server's "Local Storage" storage repository, or if a vendor utility partition is present on your disk, you are using a legacy disk layout. The legacy disk layout means the control domain has significantly less space available to it than the current layout (4GB vs 18GB)

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When attempting to apply the XenServer 7.3 update to the XenServer 7.2 installation, you receive the error message "the server does not have enough space". This happens because installation of the XenServer 7.3 update requires sufficient free space to avoid filling the disk, which is not possible with the legacy layout.

If you receive this error, you cannot update to XenServer 7.3, and you must perform a fresh installation instead.

### 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

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

### Storage

- 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.
- 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

- In some cases, booting a XenServer host from an FCoE SAN using the 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%.

### 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:

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- Run a 64-bit version of the PV Linux VM, or
  - Boot Xen with the `no-smep no-smap` options. Note that we do not recommend these options as they can reduce the depth of security of the host.
- 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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