Citrix XenServer 7.6 Feature Matrix

A list of Citrix XenServer 7.6 features by product edition, including Citrix Virtual Apps and Desktops license entitlements.

Comprehensive application and desktop hypervisor management platform

XenServer is the most highly optimized hypervisor platform for Citrix Virtual Apps and Desktops workloads. With tight feature integration throughout the stack, XenServer exposes hardware-level features for a high definition user experience, greater security and simplified operational management. Containing comprehensive, enterprise-class features and performance, XenServer can handle different workload types, mixed operating systems and complex storage or networking requirements with ease, and for the most demanding business use cases.

The XenServer 7.6 delivers thin provisioning for block storage with GFS2 Storage Repositories and high-performance networking with passthrough of virtual functions for SR-IOV capable network cards. XenServer 7.5 delivers key capabilities that customers have been asking for, including quadrupling the maximum pool size from 16 hosts to 64 hosts. The XenServer 7.4 release delivered graphics-accelerated enhancements to extend Citrix leadership in the virtualized graphics space with support for AMD MxGPU and as the first hypervisor to deliver GA support for live migrating GPU-enabled running VMs with vGPU XenMotion.

Core XenServer Hypervisor Functionality

Feature	Description	XenServer Editions			Citrix Virtual Apps and Desktops Entitlements
		Free	Standard	Enterprise	
64-bit Hypervisor	The Xen Project hypervisor upon which all workloads run.	•	•	•	•
64-bit Control Domain	Now 64-bit, the control domain manages the pooling of resources and workloads running on the host.	•	•	•	•
Hardware Compatibility List (HCL) Support	Citrix actively works with hardware OEMs to ensure all commonly used hardware types are tested and supported with XenServer. The HCL of supported hardware can be found at: http://www.citrix.com/xenserver/hcl.	•	•	•	•

XenServer Host, VM and Pool Management

Feature	Description	XenServer Editions			Citrix Virtual Apps and Desktops Entitlements
		Free	Standard	Enterprise	
Multi Server Management with XenCenter GUI	The XenCenter GUI is a Windows based interface that allows for the management of hosts and resource pools (collections of hosts) in a simple to use scalable manner.	•	•	•	•
Active Directory Integration	For support of multiple user accounts on a server or pool, utilize Microsoft Active Directory services to authentication. This lets XenServer users log into a pool of XenServer hosts using their Windows domain credentials.		•	•	•
Role-Based Administration and Control (RBAC)	RBAC allows you to assign users, roles and permissions to control who has access to XenServer hosts. XenServer RBAC maps individual or groups of users to defined, which in turn have associated XenServer permissions.		•	•	•
XenServer vApps	vApps provide the ability to group multiple VMs together, to startup, shut down, set HA and recovery order policies, all at the vApp level.	•	•	•	•

Feature	Description	Free	Standard	Enterprise	Citrix Virtual Apps and Desktops Entitlements
Dynamic Memory Control (DMC)	DMC automatically adjusts the amount of memory available for use by a guest VM's operating system. By specifying minimum and maximum memory values, a greater density of VMs per host server is permitted.		•	•	•
Performance Reporting and Alerting	XenCenter provides the ability to monitor VM workload and host infrastructure performance, for compute, memory, network and disk metrics. Administrative alerts can also be defined.	•	•	•	•
Live Memory VM Snapshot and Revert	XenServer provides a mechanism that can take a snapshot of a VM storage, memory and metadata at a given time, leveraging Microsoft Windows Volume Shadow Copy Service (VSS) to generate application consistent (quiesced) point-in-time snapshots.	•	•	•	•
Live VM Migration with XenMotion	The live migration of VM compute workloads between two different hosts within a resource pool, allows administrators to manually manage the spread of load across their infrastructure and eliminate any outages from planned infrastructure downtime.	•	•	•	•
Heterogeneous Resource Pools	When expanding existing resource pools, it is not always possible to obtain exactly the same hardware or CPUs. This feature enables new hosts and CPU versions to be added to existing pools, with support for all the VM-level features such as live migration you expect.	•	•	•	•
Live-Patching	Live patching enables infrastructure admins to patch the XenServer hypervisor without needing to migrate VMs from the host, shut down or suspend VMs.			•	•
Automated Updates via XenCenter	XenServer infrastructure hotfixes are able to be deployed from either the command line or XenCenter, and in batches, automatically downloading the required hotfixes to further simplify management of the hypervisor platform.			•	•
Scheduled Snapshots	Scheduled snapshots enables admins to schedule hourly, daily, or weekly snapshots on a VM or group of VMs. It also includes the ability to configure the maximum number of scheduled snapshots, in which the oldest snapshot will be deleted in a rolling fashion, to aid in the lifecycle of snapshot management.	•	•	•	•
Health Check	Automated infrastructure status uploads to Citrix, enabling IT admins to run reports to determine infrastructure health, and whether it requires updates or is misconfigured.	•	•	•	•
PV Driver Update	Automated delivery and patching of XenServer's Windows VM drivers via Windows Update (WSUS), dramatically simplifying management of large scale VM deployments.			•	•
XenServer Conversion Manager	As a separately downloadable supplemental pack, IT admins are able to batch migrate VMs from VMware vSphere infrastructures to Citrix XenServer. Windows and Linux operating systems can be migrated with minimal steps and effort.			•	•
Dynamic Workload Balancing & Audit Reporting (WLB)	WLB gives system administrators deep insight into system performance, allowing infrastructure optimization, host power management and audit reporting.			•	•
Export Pool Resource List	This allows for the export to a spreadsheet, of all objects within the infrastructure view of XenCenter.			•	•
Docker Container Management	This feature enables infrastructure admins to monitor and manage environments leveraging either Linux or Windows based Docker implementations.	•	•	•	**N/A**[†]
Rolling Pool Upgrade (RPU)	A XenCenter feature that eliminates downtime when upgrading XenServer hosts. RPU autonomously patches all hosts within a pool, evacuating and repatriating VMs with XenMotion as needed.		•	•	•
Maximum Pool Size*	XenServer supports a maximum pool size of 64 hosts. An unlicensed copy of XenServer is limited to 3 hosts per pool.		•	•	•

Networking Connectivity & Features					
			XenServer Editions		Citrix Virtual Apps and Desktops Entitlements
Feature	**Description**	**Free**	**Standard**	**Enterprise**	

Feature	Description	Free	Standard	Enterprise	Citrix Virtual Apps and Desktops Entitlements
Basic Network Security Groups	Available with an OVS network, security groups is a method of tenant isolation typically used by cloud management products, such as Accelerite CloudPlatform.	•	•	•	N/A[†]
Open Virtual Switch (OVS)	When used with a controller appliance, OVS networks are a programmable networking standard based on OpenFlow and sFlow for the collection of statistics.	•	•	•	•
Distributed Virtual Switch Controller (DVSC)	This is a GUI used for the configuration and management of OVS based infrastructures. OVS support includes fine grained security policies, access control lists (ACLs), traffic behavior and performance visibility.	•	•	•	•
Cross-Host Private Networks	This allows IT admins to create or tear down, L2 tunnel networks between hosts, on demand, and without the need to create VLANs on the core networking infrastructure.	•	•	•	•
SR-IOV capable network cards	Support for SR-IOV-capable networks cards delivers high performance networking for virtual machines. XenServer enables the use of Single Root I/O Virtualization (SR-IOV) to allow a single PCI device to appear as multiple PCI devices on the physical system.			•	•
Efficient Multicast Support	The use of IGMP snooping to direct IPv4 multicast traffic only to those VMs that have registered to listen to that specific multicast.			•	•

Infrastructure Resilience and Workload Protection

Feature	Description	XenServer Editions			Citrix Virtual Apps and Desktops Entitlements
		Free	Standard	Enterprise	
Host Failure Protection High Availability (HA)	HA allows for the localized recovery of VMs and/or vApps due to infrastructure hardware failure. HA also ensures that a host re-election takes place, should a pool master fail.		•	•	•
Site Recovery Manager	Designed to enable customers to recover VMs and/or vApps from catastrophic hardware failure of the compute, storage and/or network layers. This is typically the loss of significant portions, if not all, of the infrastructure at a given location.		•	•	•

Storage Connectivity & Image Caching Features

Feature	Description	XenServer Editions			Citrix Virtual Apps and Desktops Entitlements
		Free	Standard	Enterprise	
Shared Storage Connectivity	Connectivity to all types of local and shared storage, including EXT3, NFS v3 & v4, iSCSI, and FC HBA & open-FCoE.	•	•	•	•
SMB Storage Connectivity	Create XenServer Storage Repositories (SRs) based on SMB storage, whether a hardware based array, or a Windows based storage server.			•	•
Software-boot-from-iSCSI	Boot XenServer hosts from software-implemented iSCSI within Cisco UCS fabrics.	•	•	•	•
Shared Nothing Live VM Migration	Live migration of both a VM's compute and storage, between different hosts and storage types. This can be within or across different resource pools and allows administrators complete flexibility to manually re-tier storage and eliminate planned infrastructure outages.		•	•	•
Storage XenMotion	The live migration of a VM's storage, enabling administrators to select a new target SR for each of VM's VDIs and moving these live without downtime and without moving the compute aspect of the VM.		•	•	•
Intellicache	Leveraging local host storage, XenServer caches reads and non-persistent writes when using a shared desktop image. This mitigates many of the off-host IOPS reducing the need for high-end arrays to support large scale infrastructures.	•	•	•	•
MCS Read Cache	When using *Machine Creation Services (MCS)* images for virtualized desktop and application workloads, the reads can be cached in host RAM, providing fast, scalable access and dramatically reducing off-host IOPS, thereby reducing the need for high-end arrays to support large scale infrastructures.			•	•
PVS-Accelerator	The integration of a XenServer *Provisioning Services (PVS)* host cache dramatically reduces solution network traffic, enabling fewer PVS servers to handle the same volume of VMs, yet with faster VM time-to-boot. PVS entitlement (standalone license or Citrix Virtual Apps and Desktops entitlement) is required.			•	•

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[*] New or updated feature within this release
[†] Feature is not a supported for Citrix Virtual Apps and Desktops use cases
[‡] Requires use of a third-party product such as Bitdefender GravityZone.

Feature	Description			
GFS2 Storage Repository	GFS2 is a Linux-based shared-disk file system for block storage. Enabling the option for GFS2 as a Storage Repository delivers reduced storage costs with thin provisioning for block storage capabilities.		•	•
Changed Block Tracking	Changed Block Tracking APIs for XenServer enables backup vendors to develop more efficient backup solutions, so that only changed blocks are backed up after the initial VM backup.		•	•

High Performance & Enhanced 3D Graphics

Feature	Description	XenServer Editions			Citrix Virtual Apps and Desktops Entitlements
		Free	Standard	Enterprise	
GPU Pass-through	Enables high-end 3D graphics within VMs and VDI deployments for variety of use cases, including CAD/CAM, HPC and Citrix Virtual Apps published applications. Hardware GPU providers include Intel, AMD & NVIDIA, with each GPU having a one-to-one relationship with a particular VM.	•		•	•
GPU Virtualization	Enables virtualized 3D GPU support for multiple VMs per host GPU, with the most comprehensive GPU vendor support. Offering superior performance when compared to software emulation, many users can leverage enhanced graphics for all supporting applications types.			•	•
vGPU XenMotion	Enables live migration of GPU-enabled running VMs. vGPU XenMotion improves user experience by enabling administrators to rebalance GPU-enabled VMs across pool hosts to improve VM performance. vGPU XenMotion also enhances user productivity, enabling users to remain productive during unexpected maintenance. vGPU XenMotion is available upon release of supported software and graphics cards from GPU vendors.			•	•

Security Architecture and Compliance

Feature	Description	XenServer Editions			Citrix Virtual Apps and Desktops Entitlements
		Free	Standard	Enterprise	
Direct Inspect APIs[‡]	Memory Introspection APIs enable 3rd party security software vendors to build and integrate agentless security products for "better than physical" protection against malicious activity (viruses, malware and rootkits).			•	•
Measured Boot	Protect against hypervisor-level attacks with measured boot of the hypervisor. Integration with Intel TXT leverages hardware microprocessors to provide assurance the hypervisor has not been tampered.			•	**N/A[†]**
Secure Tags	Leveraging Measured Boot enables securely protected workloads and hosting infrastructure tags to be used for business compliance, ensuring protected VMs are only ever run on the appropriate infrastructure hardware.			•	**N/A[†]**
Nested Virtualization for Bromium Secure Platform	Nested Virtualization support for Bromium's Secure Platform solution. Using micro-virtualization technology, VMs are sandboxed against threats by silicon enforced hypervisor isolation.			•	•

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