IBM XIV Management Console for VMware vCenter

Version 2.0.0

Release Notes

Fifth Edition (May 2011)

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This edition applies to Version 2.0.0 of the IBM XIV Management Console for VMware vCenter software package. Newer editions may be issued for the same product version in order to add missing information. The edition is reset to 'First Edition' for every new product version.

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Overview

The IBM® XIV® Management Console for VMware® vCenter™ is a software plug-in that integrates into the VMware vCenter server platform and enables VMware administrators to connect to and fully utilize IBM XIV storage systems.

The plug-in runs as a Microsoft® Windows Server® service on the vCenter server. Any VMware vSphere™ client that connects to the vCenter server detects the service on the server, and automatically enables the IBM storage management features on the vSphere client.

Compatibility and requirements

This section specifies the compatibility and requirements of version 2.0.0 of the IBM XIV Management Console for VMware vCenter.

Supported operating systems

The IBM XIV Management Console for VMware vCenter is compatible with the Microsoft Windows Server operating systems that are listed in the following table.

Operating system	Architecture	Compatibility note
Microsoft Windows Server 2008	x86, x64	Tested with Service Pack 2
Microsoft Windows Server 2008 R2	x64	Tested without and with Service Pack 1
Microsoft Windows Server 2003	x86, x64	Tested with Service Pack 2

Supported storage systems and microcode versions

The IBM XIV Management Console for VMware vCenter supports different versions of the IBM XIV Storage System, as listed in the following table.

Storage system	Microcode version	Compatibility note
IBM XIV Storage System	10.1.0	N/A
	10.2.0	N/A
	10.2.4 and 10.2.4a	N/A

Required server software

Prior to installing the IBM XIV Management Console, VMware vCenter 4.x (4.0, 4.1) must be installed on the host server (Windows Server).

Required client software

The following software must be installed on the administrator client host:

- VMware vSphere 4.x (4.0, 4.1)

- Microsoft Internet Explorer 7.0 or later (currently, other browsers are not supported)

Change log

This section summarizes the changes made in different version releases of the IBM XIV Management Console for VMware vCenter.

Version 2.0.0 (March 2011)

Version 2.0.0 offers a new and improved graphical user interface (GUI), as well as brand new and powerful management features and capabilities, including:

- Full control over XIV-based storage volumes (LUNs), including volume creation, resizing, renaming, migration to a different storage pool, mapping, unmapping, and deletion.

- Easy and integrated allocation of volumes to VMware datastores, used by virtual machines that run on ESX hosts or datacenters.

For more detailed information about the features and management capabilities in version 2.0.0, refer to the user guide.

Version 1.0.1 (September 2010)

Version 1.0.1 resolved the following issues:

VCPLUGIN-20465	Resolved the update failure that used to happen when two LUNs had the same UUID.
VCPLUGIN-20591	Corrected Bytes to Gigabytes in the displayed unit size of Network Attached Storage.
XIVXSF-21471	Fixed Unicode characters bug for the virtual machine or folder names.

Version 1.0.0 (July 2010)

Version 1.0.0 was the initial version, which included only monitoring and limited LUN manipulation capabilities through the vSphere client.

Known limitations

This section details the known limitations in version 2.0.0, along with possible workarounds (if workarounds are available).

VCPLUGIN-33149	Restrictions on mapping and unmapping operations.
	Volume mapping and unmapping operations are available or may be unavailable, based on different factors and conditions.
	The following scenario results in whole XIV cluster-level mapping or unmapping:
	When any number of ESX hosts are:
	• Mapped to a single volume (LUN), and –
	• Defined as part of a cluster on the XIV storage system, and –
	• Defined on the vCenter server as single hosts –
	A mapping operation results in mapping the volume to the whole cluster on the XIV storage system, while an unmapping operation results in unmapping the volume from the whole cluster on the XIV storage system.
	For a detailed table about all possible scenarios, refer to the user guide.
VCPLUGIN-33430	Asymmetric LUN mapping between cluster hosts is not indicated in the IBM Storage tab.
	When a logical volume is shared within an ESX cluster both as an RDM and a Datastore Extent, it must be mapped with the same logical unit number (LUN) on all the hosts of the ESX cluster. Because volumes (LUNs) are mapped to specific ESX hosts defined in a cluster, the LUN numbering of a shared volume may become asymmetric, causing the next created volume to become unusable by the cluster.
	Due to this limitation, refrain from mapping a single host LUN to other ESX clusters hosts. For more information about this issue, refer to the following VMware knowledgebase article:
	http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=6482648
VCPLUGIN-33938	The IBM XIV Storage System GUI (Version 2.5) allows volume creation in both GiB and GB units.
	The IBM XIV Storage System management GUI version 2.5 supports the creation of volumes in **Gigabyte** (GB) or in **Gibibyte** (GiB) units, as follows:
	• If GB units are chosen, a single storage unit is regarded as 10^9 (10,000,000,000) bytes
	• If GiB units are chosen, a single storage unit is regarded as 2^{30} bytes, or 1024 mebibytes (1 mebibyte = 1,048,576 bytes)
	Although the management GUI does support Gibibyte units, the IBM XIV Management Console for VMware vCenter **does not support volume creation in Gibibyte units**.

VCPLUGIN-33389	A new volume (LUN) is not recognized by the second host to which it is mapped.
	When mapping a new volume to two hosts, the second host may not detect the new volume and may skip the logical unit policy set step.
	This occurs because there is no check whether the storage is connected to the host target list prior to LUN creation. Consequently, since the zoning is missing, the ESX host does not have any path for setting the logical unit policy.
	To avoid this issue, perform the target connectivity check prior to the LUN creation, as explained in the user guide.
VCPLUGIN-45181	Registry key values return to their default values.
	When upgrading to version 2.0.0 from version 1.0.1, the Windows Server registry keys return to their default values, even if the registry was manually modified for version 1.0.1.
	Accordingly, if modifications to the registry keys are necessary (for more information, refer to the user guide), perform the changes only after the installation of version 2.0.0.
VCPLUGIN-53710	Automatic setting of multipath policy is disabled.
	By default, automatic setting of multipath policy is disabled because it is not supported by Windows Cluster virtual machine quorum devices.
	For more information about this issue, refer to the VMware Compatibility Guide, available on the VMware Technical Resource Center:
	http://www.vmware.com/resources/compatibility/info.php?deviceCategory=san&mode=san_introduction
	If you want to enable the automatic setting of multipath policy, set the value of the `xiv_luns_multipath_policy` registry key (on the vCenter server) to `VMW_PSP_RR` (Round Robin).
	The registry key path is:
	`HKEY_LOCAL_MACHINE\SYSTEM\CurrentContolSet\Services\IBMConsoleForvCenter\Parameters`
	Attention: When you set the multipath policy in the registry of the vCenter server, it applies to all XIV LUNs that are connected to the ESX servers, and it is automatically verified and updated for each LUN **every 30 minutes**. This means that if you modify the multipath policy of a specific LUN through a VMware management tool, the modification will stay in effect for a period of up to 30 minutes, after which it will automatically be updated according to the `xiv_luns_multipath_policy` registry key value.
	Other possible registry key values are:

- `VMW_PSP_FIXED_AP` (Fixed Active Passive)

- `VMW_PSP_MRU` (Most recently used)

- `VMW_PSP_FIXED` (Fixed)

For more information about how to modify the IBM Storage registry keys, refer to the user guide.

VCPLUGIN-75299	LUN creation fails when XIV clustered hosts have private mapping.

The XIV storage management allows ESX hosts to be defined or grouped in clusters that share cluster-mapped volumes (LUNs).
In addition to having shared LUNs, these ESX hosts may also have privately mapped LUNs that are not visible to other LUNs. This causes boot errors when the operating system uses the 'Boot From SAN' option.

Such cases result in a wrong LUN ID calculation that causes the IBM XIV Management Console to fail when creating new LUNs on XIV storage clusters.

To avoid such cases, do not use privately mapped LUNs. This limitation applies to all hosts that have privately mapped LUNs on the XIV storage system.

General notices

This section includes notices regarding reference publications, help information, and trademarks.

Related publications

You can find additional information related the IBM XIV Management Console for VMware vCenter in IBM, VMware, and Microsoft publications.

- IBM XIV Management Console for VMware vCenter, Version 2.0.0 – User Guide, available on the IBM XIV Storage System Information Center:

    http://publib.boulder.ibm.com/infocenter/ibmxiv/r2

- IBM XIV Storage System – Product Overview, available on the IBM XIV Storage System Information Center (see the link above).

- VMware vCenter Server Performance and Best Practices:

    http://www.vmware.com/files/pdf/techpaper/vsp_41_perf_VC_Best_Practices.pdf

- Performance Best Practices for VMware vSphere 4.1:

    http://www.vmware.com/pdf/Perf_Best_Practices_vSphere4.1.pdf

- VMware Technical Resources website:

    http://www.vmware.com/technical-resources

- VMware Documentation website:

  http://www.vmware.com/support/pubs

- For the latest updates from VMware regarding vCenter and ESX environments, refer to the VMware knowledgebase website:

  http://kb.vmware.com

- For the latest updates from Microsoft regarding Windows Server, refer to the Microsoft Windows Server TechCenter:

  http://technet.microsoft.com/en-us/library/bb625087.aspx

Documentation format

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