

IBM XIV Provider for Microsoft Windows Volume Shadow  
Copy Service  
Version 2.8.0.1

*Release Notes*



**First Edition (October 2016)**

This edition applies to version 2.8.0.1 of the IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service software package. Newer document editions may be issued for the same product version in order to add missing information or amend typographical errors. The edition is reset to 'First Edition' for every new product version.

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## Overview

The IBM® XIV® Provider for Microsoft Windows Volume Shadow Copy Service (VSS) is a software module that runs as a service on Microsoft Windows Server and automatically creates snapshots of Windows-based or VMware-based applications.

The module uses the Windows Server VSS framework for its management interface, and the IBM XIV Storage System as the storage system on which snapshot data is stored and maintained.

You can download the IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service software package at any time from the IBM Fix Central website ([www.ibm.com/support/fixcentral](http://www.ibm.com/support/fixcentral)).

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## Compatibility and requirements

This section specifies the compatibility and requirements of version 2.8.0.1 of the IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service.

### Supported Windows Server versions

The IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service is compatible with different versions of Microsoft Windows Server, as detailed in the following table.

Operating system	Service Pack	Architecture
Microsoft Windows Server 2008	SP1, SP2	x86, x64
Microsoft Windows Server 2008 R2	None, SP1	x64
Microsoft Windows Server 2012	None	x64
Microsoft Windows Server 2012 R2	None	x64
Microsoft Windows Server 2016	None	x64

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#### Important:

- Microsoft .NET Framework 4.5 must be installed on all supported Windows Server versions.
  - Microsoft Windows Hyper-V host operating system (OS) supports Windows Server 2012 and later.
  - Microsoft Windows Hyper-V guest OS supports Windows Server 2008 and later.
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### Supported VMware platforms

The IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service supports different VMware platforms, as detailed in the following table.

VMware platform	Version
ESXi	5.0, 5.1, 5.5, 6.0
vCenter Server	5.0, 5.1, 5.5

## Supported storage systems

The IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service supports different IBM storage systems, as listed in the following table.

Storage system	Microcode version
IBM FlashSystem A9000 and A9000R	12.0.x
IBM XIV Storage System	10.2.x 11.0.x, 11.1.x, 11.2.x, 11.3.x, 11.4.x, 11.5.x, 11.6.x
IBM Spectrum Accelerate	11.5.x

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**Note:** A snapshot will not be created if the free snapshot space is less than or equal to 17 GB.

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## Change log

This section summarizes the changes made in different version releases of the IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service.

### Version 2.8.0.1 (October 2016)

Version 2.8.0.1 adds support for Microsoft Windows Server 2016.

### Version 2.8.0 (April 2016)

Version 2.8.0 added support for IBM FlashSystem A9000 and A9000R 12.0.

### Version 2.7.0.1 (September 2015)

Version 2.7.0.1 added support for IBM Spectrum Accelerate Storage System 11.5.1.c and resolved the following issues.

Ticket ID	Description
VSSP-261125	<b>Fixed:</b> IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service (VSS) lost connection to XIV after temporary network disconnection and recovery, and the connection could only be restored by restarting VSS and IBM XIV Provider.
VSSP-261126	<b>Fixed:</b> Snapshots mapped by IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service in a Hyper-V passthrough iSCSI environment were sometimes mapped to the wrong host, in cases where FC ports did not exist or were disabled. Now snapshots are mapped to the correct host, whether FC Ports are available or not.

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### Version 2.7.0 (June 2015)

Version 2.7.0 added support for IBM XIV Storage System 11.6.0 and introduced the following changes.

Ticket ID	Description
VSSP-261069	<b>Enhancement:</b> The service name for IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service is changed to "IBM XIV Provider for Microsoft Windows VSS," and the service description is changed to "IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service."
VSSP-261105	<b>Fixed:</b> InstallShield is upgraded to 2014.
VSSP-261109	<b>Enhancement:</b> Support for .NET Framework 4.5 is added.

### Version 2.6.0.1 (March 2015)

Version 2.6.0.1 added support for IBM Spectrum™ Accelerate storage system deployments and introduced the following changes.

Ticket ID	Description
VSSP-261094	<b>Enhancement:</b> Allows the XIV storage system to be managed by more than three nodes.
VSSP-261101	<b>Fixed:</b> Vulnerability in version 3 of the SSL encryption protocol allows an attacker to read information encrypted with this version of the protocol in plain text using a Man-in-the-Middle (MITM) attack.

### Version 2.6.0 (September 2014)

Version 2.6.0 added support for version 11.5.0 of the XIV microcode.

Additional enhancements in version 2.6.0:

Ticket ID	Description
VSSP-261054	<b>Enhancement:</b> Added support for the Hyper-V/MSFC Environment.
VSSP-261059	<b>Enhancement:</b> Added support for 3-way mirroring with the XIV Proxy LUN feature.
VSSP-261064	<b>Enhancement:</b> Added support for the XIV multi-tenancy feature.
VSSP-261065	<b>Enhancement:</b> In a VMware ESXi RDM environment, the user can configure a Soap timeout in the configuration file or in the MachinePoolCLI.exe file.

### Version 2.5.0 (December 2013)

Version 2.5.0 added support for version 11.4.0 of the XIV microcode, as well as for VMware vSphere 5.5 and Microsoft Windows Server 2012 R2.

Additional changes in version 2.5.0:

Ticket ID	Description
VSSP-261036	<b>Fixed:</b> When a volume is in the proxy phase and the destination pool name is different than the source pool name, the VSS provider cannot create a snapshot of that volume.

## Version 2.4.0 (June 2013)

Version 2.4.0 added support for version 11.3.0 of the XIV microcode and for the IBM Hyper-Scale Mobility (online volume migration) feature.

Additional changes in version 2.4.0:

Ticket ID	Description
VSSP-208026	<b>Enhancement:</b> The XIV Proxy LUN feature is now supported, allowing volumes to be mirrored in proxy state.
VSSP-240823	<b>Enhancement:</b> Replicated snapshots can now be enabled from the Machine Pool Editor GUI.
VSSP-240824	<b>Change:</b> The term <i>Replicated Snapshots</i> has been renamed to <i>Mirrored Snapshots</i> , in line with the XIV mirroring terminology.
VSSP-240826	<b>Change:</b> If incorrect parameters are entered upon the first configuration try, another configuration try is now allowed (the configuration interface no longer automatically closes upon incorrect data entry).
VSSP-256652	<b>Fixed:</b> Deleting old VSS Provider log files causes the following error to appear in the Windows event log: Unable to delete older log file, error code: 2
VSSP-261027	<b>Fixed:</b> On x64-based Windows Server 2003, snapshot creation fails on drive C.

## Version 2.3.2.2 (April 2013)

Version 2.3.2.2 resolved the following issue.

Ticket ID	Description
VSSP-258713	<b>Fixed:</b> If vCenter Server is installed on a non-English version of Windows Server, a redundant SCSI controller might be created for each target volume that is mapped as RDM.



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## Known issues

This section details the known issues in version 2.8.0.1, along with possible workarounds (if workarounds are available).

Ticket ID	Description
VSSP-6698	<p>Warning message about storage identifiers that are not supported on Windows Server 2008.</p> <p>The following warning message is displayed for storage systems that support TPGS: The provider has reported a storage identifier that is not supported by VSS.</p> <p>This warning message does not affect the normal operation of VSS and you can ignore it. For more information, refer to the relevant Microsoft Support website (<a href="http://support.microsoft.com/kb/951793">support.microsoft.com/kb/951793</a>)</p>
VSSP-8889	<p>Shadow set creation may fail on Windows Server 2008 R2 after LUN resynchronization.</p> <p>Shadow sets creation may fail after performing LUN resynchronization on Windows Server 2008 R2. This is a known Microsoft VSS issue.</p> <p>Until Microsoft releases a KB hotfix, you must restart the VSS service after each LUN resynchronization.</p>
VSSP-17662	<p>The VSS operation may fail during import on Windows 7 and Windows Server 2008 R2.</p> <p>A timeout may occur in the VSS process during an import of a shadow set. As a result, one or more snapshots may be missing from the system after a rescan, even if they are mapped to the host by the XIV system. The Microsoft hotfix 977096 (<a href="http://support.microsoft.com/kb/977096">support.microsoft.com/kb/977096</a>) resolves this issue:</p> <p>This issue was fixed in Windows Server 2008 R2 Service Pack 1.</p>
VSSP-64302	<p>An exception occurs when trying to repair a working VSS Provider installation via the Repair option of the installation wizard.</p> <p>To resolve this issue:</p> <ol style="list-style-type: none"><li>1. Go to <b>Control Panel &gt; Programs and Features &gt; Add or Remove Programs</b>.</li><li>2. Select the IBM XIV Provider entry and then click <b>Uninstall</b> or <b>Remove</b>. The uninstallation begins. <b>Note:</b> During the uninstallation, ignore any exception error message.</li><li>3. After the uninstallation is complete, the IBM XIV Provider entry continues to appear in the list of installed programs.</li><li>4. Select the IBM XIV Provider entry and then click <b>Repair or Change &gt; Repair</b></li><li>5. Follow the Repair wizard until the repair is complete.</li></ol>

Ticket ID	Description
VSSP-84189	<p data-bbox="667 226 1419 321">On VMware ESX servers, the VSS Provider does not rescan for Host Bus Adapters (HBAs) after unmapping Raw Device Mappings (RDMs).</p> <p data-bbox="667 348 1419 474">Because the unmapping of RDMs is performed in single mode, manually re-scanning for the HBAs of every single unmapped RDM is a time consuming procedure during which the VSS service may be timed out.</p> <p data-bbox="667 501 1419 562">To save time, wait for the VMware ESX server to automatically rescan for the HBAs instead of re-scanning manually.</p>
VSSP-147364	<p data-bbox="667 579 1419 640">The VSS Provider DLL is left registered after an installation failure.</p> <p data-bbox="667 667 1419 762">When performing a rollback to an older version after an installation failure, the VSS Provider DLL may still be registered in DCOM.</p> <p data-bbox="667 789 1062 816">To remove the DLL from DCOM:</p> <ol data-bbox="667 831 1419 1136" style="list-style-type: none"> <li data-bbox="667 831 1419 892">1. Click <b>Start &gt; Run</b> and type <b>dcomcnfg.exe</b> in the command box.</li> <li data-bbox="667 907 1419 968">2. Go to <b>Component Services &gt; Computers &gt; My Computer &gt; DCOM Config</b></li> <li data-bbox="667 982 1419 1108">3. On the right pane, click the IBM XIV VSS Provider component, and then press <b>Delete</b> on the keyboard. A message box is displayed to confirm the deletion of the component.</li> <li data-bbox="667 1123 824 1136">4. Click <b>Yes</b>.</li> </ol>
VSSP-164293	<p data-bbox="667 1157 1419 1314">On some occasions, when running Windows Server 2003 or Windows Server 2008 as a guest operating system on a VMware platform connected to XIV version 11.0.0, importing a VSS hardware snapshot created on a RDM device results in a VSS enumeration issue.</p> <p data-bbox="667 1341 1419 1436">To avoid this issue or to resolve it upon occurrence, perform the following procedure before importing VSS hardware snapshots:</p> <ol data-bbox="667 1451 1154 1591" style="list-style-type: none"> <li data-bbox="667 1451 1154 1478">1. Open the command prompt window.</li> <li data-bbox="667 1493 976 1520">2. Enter: <b>net stop xProv</b></li> <li data-bbox="667 1535 943 1562">3. Enter: <b>net stop vss</b></li> <li data-bbox="667 1577 1036 1591">4. Retry the import operation.</li> </ol>
VSSP-243718	<p data-bbox="667 1612 1419 1673">The VSS Provider cannot be installed in a directory that is named with anything other than English characters.</p> <p data-bbox="667 1701 1295 1724">Currently there is no workaround for this limitation.</p>

Ticket ID	Description
VSSP-258222	<p>The VSS Provider snapshot map parameter (<b>MapSnapshot</b>) in the Windows registry might get a wrong host name.</p> <p>This occurs due to low-case characters that Windows Server might record in the <b>DeviceIdentifierPage</b> registry parameter, located at:</p> <pre data-bbox="696 432 1386 527">HKEY_LOCAL_MACHINE\HARDWARE\DEVICEMAP\Scsi\Scsi Port 3\Scsi Bus 0\Target Id 0\Logical Unit Id 0\DeviceIdentifierPage</pre> <p>To resolve this issue, restart Windows.</p>
VSSP-259229	<p>The IBM XIV VSS Provider service (named "xProv") and the Microsoft VSS service must be restarted on the Windows Server host after the status of mirrored snapshots is changed from Disabled to Enabled.</p> <p>In such a case, without a service restart, snapshots are not created on mirrored volumes.</p> <p>Currently there is no workaround for this limitation.</p>
VSSP-261047	<p>The VSS provider cannot unmap a volume when the <code>unmap_vol_set_default_idle_time</code> setting on XIV 11.4.0 is not zero.</p> <p><b>Workaround:</b> Set <code>unmap_vol_set_default_idle_time</code> to zero (0) before deleting or masking a snapshot.</p>

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## Related information and publications

You can find additional information and publications related to the IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service on the following websites.

- IBM XIV Storage System on IBM Knowledge Center ([ibm.com/support/knowledgecenter/STJTAG](http://ibm.com/support/knowledgecenter/STJTAG))
- IBM Spectrum Accelerate on IBM Knowledge Center ([ibm.com/support/knowledgecenter/STZSWD](http://ibm.com/support/knowledgecenter/STZSWD))
- IBM FlashSystem® A9000 on IBM Knowledge Center ([ibm.com/support/knowledgecenter/STJKMM](http://ibm.com/support/knowledgecenter/STJKMM))
- IBM FlashSystem A9000R on IBM Knowledge Center ([ibm.com/support/knowledgecenter/STJKN5](http://ibm.com/support/knowledgecenter/STJKN5))
- Microsoft Windows Server troubleshooting center ([technet.microsoft.com/en-us/windowsserver](http://technet.microsoft.com/en-us/windowsserver))
- Microsoft MSDN web page for Volume Shadow Copy Service ([msdn.microsoft.com/en-us/library/bb968832.aspx](http://msdn.microsoft.com/en-us/library/bb968832.aspx))
- VMware ESXi and ESX Info Center ([www.vmware.com/products/esxi-and-esx/overview](http://www.vmware.com/products/esxi-and-esx/overview))
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- VMware knowledgebase ([kb.vmware.com](http://kb.vmware.com))
- Videos Related to IBM XIV Provider for Microsoft Windows Volume Shadow Copy Service ([www.youtube.com/channel/UCRIw6cXxi--bHnMWG45VgNw](http://www.youtube.com/channel/UCRIw6cXxi--bHnMWG45VgNw))

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- IBM Directory of Worldwide Contacts website ([www.ibm.com/planetwide](http://www.ibm.com/planetwide))

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