

IBM XIV Management Tools
Version 4.8.0.6

Release Notes



Second Edition (July 2017)

This edition applies to the IBM XIV Management Tools version 4.8.0.6 software package. Newer document editions may be issued for the same version in order to add missing information, update information, or amend typographical errors. The edition is reset to 'First Edition' for every newly released version.

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Overview

IBM® XIV® Management Tools is a powerful, top-of-the-line management and monitoring software for IBM XIV and IBM Spectrum Accelerate™ systems.

The software package includes the following components:

- XIV graphical user interface (GUI) - Industry-acclaimed storage management GUI that offers extreme ease of use and has set the standard for the entire IBM Storage product portfolio.
- XIV online monitoring tool (XIV Top)
- XIV Command-Line Interface (XCLI) utility

Also included is IBM Hyper-Scale Manager, an advanced server platform for scaling out, managing, and licensing multiple storage systems. IBM Hyper-Scale Manager reduces operational complexity and enhances capacity planning through integrated management for large and multi-site deployment.

For more detailed information about IBM XIV Management Tools, refer to its user documentation and online information.

What's new in version 4.8.0.6

Version 4.8.0.6 is a minor release that resolves a few miscellaneous issues and includes a compression functionality fix.

For more information, see “Change log” on page 4.

Compatibility

This section details the compatibility of IBM XIV Management Tools version 4.8.0.6 with storage system versions and IBM Hyper-Scale Manager releases.

Supported storage systems

Version 4.8.0.6 supports the following storage system versions:

Storage system	Microcode version
IBM XIV Storage System (model 281x-A14)	10.2.4.x
IBM XIV Storage System Gen3 (models 281x-114, 281x-214, and 281x-314)	11.1.1 – 11.6.2.x
IBM Spectrum Accelerate	11.5.0.x – 11.5.4.x

Supported IBM Hyper-Scale Manager releases

IBM XIV Management Tools version 4.8.0.6 is compatible with IBM Hyper-Scale Manager version 1.9.6.

Requirements

This section details the XIV GUI and IBM Hyper-Scale Manager requirements.

XIV GUI requirements

The XIV GUI runs in either Direct mode or Server mode, and requires different hardware resources depending on the mode in use.

Additionally, the requirements vary depending on whether the XIV GUI that is installed on a 32-bit or a 64-bit operating system.

Direct mode

In Direct mode, the XIV GUI requires the following:

CPU Dual core

RAM

Up to 25 storage systems

32-bit and 64-bit: 700 MB

More than 25 storage systems

32-bit: 1.1 GB

64-bit: 1.5 GB

Max number of systems that can be monitored by a single XIV GUI in Direct mode: 144

Best practice: Use IBM Hyper-Scale Manager and an XIV GUI in Server mode when using more than 10 storage systems.

Server mode

In Server mode, the XIV GUI requires the following:

CPU Dual core

RAM 1 GB

Allowed latency between a single XIV GUI and IBM Hyper-Scale Manager:

Maximum of 50 milliseconds

Supported operating systems

Note: Make sure you install the relevant bit package (64-bit or 32-bit) according to the operating system that is in use.

Operating system	Bit version / CPU architecture	Supported IBM XIV Management Tools component
Microsoft Windows Server 2008	32-bit or 64-bit	<ul style="list-style-type: none">• XIV GUI• XIV Top• XIV CLI (XCLI) utility
Microsoft Windows Server 2016	64-bit	<ul style="list-style-type: none">• XIV GUI• XIV Top• XIV CLI (XCLI) utility
Microsoft Windows Server 2012 R1 or R2	64-bit	<ul style="list-style-type: none">• XIV GUI• XIV Top• XIV CLI (XCLI) utility

Operating system	Bit version / CPU architecture	Supported IBM XIV Management Tools component
Microsoft Windows Vista	32-bit or 64-bit	<ul style="list-style-type: none"> • XIV GUI • XIV Top • XIV CLI (XCLI) utility
Microsoft Windows 7	32-bit or 64-bit	<ul style="list-style-type: none"> • XIV GUI • XIV Top • XIV CLI (XCLI) utility
Microsoft Windows 8–8.1	32-bit or 64-bit	<ul style="list-style-type: none"> • XIV GUI • XIV Top • XIV CLI (XCLI) utility
Microsoft Windows 10	32-bit or 64-bit	<ul style="list-style-type: none"> • XIV GUI • XIV Top • XIV CLI (XCLI) utility
Red Hat Enterprise Linux (RHEL) 6.x	32-bit or 64-bit	<ul style="list-style-type: none"> • XIV GUI • XIV Top • XIV CLI (XCLI) utility
Apple OS X 10.9 – 10.12.x	N/A	<ul style="list-style-type: none"> • XIV GUI • XIV Top • XIV CLI (XCLI) utility
HP Unix (HP-UX) 11i v3	Intel IA-64	XCLI utility
IBM AIX® 7.0 and 7.1	N/A	XCLI utility
Solaris 11	SPARC or Intel x86-64	XCLI utility

IBM Hyper-Scale Manager requirements

IBM XIV Management Tools version 4.8.0.6 is bundled with IBM Hyper-Scale Manager version 1.9.6, which can be installed as a server application.

Note:

- Starting from version 1.7, IBM Hyper-Scale Manager as a virtual appliance is no longer supported. Only the application deployment is supported.
 - If you are using the a previous virtual appliance version, refer to the *IBM Hyper-Scale Manager as an Application User Guide (GC27-5984)* for information on how to keep using the virtual appliance or migrate its data to the application version.
-

IBM Hyper-Scale Manager 1.9.6 requires the following software, hardware, and configurations:

Operating system

- Red Hat Enterprise Linux (RHEL) 6.x, 64-bit.

Disk space

- At least 1 GB of free space in the /tmp directory
- 76 GB free space under the installation path (the path is configurable and does not include the home directory)

Physical CPU cores and memory

Number of storage systems in use	Number of storage objects in use	Required CPU cores	Required RAM
Up to 40	Up to 80,000	Dual-core	4 GB
Up to 80	Up to 120,000	4 cores	6 GB
Up to 120	Up to 180,000	6 cores	6 GB
Up to 144	Up to 220,000	6 cores	8 GB

Note: For best performance, install the IBM Hyper-Scale on a dedicated independent server.

Ports

- Outbound/Inbound: RMI - 1199–1204
- Inbound only: SSH/SCP - 22
- Outbound only: SMTP - 25
- Communication with storage systems - 7778
- RESTful API port - 8443

Latency

Allowed latency between the IBM Hyper-Scale Manager and the storage systems it monitors: up to 200 milliseconds.

Concurrently connected GUI clients to an XIV system

Maximum number of GUI clients (connected to a storage system) that can concurrently send requests to IBM Hyper-Scale Manager: 15

Administered storage systems

Maximum storage systems that are administered by one server: 144 (up to 12 groups with 12 storage systems in each)

Hyper-Scale Manager with XIV GUI

Use of IBM Hyper-Scale Manager is recommended when using 10 or more storage systems.

IBM Spectrum Accelerate

IBM Hyper-Scale Manager is required for IBM Spectrum Accelerate license management.

Change log

This change log summarizes the changes that were made in recent 4.x code level versions of IBM XIV Management Tools.

Note: New functional features of these versions are only briefly summarized. For a detailed summary of the new functional features of a specific version, refer to the 'What's new' section of its individual release notes.

Version 4.8.0.6 (July 2017)

Version 4.8.0.6 of IBM XIV Management Tools resolves a few miscellaneous issues, as listed in the following table.

Ticket ID	Description
UI-265855	Fixed: An error occurs when you compress a Volume with an estimated compression ratio of less than 10% on a system with microcode version 11.6.2.a.
UI-265850	Fixed: The XIV GUI doesn't display on 2560*1440 high resolution screens.
UI-265840	Fixed: Data migration to an uncompressed Pool, when automatic Volume creation is enabled, results in configuration errors.

Version 4.8.0.4 (December 2016)

Version 4.8.0.4 of IBM XIV Management Tools introduced support for a new system authentication code and resolved a few miscellaneous issues, as listed in the following table.

Ticket ID	Description
UI-265832	Security enhancement: When the password or username are incorrect during login, the XCLI return code does not disclose which information is incorrect.
UI-265697	Fixed: When a user is associated to a domain, all of the system sessions are disconnected for a few seconds, even if they are logged in as Admin.

Version 4.8.0.3 (July 2016)

Version 4.8.0.3 of IBM XIV Management Tools introduced a number of security enhancements and resolved the following issues.

Ticket ID	Description
UI-265822	<p>Enhancement: The direct command line login in the XCLI utility can now be disabled. To disable it, in the GUI12\xiv-general.properties file, do one of the following:</p> <ul style="list-style-type: none"> • Change the value of the parameter <code>xcli_direct_login_enabled</code> to <code>false</code> • Add the string <code>xcli_direct_login_enabled=false</code> <p>Note: Prior to modifying the <code>xcli_direct_login_enabled</code> parameter, make sure that the XIV GUI is closed. Otherwise, the changes will not be applied.</p> <p>If the direct login is disabled, all direct authentication attempts will fail (command line arguments <code>-u</code> and <code>-p</code> are prohibited).</p>
UI-265821	Enhancement: If the credentials file is created with the <code>--protect</code> argument, only the user running the command has read/write permissions to this file. No permissions are granted to any other user.
UI-265820	Enhancement: Starting from version 4.8.0.3, user passwords are not retained in XCLI or GUI log files.

Ticket ID	Description
UI-265819	Enhancement: Weak cryptographic algorithms used for obfuscation of user credentials in previous versions have been thoroughly enhanced and strengthened.
UI-265818	Security enhancement: User credentials are now required every time when launching the XCLI utility or XIV Top from the XIV GUI.
UI-265813	Fixed: The correct snmp_type cannot be defined, if the GUI is set to Japanese language mode.
UI-265811	Fixed: The units of measurement for bandwidth limits and bandwidth usage in the Statistics view in the Qos Performance Class Properties window are incorrect.

Version 4.8.0.2 (April 2016)

Version 4.8.0.2 of IBM XIV Management Tools resolved the following issues.

Ticket ID	Description
UI-265802	Fixed: IBM Spectrum Accelerate deployment now supports a 6-digit ICN. (In case your ICN is 6 digits long, add a leading 0 to the number.)
UI-265800	Fixed: Sometimes the XIV GUI can't monitor pre-11.3.1 XIV systems.
UI-265799	Fixed: Wrong error message is displayed when creating a compressed volume (on 314 models with version 11.6.1).

Version 4.8.0.1 (January 2016)

Version 4.8.0.1 of IBM XIV Management Tools resolved the following issues.

Ticket ID	Description
UI-265781	Fixed: The CVE-2015-7575 issue, also known as the "MD5 SLOTH" vulnerability. Management tools applications (Hyper-Scale Manager, XIV GUI, XIV Top) disable the MD5 algorithm.
UI-265787	Fixed: Wrong latency values are shown in XIV Top when the host is using a multipath.
UI-265634	Fixed: Wrong IOPS and latency values are shown when the system has more than six interface modules.

Version 4.8 (December 2015)

Version 4.8 of IBM XIV Management Tools added support for IBM Spectrum Accelerate version 11.5.3 and IBM XIV Storage System Gen3 version 11.6.1.

Fixes in version 4.8:

Ticket ID	Description
UI-265713	Fixed: Removed users are still able to create consistency groups.

Fixes and features of earlier versions

IBM XIV Management Tools version 4.8.0.4 includes all the features and fixes that were included in previous 4.x versions.

To obtain information regarding previously introduced features or issues that were resolved in previous versions, see the release notes page on IBM Knowledge Center (ibm.com/support/knowledgecenter/STJTAG).

Limitations

The following functional limitations apply to IBM XIV Management Tools and may remain in effect in future software versions.

Ticket ID	Description
UI-263912	After upgrading IBM Hyper-Scale Manager, the time set in Schedule Daily Backup is not saved and reverts to the default value. The default value is 11:30 PM.
UI-263821	The XIV GUI does not launch when Single Sign-On (SSO) software is running on the client.
UI-262890	Domains with size 0 cannot be to created or edited.
UI-261561	An untrusted system (a system that is not authenticated via a certificate) is displayed as trusted. Removing the system certificate with the xcli -c remove command and then trying to connect to this system succeeds. This occurs when the XCLI server is up. Workaround: Log out of the XCLI server and then log in again.
UI-253185	The GUI must be installed in a dedicated directory, as the uninstallation erases it completely.
UI-247041	Changing the PC local time when the GUI is open might also change the storage system time. Workaround: Restart the GUI.

Known issues

This section details the known issues in IBM XIV Management Tools, along with possible solutions or workarounds (if available).

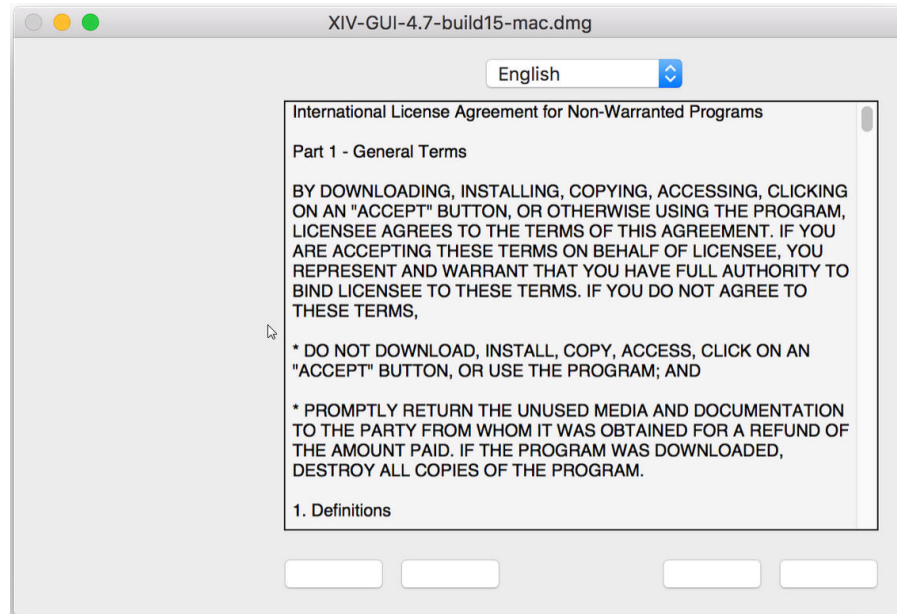
Important:

- **The issues listed below apply to version 4.8.0.6 or earlier versions.** As long as a newer version has not yet been released, a newer release notes edition for version 4.8.0.6 might be issued to provide a more updated list of known issues and workarounds.
- When a newer version is released for general availability, the release notes of version 4.8.0.6 will no longer be updated. Accordingly, check the release notes of the newer version to learn whether any newly discovered issues affect version 4.8.0.6, or whether the newer version resolves any of the issues listed below.

Ticket ID	Description
UI-265880	<p>The uninstall process of the XIV GUI fails on Microsoft Windows Server 2016 and Windows 10 operating systems.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Access the Advanced system settings from the Windows Control Panel > System menu. 2. From the Advanced tab, click Environment Variables. 3. Click New to define a New User Variable. 4. Enter JAVA_TOOL_OPTIONS for the Variable name: and -Dos.name="Windows 7" for the Variable value:.
UI-265868	<p>When collecting X-Ray support logs in the XIV GUI in Japanese, the logs can't be saved locally.</p> <p>Workaround: Use the XIV GUI in English.</p>
UI-265863	<p>The installation process of Hyper-Scale Manager version 1.9.4 fails.</p> <p>Workaround: After the Hyper-Scale Manager installation package is extracted into the tmp folder, temporarily mount the folder without the noexec flag and install Hyper-Scale Manager.</p>
UI-265848	<p>The XIV GUI doesn't support SED on IBM Spectrum Accelerate systems.</p> <p>Workaround: No workaround is currently available.</p>
UI-265847	<p>In the XIV GUI Japanese interface, the Compression Capabilities field in the Parameters tab of the system settings is disabled.</p> <p>Workaround: Use the XCLI or change the interface to English.</p>
UI-265846	<p>An error is displayed when you automatically collect and upload support logs to ECUREP from the XIV GUI.</p> <p>Workaround: Manually upload the log files via FTP.</p>
UI-265838	<p>An error occurs when trying to launch the XIV GUI after an installation on OSX 10.12.x.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Edit the Info.plist file in the XIV GUI.app/Contents directory. 2. Replace %BUNDLE_PARENT_PATH% with /Applications/XIVGUI throughout the file. For example, instead of <string>%BUNDLE_PARENT_PATH%/lib/</string>, you should have <string>/Applications/XIVGUI/lib/</string>. <p>Note: Be sure to make the same updates for XCLI and XIV Top.</p>
UI-265789	<p>When trying to import a custom certificate, the custom certificate is overwritten with the original self-signed certificate.</p> <p>Workaround: Contact IBM Support.</p>
UI-265788	<p>After a successful upgrade of HSM from version 1.9 to 1.9.1, the systems might get stuck in the Fetching Data status.</p> <p>Workaround: Reopen the XIV GUI.</p>

Ticket ID	Description
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UI-265747 In the XIV GUI 4.8 build 11 installer on Mac OSX 10.11 (El Captain), the legends are missing on all four buttons in the **License Agreement** dialog. In addition, the red (**Close**) button in the dialog menu bar is missing.



The buttons (from left to right) are: **Print, Save, Decline, Accept**.

UI-265714 On the LDAP configuration panel of the management GUI, the **Storage Integration Admin Role** field is incorrectly marked as mandatory, and the LDAP configuration cannot be completed without entering a value in that field. The fact that this field is not mandatory is correctly documented in the *IBM XIV Storage System Command-line Interface (CLI) Reference Guide* and the *IBM Spectrum Accelerate Command-line Interface (CLI) Reference Guide*.

Workaround: Enter a fictitious value in the **Storage Integration Admin Role** field and save the LDAP configuration. Then, remove the role value with the command-line interface (CLI) by using the following command:

```
ldap_config_set storage_integration_admin_role=""
```

UI-265379 An asynchronous mirror relation with an RPO that is different from the default (30 seconds) cannot be extended to a three-way mirroring with the standby mirror option selected. In addition, an existing synchronous mirror relation cannot be extended to three-way mirroring if the asynchronous mirror created during the process has an RPO that is different from the default.

Workaround: Manually create the mirror schedule on the secondary source and destination systems (if a standby mirror is created). Run the **scheduler_create** CLI command prior to creating the three-way mirroring. Alternatively, you can set the RPO with the default value and modify it after the three-way mirroring is successfully created.

UI-265088 On the target of a compressed volume, that is either mirrored or part of a Hyper-Scale Mobility (volume migration) relationship, the ratio and savings parameters are wrongly displayed as zero (0).

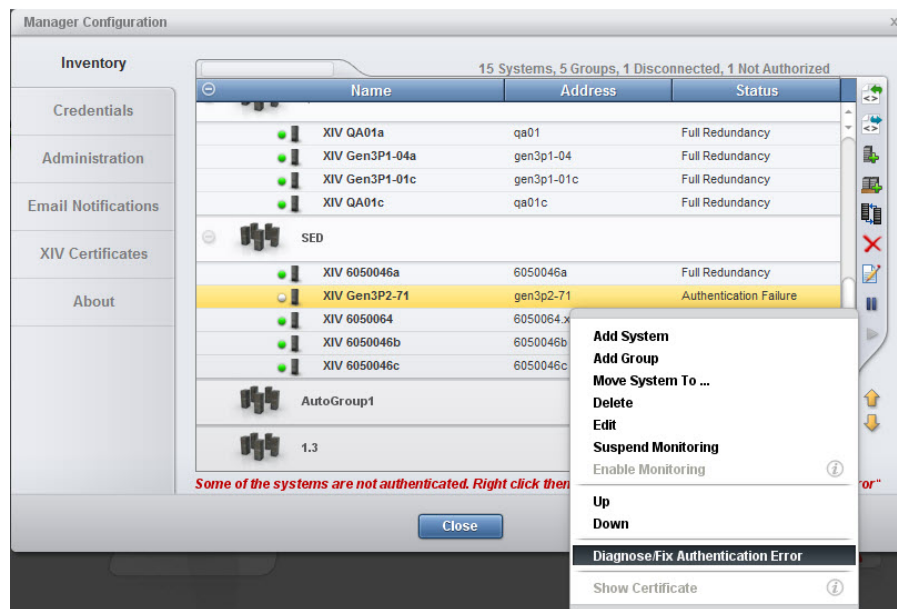
Workaround: No workaround is currently available.

Ticket ID	Description
UI-264605	<p>When there is a role conflict in a mirroring relation, two rows are displayed in the GUI. The rows display the storage systems with their source and destination volumes in different (and opposite) roles. That is, the system's role in the mirroring relation is reversed in each row.</p> <p>Workaround: Select only the row on which you would like to fix the role conflict and run the Change Role option on the mirror's source and destination. Refrain from selecting both rows at once, as this will only lead to further problems.</p>
UI-264145	<p>The XIV GUI truncates (rounding down) the Latency values in the Statistics view.</p> <p>Workaround: No workaround is currently available.</p>
UI-264141	<p>When there are two identical rows for the same mirror, the cursor might jump to the first mirror when you try to select the bottom mirror.</p> <p>Workaround: No workaround is currently available.</p>
UI-263084	<p>When an XIV Top session is open and the session idle timeout is changed, it will only take effect the next time the XIV Top is opened.</p> <p>Workaround: Close and reopen a new XIV Top session.</p>
UI-261999	<p>The option to determine where an imported certificate is stored does not work.</p> <p>The certificate is stored in C:\Users\{UserName}\AppData\Roaming\XIV\GUI12\properties, regardless of the address that is stated by the -h parameter.</p> <p>Workaround: Import the certificate using IBM Hyper-Scale Manager.</p>
UI-243418	<p>The XIV GUI does not launch if certain env variables are defined.</p> <p>The specific env variables are:</p> <ul style="list-style-type: none"> • IBM_JAVA_OPTIONS • JAVA_TOOL_OPTIONS <p>Workaround: Delete the definition.</p>
MSM-261090	<p>IBM Hyper-Scale Manager cannot monitor pre-11.2.0 XIV systems that are configured with LDAP with an <i>xiv_msms</i> user that is configured both internally and in the LDAP.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Disable LDAP on the specific XIV system. <div data-bbox="461 1486 1425 1545" style="border: 1px solid black; border-radius: 10px; padding: 5px; margin: 5px 0;"> <pre>ldap_mode_set mode=inactive</pre> </div> 2. Delete the <i>xiv_msms</i> user which is defined internally. <div data-bbox="461 1608 1425 1667" style="border: 1px solid black; border-radius: 10px; padding: 5px; margin: 5px 0;"> <pre>user_delete user=xiv_msms</pre> </div> 3. Re-enable LDAP. <div data-bbox="461 1730 1425 1789" style="border: 1px solid black; border-radius: 10px; padding: 5px; margin: 5px 0;"> <pre>ldap_mode_set mode=active</pre> </div>

Ticket ID	Description
MSM-261538	Disabling LDAP on an XIV system may cause an authentication failure on all of the systems that are configured to this LDAP.

Workaround:

1. Select **Systems > Manager Configuration** from the XIV GUI menu.
2. Type the **Manager Access Code**.
3. Select the **Inventory** tab.
4. Select and right-click the systems whose status is **Authentication Failure** and click **Diagnose/Fix Authentication Error** on the menu.



Related information and publications

You can find additional information and publications related to IBM XIV Management Tools on the following information sources.

- IBM XIV Storage System marketing website (ibm.com/systems/storage/disk/xiv)
- IBM XIV Storage System on IBM Knowledge Center (ibm.com/support/knowledgecenter/STJTAG)
- IBM Spectrum Accelerate marketing website (ibm.com/systems/storage/spectrum/accelerate)
- IBM Spectrum Accelerate on IBM Knowledge Center (ibm.com/support/knowledgecenter/STZSWD)
- IBM Storage Redbooks® website (redbooks.ibm.com/portals/storage)

IBM XIV Management Tools documentation set

IBM XIV Management Tool has an associated documentation set that provides additional information about installing and operating IBM XIV Management Tool.

IBM XIV Management Tool

- *IBM XIV Storage System Management Tools Operations Guide (SC27-5986)*
- *IBM XIV Storage System Management Tools Release Notes*

IBM Hyper-Scale Manager installation

- *IBM Hyper-Scale Manager as an Application User Guide (GC27-5984)*
- *IBM Hyper-Scale Manager Quick Start Guide for Installation as an Application*

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- IBM Support Portal website (ibm.com/storage/support)
- IBM Directory of Worldwide Contacts website (ibm.com/planetwide)
- IBM service requests and PMRs (ibm.com/support/servicerequest/Home.action)

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