
IBM XIV Storage GUI v2.4.4

Release Notes

December 6th, 2010

For the latest revision of this document, please check the download section at:
<http://www.ibm.com/systems/support/storage/XIV>

XIV GUI Platform Requirements:

OS:	Windows 2000, Windows ME, Windows XP, Windows Server 2003, Windows Vista, Windows 7, Windows 2008
CPU:	32 bit Dual Core or equivalent, 64 bit
OS:	Linux (Red Hat 5, SLES 10, SLES 11)
CPU:	x86, x64
OS:	AIX 5.3, AIX 6.1
CPU:	PPC
OS:	Solaris 9, Solaris 10
CPU:	SPARC, x64
OS:	HPUX 11i v2, HPUX 11i v3
CPU:	PA-RISC, IA64
HD:	100MB Free
Memory:	512MB RAM (1GB RAM and above recommended)
Monitor Resolution:	1024x768 (Recommended: 1024x768 - 1920x1200)
Monitor Color Quality:	24/32 True Color Recommended

Installation:

Windows:	Download the GUI installation file, double click it and follow the instructions on the screen
Linux:	Download the GUI installation package and extract the files in it to a designated directory on your system, using the following command: <pre>tar xzf <filename.tar.gz></pre> Run the following command from your designated directory: <pre>XIVGUI/xivgui</pre>

Solaris, HPUX, AIX:	<p>Download the GUI installation package.</p> <p>In order to unzip the package you will need the GNU Unzip utility (gunzip), available from http://www.gzip.org/.</p> <p>Unzip the package using the following command:</p> <pre>gunzip <filename.tar.gz></pre> <p>Extract the files from the unzipped file to a designated directory on your system, using the following command:</p> <pre>tar xvf <filename.tar></pre> <p>Run the following command from your designated directory:</p> <pre>XIVGUI/xivgui</pre>
---------------------	---

XIV System Requirements:

R2, R2.1, R2.2:	Code level 10.0.x, 10.1.x, 10.2.x
-----------------	-----------------------------------

1 What's New

1.1 XIV GUI Version 2.4.4

- 1.1.1 Support for system 10.2.4 feature of QoS performance classes.
- 1.1.2 Support for system 10.2.4 feature of off-line initialization mode for asynchronous mirroring.

1.2 XIV GUI Version 2.4.3a, 2.4.3b

None. This is a maintenance release.

1.3 XIV GUI Version 2.4.3

- 1.3.1 Manage up to 64 systems from a single GUI
- 1.3.2 Group systems for easier management
 - Create up to 8 user-defined groups
 - Each group can hold up to 8 systems
 - GUI also offers automatic grouping based on:
 - System Status: systems are grouped based on their current status (Full redundancy, Maintenance, etc.)
 - System Version: Systems are grouped based on the software version installed on them
- 1.3.3 Modifications to the 'Home' (previously known as All Systems) View
 - Click a system information bubble to choose which information will be shown for each of the systems and groups. Options are: IOPs, System Utilization, System status
 - System status is always partially visible through the rim color of the bubble, even when selecting IOPs or System Utilization

- Group IOPs and Utilization are aggregated across the systems in the group
 - Group status and alerts are the worst among the status of its members
- 1.3.4 You may now suspend and resume the monitoring of a defined system
- Useful if a system is known to be inaccessible or down for a prolonged period of time, and you want its group status not to reflect it, hiding the true status of the other systems in this group
- 1.3.5 Export and import of the monitored systems list is now available, for easy setup of the GUI after a fresh installation
- 1.3.6 System connectivity 'Star' View
- View and manage a system's mirroring targets in a star topology
 - Monitor the health of the system's mirroring connections
 - Zoom in for in-depth status and management of each connection individually
- 1.3.7 Search
- Use Ctrl-F to activate a search for systems and elements across the GUI
 - Search is based on any part of the string and the results are filtered as you type
 - Search will find:
 - Any system managed via this GUI
 - Elements within the current view, e.g. any pool or volume in the Volumes by Pools view
- 1.3.8 Quick system switch
- Use Alt-S to quickly switch among the managed systems. Click repeatedly until the desired system is highlighted
 - Switching to a different system will show the same view as was seen for the previous one
- 1.3.9 Statistics graphs can now be used to view and compare up to 12 different elements on the same graph (up from 4)
- 1.3.10 Automatic volume to LUN mapping lets you map volumes to a host without explicit selection of LUN
- LUNs will always be selected in ascending order, starting from the lowest available one.
 - One the operation is complete, the GUI will show which LUNs were selected
- 1.3.11 Volumes by Hosts view shows a tree table of all the defined hosts and the volumes that are mapped to each of them
- 1.3.12 Dynamic menus
- In right-click menus that hold a large number of menu items, the GUI will show by default only the most useful options. The user dynamically can expand the menu to see the full list of options
 - Menu items that were actually used will become visible for one week from the time they were last used
 - Use Alt-E to customize your own list of useful option, that will be always visible

- Go to Tools → Customize GUI in order to disable Dynamic Menus altogether
- 1.3.13 XCLI commands log allows you to track the actual XCLI commands that were issued by the GUI for each operation
- Log can be saved to a file, and later modified to create a custom script
- 1.3.14 Zoom in on each module for better health monitoring of its internal components, such as PSUs, software services and fans
- 1.3.15 Ability to set up CHAP Secret (for systems running version 10.2.0.a and above)
- 1.3.16 An LDAP wizard was added for easier guided configuration of an LDAP server (for systems running version 10.2.2 and above)
- 1.3.17 Activate and monitor the status of IBM's remote support option (for systems running version 10.2.2 and above)
- 1.3.18 Adding hosts to cluster behavioral changes
- When adding a host to an existing non-empty cluster, the cluster's mappings will **always** be used for the newly added host. The user will be notified in advance of changes to the host mapping that will occur as a result of adding it to a cluster, and can decide to drop the action.
 - A new action was added to create a cluster from an existing host. When used, the new cluster will have one member, and the host's previous mapping will all be assumed by the cluster. The host will not suffer any interruptions to service on any of its mapped LUNs.
- 1.3.19 For a list of all supported keyboard shortcuts go to Help → GUI Keyboard Shortcuts

1.4 XIV GUI Version 2.4.2b

- 1.4.1 Support XIV system version 10.2.1, with mirrored snapshots creation. For More information on the mirrored snapshots feature please refer to the XIV system documentation.

1.5 XIV GUI Version 2.4.2

- 1.5.1 New mirror connectivity view:
- Central view of mirroring connectivity status among all the managed systems in the GUI
 - Easy setup of mirroring connectivity, using drag and drop between two systems, to create a symmetrical link
- 1.5.2 Asynchronous mirroring setup and monitoring (with systems version 10.2 and above) [UI-4754]
- Setup a mirror and choose if it is a synchronous or asynchronous mirror
 - With asynchronous mirrors, monitor the synchronization status as compared with the desired RPO

For more information on XIV asynchronous mirroring, please refer to the Theory of Operation Guide

- 1.5.3 In the Volumes and Snapshots view, a new column was added indicating if the volume is used in a mirroring pair as a Master or as a Slave [UI-4758]
- 1.5.4 Navigation between views was enhanced as follows: [UI-4801]
 - When using the Systems dock to switch from one system to another, the new system is presented in the same view as the previous one (e.g. move from the Events view on system A directly to the Events view on system B)
 - The views history, allowing easy navigation back and forth between views using the green arrows, now keeps a full history, even when switching between systems
- 1.5.5 System time can now be seen at the top right corner of the GUI
- 1.5.6 Mapping a volume to a host may now be accessed from the Volumes and Snapshots view, by right-clicking the volume to be mapped and selecting the designated host [UI-4759]
- 1.5.7 Events extracted by the GUI may now be saved to a file [UI-5817]
- 1.5.8 System shutdown procedure from the GUI now requires retying the administrator's password [UI-6232]

1.6 XIV GUI Version 2.4.1

- 1.6.1 XIVTop launch in context:
 - XIVTop can be launched by right clicking a system in the All Systems view or clicking the Top icon in the Statistics view
 - When launched from the XIV GUI, XIVTop will use the current user credentials, and will immediately show to the currently viewed system
- 1.6.2 Demo mode now shows a system with version 10.1, enabling demo mode for 10.1 features

1.7 XIV GUI Version 2.4

System 10.1 Features and Enhancements

- 1.7.1 Manage XIV systems running version 10.1
- 1.7.2 LDAP: Use the organization's LDAP server to manage users, passwords and access lists
- 1.7.3 Cluster private mapping: Define private LUNs for hosts even if they are members of a cluster

GUI Enhancements

- 1.7.4 Additional statistics filters:
 - System statistics per a host ports
 - System capacity usage over time
- 1.7.5 Up to 15 systems can be managed with a single GUI (up from 9)

- 1.7.6 Demo mode: Ability to run the GUI without connecting to any live system, using predefined sample data and configuration. To access Demo mode login with username "P10DemoMode"
- 1.7.7 Snapshots Tree and Snapshot Groups Tree views can now be used to actively manage snapshots (e.g. create, delete, map etc.)
- 1.7.8 Execute tasks for multiple objects at once, e.g. delete volumes, activate mirroring etc.
- 1.7.9 Progress bar: Show a progress bar indicating the progress of tasks that take a long time to execute
- 1.7.10 Enhanced keyboard navigation in tables: Use the left and right arrow keys to collapse and expand trees, use the up and down arrows to navigate through the table lines
- 1.7.11 Full table expand and collapse option
- 1.7.12 Enhanced tooltips: Learn why any menu item is currently disabled by placing the mouse over it and reading the context-specific tooltip
- 1.7.13 "User" column available in the Events table
- 1.7.14 Capacity Usage thresholds: Adjust the thresholds that determine the alert level for capacity usage by pool volumes and snapshots
- 1.7.15 Gradual events retrieval: Events are retrieved from the system gradually, to allow better performance as well as the ability to retrieve any number of events that match the used filter (up to a maximum of 10,000)
- 1.7.16 Resize table columns
- 1.7.17 Customize the starting index when creating multiple indexed volumes
- 1.7.18 Create and manage snapshots from the Snapshots Tree view

Advanced Support Features

- 1.7.19 Support Logs: Automatically collect all the system logs required by IBM-XIV support for timely analysis of the system status and health
- 1.7.20 Customer contact information forms
- 1.7.21 VPN setup to allow secure connectivity to IBM-XIV Remote Support Center

2 Bug Fixes

2.1 Fixes in Version 2.4.4

- 2.1.1 When a host connection is defined automatically by the XIV Host Attachment Kit, the GUI is not automatically refreshed to show the new connections [UI-20607]
- 2.1.2 GUI takes long time to retrieve XRAY (IBM diagnostic) information [UI-25025]
- 2.1.3 In all systems view whenever more than one group of systems is defined, it is impossible to move system from group, out to the Top Level (all

systems) screen. The systems in the group can only be moved to another group. [UI-25929]

2.2 Fixes in Version 2.4.3b

- 2.2.1 Volume and CG lists is now always presented correctly, even when unmonitored targets exist [UI-20159]
- 2.2.2 The GUI now allows restoring snapshots even when the volume is in a mirroring relationship [UI-18133]
- 2.2.3 Right click menu remains available regardless of the targets connectivity status [UI-20107]
- 2.2.4 DNS system names may now contain a hyphen ('-') [UI-20134]
- 2.2.5 When selecting manual mapping in the right click menu for a cluster that already has hosts assigned to it now properly opens the manual mapping view instead of defaulting to the All Systems view [UI-21217]
- 2.2.6 In the system monitoring view, when zooming in on a module, the indication for a failed PSU is now displayed correctly when necessary [UI-21083]
- 2.2.7 When running against system 10.2.2 and above, when creating a new pool, the GUI will now offer a proper default snapshot size that matches the system capabilities [UI-20527]
- 2.2.8 When collecting support logs, the GUI will now show a proper indication of the progress [UI-20720]

2.3 Fixes in Version 2.4.3a

- 2.3.1 When mapping a volume to a cluster via the volumes and snapshots screen using the automated mapping option ("Map selected volumes" menu option), the GUI will no longer override any private mapping of the cluster if they exist. Mapping will take place on the next available LUN that is free for the entire cluster [UI-19677]
- 2.3.2 When mapping volume to a ZVM host using the automated mapping option ("Map selected volumes" menu option), it will now choose the next available LUN starting from LUN 1, keeping LUN 0 reserved [UI-19864]
- 2.3.3 Collection of support logs is now available for Storage Admin users [UI-11664]
- 2.3.4 When changing a user password through the GUI, the commands log will no longer show the new chosen password explicitly [UI-19905]

2.4 Fixes in Version 2.4.3

- 2.4.1 In the Snapshot Groups Tree view, the group size which is indicated in the Snapshot Group Share Data pane is now correct [UI-14643]
- 2.4.2 When defining a new Event Destination, the destination type pulldown is now working correctly [UI-13872]
- 2.4.3 When launching XCLI from the GUI, all three system IPs are properly used, as needed [UI-14343]

- 2.4.4 In the LUN mapping view, the individual expand/collapse buttons to display/hide a volume's snapshots, now operate properly [UI-9455]
- 2.4.5 When using asynchronous mirroring with internal schedule, the GUI is now able to duplicated the last-replicated snapshot on the salve side [UI-11547]
- 2.4.6 Connectivity is now always accessible even if one of the systems became unmonitored [UI-10896]
- 2.4.7 When used with system version 10.2.2 and above, if a system is in one of the following states: Charging, Booting, Maintenance, the GUI will no longer loose connectivity or display misleading status information. Note that this faulty behavior is still experienced with older system versions. Users of such systems should wait until this transient state is over, at which point the GUI will resume normal connectivity and operation [UI-10649]
- 2.4.8 Deleting an IP interface from iSCSI Interface table may have occasionally deleted the wrong interface. This issue is now fixed [UI-18054]

2.5 Fixes in Version 2.4.2b

- 2.5.1 GUI memory management was improved, to allow managing many more objects across the managed systems without memory exhaustion
- 2.5.2 In the Consistency Groups view, a mirrored CG is now indicated with an icon [UI-10908]
- 2.5.3 LUN Mapping for clusters in system version 10.0.1.b now works properly [XEST-14324]

2.6 Fixes in Version 2.4.2

- 2.6.1 Application administrators now have access to map volumes they manage to hosts [UI-8987]
- 2.6.2 The GUI now allows defining an iSCSI port with more than 15 characters [UI-8985]
- 2.6.3 On Linux, XCLI may now be launched the Systems view [UI-5883]
- 2.6.4 Sort for mirroring based on mirror status now operates correctly [UI-4944]
- 2.6.5 Nested sorts are now supported in tree tables [UI-3758, UI-2524]
- 2.6.6 Identical systems will no longer fail to load – instead they will be automatically merged to a single system by the GUI [UI-4604]
- 2.6.7 On HP-UX, Support Logs collection no longer leads to GUI failure [UI-6009]

2.7 Fixes in Version 2.4.1a

- 2.7.1 When defining an LDAP server that requires the use of a certificate, the GUI will now properly upload the certificate file [UI-5891]

- 2.7.2 When working with system version 10.1.0.b and above, special characters, such as '@', may now be used for the user login and password [SYS-6519, UI-8756]

2.8 Fixes in Version 2.4.1

None

2.9 Fixes in Version 2.4

- 2.9.1 Administrator may now modify FC port type between Target and Initiator [UI-3450]
- 2.9.2 Internal events are available to a Technician user [UI-2644]
- 2.9.3 Case sensitivity for usernames now works properly [UI-2598]
- 2.9.4 When the username/password provided to the system by the GUI are not accepted the GUI will no longer periodically attempt to reconnect until new credentials are provided by the user [UI-3944]

3 Known Issues and Limitations in Version 2.4.4

3.1 GUI Issues:

- 3.1.1 **Issue:** The option to restore a locked snapshot appears disabled in the GUI [UI-21880]
Corrective Action: If needed, use XCLI to restore such snapshots.
- 3.1.2 **Issue:** When running against system version 10.0.x, the Volumes by Hosts view is not available [UI-21908]
Corrective Action: None. This information can be extracted from the various other volume views.
- 3.1.3 **Issue:** When changing some of the IP addresses for a monitored system in the GUI, changes only take effect if the currently active IP address was changed [UI-20162]
Corrective Action: In order to change the currently inactive addresses, remove the system and redefine it with the revised IP addresses.
- 3.1.4 **Issue:** When the time on the workstation where the GUI runs is not properly synchronized with the XIV system time, the statistics time axis will show incorrect time [UI-22658]
Reason: The time axis shown by the GUI is calculated based on the local workstation time, adapted to the XIV system time zone. And discrepancies that are not time-zone related between these times will show an inaccurate time for the statistics graph
Corrective Action: None. This issue will be fixed in a future version of the GUI.
- 3.1.5 **Issue:** When using Async mirroring, if the system time on the master and slave systems is not properly synchronized, the calculated effective RPO on the slave may be misleading, or even negative [UI-17794]
Reason: The effective RPO is calculated based on the time difference between when the current system time and when the last replicated sync

job was created. On the master side, both times are taken on the same system using the same clock. However, on the slave side, the current system time is taken on the slave whereas the last sync job time is taken on the master. Therefore, if the systems clocks are not properly synchronized, the effective RPO will be misleading.

Corrective Action: Make sure your systems clocks are properly synchronized to the second. If this is not possible, rely only on the effective RPO calculated on the master side.

3.1.6 **Issue:** After a module failure, historical statistics data prior to the failure are misleading and erroneous [UI-11723]

Reason: Statistics are collected individually from each module. Therefore, the failed module statistics cannot be collected, even for the time frame when it was available in the past.

Corrective Action: None. This issue will be fixed in future versions of the system and the GUI.

3.1.7 **Issue:** In the mirror connectivity view, if a module that is used for remote connectivity fails, the system may appear as an "unmonitored" target, even when it is managed from this GUI [SYS-9575, UI-9552]

Reason: When a module fails, its ports no longer appear in the ports list provided by the system, and therefore the GUI is unable to associate it with one of its managed systems

Corrective Action: While the module is unavailable, manage the connectivity to this system as an unmonitored target.

This issue will be fixed in a future version of the system.

3.1.8 **Issue:** When defining or deleting an IP Interface object for iSCSI connectivity, the system may take up to 10 seconds to acknowledge its association to the selected port. During this time, the GUI may present inconsistent behavior with respect to this IP Interface and this port [UI-5874, SYS-5862]

Corrective Action: After defining or deleting an IP Interface wait for 10 seconds before continuing any operations based on this definition (e.g. connecting a host or defining a new IP interface to be used with the same port).

3.1.9 **Issue:** When managing systems with a very large number of objects (volumes, hosts etc.) defined, the GUI may behave unpredictably and generate errors [UI-3956, UI-10900]

Reason: Managing a very large amount of objects (typically tens of thousands) may lead to memory exhaustion

Corrective Action: Please contact IBM-XIV customer support

3.1.10 **Issue:** GUI fails to operate properly through desktop virtualizers [UI-4781]

Reason: Due to the heavy graphical nature of the XIV GUI application, it is currently not designed to properly work through desktop virtualizers that run over slow links

Corrective Action: None.

3.1.11 **Issue:** Some system configuration options do not get automatically updated in the GUI when modified on the system [UI-3467][CQ-S1011102]

Reason: When the system is managed from several independent management clients (more than one GUI, XCLI etc.), some configuration changes made by one of the other management clients will not be reflected in the GUI until it is restarted. These include: System configuration, LDAP configuration and Support configuration

Corrective Action: Restart the GUI to view the updated information

3.1.12 **Issue:** On Windows, when choosing "Large Fonts" appearance, some GUI text and tooltips are not properly displayed [UI-2726]

Reason: Font resizing is currently not supported.

Corrective Action: None.

3.2 General Issues:

3.2.1 **Issue:** When using IBM XIV System code level 10.0.0.c or lower, the interface nodes may run out of file descriptors upon repeated retrieval of statistics for a long time.

Continuous use (e.g. through scripts), may cause the system to no longer accept GUI connection and commands. XCLI commands will continue to operate normally.

I/O operations will not be affected and no data will be lost.

Corrective Action: Avoid using XCLI to automatically retrieve statistics repeatedly from XIV systems with code level 10.0.0.c or lower. If you detect that your GUI stopped responding, while XCLI continues to operate, contact IBM support.

Resolution: This problem is fixed in version 10.0.0.d of the system code. The GUI will allow automatic statistics refreshing on systems with updated code level.

3.2.2 **Issue:** When using IBM XIV System code level 10.0.0.b or lower, the system may present memory leakage upon retrieval of statistics from hosts or targets that have more than 10 ports. When used excessively (e.g. through scripts that refresh automatically), this leakage may eventually lead to a complete shutdown of all the interface modules.

Corrective Action: Avoid using XCLI to retrieve statistics from such host and targets from XIV systems with code level 10.0.0.b or lower.

Resolution: This problem is fixed in version 10.0.0.c of the system code. The GUI will allow viewing statistics from any host or target, regardless of its number of ports, on systems with updated code level.