Release Notes

Release	DXi 4.0.x Software
Supported Product	DXi4800 and DXi9000
Date	December 2018

Contents

Purpose of This Release

DXi 4.0 Software is the initial software release supporting the DXi4800 and DXi9000 disk backup systems. In addition, DXi 4.0 Software includes the follow new features and improvements:

- **StorNext 6 File System** - The StorNext 6 file system provides the foundation for DXi 4.0 Software. Completely re-designed for low-latency and high throughput, StorNext File System 6 delivers rapid file access in heterogeneous environments. Learn more about StorNext 6 at: http://www.stornext.com.

- **CentOS 7 Base Operating System** - DXi 4.0 Software runs on the widely adopted, enterprise-class CentOS 7 operating system. With numerous enhancements, CentOS 7 provides a platform for future DXi hardware and software innovation.

Product Compatibility List

The following table provides information about hardware compatibility with DXi 4.0.x Software.

Component	Description
DXi4800	1 Node 1 to 2 RAID controller cards. 0 to 2 Expansion modules (JBODs) 1 x 1 GbE Ethernet ports 2 x 10 GbE Ethernet ports - Additional optional network adapter providing combinations of up to 16 x 10 GbE Ethernet ports, 16 x 10 GBase-T Ethernet ports, or 8 x 16 Gb Fibre Channel ports (for VTL or PTT) 8 TB- 171 TB usable capacity
DXi9000 SD	1 Node 1 Array module (RBOD) 0 to 9 Expansion modules (EBODs) 1 x 1 GbE Ethernet ports 2 x 10 GbE Ethernet ports - Additional optional network adapter providing combinations of up to 16 x 10 GbE Ethernet ports, 16 x 10 GBase-T Ethernet ports, or 16 x 16 Gb Fibre Channel ports (for VTL or PTT) 51 TB - 1020 TB usable capacity
DXi9000 HD	1 Node 1 Array module (RBOD) 1 Expansion module (EBOD) 1 x 1 GbE Ethernet ports 2 x 10 GbE Ethernet ports - Additional optional network adapter providing combinations of up to 16 x 10 GbE Ethernet ports, 16 x 10 GBase-T Ethernet ports, or 16 x 16 Gb Fibre Channel ports (for VTL or PTT) 204 TB - 1020 TB usable capacity

Supported Web Browsers

- Mozilla Firefox 36 or later.
- Google Chrome 40 or later.
- Microsoft Internet Explorer 11.

Additional Information

- For correct operation of the remote management console, disable any pop-up blockers and enable JavaScript in your Web browser.
- DXi Advanced Reporting requires installation of Adobe Flash Player plug-in 10.x or higher.
- DXi Advanced Reporting does not support the 64-bit version of the Flash Player plug-in on Linux. Instead, use the 32-bit Flash Player plug-in and a 32-bit browser.
- If you experience Web browser issues, update to the latest version of your web browser.

OST Plug-In Support

The Quantum OST plug-ins are based on Veritas OpenStorage API specification Version 9.4.2 and 11.1.

Required Components

- Veritas NetBackup 7.6.x or later or Backup Exec 2014 or later.
- If using the Veritas NetBackup 52xx Appliance platform, version 2.6.0.2 or later.
- Quantum OST Plug-in (downloaded separately through the remote management console or from the Quantum Service and Support Web site).
- Quantum OST storage server (included with the DXi software).

Supported Platforms and Software Versions

OST Plug-in support is available for the DXi4800 and DXi9000 operating systems:

- Windows 32-bit
- Windows 64-bit
- RedHat Linux
- SUSE
- Solaris
- HP-UX
- AIX

OST Plug-in support is also available for the Veritas NetBackup 52xx/53xx appliances.

The latest versions of all OST Plug-ins are available for download at:
http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/ostclientplugin/index.aspx

For more information on OST Plug-in installation, see the *OST Plug-in Installation Instructions.*

RMAN Plug-In Support

The Quantum RMAN plug-ins are based on Oracle Recovery Manager (RMAN) API specification Version 2.1.

Required Components

- Oracle 11 or 12.
- Quantum RMAN Plug-in (downloaded separately through the remote management console or from the Quantum Service and Support Web site).

Supported Platforms and Software Versions

Oracle RMAN Plug-ins are available for the following operating systems:

Windows Support

- Windows 2012 64-bit (Oracle 11)
- Windows 2016 64-bit (Oracle 11)

Linux Support

The Quantum RMAN 1.1.0 plug-in contains support for the following Linux operating systems:

- RedHat Enterprise Linux 6 x86 64-bit
- RedHat Enterprise Linux 7 x86 64-bit
- SUSE Enterprise Linux 12 x86 64-bit
- Oracle Linux 6 x86 64-bit
- Oracle Linux 7 x86 64-bit

The latest versions of all RMAN Plug-ins are available for download at: http://www.quantum.com/serviceandsupport/softwareanddocumentationdownloads/ostclientplugin/index.aspx

For more information on RMAN Plug-in installation, see the *RMAN Plug-in Installation Instructions.*

Replication Compatibility

The following DXi software releases can replicate data to the DXi appliance. DXi software releases not shown in the list are not recommended.

		DXi 2.3.x	DXi 3.0.x	DXi 3.1.x	DXi 3.2.x	DXi 3.4.x	DXi 4.x
Replication Target	DXi 2.3.x	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.0.x	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.1.x	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.2.x	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 3.4.x	Yes	Yes	Yes	Yes	Yes	Yes
	DXi 4.x	Yes	Yes	Yes	Yes	Yes	Yes

Note: The default number of allowed DXi replication sources is 10. If you need to change these default settings, contact Quantum Customer Support.

Resolved Issues

The following issues were resolved in DXi 4.0.x Software.

Bug Number	SR Number	Description
25708	1612234	Setting DNS IP name and domain name causes system reboot.
34911	1572712	LDAP naming convention causes replication issues.
	341473	
	3646386	
	449204	
41333	324412	Customer and service alerts when Cairns not fixed by upgrades.
	327511	
	329903	
	332976	
	337483	
42412	3509866	Webguid issues resolved.
	3546816	
	3618598	
	434043	
43688	430125	GUI allows more than 32 characters for a password change.
44357	3591530	NAS/NFS symlink issues resolved.
	3613090	
	366471	
	3665022	
	384900	
	424221	
	424852	
	407749	

Bug Number	SR Number	Description
46113	348624	Replication issues due to lack of available connections.
	3710946	
	372366	
	376696	
	380554	
	385863	
	394327	
	399039	
	407278	
	415855	
	432382	
46532	321376	Customer contact information not included in service tickets and admin alert emails.
46663	313129	Blockpool issues resolved.
	448734	
46680	326489	Software upgrade updates blockpool settings if memory size is changed.
	327075	
	384459	
	412092	
47068	455921	Fibre Channel firmware issue resolved.
47139	338786	Software upgrade error code enhancements.
47361	346180	Firmware download issue resolved.
47422	356823	Blockpool issue resolved.
	378352	
	396675	
47527	342384	Dell Open Manage `dsm_sa_datamgrd segv` which caused DXi to SMITH.
	363997	
	408080	
47665	364316	`tsunami_p2tdebug.log` not in collect log.

Bug Number	SR Number	Description
47769	368171	Yum upgrade polling updates.
	369868	
47839	368702	LDAP test setting password issue resolved.
47862	373647	Multiple software upgrade attempts allowed.
	376893	
47869	374326	Remote management console home page does not display correctly in Internet Explorer 11.
47889	366730	BLOB issue resolved.
	438191	
	434921	
48002	374095	Software upgrade causes segmented network data type change.
	376442	
	394327	
	443430	
48019	0401768	Veeam service shutdown after software upgrade.
	376500	
	376558	
	379827	
	380127	
	393358	
	400400	
	410816	
	411244	
48039	376500	Software upgrade issue resolved.
	376558	
	379827	
	380127	
	440000	

Bug Number	SR Number	Description
48059	382726	IPM I logging issue (`/var/log/ipmi.sel`) resolved.
48078	398145	
48081	371669	Cannot set networking bonding mode to LACP (Mode 4) if the bond contains more than one IP address.
	371670	
	371671	
	371672	
	376442	
	381593	
	383742	
	383744	
	383746	
	383748	
	383749	
	383752	
	383754	
	383755	
	383756	
	383758	
	383760	
	383763	
	383767	
	383771	
	383796	
	383797	
	383798	
	383799	
	403189	
	440225	
48178	384603	OST coring issue resolved.

Bug Number	SR Number	Description
48262	377921	Advance Reporting (DART) chargeback report accuracy improvements.
	418632	
48360	395653	Segmentation fault occurs when reconfiguring VTL.
48461	0416671	Veeam sudo updates.
	401917	
	410352	
48528	399226	RC4 invariance weakness security fix (CVE-2015-2808).
48574	401917	Veeam shutdown performance enhancements.
	416319	
	416671	
	418524	
	418715	
	421619	
	423410	
	424307	
	424742	
	425617	
	428809	
	437914	
48726	412965	Segmentation fault when using CLI to list LSUs with a wildcard expansion.
49059	418121	Veeam timezone logging issue resolved.
49117	35623	Veeam lseek issue resolved.
	423311	
	433354	
	438803	
	443023	
49174	0418869	Blockpool cyclic redundancy check (CRC) issue resolved.
49291	437894	Replication target pauses and resumes.

Bug Number	SR Number	Description
49340	3699624	Vision status report improvements.
49390	437894 434921	Replication source connection improvements when the blockpool or OST consumes the total connection allocation for ingest.
49564	443430	`getsegmentips.sh` script enhancements.
49579	433909 445466 459918	OST kernel issue fixed.
49634	448869	Drive failure service ticket improvements.

Known Issues

DXi 4.0.x Software has the following known issues:

- Replication Known Issues
- Network Known Issues
- CLI Known Issues
- GUI Known Issues
- VTL Known Issues
- NAS Known Issues
- RMAN Known Issues
- Veeam Known Issues
- Installation and Upgrade Known Issues
- Miscellaneous Known Issues
- DXi Advanced Reporting Known Issues

Note: The Scheduler command line interface (CLI) commands are deprecated in DXi 4.0.x Software. These commands continue to function in DXi 4.0.x Software but will be removed in a future software release. To schedule events, use the **Configuration > Scheduler** page in the remote management console instead.

Replication Known Issues

Bug Number	SR Number	Description	Workaround
31605		On the **Home** page and the **Status > Disk Usage** page, the value for **Data Size After Reduction** is larger than the value for **Data Size Before Reduction**.	This issue can occur when replication is enabled for a share or partition, but replication is rarely or never run. In this case, continuously replicated data accumulates on the target system, but this data is not included in the value for **Data Size Before Reduction** until a replication job is performed and a snapshot is saved.
			To correct the issue, manually initiate replication of the share or partition on the **Replication > Send** page, and allow the replication to complete.
			To avoid this issue in the future, schedule replication for the share or partition on the **Configuration > Scheduler** page. Alternately, you can enable Directory/File or Cartridge Based replication for the share or partition.
36811		Some chargeback reporting statistics are not maintained for failback operations.	The Input Bytes for the failback operation can be viewed on the source for the failback operation. On the **Replication > Send** page, hold the cursor over the job status and note the value displayed for **Original Data Size**.
			Note: After the failback operation is complete, chargeback reporting on the target for the failback operation will accurately report the User Data Size of the data replicated.

Bug Number	SR Number	Description	Workaround
37000		If replication is disabled and the re-enabled for a share or partition on the **Replication > Send** page, previously configured Directory/File or Cartridge Based Replication settings are lost.	This is expected behavior. When replication is disabled, all replication settings for the share or partition are cleared. To re-configure the share or partition for Directory/File or Cartridge Based replication, select it and click **Configure**. **Note:** You can disable or enable replication for all shares or partitions on the **Replication > Actions** page. This method preserves replication settings for all shares or partitions.

Network Known Issues

Bug Number	SR Number	Description	Workaround
34125		On the **Configuration > System > Network** page, editing the **IP Address**, **Netmask**, and **Gateway** for a network interface results in the following error: **Destination Gateway: <ip_address> is not reachable by any of the current configured IP addresses.**	Delete the existing network interface and add a new interface with the desired **IP Address**, **Netmask**, and **Gateway**.

CLI Known Issues

Bug Number	SR Number	Description	Workaround
35104		When using the **--edit emailrecipient** CLI command, the same e-mail address can be assigned to multiple recipients.	Use the **Configuration > Notifications > Email > Recipients** page in the remote management console to edit e-mail recipients.

GUI Known Issues

Bug Number	SR Number	Description	Workaround
30999		When creating or editing an event on the **Configuration > Scheduler** page, all times are relative to the workstation from which the GUI is accessed, rather than the DXi.	If the DXi is in a different time zone than the workstation used to access the GUI, make sure to account for the time zone differences when scheduling events.
35426		On the **Configuration > OST > Storage Servers** page, if there are multiple pages of storage servers, the **Delete** button is unavailable (gray) if all storage servers on a page are selected even if all the storage servers meet the deletion criteria (no backup images or active connections).	This occurs if a storage server on another page does not meet the deletion criteria. De-select at least one storage server on the displayed page, and the **Delete** button will be available.
32609		On the **Configuration > Scheduler > Calendar** page, after you add or edit an event and specify recurrence **until** a date, if you hover the cursor over the event, the **UNTIL** date does not display in human readable format.	Open the event by double-clicking it to view the **UNTIL** date.
32659		If you reboot or shut down the DXi using the **Utilities > Reboot & Shutdown** page and leave the web browser window open, after the DXi comes up again, refreshing the open web page causes the reboot or shut down command to be sent to the DXi again.	After you reboot or shut down the DXi using the **Utilities > Reboot & Shutdown** page, make sure to close the browser window. In general, you should not refresh the web browser (unless instructed to do so) or copy and paste URLs between tabs.

Bug Number	SR Number	Description	Workaround
36888		On the **Configuration > OST > Accent** page, after uploading certificate and key files and clicking **Apply**, a dialog box appears, but the message is truncated.	The complete dialog message is: TLS credential files were successfully installed. The system is rebooting to complete the installation. Please wait before logging in again.
36926		When adding a scheduled event on the **Scheduler** page, the message Saving, please wait displays, the but the save action does not complete, and the schedule is not set.	Refresh the browser window, and add the scheduled event again.
39135		If a very long security notice is specified on the **Configuration > System > Security > Security Notice** page, the end of the message may be truncated in the **Security Notice** dialog box that displays after logging on.	Specify a shorter message on the **Configuration > System > Security > Security Notic**e page.
39824		On the **Status > Hardware > Details > Storage Arrays** page, an **Attention** link displays next to **Controllers** and **Volumes**, but clicking the link displays an empty list of non-normal controllers or volumes.	Even though the **Attention** link displays, drives that are rebuilding are considered normal by the system. Click the **Controllers** or **Volumes** link to see a list of all drives.
41378		In a Google Chrome browser, DXi Remote Management help files may not appear when **Help** is selected.	In Chrome, select **Settings > Show Advanced Setting > Privacy > Content Settings > Pop-ups > Manage Exception**s. Add the DXi IP address to the exceptions box, select **Allow**, and click **Done**.
42779		The **PTT** page allows any number concurrent PTT backup jobs to be configured. When more concurrent backup jobs are started than the PTT license allows (3), the additional jobs fail.	Do not configure more than 3 concurrent PTT backup jobs.

Bug Number	SR Number	Description	Workaround
47869		The following message displays when attempting to access the GUI using Internet Explorer 11: `Content from the website listed below is being blocked by the Internet Explorer Enhanced Security Configuration.`	In Internet Explorer 11, add the website to the Trusted Sites list. Navigate to **Tools > Internet Options > Security > Trusted sites**. Click on the **Sites** button and add the website to the list.
49285		The Remote Management Console is very slow to connect or a timeout occurs in Mozilla Firefox.	In Mozilla Firefox, do the following: 1. Clear all browser authorization certificates 2. Go to **about:preferences#privacy**. 3. Click on the **View Certificates** button. The **Certificate Manager** dialog box opens. 4. Under **Authorities**, delete all certificates under **QTM_SCC**.
49891		When selecting the **Help > Help Contents** drop-down on DXi systems that do not have an Internet connection, the **Remote Management Console** help topic does not appear.	Use the context sensitive help link on the page to make the help topic appear.

VTL Known Issues

Bug Number	SR Number	Description	Workaround
41109		Intermittent backup failures occur with the IBM LTO-5 tape drive emulation selected.	Force disable append only mode in NetBackup: **Unix** Use the following touch file to disable append mode: `/usr/openv/netbackup/db/config/DISABLE_APPEND_MODE` **Windows** Use the following touch file to disable append mode: `%install_path%\Veritas\Netbackup\db\config\DISABLE_APPEND_MODE`

NAS Known Issues

Bug Number	SR Number	Description	Workaround
27908	1387940 1408612 1465392 1493203	Files copied to exported NFS and CIFS shares do not retain their original creation time.	To determine the creation time, examine the original file rather than the copy on the share.
37651		If a workgroup user is deleted using the **syscli --del user** command while a CIFS share is mounted, a user with the same username cannot be later added.	Use a different username when adding a workgroup user. To avoid this issue, make sure to unmount any CIFS shares before deleting the associated workgroup users.
48747		NFS stops working with Round Robin (Mode 0) network bonding. The use of Round Robin (Mode 0) may cause TCP packets to arrive out of order. This can cause timeouts in the transfers.	Quantum recommends using Mode 1 or Mode 4 for TCP data transfers.

RMAN Known Issues

Bug Number	SR Number	Description	Workaround
45854		Incorrect pop-up failure message appears when attempting to configure an RMAN share replication to a target that does not support RMAN shares. Depending on the target configuration, the following error messages appear: "Source and Target Share Type's are not matching. Source share type is cifs and Target share type is nfs" "Source and Target Share Type's are not matching. Source share type is cifs and Target share type is cifs"	If this error message appears, you are attempting to replicate to a target that does not support RMAN shares. Replicate to a target that supports RMAN shares.

Veeam Known Issues

Bug Number	SR Number	Description	Workaround
47806		Veeam cannot be enabled if a "veeam" account is defined on a connected or disconnected windows workgroup.	Delete the "veeam" account from the windows workgroup.

Installation and Upgrade Known Issues

Bug Number	SR Number	Description	Workaround
36686		If the **Software Upgrade Utility** dialog box is open, and the session logs out due to inactivity, the **Login** window does not automatically display, and the **Software Upgrade Utility** remains open. Clicking the **Check Now** button results displays the following error: **PollUpgradeJob not authenticated**.	Close the **Software Upgrade Utility**, log back on to the system, and then access the **Software Upgrade Utility**. Clicking **Check Now** will now work as expected.

Miscellaneous Known Issues

Bug Number	SR Number	Description	Workaround
26610	1349564	Spectra Logic T120 and greater libraries cannot be discovered on the **Configuration > PTT > Physical Device Discovery** page.	Before attempting to discover the Spectra Logic, place the library into STK L700 emulation mode. Data partitions must be individually configured to use the Sun/StorageTek L700 emulation mode. Only data partitions configured to use the STK L700 emulation mode are recognized by the DXi.

DXi Advanced Reporting Known Issues

Bug Number	SR Number	Description	Workaround
30001		Exporting a graph to a JPEG or PNG graphic image in Internet Explorer 9 version 9.0.0.8112.16241 causes the browser to stop responding.	Using a newer version of Internet Explorer 9 or another supported browser.
35537		**Used Disk Space** may appear as unknown or NaN (not a number) if the selected time range begins before the installation date of the DXi.	Select a time range that begins after the installation of the DXi.
36969		After the time zone is changed on the DXi, DXi Advanced Reporting does not log Ethernet or Fibre Channel I/O activity. This issue only occurs if the new time zone is west of the previous time zone. ⓘ **Note:** This also affects ingest statistics displayed on the Home page in the remote management console	Ethernet and Fibre Channel I/O logging will resume after a number of hours equal to the difference in time zones. For example, if the new time zone is 8 hours west of the old time zone, logging will resume in 8 hours.
37013		The **Replication Ingest > Total per Replication** report displays a blank screen.	When no replication ingest has occurred on the DXi, the database will be empty; therefore, the **Replication Ingest > Total per Replication report** will display a blank screen. This is normal behavior.
39487		On the **Replication Ingest** report, data for small replication jobs is not graphed accurately, especially when longer time ranges are selected.	See the exported CSV file **(Reports > Replication Ingest > Export Replication Chargeback)** for the correct data.

Documentation

The following are currently available in the DXi Documentation Centers:

- **DXi4800 Documentation Center:** www.quantum.com/DXi4800Docs
- **DXi9000 Documentation Center:** www.quantum.com/DXi9000Docs

Document Number	Document Title
6-68712	DXi4800 Site Planning
6-68712	DXi4800 System Installation
6-68712	DXi4800 User's Guide
6-68712	DXi4800 Optional Interface Card Installation
6-68712	DXi4800 Capacity Upgrade Guide
6-68712	DXi4800 CRU - SSD Replacement
6-68710	DXi9000 Site Planning
6-68710	DXi9000 Optional Interface Card Installation
6-68710	DXi9000 User's Guide
6-68710 / 6-68712	DAE Installation
6-68710 / 6-68712	Veeam Installation
6-68710 / 6-68712	OST Plug-in Installation
6-68710 / 6-68712	OST Configuration
6-68710 / 6-68712	RMAN Plug-in Installation
6-68710 / 6-68712	RMAN Configuration
6-68449	DXi-Series Command Line Interface (CLI) Guide
6-68449	DXi-Series Backup Application Specific Path to Tape (PTT) Configuration Guide
6-68449	DXi-Series SNMP Reference Guide
6-68453	DXi Advanced Reporting User's Guide

Supported Backup Applications

The following backup applications are supported for use with DXi 4.0.x Software:

Backup Application	Revision
Veritas NetBackup	7.6.x and later
Veritas Backup Exec	2014 and later
CommVault Simpana	9 and later
Quantum vmPRO	3.2 and later
Veeam Backup & Replication	6.5 and later
EMC NetWorker	7.6.5 and later
IBM Tivoli Storage Manager	6.3.3 and later
HP Data Protector	7.1 and later
CA ARCserve	16.5 and later
Dell NetVault	9.0.x and later
Microsoft Data Protection Manager	2010 and later
Oracle Secure Backup	10.2 and later
ASG-Time Navigator	4.2 and later
Syncsort Backup Express	3.1.x and later

Note: Contact the backup application vendor for the latest software revision information.

DXi Additional Notes

For additional information about DXi 4.0.x Software, refer to the following sections.

- Email Reports
- Configuring a Constant Replication Bandwidth Throttle
- System Metadata
- Date & Time Configuration
- Network Hostname Restrictions
- Internet Explorer Security Level
- Changing the Number of Allowed Sources
- Quantum Vision
- StorageCare Guardian
- Running Healthchecks

Email Reports

Quantum recommends enabling **Email Reports** after upgrading to DXi 4.0.x Software (if not already enabled). When enabled, **Email Reports** periodically sends system configuration and status information to Quantum, including any software upgrades you have installed using the new **Software Upgrade Utility**. Quantum Support can use this information to provide a better support experience in the future.

To configure **Email Reports**:

1. Make sure a valid outgoing e-mail server is specified on the **Configuration > Notifications > Email > Server** page.

2. (Optional) Specify any additional recipients to receive the reports on the **Configuration > Notifications > Email > Email Reports > Recipients** page.

3. Make sure a weekly **Email Reports** schedule is configured on the **Configuration > Scheduler** page. Configure two weekly recurring events: one for **Status** reports and one for **Configuration** reports.

Configuring a Constant Replication Bandwidth Throttle

The **Configuration > Scheduler** page can be used to create a recurring series of replication throttle events. However, if you want a replication throttle bandwidth to always be in effect at all times, you need to

configure a constant replication throttle bandwidth. To configure a constant replication throttle bandwidth, do not use the **Scheduler** page to schedule the throttle event. Instead, use the following CLI command:

```
syscli --add throttle --service REP --bw <bandwidth><K|M>
```

For example, to enforce a constant replication throttle of 32KB/s at all times:

```
syscli --add throttle --service REP --bw 32K
```

> ℹ️ **Note:** For more information about using CLI commands, see the *DXi-Series Command Line Interface (CLI) Guide*).

System Metadata

The **System Metadata** statistic appears in two locations in the DXi remote management console:

- On the **Home** page, under **Disk Usage > Show More**.

- On the **Status > Disk Usage** page, under **Used**.

The **System Metadata** statistic represents all internal usage of disk space on the DXi . This statistic is calculated using the following formula:

> System Metadata = [File System Used Space] - [Reclaimable Space] -
> [Blockpool Reduced Data Size] - [Non-Deduplicated Data Size]

The following values are used in this formula:

- **File System Used Space** - All space used by all parts of the system. This includes temporary files (such as those used by replication, space reclamation, and healthchecks), as well as cached files that have not yet been truncated.

- **Reclaimable Space** - The disk space that can be used for new deduplicated data. The DXi will automatically compact reclaimable space to create more free space as needed.

- **Blockpool Reduced Data Size** - The amount of deduplicated data in the blockpool that has non-zero reference counts (that is, data that is not a candidate for space reclamation). During space reclamation, this value will decrease as reference counts are decremented.

- **Non-Deduplicated Data Size** - The size of data stored on shares that do not have data deduplication enabled. This value increases or decreases as data is added to or removed from these shares.

Because **System Metadata** is affected by many values and represents the internal operations of the system, you might not always be able to easily correlate changes in this statistic to your typical usage patterns.

Date & Time Configuration

The date and time settings are configured using either the **Getting Started Wizard** at installation or the **Configuration > System > Date & Time** page in the remote management console.

Although you may specify the date and time manually for your system, we highly recommend that you configure your system to use NTP (Network Time Protocol) to maintain accurate date and time settings.

If you have configured at least one DNS (Domain Name Server) IP address during network configuration, then you should select one of the Timeserver Pools. The Timeserver Pool most appropriate for your system will depend upon your geographical location. For example, if you are located in the United States we recommend you select **us.pool.ntp.org**.

If you have not configured your system to utilize at least one DNS IP address, then you cannot use a timeserver pool and must specify an NTP timeserver IP address, directly. The **Date & Time** page will provide a recommended default timeserver address of **208.66.174.71**; however, it is possible that the default timeserver may occasionally fail to respond to an NTP query. In this case you may receive an error message attempting to apply NTP settings using the default timeserver address. If you experience an issue with the default timeserver, we recommend that you try an alternate timeserver address (such as **192.43.244.18**) or select another timeserver address from the NTP support Web site at: http://support.ntp.org

Network Hostname Restrictions

The network hostname must not exceed 64 characters.

Internet Explorer Security Level

The remote management console has been designed to function with Internet Explorer's default security level. If you happen to experience problems logging into the remote management console, then you can view/set your browser's security level by clicking on Internet Explorer's **Tools** menu, selecting the **Internet Options** menu item, and clicking on the **Security** tab in the new window that opens.

Changing the Number of Allowed Sources

The default number of allowed DXi replication sources is 10. If you need to change these default settings, contact Quantum Customer Support.

Quantum Vision

You must update to the latest version of Quantum Vision (4.4.1 or later) to operate with DXi 4.0.x Software.

StorageCare Guardian

You must update to the latest version of StorageCare Guardian (2.0.7 or later) to operate with DXi 4.0.x Software.

StorageCare Guardian - DXi9000

- To configure your DXi9000 into Guardian, contact Quantum Customer Support to install the *StorageCare Guardian Connectivity for the DXi9000* TSB.

- The Diagnostic Collect and Storage Collect capture log features will not work for DXi 4,x software without first applying the appropriate patch. Contact Quantum Customer Support and reference the *StorageCare Guardian Connectivity for the DXi9000* TSB.

- You will need to enable the CLI Administrator user and set the password to cliadmin. This will allow Guardian to capture the Diagnostic Collect and Storage Collect log logs.

Running Healthchecks

Quantum recommends running the **Healthcheck** utility (**Utilities > Diagnostics > Healthchecks**) daily to ensure data integrity.

DXi Advanced Reporting Additional Notes

Logging On to DXi Advanced Reporting

If you cannot access the DXi Advanced Reporting Login window, launch a supported Web browser on a workstation that has network access to the DXi system for which you want to view reports, and in the browser address box, type **http://<IP_address>/reports/index.html** where <IP_address> is the IP address of the system, and then press **Enter**.

Decrease in Before Reduction Data

Backup expiration by your backup application causes the Before Reduction data to decrease immediately in graphs like Data Volume Overview. In earlier versions of the software, backup expiration was not reflected in Before Reduction data until space reclamation was run. The effect of this change is an immediate drop in Before Reduction data any time you expire backups.

Contacting Quantum

More information about this product is available on the Service and Support website at http://www.quantum.com/serviceandsupport/get-help/index.aspx. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact the Quantum Customer Support Center:

Region	Support Contact
North America	1-800-284-5101 (toll free)
	+1-720-249-5700
EMEA	+800-7826-8888 (toll free)
	+49 6131 324 185
Asia Pacific	+800-7826-8887 (toll free)
	+603-7953-3010

For worldwide support:

http://www.quantum.com/serviceandsupport/get-help/index.aspx#contact-support