



DXi V1000 Release Notes

Product	DXi 2.2.1.3_V1000 (10241-52131 Build4) Software for DXi V1000
Supported Browsers (Remote Management Console)	Microsoft Internet Explorer 8.x or higher (Internet Explorer 10 currently not supported), Mozilla Firefox 7.x or higher
Date	October 2013

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About the Quantum DXi V-Series

The Quantum V-Series virtual appliances* (DXi) provide an entry point for Quantum customers who want to implement a virtual infrastructure. The DXi is a flexible virtual appliance backup solution that integrates data deduplication and replication technology to connect backup and disaster recovery protection across distributed corporate environments. The DXi uses Quantum's patented data deduplication technology to increase disk capacities by 10 to 50 times and makes WAN replication a practical and effective part of disaster recovery planning. The DXi is designed for customers who need to protect up to 24 TB of deduplicated data and who do not wish to deploy a physical DXi system.

The Quantum DXi V-Series appliances are delivered as VMware virtual appliances in an OVF format that installs within a vSphere infrastructure.

* The 2-TB Quantum DXi virtual appliance, the DXi V1000, and the 4- to 24-TB Quantum DXi virtual appliance, the DXi V4000, are collectively referred to as the Quantum DXi V-Series virtual appliances.

Purpose of This Release

This release of the Quantum DXi V1000 is based on the DXi 2.2.1.3 software and provides an entry point for Quantum customers that want to implement a virtual infrastructure. The Quantum DXi V1000 is designed for customers who need to store up to 2TB of deduplicated data and who wish to utilize their existing virtual infrastructure.

New in This Release

DXi 2.2.1.3_V1000 Software is a minor release that provides the following for DXi V1000 systems:

- Replace the DXi V1000 MySQL database with PostgreSQL.

System Requirements

Make sure your environment meets or exceeds the following DXi V1000 system requirements before you begin installing your DXi V1000:

- Server system with at least an i7 quad-core Intel processor (AMD processors not supported), two virtual CPU cores required
- At least one IP address available for use by the DXi (obtained from DHCP or manually assigned at boot time, if assigned manually, have your Gateway IP and Node Netmask IP available)
- One or more ESX4, ESXi4, ESXi5, or ESXi5.1 servers that are part of a vSphere vCenter cluster or a VMware Workstation 9

- vSphere vCenter version 4.0 u2 or later
- Free space
 - 1-TB license – 1.5 TB storage, thin provisioned; 2.5 TB storage, thick provisioned
 - 2-TB license – 2.5 TB storage for either provisioning option
- 4 GB of free RAM
- A 1GbE or 10GbE Ethernet port for data movement on the Quantum DXi V1000 host server
- Browsers: Mozilla Firefox 7 or higher, Microsoft Internet Explorer 8 or higher (Internet Explorer 10 currently not supported)
- Adobe Flash Player plug-in 9 or higher

OST Plug-In Support

The following components are required for OST (OpenStorage) operation with the DXi-Series:

- Symantec NetBackup 7.x or higher or Backup Exec 2010 or higher.
- Quantum OST storage server (included with the Quantum DXi-Series software).
- Quantum OST Plug-in (downloaded separately through the remote management console or from the Quantum Service and Support Web site).

You must use the correct versions of all of these OST components. Refer to [Table 1](#) and [Table 2](#) for version compatibility information regarding the DXi-Series OST components. The tables include compatibility information for Windows, Linux, and Solaris operating systems. This information is current as of the publication date of these release notes.

For further information concerning the OST plug-in, see the *Quantum DXi-Series NetBackup and Backup Exec OST Configuration Guide* located on the documentation CD.

Table 1 Backup Exec 2010 (or later) Plug-in Compatibility List

Platform	Plug-in Version	DXi Software Version
Windows 2003/2008 32-bit	2.6.0	2.2.1.3_V1000
Windows 2003/2008 64-bit	2.6.0	2.2.1.3_V1000

Table 2 NetBackup 7.x (or later) Plug-in Compatibility List

Platform	Plug-in Version	DXi Software Version
RedHat Linux x86 64-bit	2.6.0	2.2.1.3_V1000

Platform	Plug-in Version	DXi Software Version
SUSE Linux x86 64-bit	2.6.0	2.2.1.3_V1000
Solaris 10 and Solaris 11 x86 64-bit	2.6.0	2.2.1.3_V1000
Solaris 10 and Solaris 11 SPARC 64-bit	2.6.0	2.2.1.3_V1000
HP-UX 11i v3 IA-64	2.6.0	2.2.1.3_V1000
IBM AIX 6.1 and 7.1 Power 64-bit	2.6.0	2.2.1.3_V1000
Windows 2003/2008 32-bit	2.6.0	2.2.1.3_V1000
Windows 2003/2008 64-bit	2.6.0	2.2.1.3_V1000

Replication Compatibility

The following table indicates the DXi software levels that can replicate data to a DXi V1000 or that can received replicated data from a DXi V1000. Combinations not shown in the table are not supported.

		Replication Source		
		DXi 2.0.0.2 DXi 2.0.x	DXi 2.1.x	DXi 2.2.x DXi 2.2.1.3_V1000
Replication Target	DXi 2.0.0.2 DXi 2.0.1	Yes	Yes	Yes
	DXi 2.1.x	Yes	Yes	Yes
	DXi 2.2.x DXi 2.2.1.3_V1000	Yes	Yes	Yes

Known Issues

DXi 2.2.1.3_V1000 Software for DXi V1000 has the following known issues:

- [Replication Known Issues](#) on page 5
- [Space Reclamation Known Issues](#) on page 8

- [Network Known Issues](#) on page 8
- [CLI Known Issues](#) on page 10
- [GUI Known Issues](#) on page 10
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- [Installation and Upgrade Known Issues](#) on page 20
- [Miscellaneous Known Issues](#) on page 21
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Replication Known Issues

Bug Number	SR Number	Description	Workaround
7269		Replicating a filename which begins with & in a directory caused all of the files in the entire directory to replicate to the target.	Do NOT use the & character in a filename.
7915		Aborting a synchronization job when a namespace and synchronize are queued up aborts only the synchronization and leaves the namespace replication in a queued state.	Manually abort the namespace replication.
11683		If the same user exists on both source and target systems, the user should be prompted to overwrite permissions on the target system before synchronization or Directory/File Based replication occurs.	Set the same permissions on both source and target for the same user.
13617		If the replication target is changed while a namespace replication on a NAS share is in progress (such as due to a power outage), the replication may become stuck or stay queued up.	Cancel the queued job and restart the replication or wait until the next scheduled replication to take effect.
13692		No Service alert is logged for failback jobs when the failure is due to a power outage.	Re-initiate the failback after system resumes operation.
14974	1132956	A Target system will fail a failback operation if the replication target IP (source role) is not configured.	Use an IP address on the Target system to specify the network address of the Source system.

Bug Number	SR Number	Description	Workaround
18326		If Directory/File Based Replication is enabled for a share and then disabled at a later time, a replication report will not show any of the replication activity that occurred during the time that Directory/File Based Replication was enabled.	Re-enable Directory/File Based Replication for the share, then run the replication report again to see the historical replication activity.
18787		A manual or scheduled replication initiated immediately after changing the replication target may fail.	Perform the replication again.
18845		An error occurs if the same DXi is configured to be a source as well as the target for replication.	Do not include the configured target DXi in the list of source DXis.
20351		If data is replicated from a DXi running DXi 2.x Software to another DXi running 2.x, that data cannot be failed back to a DXi running system software 1.x.	Perform a failback to a DXi running DXi 2.x Software.
20674		An error is returned when attempting to delete a replication source if the source was added with an invalid (cannot be resolved) host name.	Pause replication before deleting a source with an invalid host name.
21612		When recovering or failing back an NFS share, the value of the Commit attribute (sync or async) is not preserved.	Manually reset the Commit attribute for the share after it is recovered on the target, or fail back the share to the source.
24005		A missing file error occurs during replication or space reclamation. This can occur if files were deleted while replication or space reclamation was in progress.	Retry the replication or space reclamation. To avoid this issue, do not delete files while performing replication or space reclamation.
24277		If several synchronization jobs are queued, and then while the first job is in progress the other jobs are canceled, the DXi will begin synchronizing the canceled jobs after finishing the first job in the queue.	Cancel the synchronization jobs again.
26167		When performing a failback from a DXi running 2.1 or 2.1.x software to a DXi running software version 2.0.x or earlier, the failback fails if a valid source IP address has not been specified on the DXi running 2.1 or 2.1.x software.	On the DXi running 2.1 or 2.1.x software, specify a valid Source IP Address on the Configuration > Replication > Send page.
29341		It is possible to configure two identical replication schedules for the same share.	If this is done, one of the scheduled replication jobs will succeed and the other will fail. Ignore the failed job and delete the redundant schedule.

Bug Number	SR Number	Description	Workaround
31514		An error occurs when attempting to configure replication from a source system running DXi 2.2.1 Software to a target system running 2.1.x if the systems are configured for network segmentation.	Upgrade the target system to DXi 2.2.1 Software.
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 .	<p>This issue can occur when replication is enabled for a share, 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.</p> <p>To correct the issue, manually initiate replication of the share on the Replication > Send page, and allow the replication to complete.</p> <p>To avoid this issue in the future, schedule replication for the share on the Configuration > Scheduler page. Alternately, you can enable Directory/File Based replication for the share.</p>
32166		The following administration alert occurs: Directory/File Based Trigger Delete FAILED. Wild cards are not allowed in path specification for replication.	<p>Replication does not support asterisks [*] or ampersands [&].</p> <p>Remove or rename any affected files, then perform a synchronization to propagate the deletions to the target.</p>
33032		Refreshing Trigger Based Queue page causes error TDRequestGetAll failed or unable to get target host ID. Status= 3.	Retry multiple times, eventually Refresh works.

Space Reclamation Known Issues

Bug Number	SR Number	Description	Workaround
20826		After upgrading the system software, the Space Reclaimed statistics are incorrect on the Space Reclamation > General page.	The statistics will be correct after space reclamation is run.
32702		When DXi is in critical low space mode it takes several attempts to start Space Reclamation.	Retry until Space Reclamation actually starts.

Network Known Issues

Bug Number	SR Number	Description	Workaround
8628		A replication IP address should not be required to configure the network if the user does not use replication.	Enter a "dummy" IP address. This will be fixed in a future revision.
20448		If a Domain Suffix Search List has not been specified on the Network page, and the DXi is added to an Active Directory server, the DXi is added to the domain with the suffix localdomain . After this, the DXi cannot be managed using Active Directory.	Specify the correct domain suffix in the Domain Suffix Search List before adding the DXi to an Active Directory server. (If adding multiple entries to the list, make sure the correct path is first in the list.)
20572		When using Active Directory, the DXi is not automatically added to the DNS server in the parent domain after the DXi is added to a child domain.	Cross domain joining is not supported by Samba. Instead, manually add a DNS entry to the DNS server.
20574		Unable to manage DXi Local Users and Groups from the Active Directory controller after the DXi is added to a child domain.	Log off of the Active Directory controller, then log back on. Users and groups will be listed correctly.
21603		If the DXi is assigned an IP address in the 10.17.21.0 to 10.17.21.24 range, a network connection to the DXi cannot be established.	The IP addresses in this range are reserved. Configure the DXi using a different IP address.

Bug Number	SR Number	Description	Workaround
23808		A CIFS share cannot be mapped when using Windows 2008 R2 SP1 with the RequireSecuritySignature registry key set to 1.	Edit the Windows 2008 registry and set the following key to 0: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\LanmanWorkstation\Parameters\RequireSecuritySignature
27031		For ESXi servers, when the bonding mode is set to LACP the console and file /var/log/messages are filled with bonding: bond0: An illegal loopback occurred on adapter (eth0) messages.	Bonded vNICs are not supported. Bonding of virtual or physical NICs should be done using VMware utilities.*
27826		GUI: Wizard should allow user to configure basic network BEFORE configuring file systems	For DHCP-based networks, this is not an issue. For non-DHCP-based networks, a valid, static IP will be requested during startup. If the customer is using DHCP, network settings are configured and GUI is fully functional. If not, admin personal will need to configure the network settings using the Configuration System Network page.
28049		NAS: Mode 0 Bonded network - yielding poor performance of outbound traffic - restores using CommVault running at 1MB/sec	Bonded vNICs are not supported. Bonding of virtual or physical NICs should be done using VMware utilities.*
30169 30805	1419732	Running the Network Analyzer on the Utilities > Analyzer > Performance page fails if NetServer is enabled on both the source (driver) DXi and the target DXi.	Only enable NetServer on the target DXi, and leave it disabled on the source (driver) DXi. To enable or disable NetServer, use the Utilities > Analyzer > Settings page.
30430		netperf -- -P 12865,12865 option does not set the src port to 12865 on a DXi V1000	Change traffic type to any or manually disable firewall on netserver.

* Configure bonded physical NICs within VMware first, and then configure those as a single virtual NIC within DXi V1000.

CLI Known Issues

Bug Number	SR Number	Description	Workaround
13604		Enabling jumbo frames disrupts active network configurations.	Don't change the setting if I/O is running.
14032		By default the "syscli --getstatus jumbo" command displays only bonded network devices' jumbo frame status. If some network devices are not bonded (segmented) the "syscli --getstatus jumbo" will not display jumbo frame status for those devices when using the command without any option specified. Note: The --getstatus jumbo command has been deprecated.	To display all the network devices' jumbo frame status, use the "--all" option in the command (i.e. syscli --getstatus jumbo --all). To display a single network device jumbo frame status, specify the network device using the "--dev" option in the command. For example, "syscli --getstatus jumbo --dev eth0" command displays ETH0 device jumbo status.
32499		syscli --set datetime does not set date, time or timezone correctly.	Set the Date and Time using the DXi V1000's Web GUI.

GUI Known Issues

Bug Number	SR Number	Description	Workaround
7874		Alert > Service Tickets > View Recommended Actions - Quantum Support link hyperlink missing.	Manually copy and paste the hyperlink into your browser to access the Quantum Support web page.
7935		When selecting all share administrators including default domain administrator for deleting, the GUI should display an error indicating that it can not delete the default domain administrator.	The default domain administrator can NOT be deleted.
11790 11792 11954		Username beginning with "#" or "\$" characters, or OST LSU names beginning with the "_" character are not displayed correctly.	Do not use these characters to begin usernames or OST LSU names
20673		On the Email Home > On Demand page, after viewing and saving a configuration data report, the OK button is disabled.	Refresh the Web browser to return enable the OK button.
21019		Immediately after a fresh software install, the disk capacity statistics displayed in the remote management console are incorrect.	Wait a few minutes for the disk capacity statistics to be updated.

Bug Number	SR Number	Description	Workaround
22417		When adding an SNMP community, the following error displays: The IP Address/Network Mask pair does not imply a valid network address. This error occurs even though the pair is in fact valid.	Leave the Network Mask field blank when creating the community.
24567		In the OST Wizard , on Step 3: Add LSUs , if you sort the list of LSUs by name, and then select one or more LSUs, the Delete button remains disabled.	Click Previous to return to the previous step, then click Next to return to Step 3. Select the LSUs to delete, and click Delete .
24644		On the Utilities > Diagnostics > System Diag File page, after clicking Generate New to create a new system diagnostics file, the message No file has been generated appears, and the Download Current button remains disabled.	Check the Admin Alerts page to see if an admin alert was generated. If the /scratch file system is out of space, the system cannot create a new diagnostics file, and an admin alert is generated.
26245		On the Configuration > Scheduler page, the horizontal scroll bar does not allow you to scroll to the right to see the entire view.	Navigate to a different page in the remote management console, and then navigate back to the Scheduler page.
26021		Web browser save password features (and similar third party browser add-ons) are not able to store and recall the DXi password when logging on.	To maintain proper security, enter the password manually each time you log on to the DXi.
29153		After editing an event on the Scheduler page, a new event cannot be added by clicking and dragging.	Refresh the browser window, and then click and drag to add a new event.
29832		When a scheduled space reclamation event is deleted on the Scheduler page, the Administrative Activity Log records the deletion but does not record the type of event that was deleted.	When looking at the Administrative Activity Log , if you have questions about the type of event that was deleted, note the user and time of deletion, and then consult the appropriate person.
30735		On the Scheduler page, if a monthly or weekly event is edited and changed to a daily event, any subsequent attempts to edit a single instance of the event will fail.	Delete the recurring event and then create a new daily recurring event. You can then edit single instances of the new recurring event as needed.
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.

Bug Number	SR Number	Description	Workaround
31164		The Status > Logs > Activity Log page is difficult to read and use if the Internet Explorer window is resized to a small size.	Use Firefox to view the page.
31969		If the syscli --change password command is used to change a Web password (admin or monitor) so that it is longer than 15 characters, the password cannot be used to log on to the remote management console. The GUI does not accept passwords longer than 15 characters.	Use the syscli --change password command to change the password so that it is 15 characters or less, and then log on to the remote management console again.
32101		On the Network page, it is possible to inadvertently add an empty entry to the Routing Details table for an interface. Once added, the empty route table entry cannot be deleted.	<p>The empty route table entry will not affect system operation. To remove the entry, do one of the following:</p> <ul style="list-style-type: none"> • In the IP Address table, first delete the interface associated with the empty route entry. Then add the interface again to the IP Address table, using the same settings, and click Update to store the changes. (Do <i>not</i> click Apply at the bottom of the page, as this will force a reboot of the system.) • Click Reset at the bottom of the page. This will undo all recent changes and reset the Network page to the last saved settings.
32279		If you are viewing the Utilities > Space Reclamation page while space reclamation is in progress, and then attempt to navigate to the Configuration page, the remote management console does not respond, and the Configuration page does not display.	Navigate to another page (for example, Home or Map) and then navigate to the Configuration page.
32410		An error occurs when attempting to log on to the DXi remote management console using Internet Explorer 10.	Enable Compatibility View in Internet Explorer 10, and then log on to the remote management console.
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.

Bug Number	SR Number	Description	Workaround
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.
32660		After rebooting the DXi, some disk usage and data reduction statistics display a value of N/A in the remote management console.	Wait a few minutes for the statistics to update.
32807		For Configuration > Scheduler , when a first Replication Throttle event is added with a Bandwidth in KB/s and a second Replication Throttle event with Bandwidth \leq 32 MB/s is added, an error condition occurs.	User may need to change the selected units more than once.

NAS Known Issues

Bug Number	SR Number	Description	Workaround
19332		NFS recovery jobs performed with a supported backup application fail to complete.	Make sure the backup client system has a minimum of 8 GB of RAM.
19935		Attempting to delete a share while performing I/O on the share (for example, copying files to the share) results in an error. After this error occurs, the share cannot be deleted, and replication cannot be performed to the share.	Wait for I/O on a share to complete prior to deleting a share.
19936		A file/directory path with more than 244 characters cannot be accessed on a mapped NAS share.	Limit file/directory paths on a mapped NAS share to 244 characters or less.
21407		Empty files and directories can still be created on NFS shares when the DXi is in a low space condition.	Do not attempt to write files and directories to NFS shares on the DXi when it is in a low space condition. Run space reclamation to free up disk space before writing additional files.

Bug Number	SR Number	Description	Workaround
23218		When mounting NFS shares on Solaris clients using the noac option, performance is degraded.	Do not use the noac option when mounting shares, or use a non-Solaris client.
29705		Backup failures occur due to timeouts under heavy, concurrent NAS ingest.	Use the following CLI command to configure NFS shares for asynchronous mode: syscli --nfscmmit async {--share <sharename>}
27908	1387940 1408612	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.
28286/ 28106		Using Hotadd or SAN transport with BackupExec 2010r3 has unacceptable performance problems when using CIFS for target storage and when backing up VMs.	This is a known problem unique to BUE 2010r3. Symantec is addressing this issue. Refer to www.symantec.com/connect/backup-and-recovery for an available workaround. Using BackupExec 2010r3 with the Ethernet transport has produced acceptable results.
31755		Running a large number of concurrent backup and replication jobs may cause timeouts in the backup application, leading to random failure of NFS and CIFS backup jobs.	Reduce the number of concurrent backup jobs. Alternately, increase the timeout value in the backup application. For example, in NetBackup, increase the Client connect timeout and Client read timeout to the maximum (32767). See the online support article: http://www.symantec.com/business/support/index?page=content&id=HOWTO13869 In addition, on a Windows media server, change the SESSTIMEOUT value to 600 seconds (10 minutes). See the online support article: http://support.microsoft.com/kb/102067

OST Known Issues

Bug Number	SR Number	Description	Workaround
10041	1423609 1066048 1236048	Subsequent Optimized Duplication jobs may fail or become stuck when running jobs are canceled or stopped.	Restart the NetBackup services.
13795	1913763	Unable to delete undiscovered OST devices from Backup Exec 2010.	Reestablish connection from the Backup Exec OST device and the DXi system. The connection can be reestablished by re-starting Backup Exec services or rebooting the DXi system. Once the connection is established, the device will be discovered, and the you will be able to delete it. Alternately, upgrade to Backup Exec 2010 R2, which contains a fix for this bug.
15286		New OpenStorage Devices added to Backup Exec 2010 initially show as "Undiscovered".	Press Refresh in the Backup Exec View pull-down menu until the device show as discovered.
15322		Optimized Duplication Succeeds, but the following error is shown: V-79-8192-4881 - The count of Files and Directories processed is not available for this operation. The File and Directory count might be displayed as zero.	This is expected behavior. You are able to restore using the duplicated image with no issues.
20587		On a NetBackup media server, temporary files created during backups are not removed.	This issue is resolved. To remove any temporary files that were created by previous versions, delete all files in the / tmp/dm/shadow directory on the NetBackup media server.
23109		There is a small chance of observing a discrepancy in the aggregate statistics for DXi Accent and the statistics for individual media servers.	Navigate to another page in the remote management console, then navigate back.

Bug Number	SR Number	Description	Workaround
23253		<p>If a storage server is configured to use multiple LSUs, and if LSU spanning is configured, when one LSU gets full and NetBackup is handling a disk full condition, the following errors are logged in OST Plug-in log:</p> <pre> ERROR - 20110526 14:53:50 11818 /pgnimage.cpp:2500 Write to image failed. dm_error: - 812, STS Error: 2060031 ERROR - 20110526 14:53:50 11818 /pgnimage.cpp:2584 EXIT pgn_write_image: (out of space:2060031) ih=0x13c1ed00, bytesWritten=0 OR ERROR - 20110414 23:27:36 20648 /pgnbfst.cpp:1153 Received error(2060031) from server, OST_RESERVE_LSUSPACE for 262144 bytes failed </pre>	<p>If the NetBackup spanning worked as expected, and if the job completed successfully, these errors may be ignored.</p>
24628 26580		<p>When DXi Accent is enabled, a maximum number of jobs (backups, restores, and/or optimized duplications) can be run against the DXi. The maximum is 100 total jobs.</p> <p>When the limit is reached, the following error is logged to the OST Plug-in log:</p> <pre> VServer "hybrid-dedupe-no- encrypt" limit reached (limit 100). </pre> <p>Also, the following error is logged in the NetBackup progress log:</p> <pre> Critical bpdm (pid=12515) image open failed: error 2060020: storage server connection limit exceeded </pre>	<p>If the connection limit is reached on the DXi, the OST Plug-in retries for 300 seconds by default. If the connection cannot be established within 300 seconds, the connection times out and an error is returned.</p> <p>The default connection timeout is 300 seconds. The timeout value can be increased using the following setting in <code>/usr/Quantum/QuantumPlugin.conf</code>.</p> <pre> DATA_CONNECTION_BUSY_TIMEOUT </pre>

Bug Number	SR Number	Description	Workaround
26627		<p>When attempting to perform an optimized synthetic full backup using NetBackup running on a Windows-based media server, a normal synthetic full backup occurs instead. During a normal synthetic full backup, all data is read back to the media server, resulting in a longer backup window.</p> <p>Note: This issue usually occurs with existing storage servers and disk pools.</p>	<p>Make sure the storage server and disk pools are correctly configured for optimized synthetic full backups. To do this, run the following commands on the media server:</p> <pre>nbdevconfig -changests -stype Quantum -storage_server <ss_name> -setattribute nbdevconfig -changedp -stype Quantum -dp <dp_name> -setattribute OptimizedImage</pre> <p>To verify the configuration, run the following commands and make sure they return the flag OptimizedImage:</p> <pre>nbdevquery -liststs -U nbdevquery -listdp -U</pre> <p>For more information, see the following Symantec online support article: http://www.symantec.com/business/support/index?page=content&id=TECH77767</p>
26147		<p>When using OST with a media server configured with RedHat Linux and a Chelsio 10GbE card, restore operations take significantly longer to complete than backup operations.</p>	<p>Use the perftune.sh and ifup-local scripts (provided by Chelsio) to correctly set kernel parameters on the media server. To do this, you must copy the perftune.sh and ifup-local scripts to /sbin on the media server. For more information, refer to the Chelsio driver installation instructions (in the ReadMe file included with the driver).</p>

Bug Number	SR Number	Description	Workaround
27604		OST backup job fail with error 84; xcomm.c connection reset by peer	<p>In MS Windows, adjust the following TCP/IP setting by adding a subkey in the registry:</p> <p>Start the Registry Editor (Regedt32.exe), and then go to the following subkey: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters</p> <p>On the Edit menu, click Add Value, and then add the following information:</p> <p>Value Name: TcpMaxDataRetransmissions</p> <p>Value Type: REG_DWORD - Number</p> <p>Valid Range: 0 - 0xFFFFFFFF</p> <p>Default Value: 5 Decimal</p> <p>New Value: 10 Decimal</p> <p>Click OK, and then quit Registry Editor. Reboot after the registry change has been made.</p> <p>For more information, see http://support.microsoft.com/kb/q191143/</p>
29854		In NetBackup 7.5, when you click Refresh on the Change Disk Pool dialog box, the following error displays: The snapshot property of one or more volumes in the disk pool has changed. This property cannot be changed after initial configuration.	<p>To resolve this issue, refer to the following Symantec support article: http://www.symantec.com/docs/HOWTO67378</p>
30134		In NetBackup 7.5, when attempting to change a Replication operation to a Duplication operation on the Storage Lifecycle Policy Editing Window , the storage unit is not updated and remains blank.	<p>Make the change a second time. On the second attempt, the storage unit is correctly updated.</p>

Bug Number	SR Number	Description	Workaround
30429		<p>If an LSU that is enabled for Automatic Image Replication (AIR) belongs to a disk pool for which spanning is enabled, when an opportunity for spanning occurs, the LSU is not spanned, and NetBackup fails the backup with the following or similar error: Critical bptm (pid=24097) backups created for eventual duplication to remote master servers cannot span multiple volumes.</p>	<p>LSUs that are enabled for Automatic Image Replication cannot be spanned. If an LSU is configured for AIR, make sure spanning is disabled for the disk pool it belongs to.</p> <p>Note: When an LSU is configured for AIR, it can take up to five minutes for the change to be visible in NetBackup.</p>
30515		<p>Automatic Image Replication (AIR) jobs run between a UNIX media server and a Windows media server fail.</p>	<p>NetBackup does not support image replication between different operating systems. Always perform Automatic Image Replication between media servers that use the same operating system.</p>
31095		<p>NetBackup 7.5 and 7.6 may have problems recognizing or accepting the DXi replication topology configured for Automatic Image Replication (AIR).</p> <p>This occurs because Quantum's implementation of Automatic Image Replication does not correctly publish storage server names to NetBackup such that NetBackup can correctly distinguish between storage server names.</p> <p>Note: Quantum OST is unique among OST implementations in that it separates the DXi appliance from the OST storage server. In other implementations, the appliance is the storage server. On the DXi, the storage server is a logical construct which allows the DXi to have multiple storage servers.</p>	<p>When configuring AIR, use storage server names that are unique among the DXi systems involved in an AIR configuration.</p>

Installation and Upgrade Known Issues

Bug Number	SR Number	Description	Workaround
33085		DXi V1000 2.2.1_MC uses Pacific time, no matter what time zone ESXi is in.	Users can correct the time zone using the GUI (remote management console).
13711		If a power cycle occurs while uploading the software image, the system displays only an "Activation Error Occurred!" message.	Do not power cycle in middle of an upgrade. Begin the upgrade again.
28397	1395064	If a DXi that is configured with DNS entries is disconnected from the network prior to a software upgrade, the upgrade will not succeed.	If the DXi must be disconnected from the network during an upgrade, remove any DNS entries on the Configuration > System > Network page prior to the upgrade.
30829		After upgrading to 2.1 Software or later, the Integrity healthcheck is disabled.	The Integrity healthcheck is currently not supported in 2.1 or later software. Run the De-Duplication healthcheck instead.
32309		After upgrading to DXi 2.2.1 Software, the value for OST Storage Servers on the Home page (under Data Reduction Statistics) and on the Disk Usage Page (under Data Before Reduction) displays as 0.00 MB even though storage servers with data exist on the DXi.	On the Configuration > OST > Storage Servers page, edit each existing storage server. On the Edit Storage Server page, select the Enable Concurrent Optimized Duplication check box and click Apply . If you do not want to keep concurrent optimized duplication enabled, clear the check box and click Apply again. Repeat this process for each storage server.
32344		Unable to configure 10G network after upgrading from 2.1.1_RR to 2.2.1_MC.	The 2.1.1_RR release only provides two 1 GbE network interfaces in the GUI. The firmware upgrade process only updates the DXi V1000 software. It does not affect the DXi V1000 virtual machine vNICs configured. After a 2.1.1_RR firmware upgrade, you must clear the Web browser cache before logging on to the remote management console. This prevents Web page timeouts.

Miscellaneous Known Issues

Bug Number	SR Number	Description	Workaround
34135/ 34566		<p>The system capacity is in Low Space condition (going below 250GB of free space) but the GUI shows more free space.</p> <p>DXi systems calculate Critical Low Threshold based on multiple factors such as existing data classification (share deduplication enabled vs. disabled) and disk capacity vs. licensed capacity. This threshold can vary slightly even across identically configured systems depending on user's existing data. For more information, see Low Capacity Management on page 26.</p>	<p>Monitor space reclamation. When space reclamation has finished, be prepared to delete data or add more capacity.</p> <p>If space reclamation cannot complete, contact Quantum Support (see Contacting Quantum on page 31).</p>
12454		<p>If a single file is replicated using the Command Line Interface (CLI), the ACL for that file will be lost.</p>	<p>Use Synchronize option from the GUI. See the <i>DXi-Series User's Guide</i> for further information.</p>
12523		<p>Occasionally, the NTP server cannot be contacted, resulting in the following admin alert: WARNING: Unable to access NTP server/pool.</p>	<p>NTP should not be used on the DXi V1000. This can result in time oscillation.</p> <p>Check the NTP settings on the Configuration > System > Date & Time page and change if necessary.</p> <p>Before a valid NTP Server can be configured by hostname or selected from an NTP Server Pool on the Configuration > System > Date & Time page, a Primary DNS server must be configured on the Configuration > System > Network page.</p> <p>When updating the NTP settings through the Getting Started Wizard, configure the Primary DNS Server in the Network step prior to configuring the NTP server in the Date & Time step.</p>
13621		<p>NTP server error and Admin Alert are produced after changing from NTP 24-hr to 12-hr NTP format.</p>	<p>NTP should not be used on the DXi V1000. This can result in time oscillation. Verify time format has changed. If the time format has changed, ignore the alert.</p>
17553		<p>Long backups on a NetBackup client running on Windows 2003 can fail due to insufficient system resources.</p>	<p>Edit the registry settings on the client as described in the following Microsoft knowledge base article: http://support.microsoft.com/kb/304101/en-us</p>

Bug Number	SR Number	Description	Workaround
20707		If one of the processes in the DataPath cores, this can cause other processes in the DataPath to core as well. Process cores will results in RAS alerts. DataPath consists of the following processes: bpwd, bpwapid, qfsd, ost, ndmp, nas_control, nfslock, smb, nfs	If a core occurs, only the first core requires investigation, as it is the root cause. The subsequent cores are expected and can be disregarded.
23372		After a reboot, the DXi comes up in diagnostic mode, and attempting to retrieve a collect log does not proceed past the step Collecting - FC scst- .	Reboot the DXi again using the remote management console or the CLI.
26066		When using Quantum Vision to view status and reporting data for a DXi, data is not collected from the DXi at the frequency specified in Vision.	Upgrade to Quantum Vision 4.1 or later.
27894 25352		DXi V1000 RAS reports going into throttle mode but throttle mode does not exist in 2.x branch.	RAS ticket is invalid; throttle mode is not used in 2.x software. Check system for low space warnings.
27914		DAR - Delayed reporting of 5 hours on newly deployed unit.	Set the BIOS time to UTC before installation.
28088		2 of 10 jobs failing with media write error (84) when 10 jobs run congruently backing up to multiple LSU.	Limit backups to no more than 8 at a time.
28250		NBU 7.5 fails to restore any Linux VMs.	This is a known NBU problem that Symantec is investigating. Refer to www.symantec.com/netbackup for an available workaround.
28402		No DAR activity seen on the DXi V1000. When running DXi V1000 on ESX4.0 U4, the network stats may not be reported when the ESX4.0 server is under load.	This is a a limitation of the ESX4.0 hypervisor. This problem can be eliminated by upgrading the ESX server. This is not a problem with ESXi4.1 or later versions
28540		Backups are slow or fail when attempting to write a large number of small files (for example, 8KB files) to a NAS share.	The DXi is optimized for backup use (a small number of large files) rather than for use as primary NAS storage (a large number of small files). Do not use the DXi as primary NAS storage; instead, use the DXi with a backup application to store backup images on NAS shares.

Bug Number	SR Number	Description	Workaround
28699		When running a Retina Security scan, the following security event is reported: OpenSSH X11 Port Forwarding Session Hijack Vulnerability.	This is a false positive result and can be safely ignored. The version of OpenSSH included with DXi 2.1.x Software or later already includes the required security fixes.
28747		When running a Retina Security scan, the following security event is reported: IBM WebSphere Application Server JavaHashTable Denial of Service.	This is a false positive result and can be safely ignored. IBM WebSphere Application Server is not included with DXi Software.
28805		When running a Nessus Security scan, the following security event is reported: Signing is disabled on the remote SMB server.	SMB server signing is disabled by default to allow interoperability with a wide range of Windows clients. To enable SMB server signing, use the Configuration > NAS > Advanced Setting page in the remote management console.
29959		DXi Advanced Reporting cannot be accessed on a DXi with critically low or no free space.	Delete data and run space reclamation to free up space on the DXi.
32574		On a DXi installed on VMware Workstation 9, a copy/paste of multiple directories pre-creates empty directories - then asks user if its OK to overwrite on Windows 2008.	Answering Yes to the prompt to overwrite allowed the client to correctly complete the copy/paste operation.
33036		Administrative Activity Log doesn't record long CLI commands.	Use the bash shell command: <pre>for ((i=1;i<N;i++)); do /hurricane/ syscli --add share --name n\$i -- proto nfs --dedup; done</pre> This command will add N-1 shares using a shorter command that can be recorded in the Administrative Activity Logs. For more information on the use of the bash shell, see http://www.gnu.org/software/bash/manual/bashref.html .

Cosmetic Issues

Bug Number	SR Number	Description	Workaround
11800		Although all NAS shares are deleted, if there is at least 1 OST share, the target will still have value and display grayed out.	This issue can be ignored and does not impact functionality.
11803		On the Ethernet performance page, the "average" drop-down menu reflects "all" ports and not just the "active" ports.	When viewing the Ethernet performance "average," be aware that the calculation is affected by potentially inactive ports, including one of the service ports.
20505		If you have used the Configuration Wizards to configure the system, after the DXi reboots, the green check marks on the Wizards menu that indicate a wizard was completed no longer display.	This is cosmetic only. All settings made using the Configuration Wizards are retained after a reboot.
21497		The first time an NFS share is modified after a CIFS share is modified, a message appears incorrectly stating that the CIFS service was started successful.	Click OK to dismiss the message.

Documentation

The following documents are currently available for DXi V1000:

Document Number	Document Title
6-67611	<i>DXi V-Series Quick Start Guide</i>
6-67612	<i>DXi V-Series User's Guide</i>
6-67079	<i>DXi-Series NetBackup and Backup Exec OST Configuration Guide</i>
6-67081	<i>DXi-Series Command Line Interface (CLI) Guide</i>
6-67082	<i>DXi-Series SNMP Reference Guide</i>

For the most up-to-date documentation for the DXi V1000, go to:

www.quantum.com/DXiV-SeriesDocs.

Note: For DXi V1000 Standard Edition users, documentation, community support, and other resources are available through Forum V (<http://www.quantum.com/forumv>, Quantum's online support forum for virtualization products.)

Supported Backup Applications

The following backup applications are supported for use with DXi 2.2.1.3_V1000 Software:

Backup Application	Revision
Symantec NetBackup	7.x and later
Symantec Backup Exec	2010 R2 and later
EMC NetWorker	7.4 and later
CommVault Simpana	7.0 and later
CA ARCserve	12.5 and later
Oracle Secure Backup	10.2 and later
IBM Tivoli Storage Manager	5.5.4 and later
HP Data Protector	6.0 and later
Dell NetVault	8.x 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.

Additional Notes

For additional information about DXi 2.2.1.3_V1000 Software, refer to the following sections.

- [DXi V-Series Appliance Installation and Performance Recommendations](#)
- [Low Capacity Management](#)
- [Mapping Virtual Disks to Datastores](#)
- [Data Before Reduction Statistics](#)

- [Configuring a Constant Replication Bandwidth Throttle](#)
- [Making Multiple Changes to a Recurring Scheduled Event](#)
- [Free Space](#)
- [System Metadata](#)
- [Date & Time Configuration](#)
- [Network Hostname Restrictions](#)
- [Internet Explorer Security Level](#)
- [Number of Allowed Sources](#)
- [Quantum Vision](#)
- [OST NetBackup Version](#)
- [Running Healthchecks](#)

DXi V-Series Appliance Installation and Performance Recommendations

The following recommendations can help your DXi V-Series appliance operate at its optimum in regards to performance and reliability.

- The DXi V-Series appliance should be installed on a host with enough available resources so that the appliance can perform at the desired service level. The more load your ESX host carries, the greater the chance the DXi V-Series guest machine will not perform up to your expectations. This is due to the resources (CPU, RAM, I/O, etc.) needed by the DXi V-Series appliance being consumed by other guest machines.
- The storage subsystem of the ESXi server contributes the most to the overall performance of the DXi V-Series systems. Storage subsystems that are over-used or that have high latencies for access can cause timeouts and errors within the DXi V-Series appliances and possibly within the VMware products. Quantum recommends that the DXi V-Series be installed with high performance storage systems such as direct attached storage, fibre channel SAN or 10GbE iSCSI and NFS storage. Maximum performance and the most reliable storage connectivity is best achieved with direct attached storage or Fibre Channel SAN. If iSCSI or NFS datastores are required, Quantum recommends configuring multiple datastores, utilizing multiple network access paths and distributing the DXi V-series virtual disks (VMDK) across the datastores.
- To support and monitor your DXi V-Series appliances, Quantum recommends that you install and use VMware's vCenter Operations Manager. This software provides automated monitoring of ESXi servers and automatically identifies issues.

Low Capacity Management

DXi systems calculate their critical low threshold based on multiple factors such as existing data classification (share deduplication enabled versus disabled) and disk capacity versus licensed capacity. Based on a user's existing data, this threshold can vary even among identically configured systems.

As disk capacity is used and free disk space approaches low levels, the DXi V-Series automatically responds in the following ways:

- For the DXi V1000, a **Low Capacity Condition** is activated when the amount of free disk space is less than 50 GB. For the DXi V4000, a **Low Capacity Condition** can be the result of the DXi exceeding 85% of its usable capacity; this applies to meta-data storage as well.

The **Low Capacity Condition** indicator turns off when capacities surpass these thresholds.

- An administrative alert and a service ticket are generated each time free disk space drops below one of the following threshold values:
 - 50 GB (DXi V1000) or 85% (free space or meta-data) (DXi V4000) - The system banner displays **Attention** and the system enters the **Low Threshold** (yellow) state. Ingest continues and space reclamation starts (for the DXi V4000, reclamation starts at 500 GB).

A space reclamation task is initiated every 10 minutes until space reclamation begins. Space reclamation ends when the DXi V-Series appliance exits the **Low Capacity Condition**. (Any space reclamation tasks running at that time are allowed to complete.)

Ingest of backup data is not throttled during the **Low Capacity Condition** unless free disk space falls below the 10 GB (DXi V1000) or 90% (free space or meta-data) (DXi V4000) threshold. When this occurs, no write requests are accepted until free disk space rises above 10 GB (DXi V1000) or 90% (free space or meta-data) (DXi V4000).

- 10 GB (DXi V1000) or 90% (free space or meta-data) (DXi V4000) - The system banner displays **Low Space** (red). Ingest stops and replication is paused, but data can still be read.
- 5 GB (DXi V1000) or 10 GB (DXi V4000) - The system banner displays **No Space**. All data read/write is stopped.

Mapping Virtual Disks to Datastores

A default DXi V1000 deployment maps its virtual disks to a single datastore. A user can remap these virtual disks to dedicated datastores for higher performance. Such a configuration will improve overall DXi V1000 performance under heavy loads.

(Datastores are how ESX makes storage available to the vApp. The datastores are presented as virtual disks).

Data Before Reduction Statistics

The categories that make up the **Data Before Reduction** value on the **Status > Disk Usage** page changed after the *User's Guide* and online help were finalized. Refer to the information below regarding **Data Before Reduction**. In addition, the amount of data in all OST storage servers appears on the **Home** page, under **Data Reduction Statistics**.

Data Before Reduction

The **Data Before Reduction** value represents the original, native size of all data that has been processed by the data deduplication and compression engines.

Data before reduction is divided into the following categories:

- **Incoming Replication** - The amount of data stored on the DXi via replication from another DXi. This does *not* include incoming data from Directory/File Based Replication, or incoming data from Failback replication.
- **NFS Deduplicated Shares** - The amount of data stored in deduplicated shares configured in Network File System (NFS) format for Linux systems. This includes incoming data from Directory/File Based Replication, and incoming data from Failback replication.
- **CIFS Deduplicated Shares** - The amount of data stored in deduplicated shares configured in Common Internet File System (CIFS), also known as Server Message Block (SMB), format for Windows systems. This includes incoming data from Directory/File Based Replication, and incoming data from Failback replication.
- **OST Storage Servers** - The amount of data stored in deduplicated OpenStorage (OST) storage servers. This includes incoming data for OST and DXi Accent.

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
```

Note: For more information about using CLI commands, see the *DXi-Series Command Line Interface (CLI) Guide* (6-67081).

Making Multiple Changes to a Recurring Scheduled Event

This section describes the expected result when making multiple changes to a recurring scheduled event in DXi 2.1 Software and later. This information applies only when a DXi administrator has performed *all* of the following steps in the order listed:

- 1 Create a recurring event having two or more instances in the series.
- 2 Edit one or more instances within the series, creating exception instances, using one or both of the following methods:
 - a Deleting (one or more instances within the series).
 - b Changing the start time (of one or more instances within the series).
- 3 Finally, change the base start time of the entire recurring event series.

The change in step 3 will cause the system to fill in the holes in the series that were left by the instances that were deleted or moved in step 2. This is the expected behavior.

If the instances that were moved in step 2b are no longer needed after step 3, they should be manually deleted. Similarly, if the new instances filled in by step 3 are not needed, then they should be manually deleted.

Free Space

The free space available on the DXi is the sum of free space in the file system and the free space available for ingest data in the deduplication engine. The presentation layers (OST/NFS/CIFS) looking for available free space on the DXi can only present the free space in the file system. This may make it look like the DXi is low on space. The free space in the deduplication engine is available for ingest and will be used for ingest automatically by the system.

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:

$$\text{System Metadata} = [\text{File System Used Space}] - [\text{Reclaimable Space}] - [\text{Blockpool Reduced Data Size}] - [\text{Non-Deduplicated Data Size}]$$

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 DXi, you might not always be able to easily correlate changes in this statistic to your typical usage patterns.

Date & Time Configuration

It is not recommended that the DXi V1000 be configured for NTP. It is recommended that the ESXi server be configured for NTP services.

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.

Number of Allowed Sources

The default number of allowed DXi replication sources is 1.

Quantum Vision

You must update to the latest version of Quantum Vision (4.1 or later) to operate with DXi 2.2.x Software.

OST NetBackup Version

You must use NetBackup version 7.x or higher to resolve the following known issue in older versions of NetBackup:

- Subsequent Optimized Duplication jobs may fail or become stuck when running jobs are canceled or stopped.

Running Healthchecks

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

Contacting Quantum

More information about this product is available on the Service and Support website at <http://www.quantum.com/ServiceandSupport/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.

Note: For DXi V1000 Standard Edition users, documentation, community support, and other resources are available through Forum V (<http://www.quantum.com/forumv>, Quantum's online support forum for virtualization products.)

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

United States	1-800-284-5101 (toll free) +1-720-249-5700
EMEA (Europe, Middle East and Africa)	+800-7826-8888 (toll free) +49-6131-3241-1164
APAC (Asia Pacific)	+800-7826-8887 (toll free) +603-7953-3010
India	000-800-001-6014 (toll free) +603-7953-3010
Mexico	001-877-785-2465 (toll free) +1-720-249-5700
South and Central America	+800-33441000 (toll free) +1-720-249-5700

For worldwide support:

<http://www.quantum.com/ServiceandSupport/Index.aspx>
