DXi-Series Log Location and Description

(DXi4600, DXi4700, DXi4800, DXi6700, DXi6800, DXi6900, DXi8500, DXi9000)

Note: These are the log files that are the most common, but there are many other log files that may need to be used to troubleshoot issues. Issues may need logs from other locations, such as Backup application to resolve issues.

With the DXi systems, there are four main types of log files:

- **System Diagnostics File**: (collect log) Contains information related to the DXi system
- **Storage Array Diagnostics File**: Contains information related to the storage arrays
- **Dell Diagnostics Report (DSET or TSR)**: Dell hardware and storage array logs
- **Advanced Reporting Logs**: Graphical logs/charts used for analysis

System Diagnostics File

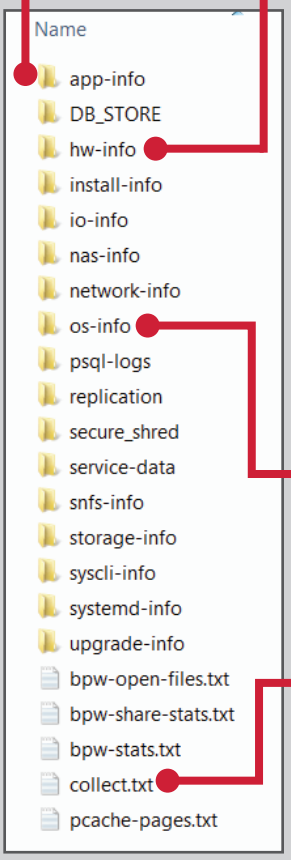
The individual logs that are part of the System Diagnostics File are constantly updated on the DXi system. You can access and review the individual logs live on the DXi system, or you can collect the System Diagnostics File at a given point in time.

After the System Diagnostics File (collect log) zip file is uncompressed, the file contains the following folders and files inside **scratch\collect\node1-collection**. The log file generated has the name structure that includes the serial number of the system, date, and time the logs was generated. Example: **collect-CX1426BVW00005-2018-01-13-07-54-33.zip**

Important log files and descriptions are listed below (including the location on the system for reference).

app-info

- **tsunami.log**
  (On system: var/log/DXi/tsunami.log)
  - Includes information about blockpool, truncation, tape states, space reclamation, OST, and firmware issues.
  - Logs roll over when files reach about 200MB. The older files are saved in separate files, for example tsunami.log.x.
- **tsunami_trace.log**
  (On system: /var/log/DXi/tsunami_trace.log)
  - Includes different information, specifically for replication, deduplication, and space reclamation. Has rollover files.
- **srvcLog.hist**
  (On system: /var/log/DXi/srvcLog.hist)
  - Includes a history of RAS ticket events, including the time stamp and event type.
- **service.log**
  (Not on 4.x system. On 2.x and 3.x system: var/log/DXi/service.log)
  - Includes a log of all activities performed in the **service.sh** script.
- **healthcheck-missingtags**
  (On system: **/snfs/healthcheck/missingTags**)
  - Includes a list of tags missing from the blockpool.
- **systemconfig.txt**
  (On system: /tmp/systemconfig.txt)
  - Includes a listing of the system configuration.



hw-info

- **current.config**
  (Not on 4.x system. On 2.x and 3.x system: /opt/DXi/hwdetect/current.config)
  - Is created on a system boot or reboot and includes the current configuration of the system.
- **factory.config**
  (On system: /opt/DXi/hwdetect/factory.config)
  - Is the output from running a factory detect from service.sh and updates the factory config file.
- **changes.diff**
  (Not on 4.x system. On 2.x and 3.x system: /opt/DXi/hwdetect/changes.diff)
  - Shows the differences between the factory.config file and the current.config file on a boot or reboot.

os-info

- **messages**
  (On system: /var/log/messages)
  - Includes information about the operating system and StorNext filesystem issues.

collect.txt

(On system: none)

- This file is useful when quickly verifying the system's configuration. It includes firmware version, system serial number, hostname, uptime, network stats, Fibre informaton, VTL information, and more. The collect.txt lists the location of the system logs within the diagnostics file and on the DXi system.

WARNING: Never edit any log file with **vi** on the system. Large files such as the **tsunami.log**, may consume all the swap memory and crash the system. Instead use the less command to review log files on a DXi system.

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Storage Array Diagnostics File

DXi6800, DXi6900, DXi8500, and DXi9000 LSI Arrays

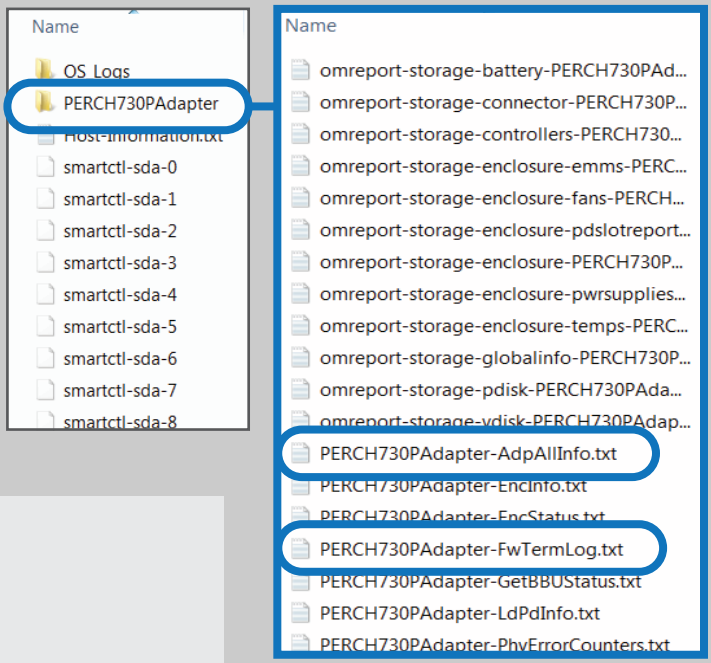
The storage array diagnostic file for these DXi systems includes the DSET (See Dell Diagnostic Report for log information), Hx00 collect, and the LSI array logs. The log file generated has the name structure that includes the serial number of the system, date, and time the logs was generated. You can collect a snapshot of the storage array diagnostic file at a given point in time.

Example: StorageCollect-CX1426BVW00005-2018-01-13-08-00-22.zip

Hx00 Array Logs

The logs are found in an embedded zip file.
Example: Hx00collect-SV1846BVZ14044-2018-12-03-19-36-45.zip

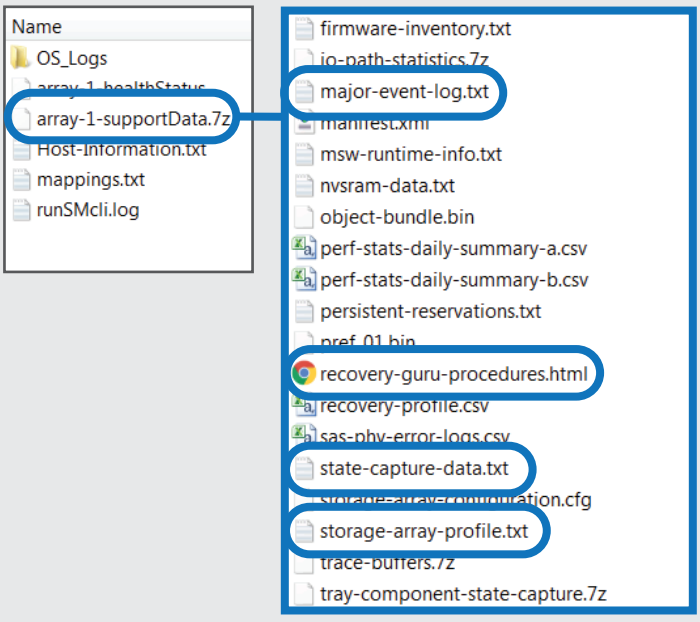
- **H7X0-AdpAllInfo.txt** or **PERCH7X0PAdapter-AdpAllInfo.txt**: Shows the configuration and list components connected to the controller.
- **H7X0-FwTermLog.txt** or **PERCH7X0PAdapter-FwTermLog.txt**: Includes a detailed record of the events for the PERC controller.



LSI Array Logs

The logs are found in the zip file and each array will be found in an embedded zip file.
Example:
StorageCollect-SerialNumber-datecode.zip\LSIcollect-SerialNumber-date.zip\array-1a-supportData.zip or
StorageCollect-SerialNumber-datecode.zip\LSIcollect-SerialNumber-date.zip\array-1-supportData.7z

- **majorEventsLog.txt** or **major-event-log.txt:** Includes a detailed record of events occurring on the storage array.
- **readLinkStatus.csv:** (Only on older controllers) Lists diagnosed drive-side channel errors (ESM, SFP, Drives Link Failures, Loss of sync or signa, Invalid CRC errors, etc.)
- **recoveryGuruProceedures.html** or **recovery-guru-procedures.html:** Lists detected storage array problems, possible causes, and possible solutions.
- **socStatistics.csv:** (Only on older controllers, switch on a chip): Provides statistical information to the Emulex SOC chip that handle the loop switches on the NetApp controller and drive trays (Port State, CRC errors, OS error count, etc.)
- **stateCaptureData.txt** or **state-capture-data.txt**: Provides the current state of the controller and drives. This log shows the output of a series of controller shell commands.
- **storageArrayProfile.txt** or **storage-array-profile.txt:** Provides the current physical and logical configuration for the storage array.



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Storage Array Diagnostics File (continued)

DXi4700 and DXi4800 Dell Arrays

The storage array diagnostic file for these systems includes the DSET log and some OS logs. The log file can be generated at any time and has the name structure that includes the serial number of the system, date, and time the log was generated. (See Dell Diagnostic Report for log information)

Example: DELLcollect-SV1845BVX18136-2018-12-05-11-06-56.zip

DXi6700 3ware Arrays

The storage array diagnostic file for these systems includes the 3ware logs and some OS logs. The log file can be generated at any time and has the name structure that includes the serial number of the system, date, and time the logs was generated. **Note:** Most of the logs needed to investigate 3ware issues are included in the System Diagnostics File (collect log scratch\collect\node1-collection\hw-info\minicollect and scratch\collect\node1-collection\hw-info\RAIDstatus-collect).

Example: 3wcollect-CX1128BVE00555-2012-02-02-12-39-32.zip

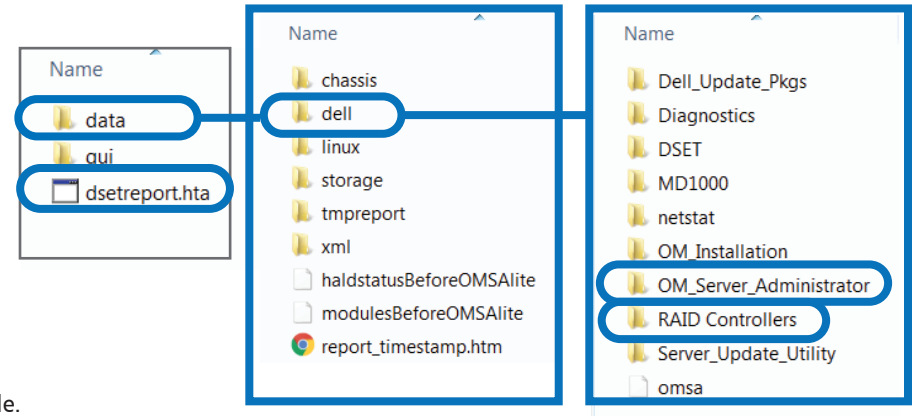
Dell Diagnostic Report (DSET [2.x and 3.x] or TSR [4.x])

The DSET log file can be generated at any time and has the name structure that includes the system name. This log will only be available for system with Dell node which is all systems except the 6700 product). The DSET will need to be unzipped to see the files. The version for 2.x and 3.x firmware requires the password "dell" to unzip the files. The 4.x version does not require a password.

Example: DSET_Report_for_Quantum_MXPADXi1.zip

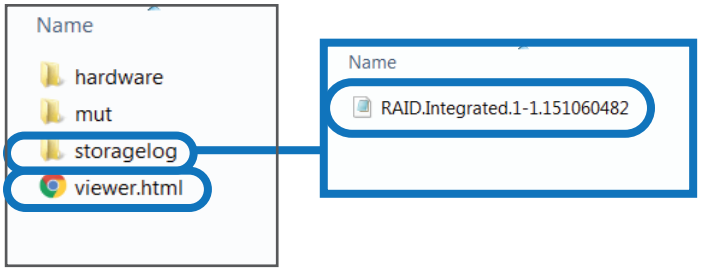
DSET (2.x and 3.x DXi Firmware)

- **dsetreport.hta:**
  This file will open and give you a graphical view of the system components and the statuses.
- **\data\dell\RAID Controllers\Controller_X.txt:**
  Includes a detailed record of events occurring on the storage array.
- **\data\dell\OM_Server_Administrator\alertlog.txt:**
  Includes a detailed record of events occurring on the node.



TSR (4.x DXi Firmware)

- **viewer.html:**
  (SupportAssist Collection) This file will open in a web browser and give you a graphical view of the system components and the statuses.
- **\storagelog\RAID.location.X-X.XXXXXXXX:**
  (location will be **Integrated** or **SlotX**) Includes a detailed record of events occurring on the storage array.



Advanced Reporting Logs

The Advanced Reporting log file can be generated at any time and has the name structure that includes the serial number of the system, date, and time the logs was generated. These logs need to be copied to the ftp site **gps.quantum.com** in the **incoming\DART** folder to be parsed. The output can be viewed at http://dart.quantum.com/.

Example: DXiStats-SV1845BVX18136-20181205-150100.tar.gz

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