opentext™

OpenText Availability and OpenText Migrate

Reference Guide

Notices

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If you need technical assistance, you can contact Customer Support. All basic configurations outlined in the online documentation will be supported through Customer Support. Assistance and support for advanced configurations may be referred to a Pre-Sales Systems Engineer or to Professional Services.

Man pages are installed and available on OpenText Availability and OpenText Migrate Linux servers. These documents are bound by the same license agreement as the software installation.

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Contents

Chapter 1 **Overview**

In this document, you will find the following OpenText Availability and OpenText Migrate reference information.

- *Log files* on page 5—This section identifies the various log files available for the OpenText Availability and OpenText Migrate products, including how to view them through the OpenText Replication Console and through a text editor. It also includes filtering the data in the engine log on Windows using LogViewer.
- *Statistics* on page 12—The DTStat utility allows you to view captured OpenText Availability and OpenText Migrate statistics from a Windows or Linux job.
- *Replication service view* on page 22—These lists identify all of the OpenText Availability and OpenText Migrate replication details that you can view for a Windows server.
- *Error codes* on page 35—This section lists error codes that you may see in the OpenText Replication Console or in log files.
- *Windows Event messages* on page 41—This list includes all OpenText Availability and OpenText Migrate alerts logged to Windows Event log.
- *Performance Monitor* on page 98—This list includes all OpenText Availability and OpenText Migrate statistics logged to Windows Performance Monitor.
- *Microsoft Systems Center Operations Manager 2007* on page 106—This section contains details to help you install and customize the OpenText Availability and OpenText Migrate SCOM 2007 pack.
- *Microsoft System Center 2012 Operations Manager* on page 109—This section contains details to help you install and use the OpenText Availability and OpenText Migrate 2012 Management Pack.
- *SNMP* on page 111—This section provides details on OpenText Availability and OpenText Migrate SNMP, including a list of traps and statistics
- *Server and job settings* on page 122—The easiest way to view and change select server and job settings is through the OpenText Replication Console. However, not all of the settings are available there. The remaining settings must be viewed and updated manually. This list identifies all server and job settings. Not all setting are applicable to all server operating systems.

Chapter 2 **Log files**

OpenText Availability and OpenText Migrate generate log files to gather alerts, which are notification, warning, and error messages.

- **Double-Take log**—This log records data from the Double-Take service, also referred to as the OpenText Availability and OpenText Migrate engine. The Double-Take service controls the data movement functions like OpenText Availability and OpenText Migrate mirroring and replication.
- **Double-Take Management Service log**—This log records data from the Double-Take Management Service. It controls all non-data-movement aspects of each job.
- **Job log**—This log records job specific messages. There is a unique job log for each job you create.
- **OpenText Replication Console log**—This log records data and user interaction from the OpenText Replication Console.

All of these log files can be viewed through the OpenText Replication Console or a standard text editor. See *Viewing the log files through the OpenText Replication Console* on page 6 and *Viewing the log files through a text editor* on page 10 for details on each.

> For cluster environments, be sure and review the log files on all nodes of the cluster.

Viewing the log files through the OpenText Replication Console

You can view all logs through the OpenText Replication Console.
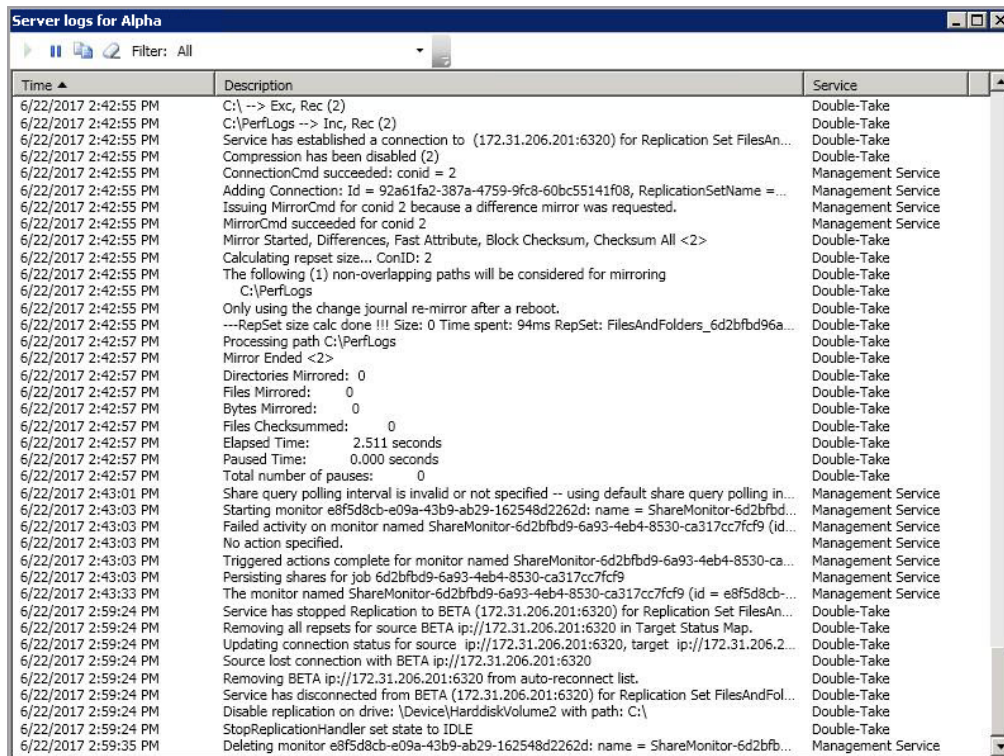
- *Viewing the engine and Management Service logs* on page 6
- *Viewing the job log file* on page 8
- *Viewing the OpenText Replication Console log file* on page 9

Viewing the engine and Management Service logs

You can view the engine and Management Service logs using either of these two methods.

- On the **Servers** page, highlight a server in the list and click **View Server Logs** from the toolbar.
- On the **Jobs** page, right-click a job and select **View Logs**. Select either the source server log or the target server log.

Separate logging windows allow you to continue working in the OpenText Replication Console while monitoring log messages. You can open multiple logging windows for multiple servers. When the OpenText Replication Console is closed, all logging windows will automatically close.

Start

> This button starts the addition and scrolling of new messages in the window.

Pause

This button pauses the addition and scrolling of new messages in the window. This is only for the **Server logs** window. The messages are still logged to their respective files on the server.

Copy

This button copies the messages selected in the **Server logs** window to the Windows clipboard.

Clear

This button clears the **Server logs** window. The messages are not cleared from the respective files on the server. If you want to view all of the messages again, close and reopen the **Server logs** window.

Filter

From the drop-down list, you can select to view all log messages or only those messages from the Double-Take log or the Management Service log.

Time

This column in the table indicates the date and time when the message was logged.

Description

This column in the table displays the actual message that was logged.

Service

This column in the table indicates if the message is from the Double-Take log or the Management Service log.
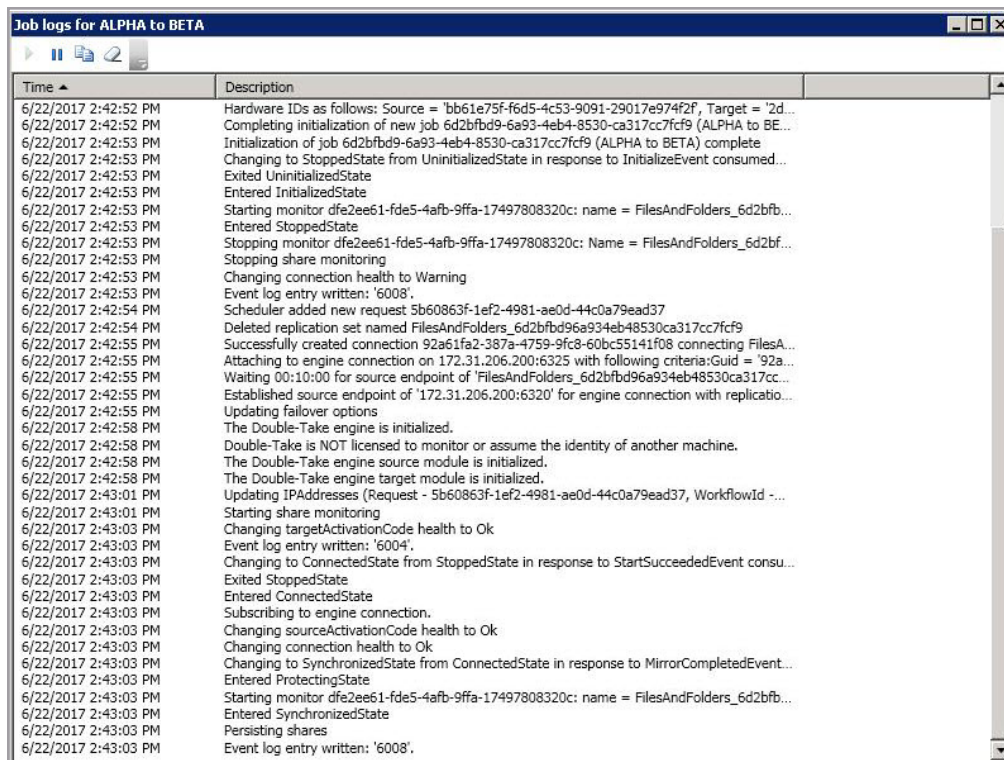
Viewing the job log file

You can view a job log file through the OpenText Replication Console by selecting **View Job Log** from the toolbar on the **Jobs** page. Separate logging windows allow you to continue working in the OpenText Replication Console while monitoring log messages. You can open multiple logging windows for multiple jobs. When the OpenText Replication Console is closed, all logging windows will automatically close.

Because the job log window communicates with the target server, if the console loses communication with the target server after the job log window has already been opened, the job log window will display an error. This includes a target cluster node roll that causes the job log to be hosted by a new cluster node.

The following table identifies the controls and the table columns in the **Job logs** window.

Start

This button starts the addition and scrolling of new messages in the window.

Pause

This button pauses the addition and scrolling of new messages in the window. This is only for the **Job logs** window. The messages are still logged to their respective files on the server.

Copy

This button copies the messages selected in the **Job logs** window to the Windows clipboard.

Clear

This button clears the **Job logs** window. The messages are not cleared from the respective files on the server. If you want to view all of the messages again, close and reopen the **Job logs** window.

Time

This column in the table indicates the date and time when the message was logged.

Description

This column in the table displays the actual message that was logged.

Viewing the OpenText Replication Console log file

You can view the OpenText Replication Console log file by using the following instructions.

1. Select **Tools**, **Options**.
2. Expand the **Diagnostics** section, if necessary.
3. Click **View Log File**.
4. Click **Cancel** to return back to the console page you were on previously. (Unless you were in the middle of a job creation workflow, in which case you will be returned to the beginning of the workflow.)

The log file is opened in the default text editor. The file will remain open until you close.

Viewing the log files through a text editor

You can view all logs through a standard text editor.

- **Windows and Linux engine log**—On a Windows server, the engine log file is located, by default, in \Program Files\OpenText\Replication. On a Linux server or appliance, the engine log file is located, by default, in /var/log/DT.

  The file consists of a base name, a series number, and an extension. The base name is dtlog and the extension is .dtl. The series number ranges from 1 to 999. For example, OpenText Availability and OpenText Migrate begin logging messages to dtlog1.dtl. When this file reaches its maximum size, which by default is 5 MB, the next log file will be written to dtlog2.dtl. As long as log messages continue to be written, files dtlog3.dtl, dtlog4.dtl, and dtlog5.dtl will be opened and filled. When the maximum number of files is reached, which by default is 20, the oldest file is deleted. For example, when dtlog6.dtl is created, dtlog1.dtl is deleted, and when dtlog7.dtl is created, dtlog2.dtl is deleted. When file dtlog999.dtl is created and filled, dtlog1.dtl will be re-created and OpenText Availability and OpenText Migrate will continue writing log messages to that file.

  The following list describes the information found in each column of the log file.

  1. Date the message was generated
  2. Time the message was generated
  3. Process ID
  4. Thread ID
  5. Sequence number is an incremental counter that assigns a unique number to each message
  6. The type or level of message displayed - 1 for warning or error message and 2 for informational message
  7. Message ID, if any
  8. Message text

- **Windows Management Service log**—On a Windows server, the Management Service log file is located, by default, in \Program Files\OpenText\Replication\Service\Logs. The file consists of a base name, an optional date, an optional series number, and an extension. The base name is ManagementService and the extension is .log. When this file reaches its maximum size, 10 MB, the file will be renamed with the current date in year, month, day format. For example, it might be ManagementService.20200207.log. The latest log messages are then stored in ManagementService.log. If the main file fills again on the same day, then a series number will be used. In this case, the ManagementService.log file will be renamed to ManagementService.20200207.1.log. If the main file is filled on a different day, that date will be specified. In each case, the latest log messages will be stored in ManagementService.log. When the maximum number of files is reached, which is 5, the oldest file is deleted.

- **Linux Management Service log**—On a Linux server or appliance, the management service log file is called master.log and is located, by default, in /opt/dbtk/log. This log rolls when it reaches the maximum size. The series number for the log file is added after the .log extension, so you may see master.log, master.log.1, master.log.2, and so on.

- **Windows job log**—For a Windows job, the job log is located on the target server in the \Service\Logs subdirectory where you installed OpenText Availability and OpenText Migrate. The job log file consists of a global unique identifier (GUID) for the job and the job name. When

this file reaches its maximum size, 10 MB, the file will be renamed with the current date in year, month, day format. For example, it might be a6cbf990-ba67-403d-855f-5bb44c18e1d6 (alpha to beta).20200207.log. The latest log messages are then stored in the base GUID_name.log file. If the main file fills again on the same day, then a series number will be used. In this case, the example file would be renamed to a6cbf990-ba67-403d-855f-5bb44c18e1d6 (alpha to beta).20200207.1.log. If the main file is filled on a different day, that date will be specified. In each case, the latest log messages will be stored in the main GUID_name.log file. When the maximum number of files is reached, which is 5, the oldest file is deleted.

- **Linux job log**—For a Linux job, the job log is located on the appliance in the /opt/dbtk/log directory. The file is called job-<GUID>.log, where GUID is a global unique identifier. The maximum size is 10 MB and then the file will roll to a new log file, maintaining three older log files before replacing the oldest.

- **OpenText Replication Console log**—This file is called OpenText Replication Console.log and is located in \Users\<your user name>\AppData\Local\OpenTextReplication\ConsoleUI\Logs. This location is hidden, so you will have to search directly for the file name or display hidden files to browse for it. Also note that the log file is dependent on the user who is logged in, so there will be multiple OpenText Replication Console log files if you have multiple OpenText Availability and OpenText Migrate users.

Chapter 3 **Statistics**

The DTStat utility allows you to view captured OpenText Availability and OpenText Migrate statistics from a Windows or Linux job. Statistics logging is the process of taking snapshots of OpenText Availability and OpenText Migrate statistical data. The data can be written to a file for future use and analysis. The statistics log file created is a binary file. To view the log file, you must run the DTStat utility from the command prompt.

Sample DTStat output

```
================================
0/11/10 12:48:05:2040
================================
SYSTEMALLOCATOR::Total Bytes: 0
IQALLOCATOR::Total Bytes: 0
SECURITY::Logins : 1 FailedLogins : 0
KERNEL::SourceState: 2 TargetState: 1 Start Time: Tue Sep 11 12:45:26 2007
RepOpsGenerated: 436845 RepBytesGenerated: 0
MirOpsGenerated: 3316423 MirBytesGenerated: 108352749214952
    FailedMirrorCount: 0 FailedRepCount: 0
    ActFailCount: 0 TargetOpenHandles: 0 DriverQueuePercent: 0
TARGET:: PeerAddress: 10.10.1.104 LocalAddress: 10.10.1.104
    Ops Received: 25 Mirror Ops Received: 23
    Retries: 0 OpsDropped: 0 Ops Remaining: 0
    Orphan Files Removed: 0 Orphan Directories Removed: 0 Orphan Bytes Removed: 0
    Bytes In Target Queue: 0 Bytes In Target Disk Queue: 0
    TasksSucceeded: 0 TasksFailed: 0 TasksIgnored: 0
SOURCE::autoDisConnects : 0 autoReConnects : 1
    lastFileTouched : /log/data_file
CONNECTION:: conPeerAddress: 10.10.1.104
    connectTime: Tue Sep 11 12:45:34 2007
    conState: 1 conOpsInCmdQueue: 0 conOpsInAckQueue: 0
    conOpsInRepQueue: 0 conOpsInMirQueue: 0 conBytesInRepQueue: 0
    conOpsTx: 27 conBytesInMirQueue: 0 conBytesTx: 14952687269
    conBytesCompressedTx: 14952
    conOpsRx: 201127 conBytesRx: 647062280 conResentOpCount: 0 conBytesInDiskQueue: 0
    conBandwidthLimit: 429496295 conBytesSkipped: 22867624 conMirrorBytesRemain: 0
    conMirrorPercent: 100.0%
    conTaskCmdsSubmitted: 0 conTaskCmdsQueued: 0
    conTasksSucceeded: 0 conTasksFailed: 0 conTasksIgnored: 0
```

Viewing the statistics file

The statistics log file created is a binary file. To view the log file, you must run the DTStat utility from a command prompt. From the directory where OpenText Availability and OpenText Migrate is installed, run the DTStat command.

Command

DTSTAT

Description

Starts the DTStats statistics logging utility from a command prompt

Syntax

DTSTAT [-p] [-i <*interval*>] [-l <level>] [-t <*tofile*>] [-f <*fromfile*>] [-s <*tofile*>] [-st <*tofile*>] [-IP <*address*>] [-Start <*mm*/*dd*/*yyyyhh*:*mm*>][-Stop <*mm*/*dd*/*yyyyhh*:*mm*>] [-Server <*ip_address*> <*port_number*>]

Options

- -p—Do not print the output to the screen. This option will increase the speed of the output to files.
- -i—Refresh from shared memory every interval seconds
- -l—Specifies the logging level. The default is 2.
- -t—Save the snapshot data from memory to the specified binary file
- -f—Reads from a previously saved binary file that was generated using the -t option instead of reading from memory
- -s—Saves only the connection data from the data in memory to an ASCII, comma-delimited file
- -f -s—Saves only the connection data from a previously saved binary file to an ASCII, comma-delimited file
- -st—Saves only the target data from the data in memory to an ASCII, comma-delimited file
- -f -st—Saves only the target data from a previously saved binary file to an ASCII, comma-delimited file
- -IP—Filters out the specified address in the IP address field and prints only those entries. Specify more than one IP address by separating them by a comma.
- -Start—Filters out any data prior to the specified date and time
- -Stop—Filters out any data after the specified date and time
- -Server—Connects DTStat to the specified IP address using the specified port number instead of to the local machine

Examples

- DTStat -p -f statistic.sts -s statistic.csv
- DTStat -p -f statistic.sts -st statistic.csv

Notes

- This command is not case-sensitive.
- If no options are specified, DTStat will print the output to the screen at an interval of every one second.
- If the statistics are not changing, DTStat will discontinue writing until statistics begin updating again.

Statistics

The following table identifies the OpenText Availability and OpenText Migrate statistics.

The categories you see will depend on the function of your server (source, target, or both).

If you have multiple IP addresses connected to one target server, you will see multiple Target sections for each IP address.

Statistic values are cumulative. For example if Kernel, RepBytesGenerated is 10000 at 1:00pm and 25000 at 2:00pm, the difference is 15000 and that is the amount of change that occurred within that one hour.

If you convert your statistics output to an ASCII, comma-delimited file using the dtstat -s option, keep in mind the following differences.

- The statistic labels will be slightly different in the ASCII file than in the following table.
- The statistics will appear in a different order in the ASCII file than in the following table.
- The statistics in the Target Category in the following table are not included in the ASCII file.
- The Kernel statistic Target Open Handles is not included in the ASCII file.
- The ASCII file contains a Managed Pagefile Alloc statistic which is no longer used.

Date/Time Stamp

> The date and time that the snapshot was taken. This is the date and time that each statistic was logged. By default, these are generated once a second, as long as there are statistics being generated. If mirroring/replication is idle, then DTStat will be idle as well.

System Allocator, Total Bytes

> The number of bytes currently allocated to the system pagefile

IQAllocator, Total Bytes

> The number of bytes currently allocated to the intermediate queue

Security, Logins

> The number of successful login attempts

Security, Failed Logins

> The number of failed login attempts

Kernel, SourceState

> - 0—Source is not running
> - 1—Source is running without the replication driver
> - 2—Source is running with the replication driver

Kernel, TargetState

- 0—Target is not running
- 1—Target is running

Kernel, Start Time

Date and time stamp indicating when the Double-Take service was loaded

Kernel, RepOpsGenerated

The number of replication operations generated by the file system driver. An op is a file system operation. OpenText Availability and OpenText Migrate replicate data by sending the file system operations across the network to the target. RepOpsGenerated indicates the number of file system operations that have been generated by replication.

Kernel, RepBytesGenerated

The number of replication bytes generated by the file system driver. This is the number of bytes generated during replication. In other words, this is roughly the amount of traffic being sent across the network that is generated by replication. It does not take into account TCP/IP overhead (headers and such).

Kernel, MirOpsGenerated

The number of mirror operations generated. Mirroring is completed by transmitting the file system operations necessary to generate the files on the target. This statistic indicates the number of file system operations that were transmitted during the initial mirror. It will continue to increase until the mirror is complete. Any subsequent remirrors will reset this field to zero and increment from there.

Kernel, MirBytesGenerated

The number of mirror bytes generated. This is the number of bytes generated during mirroring. In other words, this is roughly the amount of traffic being sent across the network that is generated by the mirror. It does not take into account TCP/IP overhead (headers and such), however it does account for attributes and other overhead associated with creating a file. With many small files in a directory, you will see larger statistics than expected because of the file creation overhead. Any subsequent remirror will reset this field to zero and increment from there.

Kernel, FailedMirrorCount

The number of mirror operations that failed due to an error reading the file from the disk

Kernel, FailedRepCount

The number of replication operations that failed due to an error reading the file from the disk

Kernel, ActFailCount

The number of license key failures when loading the OpenText Availability and OpenText Migrate functionality on a server. License keys can be bad for reasons

such as expiration of evaluation licenses, duplicate licenses, incorrect licenses, and so on.

Kernel, TargetOpenHandles

The number of handles currently open on the target

Kernel, DriverQueuePercent

The amount of throttling calculated as a percentage of the stop replicating limit

Target, PeerAddress

The IP address of the source machine

Target, LocalAddress

The IP address of the target machine.

Target, Ops Received

The total number of operations received since the Double-Take service was loaded

Target, Mirror Ops Received

The total number of mirror operations received since the Double-Take service was loaded. This number does not reset to zero for remirrors.

Target, Retries

The number of retries performed before all operations were completed

Target, OpsDropped

The number of dropped operations

Target, Ops Remaining

The total number of operations that are in queue

Target, Orphan Files Removed

The number of orphan files removed

Target, Orphan Directories Removed

The number of orphan directories removed

Target, Orphan Bytes Removed

The number of orphan bytes removed

Target, Bytes In Target Queue

The number of bytes in the system memory queue

Target. Bytes In Target Disk Queue

The number of bytes in the disk queue

Target, TasksSucceeded

> The number of task commands that have succeeded

Target, TasksFailed

> The number of task commands that have failed

Target, TasksIgnored

> The number of task commands that have been ignored

Source, autoDisConnects

> The number of automatic disconnects since starting OpenText Availability and OpenText Migrate. Auto-disconnects occur because the source no longer sees the target This could be because the connection between the two has failed at some point or because the target machine data is changing on the source faster than the source can get the data to the target. This field tracks the number of times an auto-disconnect has occurred since the Double-Take service was started.

Source, autoReConnects

> The number of automatic reconnects since starting OpenText Availability and OpenText Migrate. Auto-reconnect occurs after a target machine is back online. This field tracks the number of times an auto-reconnect has happened since the Double-Take service was started.

Source, lastFileTouched

> The last file that had a replication operation executed

Connection, conPeerAddress

> The IP address of the source machine

Connection, connectTime

> The time that this connection was established

Connection, conState

> The state of the active connection
>
> - 0—None. This indicates there is no active connection. This may be because the connection has not been established or the underlying connection is unavailable. Statistics are still available for the source and target machines.
> - 1—Active. This indicates that the connection is functioning normally and has no scheduling restrictions imposed on it at this time. (There may be restrictions, but it is currently in a state that allows it to transmit.)
> - 2—Paused. This indicates a connection that has been paused.
> - 4—Scheduled. This indicates a connection that is not currently transmitting due to scheduling restrictions (bandwidth limitations, time frame limitations, and so on).
> - 8—Error. This indicates a connection that is not transmitting because something has gone wrong (for example, lost connection).

Only the Scheduled and Error states can coexist. All other states are mutually exclusive. Statistics will display a conState of 12 when the connection is in both a scheduled and an error state because this is the sum of the two values (4 + 8).

Connection, conOpsInCmdQueue

The number of operations in queue

Connection, conOpsInAckQueue

The number of operations waiting in the acknowledgment queue. Each operation that is generated receives an acknowledgment from the target after that operation has been received by the target. This statistic indicates the number of operations that have yet to receive acknowledgment of receipt.

Connection, conOpsInRepQueue

The number of replication operations in queue

Connection, conOpsInMirQueue

The number of mirror operations in queue

Connection, conBytesInRepQueue

The number of replication bytes in queue

Connection, conOpsTx

The number of operations transmitted. This is the total number of operations that OpenText Availability and OpenText Migrate has transmitted as a source. In other words, the cumulative number of operations transmitted by this source to all connected targets.

Connection, conBytesInMirQueue

The number of mirror bytes in queue

Connection, conBytesTx

The number of bytes transmitted. This is the total number of bytes that OpenText Availability and OpenText Migrate has transmitted as a source. In other words, the cumulative number of bytes transmitted by this source to all connected targets.

Connection, conBytesCompressedTx

The number of compressed bytes transmitted

Connection, conOpsRx

The number of operations received. The number of operations that the target for this connection has received from this source.

Connection, conBytesRx

The number of bytes received. The number of bytes that the target for this connection has received from this source.

Connection, conResentOpCount

    The number of operations resent because they were not acknowledged

Connection, conBytesInDiskQueue

    The number of bytes in queue

Connection, conBandwidthLimit

    The amount of bandwidth that may be used to transfer data

Connection, conBytesSkipped

    The number of bytes skipped during a difference mirror. During a difference mirror, if OpenText Availability and OpenText Migrate detects that there have been no changes to a file, then it will indicate the number of bytes it did not send for this file in this field.

Connection, conMirrorBytesRemaining

    The number of mirror bytes remaining to be transmitted

Connection, conMirrorPercent

    The percentage of the mirror that has been completed. This field is determined if the data set size was calculated.

Connection, conTaskCmdsSubmitted

    The number of task commands that have been submitted

Connection, conTaskCmdsQueued

    The number of task commands that have been queued

Connection, conTasksSucceeded

    The number of task commands that have succeeded

Connection, conTasksFailed

    The number of task commands that have failed

Connection, conTasksIgnored

    The number of task commands that have been ignored

Connection, ConRPT

    The UTC time at which replication is synchronized between the source and target. The difference between the current UTC time and this time is the time period of data that would be lost if a failure were to occur at the current time.

Connection, ConRPL

    The number of seconds replication is behind on the target compared to the source. This is the time period of data that would be lost if a failure were to occur at the current time.

Connection, ConCurrentTime

The current UTC time

Connection, ConMirrorStartTime

The UTC time when mirroring started

Connection, ConMirrorEndTime

The UTC time when mirroring ended

Chapter 4 Replication service view

You can view the replication service details for a Windows server by right-clicking on a server on the **Servers** page and selecting **View Replication Service Details**. A separate window will open allowing you to continue working in the OpenText Replication Console while monitoring the replication service details. You can open multiple **Replication service view** windows for multiple servers. When the OpenText Replication Console is closed, all **Replication service view** windows will automatically close. If you do not want to open separate windows, you can switch between servers that are in your OpenText Replication Console from within the **Replication service view** window by using the drop-down list of servers in the toolbar.

The left pane of the **Replication service view** window is divided into the root and three folders.

- **Root**—This section shows high-level overview information for the server. See *Root items* on page 23 for the items in this **Server Properties** section.

- **Connections**—This section shows any active connections from this server. A connection is the underlying component of a job that controls data movement, like mirroring and replication. The OpenText Availability and OpenText Migrate engine controls the connection.

  A connection may or may not be associated with a job. If it is not associated with a job, it can be deleted. However, you should be certain it is not associated with a job because deleting a connection that is being used can corrupt its parent job. Use the **Delete** button in the toolbar to delete a connection.

  When you highlight the **Connections** folder in the left pane, all active connections from this server will be displayed in the right pane. See *Connections folder items* on page 23 for details on the data displayed in this view. If you highlight a specific connection under the **Connections** folder, only the information for that connection will be displayed in the right pane. The connections are identified by the type of job and the connection ID. See *Specific connection items* on page 27 for details on the data displayed in this view.

- **Replication sets**—This section shows any replication sets on this server. The replication set is the data that your job is protecting.

  A replication set may or may not be associated with a connection. If it is not associated with a connection, it can be deleted. Use the **Delete** button in the toolbar to delete a replication set.

  When you highlight the **Replication sets** folder in the left pane, all replication sets on this server will be displayed in the right pane. See *Replication sets folder items* on page 30 for details on the data displayed in this view. If you highlight a specific replication set under the **Replication sets** folder, only the information for that replication set will be displayed in the right pane. See *Specific replication set items* on page 31 for details on the data displayed in this view.

- **Target connection entries**—This section is like the **Connections** section, however it shows any active connections to this server.

  You may see target connections that are not associated with a job. These connections will have a **Target Data State** of **Disconnected**. For example, this may happen if you delete a stopped job. These disconnected target connections cannot be deleted. They will be reused when a new connection (same job type, same servers) is created.

When you highlight the **Target connection entries** folder in the left pane, all active connection to this server will be displayed in the right pane. See *Target connection entries folder items* on page 32 for details on the data displayed in this view. If you highlight a specific connection under the **Target connection entries** folder, only the information for that connection will be displayed in the right pane. See *Specific target connection items* on page 33 for details on the data displayed in this view.

Root items

Server name

> The name of the server

Product version

> The OpenText Availability and OpenText Migrate version

Operating system

> The operating system version and edition

Source module

> Indicates if the source module is running on the server

Target module

> Indicates if the target module is running on the server

Failover module

> Indicates if the failover module is running on the server

Connections folder items

Replication Set

> The name of the replication set the connection is using

Connection ID

> The incremental counter used to number connections. The number is incremented when a connection is created. The counter is reset if there are no existing jobs and the Double-Take service is restarted.

Target Name

> The name of the target the connection is using, including the port number

Target IP

> The target IP address and port, as well as the location on the target where the replication set data is being stored. This is sometimes called the transform path.

Target Data State

- **OK**—The data on the target is in a good state.
- **Mirroring**—The target is in the middle of a mirror process. The data will not be in a good state until the mirror is complete.
- **Mirror Required**—The data on the target is not in a good state because a remirror is required. This may be caused by an incomplete or stopped mirror or an operation may have been dropped on the target.
- **Restore Required**—The data on the source and target do not match because of a failover condition. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Snapshot Reverted**—The data on the source and target do not match because a snapshot has been applied on the target. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Busy**—The source is low on memory causing a delay in getting the state of the data on the target.
- **Not Loaded**—OpenText Availability and OpenText Migrate target functionality is not loaded on the target server. This may be caused by a license key error.
- **Not Ready**—The Linux drivers have not yet completed loading on the target.
- **Unknown**—The console cannot determine the status.

Target Status

- **OK**—The target machine is active and online.
- **Not Loaded**—The target module is not loaded on the target. This may be caused by a license key error.
- **Paused**—The target machine is paused by user intervention.
- **Retrying**—The target machine is retrying operations for the connection.

Transmit Mode

- **Active**—Data is being transmitted to the target.
- **Paused**—Data transmission has been paused.
- **Scheduled**—Data transmission is waiting on schedule criteria.
- **Stopped**—Data is not being transmitted to the target.
- **Error**—There is a transmission error.
- **Unknown**—The console cannot determine the status.

Mirror Status

- **Calculating**—The amount of data to be mirrored is being calculated.
- **In Progress**—Data is currently being mirrored.
- **Waiting**—Mirroring is complete, but data is still being written to the target.
- **Idle**—Data is not being mirrored.
- **Paused**—Mirroring has been paused.
- **Stopped**—Mirroring has been stopped.
- **Removing Orphans**—Orphan files on the target are being removed or deleted depending on the configuration.
- **Verifying**—Data is being verified between the source and target.
- **Restoring**—Data is being restored from the target to the source.
- **Unknown**—The console cannot determine the status.

Replication Status

- **Replicating**—Data is being replicated to the target.
- **Ready**—There is no data to replicate.
- **Pending**—Replication is pending.
- **Stopped**—Replication has been stopped.
- **Out of Memory**—Replication memory has been exhausted.
- **Failed**—The Double-Take service is not receiving replication operations from the OpenText Availability and OpenText Migrate driver. Check the Event Viewer for driver related issues.
- **Unknown**—The console cannot determine the status.

Queued (ops)

The total number of mirror and replication operations that are in the source queue

Sent (bytes)

The total number of mirror and replication bytes that have been transmitted to the target

Sent Compressed (bytes)

The total number of compressed mirror and replication bytes that have been transmitted to the target. If compression is disabled, this statistic will be the same as **Bytes sent**.

Intermediate Queue (bytes)

The total amount of memory being used by the operations buffer queue

Disk Queue (bytes)

The amount of disk space being used to queue data on the source

Queued Replication (bytes)

The total number of replication bytes in the source queue

Sent Replication (bytes)

> The total number of replication bytes that have been transmitted to the target

Sent Compressed Replication (bytes)

> The total number of compressed replication bytes that have been transmitted to the target. If compression is disabled, this statistic will be the same as sent replication (bytes).

Sent Mirror (bytes)

> The total number of mirror bytes that have been transmitted to the target

Sent Compressed Mirror (bytes)

> The sent compressed mirror (bytes) statistic is the total number of compressed mirror bytes that have been transmitted to the target. If compression is disabled, this statistic will be the same as sent mirror (bytes).

Skipped Mirror (bytes)

> The total number of bytes that have been skipped when performing a difference mirror. These bytes are skipped because the data is not different on the source and target.

Remaining Mirror (bytes)

> The total number of mirror bytes that are remaining to be sent from the source to the target.

Queued Replication (ops)

> The total number of replication operations in the queue

Connected Since

> The source server date and time indicating when the current job was started. This field is blank, indicating that a TCP/IP socket is not present, when the job is waiting on transmit options or if the transmission has been stopped. This field will maintain the date and time, indicating that a TCP/IP socket is present, when transmission has been paused.

Bandwidth Limit (Kbps)

> If bandwidth limiting has been set, this statistic identifies the limit. The keyword **Unlimited** means there is no bandwidth limit set for the job.

Specific connection items

Replication set

The name of the replication set the connection is using

Connection ID

The incremental counter used to number connections. The number is incremented when a connection is created. The counter is reset if there are no existing jobs and the Double-Take service is restarted.

Transmit mode

- **Active**—Data is being transmitted to the target.
- **Paused**—Data transmission has been paused.
- **Scheduled**—Data transmission is waiting on schedule criteria.
- **Stopped**—Data is not being transmitted to the target.
- **Error**—There is a transmission error.
- **Unknown**—The console cannot determine the status.

Target data state

- **OK**—The data on the target is in a good state.
- **Mirroring**—The target is in the middle of a mirror process. The data will not be in a good state until the mirror is complete.
- **Mirror Required**—The data on the target is not in a good state because a remirror is required. This may be caused by an incomplete or stopped mirror or an operation may have been dropped on the target.
- **Restore Required**—The data on the source and target do not match because of a failover condition. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Snapshot Reverted**—The data on the source and target do not match because a snapshot has been applied on the target. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Busy**—The source is low on memory causing a delay in getting the state of the data on the target.
- **Not Loaded**—OpenText Availability and OpenText Migrate target functionality is not loaded on the target server. This may be caused by a license key error.
- **Not Ready**—The Linux drivers have not yet completed loading on the target.
- **Unknown**—The console cannot determine the status.

Target route

The target IP address and port

Compression

- **On** / **Level**—Data is compressed at the level specified.
- **Off**—Data is not compressed.

Bandwidth limit (Kbps)

If bandwidth limiting has been set, this statistic identifies the limit. The keyword **Unlimited** means there is no bandwidth limit set for the job.

Connected since

The source server date and time indicating when the current job was started. This field is blank, indicating that a TCP/IP socket is not present, when the job is waiting on transmit options or if the transmission has been stopped. This field will maintain the date and time, indicating that a TCP/IP socket is present, when transmission has been paused.

Mirror status

- **Calculating**—The amount of data to be mirrored is being calculated.
- **In Progress**—Data is currently being mirrored.
- **Waiting**—Mirroring is complete, but data is still being written to the target.
- **Idle**—Data is not being mirrored.
- **Paused**—Mirroring has been paused.
- **Stopped**—Mirroring has been stopped.
- **Removing Orphans**—Orphan files on the target are being removed or deleted depending on the configuration.
- **Verifying**—Data is being verified between the source and target.
- **Restoring**—Data is being restored from the target to the source.
- **Unknown**—The console cannot determine the status.

Mirror percent complete

The percentage of the mirror that has been completed

Mirror remaining (bytes)

The total number of mirror bytes that are remaining to be sent from the source to the target.

Mirror skipped (bytes)

The total number of bytes that have been skipped when performing a difference mirror. These bytes are skipped because the data is not different on the source and target.

Queued mirror (ops)

The total number of mirror operations in the queue

Sent mirror (bytes)

The total number of mirror bytes that have been transmitted to the target

Sent compressed mirror (bytes)

> The sent compressed mirror (bytes) statistic is the total number of compressed mirror bytes that have been transmitted to the target. If compression is disabled, this statistic will be the same as sent mirror (bytes).

Replication status

- **Replicating**—Data is being replicated to the target.
- **Ready**—There is no data to replicate.
- **Pending**—Replication is pending.
- **Stopped**—Replication has been stopped.
- **Out of Memory**—Replication memory has been exhausted.
- **Failed**—The Double-Take service is not receiving replication operations from the OpenText Availability and OpenText Migrate driver. Check the Event Viewer for driver related issues.
- **Unknown**—The console cannot determine the status.

Replication queue (bytes)

> The total number of replication bytes in the source queue

Sent replication (bytes)

> The total number of replication bytes that have been transmitted to the target

Sent compressed replication (bytes)

> The total number of compressed replication bytes that have been transmitted to the target. If compression is disabled, this statistic will be the same as sent replication (bytes).

Sent (bytes)

> The total number of mirror and replication bytes that have been transmitted to the target

Sent compressed (bytes)

> The total number of compressed mirror and replication bytes that have been transmitted to the target. If compression is disabled, this statistic will be the same as **Bytes sent**.

Intermediate queue (bytes)

> The total amount of memory being used by the operations buffer queue

Disk queue (bytes)

> The amount of disk space being used to queue data on the source

Queued (ops)

> The total number of mirror and replication operations that are in the source queue

Source Path

> The location of the data on the source that is being protected

Target Path

> The location on the target where the source replica data is located

Usage type

> All job types use the **Normal** replication set type.

Contains

> The number of files and directories contained in the replication set

Total size

> The amount of data contained in the replication set

Last calculated

> The date and time the size of the replication set was last calculated

Path

> The path including volume, drive, directory, file, and/or wild card

Attributes

> The attributes that define the path.
>
> * Inc—The specified path is included in the replication set
> * Exc—The specified path is not included in the replication set
> * Rec—The rule is automatically applied to the subdirectories of the specified path

---

Replication sets folder items

Name

> The name of the replication set

In Use

> Specifies if the replication set is being used by a connection

Last Calculated

> The date and time the size of the replication set was last calculated

Size (bytes)

The amount of data contained in the replication set

Files

The number of files contained in the replication set

Directories

The number of directories contained in the replication set

Specific replication set items

Name

The name of the replication set

Usage type

All job types use the **Normal** replication set type.

In Use

Specifies if the replication set is being used by a connection

Contains

The number of files and directories contained in the replication set

Total size

The amount of data contained in the replication set

Last calculated

The date and time the size of the replication set was last calculated

Path

The path including volume, drive, directory, file, and/or wild card

Attributes

The attributes that define the path.

- Inc—The specified path is included in the replication set
- Exc—The specified path is not included in the replication set
- Rec—The rule is automatically applied to the subdirectories of the specified path

Target connection entries folder items

Source Name

The name of the source the connection is using

Source Address

The source IP address and port the connection is using

Replication Set

The name of the replication set

Connection ID

The incremental counter used to number connections. The number is incremented when a connection is created. The counter is reset if there are no existing jobs and the Double-Take service is restarted.

Target Data State

- **Disconnected**—The target connection entry is not associated with a connection. This may happen if you delete a stopped job. These disconnected target connections cannot be deleted. They will be reused when a new connection (same job type, same servers) is created.
- **OK**—The data on the target is in a good state.
- **Mirroring**—The target is in the middle of a mirror process. The data will not be in a good state until the mirror is complete.
- **Mirror Required**—The data on the target is not in a good state because a remirror is required. This may be caused by an incomplete or stopped mirror or an operation may have been dropped on the target.
- **Restore Required**—The data on the source and target do not match because of a failover condition. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Snapshot Reverted**—The data on the source and target do not match because a snapshot has been applied on the target. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Busy**—The source is low on memory causing a delay in getting the state of the data on the target.
- **Not Loaded**—OpenText Availability and OpenText Migrate target functionality is not loaded on the target server. This may be caused by a license key error.
- **Not Ready**—The Linux drivers have not yet completed loading on the target.
- **Unknown**—The console cannot determine the status.

Target Status

- **OK**—The target machine is active and online.
- **Not Loaded**—The target module is not loaded on the target. This may be caused by a license key error.
- **Paused**—The target machine is paused by user intervention.
- **Retrying**—The target machine is retrying operations for the connection.

Specific target connection items

Source name

The name of the source the connection is using

Source address

The source IP address and port the connection is using

Replication set

The name of the replication set

Connection ID

The incremental counter used to number connections. The number is incremented when a connection is created. The counter is reset if there are no existing jobs and the Double-Take service is restarted.

Target data state

- **Disconnected**—The target connection entry is not associated with a connection. This may happen if you delete a stopped job. These disconnected target connections cannot be deleted. They will be reused when a new connection (same job type, same servers) is created.
- **OK**—The data on the target is in a good state.
- **Mirroring**—The target is in the middle of a mirror process. The data will not be in a good state until the mirror is complete.
- **Mirror Required**—The data on the target is not in a good state because a remirror is required. This may be caused by an incomplete or stopped mirror or an operation may have been dropped on the target.
- **Restore Required**—The data on the source and target do not match because of a failover condition. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.

- **Snapshot Reverted**—The data on the source and target do not match because a snapshot has been applied on the target. Restore the data from the target back to the source. If you want to discard the changes on the target, you can remirror to resynchronize the source and target.
- **Busy**—The source is low on memory causing a delay in getting the state of the data on the target.
- **Not Loaded**—OpenText Availability and OpenText Migrate target functionality is not loaded on the target server. This may be caused by a license key error.
- **Not Ready**—The Linux drivers have not yet completed loading on the target.
- **Unknown**—The console cannot determine the status.

Target status

- **OK**—The target machine is active and online.
- **Not Loaded**—The target module is not loaded on the target. This may be caused by a license key error.
- **Paused**—The target machine is paused by user intervention.
- **Retrying**—The target machine is retrying operations for the connection.

Schedule

Any configured snapshot schedule

Next scheduled snapshot

The date and time of the next scheduled snapshot, if any

Time Taken

The date and time of the listed snapshot

Type

- **Automatic**—This snapshot was taken automatically by OpenText Availability and OpenText Migrate.
- **Manual**—This snapshot was taken manually by a user.
- **Scheduled**—This snapshot was taken as part of a periodic snapshot.
- **Deferred**—This snapshot was taken as part of a periodic snapshot, although it did not occur at the specified interval because the job between the source and target was not in a good state.

ID

The snapshot ID

Target States

The state of the target at the time of the snapshot

Chapter 5 Error codes

The following table contains error codes that you may see in the OpenText Replication Console or in log files.

-1 Unknown error code (generated when a command failed but the failure is not linked to a pre-defined error code)

-101 Invalid parameter was supplied

-102 Command is not a valid or the syntax is incorrect

-103 OpenText Availability and OpenText Migrate source module is not loaded

-104 No OpenText Availability and OpenText Migrate source identified

-105 OpenText Availability and OpenText Migrate target module is not loaded

-106 Connection already established

-107 Connection does not exist

-108 Mirror currently active

-109 Server does not exist or could not be located

-110 Server is not responding

-111 OpenText Availability and OpenText Migrate is running

-112 Unknown connection error

-113 Mirror already active

-114 Date is invalid - valid format is mm/dd/yy

-115 Time is invalid - valid format is hh:mm

-116 Invalid option supplied

-117 Mirror is not paused

-118 Connection is not paused

-119 Connection does not exist

-120 Connection already connected

-121 Mirror is not running

-122 Job exists

-123 Job does not exist

-124 No job has been selected

-125 Connection is replicating

-126 Connection is not replicating

-127 Job is enabled

-128 Schedule is not defined

-129 Job is changed

-130 Job is in use

-131 No OpenText Availability and OpenText Migrate target identified

-132 Memory is low

-133 Memory is sufficient

-134 Replication is pending

-135 Invalid option supplied

-136 Job replication rule does not exist

-137 Mirror queue is full

-138 Insufficient security access

-139 Schedule command is invalid

-140 Source path is invalid

-141 Job is not changed

-142 Insufficient source security access

-143 Invalid statistics file

-144 Job not saved

-145 Connection failed

-146 Cleaner option is not enabled

-147 Target mirror capacity high threshold is met

-148 Target mirror capacity low threshold is met

-149 New option applied

-150 Target is restarted

-151 Replication is out of memory

-152 Write access is blocked on the volume

-153 Transmission is paused

-154 Transmission is active

-155 Target does not support the command

-156 Command conversion to accommodate a different OpenText Availability and OpenText Migrate version has failed

-157 Incompatible source and target OpenText Availability and OpenText Migrate versions

-158 Incompatible source and target operating system versions

-159 NAS server to non-NAS server is not a supported configuration

-160 Target module is not loaded

-161 Operation or command is not supported

-162 Target is paused

-163 Target is pending

-164 Target is active

-165 Target is retrying operations

-166 Target is no longer retrying operations

-167 Restore required state is unknown

-168 Not a valid failover or cutover source

-169 Failover or cutover login failed

-170 Feature is not supported

-171 Command is not supported

-172 Target queue log file error

-173 Target disk is full

-174 Target disk has sufficient disk space

-175 Error reading from or writing to the queue log file

-176 Memory-based queue is in use

-177 Disk-based queue is in use

-178 Restore is required

-179 ID the driver supplied to the service is invalid

-180 Child path is blocked

-181 Parent path is blocked

-182 Target path blocking is disabled

-183 Connection ID specified is invalid

-184 No command objects are in the queue

-185 Handshake was not completed

-186 Stats server was not started

-187 Schedule is paused

-188 Schedule is resumed

-189 Target state has changed

-190 Target name has changed

-191 Acknowledgement queue has been updated

-201 Monitor name exists

-202 Monitor name does not exist

-203 Monitor configuration exists

-204 Monitor configuration does not exist

-205 Monitor configuration is in use

-206 Monitor configuration is not in use

-207 Source is online

-208 Source is offline

-209 Server is not failed over

-210 Server is failed over

-211 Server is not being monitored

-212 Failback is in progress

-213 IP address placeholders on the target are unavailable

-214 Target NIC was not found

-215 Source module is not loaded

-216 Failed to set the source state

-217 Unable to ping source

-218 Invalid argument

-219 Recovery is busy

-220 Invalid command

-221 Recovery is started

-222 Script failed to start

-223 Script timeout met

-224 No replication timeout met - connection is bad

-225 Invalid path

-226 Kernel module is not loaded

-227 System dump has failed

-228 Response is null

-229 Object stream is not OK

-230 Transactional NTFS (TxF) SavePoints (intermediate rollback points) are not supported

-231 Data overload

-232 The service failed to start

-233 The driver failed to start

-234 File and directory mismatch. A directory was expected.

-235 File and directory mismatch. A file was expected.

-2001 Transform initialization failed

-2002 General transform failure

-2003 Transform volume count

-2004 Transform missing source

-2005 Transform missing target

-2101 Network controller initialization failed

-2102 General network controller failure

-2103 Network controller already started

-2104 No socket on the network controller

-2105 Listen failure on the network controller

-2201 Error communicating with e-mail server

-2202 Error connecting to e-mail server

-2203 E-mail notification is disabled

-2204 E-mail notification is enabled

-2205 E-mail notification requires Internet Explorer version 5.0 and WMI (E-mail notification no longer requires Internet 5.0 or later.)

-2206 E-mail notification requires Internet Explorer version 5.0 (E-mail notification no longer requires Internet Explorer 5.0 or later.)

-2207 Error sending e-mail

-2208 Error sending test e-mail

-2209 WMI error connecting to e-mail server

-2210 E-mail notification requires WMI

-2211 Event Viewer settings for e-mail notification are invalid

-2212 E-mail notification setting is invalid

-2213 E-mail notification address exists

-2214 E-mail notification alert ID is invalid

-2215 E-mail notification format is invalid

-2216 E-mail notification address does not exist

-2217 E-mail notification address notification list is empty

-2218 E-mail warning is not set

-2219 E-mail test warning is not set

-2200 E-mail notification is functioning properly

-2301 Bandwidth limiting time exists

-2302 Bandwidth limiting name exists

-2303 Bandwidth limit not found

-2304 Bandwidth limit day is invalid

-2305 Bandwidth limit label is invalid

-2401 Snapshot module is not loaded

-2402 Error reading the snapshot .dll

-2403 Snapshot not found

-2404 No snapshot connections found

-2405 Snapshot revert completed

-2406 Snapshot revert is in progress

-2501 Full server functionality is disabled

-2502 No full server interface available

-3001 Refused code - target mode Small Business Server

-3002 Refused code - target mode OpenText Migrate

-3003 Refused code - duplicate

-3004 Refused code - cloud job

-3005 Refused code - OpenText Migrate code mismatch

-3006 Refused code - target license

-3007 Refused code - SPLA code

-3008 Refused code - no codes

-3009 Refused code - expired code

Chapter 6 Windows Event messages

An event is a significant occurrence in the system or in an application that requires administrators to be notified. The operating system writes notifications for these events to a log that can be displayed using the Windows Event Viewer. Three different log files are generated: application, security, and system.

1. To access the Event Viewer, select **Administrative Tools**, **Event Viewer**.
2. Select the **Application** or **System** log. See your Windows reference guide or online help for details on the information provided for each event.
3. To view a detailed description, double-click an event.

> For additional information on customizing the Event Viewer (such as sorting the display, filtering the display, and so on), see your Windows reference guide or the Windows online help.

The following table identifies the Windows OpenText Availability and OpenText Migrate events. The event ID is followed by the event message. Below the ID and message you will find the following information.

- **Event log**—Identifies if the message will be found in the Application or System event log
- **Source**—Identifies from where the message was generated
- **Level**—Identifies if the message is an error, warning, or informational message
- **Required response**—Identifies the required action, if any, you should take if you get this message

> OpenText Availability and OpenText Migrate share the same set of event messages. Some messages apply to one product, some to the other, and some to both. For messages that apply to both, the OpenText Availability terminology is used. For example, message 5100 indicates failover completed. This same message will also be seen when cutover is completed.
>
> Variables that are dynamically updated in a generated message are designated by a percent symbol followed by a number. For example, the message "The evaluation period expires in %1 day(s)" will have a number automatically inserted for %1, so the message you see might be "The evaluation period expires in 12 day(s)." Variables are used for things like server names, error codes, numbers, and so on.

1: This evaluation period has expired. Mirroring and replication have been stopped. To obtain a license key, please contact your vendor.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error

> **Required response**—Contact your vendor to purchase either a single or site license.

2: The evaluation period expires in %1 day(s).

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—Contact your vendor before the evaluation period expires to purchase either a single or site license.

3: The evaluation period has been activated and expires in %1 day(s).

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—Contact your vendor before the evaluation period expires to purchase either a single or site license.

4: Duplicate license keys detected on machine %1 from machine %2.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—If you have an evaluation license or a site license, no action is necessary. If you have a single license, you must purchase either another single license or a site license.

5: This product edition can only be run on Windows Server or Advanced Server running the Server Appliance Kit.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Verify your license key has been entered correctly.

6: Evaluation period ends today at %1.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—Contact your vendor to purchase either a single or site license.

7: Product license key is invalid. Please check that it is typed correctly and is valid for the version of the operating system in use.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—If you are in the process of installing OpenText Availability and OpenText Migrate, verify that you are using a 24 character alpha-numeric key. If OpenText Availability and OpenText Migrate is already installed, confirm that the key entered is correct. If the key appears to be correct, contact technical support.

8: Product license key is valid.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

100: Critical Error: %1 line %2, %3

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Contact technical support with the details from this message.

101: Service has aborted due to the following unrecoverable error: %1

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Restart the Double-Take service. Contact technical support if this event occurs repeatedly.

200: ExchFailover failover from %1 to %2 was started in commit mode. See log file %3 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Information
>
> **User action required**—See the specific log message for additional details.

201: ExchFailover failover from %1 to %2 was started in test mode. See log file %3 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Information
>
> **User action required**—See the specific log message for additional details.

202: ExchFailover failback to %1 from %2 was started in commit mode. See log file %3 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Information
>
> **User action required**—See the specific log message for additional details.

203: ExchFailover failback to %1 from %2 was started in test mode. See log file %3 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Information
>
> **User action required**—See the specific log message for additional details.

204: ExchFailover setup started for server %1. See log file %2 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Information
>
> **User action required**—See the specific log message for additional details.

205: ExchFailover was unable to open the default log file. A new log file has been created. All messages will be log in %1.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Error
>
> **User action required**—See the specific log message for additional details.

210: ExchFailover completed. Moved %1 users in %2 mail stores in %3 seconds. Check log file %4 for details.

> **Event log**—Application
>
> **Source**—ExchFailover

Level—Success

User action required—See the specific log message for additional details.

211:   ExchFailover completed with warnings. Moved %1 users in %2 mail stores in %3 seconds. Check log file %4 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Warning
>
> **User action required**—See the specific log message for additional details.

212:   ExchFailover completed. Tested %1 users in %2 mail stores in %3 seconds. Check log file %4 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Success
>
> **User action required**—See the specific log message for additional details.

213:   ExchFailover completed with warnings. Moved %1 users in %2 mail stores in %3 seconds. Check log file %4 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Warning
>
> **User action required**—See the specific log message for additional details.

214:   ExchFailover setup completed. Updated %1 mail stores in %2 seconds. Check log file %3 for details.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Success
>
> **User action required**—See the specific log message for additional details.

220:   ExchFailover start failed. Could not open log file: %1.

> **Event log**—Application
>
> **Source**—ExchFailover
>
> **Level**—Error
>
> **User action required**—Restart failover. Contact technical support if this event occurs again.

221: ExchFailover start failed. Invalid command line arguments. See log file %1 for details.

        Event log—Application

        Source—ExchFailover

        Level—Error

        User action required—See the specific log message for additional details.

222: ExchFailover start failed. Double-Take is not licensed on this machine.

        Event log—Application

        Source—ExchFailover

        Level—Error

        User action required—Verify your license key has been entered correctly and contact technical support.

223: ExchFailover start failed due to an Active Directory error.

        Event log—Application

        Source—ExchFailover

        Level—Error

        User action required—Restart failover. Contact technical support if this event occurs again.

224: ExchFailover failed to find one (or both) of the Exchange servers. Check the server names. This can also occur if the process does not have sufficient privileges to access Active Directory.

        Event log—Application

        Source—ExchFailover

        Level—Error

        User action required—Verify the Exchange server names and the account has sufficient privileges to update Active Directory.

1000: An exception occurred: %1

        Event log—Application

        Source—DTCounters

        Level—Error

        User action required—Run the installation and select Repair. Contact technical support if this event occurs again.

1001:   The Double-Take counter DLL could not initialize the statistics handler object to gather performance data.

>> **Event log**—Application

>> **Source**—DTCounters

>> **Level**—Error

>> **User action required**—Run the installation and select Repair. Contact technical support if this event occurs again.

1002:   The Double-Take counter DLL could not map shared memory file containing the performance data.

>> **Event log**—Application

>> **Source**—DTCounters

>> **Level**—Error

>> **User action required**—Run the installation and select Repair. Contact technical support if this event occurs again.

1003:   The Double-Take counter DLL could not open the "Performance" key in the Double-Take section of the registry.

>> **Event log**—Application

>> **Source**—DTCounters

>> **Level**—Error

>> **User action required**—Run the installation and select Repair. Contact technical support if this event occurs again.

1004:   The Double-Take counter DLL could not read the "First Counter" value under the Double-Take\Performance Key.

>> **Event log**—Application

>> **Source**—DTCounters

>> **Level**—Error

>> **User action required**—Run the installation and select Repair. Contact technical support if this event occurs again.

1005:   The Double-Take counter DLL read the "First Help" value under the Double-Take\Performance Key.

>> **Event log**—Application

>> **Source**—DTCounters

>> **Level**—Error

User action required—Run the installation and select Repair. Contact technical support if this event occurs again.

1006: The Double-Take counter DLL could not create event handler for the worker thread.

Event log—Application

Source—DTCounters

Level—Error

User action required—Run the installation and select Repair. Contact technical support if this event occurs again.

4000: Kernel was successfully started.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4001: Target service was successfully started.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4002: Source service was successfully started.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4003: Source service was successfully stopped.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4004: Target service was successfully stopped.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4005: Kernel was successfully stopped.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4007: Auto-disconnecting from %1 (%2) for Replication Set %3, ID: %4 due to %5

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—The connection is auto-disconnecting because the disk-based queue on the source has been filled, the service has encountered an unknown file ID, the target server has restarted, or an error has occurred during disk queuing on the source or target (for example, OpenText Availability and OpenText Migrate cannot read from or write to the transaction log file).

4008: Auto-disconnect has succeeded for %1 (%2) for Replication Set %3, ID: %4

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4009: Auto-reconnecting Replication Set %1 to %2 (%3)

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4010: Auto-reconnect has succeeded connecting Replication Set %1 to %2 (%3)

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4011: Auto-reconnect has failed connecting Replication Set %1 to %2 (%3)

> **Event log**—Application

Source—Double-Take

Level—Error

User action required—Manually reestablish the job to target connection.

4014: Service has started network transmission.

    Event log—Application

    Source—Double-Take

    Level—Information

    User action required—No action required.

4015: Service has stopped network transmission.

    Event log—Application

    Source—Double-Take

    Level—Information

    User action required—No action required.

4016: Service has established a connection to %1 (%2) for Replication Set %3, ID: %4

    Event log—Application

    Source—Double-Take

    Level—Information

    User action required—No action required.

4017: Service has disconnected from %1 (%2) for Replication Set %3, ID: %4

    Event log—Application

    Source—Double-Take

    Level—Information

    User action required—No action required.

4018: %1, however, mirroring and replication have been disabled as a restore is required due to a previous failover.

    Event log—Application

    Source—Double-Take

    Level—Warning

    User action required—Perform a restoration.

4019: Service has started a mirror to %1 (%2) for Replication Set %3, ID: %4

    Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4020: Service has paused a mirror to %1 (%2) for Replication Set %3, ID: %4

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4021: Service has resumed a mirror to %1 (%2) for Replication Set %3, ID: %4

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4022: Service has stopped a mirror to %1 for Replication Set %2, ID: %3, %4

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4023: Service has completed a mirror to %1 %2 for Replication Set %3, ID: %4, %5

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4024: Service has started Replication to %1 (%2) for Replication Set %3, ID: %4

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4025: Service has stopped Replication to %1 (%2) for Replication Set %3, ID: %4

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4026: The target has been paused due to user intervention.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4027: The target has been resumed due to user intervention.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4028: Registration of service class with Active Directory failed. Verify that the Active Directory server is up and the service has the proper permissions to update its entries.

Event log—Application

Source—Double-Take

Level—Warning

User action required—Verify that the Active Directory server is running and that the Double-Take service has permission to update Active Directory.

4029: Registration of service instance with Active Directory failed. Verify that the Active Directory server is up and the service has the proper permissions to update its entries.

Event log—Application

Source—Double-Take

Level—Warning

User action required—Verify that the Active Directory server is running and that the Double-Take service has permission to update Active Directory.

4030: RSResource.dll has an unknown error. The product functionality has been disabled.

Event log—Application

Source—Double-Take

Level—Error

User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4031: RSResource.dll could not be opened. The product functionality has been disabled.

        Event log—Application

        Source—Double-Take

        Level—Error

        User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4032: The RSResource.dll component version does not match the component version expected by the product. The product functionality has been disabled.

        Event log—Application

        Source—Double-Take

        Level—Error

        User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4033: RSResource.dll build version is invalid. The product functionality has been disabled.

        Event log—Application

        Source—Double-Take

        Level—Error

        User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4034: Error verifying the service name. The product functionality has been disabled.

        Event log—Application

        Source—Double-Take

        Level—Error

        User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4035: Error verifying the product name. The product functionality has been disabled.

        Event log—Application

        Source—Double-Take

        Level—Error

> **User action required**—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4036:   Error verifying the vendor name. The product functionality has been disabled.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4037:   Error verifying the vendor URL name. The product functionality has been disabled.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4038:   Error verifying the license key product code. The product functionality has been disabled.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4039:   Error while reading RSResource.dll. The product functionality has been disabled.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4040:   The license key product code is illegal for this computer hardware. The product functionality has been disabled.

> **Event log**—Application

Source—Double-Take

Level—Error

User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4041: The license key product code is illegal for this operating system version. The product functionality has been disabled.

Event log—Application

Source—Double-Take

Level—Error

User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4042: The license key product code requires installing the Windows Server Appliance Kit. The product functionality has been disabled.

Event log—Application

Source—Double-Take

Level—Error

User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4043: This product can only be run on a limited number of processors and this server exceeds the limit. The product functionality has been disabled.

Event log—Application

Source—Double-Take

Level—Error

User action required—Reinstall the software, using the installation Repair option, to install a new copy of the RSResource.dll. Contact technical support if this error persists.

4044: An error was encountered and replication has been stopped. It is necessary to stop and restart the service to correct this error.

Event log—Application

Source—Double-Take

Level—Error

User action required—Contact technical support if this error persists.

4045: %1 value must be between 1025 and 65535. Using default of %2.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—Verify that the OpenText Availability and OpenText Migrate port value you are trying to use is within the valid range. If it is not, it will automatically be reset to the default value.

4046: This service failed to start because of a possible port conflict. Win32 error: %1

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Verify that the OpenText Availability and OpenText Migrate ports are not conflicting with ports used by other applications.

4047: Could not load ZLIB DLL %1. Some levels of compression will not be available.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—The compression levels available depend on your operating system. You can reinstall the software, using the installation Repair option, to install a new copy of the DynaZip.dll, or contact technical support if this error persists.

4048: Service has started a delete orphans task to %1 (%2) for Replication Set %3, ID: %4

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4049: Service has paused a delete orphans task to %1 (%2) for Replication Set %3, ID: %4

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4050: Service has resumed a delete orphans task to %1 (%2) for Replication Set %3, ID: %4

> **Event log**—Application
>
> **Source**—Double-Take

Level—Information

User action required—No action required.

4051: **Service has stopped a delete orphans task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4052: **Service has completed a delete orphans task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4053: **Service has started a restore task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4054: **Service has paused a restore task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4055: **Service has resumed a restore task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4056: **Service has stopped a restore task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4057: **Service has completed a restore task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4058: **Service has started a verification task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4059: **Service has paused a verification task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4060: **Service has resumed a verification task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4061: **Service has stopped a verification task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4062: **Service has completed a verification task to %1 (%2) for Replication Set %3, ID: %4**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4063: Bandwidth limit to %1 (%2) has changed to %3.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4064: Bandwidth limit to %1 (%2) is now in the "%3" period at %4.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4065: Target data state for connection %1 from %2 (%3) has changed because %4.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—No action required.

4066: The product code requires a virtual server environment. The product functionality has been disabled.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—The license key you are using is for the Virtual Systems edition. This code will not work on non-virtual server environments.

4067: No replication ops have been received from the driver for an extended period of time.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Check other messages for errors with the OpenText Availability and OpenText Migrate drivers, and correct as required. If there are no driver messages, verify that your drives are connected to the source. If this error persists, contact technical support.

4068: Failed to write to a replicating volume.

> **Event log**—Application

Source—Double-Take

Level—Error

User action required—Reboot the source server. Contact technical support if this event occurs again.

4069: The option MoveOrphansDir has been updated because it was missing or empty.

Event log—Application

Source—Double-Take

Level—Warning

User action required—No action required.

4070: An error occurred while reading data for connection %1. All data needs to be remirrored. See the log for details.

Event log—Application

Source—Double-Take

Level—Error

User action required—Initiate a remirror to guarantee data integrity. Contact technical support if this event occurs repeatedly.

4071: Received network message with invalid checksum.

Event log—Application

Source—Double-Take

Level—Warning

User action required—Initiate a remirror to guarantee data integrity. Contact technical support if this event occurs repeatedly.

4072: QueueSizeAlertThreshold of %1 has been exceeded.

Event log—Application

Source—Double-Take

Level—Warning

User action required—If the queue reaches capacity, OpenText Availability and OpenText Migrate will automatically begin the auto-disconnect process. If you see this message repeatedly, you may want to consider a larger queue or upgrading your server hardware to keep up with the amount of data changes in your environment.

4073: A replication set has been modified.

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4096: The registry parameter %2 is unknown.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Warning
>
> **User action required**—Delete the parameter and report this issue to technical support.

4097: Failed to initialize WMI support. The last Word in the Data Window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv, RepKap, RepHsm, or RepSis
>
> **Level**—Warning
>
> **User action required**—No action required.

4097: The file system filter failed to load. Replication will not occur. Reboot your server and contact technical support if this error occurs again. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Error
>
> **User action required**—Reboot your server and contact technical support if this event occurs again.

4098: The registry parameters failed to load, so the default configuration values will be used. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Warning
>
> **User action required**—No action required.

4098: The control device %2 was not created. Communication with the service will be disabled. Reboot the server and contact technical support if this error occurs again. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv, RepDac, RepKap, or RepHsm
>
> **Level**—Error

> **User action required**—Reboot your server and contact technical support if this event occurs again.

4099:   The driver failed to register with filter manager. Reboot the server and contact technical support if this error occurs again. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Reboot your server and contact technical support if this event occurs again.

4100:   The versions of the driver and the filter driver do not match. Replication will not occur. Reboot your server. If this error occurs again, reinstall the software. Contact technical support if this error occurs after the software has been reinstalled. The last three Words in the Data window are the NT status code and the driver version numbers.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Error
>
> **User action required**—Reboot your server. Reinstall the software if this event occurs again. Contact technical support if this event occurs after reinstalling the software.

4110:   Target cannot write %1 due to target disk being full. Operation will be retried (%2 times or forever)

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—The disk on the target is full. The operation will be retried according to the TGExecutionRetryLimit setting.

4111:   Target can not write %1 due to a sharing violation. Operation will be retried (%2 times or forever)

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—A sharing violation error is prohibiting OpenText Availability and OpenText Migrate from writing on the target. The operation will be retried according to the TGExecutionRetryLimit setting.

4112: Target can not write %1 due to access denied. Operation will be retried (%2 times or forever)

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—An access denied error is prohibiting OpenText Availability and OpenText Migrate from writing on the target. The operation will be retried according to the TGExecutionRetryLimit setting..

4113: Target can not write %1 due to an unknown reason. Operation will be retried (%2 times or forever). Please check the log files for further information on the error.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—An unknown error is prohibiting OpenText Availability and OpenText Migrate from writing on the target. The operation will be retried according to the TGExecutionRetryLimit setting.

4120: Target write to %1 was completed successfully after %2 retries.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

4150: Target write %1 failed after %2 retries and will be discarded. See the event log or log files for error conditions. After correcting the problem, you should re-mirror or run a verify to resynchronize the changes.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—The operation has been retried according to the TGExecutionRetryLimit setting but was not able to be written to the target and the operation was discarded. Correct the problem and remirror the files.

4155: The service was unable to complete a file system operation in the allotted time. See the log files for error conditions. After correcting the problem, remirror or perform a verification with remirror to synchronize the changes.

> **Event log**—Application
>
> **Source**—Double-Take

Level—Warning

User action required—Correct the file system error and then remirror or perform a verification with remirror to synchronize the changes.

4200:   In band task %1 submitted from %2 by %3 at %4

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4201:   In band task %1 discarded (submitted from %2 by %3 at %4)

Event log—Application

Source—Double-Take

Level—Warning

User action required—A task may be discarded in the following scenarios: all connections to a target are manually disconnected, replication is stopped for all connections to a target, or an auto-disconnect occurs. If one of these scenarios did not cause the task to be discarded, contact technical support.

4202:   Running %1 in band script: %2 (task %3 submitted from %4 by %5 at %6)

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4203:   Completed run of in band script: %1 (exit code %2)

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4204:   Error running in band script: %1

Event log—Application

Source—Double-Take

Level—Error

User action required—Review the task and its associated script(s) for syntax errors.

4205: **Timeout (%1 seconds) running in band script: %2**

        Event log—Application

        Source—Double-Take

        Level—Warning

        User action required—The timeout specified for the script to complete has expired. Normal processing will continue. You may need to manually terminate the script if it will never complete

4206: **Run timeout disabled for in band script: %1**

        Event log—Application

        Source—Double-Take

        Level—Warning

        User action required—The timeout period was set to zero (0). OpenText Availability and OpenText Migrate will not wait for the script to complete before continuing. No action is required.

4207: **In band scripts disabled by server - no attempt will be made to run %1**

        Event log—Application

        Source—Double-Take

        Level—Warning

        User action required—Enable task command processing.

4300: **A connection request was received on the target before the persistent target paths could be loaded.**

        Event log—Application

        Source—Double-Take

        Level—Error

        User action required—You may need to stop and restart your job.

4301: **Unable to block target paths, the driver is unavailable.**

        Event log—Application

        Source—Double-Take

        Level—Error

        User action required—If you need to block your target paths, contact technical support.

4302: **Target Path %1 has been successfully blocked**

        Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4303: **Blocking of target path: %1 failed. Error Code: %2**

Event log—Application

Source—Double-Take

Level—Warning

User action required—If you need to block your target paths, contact technical support.

4304: **Target Path %1 has been successfully unblocked**

Event log—Application

Source—Double-Take

Level—Information

User action required—No action required.

4305: **Unblocking of target path: %1 failed. Error Code: %2**

Event log—Application

Source—Double-Take

Level—Warning

User action required—If you need to unblock your target paths, contact technical support.

4306: **Target paths for source %1 (%2) Connection id: %3 are already blocked**

Event log—Application

Source—Double-Take

Level—Warning

User action required—No action required.

4307: **Target paths for source %1 (%2) Connection id: %3 are already unblocked**

Event log—Application

Source—Double-Take

Level—Warning

User action required—No action required.

4308: **Error loading target paths for blocking, registry key %1 has been corrupted.**

Event log—Application

Source—Double-Take

Level—Error

User action required—If you need to block your target paths, contact technical support.

4400:   Failed to create snapshot set for source %1 (%2) Connection ID: %3. Error: %4

Event log—Application

Source—Double-Take

Level—Error

User action required—The snapshot could not be created. This may be due to a lack of disk space or memory or another reason. The error code is the Microsoft VSS error. Check your VSS documentation or contact technical support.

4401:   Failed to delete automatic snapshot set for source %1 (%2) Connection ID: %3. Error: %4

Event log—Application

Source—Double-Take

Level—Error

User action required—The automatic snapshot could not be deleted. This may be due to a lack of memory, the file does not exist, or another reason. The error code is the Microsoft Volume Shadow Copy error. Check your Volume Shadow Copy documentation or contact technical support.

4402:   Failed to delete snapshot set for source %1 (%2) Connection ID: %3. Error: %4

Event log—Application

Source—Double-Take

Level—Error

User action required—The snapshot could not be deleted. This may be due to a lack of memory, the file does not exist, or another reason. The error code is the Microsoft Volume Shadow Copy error. Check your Volume Shadow Copy documentation or contact technical support.

4403:   A scheduled snapshot could not be created for source %1 (%2) Connection ID: %3. because the target data was in a bad state. A snapshot will automatically be created when the target data reaches a good state.

Event log—Application

Source—Double-Take

Level—Error

User action required—No action required. A snapshot will automatically be created when the target data reaches a good state.

4404: Set snapshot schedule for source %1 (%2) connection %3 to every %4 minutes. Next snapshot: %5.

      Event log—Application

      Source—Double-Take

      Level—Information

      User action required—No action required.

4405: Removed snapshot schedule for source %1 (%2) connection %3.

      Event log—Application

      Source—Double-Take

      Level—Information

      User action required—No action required.

4406: Enabled snapshot schedule for source %1 (%2) connection %3.

      Event log—Application

      Source—Double-Take

      Level—Information

      User action required—No action required.

4407: Disabled snapshot schedule for source %1 (%2) connection %3.

      Event log—Application

      Source—Double-Take

      Level—Information

      User action required—No action required.

4408: %1 was unable to move some orphans for source %2 on connection ID %3. Check the %1 logs for further details.

      Event log—Application

      Source—Double-Take

      Level—Warning

      User action required—Orphan files could not be moved. For example, the location could be out of disk space. Check the OpenText Availability and OpenText Migrate log for more information.

4409: %3 was unable to delete some orphans for source %1 on connection ID %2. Check the %3 logs for further details.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—Orphan files could not be deleted. Check the OpenText Availability and OpenText Migrate log for more information.

4410: The registry hive dump failed with an of error: %1.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Contact technical support.

4411: The Service has detected that port %1 is being %2 by the Windows Firewall.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—The firewall port needs to be unblocked or restrictions against OpenText Availability and OpenText Migrate removed so that OpenText Availability and OpenText Migrate data can be transmitted.

5105: Attempting to run the %1 script.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

5106: The %1 script ran successfully.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

5107: Error occurred in running %1 script.

> **Event log**—Application
>
> **Source**—Double-Take

Level—Error

User action required—Verify that the script identified exists with the proper permissions.

6000: %1

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—This is a placeholder message for many other messages. See the specific log message for additional details.

6001: %1

Event log—Application

Source—Double-Take Management Service

Level—Warning

User action required—This is a placeholder message for many other messages. See the specific log message for additional details.

6002: %1

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—This is a placeholder message for many other messages. See the specific log message for additional details.

6003: A %1 job has been created. The name is "%2" and the ID is %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6004: The %1 job "%2" (ID %3) has been started.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6005: The %1 job "%2" (ID %3) has been stopped.

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required. If desired, you can restart your job.

6006: The %1 job "%2" (ID %3) has been deleted.

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required. If desired, you can re-create your job.

6007: The %1 operation has failed for the %2 job "%3" (ID %4).

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Error
>
> **User action required**—No action required. If desired, you can re-create your job.

6008: The %1 operation has completed successfully for the %2 job "%3" (ID %4).

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6009: Could not log the following message:%n%1%n---%nError:%n%2.

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Error
>
> **User action required**—There is a problem with logging. Contact technical support if this event occurs again.

6010: A failover condition has been met for the %1 job "%2" (ID %3).

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Warning

User action required—Check your source machine and initiate failover, if user intervention for failover is configured. If you bring your source machine back online without initiating failover, the failover condition met state will be canceled.

6011: The source machine (IP %1) is not responding to a ping from monitor %2 (ID %3).

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Check your source machine and initiate failover, if user intervention for failover is configured. If you bring your source machine back online without initiating failover, the source machine should start responding to the ping.

6012: The target machine (IP %1) failed to reboot.

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Reboot the target server to complete full server failover.

6050:   The service has detected that port %1 is RESTRICTED in the Windows Firewall. This port is critical to the operation of the Double-Take Management Service.

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Verify the specified firewall port is open for OpenText Availability and OpenText Migrate traffic.

6051:   The service has detected that port %1 is BLOCKED in the Windows Firewall. This port is critical to the operation of the Double-Take Management Service.

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Verify the specified firewall port is open for OpenText Availability and OpenText Migrate traffic.

6052: IP address %1 was removed from the target machine for the %2 job "%3" (ID %4).

Event log—Application

Source—Double-Take Management Service

Level—Informational

User action required—No action required.

6053:   Source browser and NetBIOS names were removed from the target machine for the %1 job "%2" (ID %3).

>   **Event log**—Application

>   **Source**—Double-Take Management Service

>   **Level**—Informational

>   **User action required**—No action required.

6054:   %1 drive share(s) were removed from the target machine for the %2 job "%3" (ID %4).

>   **Event log**—Application

>   **Source**—Double-Take Management Service

>   **Level**—Informational

>   **User action required**—No action required.

6055:   Source Active Directory SPNs were removed from the target computer account for the %1 job "%2" (ID %3).

>   **Event log**—Application

>   **Source**—Double-Take Management Service

>   **Level**—Informational

>   **User action required**—No action required.

6056:   IP address %1 with subnet mask %2 was added to target machine's %3 adapter for the %4 job "%5" (ID %6).

>   **Event log**—Application

>   **Source**—Double-Take Management Service

>   **Level**—Informational

>   **User action required**—No action required.

6057:   Source browser and NetBIOS names were added to the target machine for the %1 job "%2" (ID %3).

>   **Event log**—Application

>   **Source**—Double-Take Management Service

>   **Level**—Informational

>   **User action required**—No action required.

6058:   %1 drive share(s) were added to the target machine for the %2 job "%3" (ID %4).

>   **Event log**—Application

>   **Source**—Double-Take Management Service

Level—Informational

User action required—No action required.

6059:   Source Active Directory SPNs were added to the target computer account for the %1 job "%2" (ID %3).

Event log—Application

Source—Double-Take Management Service

Level—Informational

User action required—No action required.

6100:   The job "%1" (ID %2) has started provisioning a replica for %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6101:   The job "%1" (ID %2) has successfully completed provisioning a replica for %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6102:   The job "%1" (ID %2) has failed to provision a replica for %3.%n%n

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6110:   The job "%1" (ID %2) has started a %3 failover of the replica of %4.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6111:   The job "%1" (ID %2) has successfully completed a %3 failover of the replica of %4.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6112:   The job "%1" (ID %2) has encountered an error while performing a %3 failover of the replica of %4.%n%n

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6120:   The job "%1" (ID %2) has started undoing the failover for the replica of %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6121:   The job "%1" (ID %2) has successfully reattached the replica and resumed protecting %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6122:   The job "%1" (ID %2) has encountered an error undoing the failing over for the replica of %3.%n%n

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6130:   The job "%1" (ID %2) has started reversing the direction of the protection of %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6131: The job "%1" (ID %2) has successfully reversed the direction of the protection of %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6132: The job "%1" (ID %2) has encountered an error reversing the direction of the protection of %3.%n%n

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6140: The job "%1" (ID %2) is being deleted.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6141: The job "%1" (ID %2) has successfully been deleted.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6142: The job "%1" (ID %2) has encountered an error while being deleted.%n%n

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6150: **The job "%1" (ID %2) protecting %3 has completed its mirror.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6210: **The job "%1" (ID %2) has started a %3 failover of the replica of %4.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6211: **The job "%1" (ID %2) has successfully completed a %3 failover of the replica of %4.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6212: **The job "%1" (ID %2) has encountered an error while performing a %3 failover of the replica of %4.%n%n**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Error
>
> **User action required**—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6213: **A failover condition has been met for the host level job "%1" (ID %2).**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Warning
>
> **User action required**—Check your source machine and initiate failover, if user intervention for failover is configured. If you bring your source machine back online without initiating failover, the failover condition met state will be canceled.

6214: **Failover monitors removed for the host level job "%1" (ID %2).**

> **Event log**—Application
>
> **Source**—Double-Take Management Service

Level—Information

User action required—No action required. The failover pending state has been canceled because the job has been stopped, deleted, or failed over.

6215:   The job "%1" (ID %2) is protecting.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6220:   The job "%1" (ID %2) has started undoing the failover for the replica of %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6221:   The job "%1" (ID %2) has successfully reattached the replica and resumed protecting %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6222:   The job "%1" (ID %2) has encountered an error undoing the failing over for the replica of %3.%n%n

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6230:   The job "%1" (ID %2) has started reversing the direction of the protection of %3.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

6231: **The job "%1" (ID %2) has successfully reversed the direction of the protection of %3.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6232: **The job "%1" (ID %2) has encountered an error reversing the direction of the protection of %3.%n%n**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Error
>
> **User action required**—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6240: **The job "%1" (ID %2) is being deleted.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6241: **The job "%1" (ID %2) has successfully been deleted.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Information
>
> **User action required**—No action required.

6242: **The job "%1" (ID %2) has encountered an error while being deleted.%n%n**

> **Event log**—Application
>
> **Source**—Double-Take Management Service
>
> **Level**—Error
>
> **User action required**—Review the additional error information to identify the problem. Correct the problem and retry the operation. Contact technical support if this event occurs again.

6250: **The job "%1" (ID %2) protecting %3 has completed its mirror.**

> **Event log**—Application
>
> **Source**—Double-Take Management Service

Level—Information

User action required—No action required.

6300: **A failover condition has been met for the full server job "%1" (ID %2).**

Event log—Application

Source—Double-Take Management Service

Level—Warning

User action required—Check your source machine and initiate failover, if user intervention for failover is configured. If you bring your source machine back online without initiating failover, the failover condition met state will be canceled.

6500: **A cutover condition has been met for the full server migration job "%1" (ID %2).**

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—Initiate cutover.

6700: **A cutover condition has been met for the files and folders migration job "%1" (ID %2).**

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—Initiate cutover.

6800: **A cutover condition has been met for the SQL Modernization job "%1" (ID %2).**

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—Initiate cutover.

7000: **Double-Take On Demand is not enabled on server %1.**

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

7001: **Double-Take On Demand could not be enabled on server %1.**

Event log—Application

Source—Double-Take Management Service

Level—Error

User action required—Contact your OpenText service provider.

7002:   Double-Take On Demand is enabled on server %1. The configured service provider is %2. The configured user name is %3. The configured On Demand service address is %4.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

7003:   Double-Take successfully updated the metered license on server %1.

Event log—Application

Source—Double-Take Management Service

Level—Information

User action required—No action required.

7004:   Double-Take failed to update the metered license on server %1.

Event log—Application

Source—Double-Take Management Service

Level—Warning

User action required—Confirm the server has Internet access. If you have Internet access and continue to receive this message, contact your OpenText service provider.

7106:   The driver was unable to get valid name information from the Filter Manager for the file %2. (Filename may be truncated.) It cannot be replicated. Please contact technical support.

Event log—System

Source—RepDrv

Level—Error

User action required—Contact technical support.

7107:   The driver was unable to get valid name information from the Filter Manager for a file. It cannot be replicated. Please contact technical support.

Event log—System

Source—RepDrv

Level—Error

User action required—Contact technical support.

8100:   The driver encountered an unrecoverable internal error. Contact technical support. The last Word in the Data window is the internal error code.

> **Event log**—System
>
> **Source**—RepDac
>
> **Level**—Error
>
> **User action required**—Contact technical support.

8192:   Driver failed to allocate Kernel memory. Replication is stopped and server must be rebooted for replication to continue. The last word in the data window is the tag of the allocation that failed.

> **Event log**—System
>
> **Source**—RepDrv, RepKap, or RepHsm
>
> **Level**—Error
>
> **User action required**—Reboot the server and contact technical support if this event occurs again.

8192:   Kernel memory is exhausted. Replication is stopped. This may have been caused by low system resources.

> **Event log**—System
>
> **Source**—RepDrv or RepHsm
>
> **Level**—Error
>
> **User action required**—Reboot the server and contact technical support if this event occurs again.

8193:   The driver failed to create a thread required for normal operation. This may have been caused by low system resources. Reboot your server and contact technical support if this error occurs again. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Error
>
> **User action required**—Reboot the server and contact technical support if this event occurs again.

8196:   The maximum amount of memory for replication queuing has been reached. Replication is stopped and memory is being freed.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Warning

User action required—This error is expected when the amount of replication exceeds what can be queued and transmitted on the source server. You do not have to take any action because OpenText Availability and OpenText Migrate will automatically disconnect, reconnect and remirror (by default) when memory resources are available. However, you may want to consider changes to the source that will reduce the load on the server. See Knowledge Base Article 32410 on the support site for details on the 8196 event and possible steps you can take on your server to help alleviate this condition.

8198: The driver registry path could not be saved. The default registry path will be used.

> **Event log**—System
>
> **Source**—RepDrv, RepKap, or RepHsm
>
> **Level**—Warning
>
> **User action required**—No action required.

8200:   The driver failed to allocate a buffer for a file name longer than 260 characters. The file will be skipped. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Warning
>
> **User action required**—Reboot the server and contact technical support if this event occurs again.

9000:   The driver has failed to process a rename operation. The driver will resend the rename operation. This message is only a warning. If you receive this message repeatedly, contact technical support. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Warning
>
> **User action required**—Contact technical support if this event occurs again.

9100:   The driver encountered an error opening a file from the service. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9101:   The driver encountered an error reading from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

>**Event log**—System
>
>**Source**—RepKap
>
>**Level**—Error
>
>**User action required**—Check for related service messages. Contact technical support if this event occurs again.

9102:   The driver encountered an error writing to the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

>**Event log**—System
>
>**Source**—RepKap
>
>**Level**—Error
>
>**User action required**—Check for related service messages. Contact technical support if this event occurs again.

9103:   The driver encountered an error writing to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

>**Event log**—System
>
>**Source**—RepKap
>
>**Level**—Error
>
>**User action required**—Check for related service messages. Contact technical support if this event occurs again.

9104:   The driver encountered an error querying for file security from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

>**Event log**—System
>
>**Source**—RepKap
>
>**Level**—Error
>
>**User action required**—Check for related service messages. Contact technical support if this event occurs again.

9105:   The driver encountered an error querying for file security from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

>**Event log**—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9106: The driver encountered an error writing file security data to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9107: The driver encountered an error querying for an allocated range from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9108: The driver encountered an error querying for an allocated range from the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9109: The driver encountered an error writing an allocated range to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9110:   The driver encountered an error querying for a directory from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9111:   The driver encountered an error querying for a directory from the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9112:   The driver encountered an error writing a directory query to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9113:   The driver encountered an error querying a stream from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9114:   The driver encountered an error writing a stream query to the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System

> **Source**—RepKap

> **Level**—Error

> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9115:   The driver encountered an error writing a stream query to the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System

> **Source**—RepKap

> **Level**—Error

> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9116:   The driver has failed to close a file handle. If you receive this message repeatedly, contact technical support. The last Word in the Data window is the NT status code.

> **Event log**—System

> **Source**—RepKap

> **Level**—Error

> **User action required**—Contact technical support.

9117:   The driver encountered an error querying for extended attributes from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System

> **Source**—RepKap

> **Level**—Error

> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9118:   The driver encountered an error writing extended attributes to the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System

> **Source**—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9119:   The driver encountered an error writing extended attributes status to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9120:   The driver encountered an error querying for file information from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9121:   The driver encountered an error writing file information to the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9122:   The driver encountered an error writing file information status to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9123:   The driver encountered an error querying for fsctl information from the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9124:   The driver encountered an error writing fsctl information to the service output buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9125:   The driver encountered an error writing fsctl status to the service input buffer. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9126:   The driver encountered an error reading from the service input buffer, KFAI_OPEN_ BY_FILE_ID. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code

> **Event log**—System
>
> **Source**—RepKap
>
> **Level**—Error
>
> **User action required**—Check for related service messages. Contact technical support if this event occurs again.

9127:   The driver encountered an error writing to the service output buffer, KFAI_OPEN_BY_ FILE_ID. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

> **Event log**—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9128: The driver encountered an error reading from the service input buffer, KFAI_QUERY_INFO. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

9129: The driver encountered an error writing to the service output buffer, KFAI_QUERY_INFO. Check the Event Viewer Application log for additional service information or contact technical support. The last Word in the Data window is the exception code.

Event log—System

Source—RepKap

Level—Error

User action required—Check for related service messages. Contact technical support if this event occurs again.

10000: This message is only a placeholder warning. The last Word in the Data window is the NT status code.

Event log—System

Source—Double-Take

Level—Warning

User action required—No action required.

10000: Connect failed to node %1 for resource %2. Adding node to reconnect list.

Event log—Application

Source—Double-Take

Level—Error

User action required—Ensure that OpenText Availability is running on all possible owners and that it can communicate on the network selected for mirroring and replication traffic. OpenText Availability will try to reestablish a connection using the check unresponsive node interval specified for the resource.

10001:   Reconnect succeeded to node %1 for resource %2. Will be added as a possible owner when mirror is complete.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

10002:   Disk check failed on node %1 for resource %2. Removing as a possible owner.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Ensure that OpenText Availability is running on all possible owners and that it can communicate on the public network. Also ensure that the disk specified for the resource is functioning correctly on all possible owners.

10003:   Owner %1 of the quorum resource %2 couldn't access the arbitration path %3. Network may be down.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Error
>
> **User action required**—Ensure that the network used to access the arbitration path is up and that the server is operational. Also ensure that the arbitration share path does exist and that the account running the cluster service has write privileges to the share path.

10004:   Failover of the group %1 is being delayed. Group will be brought online when the target queue is below the limit or the timeout has expired.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—No action required.

10005:   Node %1 is taking ownership of the group %2. The group will be brought online on this node.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Information
>
> **User action required**—No action required.

10006: The cluster notification thread failed to start on node %1 for resource %2. The resource should be taken offline and brought back online.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—Take the resource offline and bring it back online.

10007: The user %1 has reverted a snapshot for the %2 resource on node %3.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—No action required. The snapshot you selected will be reverted.

10008: The user %1 has discarded queued data for the %2 resource on node %3.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—No action required. The queue you selected will be discarded.

10009: The user %1 is verifying data for the %2 resource on node %3.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—A snapshot of the current data has been taken. After you have verified the data, accept or reject the data.

10010: The user %1 has rejected the data for the %2 resource on node %3.

> **Event log**—Application
>
> **Source**—Double-Take
>
> **Level**—Warning
>
> **User action required**—No action required. Since the data was rejected, the data has been reverted to the snapshot taken when the data was selected for verification.

10011: The user %1 has accepted the data for the %2 resource on node %3.

> **Event log**—Application
>
> **Source**—Double-Take

Level—Warning

User action required—No action required. The current data will be used.

10100:   The driver could not recall a file because it did not have a token for impersonation. The security provider service should set this token. The last Word in the Data window is the exception code.

      Event log—System

      Source—RepKap

      Level—Error

      User action required—Contact technical support if this event occurs again.

10101:   The driver could not access the file in the archive bin, due to a failed impersonation attempt. The last Word in the Data window is the exception code.

      Event log—System

      Source—RepKap

      Level—Error

      User action required—Contact technical support if this event occurs again.

10102:   The driver could not recall the file. The last Word in the Data window is the exception code.

      Event log—System

      Source—RepKap

      Level—Error

      User action required—Contact technical support if this event occurs again.

12288:   The driver encountered an error accessing a buffer from the service. Contact technical support. The last Word in the Data window is the exception code.

      Event log—System

      Source—RepDrv

      Level—Error

      User action required—Contact technical support.

16384:   The driver encountered an unrecoverable error. Contact technical support.

      Event log—System

      Source—RepDrv

      Level—Error

      User action required—Contact technical support.

16385:   The driver encountered an unexpected internal result. Contact technical support. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Error
>
> **User action required**—Contact technical support.

16393:   The driver encountered an internal error. Contact technical support. The last Word in the Data window is the internal error code.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Error
>
> **User action required**—Contact technical support.

16395:   The driver detected a memory error which may have been caused by a bad driver or faulty hardware. Contact technical support. The last Word in the Data window is the internal error code.

> **Event log**—System
>
> **Source**—RepDrv or RepHsm
>
> **Level**—Error
>
> **User action required**—Contact technical support.

16396:   The driver failed to create work queues for normal operation. This may have been caused by low system resources. Reboot the server and contact technical support if this error occurs again. The last Word in the Data window is the NT status code.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Error
>
> **User action required**—Reboot the server and contact technical support if this event occurs again.

16400:   RepDrv has encountered an unexpected condition, usually caused by low kernel memory. Unless otherwise mentioned, this event has already been handled and your data remains protected. If you continue to receive these events or have further questions please contact tech support.

> **Event log**—System
>
> **Source**—RepDrv
>
> **Level**—Information
>
> **User action required**—No action required.

Chapter 7 Linux event messages

An event is a significant occurrence in the system or in an application that requires administrators to be notified. OpenText Availability and OpenText Migrate generate notifications for these events and emails them, if email notification is enabled.

The following table identifies the Linux OpenText Availability and OpenText Migrate events. The event ID is followed by the event description. Below the ID and description you will find the following information.

- **Level**—Identifies if the message is an error, warning, or informational message
- **Required response**—Identifies the required action, if any, you should take if you get this message

OpenText Availability and OpenText Migrate share the same set of event messages. Some messages apply to one product, some to the other, and some to both. For messages that apply to both, the OpenText Availability terminology is used. For example, message 5705 indicates failover has started. This same message will also be seen when cutover is started.

5700: This job was created to protect the source virtual machine.

Level—Information

Required response—No action required.

5701: Protection has started.

Level—Information

Required response—No action required.

5702: Protection has been paused.

Level—Information

Required response—No action required.

5703: The job has been stopped.

Level—Information

Required response—No action required.

5704:   The job has been deleted

Level—Warning

Required response—No action required. If desired, you can re-create the job.

5705: A failover has been initiated.

> **Level**—Warning

> **Required response**—No action required.

5706: A reverse has been initiated.

> **Level**—Warning

> **Required response**—No action required.

5707: The Double-Take Availability software license requirements have not been met.

> **Level**—Error

> **Required response**—Verify the source and target have the correct OpenText Availability and OpenText Migrate license applied. If the license keys appear to be correct, contact technical support.

5708: A network connection has been lost to an appliance, source virtual machine, or target virtual machine.

> **Level**—Error

> **Required response**—Verify the network used to access the appliance, source and target are functioning and the servers are running. (The target replica of a full server to ESX job will not be running until after failover.) See the job and server log files for additional details.

5709: A general error has occurred.

> **Level**—Error

> **Required response**—See the job and server log files for additional details.

5710: The job has a server communication error problem.

> **Level**—Error

> **Required response**—Verify the network used to access the appliance, source and target are functioning and the servers are running. (The target replica of a full server to ESX job will not be running until after failover.) See the job and server log files for additional details.

5711: The job has a server communication warning problem.

> **Level**—Warning

> **Required response**—Verify the network used to access the appliance, source and target are functioning and the servers are running. (The target replica of a full server to ESX job will not be running until after failover.) See the job and server log files for additional details.

5712: The source to target connection and the management communication are both ok.

> **Level**—Information

Required response—No action required.

5713: The source license is invalid.

> **Level**—Error
>
> **Required response**—Verify the source has the correct OpenText Availability and OpenText Migrate license applied. If the license keys appear to be correct, contact technical support.

5714: The source license is valid.

> **Level**—Information
>
> **Required response**—No action required.

5715: The source engine is down or not reachable.

> **Level**—Error
>
> **Required response**—Verify the Double-Take service is running on the source. Also verify the network used to access the source is functioning and the source is running. See the job and server log files for additional details.

5716: The target/appliance engine is down or not reachable.

> **Level**—Error
>
> **Required response**— Verify the Double-Take service is running on the target. Also verify the network used to access the target is functioning and the target is running. See the job and server log files for additional details.

5717: The target/appliance engine is up and reachable.

> **Level**—Information
>
> **Required response**—No action required.

5718: The source engine is up and reachable.

> **Level**—Information
>
> **Required response**—No action required.

Chapter 8 Performance Monitor

Performance Monitor is the Windows graphical tool for measuring performance. It provides charting, alerting, and reporting capabilities that reflect both current activity and ongoing logging. OpenText Availability and OpenText Migrate statistics are available through the Performance Monitor.

Monitoring Performance Monitor statistics

1. If you are using OpenText Availability and OpenText Migrate version 8.4.2 or later, the performance objects are not registered by default during installation. You will need to manually register them by running the following command from the location where OpenText Availability and OpenText Migrate is installed.

   lodctr DTCounters.ini

2. From the Performance Monitor, specify the data to monitor by right-clicking and selecting **Add** or using the **Add** button on the toolbar.

3. Choose one of the following OpenText Availability and OpenText Migrate Performance Objects.
   - Double-Take Connection
   - Double-Take Kernel
   - Double-Take Security
   - Double-Take Source
   - Double-Take Target

4. Select the statistics you want to monitor, and click **Add**.

For additional information and details on the Performance Monitor, see your Windows reference guide.

Performance Monitor should not be used remotely on systems running different operating systems. Performance Monitor can be used remotely when using like systems, for example Windows 2012 to Windows 2012.

If you need to unload the performance objects, you can run the following command from the location where OpenText Availability and OpenText Migrate is installed.

   unlodctr Double-Take

Performance Monitor statistics

The following tables identify the OpenText Availability and OpenText Migrate Performance Monitor statistics for each OpenText Availability and OpenText Migrate counter.

If you have multiple IP addresses connected to one target server, you will see multiple *Double-Take Target* statistic sections for each IP address.

Double-Take Connection

Bandwidth Limit

> The amount of bandwidth that may be used to transfer data

Bytes in disk queue

> The number of bytes in the source disk queue

Bytes in replication queue

> The number of replication bytes in the source queue

Bytes in the mirror queue

> The number of mirror bytes in the source queue

Bytes received

> The number of bytes received by the target since the last Performance Monitor refresh

Bytes transferred

> The number of bytes transmitted from the source

Compressed bytes transferred

> The number of compressed bytes transmitted from the source

Operations in acknowledgement queue

> The number of operations waiting in the source acknowledgement queue

Operations in command queue

> The number of operations waiting in the source command queue

Operations in mirror queue

> The number of mirror operations in the source queue

Operations in replication queue

> The number of replication operations in the source queue

Operations received

> The number of operations received by the target since the last Performance Monitor refresh

Operations resent

> The number of operations re-sent since the last time the Double-Take service was restarted on the source

Operations transmitted

> The number of operations transmitted from the source

Task commands queued

> The number of task commands queued on the source

Task commands submitted

> The number of task commands submitted on the source

Tasks failed

> The number of task commands that have failed to execute on the source

Tasks ignored

> The number of task commands that have been ignored on the source

Tasks succeeded

> The number of task commands that have succeeded on the source

---

Double-Take Kernel

Activation code failures

> The number of license key failures when loading the OpenText Availability and OpenText Migrate functionality on a server, since the last time the Double-Take service was restarted

CRC Read Time

> The length of time, in microseconds, spent reading CRC (cyclic redundancy check) data on the target. If this value is longer than the standard access time of the target's storage device, it indicates there is possibly an issue reading the data on the target. For example, if the target storage is a SAN, there may be an issue with the way the SAN is configured.

CRC Thread Count

> The number of commands being executed simultaneously on the target. In a properly functioning environment, this number should never be greater than the number of difference mirrors currently being executed on the sources connected to this target. If the value grows larger than the number of currently executing difference mirrors, that indicates there is an error condition.

Double-Take queue memory usage

> The amount of system memory in use by the OpenText Availability and OpenText Migrate queue

Driver Queue Percent

> The amount of throttling calculated as a percentage of the stop replicating limit

Failed mirror operations

> The number of mirror operations on the source that failed due to an error reading the file from the disk

Failed replication operations

> The number of replication operations on the source that failed due to an error reading the file from the disk

Memory Pool Bytes Available

> The amount of memory, in bytes, in the OpenText Availability and OpenText Migrate memory pool that can be used for OpenText Availability and OpenText Migrate operations. When OpenText Availability and OpenText Migrate is at or near idle, the pool bytes available and pool total bytes will at or near equal. If OpenText Availability and OpenText Migrate is queuing, the pool bytes available will be at or near zero and the pool total bytes will be larger (near 256 MB based on default settings).

Memory Pool Total Bytes

> The amount of memory, in bytes, that OpenText Availability and OpenText Migrate has allocated for memory pooling. When OpenText Availability and OpenText Migrate is at or near idle, the pool bytes available and pool total bytes will at or near equal. If OpenText Availability and OpenText Migrate is queuing, the pool bytes available will be at or near zero and the pool total bytes will be larger (near 256 MB based on default settings).

Mirror Kbytes generated

> The number of mirror kilobytes transmitted to the target. This is the number of bytes generated during mirroring. In other words, this is roughly the amount of traffic being sent across the network that is generated by the mirror. It does not take into account TCP/IP overhead (headers and such), however it does account for attributes and other overhead associated with creating a file. With many small files in a directory, you will see larger statistics than expected because of the file creation overhead. Any subsequent remirror will reset this field to zero and increment from there.

Mirror operations generated

> The number of mirror operations transmitted from the source

Open Target Handles

> The number of handles currently open on the target.

Replication Kbytes generated

> The number of replication kilobytes generated on the source by the file system driver

Replication operations generated

> The number of replication operations generated on the source by the file system driver

Double-Take Security

Failed logins

Number of failed login attempts since the last time the Double-Take service was restarted

Successful logins

Number of successful login attempts since the last time the Double-Take service was restarted

---

Double-Take Source

Auto disconnects

The number of automatic disconnects since the last time the Double-Take service was restarted on the source

Auto reconnects

The number of automatic reconnects since the last time the Double-Take service was restarted on the source

---

Double-Take Target

Bytes in Disk Queue

The number of bytes in the target disk queue

Bytes in Queue

The number of bytes in the system memory and disk queues

Mirror operations received

The number of mirror operations received on the target

Operations received

The number of operations received on the target

Ops Dropped

The number of operations dropped on the target since the last time the Double-Take service was restarted on the target

Ops Remaining

The number of operations on the target remaining to be applied

Orphan Bytes

The number of orphan bytes removed from the target

Orphan Directories

The number of orphan directories removed from the target

Orphan Files

The number of orphan files removed from the target

Retries

The number of retries performed on the target since the last time the Double-Take service was restarted on the target

Tasks failed

The number of task commands that have failed on the target.

Tasks ignored

The number of task commands that have been ignored on the target

Tasks succeeded

The number of task commands that have succeeded on the target

Chapter 9 Microsoft Systems Center Operations Manager 2007

Microsoft Systems Center Operations Manager 2007 (SCOM) is an enterprise class operations management system that provides event management, proactive monitoring and alerting, reporting and trend analysis, system and application specific knowledge, and configurable task responses to proactively respond to negative trends and alerts. Management Packs are pre-configured collections of these capabilities focused on managing a specific application or hardware type, which can be easily exported and imported into other SCOM environments.

The OpenText Availability and OpenText Migrate Management Pack was created to help you monitor OpenText Availability and OpenText Migrate operations and provides the following features.

- **Event rules to monitor all OpenText Availability and OpenText Migrate generated events**—All OpenText Availability and OpenText Migrate generated events that appear in the Event Viewer can trigger a SCOM alert. By default, only a subset of events are pre-selected to generate alerts, but additional alerts can easily be generated by enabling additional event rules. See *Windows Event messages* on page 41 for a list of the events.

- **Performance rules for threshold violations**—All OpenText Availability and OpenText Migrate performance counters that appear in the Performance Monitor can generate a SCOM alert when the configured threshold is violated. Because every environment is unique, only a few performance thresholds are enabled by default. See *Customizing the Management Pack* on page 107 for instructions on configuring the performance thresholds, and see *Performance Monitor statistics* on page 100 for a list of the statistics.

- **Performance rules for performance monitoring**—A subset of OpenText Availability and OpenText Migrate performance counters can be graphically monitored in the OpenText Availability and OpenText Migrate performance views, accessible from the SCOM console. These statistics illustrate key metrics, such as how much memory or disk space OpenText Availability and OpenText Migrate is consuming and how much data is being transmitted.

- **Vendor product knowledge for alerts**—Understanding why problems exist and how to fix them is an important part of operations management. The OpenText Availability and OpenText Migrate Management Pack contains product knowledge for each alert, gathered from OpenText technical support. Each alert will also provide information and links to external support.

- **OpenText Availability and OpenText Migrate specific views**—Various OpenText Availability and OpenText Migrate specific views are provided in the SCOM console.

  - **Alerts View**—View only OpenText Availability and OpenText Migrate alerts for computers with OpenText Availability and OpenText Migrate installed.

  - **State View**—View the server state for all OpenText Availability and OpenText Migrate servers. You can also view the various properties of all OpenText Availability and OpenText Migrate servers, including the overall server state.

  - **Events View**—View OpenText Availability and OpenText Migrate events for OpenText Availability and OpenText Migrate servers.

  - **Performance Data View**—View graphs of various performance counters for one or multiple computers, as defined in the performance rules.

Installing the OpenText Availability and OpenText Migrate Management Pack

Microsoft Management Pack for Microsoft Systems Center Operations Manager 2007 R2 is required for the OpenText Availability and OpenText Migrate Management Pack. To improve the operation of the OpenText Availability and OpenText Migrate Management Pack, you should have the OpsMgr 2007 MOM 2005 Backward Compatibility MP Update installed. This Management Pack can be found on the Microsoft download site at
http://www.microsoft.com/downloads/details.aspx?FamilyID=655cdd06-861e-4342-99b2-8a81e09f6546&DisplayLang=en.

The Management Pack is distributed as an .xml file that is imported via the SCOM console.

1. Download the management pack zip file and unzip it, or start the OpenText Availability and OpenText Migrate installation, and when the installation landing page appears, select the **Get the SCOM 2007 Management Pack** link.
2. From the Operations console, click **Administration**.
3. Right-click **Management Packs** and select **Import Management Pack**.
4. Click **Add** then click **Add from disk**.
5. Navigate to the location of the .xml file, select it, and click **Open**.
6. The OpenText Availability and OpenText Migrate management pack does not have any dependencies. When you see the green checkmark indicating the management pack can be imported, click **Install**.
7. Click **Close** when the import is complete.

See the Microsoft SCOM documentation for complete installation details.

Customizing the Management Pack

After the installation, you will have the following OpenText Availability and OpenText Migrate Management Pack assets.

- **Double-Take Product Version Attribute**—This attribute checks the OpenText Availability and OpenText Migrate product version and is used by the OpenText Availability and OpenText Migrate Servers computer group.
- **Double-Take Servers Group and Installation Type**—This asset uses a formula and regular expression match on the Double-Take Product Version attribute to determine which servers have OpenText Availability and OpenText Migrate installed.
- **Double-Take Rules**—Rules can be found under the Management Pack Objects section, and contains all of the rules that comprise the Management Pack. Performance Rules, Alert Rules and Event Rules are grouped together under the Rules category. (To see only OpenText Availability and OpenText Migrate rules, change the scope of the Rules group and filter by Double-Take Servers Installation.)
- **Double-Take views**—Various views are available as previously described in **OpenText Availability and OpenText Migrate specific views**.

Except for vendor produced product knowledge, all aspects of the Management Pack can be modified by the SCOM administrator. Use the following notes as suggestions for customization, and see your SCOM documentation for complete instructions.

- **Threshold configuration**—Because each server environment is different, the thresholds at which alerts should be generated will be different. To enable one of the pre-existing (but disabled) performance rules, right-click a performance rule and select **Properties**. On the **General** tab, enable **Performance Rule**. If you want to customize the threshold trigger, modify the threshold value on the **Overrides** tab.

- **Multi-tier alerting**—Although only one performance rule is provided for each performance counter, by copying that rule and changing the alert severity and threshold values, multi-tiered alerting is possible. For example, it is possible to generate a warning alert when 1024 MB memory is used for queuing and generate an error when 512 MB is consumed. Threshold values can be modified on the **Overrides** tab. Alert severities can be modified on the **Configuration** tab, by highlighting the **GenerateAlert** entry and editing the XML data behind the rule. For more details, see your SCOM documentation.

- **Enable additional event rules**—By default, only a pre-selected group of events will generate alerts. If additional alerts are desired, enable additional Event Rules and verify the alert severity.

- **Notifications**—For each Alert Rule, a notification response is pre-selected and will send the applicable message to the defined Recipients and notification Subscriptions. Notification and Subscription options in SCOM do not allow for pre-defined notification groups. Therefore, it is required that the SCOM administrator create custom notification Recipients and Subscriptions. (Notification Groups previously used in MOM 2005 can be re-created in SCOM using the Subscriptions feature. For more information on Recipients and Subscriptions, refer to Operations Manager Help using the keyword Notifications.)

Chapter 10 Microsoft System Center 2012 Operations Manager

Microsoft System Center 2012 Operations Manager is an enterprise operations management system that allows you to monitor services, devices, and operations from a single console. You can see state, health, and performance information and gather performance and configuration alerts. Management packs are pre-configured collections of these capabilities focused on managing a specific application or hardware type, which can be easily exported and imported into other System Center environments. The OpenText Availability and OpenText Migrate 2012 Management Pack was created to help you monitor OpenText Availability and OpenText Migrate operations.

You must have System Center 2012 R1 SP1 or later. Ideally, your Systems Center environment should be fully patched. Also, you should already have the Operations Manager agents deployed to each OpenText Availability and OpenText Migrate server that you want to monitor. See your System Center documentation for details on agents.

The OpenText Availability and OpenText Migrate 2012 Management Pack is sealed and is distributed as four .mpb files that are imported using the Operations console.

> If you have the OpenText Availability and OpenText Migrate SCOM 2007 management pack, you must uninstall it before importing the OpenText Availability and OpenText Migrate 2012 management packs. You cannot upgrade it.

1. First you need to install the OpenText Availability and OpenText Migrate 2012 Management Pack using the following basic guidelines. See the Operations Manager documentation for complete installation details.

    a. Download the management pack zip file and unzip it, or start the OpenText Availability and OpenText Migrate installation and when the installation landing page appears, select the **Get the SCOM 2012 Management Pack** link and then unzip the management pack file.

    b. Copy the four .mpb files from the unzipped file to your Operations server.

    c. From the Operations console, click **Administration**.

    d. Right-click **Management Packs** and select **Import Management Pack**.

    e. Click **Add** then click **Add from disk**.

    f. Navigate to the location of the .mpb files, select the four files, and click **Open**.

    g. The OpenText Availability and OpenText Migrate management pack does not have any dependencies. When you see the green checkmark indicating the management packs can be imported, click **Install**.

    h. Click **Close** when the import is complete.

2. Next you will need to apply a run as account in order to use the OpenText Availability and OpenText Migrate 2012 Management Pack. This run as account provides authentication for each OpenText Availability and OpenText Migrate server. If desired, you can apply multiple run as accounts, for example if your OpenText Availability and OpenText Migrate servers are in different domains.

a. From the Operations console, click **Administration**, **Run As Configuration**, **Profiles**.

b. Right-click on the **Vision Solutions Double-Take Action Account** and select **Properties**.

c. Review the introduction and click **Next**, unless this page was previously set to no longer display.

d. Review the general properties and if desired add an optional description. Click **Next** to continue.

e. Click **Add** to select or create the run as accounts to use.

f. Select a user from the **Run As account** list or click **New** to create a new run as account. If you are creating a new run as account, follow the **Create Run As Account Wizard** using steps f1 through f6.

    1. Review the introduction and click **Next**, unless this page was previously set to no longer display.

    2. Select the **Windows** type, provide a descriptive **Display name**, and click **Next**.

    3. Specify an account that has access to your OpenText Availability and OpenText Migrate servers and click **Next**.

    4. Select your security option. The more secure security is recommended, but is not required. See your Operations Manager documentation for details on the security options.

    5. Click **Create**.

    6. Click **Close**.

g. Confirm the account you just created or an account you already had is selected for the **Run As account**.

h. Select what objects you want the run as account to manage. See your Operations Manager documentation for details on the objects.

i. Click **OK** to return to the **Run As Profile Wizard**.

j. If desired, add any additional run as accounts. When you are finished adding the run as accounts, click **Save**.

k. Click **Close**. If you choose the less secure security option for your run as account, you are now finished. If you choose the more secure security option for your run as account, continue with the remaining steps.

l. Back in the Operations console, click **Administrator**, **Run As Configuration**, **Accounts**.

m. Right-click on the account you just applied to your **Vision Solutions Double-Take Action Account** and select **Properties**.

n. Select the **Distribution** tab.

o. Click **Add** and select the computers that you want the run as account to be distributed to.

p. Locate, select, and **Add** the computers and then click **OK**.

q. Click **OK** again.

Once your management packs are installed and your run as account is applied, go to the **Monitoring** page in your Operations console and you will see a Vision Solutions folder and a Double-Take subfolder where you will find your various alerts and views for your OpenText Availability and OpenText Migrate servers.

Chapter 11 **SNMP**

SNMP, Simple Network Management Protocol, is the Internet's standard for remote monitoring and management of hosts, routers and other nodes and devices on a network. OpenText Availability and OpenText Migrate provides an SNMP sub-agent that can be managed from an SNMP Management Console.

OpenText Availability and OpenText Migrate installs two components to work with SNMP.

1. The sub-agent is a program that installs and runs on the same machine as OpenText Availability and OpenText Migrate and gathers statistics, data, and traps. The sub-agent forwards the information to the SNMP agent, which relays the information to the manager. The OpenText Availability and OpenText Migrate SNMP sub-agent is included in the OpenText Availability and OpenText Migrate installation program.

2. A OpenText Availability and OpenText Migrate MIB file is placed on the administrator's machine so that the Management Console can interpret the data sent from the sub-agent. The OpenText Availability and OpenText Migrate .mib file is dt.mib and meets SNMP standards.

For Linux servers, the OpenText Availability and OpenText Migrate SNMP sub-agent is only supported for NET -SNMP v2c. Also, Ubuntu SNMP is not supported.

Configuring SNMP on a Windows server

The OpenText Availability and OpenText Migrate SNMP components are automatically included with the OpenText Availability and OpenText Migrate installation. However, the OpenText Availability and OpenText Migrate .mib file will need to be loaded into your SNMP Management Console. Depending on the type of console you are using, this process might include compiling the .mib file. Reference your SNMP Management Console documentation for additional information.

> OpenText Availability and OpenText Migrate SNMP will run in any environment, but it only uses 32-bit statistics and traps.

Configuring SNMP on a Linux server

1. Install OpenText Availability and OpenText Migrate, if it is not already installed.
2. Move the DTSubAgent_init script to /etc/init.d/DTSubAgent

    # mv DTSubAgent_init /etc/init.d/DTSubAgent

    # chmod 755 /etc/init.d/DTSubAgent

3. Install the NET-SNMP service, libs, and utils rpm, if they are not already installed.

    # yum install net-snmp net-snmp-utils

4. Make a backup copy of the SNMP configuration file snmpd.conf.

    # cp /etc/snmp/snmpd.conf /etc/snmp/snmpd.conf.orig

5. Edit the snmpd.conf file and insert the following line with the view definitions.

    view systemview included .1.3.6.1.4.1.2592

6. Append the following lines to the end of the file, where <SNMP Manager IP> is the IP address where the SNMP manager is being run.

    master agentx

    trapcommunity public

    trapsink <SNMP Manager IP>

If your snmpd.conf file is empty, add the following content to the file, where <SNMP Manager IP> is the IP address where the SNMP manager is being run.

    com2sec nsiUser   default public

    group   nsiGroup v1   nsiUser

    group   nsiGroup v2c   nsiUser

    view   all   included   .1

    access   nsiGroup ""   any   noauth exact all all all

    rocommunity public 127.0.0.1

    master agentx

    trapcommunity public

    trapsink <SNMP Manager IP>

---

7. Create or edit /usr/share/snmp/snmp.conf and add the following lines.

    mibdirs +/usr/share/snmp/mibs

    mibs +NSI-MIB

8. Edit the shell script /etc/init.d/snmpd and insert the following in the OPTIONS line.

    -x /var/agentx/master"

   It should now be similar to this.

    OPTIONS="-x /var/agentx/master -LS0-6d -Lf /dev/null -p /var/run/snmpd.pid"

9. Install and start the snmpd and DTSubAgent services by running the following commands.

    # chkconfig --add snmpd

    # chkconfig snmpd on

    # service snmpd start

    # chkconfig --add DTSubAgent

    # chkconfig DTSubAgent on

    # service DTSubAgent start

10. Reboot the system to ensure that the latest versions of the Net-SNMP libraries are loaded and that the snmpd and DTSubAgent services start as expected.

11. Confirm that the agents are configured correctly. The output should be similar to the text below the command.

    # snmpget -v2c -c public localhost dtGeneral.dtUpTime.0

    NSI-MIB::dtUpTime.0 = Timeticks: (586000) 1:37:40.00

    If the output says that the object could not be found, confirm that the snmpd.conf has "public" as the community specified in the line beginning "com2sec". If it uses a different value, try that value in the snmpget command above.

12. Once you have this working, you should change the community string to a custom value for security reasons. DTSubAgent only supports v2c so SNMP user credentials cannot be used.

13. Confirm that the SNMP monitor is configured to receive traps remotely by stopping/starting the DTSubAgent service after the monitor is set up.

    # service DTSubAgent restart

   This will generate traps for OpenText Availability and OpenText Migrate events gathered from the latest log such as dttrapKernelStarted (OID 1).

SNMP traps

The following table lists the OpenText Availability and OpenText Migrate SNMP traps.

---

dttrapAutoDisconnectEndConnection

> Auto-disconnect has intentionally dropped the connection

dttrapAutoDisconnectPauseTransmission

> Auto-disconnect requested that the source pause sending any operations (create, modify, or delete)

dttrapAutoReconnect

> Auto-reconnect needs to make a new connection

dttrapConnectionFailed

> The source to target connection was not successful

dttrapConnectionLost

> The source to target connection has been disconnected

dttrapConnectionPause

> The source to target transmission has paused

dttrapConnectionRequested

> The source has requested a connection to the target

dttrapConnectionRequestReceived

> The target has received a connection request from the source

dttrapConnectionResume

> The source to target transmission has resumed

dttrapConnectionSucceeded

> The source to target connection has been established

dttrapFailoverConditionMet

> Manual intervention is required because failover has detected a failed source machine

dttrapFailoverInProgress

> Failover or cutover is occurring

dttrapKernelStarted

> OpenText Availability and OpenText Migrate has started

dttrapKernelStopped

> OpenText Availability and OpenText Migrate has stopped

dttrapLicenseViolationOnNetwork

> A OpenText Availability and OpenText Migrate serial number conflict was identified on the network

dttrapLicenseViolationStartingSource

> The source or target cannot be started due to a license violation

dttrapMemoryLimitReached

> The OpenText Availability and OpenText Migrate memory pool limit has been reached

dttrapMemoryLimitRemedied

> The memory pool usage is below the maximum limit specified

dttrapMirrorEnd

> Mirroring has ended

dttrapMirrorPause

> Mirroring has paused

dttrapMirrorResume

> Mirroring has resumed

dttrapMirrorStart

> Mirroring has started

dttrapMirrorStop

> Mirroring has stopped

dttrapReplicationStart

> Replication has started

dttrapReplicationStop

> Replication has stopped

dttrapRepSetModified

> The replication set has been modified

dttrapRestoreComplete

> Restoration has ended

dttrapRestoreStarted

> Restoration has started

dttrapScheduledConnectEnd

>A scheduled end connection has been reached and the connection has been disconnected

dttrapScheduledConnectStart

>A scheduled connection has been started

dttrapSourceStarted

>The OpenText Availability and OpenText Migrate source component has started

dttrapSourceStopped

>The OpenText Availability and OpenText Migrate source component has stopped

dttrapTargetFull

>The target is full

dttrapTargetStarted

>The OpenText Availability and OpenText Migrate target component has started

dttrapTargetStopped

>The OpenText Availability and OpenText Migrate target component has stopped

dttrapVerificationEnd

>Verification has ended

dttrapVerificationFailure

>Verification has failed because the source and target are not synchronized

dttrapVerificationStart

>Verification has started

SNMP statistics

The following table lists the OpenText Availability and OpenText Migrate SNMP statistics.

---

dtActFailCount

> The number of license key errors

dtAutoDisCount

> The number of auto-disconnects

dtAutoReCount

> The number of auto-reconnects

dtconBytesCompressedTx

> The total number of compressed bytes transmitted to the target

dtconBytesInMirQueue

> The number of mirror bytes in the queue

dtconBytesInRepQueue

> The number of replication bytes in the queue

dtconBytesRx

> The total number of bytes received by the target

dtconBytesTx

> The total number of bytes transmitted to the target

dtconConnectTime

> The length of time, in seconds, that the connection has been active

dtconIpAddress

> The IP address of the connected machine. If you are on the source, then this will be the IP address of the target. If you are on the target, then this will be the IP address of the source.

dtConnectionCount

> The number of active connections between servers

dtconOpsInAckQueue

> The number of operations (create, modify, or delete) waiting for verification acknowledgements from the target

---

dtconOpsInCmdQueue

>The number of operations (create, modify, or delete) in the queue on the source

dtconOpsInMirQueue

>The number of mirror operations (create, modify, or delete) in the queue on the source

dtconOpsInRepQueue

>The number of replication operations (create, modify, or delete) in the queue on the source

dtconOpsRx

>The total number of operations (create, modify, or delete) received by the target

dtconOpsTx

>The total number of operations (create, modify, or delete) transmitted to the target

dtconResentOpCount

>The number of operations that were resent because of acknowledgement errors

dtconState

>The state of the active connection
>
>0—None. This indicates there is no active connection. This may be because the connection has not been established or the underlying connection is unavailable. Statistics are still available for the source and target machines.
>
>1—Active. This indicates that the connection is functioning normally and has no scheduling restrictions imposed on it at this time. (There may be restrictions, but it is currently in a state that allows it to transmit.)
>
>2—Paused. This indicates a connection that has been paused.
>
>4—Scheduled. This indicates a connection that is not currently transmitting due to scheduling restrictions (bandwidth limitations, time frame limitations, and so on).
>
>8—Error. This indicates a connection that is not transmitting because something has gone wrong (for example, lost connection).
>
>Only the Scheduled and Error states can coexist. All other states are mutually exclusive. SNMP will display a dtconState of 12 when the connection is in both a scheduled and an error state because this is the sum of the two values (4 + 8).

dtCurrentMemoryUsage

>The amount of memory, in bytes, allocated from the OpenText Availability and OpenText Migrate memory pool

dtCurrentMemoryUsageMB

> The amount of memory, in MB, allocated from the OpenText Availability and OpenText Migrate memory pool

dtDriverQueuePercent

> The percentage of the driver queue that is currently in use. (This is the amount of throttling calculated as a percentage of the stop replicating limit.)

dtFailedLoginCount

> The number of unsuccessful logins

dtFailedMirrorCount

> The number of operations that failed to mirror because they could not be read on the source

dtFailedRepCount

> The number of operations that failed to be replicated because they could not be read on the source

dtLoginCount

> The number of successful logins and logouts

dtMirBytesGenerated

> The number of mirror bytes transmitted to the target. This is the number of bytes generated during mirroring. In other words, this is roughly the amount of traffic being sent across the network that is generated by the mirror. It does not take into account TCP/IP overhead (headers and such), however it does account for attributes and other overhead associated with creating a file. With many small files in a directory, you will see larger statistics than expected because of the file creation overhead. Any subsequent remirror will reset this field to zero and increment from there.

dtMirOpsGenerated

> The number of mirror operations (create, modify, or delete) that have been generated by the mirroring driver

dtOpsDroppedCount

> The number of file operations that have failed and will not be retried

dtRepBytesGenerated

> The number of bytes generated by the replication driver

dtRepOpsGenerated

> The number of operations (create, modify, or delete) that have been generated by the replication driver

dtRetryCount

    The number of file operations that have been retried

dtSourceState

    0—Source is not running

    1—Source is running without the replication driver

    2—Source is running with the replication driver

dtTargetState

    0—Target is not running

    1—Target is running

dtUpTime

    The time in seconds since OpenText Availability and OpenText Migrate was last started

Chapter 12 Server and job settings

The easiest way to view and change select server and job settings is through the OpenText Replication Console. However, not all of the settings are available there, especially for Linux servers. To view and update the remaining settings, in addition to the settings available in the console, you will need to go to HKEY_LOCAL_MACHINE\SOFTWARE\NSI Software\Double-Take\CurrentVersion in the registry on a Windows server. For a Linux server, you can use DTSetup to modify the configuration settings or manually modify /etc/DT/DT.conf. For Windows or Linux, you can use the OpenText Availability and OpenText Migrate PowerShell cmdlets Get-DtOption and Set-DtOptions.

The following table lists all of the Windows and Linux server and job settings, in decimal value.

Windows server and job settings

The following table lists all of the Windows server and job settings, in decimal value.

OpenText Availability and OpenText Migrate products share the same set of server and job settings. You may only have a subset of the settings listed below depending on your Windows operating system and OpenText Availability and OpenText Migrate product.

OpenText Availability terminology is used in the following list. For example, failover is used for OpenText Availability and cutover for OpenText Migrate.

AcquireDataRetryLimit

> **Description**—The length of time, in milliseconds, spent retrying a file read if there is a read error
>
> **Values**—Any positive, integer value
>
> **Default**—2000
>
> **Console setting**—None
>
> **Service restart required**—No

ActivationCode

> **Description**—24-character OpenText Availability and OpenText Migrate license key
>
> **Values**—Unique value for each customer
>
> **Default**—N/A
>
> **Console setting**—Edit Server Properties page, Licensing section, Current license keys
>
> **Service restart required**—No

AddOnCodes

> **Description**—This setting is no longer used.

ArchiveLoopAttempts

> **Description**—This setting is no longer used.

ArchiveLoopDelay

> **Description**—This setting is no longer used.

AutoCalcEulaAccepted

> **Description**—Used internally by OpenText Availability and OpenText Migrate. Do not modify this entry.

AutoReconnect

> **Description**—Specifies whether to reinstate the target connection(s) when the source machine is brought online after a source machine failure
>
> **Values**—0 Do not reconnect, 1 Reconnect
>
> **Default**—1
>
> **Console setting**—Edit Server Properties page, Setup section, Automatically reconnect during source initialization
>
> **Service restart required**—Yes

AutoRemirror

> **Description**—Specifies whether to remirror when a source is brought online after an auto-disconnect
>
> **Values**—0 Do not compare or send any files, 1 Compare file attributes and send the attributes and bytes that are different, 2 Do not compare files, just send all files (the entire file), 3 Compare file attributes and send the entire file for those that are different, 4 Compare file attributes and data and send the attributes and bytes that are different
>
> **Default**—3
>
> **Console setting**—Edit Server Properties page, Setup section, Behavior when automatically remirroring
>
> **Service restart required**—No

AutoRemirrorRetry

> **Description**—Specifies how often, in seconds, the source should check for connections that have been reconnected but still need to be remirrored
>
> **Values**—any integer
>
> **Default**—30
>
> **Console setting**—None
>
> **Service restart required**—No

AutoRetransmit

> **Description**—Determines whether or not a source that has lost its connection with a target will attempt to reconnect to the target
>
> **Values**—0 Do not attempt to reconnect, 1 Attempt to reconnect
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

BackupDir

>**Description**—Location on the target of the backup of the protected data sets
>
>**Values**—any valid path
>
>**Default**—the location where the OpenText Availability and OpenText Migrate files were installed
>
>**Console setting**—None
>
>**Service restart required**—No

CalculateByVolume

>**Description**—Calculates the approximate size of a protected data set by using the size of the volume and subtracting the free space
>
>**Values**—0 Disabled, 1 Enabled
>
>**Default**—0
>
>**Console setting**—None
>
>**Service restart required**—Yes

CalculateOnConnect

>**Description**—Specifies whether or not the amount of data to be mirrored should be calculated on connection
>
>**Values**—0 Do not calculate on connection, 1 Calculate on connection
>
>**Default**—1
>
>**Console setting**—Edit Server Properties page, Source section, Calculate size of protected data upon connection
>
>**Service restart required**—Yes

CertificateSubject

>**Description**—Identifies a self-signed certificate
>
>**Values**—Any valid string
>
>**Default**—None
>
>**Console setting**—None
>
>**Service restart required**—No

ChangeJournalState

>**Description**—An internal setting for change journal tracking. Do not modify this setting.

ChangeJournalSystemState

> **Description**—An internal setting for change journal tracking. Do not modify this setting.

ChecksumAll

> **Description**—Indicates if a mirror, verify, or restore will ignore all attributes and perform a checksum calculation on all files
>
> **Values**—0 Compare files by attribute, 1 Compare files by checksums
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

ClusterDir

> **Description**—Location of a Microsoft Cluster Service installation, if it exists
>
> **Values**—any valid path
>
> **Default**—determined by the Microsoft Cluster Service installation
>
> **Console setting**—None
>
> **Service restart required**—No

ConnectionFile

> **Description**—Name of the database file containing connection information
>
> **Values**—any valid file name
>
> **Default**—connect.sts
>
> **Console setting**—None
>
> **Service restart required**—No

CreateDumpOnAckErrors

> **Description**—Enables additional logging for out of order acknowledgement errors
>
> **Values**—0 Do not create a logging file, 1 Create a logging file
>
> **Default**—0
>
> **Console setting**—None
>
> **Service restart required**—No

DataPath

> **Description**—The location of the OpenText Availability and OpenText Migrate file attribute, protected data set, connection, and schedule database files
>
> **Values**—any valid path

Default—the location where the OpenText Availability and OpenText Migrate files were installed

Console setting—None

Service restart required—No

DefaultAddress

Description—The default primary IP address in a multi-homed server

Values—any valid IP address that will act as your primary IP address for connecting the source to the target

Default—<null>

Console setting—Edit Server Properties page, General section, Default address

Service restart required—Yes

DefaultProtocol

Description—The default protocol

Values—2 IPv4 protocol only, 23 IPv4 and IPv6 protocols, 3 TDU (Throughput Diagnostics Utility)

Default—23

Console setting—None

Service restart required—Yes

DefaultReaderType

Description—Internal setting used for recoveries. Do not modify this setting.

DelayGCArbitration

Description—This setting is no longer used.

DelayGCConnection

Description—This setting is no longer used.

DiffMirrorHardLinkCleanup

Description—This setting is no longer used.

DisableAttributeReplication

Description—Specifies whether or not attributes (read-only, hidden, and so on) are replicated to the target

Values—0 Enable attribute replication, 1 Disable attribute replication

Default—0

Console setting—None

DisconnectOnMarkDelete

Description—Used internally by OpenText Availability and OpenText Migrate. Do not modify this entry.

DriverJournalValid

Description—An internal setting for change journal tracking. Do not modify this setting.

DropOpOnAccessDeniedError

Description—Specifies whether or not operations are dropped or retried after an access denied error

Values—0 The operation will be retried, 1 The operation will be dropped

Default—1

Console setting—None

Service restart required—No

DropOpOnHandleError

Description—Determines if an additional attempt is made to access a file by a Microsoft API call if the OpenText Availability and OpenText Migrate call fails.

Values—0 When opening a file using the OpenText Availability and OpenText Migrate driver fails, attempt to open the file usingthe Microsoft Win32 API, 1 When opening a file using the OpenText Availability and OpenText Migrate driver fails, skip the file and document it in the OpenText Availability and OpenText Migrate log

Default—1

Console setting—None

Service restart required—No

Notes—If the value is set to 0 and the Win32 call also fails, OpenText Availability and OpenText Migrate will skip the file and document it in the OpenText Availability and OpenText Migrate log

DTSetupType

Description—Used by the OpenText Availability and OpenText Migrate installation program to maintain the installation settings for an upgrade. Do not modify this setting.

DumpDiskQuotaIntervalMinutes

Description—Specifies how often, in minutes, a snapshot of the disk quota is taken as a backup in case the live registry is not usable at failover or cutover

Values—any integer

Default—240

Console setting—None

Service restart required—No

DumpHiveIntervalMinutes

Description—Specifies how often, in minutes, a snapshot of the registry is taken as a backup in case the live registry is not usable at failover or cutover

Values—any integer

Default—240

Console setting—None

Service restart required—No

EnableCRCCheck

Description—Indicates if OpenText Availability and OpenText Migrate will perform a cyclic redundancy check between the source and target to identify corrupted packets

Values—0 Disabled, 1 Enabled

Default—0

Console setting—None

Service restart required—No

Notes—This option only needs to be set on the source server. However, if you will be restoring or reversing, where the roles of the servers are reversed, then you will need to set this option on the target as well.

EnableDHCP

Description—Indicates if OpenText Availability and OpenText Migrate DHCP support is enabled

Values—0 Disabled, 1 Enabled

Default—1

Console setting—None

Service restart required—No

EnableEFSVerify

Description—Indicates if OpenText Availability and OpenText Migrate will verify Microsoft encryption on the source before transmitting the encrypted file to the target

Values—0 Disabled, 1 Enabled

Default—0

Console setting—None

Service restart required—No

EnableFileOpenTracing

Description—Specifies if debug-level messages are enabled to trace all mirroring and replicated files that are opened

Values—0 Do not trace files that are opened, 1 Trace files that are opened

Default—0

Console setting—None

Service restart required—Yes

Notes—This option should only be enabled (1) for temporary, debug sessions as instructed by technical support.

EnableRootEncryption

Description—Specifies if the top-level folders of a protected data set are encrypted on the source, they will be encrypted on the target as well

Values—0 Disabled, 1 Enabled

Default—1

Console setting—None

Service restart required—No

Notes—If the top-level folders in a protected data set are not encrypted, disabling this option may obtain a small performance improvement.

EnableShortFileNameProcessing

Description—Indicates if OpenText Availability and OpenText Migrate will correct any short file names created by the operating system on the target during a mirror. It will also correct any short file names created or renamed by the operating system on the target during replication.

Values—0 Do not correct any short file names on the target, 1 Correct short file names on the target

Default—0

Console setting—None

Service restart required—No

Notes—This setting only needs to be enabled on the target.

EnableSnapshots

Description—Specifies whether OpenText Availability and OpenText Migrate snapshot functionality is enabled

Values—0 OpenText Availability and OpenText Migrate snapshot functionality is disabled, 1 OpenText Availability and OpenText Migrate snapshot functionality is enabled

Default—1

Console setting—None

Service restart required—Yes

Notes—This setting only impacts OpenText Availability and OpenText Migrate snapshot functionality. If this setting is disabled, other snapshot software such as Microsoft Volume Shadow Copy will be not be impacted.

EnableTaskCmdProcessing

Description—Queues tasks inline with replication data

Values—0 Disable task command processing, 1 Enable task command processing

Default—0

Console setting—Edit Server Properties page, Setup section, Enable task command processing

Service restart required—No

EncryptNetworkData

Description—Encrypts OpenText Availability and OpenText Migrate data before it is sent from the source to the target

Values—0 Disable data encryption, 1 Enable data encryption

Default—0

Console setting—Edit Server Properties page, General section, Encrypt network data

Service restart required—No

Notes—Both the source and target must be OpenText Availability and OpenText Migrate encryption capable (OpenText Availability and OpenText Migrate version 7.0.1 or later), however this option only needs to be enabled on the source or target in order to encrypt data. Keep in mind that all jobs from a source with this option enabled or to a target with this option enabled will have the same encryption setting. Changing this option will cause jobs to auto-reconnect and possibly remirror.

FaileoverData1

Description—An internal setting for failover. Do not modify this setting.

FailoverData2

Description—An internal setting for failover. Do not modify this setting.

FileAccessRetry

Description—The number of times a failed driver call will be retried by the service.

Values—1 - 65535

Default—10

Console setting—None

Service restart required—No

FileQueueSize

Description—When a mirror is started, one thread reads from the disk and builds the file queue. Another set of threads reads files off of the queue and sends them to the target. This setting is the maximum size of the queue in entries. If you had 100 files to be mirrored and this was set to 16 (the default value), the first thread would fill the queue to a maximum of 16 entries.

Values—1 - 65535

Default—16

Console setting—None

Service restart required—No

Notes—This value must be set prior to starting the mirror process. The higher the number, the more memory that is used.

ForceVerifyOnMirror

Description—Specifies if verification will be performed with every difference mirror

Values—0 Verification is not performed with every difference mirror, 1 Verification is performed with every difference mirror

Default—0

Console setting—None

Service restart required—No

HardlinkInterval

Description—This setting is no longer used.

HardLinkLogPath

Description—Specifies the location where hard links will be logged. If no path is specified, the location defined in LogDir will be used.

Values—any valid path

Default—None

Console setting—None

Service restart required—No

Note—This option is only used by servers running OpenText Availability and OpenText Migrate version 8.0.x or earlier.

HBTTL

Description—Number of seconds without receiving a heartbeat before a remote machine is considered unavailable

Values—0 - 65535

Default—10

Console setting—None

Service restart required—No

HeartbeatIgnoreIPs

Description—This setting is no longer used.

HPQueueRatio

Description—Ratio of replication packets to one mirror packet

Values—1 - 65535

Default—5

Console setting—Edit Server Properties page, Source section, Number of replication packets per one mirror packet

Service restart required—No for future connections, Yes for the current connection

Notes—An HPQueueRatio of 5 allows OpenText Availability and OpenText Migrate to dynamically change the ratio as needed based on the amount of replication data in queue. If you set a specific value other than the default (other than 5), the specified value will be used.

IgnoreAlternateStreamFiles

Description—Specifies alternate streams to skip during mirroring and replication

Values—a semi-colon separate list of stream names. The stream names are not case-sensitive

Default—none

Console setting—None

Service restart required—No

IgnoreArchiveBit

Description—Specifies if the archive bit is compared during verification

Values—0 Archive bit is compared during a verification, 1 Archive bit is not compared during a verification

Default—1

Console setting—None

Service restart required—No

IgnoreDeleteOps

Description—Specifies if file and directory delete operations will be replicated to the target

Values—0 Delete operations are replicated to the target, 1 Delete operations are not replicated to the target

Default—0

Console setting—None

Service restart required—No

IgnoreOpLockErrors

Description—Specifies how files that are locked open on the source are handled during mirroring

Values—0 Fail the mirror and record OpLock errors in the log. The job state will be set to mirror required, 1 Ignore the lock errors and continue the mirror. This option does not guarantee data integrity. There may be differences in the file that was locked.

Default—0

Console setting—None

Service restart required—No

IgnorePPPAddresses

Description—Identifies if OpenText Availability and OpenText Migrate will use PPP (Point-to-Point Protocol) or SLIP (Serial Line Internet Protocol) adapters

Values—0 OpenText Availability and OpenText Migrate will send out heartbeats across the PPP/SLIP adapter, 1 OpenText Availability and OpenText Migrate will not send out heartbeats across the PPP/SLIP adapter

Default—1

Console setting—None

Service restart required—No

IgnoreSourceErrors

Description—This setting is no longer used.

IgnoreThumbnailStreams

Description—Specifies if thumbnails will be replicated to the target.

Values—0 OpenText Availability and OpenText Migrate will mirror and replicate all data streams, 1 OpenText Availability and OpenText Migrate will not mirror or replicate any data about the alternate data streams for thumbnail images. When comparing data for a verification or difference mirror,alternate data streams for thumbnails will not be reported as different.

Default—1

Console setting—None

Service restart required—If you change this value to 0, you must restart the Double-Take service in order for the OpenText Availability and OpenText Migrate driver to begin sending all data stream information to the service. If you change this value to 1, you do not need to restart the service.

IgnoreWriteFailureOnTarget

Description—Specifies whether failures to write a file on the target are logged

Values—0 Log all write failures on the target, 1 or any larger integer indicates that number of write failures which will be ignored before starting to log the write failures

Default—0

Console setting—None

Service restart required—No

IncludeSysVolInfo

Description—Specifies whether the system volume information folder is mirrored and replicated

Values—0 Do not include the system volume information folder, 1 Include the system volume information folder

Default—0

Console setting—None

Service restart required—No

InstallPath

Description—Path specified during the OpenText Availability and OpenText Migrate installation. Do not modify this entry.

InstallVersionInfo

Description—Installation number specified during the OpenText Availability and OpenText Migrate installation. Do not modify this entry.

IntermediateQueueLimit

Description—Amount of memory, in KB, that may be allocated to the intermediate queue by the system memory manager when MemoryAllocatorMode is set to mixed mode (2).

Values—512-4194304

Default—65536

Console setting—None

Service restart required—Yes

KFAIOpenRetry

Description—Specifies the number of times an operation is retried if the driver return an error

Values—any valid integer

Default—10

Console setting—None

Service restart required—No

LanguageSelected

Description—Specifies the language of the verification log

Values—Depends on LanguagesSupported

Default—Language used during the installation

Console setting—Edit Server Properties page, Logging section, Language

Service restart required—Yes

LanguagesSupported

Description—Specifies the available languages for the verification log. Do not modify this setting.

LastModifiedReadDelay

Description—Specifies the length of time, in seconds, to wait before reading the last modified file time attribute

Values—any valid integer

Default—15

Console setting—None

Service restart required—No

Notes—This option is only used if SendLastModifiedTimeOnClose is disabled

LicenseAcceptedTime

Description—Used internally by OpenText Availability and OpenText Migrate. Do not modify this entry.

LogAllOrphans

Description—Specifies whether success messages regarding orphan files are logged to the OpenText Availability and OpenText Migrate log

Values—0 Do not log orphan file success messages to the OpenText Availability and OpenText Migrate log, 1 Log orphan file success messages to the OpenText Availability and OpenText Migrate log

Default—0

Console setting—None

Service restart required—No

LogDir

Description—The location of the OpenText Availability and OpenText Migrate messages/alerts, verification, and statistics log files

Values—any valid path

Default—the location where the OpenText Availability and OpenText Migrate files were installed

Console setting—Edit Server Properties page, Logging section, Logging folder

Service restart required—Yes

LogFile

Description—The name of the OpenText Availability and OpenText Migrate messages/alerts log file

Values—any valid file name

Default—DTLog

Console setting—None

Service restart required—No

LogMessageLevel

Description—Specifies the types of messages logged to the.dtl files

Values—0 No messages will be logged, 1 Only alert messages will be logged, 2 Alert and release messages will be logged, 3 Alert, release, and debug messages will be logged

Default—2

Console setting—None

Service restart required—No

MaxChecksumBlocks

Description—Specifies the number of checksum values retrieved from the target

Values—any integer

Default—32

Console setting—None

Service restart required—No

MaxConnections

Description—Number of network requests that can be processed simultaneously. Windows is limited to 5 simultaneous requests.

Values—0 - 65535

Default—5

Console setting—None

Service restart required—Yes

Notes—OpenText recommends that you not change this value.

MaxLogFileSize

Description—Maximum size, in bytes, of any .dtl log file

Values—limited by available disk space

Default—5242880

Console setting—Edit Server Properties page, Logging section, Maximum size (under Messages & Alerts)

Service restart required—No

MaxLogPathname

Description—The maximum length of a file name (the entire volume\directory\filename including slashes, spaces, periods, extensions, and so on) that will be displayed in the OpenText Availability and OpenText Migrate log file and the Windows Event Viewer. File names longer than the MaxDisplayablePath will be truncated and will be followed by an ellipsis (...).

Values—1-32760

Default—32760

Console setting—None

Service restart required—No

MaxNumberofLogFiles

Description—Maximum number of .dtl log files that can exist at one time. When OpenText Availability and OpenText Migrate creates a new .dtl file, if this number is exceeded, the oldest .dtl file is deleted.

Values—1 - 999

>> **Default**—20

>> **Console setting**—Edit Server Properties page, Logging section, Maximum number of files

>> **Service restart required**—No

MaxOpBufferSize

>> **Description**—An internal setting for memory buffering. Do not modify this setting.

MaxRemoveOrphansOpSize

>> **Description**—Determines whether or not OpenText Availability and OpenText Migrate will send over multiple orphan operations. OpenText Availability and OpenText Migrate will send over the operations if a directory has more files than this number.

>> **Values**—0 - 131072

>> **Default**—1000

>> **Console setting**—None

>> **Service restart required**—No

MaxRetry

>> **Description**—A generic, application wide setting specifying the number of retry attempts for processes such as creating sockets, starting the service, and so on

>> **Values**—any integer

>> **Default**—5

>> **Console setting**—None

>> **Service restart required**—Yes

MaxWriteChunkSize

>> **Description**—Maximum merged op size (in bytes) used during replication

>> **Values**—1 - 131072

>> **Default**—65536

>> **Console setting**—None

>> **Service restart required**—No

MemoryAllocatorCallbackMode

>> **Description**—Determines what action is taken when the MemoryQueueToDiskThreshold is met

>> **Values**—0 Auto-disconnect processing is initiated when theMemoryQueueToDiskThreshold has been met. Connections will be reestablished when auto-reconnect occurs, 1 The Double-Take service stops pulling operations

from the driver when theMemoryQueueToDiskThreshold has been met. The target will pause the source.The service will resume pulling operations when the target tells the source to resume, 2 The source and target begin queuing operations to disk.

Default—2

Console setting—None

Service restart required—Yes

MemoryQueueToDiskThreshold

Description—A percentage of QmemoryBufferMax that will trigger queuing to disk.

Values—any valid percentage

Default—75

Console setting—None

Service restart required—Yes

MinCompressionFileSize

Description—The minimum file size, in bytes, that will be compressed. Files smaller than this size will not be compressed.

Values—any file size

Default—1024

Console setting—None

Service restart required—No

MirrorChunkSize

Description—Block size, in bytes, used in the mirroring process

Values—1 - 1048576

Default—65536

Console setting—Edit Server Properties page, Source section, Size of mirror packets

Service restart required—No

Notes—A higher block size value gives you better throughput, but only to a certain point, then it starts using more memory (this has to do with the way memory is allocated and deallocated). A lower block size value produces slower throughput, but uses memory efficiently.

MirrorEncryptedFiles

Description—Specifies if Windows 200x encrypted files are mirrored

Values—0 Encrypted files are not mirrored, 1 Encrypted files are mirrored

Default—1

Console setting—None

Service restart required—No

MirrorEnumRetryMinutes

Description—Length of time, in minutes, to wait during enumeration retries

Values—any valid integer

Default—30

Console setting—None

Service restart required—No

MirrorOverwrite

Description—Determines if the mirror process overwrites existing files

Values—0 never overwrite, 1 always overwrite, 2 overwrite if older

Default—1

Console setting—None

Service restart required—No

MirrorQueueLimit

Description—Maximum number of mirror operations that can be queued on the source machine

Values—1 - 65535

Default—1000

Console setting—Edit Server Properties page, Source section, Maximum pending mirror operations

Service restart required—No

MirrorRootAttributes

Description—Specifies whether or not root permissions from the source are mirrored to the target

Values—0 Root permissions are not mirrored to the target, 1 Root permissions are mirrored to the target

Default—1

Console setting—None

Service restart required—No

MirrorZeroKFiles

Description—Specifies whether or not empty files, zero byte files, are included in a mirror

Values—0 Zero byte files are skipped and not mirrored to the target, 1 All files are mirrored to the target

Default—1

Console setting—None

Service restart required—No

Notes—If MirrorZeroKFiles is enabled (0), zero byte files are skipped during a full mirror, file differences mirror, and a verification with synchronization. Zero byte files that contain alternate data streams that are not empty, will still be skipped if MirrorZeroKFiles is enabled.

MoveOrphanedFiles

Description—This entry is no longer used.

MoveOrphansDir

Description—This entry is no longer used.

NetworkRetry

Description—Specifies the interval, in seconds, at which OpenText Availability and OpenText Migrate will attempt to reconnect to the target

Values—any positive number

Default—10

Console setting—None

Service restart required—No

NetworkStatusInterval

Description—An internal setting for network communications. Do not modify this setting.

NetworkTimeout

Description—The maximum length of time, in seconds, to wait on a network connection. If data is not received over a network connection within the specified time limit, the connection is closed. During idle periods, OpenText Availability and OpenText Migrate sends small amounts of keep-alive data at an interval 1/6 of the NetworkTimeout value to keep the socket from being inadvertently closed.

Values—any integer

Default—120

Console setting—None

Service restart required—No

NodeLockedLicenseKey

> **Description**—An internal setting for licensing. Do not modify this setting.

NodeLockedServerInfo

> **Description**—An internal setting for licensing. Do not modify this setting.

OpBufferMax

> **Description**—Specifies the number of operations that can be stored in the memory queue prior to queuing to disk

> **Values**—0 There is no limit to the number of operations that can be stored in the memory queue, 1 or any larger integer

> **Default**—200000

> **Console setting**—None

> **Service restart required**—No

OpBuffersCount

> **Description**—An internal setting for memory buffering. Do not modify this setting.

OpLogging

> **Description**—Specifies whether operations from the OpenText Availability and OpenText Migrate driver are logged

> **Values**—0 Do not log operations, 1 Log operations

> **Default**—0

> **Console setting**—None

> **Service restart required**—Yes

OutOfOrderDiff

> **Description**—The maximum number of operations that can be out of order before the connection is paused

> **Values**—any integer

> **Default**—10

> **Console setting**—None

> **Service restart required**—No

> **Notes**—The larger the value, the more memory the Double-Take service on the targe service will use.

Port

Description—Port connection for core OpenText Availability and OpenText Migrate communications

Values—1025 - 65535

Default—6320

Console setting—Edit Server Properties page, General section, Port

Service restart required—Yes

ProductCode

Description—Used by the OpenText Availability and OpenText Migrate installation program to maintain the installation settings for an upgrade. Do not modify this entry.

ProductName

Description—Used by the OpenText Availability and OpenText Migrate installation program to maintain the installation settings for an upgrade. Do not modify this entry.

QJournalDir

Description—The location where the queue is stored.

Values—any valid path

Default—the location specified during the installation

Console setting—Edit Server Properties page, Queue section, Queue folder

Service restart required—No

Notes—For best results and reliability, you should select a dedicated, non-boot volume. The queue should be stored on a fixed, local NTFS volume. This location also stores the OpenText Availability and OpenText Migrate driver pagefile.

QJournalFileSize

Description—The size, in MB, of each queuing transaction log file.

Values—any valid file size, up to 4095 MB

Default—5

Console setting—None

Service restart required—No

QJournalFreeSpaceMin

Description—The minimum amount of disk space, in MB, in the specified QJournalDir that must be available at all times.

Values—dependent on the amount of physical disk space available

Default—250

Console setting—Edit Server Properties page, Queue section, Minimum free disk space

Service restart required—No

Notes—The QJournalFreeSpaceMin should be less than the amount of physical disk space minus QJournalSpaceMax.

QJournalPreload

Description—The number of operations being pulled from the disk queue at one time. Do not modify this setting.

QJournalSpaceMax

Description—The maximum amount of disk space, in MB, in the specified QJournalDir that can be used for OpenText Availability and OpenText Migrate queuing. When this limit is reached, OpenText Availability and OpenText Migrate will automatically begin the auto-disconnect process.

Values—dependent on the amount of physical disk space available

Default—Unlimited

Console setting—Edit Server Properties page, Queue section, Limit disk space for queue

Service restart required—No

Notes—The unlimited setting allows the disk queue usage to automatically expand whenever the available disk space expands. Setting this option to zero (0) disables disk queuing. Even if you are using the unlimited option, OpenText Availability and OpenText Migrate will only store 16,384 log files. If you are using the default 5MB file size, this is approximately 80GB of data. If you anticipate needing to be able to queue more data than this, you should increase the size of the log files.

QLogWriteThrough

Description—Specifies if the disk queues are write-through mode

Values—0 Disk queues are not write-through mode, 1 Disk queues are write-through mode

Default—0

Console setting—None

Service restart required—No

Notes—While write-through mode may decrease the frequency of auto-disconnects, it may also decrease the performance of the source server.

QMemoryBufferMax

Description—The amount of Windows system memory, in MB, that, when exceeded, will trigger queuing to disk.

Values—minimum 512, maximum is dependent on the server hardware and operating system

Default—1024

Console setting—Edit Server Properties page, Queue section, Amount of system memory to use

Service restart required—Yes

QueryOnQuorumFile

Description—Identifies if the Double-Take service will reopen closed files on the quorum drive

Values—0 The Double-Take service will not attempt to reopen a closed file on the quroum drive to get security descriptors or last modified times, 1 The Double-Take service will attempt to reopen a closed file on the quroum drive to get security descriptors or last modified times.

Default—1

Console setting—None

Service restart required—No

QueueSizeAlertThreshold

Description—The percentage of the queue that must be in use to trigger an alert message

Values—any valid percentage

Default—50

Console setting—Edit Server Properties page, Queue section, Alert at this queue usage

Service restart required—Yes

RemapLink

Description—Used internally by OpenText Availability and OpenText Migrate. Do not modify this entry.

RemoveAllOrphans

Description—This entry is no longer used.

RemoveOrphansTime

Description—This entry is no longer used.

ReplicateNtSecurityByName

Description—Determines whether or not OpenText Availability and OpenText Migrate replicates permissions and attributes assigned to local (non-domain) users and groups

Values—0 Do not replicate by name, 1 Replicate by name

Default—0

Console setting—Edit Server Properties page, Source section, Replicate NTFS security attributes by name

Service restart required—No

ReplicationDiskCheckScript

Description—Specifies the script to run if validation of the replication drive fails

Values—Any valid path and script file

Default—<null>

Console setting—None

Service restart required—No

ReplicationDiskCheckTimeOut

Description—Specifies the interval, in seconds, between validation checks when ReplicationDiskCheckSript is populated

Values—any integer

Default—300

GUI Setting—None

Service restart required—No

RepSetDBName

Description—Name of the database that contains protected data set information

Values—any valid file name

Default—DblTake.db

Console setting—None

Service restart required—No

RunDTInfoOnCutover

Description—Specifies if DTInfo is launched before a failover or cutover when protecting an entire server

Values—0 Do not launch DTInfo, 1 Launch DTInfo

Default—1

Console setting—None

Service restart required—No

RunScriptatSnaptime

> **Description**—If a script is specified, the script is launched on the target before OpenText Availability and OpenText Migrate executes any snapshots. The snapshot will not be executed until the script has completed. If the script returns an error, the snapshot will still execute.
>
> **Values**—any valid path and script name
>
> **Default**—<null>
>
> **Console setting**—None
>
> **Service restart required**—No

RunScriptInsteadofSnap

> **Description**—Specifies if a script specified in RunScriptAtSnaptime is executed
>
> **Values**—0 Execute script specified in RunScriptAtSnaptime, 1 Do not execute script specified in RunScriptAtSnaptime
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

SaveStatFile

> **Description**—Determines if the statistic.sts (statistics logging) file is saved or ovewritten
>
> **Values**—0 overwrite, 1 saved as statistic-old.sts
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

ScheduleFile

> **Description**—Name of the database file that contains transmission scheduling information
>
> **Values**—any valid file name
>
> **Default**—Schedule.sts
>
> **Console setting**—None
>
> **Service restart required**—Yes

ScheduleInterval

> **Description**—The number of seconds to wait before checking the transmission schedules to see if transmission should be started or stopped

Values—1 - 3600

Default—1

Console setting—None

Service restart required—Yes

SendDirLastModifiedTime

Description—Specifies if the last modified time for directories will be transmitted to the target during a difference mirror

Values—0 last modified time on directories will not be sent to the target, 1 last modified time on directories will be sent to the target

Default—1

Console setting—None

Service restart required—No

SendFileTimesOnCreate

Description—Specifies whether a file is accessed twice so that the file's creation time can be modified to match the source

Values—0 The Double-Take service will not access newly created files that have not been modified. These files on the target will have the date and time of when the file was created on the target, 1 The Double-Take service will access newly created files. These files on the target will have the same date and time as the source.

Default—0

Console setting—None

Service restart required—No

Notes—New files created on the source that have not been modified will have the date and time of when the file is created on the target. The date and time will be corrected to match the source's true file attributes when a remirror or verification modifies them to match the source or the file is modified by a user or application on the source. For example, if the source machine's clock is set to 2:00 PM and the target machine is set to 4:00 PM, a newly created file that has not been modified will have a time stamp of 4:00 PM when it is applied to the target. If this option is enabled (1), OpenText Availability and OpenText Migrate will access the file twice, to correctly set the time to 2:00 PM to reflect the file's true attributes. If this option is disabled (0), OpenText Availability and OpenText Migrate will not access the file twice, and the file will have the target time of 4:00 PM until it is modified (remirror, verification, or user or application update).

SendLastModifiedTimeOnClose

Description—Specifies that the last modified time attribute is sent when a file is closed

Values—0 Last modified time is sent when OpenText Availability and OpenText Migrate has not received any additional operations for the file in the time period specified by LastModifiedReadDelay, 1 Last modified time is sent when a file is closed, which may not be immediately depending on system processing

Default—1

Console setting—None

Service restart required—No

Notes—If system processing delays (such as the system cache manager not flushing quickly enough) are causing delays in processing the last modified time, you may want to consider disabling this option (0).

ServerUUID

Description—Used internally by the Double-Take service to identify OpenText Availability and OpenText Migrate connections and IP addresses used between servers

Values—Unique identifier generated by OpenText Availability and OpenText Migrate

Default—Generated by OpenText Availability and OpenText Migrate

Console setting—None

Service restart required—Yes

Notes—If you are certain that the server is not being used by any jobs, you can delete the ServerUUID. For example, you may want to delete the ServerUUID so that you can create an image of a server after installing OpenText Availability and OpenText Migrate. A deleted ServerUUID will be re-created the next time the Double-Take service is started. Keep in mind, if you delete the ServerUUID and the server is being used by any jobs, you will have problems with all aspects of OpenText Availability and OpenText Migrate including mirroring, replication, and failover.

ServicePriority

Description—The priority level at which the Double-Take service runs.

Values—2 normal priority, 3 high priority

Default—2

Console setting—None

Service restart required—Yes

Notes—The Double-Take service runs at normal priority by default. This option should not be modified, however, if the priority is raised to high (3), it can be done through Windows Task Manager.

ServicesToKeepRunning

Description—Services that will not be stopped on the target

Values—Semi-colon separated list of service names

Default—<null>

Console setting—Set Options page, Target Services section, Services to leave running on the target server during protection

Service restart required—No

Notes—You can specify the service name using the service executable file name or the service display name. There is no need to use quotation marks, even if the names have spaces in them. Only separate the names by a semi-colon (;).

ServiceStopState

Description—Used internally by the Double-Take service. Do not modify this entry.

ShortFileNameScanIntervalMinutes

Description—Specifies how often, in minutes, the registry is scanned for short file names

Values—any valid integer

Default—240

Console setting—None

Service restart required—No

ShutdownRebootTimeoutMinutes

Description—Specifies the amount of time, in minutes, to wait for the source to shutdown during failover or cutover

Values—any valid integer

Default—5

Console setting—None

Service restart required—No

ShutdownTimeout

Description—The amount of time, in seconds, for the service to wait prior to completing the shutdown so that OpenText Availability and OpenText Migrate can persist data on the target in an attempt to avoid a remirror when the target comes back online

Values—any valid number of seconds where 0 (zero) indicates waiting indefinitely and any other number indicates the number of seconds

Default—0

Console setting—Edit Server Properties page, Setup section, Time allowed to complete shutdown operations

Service restart required—No

Notes—This setting only controls the service shutdown from the OpenText Availability and OpenText Migrate clients. It does not control the service shutdown through a reboot or from the Service Control Manager.

SkipCompressionFileExt

Description—A period delimited list of file types that are not compressed, even if compression is enabled.

Values—any period delimited list of file types

Default—mp3.exe.wmv.wma.qt.mpg.mpeg.zip.jpg.jpeg.tiff.tar.rar.cab

Console setting—None

Service restart required—No

SnapshotType

Description—Specifies the type of snapshot that OpenText Availability and OpenText Migrate takes

Values—0 Create a client-accessible or non-client-accessible snapshot based on the job type , 1 Always create a client-accessible snapshot, 2 Always create a non-client-accessible snapshot

Default—0

Console setting—None

Service restart required—No

SourcePendingAcks

Description—The number of operations received by the target queue in which the source is waiting for a response

Values—100 - 20,000

Default—2000

Console setting—None

Service restart required—No

SSMShutdownServices

Description—Used by full server jobs to determine services to shutdown during failover or cutover. Do not modify this entry.

StartupScript

Description—Used by full server jobs to control the post-failover script after reboot after failover. Do not modify this entry.

StatsDriverLogFlags

> **Description**—Indicates which driver statistics are logged to the OpenText Availability and OpenText Migrate log
>
> **Values**—0 No driver statistics are logged, 1 State, 2 Operations, 4 Paging, 8 Timing
>
> **Default**—0
>
> **Console setting**—None
>
> **Service restart required**—Yes
>
> **Notes**—Use the sum of various values to log multiple driver statistics. For example, a setting of 5 would log paging and state statistics. A setting of 7 would log paging, operations, and state statistics. A setting of 15 would log all driver statistics.

StatsFileName

> **Description**—Default file for logging statistics
>
> **Values**—any valid file name
>
> **Default**—statistic.sts
>
> **Console setting**—Edit Server Properties page, Logging section, Filename (under Statistics)
>
> **Service restart required**—No

StatsLoggingOn

> **Description**—Specifies if OpenText Availability and OpenText Migrate logs statistics at startup
>
> **Values**—0 Stats logging does not start when OpenText Availability and OpenText Migrate starts, 1 Stats logging starts when OpenText Availability and OpenText Migrate starts
>
> **Default**—0
>
> **Console setting**—Edit Server Properties page, Setup section, Setup Options, Log statistics automatically
>
> **Service restart required**—No

StatsMaxFileSize

> **Description**—Maximum size, in MB, for the statistic.sts file
>
> **Values**—limited by available disk space
>
> **Default**—10485760
>
> **Console setting**—Edit Server Properties page, Logging section, Maximum size (under Statistics)
>
> **Service restart required**—No

StatsWriteInterval

> **Description**—Interval, in minutes, in which statistics are written to the statistic.sts file
>
> **Values**—0 - 65535
>
> **Default**—5
>
> **Console setting**—Edit Server Properties page, Logging section, Write interval
>
> **Service restart required**—No

SystemMemoryLimit

> **Description**—Set by the Double-Take service, each time it is started, to record the amount of available memory.

TargetPaused

> **Description**—Internal setting that indicates if the target machine is paused. Do not modify this setting.

TargetPausedVirtual

> **Description**—Internal setting that indicates which target machines are paused. Do not modify this setting.

TCPBufferSize

> **Description**—Size of the TCP/IP buffer in bytes.
>
> **Values**—4096-7500000
>
> **Default**—375000
>
> **Console setting**—None
>
> **Service restart required**—Yes
>
> **Notes**—The default setting creates a TCP window that will accommodate most environments. In most environments, this value will not need to be adjusted. However, if your OpenText Availability and OpenText Migrate network has a long end-to-end route and the throughput is not where you would expect it to be, then adjusting this parameter may have beneficial results. This value is the bandwidth delay product, which is calculated using the bandwidth of the network (in bits/second) times the round trip time (in seconds) between the two ends. Use the following recommended settings to improve OpenText Availability and OpenText Migrate throughput performance.
>
> - 100Mbit LAN—The setting should be around 37500.
> - 1Gbit LAN—The setting should be around 375000.
> - WAN—The setting should be around 130000.
>
> While the calculations are fairly straight forward, the values that have been suggested are not exact because they depend on round trip time. Some

improvements could be gained by adjusting these values either higher or lower. The value suited for your environment can best be determined through trial and error testing.

TempDir

Description—Temporary directory used when replicating Windows 200x encrypted files.

Values—Any valid path

Default—\Program Files\OpenText\Replication\Temp

Console setting—None

Service restart required—No

TGApplyMntPntSecurity

Description—Applies security settings to the volume of a mount point instead of applying them to the directory that the mount point is mounted to.

Values—0 Security will be applied to the directory, 1 Security will be applied to the volume

Default—0

Console setting—None

Service restart required—Yes

Notes—This setting needs to be applied to the target server.

TGBlockOnConnect

Description—Blocks the target path for all connections, regardless of the source, so that the data cannot be modified

Values—0 Target paths are not blocked, 1 Target paths are blocked

Default—0

Console setting—None

Service restart required—No

TGCloseDelay

Description—The length of time, in milliseconds, a file is held open on the target

Values—0 - 2000

Default—1000

Console setting—None

Service restart required—No

Notes—If disk caching on the target is disabled either manually or by default (for example, by default on disks that host Active Directory database files), the target system may be slow during a mirror. If so, descreasing this setting to 100, 10, and 0 will result in incremental improvements, with 0 returning the system performance to normal.

TGDaysToKeepMovedFiles

Description—Specifies the length of time, in days, to keep moved files if TGMoveFilesOnDelete is enabled

Values—any valid integer

Default—0

Console setting—Edit Server Properties page, Target section, Remove deleted files after this number of days

Service restart required—No

TGDisableAttributeReplication

Description—Specifies whether or not the attributes compression, ACL, and file mask are written to the target during mirroring and replication

Values—0 Enable attribute replication, 1 Disable attribute replication and check attributes during data verification, 2 Disable attribute replication and do not check attributes during data verification, 4 Enable attribute replication except security attributes

Default—0

Console setting—None

Service restart required—Yes

Notes—The default value 0 is the recommended setting. If you need to rely on the data verification process, do not select value 1 because the attributes will not match during verification.

TGExecutionRetryLimit

Description—The number of times an unfinished operation will be retried on the target before it is discarded. If this value is set to zero (0), an operation will never be discarded and will be retried on the target until it is applied.

Values—0 - 65536

Default—0

Console setting—None

Service restart required—No

TGFileAlloc

> **Description**—Indicates that OpenText Availability and OpenText Migrate allocates an entire file on the first write of a mirror operation
>
> **Values**—0 Disabled 1 Enabled
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No
>
> **Notes**—To help eliminate file fragmentation on the target server, OpenText Availability and OpenText Migrate should allocate the entire file first. With extremely large files, the file allocation may take a long time. Therefore, you may want to disable the file allocation. If you disable file allocation, you will have more fragmentation on the target disk.

TGHLIntellimirror

> **Description**—Used internally by OpenText Availability and OpenText Migrate. Do not modify this entry.

TGMirrorCapacityHigh

> **Description**—Maximum percentage of system memory that can contain mirror data before the target signals the source to pause the sending of mirror operations.
>
> **Values**—2-75
>
> **Default**—20
>
> **Console setting**—Edit Server Properties page, Target section, Pause mirroring at this level
>
> **Service restart required**—No

TGMirrorCapacityLow

> **Description**—Minimum percentage of system memory that can contain mirror data before the target signals the source to resume the sending of mirror operations.
>
> **Values**—1-75
>
> **Default**—15
>
> **Console setting**—Edit Server Properties page, Target section, Resume mirroring at this level
>
> **Service restart required**—No
>
> **Notes**—The maximum value forTGMirrorCapacityLow is either 75 or TGMirrorCapacityHigh, which ever is lower.

TGMoveFilesOnDelete

Description—Specifies whether files deleted on the source are actually moved to a different location on the target rather than being deleted on the target

Values—0 Files deleted on the source will be deleted on the target, 1 Files deleted on the source will be moved to a different location on the target

Default—0

Console setting—Edit Server Properties page, Target section, Moved deleted files to this folder

Service restart required—No

Notes—If this option is enabled, the deleted files will be moved to the location specified in TGMoveFilesPath.

TGMoveFilesPath

Description—Specifies where deleted files on the source are being moved to on the target

Values—any valid path

Default—<null>

Console setting—Edit Server Properties page, Target section, Moved deleted files to this folder

Service restart required—No

TGMoveFilesSingleDirectory

Description—Specifies if deleted files that will be moved on the target (see **TGMoveFilesOnDelete**) will be moved to a single directory structure

Values—0 Use the same directory structure on the target as the source to store deleted files, 1 Use a single directory structure on the target to store deleted files

Default—0

Console setting—None

Service restart required—No

TGRetryLocked

Description—Minimum number of seconds to wait before retrying a failed operation on a target

Values—0-65536

Default—3

Console setting—Edit Server Properties page, Target section, Retry delay for incomplete operations

Service restart required—No

TGUnfinishedOpEvent

> **Description**—Specifies whether or not unfinished operations on the target are logged to the Event Viewer
>
> **Values**—0 Unfinished operation messages are not logged, 1 Unfinished operation messages are logged
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

TGWriteCache

> **Description**—Specifies whether or not OpenText Availability and OpenText Migrate uses the intermediate cache
>
> **Values**—0 Bypass the intermediate cache and write directly to disk, 1 Do not bypass the intermediate cache
>
> **Default**—1 for all other job types
>
> **Console setting**—None
>
> **Service restart required**—No

TGWriteFailureBeforeNotification

> **Description**—Specifies the number of times an operation will be retried on the target before a notification is sent to update the target status
>
> **Values**—0-1024
>
> **Default**—10
>
> **Console setting**—None
>
> **Service restart required**—Yes
>
> **Notes**—If you change the setting to 0, the notification will be disabled. Changing this option will only affect how the target status is displayed. To solve the underlying issue of why the operations are failing will require investigation into the OpenText Availability and OpenText Migrate log files.

UpgradeCode

> **Description**—Used by the OpenText Availability and OpenText Migrate installation program to maintain the installation settings for an upgrade. Do not modify this entry.

UseChangeJournal

> **Description**—Specifies if the OpenText Availability and OpenText Migrate driver change journal is used to track file changes. If the source is rebooted, only the files identified in the change journal will be remirrored to the target. This setting helps improve mirror times.

Values—0 Do not track file changes and use the selected AutoRemirror option, 1 Track file changes and remirror only changed files on source reboot. If the change journal cannot be used, the selected AutoRemirror option will be used

Default—1

Console setting—Edit Server Properties page, Setup section, Mirror only changed files when source reboots

Service restart required—Yes

Notes—If you reboot your source into safe mode and changes are made to the protected data and then the source is rebooted normally, the OpenText Availability and OpenText Migrate driver change journal will try but not be able to synchronize the source and target correctly because it was not loaded in safe mode. Therefore, you should manually start a difference mirror.

UseScheduledPause

Description—Used by OpenText Availability and OpenText Migrate for internal schedule processing. Do not modify this setting.

VerifyLogAppend

Description—Specifies whether the DTVerify.log file will be appended to or overwritten

Values—0 Overwrite, 1 Append

Default—1

Console setting—Edit Server Properties page, Logging section, Append

Service restart required—No

VerifyLogLimit

Description—Maximum size of the DTVerify.log file in bytes

Values—limited by available hard drive space, up to 4 GB

Default—1048576

Console setting—Edit Server Properties page, Logging section, Maximum size (under Verification)

Service restart required—No

VerifyLogName

Description—Name of the verification log file

Values—any valid file name

Default—DTVerify.log

Console setting—Edit Server Properties page, Logging section, File name (under Verification)

Service restart required—No

VerifyRetryInterval

Description—The time, in minutes, between when one verification fails and a retry is scheduled to begin.

Values—any valid number

Default—3

Console setting—None

Service restart required—No

VerifyRetryLimit

Description—The number of time a verification will be retried.

Values—any valid number

Default—5

Console setting—None

Service restart required—No

VersionInfo

Description—The version of OpenText Availability and OpenText Migrate that was installed. Do not modify this entry.

WatchDogFailureProcessDump

Description—Creates a troubleshooting dump file if the OpenText Availability and OpenText Migrate driver stops running

Values—0 Do not create a dump file, 1 Create a dump file

Default—0

Console setting—None

Service restart required—No

WatchDogFailureScript

Description—Specifies the script to run if the OpenText Availability and OpenText Migrate driver stops running

Values—Any valid path and script file

Default—<null>

Console setting—None

Service restart required—No

Linux server and job settings

The following table lists all of the Linux server and job settings, in decimal value.

> OpenText Availability and OpenText Migrate products share the same set of server and job settings. You may only have a subset of the settings listed below depending on your Linux operating system and OpenText Availability and OpenText Migrate product.
>
> OpenText Availability terminology is used in the following list. For example, failover is used for OpenText Availability and cutover for OpenText Migrate.

ActivationCode

        Description—24-character OpenText Availability and OpenText Migrate license key

        Values—Unique value for each customer

        Default—N/A

        Console setting—Edit Server Properties page, Licensing section, Current license keys

        Service restart required—No

AdapterFlags

        Description—Specifies the adapter to use when establishing a connection. This option should not be changed.

        Values—2 Encryption, 4 Network Data Representation

        Default—4

        Console setting—None

        Service restart required—No

Advertisement

        Description—This setting is no longer used.

AllFailover

        Description—Specifies which IP addresses to failover

        Values—0 Failover only monitored IP addresses, 1 Failover all IP addresses

        Default—1

        Console setting—None

        Service restart required—No

AllMustFail

> **Description**—Specifies whether or not all IP addresses must fail for failover to take place
>
> **Values**—0 Any IP address can fail, 1 All IP addresses must fail
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

AutoReconnect

> **Description**—Specifies whether to reinstate the target connection(s) when the source machine is brought online after a source machine failure
>
> **Values**—0 Do not reconnect, 1 Reconnect
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—Yes

AutoRemirror

> **Description**—Specifies whether to remirror when a source is brought online after an auto-disconnect
>
> **Values**—0 Do not compare or send any files, 1 Compare file attributes and send the attributes and bytes that are different, 2 Do not compare files, just send all files (the entire file), 3 Compare file attributes and send the entire file for those that are different, 4 Compare file attributes and data and send the attributes and bytes that are different
>
> **Default**—3
>
> **Console setting**—Edit Server Properties page, Setup section, Behavior when automatically remirroring
>
> **Service restart required**—No

AutoRemirrorRetry

> **Description**—Specifies how often, in seconds, the source should check for connections that have been reconnected but still need to be remirrored
>
> **Values**—any integer
>
> **Default**—30
>
> **Console setting**—None
>
> **Service restart required**—No

AutoRetransmit

> **Description**—Determines whether or not a source that has lost its connection with a target will attempt to reconnect to the target
>
> **Values**—0 Do not attempt to reconnect, 1 Attempt to reconnect
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

BackupDir

> **Description**—Location on the target of the backup of the protected data sets
>
> **Values**—any valid path
>
> **Default**—the location where the OpenText Availability and OpenText Migrate files were installed
>
> **Console setting**—None
>
> **Service restart required**—No

CalculateOnConnect

> **Description**—Specifies whether or not the amount of data to be mirrored should be calculated on connection
>
> **Values**—0 Do not calculate on connection, 1 Calculate on connection
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—Yes

CaseSensitiveRepSetQueries

> **Description**—This entry is no longer used.

ChecksumAll

> **Description**—Indicates if a mirror, verify, or restore will ignore all attributes and perform a checksum calculation on all files
>
> **Values**—0 Compare files by attribute, 1 Compare files by checksums
>
> **Default**—1
>
> **Console setting**—None
>
> **Service restart required**—No

Cleaner

Description—Specifies if a clean mirror will delete files on the target before mirroring

Values—0 Do not delete files before mirroring, 1 Delete files before mirroring

Default—0

Console setting—None

Service restart required—No

Notes—This option is only valid if you have this option enabled and use the clean option with the DTCL mirror command.

ClientLog

Description—This setting is no longer used.

ClientLogName

Description—This setting is no longer used.

ConnectionFile

Description—Name of the database file containing connection information

Values—any valid file name

Default—connect.sts

Console setting—None

Service restart required—No

DataPath

Description—The location of the OpenText Availability and OpenText Migrate file attribute, protected data set, connection, and schedule database files

Values—any valid path

Default—the location where the OpenText Availability and OpenText Migrate files were installed

Console setting—None

Service restart required—No

DefaultProtocol

Description—The default protocol

Values—1 IPv4 protocol only

Default—1

Console setting—None

Service restart required—Yes

DirUNetPort

Description—Port used for directed UDP communications

Values—1025 - 65535

Default—1505

Console setting—None

Service restart required—Source yes, Target no

DisableAttributeReplication

Description—Specifies whether or not attributes (user, group, or other permissions) are replicated to the target

Values—0 Enable attribute replication, 1 Disable attribute replication

Default—0

Console setting—None

Service restart required—Yes

EnablePerformanceTracking

Description—This entry will be used in the future.

EnableSparseFileMirroring

Description—Specifies if sparse files are mirrored

Values—0 Disable mirroring of sparse files, 1 Enable mirroring of sparse files

Default—1

Console setting—None

Service restart required—No

EnableTaskCmdProcessing

Description—Queues tasks inline with replication data

Values—0 Disable task command processing, 1 Enable task command processing

Default—0

Console setting—None

Service restart required—No

EnableVolumeLevelReplication

Description—Used by internally for full server jobs

EncryptionCipherFilter

>**Description**—Encryption uses AES 256. Public key exchange uses industry-defined methods implemented by OpenSSL.

EncryptNetworkData

>**Description**—Encrypts OpenText Availability and OpenText Migrate data before it is sent from the source to the target

>**Values**—0 Disable data encryption, 1 Enable data encryption

>**Default**—0

>**Console setting**—Edit Server Properties page, General section, Encrypt network data

>**Service restart required**—No

>**Notes**—Both the source and target must be OpenText Availability and OpenText Migrate encryption capable (OpenText Availability and OpenText Migrate version 8.0.0 or later), however this option only needs to be enabled on the source or target in order to encrypt data. Keep in mind that all jobs from a source with this option enabled or to a target with this option enabled will have the same encryption setting. Changing this option will cause jobs to auto-reconnect and possibly remirror.

ExtendedAttributes

>**Description**—Specifies whether or not extended attributes are replicated to the target

>**Values**—0 Extended attributes are not mirrored or replicated, 1 Extended attributes are mirrored and replicated

>**Default**—0

>**Console setting**—None

>**Service restart required**—No

ExtensionNumber

>**Description**—Used by the OpenText Availability and OpenText Migrate log files.

FileQueueSize

>**Description**—When a mirror is started, one thread reads from the disk and builds the file queue. Another set of threads reads files off of the queue and sends them to the target. This setting is the maximum size of the queue in entries. If you had 100 files to be mirrored and this was set to 16 (the default value), the first thread would fill the queue to a maximum of 16 entries.

>**Values**—1 - 65535

>**Default**—16

>**Console setting**—None

Service restart required—No

Notes—This value must be set prior to starting the mirror process. The higher the number, the more memory that is used.

HBExternalRate

Description—Number of seconds between heartbeats

Values—0 - 65535

Default—3

Console setting—None

Service restart required—No

Notes—OpenText recommends a value that is less than 10 (see HBTTL). Zero (0) turns the heartbeats off.

HBInteralRate

Description—This entry is no longer used

HBLoopback

Description—This entry is no longer used.

HBTrace

Description—Specifies whether heartbeat debugging information is generated

Values—0 not generated, 1 Generated

Default—0

Console setting—None

Service restart required—No

HBTTL

Description—Number of seconds without receiving a heartbeat before a remote machine is considered unavailable

Values—0 - 65535

Default—10

Console setting—None

Service restart required—No

HPQueueRatio

Description—Ratio of replication packets to one mirror packet

Values—1 - 65535

Default—5

> **Console setting**—None
>
> **Service restart required**—No for future connections, Yes for the current connection
>
> **Notes**—An HPQueueRatio of 5 indicates 5 replication packets to 1 mirror packet.

IgnoreDeleteOps

> **Description**—Specifies if file and directory delete operations will be replicated to the target
>
> **Values**—0 Delete operations are replicated to the target, 1 Delete operations are not replicated to the target
>
> **Default**—0
>
> **Console setting**—None
>
> **Service restart required**—No

LoadSourceTarget

> **Description**—Specifies the functionality of the loaded modules
>
> **Values**—0 Neither the source nor target modules are loaded, 1 Only the source module is loaded, 2 Only the target module is loaded, 3 Both the source and target modules are loaded
>
> **Default**—3
>
> **Console setting**—None
>
> **Service restart required**—Yes

LogAllOrphans

> **Description**—Specifies whether success messages regarding orphan files are logged to the OpenText Availability and OpenText Migrate log
>
> **Values**—0 Do not log orphan file success messages to the OpenText Availability and OpenText Migrate log, 1 Log orphan file success messages to the OpenText Availability and OpenText Migrate log
>
> **Default**—0
>
> **Console setting**—None
>
> **Service restart required**—No

LogDir

> **Description**—The location of the OpenText Availability and OpenText Migrate messages/alerts, verification, and statistics log files
>
> **Values**—any valid path
>
> **Default**—the location where the OpenText Availability and OpenText Migrate files were installed

Console setting—None

Service restart required—Yes

LogFile

Description—The name of the OpenText Availability and OpenText Migrate messages/alerts log file

Values—any valid file name

Default—DTLog

Console setting—None

Service restart required—No

LogMessageLevel

Description—Specifies the types of messages logged to the.dtl files

Values—0 No messages will be logged, 1 Only alert messages will be logged, 2 Alert and release messages will be logged, 3 Alert, release, and debug messages will be logged

Default—2

Console setting—None

Service restart required—No

MaxChecksumBlocks

Description—Specifies the number of checksum values retrieved from the target

Values—any integer

Default—32

Console setting—None

Service restart required—No

MaxConnections

Description—Number of network requests that can be processed simultaneously.

Values—0 - 65535

Default—5

Console setting—None

Service restart required—Yes

Notes—OpenText recommends that you not change this value.

MaxLogFileSize

Description—Maximum size, in bytes, of any .dtl log file

Values—limited by available disk space

Default—5242880

Console setting—None

Service restart required—No

MaxNumberofLogFiles

Description—Maximum number of .dtl log files that can exist at one time. When OpenText Availability and OpenText Migrate creates a new .dtl file, if this number is exceeded, the oldest .dtl file is deleted.

Values—1 - 999

Default—20

Console setting—None

Service restart required—No

MaxRemoveOrphansOpSize

Description—Determines whether or not OpenText Availability and OpenText Migrate will send over multiple orphan operations. OpenText Availability and OpenText Migrate will send over the operations if a directory has more files than this number.

Values—0 - 131072

Default—1000

Console setting—None

Service restart required—No

MaxRetry

Description—A generic, application wide setting specifying the number of retry attempts for processes such as creating sockets, starting the service, and so on

Values—any integer

Default—5

Console setting—None

Service restart required—Yes

MaxWriteChunkSize

Description—Maximum merged op size (in bytes) used during replication

Values—1 - 131072

Default—65536

Console setting—None

Service restart required—No

MemoryQueueToDiskThreshold

Description—A percentage of QmemoryBufferMax that will trigger queuing to disk.

Values—any valid percentage

Default—100

Console setting—None

Service restart required—Yes

MinCompressionFileSize

Description—The minimum file size, in bytes, that will be compressed. Files smaller than this size will not be compressed.

Values—any file size

Default—1024

Console setting—None

Service restart required—No

MirrorChunkSize

Description—Block size, in bytes, used in the mirroring process

Values—1 - 1048576

Default—65536

Console setting—None

Service restart required—No

Notes—A higher block size value gives you better throughput, but only to a certain point, then it starts using more memory (this has to do with the way memory is allocated and deallocated). A lower block size value produces slower throughput, but uses memory efficiently.

MirrorOverwrite

Description—Determines if the mirror process overwrites existing files

Values—0 never overwrite, 1 always overwrite, 2 overwrite if older

Default—1

Console setting—None

Service restart required—No

MirrorPrompting

Description—This entry is no longer used.

MirrorQueueLimit

Description—Maximum number of mirror operations that can be queued on the source machine

Values—1 - 65535

Default—1000

Console setting—None

Service restart required—No

MirrorZeroKFiles

Description—Specifies whether or not empty files, zero byte files, are included in a mirror

Values—0 Zero byte files are skipped and not mirrored to the target, 1 All files are mirrored to the target

Default—1

Console setting—None

Service restart required—No

Notes—If MirrorZeroKFiles is enabled (0), zero byte files are skipped during a full mirror, file differences mirror, and a verification with synchronization.

MissedPackets

Description—Specifies the number of requests sent by the target that go unanswered by the source before failover occurs, when using network responses to monitor for failover

Values—1 - 65535

Default—5

Console setting—None

Service restart required—No

MoveOrphanedFiles

Description—Specifies if orphaned files are deleted or moved to the directory specified by MoveOrphansDir

Values—1 Move, 0 Delete

Default—0

Console setting—None

Service restart required—No

MoveOrphansDir

> **Description**—Indicates the name of the directory where orphaned files will be moved if MoveOrphanedFiles=1
>
> **Values**—any valid path
>
> **Default**—the location where the OpenText Availability and OpenText Migrate files were installed
>
> **Console setting**—None
>
> **Service restart required**—No

NetPort

> **Description**—Port connection for TCP communications
>
> **Values**—1025 - 65535
>
> **Default**—1500
>
> **Console setting**—None
>
> **Service restart required**—Yes

NetworkRetry

> **Description**—Specifies the interval, in seconds, at which OpenText Availability and OpenText Migrate will attempt to reconnect to the target
>
> **Values**—any positive number
>
> **Default**—10
>
> **Console setting**—None
>
> **Service restart required**—No

NetworkStatusInterval

> **Description**—An internal setting for network communications. Do not modify this setting.

NetworkTimeout

> **Description**—The maximum length of time, in seconds, to wait on a network connection. If data is not received over a network connection within the specified time limit, the connection is closed. During idle periods, OpenText Availability and OpenText Migrate sends small amounts of keep-alive data at an interval 1/6 of the NetworkTimeout value to keep the socket from being inadvertently closed.
>
> **Values**—any integer
>
> **Default**—120
>
> **Console setting**—None
>
> **Service restart required**—No

Notes—If you are archiving files and it takes longer than the NetworkTimeout specified (for example, this may happen if the DTArchiveBin is located on an alternate volume), the archive operation will complete on the target, but the full file will not be changed to a link on the source because the source detected the network timeout.

NodeLockedLicenseKey

Description—An internal setting for licensing. Do not modify this setting.

OpBufferSize

Description—Specifies the number of operations that can be stored in the memory queue prior to queuing to disk.

Values—0 There is no limit to the number of operations that can be stored in the memory queue, 1 or any larger integer

Default—0

Console setting—None

Service restart required—No

PingFrequency

Description—Specifies, in seconds, how often a ping is sent to the source from a monitoring target

Values—1 - 65535

Default—5

Console setting—None

Service restart required—No

PreFailbackWait

Description—Specifies whether or not to wait for the target pre-failback script to complete before finishing a failback

Values—0 Do not wait, 1 Wait

Default—0

Console setting—None

Service restart required—No

PreFailoverWait

Description—Specifies whether or not to wait for the target pre-failover script to complete before finishing a failover

Values—0 Do not wait, 1 Wait

Default—0

Console setting—None

Service restart required—No

QJournalDir

Description—The location where the queue is stored.

Values—any valid path

Default—the location specified during the installation

Console setting—None

Service restart required—No

Notes—For best results and reliability, you should select a dedicated, non-boot volume. The queue should be stored on a dedicated, high-performance local volume (like SSD or high-speed HDD backed volume). The volume should not be used for any high I/O activity applications.

QJournalFileSize

Description—The size, in MB, of each queuing transaction log file.

Values—any valid file size, up to 4095 MB

Default—5

Console setting—None

Service restart required—No

QJournalFreeSpaceMin

Description—The minimum amount of disk space, in MB, in the specified QJournalDir that must be available at all times.

Values—dependent on the amount of physical disk space available

Default—250

Console setting—None

Service restart required—No

Notes—The QJournalFreeSpaceMin should be less than the amount of physical disk space minus QJournalSpaceMax.

QJournalPreload

Description—The number of operations being pulled from the disk queue at one time. Do not modify this setting.

QJournalSpaceMax

Description—The maximum amount of disk space, in MB, in the specified QJournalDir that can be used for OpenText Availability and OpenText Migrate

queuing. When this limit is reached, OpenText Availability and OpenText Migrate will automatically begin the auto-disconnect process.

Values—dependent on the amount of physical disk space available

Default—Unlimited

Console setting—None

Service restart required—No

Notes—The unlimited setting allows the disk queue usage to automatically expand whenever the available disk space expands. Setting this option to zero (0) disables disk queuing. Even if you are using the unlimited option, OpenText Availability and OpenText Migrate will only store 16,384 log files. If you are using the default 5MB file size, this is approximately 80GB of data. If you anticipate needing to be able to queue more data than this, you should increase the size of the log files.

QLogWriteThrough

Description—Specifies if the disk queues are write-through mode

Values—0 Disk queues are not write-through mode, 1 Disk queues are write-through mode

Default—0

Console setting—None

Service restart required—No

Notes—While write-through mode may decrease the frequency of auto-disconnects, it may also decrease the performance of the source server.

QMemoryBufferMax

Description—The amount of system memory, in MB, that, when exceeded, will trigger queuing to disk.

Values—minimum 32, maximum 4095

Default—256

Console setting—None

Service restart required—Yes

QueueSizeAlertThreshold

Description—The percentage of the queue that must be in use to trigger an alert message

Values—any valid percentage

Default—50

Console setting—None

Service restart required—Yes

RemapLink

>**Description**—Specifies how OpenText Availability and OpenText Migrate handles a soft link

>**Values**—0 If a soft link exists in a replication set and points to a file or directory inside the replication set, the path contained in the link will retain its original mapping, 1 If a soft link exists in a replication set and points to a file or directory inside the replication set, OpenText Availability and OpenText Migrate will remap the path contained in that link based on the OpenText Availability and OpenText Migrate target path

>**Default**—1

>**Console setting**—None

>**Service restart required**—No

RemoveAllOrphans

>**Description**—Specifies if all orphan files will be removed or only those based on RemoveOrphanTime

>**Values**—0 Remove orphans based on the entry RemoveOrphansTime, 1 Remove all orphans

>**Default**—1

>**Console setting**—None

>**Service restart required**—No

RemoveOrphansTime

>**Description**—Specifies the amount of time, in minutes, that must be expired before an orphan file is removed

>**Values**—1 - 131072

>**Default**—60

>**Console setting**—None

>**Service restart required**—No

ReplaceTarget

>**Description**—Specifies whether or not to replace the target identity with the source identity during a failover

>**Values**—0 Do not replace, 1 Replace

>**Default**—0

>**Console setting**—None

>**Service restart required**—No

RepSetDBName

    Description—Name of the database that contains protected data set information

    Values—any valid file name

    Default—DblTake.db

    Console setting—None

    Service restart required—No

RestoreOverwrite

    Description—Determines if the restoration process overwrites existing files

    Values—0 never overwrite, 1 always overwrite, 2 overwrite if older

    Default—2

    Console setting—None

    Service restart required—No

RestorePrompting

    Description—This entry is no longer used.

RestoreSpecialExecutableHandling

    Description—Specifies if an alternate file is created and updated during a restoration for executables that are in use

    Values—0 Do not use alternate files for executables that are in use, 1 Use alternate files for executables that are in use

    Default—1

    Console setting—None

    Service restart required—No

SaveStatFile

    Description—Determines if the statistic.sts (statistics logging) file is saved or ovewritten

    Values—0 overwrite, 1 saved as statistic-old.sts

    Default—1

    Console setting—None

    Service restart required—No

ScheduleFile

    Description—Name of the database file that contains transmission scheduling information

Values—any valid file name

Default—Schedule.sts

Console setting—None

Service restart required—Yes

ScheduleInterval

Description—The number of seconds to wait before checking the transmission schedules to see if transmission should be started or stopped

Values—1 - 3600

Default—1

Console setting—None

Service restart required—Yes

ShareUpdateInterval

Description—Specifies how often, in minutes, the share file will be sent to the target

Values—1 - 65535

Default—60

Console setting—None

Service restart required—No

SkipCompressionFileExt

Description—A period delimited list of file types that are not compressed, even if compression is enabled.

Values—any period delimited list of file types

Default—mp3.exe.wmv.wma.qt.mpg.mpeg.zip.jpg.jpeg.tiff.rar.cab.tgz.bz.bz2.z.pkg.sea.sit.sit x

Console setting—None

Service restart required—No

SmallFileThreshold

Description—Identifies the size of a small file. The entire file will be mirrored if the file size is below this threshold, thus improving mirror speeds.

Values—any integer

Default—65536

Console setting—None

Service restart required—No

SourcePendingAcks

> **Description**—The number of operations received by the target queue in which the source is waiting for a response
>
> **Values**—100 - 20,000
>
> **Default**—2000
>
> **Console setting**—None
>
> **Service restart required**—No

StatsFileName

> **Description**—Default file for logging statistics
>
> **Values**—any valid file name
>
> **Default**—statistic.sts
>
> **Console setting**—None
>
> **Service restart required**—No

StatsLoggingOn

> **Description**—Specifies if OpenText Availability and OpenText Migrate logs statistics at startup
>
> **Values**—0 Stats logging does not start when OpenText Availability and OpenText Migrate starts, 1 Stats logging starts when OpenText Availability and OpenText Migrate starts
>
> **Default**—0
>
> **Console setting**—None
>
> **Service restart required**—No

StatsMaxFileSize

> **Description**—Maximum size, in MB, for the statistic.sts file
>
> **Values**—limited by available disk space
>
> **Default**—10485760
>
> **Console setting**—None
>
> **Service restart required**—No

StatsMaxObjects

> **Description**—This entry is no longer used.

StatsPort

> **Description**—Port used by DTStat to gather OpenText Availability and OpenText Migrate statistics
>
> **Values**—1025 - 65535
>
> **Default**—1506
>
> **Console setting**—None
>
> **Service restart required**—No

StatsShmSize

> **Description**—This entry is no longer used.

StatsWriteInterval

> **Description**—Interval, in minutes, in which statistics are written to the statistic.sts file
>
> **Values**—0 - 65535
>
> **Default**—5
>
> **Console setting**—None
>
> **Service restart required**—No

SystemMemoryLimit

> **Description**—Set by the Double-Take service, each time it is started, to record the amount of available memory.

TargetPaused

> **Description**—Internal setting that indicates if the target machine is paused. Do not modify this setting.

TargetPausedVirtual

> **Description**—Internal setting that indicates which target machines are paused. Do not modify this setting.

TCPBufferSize

> **Description**—Size of the TCP/IP buffer in bytes.
>
> **Values**—4096-7500000
>
> **Default**—375000
>
> **Console setting**—None
>
> **Service restart required**—Yes
>
> **Notes**—This is an operating system buffer, not a OpenText Availability and OpenText Migrate buffer. If this option is set to zero (0), Linux kernel versions 2.6.7

or later can automatically tune this buffer setting for best server performance. Therefore, the recommended setting is 0 for automatic tuning, if you are using a version 2.6.7 or later Linux kernel. If you want to reduce or control network traffic, you can configure this option to a static size. The default is 375000 for a 1 GB network. Modifications should be relative to that speed using the calculation 37500 * network_speed_in_bits_per_second / 100 Mbit.

TGCloseDelay

Description—The length of time, in milliseconds, a file is held open on the target

Values—0 - 2000

Default—1000

Console setting—None

Service restart required—No

Notes—If disk caching on the target is disabled either manually or by default (for example, by default on disks that host Active Directory database files), the target system may be slow during a mirror. If so, descreasing this setting to 100, 10, and 0 will result in incremental improvements, with 0 returning the system performance to normal.

TGExecutionRetryLimit

Description—The number of times an unfinished operation will be retried on the target before it is discarded. If this value is set to zero (0), an operation will never be discarded and will be retried on the target until it is applied.

Values—0 - 65536

Default—0

Console setting—None

Service restart required—No

TGMirrorCapacityHigh

Description—Maximum percentage of system memory that can contain mirror data before the target signals the source to pause the sending of mirror operations.

Values—2-75

Default—20

Console setting—None

Service restart required—No

TGMirrorCapacityLow

Description—Minimum percentage of system memory that can contain mirror data before the target signals the source to resume the sending of mirror operations.

Values—1-75

Default—15

Console setting—None

Service restart required—No

Notes—The maximum value forTGMirrorCapacityLow is either 75 or TGMirrorCapacityHigh, which ever is lower.

TGRetryLocked

Description—Minimum number of seconds to wait before retrying a failed operation on a target

Values—0-65536

Default—3

Console setting—None

Service restart required—No

TGThreadCount

Description—This setting is no longer used

TGUseExtendedQueue

Description—Specifies whether or not OpenText Availability and OpenText Migrate uses the extended queue

Values—0 Use the extended queue, 1 Do not use the extended queue

Default—1

Console setting—None

Service restart required—No

TGWriteCache

Description—Specifies whether or not OpenText Availability and OpenText Migrate uses the intermediate cache

Values—0 Bypass the intermediate cache and write directly to disk, 1 Do not bypass the intermediate cache

Default—0 for full server to ESX jobs, 1 for all other job types

Console setting—None

Service restart required—No

TGWriteFailureBeforeNotification

Description—Specifies the number of times an operation will be retried on the target before a notification is sent to update the target status

Values—0-1024

Default—10

Console setting—None

Service restart required—Yes

Notes—If you change the setting to 0, the notification will be disabled. Changing this option will only affect how the target status is displayed. To solve the underlying issue of why the operations are failing will require investigation into the OpenText Availability and OpenText Migrate log files.

UNetPort

Description—Port connection for UDP communications

Values—1025 - 65535

Default—1500

Console setting—None

Service restart required—Yes

UpdateInterval

Description—Interval, in seconds, at which the Failover Control Center updates the monitored machines display

Values—1 - 9999

Default—1

Console setting—None

Service restart required—No

UserIntervention

Description—Specifies whether or not user intervention is required to initiate a failover

Values—0 User intervention is not required, 1 User intervention is required

Default—1

Console setting—None

Service restart required—No

UseShareFile

Description—Specifies whether to create and use a share file or to use the shares that are currently stored in the target memory

Values—0 Use the shares that are currently stored in the target memory, 1 Create and use a file containing the share information

Default—1

Console setting—None

Service restart required—No

VerifyLogAppend

Description—Specifies whether the DTVerify.log file will be appended to or overwritten

Values—0 Overwrite, 1 Append

Default—1

Console setting—None

Service restart required—No

VerifyLogLimit

Description—Maximum size of the DTVerify.log file in bytes

Values—limited by available hard drive space, up to 4 GB

Default—1048576

Console setting—None

Service restart required—No

VerifyLogName

Description—Name of the verification log file

Values—any valid file name

Default—DTVerify.log

Console setting—None

Service restart required—No

VerifyRetryInterval

Description—The time, in minutes, between when one verification fails and a retry is scheduled to begin.

Values—any valid number

Default—3

Console setting—None

Service restart required—No

VerifyRetryLimit

Description—The number of time a verification will be retried.

Values—any valid number

Default—5

Console setting—None

Service restart required—No

WarningPings

Description—This entry is no longer used.

Chapter 13 **Ports**

The following table identifies the ports that OpenText Availability and OpenText Migrate require. You should also review the documentation for the specific job type you are using for detailed job requirements.

Operating System	OpenText Availability and OpenText Migrate Component	Port	Notes

Windows	Replication engine	6320	• TCP and UDP • Inbound and outbound
	OpenText Replication Console, job management service, SOAP API, and PowerShell	6325	• TCP • Inbound and outbound
	REST API	6326	• TCP • Inbound and outbound
	Push installation	135 through 139	• TCP and UDP • Inbound and outbound • Used by Microsoft Files Share
		445	• TCP and UDP • Inbound and outbound • Used by Microsoft Directory
		1024 and higher	• WMI (Windows Management Instrumentation) which uses RPC (Remote Procedure Call) • By default, RPC uses ports at random above 1024 • RPC ports can be configured to a specific range by specific registry changes and a reboot. See the Microsoft Knowledge Base article 154596 for instructions.
	Failover monitoring	ICMP	• ICMP pings
	Job types that allow you to update a DNS server during failover	53	• DNS protocol from target to DNS server • Used to discover source DNS records

Linux	Replication engine	1500	• TCP and UDP • Inbound and outbound
	Replication engine and job management service	1501	• TCP and UDP • Inbound and outbound • Localhost only
	Replication engine and job management service	1505	• TCP and UDP • Inbound and outbound
	DTStat and SNMP	1506	• TCP and UDP • Inbound and outbound
	Failover monitoring	6325	• TCP • Inbound and outbound
	OpenText Replication Console, job management service, SOAP API, REST API, and PowerShell	6326	• TCP • Inbound and outbound
ESX and vCenter	Full server to ESX job types	443	• TCP • Inbound