Double-Take® AVAILABILITY™

Version 7.0
DTCL Scripting Guide

VISION® SOLUTIONS

Notices

Double-Take Availability DTCL Scripting Guide Version 7.0, Friday, November 22, 2013

Check the Vision Solutions support web site at http://www.VisionSolutions.com/SupportCentral for the most up-to-date version of this documentation.

- **Product Updates**—Check your service agreement to determine which updates and new releases you may be eligible for. Product updates can be obtained from the support web site at http://www.VisionSolutions.com/SupportCentral.
- **Sales**—If you need maintenance renewal, an upgrade activation code, or other sales assistance, contact your reseller/distributor or a Vision Solutions sales representative. Contact information is available on the Vision Solutions Worldwide Locations and Contacts web page at http://www.VisionSolutions.com/Company/Vision-HA-Locations.aspx.
- **Technical Support**—If you need technical assistance, you can contact CustomerCare. All basic configurations outlined in the online documentation will be supported through CustomerCare. Your technical support center is dependent on the reseller or distributor you purchased your product from and is identified on your service agreement. If you do not have access to this agreement, contact CustomerCare and they will direct you to the correct service provider. To contact CustomerCare, you will need your serial number and activation code. Contact information is available on the Vision Solutions CustomerCare web page at http://www.VisionSolutions.com/Support/Support-Overview.aspx .
- **Professional Services**—Assistance and support for advanced configurations may be referred to a Pre-Sales Systems Engineer or to Professional Services. For more information, see the Windows and Linux tab on the Vision Solutions Consulting Services web page at http://www.VisionSolutions.com/Services/Consulting-Services.aspx .
- **Training**—Classroom and computer-based training are available. For more information, see the Double-Take Product Training web page at http://www.VisionSolutions.com/Services/DT-Education.aspx .
- **Documentation**—Please forward any comments or suggestions about this online documentation to documentation-Double-Take@VisionSolutions.com.

Contents

Chapter 1 Client and scripts

Double-Take Availability has its own scripting language to control some, but not all Double-Take Availability features. This *Scripting Guide* does not explain Double-Take Availability features and functions, only the scripting aspects of Double-Take Availability. For details on the features and functions, see the Double-Take Availability *User's Guide*.

The scripting language can be used in the Double-Take Availability Command Line client or in script files. The client and script files use the same set of commands.

This section includes the following topics.

Command Line client

There are three different methods of executing commands from the Command Line client.

- **Interactive Entry**—Type the case-sensitive command **DTCL –i**. A **Command** prompt will appear and the scripting commands can be entered from that prompt. Any resulting errors are immediately displayed.

```
[root@server ~]# DTCL -i
Command: login serve root *******
  User access level set to DT_FULL_ACCESS
Command:
```

- **File Entry**—Create a file with all of the scripting commands you want to run. Type the case-sensitive command **DTCL –f filename** where **filename** is the name of the file containing the scripting commands. For example, you might use the following three lines in your script. to log on to a machine and display its replication sets.

  login server_name root *******;

  source server_name;

  repset list;

```
[root@server ~]#DTCL -f script
User access level set to DT_FULL_ACCESS
 - List of rep sets -
    DataFiles             enabled

[root@server ~]#
```

- **Single Line Entry**—Determine all of the scripting commands you want to run, and enter them in a single line (separated by semi-colons) at the command prompt using the case-sensitive command DTCL. For example, you might use the following command to log on to a machine and display its replication sets.

```
[root@server ~]# DTCL login server_name root password; source server_name; repset list
 User access level set to DT_FULL_ACCESS
    - List of rep sets -
DataFiles             enabled

[root@server ~]#
```

If you are running the Command Line client single line entry in a Linux shell, you must escape the semi-colon and any quotation marks with a backslash to keep the shell from interpreting them as its own command separators. For example, you might enter the following command.

DTCL login \"server_name\" root \"password\"\; source \"server_name\"\; repset list\;

If you are running the Command Line client single line entry from a Windows client, the Windows command process (cmd.exe) strips two layers of quotation marks during processing. Therefore, any scripting command that you use that requires quotation marks must have three quotation marks around it. For example, if your machine name had a space in it, login "server name" username password would be sufficient for the Command Line client interactive entry or file entry. But for the Command Line client single line entry, you would have to use login """machine name""" username password.

Scripts

You can create script files to execute series and combinations of scripting commands to meet specific needs. When working with scripts, keep in mind the following.

- When creating scripts, each commented line must start and end with the pound (or number) sign (#).
- Scripts must use ANSI coding. Do not use Unicode or other formats.
- Variables can be used in commands to replace items that vary such as machine names. A variable name must start with the dollar sign ($) character and can contain letters or numbers. Values are assigned to variables using the equals (=) assignment statement. For example, valid variable assignment statements are $MySource=alpha; and $MyPassword="pass word";.
- All commands return values which can also be assigned to variables. For example, the connection command returns a connection ID for the connection being created. The statement $ConnectionID=CONNECT dataset to target; saves the connection ID as a variable. The variable components of the connect command could be replaced as well. For example, $TheRepset="DataFiles";, $TheTarget=beta;, and $ConnectionID=CONNECT $TheRepset to $TheTarget; are all valid statements.
- Scripts can take advantage of four flow control programming constructs.
    - **IF conditional**—The IF conditional expression is a comparison between two values or variables. Use the following syntax for an IF conditional.

      IF <relational_expression> THEN <statement_block> [ELSE <statement_block>] END

      Use the following conditions to create the relational expression.

        - equal to =
        - not equal to !=
        - less than <
        - less than or equal to <=
        - greater than >
        - greater than or equal to >=
        - statement block—any sequence of valid commands
    - **FOR Loop**—The FOR loop sets a variable to a start value, executes each statement in the statement block, and then adds the step value to the variable. If the new value of the variable does not exceed the end value then the statements will be executed again. This continues until the variable exceeds the end value. If a step value is not provided, the default adds one to the variable. Use the following syntax for the FOR loop.

      FOR <variable> = <start_value> TO <end_value> [STEP <step_value>] DO <statement_block> END
    - **WHILE Loop**—The WHILE loop evaluates a relational expression and, if it is true, then the statement block is executed. When the statement block has completed execution, the expression will be reevaluated again and, if it is true, the statement block is executed again. This continues until the expression is false. Use the conditions specified in the IF conditional to create the relational expression and the following syntax for the WHILE loop.

      WHILE <relational_expression> DO <statement_block> END

    - **WRITE Command**—The WRITE command writes values to the screen. These values can be variables or constants of type integer$, string$, date$, or time$. The write command is used in conjunction with either the IF conditional, WHILE loop, or FOR loop.
- Each command and assignment must end with a semi-colon. However, no semicolon is necessary after the END keyword for the IF conditional and the loop statements.
- When using the Command Line client, a script file can be executed using the -f option. Create a one-line batch file using the following command to initiate the Command Line client with the -f option and specify the name of the script to execute.

  DTCL -f /directory_name/script_name

  If you do not specify a path for the script file, Double-Take Availability will look in the directory where the DTCL -f command was executed.

Command syntax conventions

The following conventions are used for the scripting commands.

- UPPERCASE letters indicate syntax that must be typed exactly as shown.
- ***lowercase italic blue*** letters are variables such as file names, user names, or machine names.
- Angle brackets, < and >, surround required items that must be supplied with the command.
- Square brackets, [and], surround optional items that can be supplied with the command but are not required.
- The pipe character, |, separates items in a list.
- Identifiers that contain a space or non-alphanumeric characters must be enclosed in quotation marks. For example "this is a password" or "machine name." The only exception is IP addresses which do not need to be enclosed in quotation marks.

You can specify an IP address or an IP address:port combination (separated by a colon) in place of a machine name in any DTCL command that allows for the entry of a machine name. For example, all of the following login commands are acceptable.

- login alpha root ********
- login 216.234.244.47 root ********
- login 216.234.244.47:1205 root ********

If you have modified your ports so that your source, target and/or clients are running on different ports and you are using DTCL scripts, then you will need to modify the scripts to include the port values as noted above. This only applies to source/target/client combinations that are communicating with each other on different ports.

Getting help for scripting commands

A listing of the DTCL commands and their syntax is available by typing the help command.

Command

HELP

Description

Displays the DTCL commands and their syntax

Syntax

HELP

Notes

- Press any key to scroll through the list of commands.
- Press q to exit the help function.
- You can also type dtcl help from the directory where the Double-Take Availability program files are installed to display the DTCL commands and their syntax.

Chapter 2 Replication sets

Using the scripting commands, you can perform the following functions to manage your replication sets.

Creating a replication set

Before you can establish a connection, you must create a replication set.

1. Use the repset create command to create a new replication set.

Command

REPSET CREATE

Description

Creates a replication set

Syntax

REPSET CREATE <***name***>

Options

name—Name of the replication set

Examples

repset create DataFiles

Notes

- The name of the replication set should not be a Double-Take Availability keyword. These are any DTCL command (source, target, and so on.) or any DTCL shortcut command (env, mon, rep, and so on).
- Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. Specify it as the active replication set by using the repset use command.

Command

REPSET USE

Description

Specifies a replication set as the active replication set

Syntax

REPSET USE <***repset***>

Options

repset—Name of the replication set

Examples

repset use DataFiles

Notes

Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. Define a replication set rule by using the repset rule add command.

Command

REPSET RULE ADD

Description

Adds a rule to a replication set. A rule is the specification of a path including volume, directories, wild cards, and/or file names.

Syntax

REPSET RULE ADD <***path***> [INClude|EXClude] [, RECursive|NONRECursive] [TO <***repset***>]

Options

- ***path***—Volume, directory, wild card, and/or file name
- INClude—Include the specified path in the replication set
- EXClude—Exclude the specified path in the replication set
- RECursive—All subdirectories and files of the specified path are recursively included or excluded
- NONRECursive—No subdirectories and files of the specified path are included or excluded
- ***repset***—Name of the replication set

Examples

- repset rule add "/data" to DataFiles
- repset rule add "/temp" exc rec to DataFiles

Notes

- The default settings for this command are include and recursive.
- The options include/exclude and recursive/nonrecursive can be used in any combination and in any order. The first option does not require a comma, but the second option does require a comma before the option.
- If you do not specify a replication set name, the current replication set will be used.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

---

4. Repeat the repset rule add command to completely define your replication set.
5. If you need to see the devices available, use the device list command.

Command

DEVICE LIST

Description

Displays the block devices available on a machine

Syntax

DEVICE LIST <***filter***> [ON <***machine***>]

Options

- ***filter***—Use one of the following options for the device filter
- ALL—Lists all unique devices on the specified machine. If there is no machine specified, the source, if designated, will be tried first. The target, if designated, will be tried second.
- OKSOURCE—List all devices on the specified source that are replication capable. If a target is specified, an error will be returned.
- OKTARGET—List all devices on the specified target that are capable of being used as a target path. If a source is specified, an error will be returned.
- ***machine***—Name of the machine

Examples

device list all on alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

6. If you need to remove a rule, use the repset rule remove command.

Command

REPSET RULE REMOVE

Description

Removes a rule from a replication set

Syntax

REPSET RULE REMove <***path***> [FROM <***repset***>]

Options

- ***path***—Volume, directory, wild card, and/or file name
- ***repset***—Name of the replication set

Examples

- repset rule remove "/data" from DataFiles
- repset rule rem "/temp"

Notes

- If you do not specify a replication set name, the current replication set will be used.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

7. After you have added all of the rules, save the replication set by using the repset save command.

Command

REPSET SAVE

Description

Saves all replication set rules for the currently selected source

Syntax

REPSET SAVE

Modifying a replication set

Make modifications to a replication set when you want to change the data you wish to protect.

1. View the replication sets associated with the active source machine by using the repset list command.

Command

REPSET LIST

Description

Lists all replication set names for the currently selected source

Syntax

REPSET LIST

---

2. Identify a replication set as active by using the repset use command.

Command

REPSET USE

Description

Specifies a replication set as the active replication set

Syntax

REPSET USE <*repset*>

Options

repset—Name of the replication set

Examples

repset use DataFiles

Notes

Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. View the replication set's rules by using the repset display command.

Command

REPSET DISPLAY

Description

Displays the replication set rules

Syntax

REPSET DISPlay [***repset***]

Options

repset—Name of the replication set

Examples

- repset display DataFiles
- repset disp DataFiles

Notes

- If you do not specify a replication set name, the current replication set will be used.
- Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

---

4. Remove the existing rule that you need to change using the repset rule remove command.

Command

REPSET RULE REMOVE

Description

Removes a rule from a replication set

Syntax

REPSET RULE REMove <***path***> [FROM <***repset***>]

Options

- ***path***—Volume, directory, wild card, and/or file name
- ***repset***—Name of the replication set

Examples

- repset rule remove "/data" from DataFiles
- repset rule rem "/temp"

Notes

- If you do not specify a replication set name, the current replication set will be used.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

---

5. Add a new rule by using the repset rule add command.

Command

REPSET RULE ADD

Description

Adds a rule to a replication set. A rule is the specification of a path including volume, directories, wild cards, and/or file names.

Syntax

REPSET RULE ADD <***path***> [INClude|EXClude] [, RECursive|NONRECursive] [TO <***repset***>]

Options

- ***path***—Volume, directory, wild card, and/or file name
- INClude—Include the specified path in the replication set
- EXClude—Exclude the specified path in the replication set
- RECursive—All subdirectories and files of the specified path are recursively included or excluded
- NONRECursive—No subdirectories and files of the specified path are included or excluded
- ***repset***—Name of the replication set

Examples

- repset rule add "/data" to DataFiles
- repset rule add "/temp" exc rec to DataFiles

Notes

- The default settings for this command are include and recursive.
- The options include/exclude and recursive/nonrecursive can be used in any combination and in any order. The first option does not require a comma, but the second option does require a comma before the option.
- If you do not specify a replication set name, the current replication set will be used.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

---

6. If you decide that you do not like the changes you have just made, you can use the repset resync command to restore the previously saved settings, undoing your modifications.

Command

REPSET RESYNC

Description

Retrieves the last saved replication set settings, clearing any unsaved changes

Syntax

REPSET RESYNC

---

7. Save the replication set by using the repset save command.

Command

REPSET SAVE

Description

Saves all replication set rules for the currently selected source

Syntax

REPSET SAVE

Deleting a replication set

1. View the replication sets associated with the active source machine by using the repset list command.

Command

REPSET LIST

Description

Lists all replication set names for the currently selected source

Syntax

REPSET LIST

---

2. Delete the replication set by using the repset delete command.

Command

REPSET DELETE

Description

Deletes the specified replication set

Syntax

REPSET DELete <***repset***>

Options

repset—Name of the replication set

Examples

- repset delete DataFiles
- repset del DataFiles

Notes

Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. After deleting the replication set, use the repset save command so that the deletion will be registered by other Double-Take Availability clients.

Command

REPSET SAVE

Description

Saves all replication set rules for the currently selected source

Syntax

REPSET SAVE

Calculating replication set size

1. Use the repset calculate command to manually calculate the size of a replication set.

Command

REPSET CALCULATE

Description

Calculates the size of a replication set

Syntax

REPSET CALCulate [***repset***]

Options

repset—Name of the replication set

Examples

- repset calculate DataFiles
- repset calc DataFiles

Notes

- If a replication set name is not specified, the active replication set will be used.
- The results of the calculation are logged to the Double-Take Availability log file.
- Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. Use the **CalculateOnConnect** option with the get and set commands to calculate the size of the replication set automatically upon connection.

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings

- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Chapter 3 Establishing a connection

After you have created a replication set, you can establish a connection by connecting the replication set to a target.

1. If you do not know which replication set you will be connecting to the target machine, the repset list command will display the available replication sets for that source.

Command

REPSET LIST

Description

Lists all replication set names for the currently selected source

Syntax

REPSET LIST

---

2. Connect the replication set to the target by using the connect command.

Command

CONNECT

Description

Establishes a connection between a replication set and a target machine

Syntax

CONnect <***repset***> TO <***target***> MAP EXACT | MAP BASE <***target_path***> | MAP <***source_path***> TO <***target_path***> [,...] [MIRror | NOMIRror] [, REPlicate | NOREPlicate] [, MONitor | NOMONitor] [, ORPHANS | NOORPHANS] [, COMPRESSion <***level***>] [CLEARRESTOREREQUIRED] [ROUTE=<***target_IP***>]

Options

- ***repset***—Name of the replication set
- ***target***—Name of the target or an IP address on the target
- MAP EXACT—Specifies that the replication set data will be sent to the same logical volume on the target (/data and /files is copied to /data and /files, respectively)
- MAP BASE ***target_path***—Substitute a complete path, including the volume, for target_path and the data will be replicated to target_path\SrcVolName on the target machine

- MAP ***source_path*** TO ***target_path***—Custom location that specifies each directory on the source and where that data will be copied to on the target machine
- ***...***—Indicates that the source_path TO target_path option can be used more than once for each source directory in the replication set
- MIRror—Automatically initiates a mirror when the connection is established
- NOMIRror—Does not initiate a mirror when the connection is established
- REPlicate—Automatically initiates replication when the connection is established
- NOREPlicate—Does not initiate replication when the connection is established
- MONitor—Specifies that the target is going to monitor the specified source machine for failover. The source machine must have already been defined as a monitor machine.
- NOMONitor—Specifies that the target is not going to monitor the source machine for failover
- ORPHANS—Moves or deletes orphan files on the target. Orphan files will not be immediately processed when you create the connection. This setting is for processes that are run after a connection is already established (remirror, auto-remirror, verification, and so on).
- NOORPHANS—Does not move or delete orphan files on the target
- COMPRESSion ***level***—Enables compression of data being sent to the target at the level specified. Valid levels are 1 (minimum), 2 (moderate), or 3 (maximum).
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the connection
- ROUTE=***target_ip***—Specifies the IP address on the target that will receive the incoming Double-Take Availability data

Examples

- connect DataFiles to beta map exact
- connect UserData to beta map base d:\UserData\
- connect UserFiles to beta map exact orphans, compression 2
- con DataFiles to beta map exact mir, compress 1

Notes

- The default settings for this command are mirror, replicate, nomonitor, and noorphans.
- The options (no)mirror, (no)replicate, (no)monitor, (no)orphans, and compression can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- If you are establishing a connection within a NAT or firewall environment, you will need to specify the target using the IP address and port number

(separated by a colon) of the router. For example, connect DataFiles to 10.10.1.57:1105 map exact.

- When scripting with this command, if a successful connection is established, the command will return a positive number, which is the connection ID assigned to that connection.

Chapter 4 Simulating a connection

After you have created a replication set, you can simulate a connection by connecting the replication set to the TDU.

1. If you do not know which replication set you will be connecting to the target machine, the repset list command will display the available replication sets for that source.

Command

REPSET LIST

Description

Lists all replication set names for the currently selected source

Syntax

REPSET LIST

---

2. To initiate a connection to the TDU, use the connect TDU command. This logs the connection statistics to the file specified. The remaining connection flags are identical to the standard connect command.

Command

CONNECT TDU

Description

Establishes a simulation connection between a replication set and the Throughput Diagnostics Utility. This connection imitate a normal connection without transmitting any data across the network.

Syntax

CONNECT <***repset***> TO TDU <***filename***> [***connection_flags***]

Options

- ***repset***—Name of the replication set
- ***filename***—Name of the file to store the connection statistics generated by the TDU
- ***connection_flags***—The same options available in the standard connect command

Examples

- connect DataFiles to TDU
- connect UserData to TDU map /userdata to /backup/userdata

Notes

- The statistic file that the TDU creates can be viewed using DTStat. By default, the file is called statistic.sts. To view the statistic file, type DTStat -f <filename>.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

Chapter 5 Connections

Using the scripting commands, you can perform the following functions to manage your connections.

Monitoring connections

1. Identify the connection ID that you want to monitor by using the conID command.

Command

CONID

Description

- Assigns the value of a connection ID to a variable
- Lists the target and replication set for all connection IDs for a source

Syntax

- <***variable***>=CONID <***repset***> TO <***target***>
- CONID LIST [***source***]

Options

- ***variable***—Name of the variable that you want to use to store the connection ID
- ***repset***—Replication set that was used to establish the connection
- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source

Examples

- $con_id=conid DataFiles to beta
- $ConnectionNumber=conid UserData to beta
- conid list alpha conid list alpha

Notes

- The conid list and variable=conid commands are two separate commands.
- Make sure there are no spaces before or after the equal sign when using the variable=conid command.
- If no machine name is specified in the conid list command, the active source will be used.

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. Use the status command to display statistical and informational data.

Command

STATUS

Description

Requests connection and statistical information

Syntax

STATUS CONnect <*con_id*> | MIRror <*con_id*> | REPlicate <*con_id*> | TRANsmit <*con_id*> | TARget <*target*>

Options

- CONnect—Displays connection information for the connection ID specified
- *con_id*—Connection ID assigned to the source/target connection
- MIRror—Displays mirroring information for the connection ID specified
- REPlicate—Displays replication information for the connection ID specified
- TRANsmit—Displays transmission information for the connection ID specified
- TARget—Displays target state information for the target machine specified
- *target*—Name of the target or an IP address on the target

Examples

- status connect 1
- status rep 1
- status tar beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Queuing Double-Take Availability data

Use the get and set commands with the following options to configure how Double-Take Availability queues data.

- **QJournalDir**
- **QJournalFileSize**
- **QJournalFreeSpaceMin**
- **QJournalSpaceMax**
- **QmemoryBufferMax**
- **QueueSizeAlertThreshold**

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Reconnecting automatically

Use the **AutoReconnect** option with the get and set commands to configure Double-Take Availability to reconnect connections automatically.

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Pausing and resuming target processing

1. Pause the execution of operations on the target by using the pausetarget command on a target that you are logged in to.

Command

PAUSE TARGET

Description

Allows you to pause the execution of Double-Take Availability operations on the target

Syntax

PAUSETARGET <***target***> [FROM <***source***>]

Options

- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source

Examples

pausetarget beta

Notes

- You must be logged on to the target machine for this command to work.
- If the target machine has not been identified using the target command, you must specify the target name in the command.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. Resume the execution of operations on the target by using the resumetarget command on a target that you are logged in to.

Command

RESUME TARGET

Description

Allows you to resume the execution of Double-Take Availability operations on the target

Syntax

RESUMETARGET <***target***> [FROM <***source***>]

Options

- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source

Examples

resumetarget beta

Notes

- You must be logged on to the target machine for this command to work.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Disconnecting a connection

Use the disconnect command to disconnect the source/target connection.

Command

DISCONNECT

Description

Disconnects a specified source/target connection for the currently selected source

Syntax

DISCONnect <***con_id*** | *>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Examples

- disconnect 1
- disconnect *

Chapter 6 Mirroring

Using the scripting commands, you can perform the following functions to manage mirroring.

Stopping, starting, pausing, or resuming mirroring

You can stop, start, pause, or resume a mirror.

Command

MIRROR STOP

Description

Stops a mirror

Syntax

MIRror STOP <***con_id*** | *>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Examples

- mirror stop 1
- mir stop *

Command

MIRROR START

Description

Initiates the mirror process

Syntax

MIRror START <***con_id***> [DIFFERENT [,NEWER] ,CHECKSUM | NOCHECKSUM] [ORPHANS |NOORPHANS] [CALCulate | NOCALCulate] [CLEARRESTOREREQUIRED]

Options

- *con_id*—Connection ID assigned to the source/target connection
- DIFFERENT—Mirrors only those files that are different based on the file date, time, and/or size
- NEWER—Mirrors only those files that are newer on the source than on the target
- CHECKSUM—Mirrors only those blocks that are different based on block checksum comparisons
- NOCHECKSUM—Does not perform a checksum comparison when mirroring files
- ORPHANS—Moves or deletes orphan files on the target
- NOORPHANS—Does not move or delete orphan files on the target
- CALCulate—Calculate the size of the replication set prior to mirroring
- NOCALCulate—Does not calculate the size of the replication set prior to mirroring
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the mirror

Examples

- mirror start 1 different, newer
- mir start 2 different, checksum orphans calc

Notes

The default settings for this command are noorphans and calculate.

Command

MIRROR PAUSE

Description

Pauses a mirror that is in progress

Syntax

MIRror PAUSE <*con_id* | *>

Options

- *con_id*—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Notes

- mirror pause 1
- mir pause *

Command

MIRROR RESUME

Description

Resumes a paused mirror

Syntax

MIRror RESUME <***con_id*** | *>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Notes

- mirror resume 1
- mir resume *

Mirroring automatically

Use the **AutoRemirror** option with the get and set commands to configure if a mirror is initiated automatically when a connection is automatically reconnected.

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Removing orphan files

1. Use the **MoveOrphanedFiles**, **MoveOprhansDir**, **RemoveAllOrphans**, **RemoveOrphansTime**, and **LogAllOrphans** options with the get and set commands for orphan file configuration.

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. If you want to preview which files are identified as orphan files, use the orphans preview command. Check the log file on the target for the list of orphaned files.

Command

ORPHANS PREVIEW

Description

Previews which files are orphan files on the target

Syntax

ORPHANS PREVIEW ***con_id***

Options

con_id—Connection ID assigned to the source/target connection

Examples

orphans preview 1

---

3. To remove orphan files manually, use the orphans start command.

Command

ORPHANS START

Description

Manual operation to remove any orphan files on the target

Syntax

ORPHANS START ***con_id*** [CLEARRESTOREREQUIRED]

Options

- ***con_id***—Connection ID assigned to the source/target connection
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the orphan operation

Examples

orphans start 1

---

4. If you want to stop removing orphan files after it has been started, use the orphans stop command.

Command

ORPHANS STOP

Description

Stops the process to remove orphan files on the target

Syntax

ORPHANS STOP ***con_id***

Options

con_id—Connection ID assigned to the source/target connection

Examples

orphans stop 1

Chapter 7 Replication

Using the scripting commands, you can perform the following functions to manage replication.

Starting replication

Start replication by using the replication start command.

Command

REPLICATION START

Description

Initiates the replication process

Syntax

REPlication START <***conid*** | *> [CLEARRESTOREREQUIRED]

Options

- ***conid***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates replication

Examples

- replication start 1
- rep start *

Inserting tasks during replication

Task command processing is a Double-Take Availability feature that allows you to insert and run tasks at various points during the replication of data. Because the tasks are user-defined, you can achieve a wide variety of goals with this feature. For example, you might insert a task to create a snapshot or run a backup on the target after a certain segment of data from the source has been applied on the target. This allows you to coordinate a point-in-time backup with real-time replication.

Task command processing can be enabled from the Replication Console, but it can only be initiated through a scripting command.

If you disable this option on a source server, you can still submit tasks to be processed on a target, although task command processing must be enabled on the target.

Because Double-Take Availability replication follows the same write sequence within and across multiple files, it provides complete data integrity at all times. At any given moment, the target represents a single point in time from the source, which makes the target crash consistent. But for some applications, crash consistency may not be adequate. You may require that the source data be in a quiescent (latent) state, similar to an application checkpoint. You need to be able to identify when the application is stable, which is usually when all of the data has been written to disk. This can be triggered by stopping the service. With task command processing, you can stop the source service just long enough to identify that stopped point in time as a stable state, insert a task at that point into the Double-Take Availability replication queue to trigger a backup or snapshot on the target, and then restart the service. Here is how the process would work.

1. Double-Take Availability and an application are both running on the source. Only Double-Take Availability is running on the target.
2. The application data is changing on the source and Double-Take Availability is capturing those data changes and transmitting them to the target.
3. A script is launched (either manually or perhaps by a scheduler program) that stops the application service on the source, pauses to give the service time to shutdown and write the data to disk, initiates a Double-Take Availability task command, and then restarts the application service on the source.
4. The Double-Take Availability task command is transmitted, inline with the source replication data, to the target.
5. The data is applied on the target as it is received. Since the task command was inserted inline, the replication data from the source is applied to the target first. When the target gets to the Double-Take Availability task command, the target data will be in the exact same state as the source data when the source application service was stopped. Since this was a stable point on the source, it is also a stable point on the target.
6. The target processes the Double-Take Availability task command and completes whatever task is defined, perhaps a snapshot or backup. Since the Double-Take Availability task command is user-defined, you can insert any valid executable or batch file.

Double-Take Availability task command processing must be enabled, and there must be an active Double-Take Availability connection for task command processing to function properly. To insert a task command, you would use the queuetask command.

Command

QUEUETASK

Description

Queues tasks inline with replication data

Syntax

QueueTASK <*job_name*> TO <*target*> ONQueue = <*task*> [*args*] | ONTRANSmit = <*task*> [*args*] | ONRECeive = <*task*> [*args*] | ONEXECute = <*task*> [*args*] [TIMEOUT = <*timeout*>] [INTERACT | NOINTERACT]

Options

- *job_name*—Unique job name assigned to this task. This will be the identifier you see in the log files.
- *target*—Name of the target or an IP address on the target. The target is required even if you are only queuing a task to be executed on the source.
- ONQueue—Execute the specified task on the source machine as soon as the source receives and queues the task. During heavy replication, there may be a delay while the task is queued inline with the replication operations.
- ONTRANSmit—Execute the specified task on the source machine just before the source transmits the task to the target.
- ONRECeive—Execute the specified task on the target machine as soon as the target receives and queues the task.
- ONEXECute—Execute the specified task on the target when the target processes the task from the queue. Since the task is not executed until it is processed, if the target is paused, the task will be held in queue.
- *task*—The path and filename of the task to run relative to the machine it will be run on. Tasks include any valid executable or batch file. The executables or files must exist in the specified location on the machine where they will be executed
- *args*—Arguments or options which need to be supplied with the task. Multiple arguments can be supplied in a space-separated list enclosed in quotation marks.
- TIMEOUT *timeout*—Valid number followed by an optional time indicator indicating the length of time ot pause while waiting for the task to complete. The valid time indicators include seconds, minutes, hours, and days. If you do not specify a time indicator, it will default to seconds. The number zero (0) indicates there is no timeout delay and the next operation is immediately processed. The keyword FOREVER indicates that the next operation is not processed until the task has completed execution. If you do not specify this option, the timeout will default to forever.
- INTERACT—Tasks interact with the desktop and, therefore, display on screen and run in the foreground
- NOINTERACT—Tasks do not interact with the desktop

Examples

- queuetask backup to beta onreceive=PauseAndBackup.bat onexecute=Resume.bat
- qtask backup to beta onrec=PauseAndBackup.bat onexec=resume.bat

Notes

- The default setting for this command is nointeract.
- Any combination of one or more execution points can be used with the same queuetask command.
- All script processing messages, including errors, can be viewed in the Double-Take Availability log.
- Onqueue will still execute as soon as the task is placed on the queue even if transmission is stopped (manually stopped or paused, unmet scheduled transmission criteria, etc.). Any other option will not execute until transmission is restarted.
- If your source is in a restore required state, any task placed on the queue will be executed immediately. Use caution when submitting tasks while in this state so that the target does not get inadvertently updated.
- A task may be discarded if all connections to a target are manually disconnected, replication is stopped for all connections to a target, or an auto-disconnect occurs.
- If a task is submitted after replication is stopped, the task will be executed immediately.
- If you disable task command processing while tasks are in queue, those tasks will not be executed.
- The user submitting the task command must be a member of the **Double-Take Admin** security group on both the source and target and the Double-Take service must have proper privileges to access the files or run the commands specified in the task.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Chapter 8 Verifying your target data

With scripting commands, verification can only be initiated after a connection is established.

1. Log on to the source using the login command.

Command

LOGIN

Description

Log on to a Double-Take Availability machine

Syntax

LOGIN <***machine***> <***username***> <***password***>

Options

- ***machine***—Name of the machine
- ***username***—Name of the user. The username is limited to 100 characters.
- ***password***—Password associated with the user name. The password is limited to 100 characters.

Examples

login alpha root ******

Notes

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- The password cannot be a Double-Take Availability keyword. These are any DTCL command (source, target, and so on.) or any DTCL shortcut command (env, mon, rep, and so on).
- When scripting with this command, it will return one of three positive numbers: 0 (no access granted), 1 (monitor access granted), or 2 (full access granted).

2. Identify the source that you want to initiate verification for by using the source command.

Command

SOURCE

Description

Identifies a machine as the active source machine

Syntax

SOUrce <***source***>

Options

source—Name of the source or an IP address on the source

Examples

- source alpha
- sou alpha

Notes

Source names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. Use the **VerifyLogName**, **VerifyLogAppend**, and **VerifyLogLimit** options with the get and set commands to configure the verification log.

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

4. Initiate the verification process by using the verify command.

Command

VERIFY

Description

Verifies the integrity of the data between the source and target machines

Syntax

VERIFY <*con_id*> [SYNC [,NEWER] | NOSYNC] [,CHECKSUM | NOCHECKSUM] [STARTTIME=<*mm/dd/yy*> [*hh:mm*]] [EVERY <*number*> <*time_units*>] [ORPHANS | NOORPHANS] [CLEARRESTOREREQUIRED]

Options

- *con_id*—Connection ID assigned to the source/target connection
- SYNC—Synchronizes any data that is different
- NEWER—Synchronizes only those files that are newer on the source than on the target
- NOSYNC—Do not synchronize any data that is different
- CHECKSUM—Compares and/or synchronizes those blocks that are different on the source than on the target based on checksum comparisons
- NOCHECKSUM—Does not perform a checksum comparison when comparing and/or synchronizing files
- STARTTIME—Starts the verification process at the time specified
- *mm/dd/yy*—Date in month/day/year format when the verification process will begin
- *hh:mm*—Time in hour:minute format using the 24-hour clock when the verification process will begin
- EVERY—Repeat the verification process at the frequency specified
- *number*—Length of time to repeat the verification process
- *time_units*—Minutes (min), hours (hr), or days (day)
- ORPHANS—Moves or deletes orphan files on the target
- NOORPHANS—Does not move or delete orphan files on the target
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the verification

Examples

- verify 1
- verify 2 sync, newer
- verify 2 every 2 hr

Notes

The default verification settings are sync, checksum, and noorphans.

Chapter 9 Data transmission

Using the scripting commands, you can perform the following functions to manage your Double-Take Availability transmissions.

Stopping, starting, pausing, and resuming transmission

You can stop, start, pause, or resume transmission.

1. To start the transmission process, use the transmission start command.

Command

TRANSMISSION START

Description

Initiates the transmission pause

Syntax

TRANSmission START <*target*>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission start beta
- trans start beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. To stop the transmission process, use the transmission stop command.

Command

TRANSMISSION STOP

Description

Stops the transmission pause

Syntax

TRANSmission STOP <***target***>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission stop beta
- trans stop beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. To pause the transmission process, use the transmission pause command.

Command

TRANSMISSION PAUSE

Description

Pauses the transmission pause

Syntax

TRANSmission PAUSE <***target***>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission pause beta
- trans pause beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

4. To resume the transmission process, use the transmission resume command.

Command

TRANSMISSION RESUME

Description

Resumes a paused transmission pause

Syntax

TRANSmission RESUME <*target*>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission resume beta
- trans resume beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Scheduling data transmission

You can clear an existing schedule, disable or enable the use of a schedule, and set start, stop, and window criteria.

1. To clear all existing transmission options, use the schedule clear command.

All transmission options are stored on the source machine until they are either cleared or the option is updated. At this time, there is not a command to display the existing transmission options.

Command

SCHEDULE CLEAR

Description

Clears the existing transmission schedule for the specified target

Syntax

SCHEDule <*target*> CLEAR

Options

target—Name of the target or an IP address on the target.

Examples

- schedule beta clear
- sched beta clear

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

2. Enable transmission limiting when you want to apply any transmission options that have been configured. You can also disable the transmission options without losing your settings. Use the schedule enable or schedule disable commands to enable or disable transmission limiting.

Command

SCHEDULE ENABLE

Description

Enables the transmission schedule

Syntax

SCHEDule <*target*> ENABLE

Options

target—Name of the target or an IP address on the target.

Examples

- schedule beta enable
- sched beta enable

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Command

SCHEDULE DISABLE

Description

Disables the transmission schedule without clearing the schedule data

Syntax

SCHEDule <*target*> DISABLE

Options

target—Name of the target or an IP address on the target.

Examples

- schedule beta disable
- sched beta disable

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. You can specify a start time, a repeat interval, and queue usage criteria using the schedule start command.

Command

SCHEDULE START

Description

Sets criteria to start the transmission of data from the source to the target

Syntax

SCHEDule <*target*> START [STARTTIME = <*mm/dd/yy*> <*hh:mm*>] [MEMLIMIT = <*percent*>] [QUEUESIZE = <*bytes*>] [EVERY <*number*> <*time_units*>]

Options

- *target*—Name of the target or an IP address on the target.
- *mm/dd/yy*—Date in month/day/year format indicating when the transmission will begin
- *hh:mm*—Time in hour:minute format using the 24-hour clock indicating when the transmission will begin
- *percent*—Any number between 0 and 100 indicating the percentage of system memory that must be in use to initiate the transmission process
- *bytes*—Number of bytes that must be in the source disk queue to initiate the transmission process
- *number*—Any number indicating how often the transmission process will be repeated
- *time_units*—Minutes (min), hours (hr), or days (day)

Examples

- schedule beta start starttime=03/11/07 03:30, queuesize=10000, every 6 hr
- sched beta start queuesize=100000000

Notes

- The start option EVERY cannot be used by itself and cannot be the first option in a string of options.
- If you use more than one start option, the transmission will begin when the first start option value is met. Additionally, each option after the first must be separated by a comma, as illustrated in the Examples.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

4. You can specify a transmission duration and a maximum number of bytes using the schedule end command.

Command

SCHEDULE END

Description

Sets criteria to end the transmission of data from the source to the target

Syntax

SCHEDule <*target*> END [DURATION = <*number*> <*time_units*>] [BYTES = <*bytes*>]

Options

- ***target***—Name of the target or an IP address on the target.
- ***number***—Any number indicating the length of time before the transmission ends
- ***time_units***—Minutes (min), hours (hr), or days (day)
- ***bytes***—Number of bytes transmitted before the transmission ends

Examples

- schedule beta end duration=3 hr bytes=1500000
- sched beta end duration=6 hr

Notes

- If you use both of the end options, duration and bytes, the transmission will be stopped when the first end option value is met.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

5. You can specify a transmission window using the schedule window command.

Command

SCHEDULE WINDOW

Description

Sets criteria to only allow transmissions during a certain period of time

Syntax

SCHEDule <***target***> WINDOW <***hh:mm***> TO <***hh:mm***>

Options

- ***target***—Name of the target or an IP address on the target.
- ***hh:mm***—Time in hour:minute format using the 24-hour clock. The first time is when the transmission will begin and the second time is when the transmission will end.

Examples

- schedule beta window 23:00 to 06:00
- sche beta window 20:00 to 4:00

Notes

- Establishing a transmission window by itself is not sufficient to start a transmission. You will need to specify a start criteria.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Transmission schedule examples

This section shows examples of how the different schedule commands could be used together. The numbers and times were randomly selected for these examples. Be sure to use values that work for your environment.

- **Example 1**—In this example, transmission is set to begin on January 12, 2009, at 10:30 p.m. and to end after 6 hours. This schedule is also set to repeat every day.

  schedule alpha start starttime=1/12/09 22:30, every 1 day

  schedule alpha end duration=6 hr

  schedule alpha enable

  If all the data is not transmitted within the 6-hour duration, the remaining data will remain in the queue and will be transmitted during the next scheduled transmission.

- **Example 2**—In this example, transmission is set to begin after the source queue contains approximately 40 MB of data, and transmission is set to end after approximately 50 MB of data have been sent from the source to the target.

  schedule alpha start queuesize=40000000

  schedule alpha end bytes=50000000

  schedule alpha enable

  If there is data remaining in the source queue after the transmission ends, the data will be sent when the source queue again reaches 40000000 bytes of data.

- **Example 3**—In this example, transmission is set to begin after the source queue contains approximately 50 MB of data, and transmission is set to end after 60 MB of data have been sent from the source to the target. However, transmission can only occur if the start criteria is met within the defined 6-hour window.

  schedule alpha start queuesize=50000000

  schedule alpha end bytes=60000000

  schedule alpha window 22:00 to 04:00

  schedule alpha enable

  If additional data remains in the source queue after the transmission ends, that data will be sent when the start criteria is again met within the defined 6-hour window. However, if the start criteria is not met within the defined 6-hour window, data remains in the queue until the start criteria is met within the defined window.

At any time, transmission can be manually started, stopped, paused, or resumed regardless of scheduled transmission criteria.

Limiting transmission bandwidth

With a fixed bandwidth limit, data will be transmitted at all times according to the user-specified bandwidth configuration. If you want to set a fixed bandwidth limit, use the limit bandwidth command.

Command

LIMIT BANDWIDTH

Description

Sets a fixed bandwidth limitation for transmitting data from the source to the target

Syntax

LIMIT BANDWIDTH <***bytes***>, <***seconds***> TO <***target***>

Options

- ***bytes***—Number of bytes to be transmitted
- ***seconds***—Maximum number of seconds to wait before transmitting again
- ***target***—Name of the target or an IP address on the target.

Examples

limit bandwidth 19300, 5 to beta

Notes

- This command transmits in bursts, not bytes per seconds. The time identifies how long to wait before transmitting again. For example, if 5 seconds are specified and it only takes 2 seconds to send the specified bytes, Double-Take Availability will wait an additional 3 seconds before transmitting again.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Compressing data for transmission

1. To determine the current compression setting, use the compression list command. By default, compression is disabled.

Command

COMPRESSION LIST

Description

Identifies the compression level and if compression is enabled

Syntax

COMPRESSion LIST

---

2. To set the level of compression, use the compression set command.

Command

COMPRESSION SET

Description

Sets the compression level

Syntax

COMPRESSion SET <***con_id***> <***level***>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- ***level***—Any whole number from 1 to 3 where 1 is minimum compression and 3 is maximum compression

Examples

compression set 1 2

Notes

This command only sets the level of compression. It does not initiate compression.

---

3. To initiate compression, use the compression enable command.

Command

COMPRESSION ENABLE

Description

Enables compression

Syntax

COMPRESSion ENABLE <***con_id***>

Options

con_id—Connection ID assigned to the source/target connection

Examples

compression enable 1

---

4. If you need to stop compression, use the compression disable command.

Command

COMPRESSION DISABLE

Description

Disables compression

Syntax

COMPRESSion DISABLE <***con_id***>

Options

con_id—Connection ID assigned to the source/target connection

Examples

compression disable 1

---

1. Log on to your target using the login command.

Command

LOGIN

Description

Log on to a Double-Take Availability machine

Syntax

LOGIN <*machine*> <*username*> <*password*>

Options

- *machine*—Name of the machine
- *username*—Name of the user. The username is limited to 100 characters.
- *password*—Password associated with the user name. The password is limited to 100 characters.

Examples

login alpha root ******

Notes

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- The password cannot be a Double-Take Availability keyword. These are any DTCL command (source, target, and so on.) or any DTCL shortcut command (env, mon, rep, and so on).
- When scripting with this command, it will return one of three positive numbers: 0 (no access granted), 1 (monitor access granted), or 2 (full access granted).

2. Identify your source that you will be restoring to by using the source command.

Command

SOURCE

Description

Identifies a machine as the active source machine

Syntax

SOUrce <*source*>

Options

source—Name of the source or an IP address on the source

Examples

- source alpha
- sou alpha

Notes

Source names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. Restore Double-Take Availability data from the target to the source by using the restore command.

Command

RESTORE

Description

Initiates the restoration process

Syntax

RESTORE <*repset*> FROM <*target*> ORIGINAL <*original_source*> [, OVERWRITE | NOOVERWRITE] [, OVERWRITENEWER | NOOVERWRITENEWER] [, USETARGETDB | NOUSETARGETDB] [, RESTOREDBTOO | NORESTOREDBTOO] [, CHECKSUM | NOCHECKSUM][, ORPHANS | NOORPHANS]

Options

- *repset*—Name of the replication set
- *target*—Name of the target or an IP address on the target
- *original_source*—Name of the original source
- OVERWRITE—Overwrites files on the source

- NOOVERWRITE—Does not overwrite files on the source
- OVERWRITENEWER—Overwrites files on the source even if the source file is newer than on the target
- NOOVERWRITENEWER—Does not overwrite files on the source that are newer on the source than on the target
- USETARGETDB—Uses the replication set from the target machine
- NOUSETARGETDB—Uses the replication set from the source machine
- RESTOREDBTOO—Restores the replication set database from the target to the source
- NORESTOREDBTOO—Does not restore the replication set database from the target to the source
- CHECKSUM—Performs a block checksum comparison and only restores those blocks that are different
- NOCHECKSUM—Does not perform a block checksum comparison and restores those files that are different
- ORPHANS—Moves or deletes orphan files on the source
- NOORPHANS—Does not move or delete orphan files on the source

Examples

restore DataFiles from beta ,overwritenewer ,usetargetdb

Notes

- The default settings for this command are overwrite, overwritenewer, usetargetdb, restoredbtoo, and noorphans.
- The options can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- The source command is required before each use of the restore command.
- This command requires the original source option.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- When scripting with this command, if a successful restoration connection is established, the command will return a positive number, which is the connection ID assigned to that connection.

4. After the restoration is complete, the connection will remain connected and continue replicating data changes from the target to the source until the restoration connection is manually disconnected on the target using the disconnect command.

Command

DISCONNECT

Description

Disconnects a specified source/target connection for the currently selected source

Syntax

DISCONnect <***con_id*** | *>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Examples

- disconnect 1
- disconnect *

Chapter 11 Failover

Using the scripting commands, you can perform the following functions to manage failover.

Configuring failover monitoring

1. Specify a target machine by using the target command.

Command

TARGET

Description

Identifies a machine as the active target machine

Syntax

TARget <*target*>

Options

target—Name of the target or an IP address on the target

Examples

- target beta
- tar beta

Notes

- You must be logged into a machine using the login command before using the target command.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. Determine what NICs are available on the specified target by using the niclist command.

Command

NICLIST

Description

Displays the NICs available on the specified target machine. Each NIC is assigned an integer value and this value is used in the monitor move command.

Syntax

NICLIST [***target***]

Options

target—Name of the target or an IP address on the target

Examples

niclist beta

Notes

- If you do not specify a machine name, the value from the current target will be returned. If you have not identified a target, no data will be returned.
- If you have not logged into the target machine, no data will be displayed.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

3. Establish a monitor to use with the remaining monitor commands by using the monitor create command.

Command

MONITOR CREATE

Description

Establishes a source as a failover monitor. This is the machine that will be monitored by a target in case it should experience a failure.

Syntax

MONitor CREATE <***source***>

Options

source—Name of the source or an IP address on the source

Examples

- monitor create alpha
- mon create alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

4. Specify that you want to use the monitor that was just created by using the monitor use command.

Command

MONITOR USE

Description

Specifies the source machine designated as the monitor that will be used in subsequent monitor commands

Syntax

MONitor USE <***monitor***>

Options

monitor—Name of the source machine designated as the monitor .

Examples

- monitor use alpha
- mon use alpha

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

5. Configure the monitor settings (including the IP address to monitor, the target NIC that will assume the IP address when it fails, the monitor interval and missed packets) by using the monitor move command.

Command

MONITOR MOVE

Description

Designates the IP address that will be failed over to the specified target NIC

Syntax

MONitor MOVE <***IP_address***> TO NIC <***target_NIC***> INTERVAL <***interval***> TIMEOUT <***timeout***> | <NOTEST> [***monitor***]

Options

- ***IP_address***—The IP address which should be moved during failover
- ***target_NIC***—The integer value of the target NIC obtained from the niclist command
- INTERVAL ***interval***—The frequency, in seconds, of the monitor requests sent to the source machine to see if it is online and active
- TIMEOUT ***timeout***—The number of seconds before failover will occur. This number is reset to its maximum each time the source sends a response to the monitor request.
- NOTEST—Allows you to failover an IP address without sending monitor requests or expecting responses from the source. This option should only be used if you are monitoring multiple IP addresses but do not want to send monitor requests to each address.
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor move 205.31.2.57 to nic 1 interval 5 timeout 25
- monitor move 205.31.2.68 to nic 2 notest

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

6. To remove an IP address from an established monitor, use the monitor remove command.

Command

MONITOR REMOVE

Description

Removes an IP address that is currently being monitored

Syntax

MONitor REMove <***IP_address***> [***monitor***]

Options

- ***IP_address***—The currently monitored IP address that should be removed
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor remove 205.31.2.57 alpha
- mon rem 205.31.2.68

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

7. Configure the failover settings by using the monitor option command.

Command

MONITOR OPTION

Description

Configures the settings to determine how failover will be performed

Syntax

MONitor OPTION [, MOVEADDRESSES | NOMOVEADDRESSES] [, FAILONE | FAILALL] [, FODELAY | NOFODELAY] [, FBDELAY | NOFBDELAY] [, APPLY | DISCARD | REVERT] [, INTERVENTION | NOINTERVENTION] [***monitor***]

Options

- MOVEADDRESSES—Moves the IP address(es) during failover
- NOMOVEADDRESSES—Does not move the IP address(es) during failover

- FAILONE—When multiple IP addresses exist on a monitor machine, only the failed address is failed over to the target machine
- FAILALL—When multiple IP addresses exist on a monitor machine, all of the addresses will fail over to the target machine even if only one address fails
- FODELAY—Guarantees that the pre-failover script has completed before failing over
- NOFODELAY—Does not guarantee that the pre-failbover script has completed before failing over
- FBDELAY—Guarantees that the pre-failback script has completed before failing back
- NOFBDELAY—Does not guarantee that the pre-failback script has completed before failing back
- APPLY—When failover is triggered, apply the data that is in the target queue before beginning failover
- DISCARD—When failover is triggered, discard the data that is in the target queue and begin failover immediately
- REVERT—When failover is triggered, revert the target to the last known good Double-Take Availability state
- INTERVENTION—Specifies that network administrator intervention is required before failover begins
- NOINTERVENTION—Specifies that network administrator intervention is not required before failover begins
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor option alpha
- mon option alpha
- monitor option failone, nointervention

Notes

- The default settings are moveaddress, failall, fodelay, fbdelay, apply, and intervention.
- The options can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

8. Specify any scripts by using the monitor script add command.

Command

MONITOR SCRIPT ADD

Description

Specifies the scripts that should be run during the failover and failback processes

Syntax

MONitor SCRIPT ADD <***type***> <***script_name***> [ARGS=<***arguments***>] [***monitor***]

Options

- ***type***—Any of the following script types
- PREFAILOVER—The file is a pre-failover script to be run on the target before failover
- POSTFAILOVER—The file is a post-failover script to be run on the target after failover
- PREFAILBACK—The file is a pre-failback script to be run on the target before failback
- POSTFAILBACK—The file is a post-failback script to be run on the target after failback
- SRCPOSTFAILBACK—The file is a post-failback script to be run on the source after failback
- ***script_name***—Full path and name of the script file
- ***arguments***—Comma-separated list of valid arguments required to execute the script
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor script add prefailback "/user/shared/prefailback"
- mon script add postfailback "/user/shared/postfailback"

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

9. Remove any scripts by using the monitor script remove command.

Command

MONITOR SCRIPT REMOVE

Description

Specifies the scripts that should not be run during the failover and failback processes

Syntax

MONitor SCRIPT REMove <***type***> [***monitor***]

Options

- ***type***—Any of the following script types
- PREFAILOVER—The file is a pre-failover script to be run on the target before failover
- POSTFAILOVER—The file is a post-failover script to be run on the target after failover
- PREFAILBACK—The file is a pre-failback script to be run on the target before failback
- POSTFAILBACK—The file is a post-failback script to be run on the target after failback
- SRCPOSTFAILBACK—The file is a post-failback script to be run on the source after failback
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor script remove prefailback
- mon script rem postfailover

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

10. Review your failover settings by using the monitor display command.

Command

MONITOR DISPLAY

Description

Displays the monitoring and failover configuration settings for the specified monitor machine

Syntax

MONitor DISPlay <***monitor***>

Options

monitor—Name of the source machine designated as the monitor

Examples

- monitor display alpha
- mon disp alpha

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Depending on your sequence of commands, you may need to use the monitor get command to specify an active monitor before using monitor display.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

11. Start failover monitoring by using the monitor start command.

Command

MONITOR START

Description

Initiates failover monitoring

Syntax

MONitor START <***monitor***> [ON <***target***>]

Options

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target

Examples

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target

Notes

Option names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Editing failover monitoring configuration

1. Retrieve your monitor information by using the monitor get command.

Command

MONITOR GET

Description

Identifies a machine as the active monitor machine

Syntax

MONitor GET <***target***>

Options

target—Name of the target or an IP address on the target

Examples

- monitor get beta
- mon get beta

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. Review the current failover settings by using the monitor display command.

Command

MONITOR DISPLAY

Description

Displays the monitoring and failover configuration settings for the specified monitor machine

Syntax

MONitor DISPlay <***monitor***>

Options

monitor—Name of the source machine designated as the monitor

Examples

- monitor display alpha
- mon disp alpha

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Depending on your sequence of commands, you may need to use the monitor get command to specify an active monitor before using monitor display.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

3. If you need to edit any of the failover settings, use the failover configuration commands used to establish the failover configuration.

Failing over

Verify that the source machine is offline and not connected to the network to avoid IP address conflicts. Trigger failover using the failover command.

Command

FAILOVER

Description

Manually initiates the failover process for the specified monitor machine

Syntax

FAILOVER <***monitor***> [ON <***target***>] [APPLY | DISCARD | REVERT]

Options

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target
- APPLY—Apply the data that is in the target queue before beginning failover
- DISCARD—Discard the data that is in the target queue and begin failover immediately
- REVERT—Revert the target to the last known good Double-Take Availability state

Examples

failover alpha on beta apply

Notes

If failover is configured for manual intervention, you must open the Failover Control Center to access the intervention prompt.

Stopping failover monitoring

1. Retrieve your monitor information by using the monitor get command.

Command

MONITOR GET

Description

Identifies a machine as the active monitor machine

Syntax

MONitor GET <***target***>

Options

target—Name of the target or an IP address on the target

Examples

- monitor get beta
- mon get beta

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. To stop failover monitoring, use the monitor stop command.

Command

MONITOR STOP

Description

Stops monitoring the source machine for failure

Syntax

MONitor STOP <***monitor***> [ON <***target***>]

Options

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target

Examples

- monitor stop alpha on beta
- mon stop alpha

Notes

Option names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Deleting failover monitoring configuration

1. Retrieve your monitor information by using the monitor get command.

Command

MONITOR GET

Description

Identifies a machine as the active monitor machine

Syntax

MONitor GET <***target***>

Options

target—Name of the target or an IP address on the target

Examples

- monitor get beta
- mon get beta

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

2. To delete the monitor, use the monitor delete command.

Command

MONITOR DELETE

Description

Deletes the specified failover monitor and all of its parameters

Syntax

MONitor DELete <***monitor***>

Options

monitor—Name of the source machine designated as the monitor

Examples

- monitor delete alpha
- mon del alpha

Notes

- In order to successfully delete a monitor, the monitor must not be running on the server. Use the monitor stop command to ensure the monitor is not running.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Chapter 12 Failing back

1. If you are performing failback before restoring, verify that your source machine is not connected to the network and that the issue(s) that caused the failure is resolved. If you have already performed a restoration, your source should already be connected to the network using a unique identity.
2. Login to the target machine that is currently standing in for the failed source by using the login command.

Command

LOGIN

Description

Log on to a Double-Take Availability machine

Syntax

LOGIN <***machine***> <***username***> <***password***>

Options

- ***machine***—Name of the machine
- ***username***—Name of the user. The username is limited to 100 characters.
- ***password***—Password associated with the user name. The password is limited to 100 characters.

Examples

login alpha root ******

Notes

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- The password cannot be a Double-Take Availability keyword. These are any DTCL command (source, target, and so on.) or any DTCL shortcut command (env, mon, rep, and so on).
- When scripting with this command, it will return one of three positive numbers: 0 (no access granted), 1 (monitor access granted), or 2 (full access granted).

---

3. Identify the machine you just logged into as the target by using the target command.

Command

TARGET

Description

Identifies a machine as the active target machine

Syntax

TARget <*target*>

Options

target—Name of the target or an IP address on the target

Examples

- target beta
- tar beta

Notes

- You must be logged into a machine using the login command before using the target command.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

---

4. Retrieve your monitor information by using the monitor get command.

Command

MONITOR GET

Description

Identifies a machine as the active monitor machine

Syntax

MONitor GET <*target*>

Options

target—Name of the target or an IP address on the target

Examples

- monitor get beta
- mon get beta

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

5. Initiate failback by using the failback command. If you specified a pre-failback script in your failover configuration, that script will be executed at this time.

Command

FAILBACK

Description

Initiates the failback process for the specified monitor machine

Syntax

FAILBACK <*monitor*> [ON <*target*>] REMONITOR|NOREMONITOR

Options

- *monitor*—Name of the source machine designated as the monitor
- *target*—Name of the target or an IP address on the target
- REMONITOR—Automatically continues monitoring the source machine after failback
- NOREMONITOR—Automatically discontinues monitoring the source machine after failback.

Examples

failback alpha on beta remonitor

Notes

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- The source machine must be online and Double-Take Availability must be running to ensure that the source post-failback script can be started. If the source has not completed its boot process, the command to start the script may be lost and the script will not be initiated.

The source machine must be online and Double-Take Availability must be running to ensure that the source post-failback script can be started. If the source has not completed its boot process, the command to start the script may be lost and the script will not be initiated.

Chapter 13 Configuring server settings

While only a subset of the server settings are available through the Replication Console, all of the Double-Take Availability server settings are accessible through the get and set commands. See Server settings for a complete list of the server settings.

- **Retrieving setting values**—To retrieve the current value of a setting, use the get command. This command will return the value of the specified setting from the specified server.

  Command

  GET

  Description

  Requests the value of a Double-Take Availability program setting from the specified server

  Syntax

  GET <***setting***> [***machine***]

  Options

  - ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
  - ***machine***—Name of the machine

  Examples

  - get AutoRemirror
  - get MoveOrphansDir

  Notes

  - If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
  - Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

- **Updating setting values**—To update the value of a setting, use the set command. This command will modify the value of the specified setting on the specified server.

  Command

  SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Server settings

The following table lists all of the server settings, in decimal value.

ActivationCode

Description—24-character Double-Take Availability activation code

Values—Unique value for each customer

Default—N/A

GUI Setting—Server Properties, Licensing tab, Activation Code

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

GUI Setting—None

Advertisement

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

GUI Setting—Failover Control Center, Monitor Settings, Items to Failover, IP Address (es)

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

GUI Setting—Failover Control Center, Monitor Settings, Failover Trigger, All Monitored IP Addresses Fail

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

GUI Setting—Server Properties, Setup tab, Source Module Startup Options, Automatically Reconnect During Source Initialization

AutoRemirror

Description—Specifies whether to remirror when a source is brought online after an auto-disconnect

Values—0 Do not remirror, 1 Perform a file differences checksum mirror, 2 Perform a full mirror, 3 Perform a file differences mirror, 4 Perform a date comparison mirror and send data only if the source data is newer than the target data.

Default—1

GUI Setting—Server Properties, Setup tab, Source Module Startup Options, Perform Remirror After Auto-Reconnect

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

GUI Setting—None

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

GUI Setting—None

BackupDir

Description—Location on the target of the backup of the replication sets

Values—any valid path

Default—the location where the Double-Take Availability files were installed

GUI Setting—None

CalculateOnConnect

Description—Specifies whether or not the replication set size should be calculated on connection

Values—0 Do not calculate on connection, 1 Calculate on connection

Default—1

GUI Setting—Connection Manager, Mirroring tab, Calculate Replication Set size on connection

CaseSensitiveRepSetQueries

Description—This entry is no longer used.

ChecksumAll

Description—Setting to allow for the difference checksum option on mirror, verify, or restore to ignore the date, time, and size of the file and perform a checksum calculation on all files

Values—0 Checksum using date, time, size comparison, 1 Checksum all files regardless of the date, time, or file size

Default—1

GUI Setting—Server Properties, Source tab, Mirroring or Verify, Block Checksum All Files on a Difference Mirror

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

GUI Setting—None

Notes—This option is only valid if you have this option enabled and use the clean option with the DTCL mirror command.

ClientLog

This setting is no longer used.

ClientLogName

This setting is no longer used.

ConnectionFile

Description—Name of the database file containing connection information

Values—any valid file name

Default—connect.sts

GUI Setting—Server Properties, Database tab, Database Files, Connection

DataPath

Description—The location of the Double-Take Availability file attribute, replication set, connection, and schedule database files

Values—any valid path

Default—the location where the Double-Take Availability files were installed

GUI Setting—Server Properties, Database tab, Database Files, Folder

DefaultProtocol

Description—The default protocol

Values—1 IP protocol

Default—1

GUI Setting—Server Properties, Network tab, Interface, Default Protocol

Notes—TCP/IP is the only protocol currently supported

DirUNetPort

Description—Port used for directed UDP communications

Values—1025 - 65535

Default—1505

GUI Setting—Server Properties, Network tab, Interface, Network, Status Listen Port and Replication Console, File, Options, Network, Status Transmit Port

Notes—If you change this value, the source service must be stopped and restarted to implement the change.

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

GUI Setting—None

EnablePerformanceTracking

Description—This entry will be used in the future.

EnableTaskCmdProcessing

Description—Queues tasks inline with replication data

Values—0 Disable task command processing, 1 Enable task command processing

Default—0

GUI Setting—Server Properties, Setup tab, Setup Options, Enable Task Command Processing

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

GUI Setting—None

ExtensionNumber

Description—Used by the Double-Take Availability 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

GUI Setting—None

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

GUI Setting—Server Properties, Network tab, Heartbeat, Time between Heartbeats

Notes—Vision Solutions 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

GUI Setting—None

HBTTL

Description—Number of seconds without receiving a heartbeat before a remote machine is considered unavailable

Values—0 - 65535

Default—10

GUI Setting—None

HPQueueRatio

Description—Ratio of replication packets to one mirror packet

Values—0 - 65535

Default—5

GUI Setting—Server Properties, Source tab, Queue Ratio, Replication Packets to 1 Mirror Packet

Notes—An HPQueueRatio of 5 indicates 5 replication packets to 1 mirror packet. If you change this value, the source service must be stopped and restarted to implement the change.

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

GUI Setting—Server Properties, Source tab, Replication, Ignore Delete Operations

LoadSourceTarget

Description—Specifies the functionality of the Double-Take

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

GUI Setting—None

Notes—This setting will not take effect until the Double-Take service has been restarted.

LogAllOrphans

Description—Specifies whether orphan files are logged to the Double-Take Availability log on the target

Values—0 Do not log the orphan files to the Double-Take Availability log on the target, 1 Log the orphan files to the Double-Take Availability log on the target

Default—0

GUI Setting—Connection Manager/Restoration Manager, Orphans tab, Log Orphaned Files to Target List

LogDir

Description—The location of the Double-Take Availability messages/alerts, verification, and statistics log files

Values—any valid path

Default—the location where the Double-Take Availability files were installed

GUI Setting—Server Properties, Logging tab, Folder

LogFile

Description—The name of the Double-Take Availability messages/alerts log file

Values—any valid file name

Default—DTLog

GUI Setting—None

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

GUI Setting—None

MaxChecksumBlocks

Description—Specifies the number of checksum values retrieved from the target

Values—any integer

Default—32

GUI Setting—None

MaxConnections

Description—Number of network requests that can be processed simultaneously.

Values—0 - 65535

Default—5

GUI Setting—None

Notes—Vision Solutions 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—1048576

GUI Setting—Server Properties, Logging tab, Messages & Alerts, Maximum Length

MaxNumberofLogFiles

Description—Maximum number of .dtl log files that can exist at one time. When Double-Take Availability creates a new .dtl file, if this number is exceeded, the oldest .dtl file is deleted.

Values—1 - 999

Default—5

GUI Setting—Server Properties, Logging tab, Messages & Alerts, Maximum Files

MaxRemoveOrphansOpSize

Description—Determines whether or not Double-Take Availability will send over multiple remove orphan operations. Double-Take Availability will send over the operations if a directory has more files than this number.

Values—0 - 131072

Default—1000

GUI Setting—None

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

GUI Setting—None

MaxWriteChunkSize

Description—Maximum merged op size (in bytes) used during replication

Values—1 - 131072

Default—65536

GUI Setting—None

MemoryQueueToDiskThreshold

Description—A percentage of QmemoryBufferMax that will trigger queuing to disk.

Values—any valid percentage

Default—100

GUI Setting—None

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

GUI Setting—None

MirrorChunkSize

Description—Block size, in bytes, used in the mirroring process

Values—1 - 1048576

Default—65536

GUI Setting—Server Properties, Source tab, Mirror Queue, Size of Mirror Packets

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

GUI Setting—None

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

GUI Setting—Server Properties, Soruce tab, Mirror Queue, Maximum Pending Mirror Operations

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

GUI Setting—None

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

GUI Setting—Failover Control Center, Monitor Settings, Missed Packets

MoveOrphanedFiles

Description—Specifies if orphaned files are deleted or moved to the directory specified by MoveOrphansDir

Values—1 Move, 0 Delete

Default—0

GUI Setting—Connection/Restoration Manager, Orphans tab, Move/Delete Orphan Files

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 Double-Take Availability files were installed

GUI Setting—Connection/Restoration Manager, Orphans tab, Move Orphaned Files to following location

NetPort

Description—Port connection for TCP communications

Values—1025 - 65535

Default—1500

GUI Setting—Server Properties, Network tab, Interface, Service Listen Port

Notes—If you change this value, the source service must be stopped and restarted to implement the change.

NetworkRetry

Description—Specifies the interval, in seconds, at which Double-Take Availability will attempt to reconnect to the target

Values—any positive number

Default—10

GUI Setting—None

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, Double-Take Availability 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

GUI Setting—None

NodeLockedLicenseKey

Description—24-character activation code for a node-locked license

Values—Unique value for each customer

Default—N/A

GUI Setting—Server Properties, Licensing tab, Additional Codes

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

GUI Setting—None

PingFrequency

Description—Specifies, in seconds, how often a ping is sent to the source from a monitoring target

Values—1 - 65535

Default—5

GUI Setting—Failover Control Center, Monitor Settings, Monitor Interval

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

GUI Setting—Failover Control Center, Monitor Settings, Scripts, Target, Pre-Failback, Delay failback until script completes

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

GUI Setting—Failover Control Center, Monitor Settings, Scripts, Target, Pre-Failover, Delay failover until script completes

QJournalDir

Description—The location where the queue is stored.

Values—any valid path

Default—the location specified during the installation

GUI Setting—Server Properties, Queue tab, Location, Folder

Notes—For best results and reliability, you should select a dedicated, non-boot volume.

QJournalFileSize

Description—The size, in MB, of each queuing transaction log file.

Values—any valid file size, up to 4095 MB

Default—5

GUI Setting—None

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—50

GUI Setting—Server Properties, Queue tab, Memory and Disk Usage, Minimum Free Space

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 Double-Take Availability queuing. When this limit is reached, Double-Take Availability will automatically begin the auto-disconnect process.

Values—dependent on the amount of physical disk space available

Default—Unlimited

GUI Setting—Server Properties, Queue tab, Memory and Disk Usage, Maximum disk space for queue

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, Double-Take Availability 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

GUI Setting—None

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—dependent on the amount of physical memory available; minimum of 32 MB

Default—128 or 512 MB, depending on your operating system

GUI Setting—Server Properties, Queue tab, Memory and Disk Usage, Maximum system memory for queue

QueueSizeAlertThreshold

Description—The percentage of the queue that must be in use to trigger an alert message in the Double-Take Availability log

Values—any valid percentage

Default—50

GUI Setting—Server Properties, Queue tab, Queue Usage Alert Threshold, Alert at following queue usage percentage

RemapLink

Description—Specifies how Double-Take Availability 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, Double-Take Availability will remap the path contained in that link based on the Double-Take Availability target path

Default—1

GUI Setting—None

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

GUI Setting—Connection/Restoration Manager, Orphans tab, Remove All Orphans

RemoveOrphansTime

Description—Specifies the amount of time, in minutes, that must be expired before an orphan file is removed

Values—1 - 131072

Default—60

GUI Setting—Connection/Restoration Manager, Orphans tab, Remove Orphans not modified within the following time period

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

GUI Setting—Failover Control Center, Monitor Settings, Failover Method

RepSetDBName

Description—Name of the database that contains replication set information

Values—any valid file name

Default—DblTake.db

GUI Setting—Server Properties, Database tab, Database Files, Replication Set

RestoreOverwrite

Description—Determines if the restoration process overwrites existing files

Values—0 never overwrite, 1 always overwrite, 2 overwrite if older

Default—2

GUI Setting—Restoration Manager, Servers tab, Overwrite existing files during restore

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

GUI Setting—Restoration Wizard, Restoration Options, Use alternate target files for executables that may be in use

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

GUI Setting—None

ScheduleFile

Description—Name of the database file that contains transmission scheduling information

Values—any valid file name

Default—Schedule.sts

GUI Setting—Server Properties, Database tab, Database Files, Schedule

Notes—If you change the name of the database file, the source service must be stopped and restarted to start logging to the new database file.

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

GUI Setting—None

ShareUpdateInterval

Description—Specifies how often, in minutes, the share file will be sent to the target

Values—1 - 65535

Default—60

GUI Setting—None

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

GUI Setting—None

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

GUI Setting—None

StatsFileName

Description—Default file for logging statistics

Values—any valid file name

Default—statistic.sts

GUI Setting—Server Properties, Logging tab, Statistics, Filename

StatsLoggingOn

Description—Specifies if Double-Take Availability logs statistics at startup

Values—0 Stats logging does not start when Double-Take Availability starts, 1 Stats logging starts when Double-Take Availability starts

Default—1

GUI Setting—Server Properties, Setup tab, Setup Options, Log Statistics Automatically

StatsMaxFileSize

Description—Maximum size, in MB, for the statistic.sts file

Values—limited by available disk space

Default—10485760

GUI Setting—Server Properties, Logging tab, Statistics, Maximum Length

StatsMaxObjects

Description—This entry is no longer used.

StatsPort

Description—Port used by DTStat to gather Double-Take Availability statistics

Values—1025 - 65535

Default—1506

GUI Setting—None

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

GUI Setting—Server Properties, Logging tab, Statistics, Write Interval

SystemMemoryLimit

Description—Set by the Double-Take, 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

GUI Setting—Server Properties, Network tab, TCP Window Size

Notes—This is an operating system buffer, not a Double-Take Availability 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

GUI Setting—None

Notes—If disk caching on the target is disabled either manually or by default, the target system may be slow during a mirror. If so, decreasing 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

GUI Setting—None

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

GUI Setting—Server Properties, Target tab, Files, Target Mirror Capacity High Percentage

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

GUI Setting—Server Properties, Target tab, Files, Target Mirror Capacity Low Percentage

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

GUI Setting—Server Properties, Target tab, Queues, Retry Delay for Incomplete Operations

TGThreadCount

Description—This setting is no longer used

TGWriteCache

Description—Specifies whether or not Double-Take Availability uses the intermediate cache

Values—0 Bypass the intermediate cache and write directly to disk, 1 Do not bypass the intermediate cache

Default—1

GUI Setting—None

UNetPort

Description—Port connection for UDP communications

Values—1025 - 65535

Default—1500

GUI Setting—Server Properties, Network tab, Interface, Heartbeat Transmit Port and Replication Console, File, Options, Configuration tab, Automatic Service Discovery, Heartbeat Advertisement, Port

Notes—If you change this value, the source service must be stopped and restarted to implement the change

UpdateInterval

Description—Interval, in seconds, at which the Failover Control Center updates the monitored machines display

Values—1 - 9999

Default—1

GUI Setting—Failover Control Center, Settings, Refresh Rate

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

GUI Setting—Failover Control Center, Monitor Settings, Manual Intervention

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

GUI Setting—Failover Control Center, Monitor Settings, Use .SHR Share Mapping File

VerifyLogAppend

Description—Specifies whether the DTVerify.log file will be appended to or overwritten

Values—0 Overwrite 1 Append

Default—1

GUI Setting—Server Properties, Logging tab, Verification, Append

VerifyLogLimit

Description—Maximum size of the DTVerify.log file in bytes

Values—limited by available hard drive space, up to 4 GB

Default—1048576

GUI Setting—Server Properties, Logging tab, Verification, Maximum Length

VerifyLogName

Description—Name of the verification log file

Values—any valid file name

Default—DTVerify.log

GUI Setting—Server Properties, Logging tab, Verification, Filename

VerifyRetryInterval

Description—The time, in minutes, between when one verification fails and a retry is scheduled to begin.

Values—any valid number

Default—3

GUI Setting—None

VerifyRetryLimit

Description—The number of time a verification will be retried.

Values—any valid number

Default—5

GUI Setting—None

WarningPings

Description—This entry is no longer used.

Chapter 14 Scripting examples

Below are links to sample Double-Take Availability scripts. Most of the sample scripts must be modified. They cannot be used as-is. Modify them to fit your environment. If you need basic assistance with script modifications, contact Technical Support. Assistance with advanced scripting will be referred to Professional Services.

Creating and connecting a replication set

The following script will start a Double-Take Availability connection by creating a replication set called DataFiles on the source alpha and connecting it to the target beta.

```
source alpha;
repset create DataFiles;
repset rule add /files include, recursive;
repset rule add /files/users exclude;
repset rule add /data include, recursive;
repset save;
connect DataFiles to beta map exact;
```

Creating and connecting a replication set with failover monitoring

The following script will start a Double-Take Availability connection by creating a replication set called DataFiles on the source alpha and connecting it to the target beta. This script will also configure and start failover monitoring.

```
source alpha;
repset create DataFiles;
repset rule add /files include, recursive;
repset rule add /files/users exclude;
repset rule add /data include, recursive;
repset save;
connect DataFiles to beta map exact;
target beta;
monitor create alpha;
monitor move "205.31.4.193" to nic 3 interval 5 timeout 25;
monitor start alpha;
```

Restoring a replication set

The following script will restore the data in the DataFiles replication set from the target machine beta to the original source machine.

```
source alpha;
restore DataFiles to beta nooverwritenewer, usertargetdb;
```

Using variables to create and connect a replication set and run verification

The following script uses variables to identify the source, target, and replication set. These variables are then used in the scripting commands. The $connectionID variable will contain the connection ID for the connection established. This variable can then be used to establish a verification schedule.

```
$TheTarget = "beta";
$TheSource = "alpha";
$TheRepset = "DataFiles";
source $TheSource;
repset create $TheRepset;
repset rule add /files include, recursive;
repset rule add /files\users exclude;
repset rule add /data include, recursive;
repset save;
$ConnectionID = connect $TheRepset to $TheTarget map exact;
verify $ConnectionID sync, newer, checksum, every 12 hr;
```

Controlling a mirror using flow control

The following script uses the IF conditional, FOR loop, and WHILE loop commands. In the following examples the FOR loop will start a mirror for all connections between 1 and 10. The IF conditional will return the error command "mirror failed to start" if a value of 0 is not obtained. The WHILE loop will wait for a mirror to end and disconnect as long as the returned value is less than 10. The IF conditional will return the error message "failed to disconnect" if a value of 0 is not obtained.

```
# Start mirror for all connections 1-10. #
# Notify user of any errors. #
SOURCE alpha;
FOR $x = 1 TO 10 DO
    $ret = MIRROR START $x;
    IF $ret != 0 THEN
        WRITE "Mirror failed to start";
        WRITE $x;
        WRITE $ret;
    END
END

# Wait for mirror to end and disconnect all connections 1-10. #
# Notify user of any errors. #
SOURCE alpha;
$x = 1;
WHILE $x <= 10 DO
    waitonmirror $x;
    $ret = disconnect $X;
    IF $ret != 0 THEN
        WRITE "Failed to disconnect";
        WRITE $x;
        WRITE $ret;
    END
    $x = $x + 1;
END
```

Using variables to pause a target

The following script uses variables to identify the target and credentials to login to that target. These variables are then used in the scripting commands to pause the target.

```
$TheTarget = "beta";
$TheUser = "admin";
$ThePassword = "password";
login $TheTarget $TheUser $ThePassword;
target $TheTarget;
pausetarget $TheTarget;
```

Using variables to resume a target

The following script uses variables to identify the target and credentials to login to that target. These variables are then used in the scripting commands to resume the target.

```
$TheTarget = "beta";
$TheUser = "admin";
$ThePassword = "password";
login $TheTarget $TheUser $ThePassword;
target $TheTarget;
resumetarget $TheTarget;
```

Creating a backup of the target by rotating connections

The following two scripts create multiple copies of your data on the target, but only one copy is active at a time. This allows you the time and availability to backup the inactive copy of data. This is especially helpful when you have applications with interdependent files.

Backups occur sequentially from the first file to the last file. Therefore, when you are using applications that have interdependent files, such as a database application whose database and log files must be synchronized, Double-Take Availability cannot be actively updating files on the target while the backup is running, or there becomes an opportunity for interdependent files to become mismatched, causing a corrupt application on the backup. For example, suppose the following scenario occurs on a target machine that contains a replica of a database.

1. The backup process which is currently running sequentially through the files on the target, reaches the database log file and starts writing the log file to tape. At the same time, Double-Take Availability receives additional updates to the database. The database file on the target is updated, but since the log file is in use by the backup, the associated log operation is placed on the Double-Take Availability queue on the target.
2. When the log file is finished being backed up, the backup process continues with the next sequential file, which is not necessarily the database that corresponds with that log file.
3. Since the log file is no longer in use, Double-Take Availability applies the log operation from the Double-Take Availability queue.
4. Eventually, the backup process reaches the database file and writes it to tape.

At this point, the database file on the tape backup contains an extra update that the log file on the tape backup does not. The two files do not correspond, so the database on the tape backup will not be time consistent.

The two scripts identify an existing connection, disconnect it, establish a new connection, and initiate a difference mirror. The connections in the two scripts transmit the same data to two different locations, allowing you to backup the idle files on the inactive connection.

```
# Script 1 #
$TheSource = "alpha";
$TheTarget = "beta";
$TheUser = "root";
$ThePassword = "password";
$TheRepSet = "DataFiles";
login $TheSource $TheUser $ThePassword;
login $TheTarget $TheUser $ThePassword;
source $TheSource;
$FirstConnection = conid $TheRepSet to $TheTarget map base /first_location;
disconnect $FirstConnection;
$SecondConnection = connect $TheRepSet to $TheTarget map base /second_location, nomirror;
mirror start $SecondConnection different, checksum;
```

```
# Script 2 #
$TheSource = "alpha";
$TheTarget = "beta";
$TheUser = "root";
$ThePassword = "password";
$TheRepSet = "DataFiles";
login $TheSource $TheUser $ThePassword;
login $TheTarget $TheUser $ThePassword;
source $TheSource;
$SecondConnection = conid $TheRepSet to $TheTarget map base /second_location;
disconnect $SecondConnection;
$FirstConnection = connect $TheRepSet to $TheTarget map base /first_location, nomirror;
mirror start $FirstConnection different, checksum;
```

Chapter 15 Scripting commands

Each scripting command includes the following.

- Command name
- Description of the command
- Exact syntax for using the command
- Options, if any
- Examples, if necessary
- Notes, if any

For details on the conventions used for the command syntax, see Command syntax conventions.

- Help
- Limit Bandwidth
- Load Source
- Load Target
- Login
- Logout
- Mirror Pause
- Mirror Resume
- Mirror Start
- Mirror Stop
- Monitor Clear
- Monitor Create
- Monitor Delete
- Monitor Display
- Monitor Get
- Monitor List
- Monitor Move
- Monitor Option
- Monitor Remove
- Monitor Script Add
- Monitor Script Remove
- Monitor Start
- Monitor Stop
- Monitor Use
- NIC List
- Orphans Preview
- Orphans Start
- Orphans Stop
- Pause Target
- Ping
- Queue Task
- Quit
- Replication Start
- Replication Stop
- Repset Calculate
- Repset Create
- Repset Delete
- Repset Display
- Repset List

- Repset Resync
- Repset Rule Add
- Repset Rule Remove
- Repset Save
- Repset Use
- Restore
- Resume Target
- Schedule Clear
- Schedule Disable
- Schedule Enable
- Schedule End
- Schedule Start
- Schedule Window
- Set
- Set Local
- Shutdown
- Source
- StatsLog Start
- StatsLog Status
- StatsLog Stop
- Status
- Target
- Test Connections
- Time Now
- Transmission Pause
- Transmission Resume
- Transmission Start
- Transmission Stop
- Unload Source
- Unload Target
- Verify
- Version
- Wait
- Wait on Mirror
- Wait on Restore
- Wait on Target
- Write

Compression Disable

Command

COMPRESSION DISABLE

Description

Disables compression

Syntax

COMPRESSion DISABLE <*con_id*>

Options

con_id—Connection ID assigned to the source/target connection

Examples

compression disable 1

Compression Enable

Command

COMPRESSION ENABLE

Description

Enables compression

Syntax

COMPRESSion ENABLE <***con_id***>

Options

con_id—Connection ID assigned to the source/target connection

Examples

compression enable 1

Compression List

Command

COMPRESSION LIST

Description

Identifies the compression level and if compression is enabled

Syntax

COMPRESSion LIST

Compression Set

Command

COMPRESSION SET

Description

Sets the compression level

Syntax

COMPRESSion SET <***con_id***> <***level***>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- ***level***—Any whole number from 1 to 3 where 1 is minimum compression and 3 is maximum compression

Examples

compression set 1 2

Notes

This command only sets the level of compression. It does not initiate compression.

ConID

Command

CONID

Description

- Assigns the value of a connection ID to a variable
- Lists the target and replication set for all connection IDs for a source

Syntax

- <***variable***>=CONID <***repset***> TO <***target***>
- CONID LIST [***source***]

Options

- ***variable***—Name of the variable that you want to use to store the connection ID
- ***repset***—Replication set that was used to establish the connection
- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source

Examples

- $con_id=conid DataFiles to beta
- $ConnectionNumber=conid UserData to beta
- conid list alpha conid list alpha

Notes

- The conid list and variable=conid commands are two separate commands.
- Make sure there are no spaces before or after the equal sign when using the variable=conid command.
- If no machine name is specified in the conid list command, the active source will be used.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Connect

Command

CONNECT

Description

Establishes a connection between a replication set and a target machine

Syntax

CONnect <*repset*> TO <*target*> MAP EXACT | MAP BASE <*target_path*> | MAP <*source_path*> TO <*target_path*> [,*...*] [MIRror | NOMIRror] [, REPlicate | NOREPlicate] [, MONitor | NOMONitor] [, ORPHANS | NOORPHANS] [, COMPRESSion <*level*>] [CLEARRESTOREREQUIRED] [ROUTE=<*target_IP*>]

Options

- *repset*—Name of the replication set
- *target*—Name of the target or an IP address on the target
- MAP EXACT—Specifies that the replication set data will be sent to the same logical volume on the target (/data and /files is copied to /data and /files, respectively)
- MAP BASE *target_path*—Substitute a complete path, including the volume, for target_path and the data will be replicated to target_path\SrcVolName on the target machine
- MAP *source_path* TO *target_path*—Custom location that specifies each directory on the source and where that data will be copied to on the target machine
- *...*—Indicates that the source_path TO target_path option can be used more than once for each source directory in the replication set
- MIRror—Automatically initiates a mirror when the connection is established
- NOMIRror—Does not initiate a mirror when the connection is established
- REPlicate—Automatically initiates replication when the connection is established
- NOREPlicate—Does not initiate replication when the connection is established
- MONitor—Specifies that the target is going to monitor the specified source machine for failover. The source machine must have already been defined as a monitor machine.
- NOMONitor—Specifies that the target is not going to monitor the source machine for failover
- ORPHANS—Moves or deletes orphan files on the target. Orphan files will not be immediately processed when you create the connection. This setting is for processes that are run after a connection is already established (remirror, auto-remirror, verification, and so on).
- NOORPHANS—Does not move or delete orphan files on the target
- COMPRESSion *level*—Enables compression of data being sent to the target at the level specified. Valid levels are 1 (minimum), 2 (moderate), or 3 (maximum).

- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the connection
- ROUTE=*target_ip*—Specifies the IP address on the target that will receive the incoming Double-Take Availability data

Examples

- connect DataFiles to beta map exact
- connect UserData to beta map base d:\UserData\
- connect UserFiles to beta map exact orphans, compression 2
- con DataFiles to beta map exact mir, compress 1

Notes

- The default settings for this command are mirror, replicate, nomonitor, and noorphans.
- The options (no)mirror, (no)replicate, (no)monitor, (no)orphans, and compression can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- If you are establishing a connection within a NAT or firewall environment, you will need to specify the target using the IP address and port number (separated by a colon) of the router. For example, connect DataFiles to 10.10.1.57:1105 map exact.
- When scripting with this command, if a successful connection is established, the command will return a positive number, which is the connection ID assigned to that connection.

Connect TDU

Command

CONNECT TDU

Description

Establishes a simulation connection between a replication set and the Throughput Diagnostics Utility. This connection imitate a normal connection without transmitting any data across the network.

Syntax

CONNECT <***repset***> TO TDU <***filename***> [***connection_flags***]

Options

- ***repset***—Name of the replication set
- ***filename***—Name of the file to store the connection statistics generated by the TDU
- ***connection_flags***—The same options available in the standard connect command

Examples

- connect DataFiles to TDU
- connect UserData to TDU map /userdata to /backup/userdata

Notes

- The statistic file that the TDU creates can be viewed using DTStat. By default, the file is called statistic.sts. To view the statistic file, type DTStat -f <filename>.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

Device List

Command

DEVICE LIST

Description

Displays the block devices available on a machine

Syntax

DEVICE LIST <*filter*> [ON <*machine*>]

Options

- *filter*—Use one of the following options for the device filter
- ALL—Lists all unique devices on the specified machine. If there is no machine specified, the source, if designated, will be tried first. The target, if designated, will be tried second.
- OKSOURCE—List all devices on the specified source that are replication capable. If a target is specified, an error will be returned.
- OKTARGET—List all devices on the specified target that are capable of being used as a target path. If a source is specified, an error will be returned.
- *machine*—Name of the machine

Examples

device list all on alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Disconnect

Command

DISCONNECT

Description

Disconnects a specified source/target connection for the currently selected source

Syntax

DISCONnect <***con_id*** | *>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Examples

- disconnect 1
- disconnect *

Email Add

Command

EMAIL ADD

Description

Adds an e-mail address to the e-mail notification distribution list

Syntax

EMAIL ADD <***email_address***>

Options

email_address—A valid e-mail address enclosed in quotation marks

Examples

email add "root@domain.com"

Notes

- You can repeat this command to add additional addresses to the distribution list.
- You must have an active source specified for any e-mail command to work properly.

Email Disable

Command

EMAIL DISABLE

Description

Disables e-mail notification

Syntax

EMAIL DISABLE

Notes

You must have an active source specified for any e-mail command to work properly.

Email Enable

Command

EMAIL ENABLE

Description

Enables e-mail notification

Syntax

EMAIL ENABLE

Notes

You must have an active source specified for any e-mail command to work properly.

Email Filter

Command

EMAIL FILTER

Description

Displays the filter configuration from the email setfilterinclude command

Syntax

EMAIL FILTER

Notes

You must have an active source specified for any e-mail command to work properly

Email From Address

Command

EMAIL FROMADDRESS

Description

Specifies the e-mail address that will appear in the From field of Double-Take Availability generated e-mail messages

Syntax

EMAIL FROMADDRESS <***email_address***>

Options

email_address—A valid e-mail address enclosed in quotation marks

Examples

email fromaddress "root@domain.com"

Notes

You must have an active source specified for any e-mail command to work properly.

Email Get Email Config

Command

EMAIL GET EMAILCONFIG

Description

Displays e-mail notification configuration information

Syntax

EMAIL GET EMAILCONFIG

Notes

You must have an active source specified for any e-mail command to work properly.

Email Mail Server

Command

EMAIL MAILSERVER

Description

Specifies the name of the SMTP mail server for e-mail notification

Syntax

EMAIL MAILSERVER <***server_name*** | ***ip_address***> [***username***][***password***]

Options

- ***server_name***—Name of the SMTP mail server
- ***ip_address***—IP address of the SMTP mail server
- ***username***—User ID required for SMTP server authentication
- ***password***—Password associated with the specified user name

Examples

email mailserver xchng root *******

Notes

- Your SMTP server must support the LOGIN authentication to supply a username and password. If your server supports a different authentication method or does not support authentication, you may need to add the Double-Take Availability server as an authorized host for relaying e-mail messages. This option is not necessary if you are sending exclusively to e-mail addresses that the SMTP server is responsible for.
- You must have an active source specified for any e-mail command to work properly.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Email Remove

Command

EMAIL REMOVE

Description

Removes an e-mail address from the e-mail notification distribution list

Syntax

EMAIL REMOVE <***email_address***>

Options

email_address—An e-mail address, listed in the current distribution list, enclosed in quotation marks

Examples

email remove "root@domain.com"

Notes

You must have an active source specified for any e-mail command to work properly.

Email Set Filter Include

Command

EMAIL SETFILTERINCLUDE

Description

Specifies which Event Viewer messages are sent via e-mail

Syntax

EMAIL SETFILTERINCLUDE [INFO, WARNING, ERROR] [EXCLUDEIDS "<*ID1*,*ID2*-*ID4*,*...*>"]

Options

- INFO—Information messages will be sent via e-mail
- WARNING—Warning messages will be sent via e-mail
- ERROR—Error messages will be sent via e-mail
- EXCLUDEIDS *ID1*,*ID2*-*ID4*,*...*—A comma separated list of IDs or ID ranges. A space should separate the EXCLUDEIDS switch from the list but within the list, there should be no spaces. Ranges are specified with a begin and end number and separated with a dash (-). The entire list should be enclose in quotation marks.

Examples

- email setfilterinclude warning, error excludeids "4007, 4012, 4015"
- email setfilterinclude excludeids "4000-4010, 5100"

Notes

- The default settings for this command are info and warning. No IDs are excluded, by default.
- The options info, warning, and error can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- When changing the filter options, e-mail notification will automatically be stopped and restarted. If a failure occurs while stopping or restarting e-mail notification, Double-Take Availability will output a related error message
- You must have an active source specified for any e-mail command to work properly.

Email Subject

Command

EMAIL SUBJECT

Description

Specifies if additional text will be displayed in the subject of the e-mail message

Syntax

EMAIL SUBJECT [PREFIX <*prefix*> | NOPREFIX] [DESCRIPTION | NODESCRIPTION]

Options

- PREFIX *prefix*—Text which will be inserted at the front of the subject line for each Double-Take Availability generated e-mail message. This will help distinguish the Double-Take Availability messages from other messages.
- NOPREFIX—No prefix will be inserted at the front of the subject line for each Double-Take Availability generated e-mail message
- DESCRIPTION—Append the message description to the end of the subject line
- NODESCRIPTION—Do not append the message description to the end of the subject line

Examples

- email subject prefix "Double-Take Availability Notification" description
- email subject prefix "Double-Take Availability Notification" nodescription

Notes

- Prefix phrases that contain non-alphnumeric characters must be enclosed in quotation marks.
- The entire subject line is limited to 150 characters.
- You must have an active source specified for any e-mail command to work properly.

Email Test

Command

EMAIL TEST

Description

Sends a test message to demonstrate e-mail notification

Syntax

EMAIL TEST [SENDTO <*email_address*[,*email_address*,...]>] [TEXT <*message_text*>]

Options

- *email_address*—Specifies the e-mail address(es) to send the test message to if you do not want to use the e-mail addresses configured with the EMAIL ADD command. This is a comma separated list of addresses. The entire list should be enclosed in quotation marks. A space should separate the SENDTO switch from the list of addresses but within the list, there should be no spaces.
- *message_text*—Text to be displayed in the body of the test e-mail message. The test message is limited to 1024 characters and must be enclosed in quotation marks.

Examples

- email test sendto "admin@domain.com, suppport@domain.com"
- email test sendto "admin@domain.com" text "This is a test message."

Notes

- The default setting for this command are to use the addresses configured with the email add command. and to appends the word Test to the prefix defined in the email subject prefix command.
- You must have an active source specified for any e-mail command to work properly.

Environment

Command

ENVIRONMENT

Description

Displays a list of all Double-Take Availability machines available to the specified machine. Each machine is identified by machine name, IP addresses and whether or not the source and/or target modules are loaded. If no machine is specified, the information is provided for the machine currently specified as the source.

Syntax

ENVironment [***machine***]

Options

machine—Name of the machine to poll for environment information

Examples

- environment alpha
- env alpha

Exit

Command

EXIT

Description

Exits the Command Line Interactive client

Syntax

EXIT

Failback

Command

FAILBACK

Description

Initiates the failback process for the specified monitor machine

Syntax

FAILBACK <*monitor*> [ON <*target*>] REMONITOR|NOREMONITOR

Options

- *monitor*—Name of the source machine designated as the monitor
- *target*—Name of the target or an IP address on the target
- REMONITOR—Automatically continues monitoring the source machine after failback
- NOREMONITOR—Automatically discontinues monitoring the source machine after failback.

Examples

failback alpha on beta remonitor

Notes

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- The source machine must be online and Double-Take Availability must be running to ensure that the source post-failback script can be started. If the source has not completed its boot process, the command to start the script may be lost and the script will not be initiated.

Failover

Command

FAILOVER

Description

Manually initiates the failover process for the specified monitor machine

Syntax

FAILOVER <*monitor*> [ON <*target*>] [APPLY | DISCARD | REVERT]

Options

- *monitor*—Name of the source machine designated as the monitor
- *target*—Name of the target or an IP address on the target
- APPLY—Apply the data that is in the target queue before beginning failover
- DISCARD—Discard the data that is in the target queue and begin failover immediately
- REVERT—Revert the target to the last known good Double-Take Availability state

Examples

failover alpha on beta apply

Notes

If failover is configured for manual intervention, you must open the Failover Control Center to access the intervention prompt.

Get

Command

GET

Description

Requests the value of a Double-Take Availability program setting from the specified server

Syntax

GET <***setting***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***machine***—Name of the machine

Examples

- get AutoRemirror
- get MoveOrphansDir

Notes

- If you do not specify a machine name, the value from the current source will be returned. If you have not identified an active source, no data will be returned.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

GetEnvStr

Command

GETENVSTR

Description

Retrieves an operating system environment variable and stores the value in a Double-Take Availability variable

Syntax

GETENVSTR <*env_variable*> $<*variable_name*>

Options

- *env_variable*—Name of the operating system environment variable that you want to store in the user defined variable
- *variable_name*—Name of the variable you want to create. This variable will store the operating system environment variable specified.

Examples

getenvstr computername $server

Notes

It is not necessary for either the environment or Double-Take Availability variable to exist when using this command. A non-existent environment variable will store a null string in the Double-Take Availability variable.

Get Local

Command

GETLOCAL

Description

Requests the value of a Double-Take Availability program setting from the local machine

Syntax

GETLOCAL <***setting***>

Options

setting—See Server settings for a complete list of the Double-Take Availability program settings

Examples

- getlocal AutoRemirror
- getlocal MoveOrphansDir

Help

Command

HELP

Description

Displays the DTCL commands and their syntax

Syntax

HELP

Notes

- Press any key to scroll through the list of commands.
- Press q to exit the help function.
- You can also type dtcl help from the directory where the Double-Take Availability program files are installed to display the DTCL commands and their syntax.

Limit Bandwidth

Command

LIMIT BANDWIDTH

Description

Sets a fixed bandwidth limitation for transmitting data from the source to the target

Syntax

LIMIT BANDWIDTH <***bytes***>, <***seconds***> TO <***target***>

Options

- ***bytes***—Number of bytes to be transmitted
- ***seconds***—Maximum number of seconds to wait before transmitting again
- ***target***—Name of the target or an IP address on the target.

Examples

limit bandwidth 19300, 5 to beta

Notes

- This command transmits in bursts, not bytes per seconds. The time identifies how long to wait before transmitting again. For example, if 5 seconds are specified and it only takes 2 seconds to send the specified bytes, Double-Take Availability will wait an additional 3 seconds before transmitting again.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Load Source

Command

LOAD SOURCE

Description

Loads the Double-Take Availability source module

Syntax

LOAD SOURCE <*machine*>

Options

machine—Name of the machine

Examples

load source alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters should be enclosed in quotation marks.

Load Target

Command

LOAD TARGET

Description

Loads the Double-Take Availability target module

Syntax

LOAD TARGET <*machine*>

Options

machine—Name of the machine

Examples

load target beta

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters should be enclosed in quotation marks.

Login

Command

LOGIN

Description

Log on to a Double-Take Availability machine

Syntax

LOGIN <***machine***> <***username***> <***password***>

Options

- ***machine***—Name of the machine
- ***username***—Name of the user. The username is limited to 100 characters.
- ***password***—Password associated with the user name. The password is limited to 100 characters.

Examples

login alpha root ******

Notes

- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- The password cannot be a Double-Take Availability keyword. These are any DTCL command (source, target, and so on.) or any DTCL shortcut command (env, mon, rep, and so on).
- When scripting with this command, it will return one of three positive numbers: 0 (no access granted), 1 (monitor access granted), or 2 (full access granted).

Logout

Command

LOGOUT

Description

Logs off of a Double-Take Availability machine

Syntax

LOGOUT <*machine*>

Options

machine—Name of the machine

Examples

logout alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Mirror Pause

Command

MIRROR PAUSE

Description

Pauses a mirror that is in progress

Syntax

MIRror PAUSE <*con_id* | *>

Options

- *con_id*—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Notes

- mirror pause 1
- mir pause *

Mirror Resume

Command

MIRROR RESUME

Description

Resumes a paused mirror

Syntax

MIRror RESUME <*con_id* | *>

Options

- *con_id*—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Notes

- mirror resume 1
- mir resume *

Mirror Start

Command

MIRROR START

Description

Initiates the mirror process

Syntax

MIRror START <*con_id*> [DIFFERENT [,NEWER] ,CHECKSUM | NOCHECKSUM] [ORPHANS |NOORPHANS] [CALCulate | NOCALCulate] [CLEARRESTOREREQUIRED]

Options

- *con_id*—Connection ID assigned to the source/target connection
- DIFFERENT—Mirrors only those files that are different based on the file date, time, and/or size
- NEWER—Mirrors only those files that are newer on the source than on the target
- CHECKSUM—Mirrors only those blocks that are different based on block checksum comparisons
- NOCHECKSUM—Does not perform a checksum comparison when mirroring files
- ORPHANS—Moves or deletes orphan files on the target
- NOORPHANS—Does not move or delete orphan files on the target
- CALCulate—Calculate the size of the replication set prior to mirroring
- NOCALCulate—Does not calculate the size of the replication set prior to mirroring
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the mirror

Examples

- mirror start 1 different, newer
- mir start 2 different, checksum orphans calc

Notes

The default settings for this command are noorphans and calculate.

Mirror Stop

Command

MIRROR STOP

Description

Stops a mirror

Syntax

MIRror STOP <***con_id*** | *>

Options

- ***con_id***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Examples

- mirror stop 1
- mir stop *

Monitor Clear

Command

MONITOR CLEAR

Description

Clears all of the failover configuration and monitoring parameters for the specified monitor machine

Syntax

MONitor CLEAR [***monitor***]

Options

monitor—Name of the source machine designated as the monitor

Examples

- monitor clear alpha
- mon clear alpha

Notes

- If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Create

Command

MONITOR CREATE

Description

Establishes a source as a failover monitor. This is the machine that will be monitored by a target in case it should experience a failure.

Syntax

MONitor CREATE <***source***>

Options

source—Name of the source or an IP address on the source

Examples

- monitor create alpha
- mon create alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Delete

Command

MONITOR DELETE

Description

Deletes the specified failover monitor and all of its parameters

Syntax

MONitor DELete <***monitor***>

Options

monitor—Name of the source machine designated as the monitor

Examples

- monitor delete alpha
- mon del alpha

Notes

- In order to successfully delete a monitor, the monitor must not be running on the server. Use the monitor stop command to ensure the monitor is not running.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Display

Command

MONITOR DISPLAY

Description

Displays the monitoring and failover configuration settings for the specified monitor machine

Syntax

MONitor DISPlay <***monitor***>

Options

monitor—Name of the source machine designated as the monitor

Examples

- monitor display alpha
- mon disp alpha

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Depending on your sequence of commands, you may need to use the monitor get command to specify an active monitor before using monitor display.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Get

Command

MONITOR GET

Description

Identifies a machine as the active monitor machine

Syntax

MONitor GET <*target*>

Options

target—Name of the target or an IP address on the target

Examples

- monitor get beta
- mon get beta

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor List

Command

MONITOR LIST

Description

Displays a list of all failover monitor machines

Syntax

MONitor LIST

Options

- monitor list
- mon list

Notes

You must use the monitor get command to specify an active monitor before using monitor list.

Monitor Move

Command

MONITOR MOVE

Description

Designates the IP address that will be failed over to the specified target NIC

Syntax

MONitor MOVE <***IP_address***> TO NIC <***target_NIC***> INTERVAL <***interval***> TIMEOUT <***timeout***> | <NOTEST> [***monitor***]

Options

- ***IP_address***—The IP address which should be moved during failover
- ***target_NIC***—The integer value of the target NIC obtained from the niclist command
- INTERVAL ***interval***—The frequency, in seconds, of the monitor requests sent to the source machine to see if it is online and active
- TIMEOUT ***timeout***—The number of seconds before failover will occur. This number is reset to its maximum each time the source sends a response to the monitor request.
- NOTEST—Allows you to failover an IP address without sending monitor requests or expecting responses from the source. This option should only be used if you are monitoring multiple IP addresses but do not want to send monitor requests to each address.
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor move 205.31.2.57 to nic 1 interval 5 timeout 25
- monitor move 205.31.2.68 to nic 2 notest

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Option

Command

MONITOR OPTION

Description

Configures the settings to determine how failover will be performed

Syntax

MONitor OPTION [, MOVEADDRESSES | NOMOVEADDRESSES] [, FAILONE | FAILALL] [, FODELAY | NOFODELAY] [, FBDELAY | NOFBDELAY] [, APPLY | DISCARD | REVERT] [, INTERVENTION | NOINTERVENTION] [***monitor***]

Options

- MOVEADDRESSES—Moves the IP address(es) during failover
- NOMOVEADDRESSES—Does not move the IP address(es) during failover
- FAILONE—When multiple IP addresses exist on a monitor machine, only the failed address is failed over to the target machine
- FAILALL—When multiple IP addresses exist on a monitor machine, all of the addresses will fail over to the target machine even if only one address fails
- FODELAY—Guarantees that the pre-failover script has completed before failing over
- NOFODELAY—Does not guarantee that the pre-failbover script has completed before failing over
- FBDELAY—Guarantees that the pre-failback script has completed before failing back
- NOFBDELAY—Does not guarantee that the pre-failback script has completed before failing back
- APPLY—When failover is triggered, apply the data that is in the target queue before beginning failover
- DISCARD—When failover is triggered, discard the data that is in the target queue and begin failover immediately
- REVERT—When failover is triggered, revert the target to the last known good Double-Take Availability state
- INTERVENTION—Specifies that network administrator intervention is required before failover begins
- NOINTERVENTION—Specifies that network administrator intervention is not required before failover begins
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor option alpha
- mon option alpha
- monitor option failone, nointervention

Notes

- The default settings are moveaddress, failall, fodelay, fbdelay, apply, and intervention.
- The options can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Remove

Command

MONITOR REMOVE

Description

Removes an IP address that is currently being monitored

Syntax

MONitor REMove <***IP_address***> [***monitor***]

Options

- ***IP_address***—The currently monitored IP address that should be removed
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor remove 205.31.2.57 alpha
- mon rem 205.31.2.68

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Script Add

Command

MONITOR SCRIPT ADD

Description

Specifies the scripts that should be run during the failover and failback processes

Syntax

MONitor SCRIPT ADD <***type***> <***script_name***> [ARGS=<***arguments***>] [***monitor***]

Options

- ***type***—Any of the following script types
- PREFAILOVER—The file is a pre-failover script to be run on the target before failover
- POSTFAILOVER—The file is a post-failover script to be run on the target after failover
- PREFAILBACK—The file is a pre-failback script to be run on the target before failback
- POSTFAILBACK—The file is a post-failback script to be run on the target after failback
- SRCPOSTFAILBACK—The file is a post-failback script to be run on the source after failback
- ***script_name***—Full path and name of the script file
- ***arguments***—Comma-separated list of valid arguments required to execute the script
- ***monitor***—Name of the source machine designated as the monitor

Examples

- monitor script add prefailback "/user/shared/prefailback"
- mon script add postfailback "/user/shared/postfailback"

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Script Remove

Command

MONITOR SCRIPT REMOVE

Description

Specifies the scripts that should not be run during the failover and failback processes

Syntax

MONitor SCRIPT REMove <*type*> [*monitor*]

Options

- *type*—Any of the following script types
- PREFAILOVER—The file is a pre-failover script to be run on the target before failover
- POSTFAILOVER—The file is a post-failover script to be run on the target after failover
- PREFAILBACK—The file is a pre-failback script to be run on the target before failback
- POSTFAILBACK—The file is a post-failback script to be run on the target after failback
- SRCPOSTFAILBACK—The file is a post-failback script to be run on the source after failback
- *monitor*—Name of the source machine designated as the monitor

Examples

- monitor script remove prefailback
- mon script rem postfailover

Notes

- If you do not specify a monitor, the current source designated as the monitor will be used. If you have not identified a monitor, you will receive an error message stating that a monitor has not been selected.
- Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Start

Command

MONITOR START

Description

Initiates failover monitoring

Syntax

MONitor START <***monitor***> [ON <***target***>]

Options

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target

Examples

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target

Notes

Option names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Stop

Command

MONITOR STOP

Description

Stops monitoring the source machine for failure

Syntax

MONitor STOP <***monitor***> [ON <***target***>]

Options

- ***monitor***—Name of the source machine designated as the monitor
- ***target***—Name of the target or an IP address on the target

Examples

- monitor stop alpha on beta
- mon stop alpha

Notes

Option names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Monitor Use

Command

MONITOR USE

Description

Specifies the source machine designated as the monitor that will be used in subsequent monitor commands

Syntax

MONitor USE <***monitor***>

Options

monitor—Name of the source machine designated as the monitor .

Examples

- monitor use alpha
- mon use alpha

Notes

Monitor names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

NIC List

Command

NICLIST

Description

Displays the NICs available on the specified target machine. Each NIC is assigned an integer value and this value is used in the monitor move command.

Syntax

NICLIST [***target***]

Options

target—Name of the target or an IP address on the target

Examples

niclist beta

Notes

- If you do not specify a machine name, the value from the current target will be returned. If you have not identified a target, no data will be returned.
- If you have not logged into the target machine, no data will be displayed.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Orphans Preview

Command

ORPHANS PREVIEW

Description

Previews which files are orphan files on the target

Syntax

ORPHANS PREVIEW ***con_id***

Options

con_id—Connection ID assigned to the source/target connection

Examples

orphans preview 1

Orphans Start

Command

ORPHANS START

Description

Manual operation to remove any orphan files on the target

Syntax

ORPHANS START ***con_id*** [CLEARRESTOREREQUIRED]

Options

- ***con_id***—Connection ID assigned to the source/target connection
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the orphan operation

Examples

orphans start 1

Orphans Stop

Command

ORPHANS STOP

Description

Stops the process to remove orphan files on the target

Syntax

ORPHANS STOP ***con_id***

Options

con_id—Connection ID assigned to the source/target connection

Examples

orphans stop 1

Pause Target

Command

PAUSE TARGET

Description

Allows you to pause the execution of Double-Take Availability operations on the target

Syntax

PAUSETARGET <***target***> [FROM <***source***>]

Options

- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source

Examples

pausetarget beta

Notes

- You must be logged on to the target machine for this command to work.
- If the target machine has not been identified using the target command, you must specify the target name in the command.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Ping

Command

PING

Description

Checks a specified machine to see if Double-Take Availability is running

Syntax

PING <*machine*>

Options

machine—Name of the machine

Examples

ping alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Queue Task

Command

QUEUETASK

Description

Queues tasks inline with replication data

Syntax

QueueTASK <*job_name*> TO <*target*> ONQueue = <*task*> [*args*] | ONTRANSmit = <*task*> [*args*] | ONRECeive = <*task*> [*args*] | ONEXECute = <*task*> [*args*] [TIMEOUT = <*timeout*>] [INTERACT | NOINTERACT]

Options

- *job_name*—Unique job name assigned to this task. This will be the identifier you see in the log files.
- *target*—Name of the target or an IP address on the target. The target is required even if you are only queuing a task to be executed on the source.
- ONQueue—Execute the specified task on the source machine as soon as the source receives and queues the task. During heavy replication, there may be a delay while the task is queued inline with the replication operations.
- ONTRANSmit—Execute the specified task on the source machine just before the source transmits the task to the target.
- ONRECeive—Execute the specified task on the target machine as soon as the target receives and queues the task.
- ONEXECute—Execute the specified task on the target when the target processes the task from the queue. Since the task is not executed until it is processed, if the target is paused, the task will be held in queue.
- *task*—The path and filename of the task to run relative to the machine it will be run on. Tasks include any valid executable or batch file. The executables or files must exist in the specified location on the machine where they will be executed
- *args*—Arguments or options which need to be supplied with the task. Multiple arguments can be supplied in a space-separated list enclosed in quotation marks.
- TIMEOUT *timeout*—Valid number followed by an optional time indicator indicating the length of time ot pause while waiting for the task to complete. The valid time indicators include seconds, minutes, hours, and days. If you do not specify a time indicator, it will default to seconds. The number zero (0) indicates there is no timeout delay and the next operation is immediately processed. The keyword FOREVER indicates that the next operation is not processed until the task has completed execution. If you do not specify this option, the timeout will default to forever.
- INTERACT—Tasks interact with the desktop and, therefore, display on screen and run in the foreground
- NOINTERACT—Tasks do not interact with the desktop

Examples

- queuetask backup to beta onreceive=PauseAndBackup.bat onexecute=Resume.bat
- qtask backup to beta onrec=PauseAndBackup.bat onexec=resume.bat

Notes

- The default setting for this command is nointeract.
- Any combination of one or more execution points can be used with the same queuetask command.
- All script processing messages, including errors, can be viewed in the Double-Take Availability log.
- Onqueue will still execute as soon as the task is placed on the queue even if transmission is stopped (manually stopped or paused, unmet scheduled transmission criteria, etc.). Any other option will not execute until transmission is restarted.
- If your source is in a restore required state, any task placed on the queue will be executed immediately. Use caution when submitting tasks while in this state so that the target does not get inadvertently updated.
- A task may be discarded if all connections to a target are manually disconnected, replication is stopped for all connections to a target, or an auto-disconnect occurs.
- If a task is submitted after replication is stopped, the task will be executed immediately.
- If you disable task command processing while tasks are in queue, those tasks will not be executed.
- The user submitting the task command must be a member of the **Double-Take Admin** security group on both the source and target and the Double-Take service must have proper privileges to access the files or run the commands specified in the task.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Quit

Command

QUIT

Description

Quits the Command Line Interactive client

Syntax

QUIT

Replication Start

Command

REPLICATION START

Description

Initiates the replication process

Syntax

REPlication START <*conid* | *> [CLEARRESTOREREQUIRED]

Options

- *conid*—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates replication

Examples

- replication start 1
- rep start *

Replication Stop

Command

REPLICATION STOP

Description

Stops the replication process

Syntax

REPLlication STOP <***conid*** | *>

Options

- ***conid***—Connection ID assigned to the source/target connection
- *—Specifies all connection IDs

Examples

- replication stop 1
- rep stop *

Repset Calculate

Command

REPSET CALCULATE

Description

Calculates the size of a replication set

Syntax

REPSET CALCulate [***repset***]

Options

repset—Name of the replication set

Examples

- repset calculate DataFiles
- repset calc DataFiles

Notes

- If a replication set name is not specified, the active replication set will be used.
- The results of the calculation are logged to the Double-Take Availability log file.
- Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

Repset Create

Command

REPSET CREATE

Description

Creates a replication set

Syntax

REPSET CREATE <*name*>

Options

name—Name of the replication set

Examples

repset create DataFiles

Notes

- The name of the replication set should not be a Double-Take Availability keyword. These are any DTCL command (source, target, and so on.) or any DTCL shortcut command (env, mon, rep, and so on).
- Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

Repset Delete

Command

REPSET DELETE

Description

Deletes the specified replication set

Syntax

REPSET DELete <*repset*>

Options

repset—Name of the replication set

Examples

- repset delete DataFiles
- repset del DataFiles

Notes

Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

Repset Display

Command

REPSET DISPLAY

Description

Displays the replication set rules

Syntax

REPSET DISPlay [*repset*]

Options

repset—Name of the replication set

Examples

- repset display DataFiles
- repset disp DataFiles

Notes

- If you do not specify a replication set name, the current replication set will be used.
- Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

Repset List

Command

REPSET LIST

Description

Lists all replication set names for the currently selected source

Syntax

REPSET LIST

Repset Resync

Command

REPSET RESYNC

Description

Retrieves the last saved replication set settings, clearing any unsaved changes

Syntax

REPSET RESYNC

Repset Rule Add

Command

REPSET RULE ADD

Description

Adds a rule to a replication set. A rule is the specification of a path including volume, directories, wild cards, and/or file names.

Syntax

REPSET RULE ADD <***path***> [INClude|EXClude] [, RECursive|NONRECursive] [TO <***repset***>]

Options

- ***path***—Volume, directory, wild card, and/or file name
- INClude—Include the specified path in the replication set
- EXClude—Exclude the specified path in the replication set
- RECursive—All subdirectories and files of the specified path are recursively included or excluded
- NONRECursive—No subdirectories and files of the specified path are included or excluded
- ***repset***—Name of the replication set

Examples

- repset rule add "/data" to DataFiles
- repset rule add "/temp" exc rec to DataFiles

Notes

- The default settings for this command are include and recursive.
- The options include/exclude and recursive/nonrecursive can be used in any combination and in any order. The first option does not require a comma, but the second option does require a comma before the option.
- If you do not specify a replication set name, the current replication set will be used.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

Repset Rule Remove

Command

REPSET RULE REMOVE

Description

Removes a rule from a replication set

Syntax

REPSET RULE REMove <***path***> [FROM <***repset***>]

Options

- ***path***—Volume, directory, wild card, and/or file name
- ***repset***—Name of the replication set

Examples

- repset rule remove "/data" from DataFiles
- repset rule rem "/temp"

Notes

- If you do not specify a replication set name, the current replication set will be used.
- Options that contain non-alphanumeric characters must be enclosed in quotation marks.

Repset Save

Command

REPSET SAVE

Description

Saves all replication set rules for the currently selected source

Syntax

REPSET SAVE

Repset Use

Command

REPSET USE

Description

Specifies a replication set as the active replication set

Syntax

REPSET USE <*repset*>

Options

repset—Name of the replication set

Examples

repset use DataFiles

Notes

Replication set names that contain non-alphanumeric characters must be enclosed in quotation marks.

Restore

Command

RESTORE

Description

Initiates the restoration process

Syntax

RESTORE <*repset*> FROM <*target*> ORIGINAL <*original_source*> [, OVERWRITE | NOOVERWRITE] [, OVERWRITENEWER | NOOVERWRITENEWER] [, USETARGETDB | NOUSETARGETDB] [, RESTOREDBTOO | NORESTOREDBTOO] [, CHECKSUM | NOCHECKSUM][, ORPHANS | NOORPHANS]

Options

- *repset*—Name of the replication set
- *target*—Name of the target or an IP address on the target
- *original_source*—Name of the original source
- OVERWRITE—Overwrites files on the source
- NOOVERWRITE—Does not overwrite files on the source
- OVERWRITENEWER—Overwrites files on the source even if the source file is newer than on the target
- NOOVERWRITENEWER—Does not overwrite files on the source that are newer on the source than on the target
- USETARGETDB—Uses the replication set from the target machine
- NOUSETARGETDB—Uses the replication set from the source machine
- RESTOREDBTOO—Restores the replication set database from the target to the source
- NORESTOREDBTOO—Does not restore the replication set database from the target to the source
- CHECKSUM—Performs a block checksum comparison and only restores those blocks that are different
- NOCHECKSUM—Does not perform a block checksum comparison and restores those files that are different
- ORPHANS—Moves or deletes orphan files on the source
- NOORPHANS—Does not move or delete orphan files on the source

Examples

restore DataFiles from beta ,overwritenewer ,usetargetdb

Notes

- The default settings for this command are overwrite, overwritenewer, usetargetdb, restoredbtoo, and noorphans.
- The options can be used in any combination and in any order. The first option does not require a comma, but the second and remaining options do require a comma before the option.
- The source command is required before each use of the restore command.
- This command requires the original source option.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.
- When scripting with this command, if a successful restoration connection is established, the command will return a positive number, which is the connection ID assigned to that connection.

Resume Target

Command

RESUME TARGET

Description

Allows you to resume the execution of Double-Take Availability operations on the target

Syntax

RESUMETARGET <***target***> [FROM <***source***>]

Options

- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source

Examples

resumetarget beta

Notes

- You must be logged on to the target machine for this command to work.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Schedule Clear

Command

SCHEDULE CLEAR

Description

Clears the existing transmission schedule for the specified target

Syntax

SCHEDule <*target*> CLEAR

Options

target—Name of the target or an IP address on the target.

Examples

- schedule beta clear
- sched beta clear

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Schedule Disable

Command

SCHEDULE DISABLE

Description

Disables the transmission schedule without clearing the schedule data

Syntax

SCHEDule <*target*> DISABLE

Options

target—Name of the target or an IP address on the target.

Examples

- schedule beta disable
- sched beta disable

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Schedule Enable

Command

SCHEDULE ENABLE

Description

Enables the transmission schedule

Syntax

SCHEDule <*target*> ENABLE

Options

target—Name of the target or an IP address on the target.

Examples

- schedule beta enable
- sched beta enable

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Schedule End

Command

SCHEDULE END

Description

Sets criteria to end the transmission of data from the source to the target

Syntax

SCHEDule <***target***> END [DURATION = <***number***> <***time_units***>] [BYTES = <***bytes***>]

Options

- ***target***—Name of the target or an IP address on the target.
- ***number***—Any number indicating the length of time before the transmission ends
- ***time_units***—Minutes (min), hours (hr), or days (day)
- ***bytes***—Number of bytes transmitted before the transmission ends

Examples

- schedule beta end duration=3 hr bytes=1500000
- sched beta end duration=6 hr

Notes

- If you use both of the end options, duration and bytes, the transmission will be stopped when the first end option value is met.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Schedule Start

Command

SCHEDULE START

Description

Sets criteria to start the transmission of data from the source to the target

Syntax

SCHEDule <***target***> START [STARTTIME = <***mm/dd/yy***> <***hh:mm***>] [MEMLIMIT = <***percent***>] [QUEUESIZE = <***bytes***>] [EVERY <***number***> <***time_units***>]

Options

- ***target***—Name of the target or an IP address on the target.
- ***mm/dd/yy***—Date in month/day/year format indicating when the transmission will begin
- ***hh:mm***—Time in hour:minute format using the 24-hour clock indicating when the transmission will begin
- ***percent***—Any number between 0 and 100 indicating the percentage of system memory that must be in use to initiate the transmission process
- ***bytes***—Number of bytes that must be in the source disk queue to initiate the transmission process
- ***number***—Any number indicating how often the transmission process will be repeated
- ***time_units***—Minutes (min), hours (hr), or days (day)

Examples

- schedule beta start starttime=03/11/07 03:30, queuesize=10000, every 6 hr
- sched beta start queuesize=100000000

Notes

- The start option EVERY cannot be used by itself and cannot be the first option in a string of options.
- If you use more than one start option, the transmission will begin when the first start option value is met. Additionally, each option after the first must be separated by a comma, as illustrated in the Examples.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Schedule Window

Command

SCHEDULE WINDOW

Description

Sets criteria to only allow transmissions during a certain period of time

Syntax

SCHEDule <***target***> WINDOW <***hh:mm***> TO <***hh:mm***>

Options

- ***target***—Name of the target or an IP address on the target.
- ***hh:mm***—Time in hour:minute format using the 24-hour clock. The first time is when the transmission will begin and the second time is when the transmission will end.

Examples

- schedule beta window 23:00 to 06:00
- sche beta window 20:00 to 4:00

Notes

- Establishing a transmission window by itself is not sufficient to start a transmission. You will need to specify a start criteria.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Set

Command

SET

Description

Modifies the value of a Double-Take Availability program setting for the specified server

Syntax

SET <***setting***>=<***value***> [***machine***]

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting
- ***machine***—Name of the machine

Examples

- set AutoRemirror=3
- set MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- If you do not specify a machine name, the value from the current source will be updated. If you have not identified an active source, no changes will be made.
- Options, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Set Local

Command

SET LOCAL

Description

Modifies the value of a Double-Take Availability program setting for the local machine

Syntax

SETLOCAL <***setting***>=<***value***>

Options

- ***setting***—See Server settings for a complete list of the Double-Take Availability program settings
- ***value***—See Server settings for a complete list of the values for each Double-Take Availability program setting

Examples

- setlocal AutoRemirror=3
- setlocal MoveOrphansDir="/OrphanFiles"

Notes

- Some settings, although immediately applied to Double-Take Availability, will not take effect until the service is restarted.
- Program setting values that contain non-alphanumeric characters must be enclosed in quotation marks.

Shutdown

Command

SHUTDOWN

Description

Stops the Double-Take service .

Syntax

SHUTDOWN <*machine*>

Options

machine—Name of the machine

Examples

shutdown alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Source

Command

SOURCE

Description

Identifies a machine as the active source machine

Syntax

SOUrce <***source***>

Options

source—Name of the source or an IP address on the source

Examples

- source alpha
- sou alpha

Notes

Source names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

StatsLog Start

Command

STATSLOG START

Description

Starts the DTStats statistics logging utility

Syntax

STATSLOG START <***machine***> [TO <***filename***>] [EVERY <***minute***>] [MAXSIZE <***kilobytes***>]

Options

- ***machine***—Name of the machine
- ***filename***—Any valid path and filename to which the statistical information will be logged
- ***minutes***—The number of minutes to write to the log file
- ***kilobytes***—The maximum file size in kilobytes

Examples

statslog start alpha to "dtstat.sts" every 20 maxsize 200000

Notes

- The default settings are the file name statistic.sts, a five (5) minute interval, and a file size of 10485760 bytes (10 MB).
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

StatsLog Status

Command

STATSLOG STATUS

Description

Identifies whether the DTStats statistics logging utility is currently running

Syntax

STATSLOG STATUS <***machine***>

Options

machine—Name of the machine

Examples

statslog status alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

StatsLog Stop

Command

STATSLOG STOP

Description

Stops the DTStats statistics logging utility

Syntax

STATSLOG STOP <*machine*>

Options

machine—Name of the machine

Examples

statslog stop alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Status

Command

STATUS

Description

Requests connection and statistical information

Syntax

STATUS CONnect <*con_id*> | MIRror <*con_id*> | REPlicate <*con_id*> | TRANsmit <*con_id*> | TARget <*target*>

Options

- CONnect—Displays connection information for the connection ID specified
- *con_id*—Connection ID assigned to the source/target connection
- MIRror—Displays mirroring information for the connection ID specified
- REPlicate—Displays replication information for the connection ID specified
- TRANsmit—Displays transmission information for the connection ID specified
- TARget—Displays target state information for the target machine specified
- *target*—Name of the target or an IP address on the target

Examples

- status connect 1
- status rep 1
- status tar beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Target

Command

TARGET

Description

Identifies a machine as the active target machine

Syntax

TARget <*target*>

Options

target—Name of the target or an IP address on the target

Examples

- target beta
- tar beta

Notes

- You must be logged into a machine using the login command before using the target command.
- Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Test Connections

Command

TEST CONNECTIONS

Description

Sends a test command to determine if Double-Take Availability is running. If there are active connections, the replication set(s), IP address(es), and connection ID(s) will be included in the testcon log file.

Syntax

TESTCONnections <***machine***> [***filename*** [OVERWRITE]]

Options

- ***machine***—The name of the machine
- ***filename***—The name of the log file. The file extension .dts is appended to any file name supplied.
- OVERWRITE—Indicates that existing data in the file will be overwritten

Examples

- testconnections alpha connectionstat
- testcon alpha

Notes

- The default log file is status.dts and is located in the same directory as the other Double-Take Availability log files. By default, the log file is not overwritten.
- Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Time Now

Command

TIME NOW

Description

Prints the current date and time. This command is useful for scripting to determine process start and stop times.

Syntax

TIMEnow

Examples

- timenow
- time

Transmission Pause

Command

TRANSMISSION PAUSE

Description

Pauses the transmission pause

Syntax

TRANSmission PAUSE <*target*>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission pause beta
- trans pause beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Transmission Resume

Command

TRANSMISSION RESUME

Description

Resumes a paused transmission pause

Syntax

TRANSmission RESUME <*target*>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission resume beta
- trans resume beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Transmission Start

Command

TRANSMISSION START

Description

Initiates the transmission pause

Syntax

TRANSmission START <*target*>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission start beta
- trans start beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Transmission Stop

Command

TRANSMISSION STOP

Description

Stops the transmission pause

Syntax

TRANSmission STOP <*target*>

Options

target—Name of the target or an IP address on the target.

Examples

- transmission stop beta
- trans stop beta

Notes

Target names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Unload Source

Command

UNLOAD SOURCE

Description

Unloads the Double-Take Availability source module

Syntax

UNLOAD SOURCE <***machine***>

Options

machine—Name of the machine

Examples

unload source alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Unload Target

Command

UNLOAD TARGET

Description

Unloads the Double-Take Availability target module

Syntax

UNLOAD TARGET <*machine*>

Options

machine—Name of the machine

Examples

unload target alpha

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Verify

Command

VERIFY

Description

Verifies the integrity of the data between the source and target machines

Syntax

VERIFY <***con_id***> [SYNC [,NEWER] | NOSYNC] [,CHECKSUM | NOCHECKSUM] [STARTTIME=<***mm/dd/yy***> [***hh:mm***]] [EVERY <***number***> <***time_units***>] [ORPHANS | NOORPHANS] [CLEARRESTOREREQUIRED]

Options

- ***con_id***—Connection ID assigned to the source/target connection
- SYNC—Synchronizes any data that is different
- NEWER—Synchronizes only those files that are newer on the source than on the target
- NOSYNC—Do not synchronize any data that is different
- CHECKSUM—Compares and/or synchronizes those blocks that are different on the source than on the target based on checksum comparisons
- NOCHECKSUM—Does not perform a checksum comparison when comparing and/or synchronizing files
- STARTTIME—Starts the verification process at the time specified
- ***mm/dd/yy***—Date in month/day/year format when the verification process will begin
- ***hh:mm***—Time in hour:minute format using the 24-hour clock when the verification process will begin
- EVERY—Repeat the verification process at the frequency specified
- ***number***—Length of time to repeat the verification process
- ***time_units***—Minutes (min), hours (hr), or days (day)
- ORPHANS—Moves or deletes orphan files on the target
- NOORPHANS—Does not move or delete orphan files on the target
- CLEARRESTOREREQUIRED—Clears the restore required flag and initiates the verification

Examples

- verify 1
- verify 2 sync, newer
- verify 2 every 2 hr

Notes

The default verification settings are sync, checksum, and noorphans.

Version

Command

VERSION

Description

Displays the Double-Take Availability version currently installed

Syntax

VERSION [***machine***]

Options

machine—Name of the machine

Examples

version alpha

Notes

- If no machine name is specified, the version of the active source will be displayed. If there is no active source, no version information will be displayed.
- Machine names, except for IP addresses, that contain non-alpanumeric characters must be enclosed in quotation marks.

Wait

Command

WAIT

Description

This command is used in scripts to force the script to stop executing until the specified number of milliseconds has elapsed.

Syntax

WAIT <*ms*>

Options

ms—Length of time in milliseconds

Examples

wait 5000

Notes

This example waits for 5 seconds.

Wait on Mirror

Command

WAIT ON MIRROR

Description

This command is used in scripts to force the script to stop executing until the connection has finished mirroring or verifying

Syntax

WAITONMIRROR <***con_id***>

Options

con_id—Connection ID assigned to the source/target connection

Examples

waitonmirror 1

Wait on Restore

Command

WAIT ON RESTORE

Description

This command is used in scripts to force the script to stop executing until the connection has finished restoring

Syntax

WAITONRESTORE <***rest_id***>

Options

rest_id—Restoration ID assigned to the source/target connection

Examples

waitonrestore 1

Notes

This command requires using the source command immediately before the waitonrestore command.

Wait on Target

Command

WAIT ON TARGET

Description

This command is used in scripts to force the script to stop executing until the target queue has been empty for the time specified

Syntax

WAITONTARGET <***target***> [FROM <***source***>] <***time***>

Options

- ***target***—Name of the target or an IP address on the target
- ***source***—Name of the source or an IP address on the source
- ***time***—Number of seconds that the target queue needs to be empty before the command will return

Examples

waitontarget beta from alpha 30

Notes

Machine names, except for IP addresses, that contain non-alphanumeric characters must be enclosed in quotation marks.

Write

Command

WRITE

Description

Displays the value of a Double-Take Availability variable

Syntax

WRITE $<*variable_name*>

Options

variable_name—The name of the variable that you have established and want to display

Examples

- write $thetarget
- write $dbrepset

Index

M

N

O

P

Q

R

S

T

U

V

W