AUTHORIZED DOCUMENTATION

Client Commands and Utilities Reference

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Dynamic File Services

1.5

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Contents

About This Guide

This guide provides essential information for the client command line interface (CLI) and utilities for Novell Dynamic File Services (DynamicFS) 1.5.

Audience

This guide is designed to help storage solutions administrators use commands and utilities to create and manage Dynamic File Services pairs and policies.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to `www.novell.com/documentation/feedback.html` and enter your comments there.

Documentation Updates

For the most recent version of the *Novell Dynamic File Services 1.5 Client Commands and Utilities Guide*, visit the Dynamic File Services 1.5 Documentation Web site (http://www.novell.com/documentation/dynamic_file_services/).

Additional Documentation

Additional documentation is available on the Dynamic File Services 1.5 Documentation Web site (http://www.novell.com/documentation/dynamic_file_services/):

- *Readme*
- *Installation Guide*
- *Administration Guide*

1 Overview of the Dynamic File Services Client Commands and Utilities

Novell Dynamic File Services (DynamicFS) 1.5 provides a client command line interface (CLI) and utilities for the Windows environment. The commands allow you to create and manage pairs and policies. The CLI is a text interface that also allows scripting of the commands instead of using the graphical user interface (GUI) tools.

For information about using the GUI tools to create and manage Dynamic File Services, see the *Dynamic File Services 1.5 Administration Guide*.

- Section 1.1, “Client CLI and Utilities,” on page 7
- Section 1.2, “Command Line Syntax,” on page 8

1.1 Client CLI and Utilities

The following table describes the commands and utilities that you can use to create and manage Dynamic File Services pairs and policies.

Component	Description
CLI	The DynamicFS CLI application allows you to create and manage pairs and policies on the server by issuing commands in the Windows Command Prompt console. The application runs only when you issue a command. For information, see Chapter 3, “Dynamic File Services Client Commands for Pair and Policy Management,” on page 11. The application is `DswCLI.exe`.
Configuration Dump	The DynamicFS Configuration Dump utility aggregates information about the current DynamicFS server settings for pairs, policies, and logs, and puts it an output file in XML format. This tool is available to help with troubleshooting when working with Novell Support. For information, see Chapter 6, “Dynamic File Services Configuration Dump Utility,” on page 63. The application is `DswDump.exe`.

Component	Description
File System Inventory	The DynamicFS File System Inventory utility automatically runs a Pair History Scan on a pair each day at 4:00 a.m. by default. It scans the pairs to gather metadata information about the data stored on the primary and secondary locations, such as the file sizes, number of files, and file types. The time and frequency of pair history scanning is configurable. For information, see "Scheduling the Pair History Scan" in the *Dynamic File Services 1.5 Administration Guide*. The DynamicFS Service controls when the File System Inventory runs. The application is `DswInventory.exe`.
Synchronize Pair	The DynamicFS Synchronize Pair utility is used to detect duplicate files in the pair structure or to detect folders with attribute or ACL permission differences. It can generate reports in CSV and XML format. The primary and secondary locations are rarely out of synchronization. Such conditions might occur, for example, after recovering files in the two locations from backup media. For information, see Chapter 5, "Dynamic File Services Synchronize Pair Utility," on page 59. The application is `DswSyncPair.exe`.

1.2 Command Line Syntax

The following notation is used in the Dynamic File Services command line syntax:

Notation	Description
Text without brackets or braces	Command, action, parameter, or option that you must type as shown.
<*Italicized text inside angle brackets*>	Variable that you must replace with a value.
Italicized text	Values in DynamicFS commands are read as character strings and should be surrounded by quotation marks.
[Text inside square brackets]	Optional parameters or options.
{Text inside braces}	A set of mutually exclusive items separated by a vertical bar (|). Choose only one.

What’s New for the Dynamic File Services Client CLI and Utilities 2

This section describes the new features and changes for the client command line interface (CLI) commands and utilities in each release of Novell Dynamic File Services 1.5.

- Section 2.1, “What’s New for Dynamic File Services 1.5,” on page 9

2.1 What’s New for Dynamic File Services 1.5

In addition to bug fixes, the initial release of Novell Dynamic File Services 1.5 provides the following new features and changes for the client commands and utilities over the previous release of Dynamic File Services 1.0:

- Section 2.1.1, “Pair Options,” on page 9
- Section 2.1.2, “Policy Options,” on page 9
- Section 2.1.3, “Logging Level Option,” on page 10

2.1.1 Pair Options

Remote Share as the Secondary Path in a Pair

In an Active Directory environment, remote paths are supported as the secondary path for pairs. Use the UNC (Uniform Naming Convention) path for a remote share that has been published in Active Directory:

```
\\computerName\AD_shareName
```

The path name is case sensitive.

Manually Moving Files or Folders for a Pair

The `-movefiles` option for the `DswCli.exe -pairs` command allows you to specify a list of files or a list of folders to be moved manually as a one-time move event. For information, see Section 3.7.10, “Move Files or Folders in a Pair,” on page 30.

2.1.2 Policy Options

- “Yearly Option for the Policy Frequency” on page 9
- “FilePattern Option for the Policy Filter” on page 10
- “File Types” on page 10

Yearly Option for the Policy Frequency

You can specify a policy run frequency of *Yearly* in a policy schedule. For information, see “Add Policy Schedule Frequency Options” on page 35.

FilePattern Option for the Policy Filter

A filename pattern option was added as a policy filter option. You can use regular expressions to specify patterns in file names for files to be moved. Previously, only filename extensions were permitted. The `-fileExtension` and `-filePattern` options are aliased so that either can be used for pattern expressions in Dynamic File Services 1.5 or later. For information, see Section 3.8.2, “Add a Policy,” on page 33.

File Types

You can select one or more file types as a filter option. The file types are based on the content types (standard MIME types) of applications that are installed on the server. For information, see Section 3.8.2, “Add a Policy,” on page 33.

2.1.3 Logging Level Option

You can view or modify the logging level settings for the Service and Enforcer log files. For information, see Section 3.6.7, “Display or Modify the Logging Level for the Service or Enforcer,” on page 22.

3 Dynamic File Services Client Commands for Pair and Policy Management

The Novell Dynamic File Services (DynamicFS) 1.5 client command line interface (`DswCli.exe`) provides the ability to manage pairs and policies at the command line or in a script. The Dynamic File Service must be running on the server you want to manage in order to use the utility.

The Dynamic File Services client CLI utility provides the following basic functionality of the GUI interface:

- Add and remove pairs.
- Add and remove policies.
- Associate and disassociate a pair with a policy.
- Run one or more policies for a pair.
- Move files or folders based on a supplied list.
- Set log levels for the Enforcer and Service logs.

The utility is found in the `C:\Program Files\Dynamic File Services` directory (or the directory where you installed Dynamic File Services).

See the following sections for command actions and options:

- Section 3.1, “Syntax Overview,” on page 11
- Section 3.2, “Help Command,” on page 12
- Section 3.3, “Authentication Parameters,” on page 13
- Section 3.4, “Common Pair and Policy Parameters,” on page 17
- Section 3.5, “Common Options,” on page 20
- Section 3.6, “System Actions,” on page 20
- Section 3.7, “Pair Actions,” on page 24
- Section 3.8, “Policy Actions,” on page 32
- Section 3.9, “Using CLI Commands in Scripts,” on page 41
- Section 3.10, “Example Scripts Using CLI Commands,” on page 41

3.1 Syntax Overview

```
Syntax:
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -ADD
         -name=<pairname>
         -primarypath=<path>
         -secondaryPath=<path>
         [-description=<"text">]
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -DELETE
         -pairid=<pairname|GUID>
```

```
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -ASSOCIATE
         -pairid=<pairname|GUID>
         -policyid=<policyname|GUID>
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -DISASSOCIATE
         -pairid=<pairname|GUID>
         -policyid=<policyname|GUID>
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -
ADDEXCLUDEINCLUDEPATHS
         -pairid=<pairname|GUID>
         -flags=<Exclude|Include|None>
         [-paths=<path1[;path2;path3...]>]
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -
DELETEEXCLUDEINCLUDEPATHS
         -pairid=<pairname|GUID>
         -flags=<Exclude|Include|None>
         [-paths=<path1[;path2;path3...]>]
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -RUN
         -pairid=<pairname|GUID>
         -policyidlist=<policyname|GUID>
dswcli.exe [-servername [-port [-username [-password]]]] -PAIR -DETAIL
         -pairid=<pairname|GUID>
dswcli.exe [-servername [-port [-username [-password]]]] -POLICY -ADD
         -name=<policyname>
         [-description=<"text">]
         -primaryToSecondary|-secondaryToPrimary
         [-fileExtension=<SEE FORMAT>]
         [-lastAccessed=<SEE FORMAT>]
         [-lastModified=<SEE FORMAT>]
         [-manual]
         [-hourly]
         [-daily=<SEE FORMAT>]
         [-weekly=<SEE FORMAT>]
         [-monthly=<SEE FORMAT>]
         [-yearly=<SEE FORMAT>]
dswcli.exe [-servername [-port [-username [-password]]]] -POLICY -DELETE
         -policyid=<policyname|GUID>
dswcli.exe [-servername [-port [-username [-password]]]] -POLICY -DETAIL
         -policyid=<policyname|GUID>
```

3.2 Help Command

-help, -h

Displays basic information about the syntax for Dynamic File Services CLI options, parameters, and actions. It also identifies the software version of DynamicFS that is running.

Syntax

At the Command Prompt console, go to the DynamicFS directory, then enter one of the following:

```
DswCli.exe help
```

```
DswCli.exe -h
```

3.3 Authentication Parameters

You must specify the server name and login credentials for the server where you want to manage Dynamic File Services pairs and policies. This allows you to connect to the service running on the Dynamic File Services server and execute the command. The authentication parameters include the server name, username, password, and port number for the Dynamic File Services server that you want to manage.

IMPORTANT: Login credentials are not required if you run a `DswCli` command while you are logged in as the Administrator user or a user in the `Dynamic File Services` group on the server. Credentials are required if you are managing the server remotely from another computer, or if you are on the server you want to manage but are logged in as a user without the privileges needed to manage Dynamic File Services.

You can specify the server name and login credentials with each command, or you can set environment variables for the parameters while you are managing the server.

- Section 3.3.1, "Setting Authentication Parameters in Commands," on page 13
- Section 3.3.2, "Setting Authentication Parameters as Environment Variables," on page 15

3.3.1 Setting Authentication Parameters in Commands

Use the options in this section to specify the authentication parameters in each Dynamic File Services command for a server. With this method, you must provide the `-servername`, `-username`, and `-password` options for every command. You need to specify the port number for the DynamicFS Service port on the target server only if the server has been previously configured to use a port other than the default (8999).

- "Syntax" on page 13
- "Authentication Parameters" on page 13
- "Authentication Examples" on page 15

Syntax

Specifies the authentication parameters as needed in the pair or policy command.

```
DswCli.exe [-servername [-port [-username [-password]]]] {-pair [pair_options]
| -policy [policy_options]}
```

Authentication Parameters

- "-servername" on page 14
- "-port" on page 14
- "-username, -u" on page 14
- "-password, -p" on page 14

-servername

Specifies the IP address or DNS name of the server where you want to create or manage the pair. If you are issuing the DynamicFS commands locally on the DynamicFS server, you can also use the loopback address (127.0.0.1) instead of its assigned IP address, or you can use `localhost` as the server name instead of its full DNS name. The IPv4 format is supported for the IP address. DNS names are case sensitive.

Syntax

```
-servername={"ip_address" | "DNS_name"}
```

Examples

```
-servername="192.168.1.1"
```

```
-servername="server1.site1.example.com"
```

```
-servername="localhost"
```

-port

Instead of using the configured port number, use the supplied value.

You need to specify this parameter only if you have set up the target server to use a port other than the default Dynamic File Service port (8999) for remote management communications.

If this parameter is not used and the port is not configured as an environment variable, the default port is automatically used for DynamicFS communications.

Syntax

```
-port="portnumber"
```

Example

```
-port="1234"
```

-username, -u

Specifies the username of a user who is a member of the `Dynamic File Services` group (or is the Administrator user) for the DynamicFS server that you want to manage.

Syntax

```
-username="admin_user_name"
```

```
-u="admin_user_name"
```

Examples

```
-username="Administrator"
```

```
-u="Administrator"
```

```
-u="john"
```

-password, -p

Specifies the password for the user whose username you supplied.

Syntax

```
-password="admin_user_password"
```

```
-p="admin_user_password"
```

Examples

```
-password="novell"
```

```
-p="novell"
```

Authentication Examples

Using the IP Address of the Server

```
DswCli.exe -servername="192.168.1.1" -username="Administrator"
-password="novell" -pair
```

This command connects to the server via the IP address 192.168.1.1, logs in with the credentials of `Administrator` and `novell`, then lists all pairs on the specified server. You can also provide the credentials of a user who is a member of the `Dynamic File Services` group. It assumes that the default port 8999.

Using the DNS Address of the Server

```
DswCli.exe -servername="server1.site1.example.com" -u="Administrator"
-p="novell" -port="1234" -policy
```

This command connects to the server via the DNS name of `server1.site1.example.com`, logs in with the credentials of `Administrator` and `novell`, then lists all policies on the specified server. You can also provide the credentials of a user who is a member of the `Dynamic File Services` group. It specifies that the TCP connection should be made with port 1234 on the target server, because you have previously configured the DynamicFS Service port on that server to use port 1234 instead of the default port 8999.

3.3.2 Setting Authentication Parameters as Environment Variables

Dynamic File Services allows you to use the Windows `set` command in the Command Prompt console to specify environment variables for the authentication parameters (server name, username, password, and port) for the server that you want to manage with commands. The environment variables are set for only one server at a time. The environment variable settings persist if you issue the `set` command again with different values, or until you close the Command Prompt console.

After the environment variables are set for a given server, the parameter values are automatically applied for every `DswCli.exe` command where you do not provide authentication parameters. For example, the following commands apply only to the server that has been previously set up with the environment variables:

```
DswCli.exe -pair
DswCli.exe -policy
```

You can change the environment variables settings by issuing the `set` commands again with the new values.

If it is used without parameters, the `set` command displays the current environment variable settings.

IMPORTANT: You can remove the environment variable settings by closing the Command Prompt console.

The Dynamic File Services environment variables for the `set` command are:

Environment Variable	Description

set DswParm1=*servername*	Specifies the *servername* by providing the DNS address or the IP address of the server you want to manage.
	Examples
	The following command sets the environment variable for *servername* to 192.168.1.1:
	`set DswParm1=192.168.1.1`
	The following command displays the current setting for the DswParm1 environment variable:
	`set DswParm1`

set DswParm2=*username*	Specifies the *username* of the user identity you want to use to manage the server. The user must be a member of the `Dynamic File Services` group (or the Administrator user) on the server.
	Examples
	The following command sets the environment variable for *username* to Administrator. You can also provide the credentials of a user who is a member of the `Dynamic File Services` group.
	`set DswParm2=Administrator`
	The following command displays the current setting for the DswParm2 environment variable:
	`set DswParm2`

set DswParm3=*password*	Specifies the *password* of the user identity you specified with DswParm2.
	Examples
	The following command sets the environment variable for *password* to novell:
	`set DswParm3=novell`
	The following command displays the current setting for the DswParm3 environment variable:
	`set DswParm3`

Environment Variable	Description

set DswParm4=*portnumber*	Specifies the *portnumber* to use for DynamicFS communications with the server you want to manage.
	You need to specify this parameter only if you have set up the target server to use a port other than the default DynamicFS port for remote management communications. The default port value is automatically assumed if this parameter is not otherwise specified.
	Examples
	The following command sets the environment variable for *portnumber* to 1234:
	`set DswParm4=1234`
	The following command displays the current setting for the DswParm4 environment variable:
	`set DswParm4`

To use environmental variables while executing Dynamic File Services commands:

1. On a Windows server or workstation where DynamicFS is installed, open the Command Prompt console.
2. At the command prompt, specify the server name and login credentials for the server that you want to manage by entering the following commands as needed:

   ```
   set DswParm1=192.168.1.1

   set DswParm2=Administrator

   set DswParm3=password

   set DswParm4=1234
   ```

   Make sure to change the values to the credentials needed to log in to the server you want to manage.
3. At the command prompt, enter the `DswCli.exe` commands to manage pairs and policies on the specified server.

   You can specify the commands without providing credentials.
4. Repeat Step 3 for all of the `DswCli.exe` commands you want to issue for that server.
5. When you are done, repeat Step 2 to Step 4 for each server you want to manage.
6. Close the Command Prompt console to remove the credentials as environmental variables.

3.4 Common Pair and Policy Parameters

The parameters in this section can be used by Dynamic File Services pair or policy actions.

- Section 3.4.1, “Description,” on page 18
- Section 3.4.2, “Direction to Move Files,” on page 18
- Section 3.4.3, “Name,” on page 18

- Section 3.4.4, “Pair ID,” on page 19
- Section 3.4.5, “Policy ID,” on page 19
- Section 3.4.6, “Policy ID List,” on page 19

3.4.1 Description

-description

Specifies a textual description of a pair or policy that you are creating with the `-pair -add` action or the `-policy -add` action.

Syntax

```
-description="text"
```

Examples

```
-description="This is a description of myPair"
```

```
-description="Moves graphics files to the secondary location."
```

3.4.2 Direction to Move Files

-primaryToSecondary

Specifies the direction to move files. If a direction option is not specified, the default direction is primary to secondary.

Restriction: This option cannot be used with the `-secondaryToPrimary` option.

-secondaryToPrimary

Specifies the direction to move files. If a direction option is not specified, the default direction is primary to secondary.

Restriction: This option cannot be used with the `-primaryToSecondary` option.

3.4.3 Name

-name

Specifies a name for the pair or policy that you are creating with the `-pair -add` action or the `-policy -add` action.

Syntax

```
-name="text"
```

Pair Examples

```
-name="myPair"
```

```
-name="ProjectA Pair"
```

Policy Examples

```
-name="myPolicy"
```

```
-name="Move music and videos"
```

3.4.4 Pair ID

-pairId

Specifies the pair identifier. You can provide the pair name, or provide the GUID (globally unique ID) of the pair. A GUID is automatically assigned by Dynamic File Services when you create a pair.

Syntax

```
-pairId="< pairname | GUID >"
```

Example

```
-pairId="myPair"
-pairID="42e0064d-0b2c-4bb3-9825-bfa82999720e"
```

3.4.5 Policy ID

-policyId

Specifies the policy identifier. You can provide the policy name, or provide the GUID of the policy. A GUID is automatically assigned by Dynamic File Services when you create a policy.

Syntax

```
-policyId="< policyname | GUID >"
```

Examples

```
-policyId="myPolicy"

-policyId="My JPG and BMP Policy"

-policyId="My Last Modified GT 6 Months Policy"

-policyId="4b5b5820-da6c-4c07-b9da-07e3b83ebe02"
```

3.4.6 Policy ID List

-policyIdList

Specifies a comma-separated list of `policyId` parameters. For each policy in the list, you can provide the policy name or the GUID. Separate entries with a comma and no spaces. Place quotation marks around the list.

Syntax

```
-policyIdList="<policyname|GUID>[,<policyname|GUID>,...]"
```

Examples

```
-policyIdList="myPolicy,myPolicy100,4b5b5820-da6c-4c07-b9da-07e3b83ebe02"

-policyIdList="My JPG and BMP Policy"

-policyIdList="My Last Modified GT 6 Months Policy,myPolicy"
```

3.5 Common Options

Common options can be used in combination with any of the system, pair, or policy actions.

- Section 3.5.1, "Debug," on page 20
- Section 3.5.2, "Output to a File," on page 20
- Section 3.5.3, "Silent," on page 20

3.5.1 Debug

-debug

Displays debug messages.

Syntax

```
-debug
```

3.5.2 Output to a File

-of

Dumps certain requests and replies to a file.

Syntax

```
-of
```

3.5.3 Silent

-silent

Use this option when you do not want to display errors or help on execution, such as in scripts for batch files where the batch file checks for return codes. This option returns a 0 if the command is successful. It returns a 1 if the command fails.

If a command fails, you can enter the command at the Command Prompt console without the `-silent` option to view the error messages.

Syntax

```
-silent
```

3.6 System Actions

You can use the system action options to display information about a specified Dynamic File Services server. For information about authentication parameters, see Section 3.3, "Authentication Parameters," on page 13.

- Section 3.6.1, "Display Active Directory Computers," on page 21
- Section 3.6.2, "Display Active Directory Shares," on page 21
- Section 3.6.3, "Display the File Types Information," on page 21
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- Section 3.6.7, “Display or Modify the Logging Level for the Service or Enforcer,” on page 22
- Section 3.6.8, “Query for File Types or Extensions (for Technical Support Use Only),” on page 24

3.6.1 Display Active Directory Computers

-adcomputers

Displays the computers in Active Directory.

```
DswCli.exe [authentication_parameters] -adcomputers
```

3.6.2 Display Active Directory Shares

-adshares

Displays the shares that are published in Active Directory.

Syntax

```
DswCli.exe [authentication_parameters] -adshares
```

3.6.3 Display the File Types Information

-fileTypesInfo, -types

Displays a list of supported file types on the target.

Syntax

```
DswCli.exe [authentication_parameters] -fileTypesInfo
```

```
DswCli.exe [authentication_parameters] -types
```

3.6.4 Display Local Drives

-localdrives

Displays local drive information for the specified server.

Syntax

```
DswCli.exe [authentication_parameters] -localdrives
```

3.6.5 Display Network Shares

-shares

Displays network share information for the specified server.

Syntax

```
DswCli.exe [authentication_parameters] -shares
```

3.6.6 Display Server System Information

-system

Displays system information for the specified server.

Syntax

```
DswCli.exe [authentication_parameters] -system
```

3.6.7 Display or Modify the Logging Level for the Service or Enforcer

Novell Dynamic File Services uses Apache log4net to log events. Log level settings determine the type of events that are logged. You can use the log level commands to set the log levels for the Dynamic File Service (`DswMcpCore.log`) and Enforcer (`DswEnforcer.log`) log files.

Syntax

```
DswCli [authentication_parameters] -logfilename={ * | SERVICE | ENFORCER |
filename } -loglevel={ ALL | DEBUG | INFO | WARN | ERROR | FATAL | OFF  }
```

The two log level options are used together to modify the log level for the specified log file. If you use the `-logfilename` option without the `-loglevel` option, the current setting for the specified log file is displayed.

Parameters

-logfilename={ * | SERVICE | ENFORCER | filename }

You must specify whether you want to apply the `-loglevel` setting to the Service, Enforcer, or both the Serviced and Enforcer. Use this option in combation with the `-loglevel` option to modify the log level for the specified file. If you use the `-logfilename` without the `-loglevel` option, the current setting for the specified log file is displayed.

Logfilename Options

Logfilename Option	Description
`*`	Apply the specified `-loglevel` setting to both the Service (`DswMcpCore.config.xml`) log file and the Enforcer (`DswEnforcer.config.xml`) log file.
`SERVICE`	Apply the specified `-loglevel` setting to the Service (`DswMcpCore.config.xml`) log file.
`ENFORCER`	Apply the specified `-loglevel` setting to the Enforcer (`DswEnforcer.config.xml`) log file.
"*filename*"	Apply the specified `-loglevel` setting to the specified file. Valid filenames are `DswMcpCore.config.xml` or `DswEnforcer.config.xml`. This option allows you to specify the names of the Service and Enforcer log files as an alternative to using the SERVICE or ENFORCER options.

Logfilename Examples

```
-logfilename=*
```

```
-logfilename=SERVICE
```

-loglevel={ ALL | DEBUG | INFO | WARN | ERROR | FATAL | OFF }

The log level settings determine which events are logged for the Dynamic File Service or Enforcer log files. Use this option in combation with the `-logfilename` option to modify the log level setting for the specified log file.

Loglevel Options

The log level options are ordered from the most information reported to no information reported. Each level includes the events specified, plus the events of the levels below it. The log4net software supports the following logging levels in order of increasing priority:

Loglevel Option	Description
`All`	Record all events in the specified log file. (This is the same output as for the DEBUG level.)
`DEBUG`	Record debug, information, warning, error, and fatal events in the specified log file.
`INFO`	Record information, warning, error, and fatal events in the specified log file.
`WARN`	(Default) Record warning, error, and fatal events in the specified log file.
`ERROR`	Record error and fatal events in the specified log file.
`FATAL`	Record fatal events in the specified log file.
`OFF`	No events are recorded in the specified log file.

Loglevel Examples

```
-loglevel=INFO
```

```
-loglevel=FATAL
```

Logging Level Examples

To get the current value of the Service log file (`DswMcpCore.config.xml`), enter

```
DswCli [authentication_parameters] -logfilename=SERVICE
```

To set the log level to `ALL` for the Service log file (`DswMcpCore.config.xml`), enter the following command:

```
DswCli [authentication_parameters] -logfilename=SERVICE -loglevel=ALL
```

3.6.8 Query for File Types or Extensions (for Technical Support Use Only)

Dynamic File Services provides the following query commands for use only by Novell Technical Support):

-fileTypeExtensionQuery, -extquery

Returns a list of file types associated with the specified extensions.

Example

```
dswcli.exe [authentication_parameters] -fileTypeExtensionQuery=".jpg,.mp3"
```

-fileTypeQuery, -typequery

Returns a list of file extensions associated with the specified file type.

Example

```
dswcli.exe [authentication_parameters] -fileTypeQuery="image"
```

3.7 Pair Actions

-pair

Performs operations on a pair. When it is used without other pair action options, all pairs on the server are listed.

Syntax

```
DswCli.exe [authentication_parameters] -pair [pair_action] [-pairId
pair_option]
```

For information about how to provide the servername and login credentials that are needed to connect to the server that you want to manage, see Section 3.3, “Authentication Parameters,” on page 13.

- Section 3.7.1, “Add a Pair,” on page 25
- Section 3.7.2, “Delete a Pair,” on page 27
- Section 3.7.3, “Associate a Pair and Policy,” on page 27
- Section 3.7.4, “Disassociate a Pair and Policy,” on page 27
- Section 3.7.5, “Add Exclude/Include Paths to a Pair,” on page 28
- Section 3.7.6, “Remove Exclude/Include Paths from a Pair,” on page 29
- Section 3.7.7, “List Pairs,” on page 29
- Section 3.7.8, “List Details for a Pair,” on page 30
- Section 3.7.9, “Run Policies on a Pair,” on page 30
- Section 3.7.10, “Move Files or Folders in a Pair,” on page 30

3.7.1 Add a Pair

-add

The `-add` action creates the pair with the desired name and stores the configuration as an XML file in the `...\Dynamic File Services\Pairs` folder.

IMPORTANT: Before you issue a command to create a pair, make sure your system meets the requirements in "Dynamic File Services Pairs" in the *Dynamic File Services 1.5 Administration Guide*.

Syntax

```
DswCli.exe [authentication_parameters] -pair -add -name=<pairname>
-primaryPath=<path> -secondaryPath=<path> option
```

You must specify a name for the pair, a primary path, and a secondary path. You can optionally specify a description of the pair.

IMPORTANT: You must create a network share for the primary path in order to provide a merged view of the data for users. Use the Microsoft Network Sharing tool to create a network share. Users connect to the network share by mapping a local drive letter on their workstations to the network share. All user access takes place through the share.

If the secondary location is a remote share, you must create the remote share and publish it in Active Directory before you issue the command to create the pair. You must add the `DFSStorageRights` group to the remote share and give the group all permissions. We recommend that you verify that the setup is correct before granting users access to the pair or running policies on the pair.

After you create a pair, you must associate it with one or more policies in order for files to be moved between the paths. For information about creating policies, see the -add action option for a policy command.

Add Pair Parameters

-name

Specifies the pair name. The name must be unique on the server you are managing.

Syntax

```
-name="pairname"
```

Example

```
-name="myPair"
```

-primaryPath

Specifies the path of the primary location in the pair. The drive or path must already exist; the command does not create it for you.

Syntax

```
-primaryPath="path"
```

Examples

```
-primaryPath="C:\users"
```

```
-primaryPath="M:"
```

```
-primaryPath="K:\engineering\proj1"
```

-secondaryPath

Specifies the path of the secondary location in the pair. The drive or path must already exist; the command does not create it for you. Beginning in version 1.5, the path can also be a UNC (Universal Naming Convention) path to a remote file server.

Syntax

`-secondaryPath="`*`path`*`"`

Examples

```
-secondaryPath="L:\users\media"
```

```
-secondaryPath="N:\m_sh"
```

```
-secondaryPath="Z:\project1"
```

```
-secondaryPath="\\remoteserver\share"
```

Add Pair Option

-description

Specifies a textual description of the pair.

Syntax

`-description="`*`text`*`"`

Example

```
-description="Moves graphics files to the secondary location."
```

Add Pair Examples

Create a Pair

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair -add -name="myPair"
-primaryPath="e:\PrimaryPath" -secondaryPath="f:\SecondaryPath"
```

This command uses the user credentials of the Administrator user to log you in to the server where you are running the command. You can also provide the credentials of a user who is a member of the `Dynamic File Services` group. It creates a pair named `myPair` on the server. The pair’s primary path is the `e:\PrimaryPath` directory. The pair’s secondary path is the `f:\SecondaryPath` directory. No files are moved until you create a policy for the pair, and associate the policy to the pair.

Create a Pair with a Description

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair -add -name="ProjectA"
-primaryPath="e:\PrimaryPath" -secondaryPath="f:\SecondaryPath"
-description=”Project A management files”
```

This command uses the user credentials of the Administrator user to log you in to the server where you are running the command. You can also provide the credentials of a user who is a member of the `Dynamic File Services` group. It creates a pair named ProjectA. It uses the optional description field to provide more information about the pair. The pair’s primary path is the *`e:\PrimaryPath`* directory. The pair’s secondary path is the *`f:\SecondaryPath`* directory. No files are moved until you create a policy for the pair, and associate the policy to the pair.

3.7.2 Delete a Pair

-delete

The `-delete` action removes the specified pair from the pair database. All links between the two storage locations are removed. Data is not destroyed. The data is not moved; that is, the data remains in the location where it was stored when the delete command was executed. The associations between the pair and any policies are removed. After the pair is deleted, the users who are logged in to the network share on the primary location can see and access the data only on the primary location.

You must specify the `pairId` for the pair that you want to delete.

Syntax

The delete option unlinks the two paths in a pair. The files are not deleted.

```
DswCli.exe [authentication_parameters] -pair -delete -pairId=<"pairname" |
"GUID" >
```

Example

The following `-pair` command deletes the pair named `myPair` on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair -delete -pairId="myPair"
```

3.7.3 Associate a Pair and Policy

-associate

The `-associate` action links a specified pair to a specified policy. You must specify the `pairId` parameter for the pair that you want to associate, and the `policyID` parameter for the policy.

Syntax

```
DswCli.exe [authentication_parameters] -pair -associate
-pairId=<"pairname" | "GUID" > -policyId=<"policyname" | "GUID">
```

Example

The following `-pair` command associates the pair named `myPair` with the policy named `myPolicy` on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair -associate -pairId="myPair" -policyId="myPolicy"
```

3.7.4 Disassociate a Pair and Policy

-disassociate

The `-disassociate` action removes the association between a given pair and policy. You must specify the `pairId` parameter for the pair. You must specify the `policyId` parameter for the policy that you no longer want to run on the pair.

Syntax

```
DswCli.exe [authentication_parameters] -pair -disassociate
-pairId=<"pairname" | "GUID" > -policyId=<"policyname" | "GUID" >
```

Example

The following `-pair` command removes the association between the pair named `myPair` and the policy named `myPolicy` on the specified server.

```
DswCli.exe -servername=localhost -username=Administrator -password=novell
-pair -disassociate -pairId="myPair" -policyId="myPolicy"
```

3.7.5 Add Exclude/Include Paths to a Pair

-addExcludeIncludePaths

Adds exclude or include folder paths to a pair. It requires the `-pairId`, `-paths`, and `-flags` parameters. A given pair can include folders or exclude folders, but you cannot do both.

Syntax

```
DswCli.exe [authentication_parameters] -pair -addExcludeIncludePaths -
pairID -flags -paths
```

Examples

```
-addExcludeIncludePaths -pairId="myPair" -flags="exclude" -paths="path1"
```

```
-addExcludeIncludePaths -pairId="myPair" -flags="include" -
paths="path1;path2;path3"
```

-paths

Specifies one or more directory paths to be included or excluded from policies run on the pair. Separate multiple paths with a semicolon. Use this option in combination with the `-flags` option.

Syntax

```
-paths=<"dirpath[;dirpath;...]">
```

Examples

```
-flags="exclude" -paths="path1"
```

```
-flags="include" -paths="path1;path2;path3"
-flags="exclude" -paths="C:\primary\subdir1;C:\primary\subdir2"
```

-flags

Specifies the flag to exclude or include the folders specified by the `-paths` option. A given pair can include folders or exclude folders, but you cannot do both.

Syntax

```
-flags=<"exclude" | "include">
```

Examples

```
-flags="exclude" -paths="path1"
```

```
-flags="include" -paths="path1;path2;path3"
```

3.7.6 Remove Exclude/Include Paths from a Pair

-deleteExcludeIncludePaths

Removes exclude or include folder paths from a pair. It requires the `-pairId`, `-paths`, and `-flags` options.

Syntax

```
DswCli.exe [authentication_parameters] -pair -addExcludeIncludePaths -
pairID -flags -paths
```

Examples

```
-addExcludeIncludePaths -pairId="myPair" -flags="exclude" -paths="path1"
```

```
-addExcludeIncludePaths -pairId="myPair" -flags="include" -
paths="path1;path2;path3"
```

-paths

Specifies one or more directory paths to be included or excluded from policies run on the pair. Separate multiple paths with a semicolon. Use this option in combination with the `-flags` option.

Syntax

```
-paths=<"dirpath[;dirpath;...]">
```

Examples

```
-flags="exclude" -paths="path1"
```

```
-flags="include" -paths="path1;path2;path3"
-flags="exclude" -paths="C:\primary\subdir1;C:\primary\subdir2"
```

-flags

Specifies the flag to exclude or include the folders specified by the `-paths` option. A given pair can include folders or exclude folders, but you cannot do both.

Syntax

```
-flags=<"exclude" | "include">
```

Examples

```
-flags="exclude" -paths="path1"
```

```
-flags="include" -paths="path1;path2;path3"
```

3.7.7 List Pairs

(no action options)

When the `-pair` action option is used without any other parameters or options, all pairs on the server are listed.

Syntax

```
DswCli.exe [authentication_parameters]] -pair
```

Example

The following `-pair` command displays a list of all pairs on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair
```

3.7.8 List Details for a Pair

-detail

The `-detail` action provides a detail listing for a pair. You must specify the `pairId` parameter for the pair.

Syntax

```
DswCli.exe [authentication_parameters] -pair -detail -pairId=<"pairname" |
"GUID">
```

Example

The following `-pair` command lists details for the pair named `myPair` on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair -detail -pairId="myPair"
```

3.7.9 Run Policies on a Pair

-run

The `-run` action causes all policies defined in the specified policy ID list to be executed for the specified pair. You must specify the `pairId` parameter for the pair. Use the `-policyIdList parameter` to list one or more policies to run. If the policy list is not specified, all policies are run that are associated with the specified pair.

Syntax

```
DswCli.exe [authentication_parameters] -pair -run
-pairId=<"pairname"|"GUID"> [-policyIdList="policy1[,policy2,...]"]
```

Example

The following `-pair` command runs the DynamicFS policies named `myPolicy` and `myPolicy100` for the pair named `myPair` on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -pair -run -pairId="myPair"
-policyIdList="myPolicy,myPolicy100"
```

3.7.10 Move Files or Folders in a Pair

-move

Moves a specified list of files or a list of folders in the specified direction. You can specify either file or both files in a single move command.

Syntax

```
DswCli.exe [authentication_parameters] -pair
 -pairId=<pairname|GUID>
 -move { -folderList | -fileList }
 { -primaryToSecondary  or -secondaryToPrimary }
```

Description

The `-move` option requires the following options be specified:

```
 -pair
 -pairId=<pairname|GUID>
 { -primaryToSecondary or -secondaryToPrimary }
```

{ `-folderList` or `-folderList` }

The `-pairId` option identifies the pair where the folders are located.

The `-primaryToSecondary` or `-secondaryToPrimary` option specifies which direction to move the folders and their content.

In the `-fileList` option, the `ListOfFilesToMove.txt` file contains a list of files to move.

In the `-folderList` option, the `ListOfFoldersToMove.txt` file contains a list of folders to move. The folders and all of their contents are moved.

Example

The following `-pair` command moves the folders specified in the `ListOfFoldersToMove.txt` file for a pair named `myPair` on the specified server from the primary location to the secondary location.

```
DswCli.exe -servername="localhost" -username="Administrator"
  -password="novell" -pair -pairId="myPair"
  -moveFolders -folderList="c:\dir1\ListOfFoldersToMove.txt"
  -primaryToSecondary
```

-fileList="*path\ListOfFilesToMove.txt*"

Specifies the path to a text file that contains a list of the files that are to be moved. This parameter is used in combination with the `-move` option.

Each entry in the file provides path and filename of the file to be moved. Each file appears on a different line in the text file. The file path is relative to the pair's root directory.

For example, the following lines are sample text content for the `ListOfFilesToMove.txt` file:

```
\file.jpg
\dir1\anotherfile.avi
\dir2\dir3\file3.bmp
```

Examples

```
-fileList="M:\primary\dir1\ListOfFilesToMove.txt"
-fileList="C:\dir1\movelist.txt"
```

-folderList="*path\ListOfFoldersToMove.txt*"

Specifies the path to a text file that contains a list of the files that are to be moved. This parameter is used in combination with the `-move` option.

Each entry in the file provides path of the folder to be moved. Each folder path appears on a different line in the text file. The folder path is relative to the pair's root directory.

For example, the following lines are sample text content for the `ListOfFoldersToMove.txt` file:

```
\home\user1\music
\dir1\archive
\dir2\dir3\reports
```

Examples

```
-folderList="M:\primary\dir1\ListOfFoldersToMove.txt"
-folderList="C:\dir1\movelist.txt"
```

3.8 Policy Actions

-policy

Performs operations on a policy. When it is used without other policy action options, all policies on the server are listed.

Syntax

```
DswCli.exe [authentication_parameters] -policy [policy_action [policyId |
policyIdList] [policy_option]]
```

For information about how to provide the servername and login credentials that are needed to connect to the server that you want to manage, see Section 3.3, “Authentication Parameters,” on page 13.

- Section 3.8.1, “Policy Parameters,” on page 32
- Section 3.8.2, “Add a Policy,” on page 33
- Section 3.8.3, “Delete a Policy,” on page 40
- Section 3.8.4, “List All Policies,” on page 40
- Section 3.8.5, “List Details for a Policy,” on page 40

3.8.1 Policy Parameters

-policyId

Specifies the policy identifier. You can provide the policy name, or provide the GUID of the policy.

Syntax

```
-policyId=< "policyname" | "GUID" >
```

Examples

```
-policyId="myPolicy"
```

```
-policyId="My JPG and BMP Policy"
```

```
-policyId="My Last Modified GT 6 Months Policy"
```

-policyIdList

Specifies a comma-separated list of `policyId` parameters. For each policy, you can provide the policy name, or provide the GUID of the policy.

If the policy list is not specified, all policies that are associated with the specified pair are run.

Syntax

```
-policyIdList="<policyname|GUID>,<policyname|GUID>,..."
```

Example

```
-policyIdList="myPolicy,myPolicy100"
```

-primaryToSecondary

Specifies the direction to move files. If a direction option is not specified, the default direction is primary to secondary.

Restriction: This option cannot be used with the `-secondaryToPrimary` option.

-secondaryToPrimary

Specifies the direction to move files. If a direction option is not specified, the default direction is primary to secondary.

Restriction: This option cannot be used with the primaryToSecondary option.

3.8.2 Add a Policy

-add

The `-add` action creates the policy with the specified name and stores the configuration as an XML file in the `...\Dynamic File Services\Policies` folder.

Syntax

```
DswCli.exe [authentication_parameters] -policy -add -name=<policyname>
options filterOptions frequencyOptions
```

After you add a policy, you must associate it with one or more pairs before you can run it on the pairs. For information, see the `-associate` action option for a pair command.

Add Policy Parameter

-name

Specifies a name for the policy. The name must be unique on the server you are managing.

Syntax

`-name="policyname"`

Example

`-name="myPolicy"`

Add Policy Description Option

Specifies the following as options in combination with the `-add` action.

Options	Description
`-description="text"`	Specifies a textual description of the policy. This option is optional.

Add Policy Filter Options

Specify the following as filter options in combination with the `-add` action. Filter options are applied in combination to determine which files you want to move. All of the specified filter options must be met in order for the file to be moved.

You can specify one or more filter options in the same policy. Only one filter option of each type can be used in the same policy.

Filters set in the same policy are enforced as AND conditions. A file must meet all filter conditions to be moved. For example, if you specify a filter with the file extension option for files ending in `*.jpg and *.gif`, then any file with either of the specified extensions is moved. If you specify a second filter with a file size option for files with a file size greater than 5 MB, only the `*.jpg` and `*.gif` files that have a file size greater than 5 MB are moved.

Filters set in different policies that run at the same time are enforced as OR conditions. A file that meets the conditions in any one of the policies is moved. In the example above, if each of the filters was set in two separate policies and both policies run at the same time, then a file is moved if it ends in `*.jpg` or `*.gif`, or the file is moved if it is greater than 5 MB with any file extension.

Filter Options	Description

`-fileSize="ccn[...]uu"`
Where
`cc` = `gt` or `lt` conditional
`n[...]` = any length numeric value
`uu` = units of size
Valid `uu` values are:
`b` =bytes
`kb` =kilobytes
`mb` =megabytes
`gb` =gigabytes
	Specifies the file size of files to filter for movement.
	Examples:
	Move all files that are greater than 1 GB in size.
	`-fileSize="gt1gb"`
	Move all files that are less than 100 KB in size.
	`-fileSize="lt100kb"`

`-lastAccessed="ccn[...]u"`
Where
`cc` = `gt` or `lt` conditional
`n[...]` = any length numeric value
`u` = units of time
Valid `u` values are:
`d` = days
`w` = weeks
`m` = months
`y` = years
	Moves files that meet the specified condition based on the last access time.
	Examples:
	Move all files that have an access time greater than 10 days old.
	`-lastAccessed="gt10d"`
	Move all files that have an access time less than 5 weeks old.
	`-lastAccessed="lt5w"`

`-lastModified="ccn[...]u"`
Where
`cc` = `gt` or `lt` conditional
`n[...]` = any length numeric value
`u` = units of time
Valid `u` values are:
`d` = days
`w` = weeks
`m` = months
`y` = years
	Moves files that meet the specified condition based on the last modified time.
	Examples:
	Move all files that have a modified time greater than 10 days old.
	`-lastModified="gt10d"`
	Move all files that have a modified time less than 5 weeks old.
	`-lastModified="lt5w"`

Filter Options	Description

`-fileExtension="`*`extensionList`*`"`
In Dynamic File Services 1.5 and later, you can use the `-filePattern` option. The `-fileextension` option has been aliased to `-filePattern`.
`-filePattern="patternList"`
	Moves files that have the specified file extensions. An asterisk (*) can be used as a wildcard character. Separate multiple entries with a comma.
	Examples:
	Move all `.jpg` files and `.gif` files:
	`-filePattern="*.jpg,*.gif"`
	`-fileExtension="*.jpg,*.gif"`
	Move all files that begin with gw that have the file extension `.mail`:
	`-filepattern="gw*.mail"`
	Move all `.txt` files:
	`-filePattern="*.txt"`

`-filetypes=”typeList”`
Valid types are:
`application`
`audio`
`compressed`
`image`
`message`
`model`
`system`
`text`
`video`
	Moves files based on the file type. Separate multiple entries with a comma.
	Examples:
	Move video and audio files:
	`Example: -filetype="video,audio"`

Add Policy Schedule Frequency Options

Specify one frequency option in combination with the -add action. The specified frequency option determines when the is enforced. The policy is enforced for all pairs associated with the policy.

Frequency Options	Description

`-manual`	Scan frequency is performed manually.
	Restrictions: This option cannot be combined with the following frequency options:
	`-hourly`
	`-daily`
	`-weekly`
	`-monthly`
	`-yearly`

Frequency Options	Description

`-hourly`	Scan frequency is performed hourly.
	Restrictions: This option cannot be combined with the following frequency options:
	`-manual`
	`-daily`
	`-weekly`
	`-monthly`
	`-yearly`

`-daily[="hh:mm[-hh:mm]"]`
`hh:mm[-hh:mm]` specifies the scan start and stop time, respectively. Twenty-four-hour time is required with valid values of `00:00` to `23:45` (that is, midnight to 11:45 p.m.). The first two units specify hours from `00` to `23`. The second two units specify minutes in 15-minute increments of 00, 15, 30, or 45.
	Scan frequency is performed daily.
	If the start and stop time are omitted, a default start time of 00:00 (midnight) is assumed and the scan runs until complete.
	If start time is provided and the stop time is omitted, the scan starts at the given time and runs until complete.
	Restrictions: This option cannot be combined with the following frequency options:
	`-manual`
	`-hourly`
	`-weekly`
	`-monthly`
	`-yearly`
	Example:
	The scan runs daily from 1:00 p.m. to 3:00 p.m.:
	`-daily="13:00-15:00"`

Frequency Options	Description

`-weekly[="nn[@hh:mm[-hh:mm]]"]`
Where
nn specifies the day of the week. Valid values are:
`01` = Sunday
`02` = Monday
`03` = Tuesday
`04` = Wednesday
`05` = Thursday
`06` = Friday
`07` = Saturday
`@hh:mm[-hh:mm]` specifies the scan start and stop time, respectively.Twenty-four-hour time is required with valid values of `00:00` to `23:45` (that is, midnight to 11:45 p.m.). The first two units specify hours from `00` to 23. The second two units specify minutes in 15-minute increments of 00, 15, 30, or 45.
	Scan frequency is performed weekly.
	If the day of the week and the start and stop times are omitted, the scan starts on Sunday at 00:00 (12:00 midnight), and the scan runs until complete.
	If the start and stop time are omitted, a default start time of `00:00` (midnight) is assumed, and the scan runs until complete.
	If start time is provided and the stop time is omitted, the scan starts at the given time and runs until complete.
	Restrictions: This option cannot be combined with the following frequency options:
	`-manual`
	`-hourly`
	`-daily`
	`-monthly`
	`-yearly`
	Examples:
	The scan runs every Monday from 1:00 p.m. until complete:
	`-weekly="02@13:00"`
	The scan runs every Monday from 1:00 a.m. to 5:00 a.m.:
	`-weekly="02@01:00-05:00"`

Frequency Options	Description

`-monthly[="nn[@hh:mm-hh:mm]]"]`
nn specifies the day of the month numerically. Valid values are from `01` to `31`.
`@hh:mm[-hh:mm]` specifies the scan start and stop time, respectively. Twenty-four-hour time is required with valid values of `00:00` to `23:45` (that is, midnight to 11:45 p.m.). The first two units specify hours from `00` to `23`. The second two units specify minutes in 15-minute increments of 00, 15, 30, or 45.
	Scan frequency is performed monthly.
	If the day of the month and the start and stop times are omitted, the scan starts on first day of the month at 00:00 (midnight) and runs until complete.
	If the start and stop time are omitted, a default start time of 00:00 is assumed and the scan runs until complete.
	If start time is provided and the stop time is omitted, the scan starts at the given time and runs until complete.
	Restrictions: This option cannot be combined with the following frequency options:
	`-manual`
	`-hourly`
	`-daily`
	`-weekly`
	`-yearly`
	Examples:
	The scan runs on the 25th day of the month from 1:00 p.m. until complete:
	`-monthly="25@13:00"`

Frequency Options	Description
`-yearly="dd:nn[@hh:mm[-hh:mm]]"`	Scan frequency is performed yearly.
`dd` specifies the day of the month numerically. Valid values are from `01` to `31`.	The day of the month and the month fields are required to be specified. There are no defaults specified.
`nn` specifies the month numerically. Valid values are 01 to 12, where the numbers correspond to the sequential months of the year in the Gregorian calendar.	If the start and stop times are omitted, a default start time of 00:00 is assumed and the scan runs until complete.

`@hh:mm[-hh:mm]` specifies the scan start and stop time, respectively. Twenty-four-hour time is required with valid values of `00:00` to `23:45` (that is, midnight to 11:45 p.m.). The first two units specify hours from `00` to `23`. The second two units specify minutes in 15-minute increments of 00, 15, 30, or 45.	If start time is provided and the stop time is omitted, the scan starts at the given time and runs until complete.
	Restrictions: This option cannot be combined with the following frequency options:
	`-manual`
	`-hourly`
	`-daily`
	`-weekly`
	`-monthly`
	Examples:
	The scan runs on day 15, month 6, starting at 1:00 p.m. and running until complete:
	`-yearly="15:06@13:00"`

Add Policy Examples

Each of the following `-policy` commands creates a policy with a single filter specified. The direction option is not set in these policies, so data is moved in the default direction of primary to secondary. If no frequency is specified, the policy can be run manually.

-fileExtension Policy Filter

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -add -name="My Pictures Policy"
-fileExtension="*.jpg,*.bmp,*.gif"
```

-fileSize Policy Filter

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -add -name="My Size GT 1GB Policy"
-fileSize="gt1gb"
```

-frequency Policy Filter

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -add -name="My Weekly at 1300 Policy"
-weekly="01@1300"
```

-lastAccessed Policy Filter

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -add -name="My Last Accessed LT 5 Weeks
Policy" -lastAccessed="lt5w"
```

-lastModified Policy Filter

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -add -name="My Last Modified GT 10 Days
Policy" -lastModified="gt10d"
```

3.8.3 Delete a Policy

-delete

The `-delete` action removes the specified policy from the database. All links to any pairs are removed.

Syntax

```
DswCli.exe [authentication_parameters] -policy -delete
-policyId=<"policyname"|"GUID">
```

Example

The following `-policy` command deletes the DynamicFS policy named myPolicy on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -delete -policyId="myPolicy"
```

3.8.4 List All Policies

(no action options)

When the `-policy` action option is used without any other parameters or options, all policies on the server are listed.

Syntax

```
DswCli.exe [authentication_parameters] -policy
```

Example

The following `-policy` command displays a list of all policies on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy
```

3.8.5 List Details for a Policy

-detail

The `-detail` action provides a detail listing of the requested policy. You must specify the `policyId` parameter for the policy.

Syntax

```
DswCli.exe [authentication_parameters] -policy -detail -policyId=<
"policyname" | "GUID" >
```

Example

The following `-policy` command lists details for the DynamicFS policy named myPolicy on the specified server.

```
DswCli.exe -servername="localhost" -username="Administrator"
-password="novell" -policy -detail -policyId="myPolicy"
```

3.9 Using CLI Commands in Scripts

When you use Dynamic File Services commands in scripts, you can use the -silent option to prevent the results from displaying to a console. The script should check for an exit code to report whether a command succeeded or failed. The `-silent` option can be added to any pair or policy command.

-silent

Use this option when you do not want to display errors or help on execution, such as in scripts for batch files where the batch file checks for exit codes.

If a command fails, you can enter the command at the Command Prompt console without the `-silent` option to view the error messages.

Syntax

```
DswCli.exe [authentication_parameters] -pair -silent [pair_actions]
[pair_parameters] [pair_options]
```

```
DswCli.exe [authentication_parameters] -policy -silent [policy_actions]
[policy_parameters] [policy_options]
```

For information about the DynamicFS command options, see the following resources:

Option	Reference
authentication_parameters	Section 3.3, “Authentication Parameters,” on page 13
-pair pair_actions pair_parameters pair_options	Section 3.7, “Pair Actions,” on page 24
-policy policy_actions policy_parameters policy_options	Section 3.8, “Policy Actions,” on page 32

Exit Codes

The `DswCli.exe` command returns an exit code of 0 or 1.

Return Code	Description
0	Success
1	Failure

3.10 Example Scripts Using CLI Commands

This section provides example scripts for Dynamic File Services.

- Section 3.10.1, “Creating a Pair and Policy,” on page 42
- Section 3.10.2, “Running the Policies Manually,” on page 43

- Section 3.10.3, “Deleting the Policies,” on page 43
- Section 3.10.4, “Deleting the Pair Relationship,” on page 43

3.10.1 Creating a Pair and Policy

This example uses the DynamicFS CLI to set up one pair named `myPair` with a primary path of `e:\Primary` and a secondary path of `f:\Secondary`. It creates three policies and associates them to the pair:

- The `GRAPHICS` policy moves graphic files to the secondary path. It is scheduled to run daily at midnight.
- The `OLD FILES` policy moves files that have not been accessed or modified within two weeks to the secondary path. It is scheduled to run weekly on Saturday at midnight.
- The `ACCESSED FILES` policy moves files accessed during the past day from the secondary to the primary. It is scheduled to run hourly.

```
ECHO Create Dynamic File Services Setup of one pair and three policies

ECHO Create the pair named myPair

DswCli.exe -pair -add -name=myPair -primaryPath=e:\Primary -
secondaryPath=f:\Secondary -description="Dynamic File Services Pair linking
user home directories and old storage" -serverName=192.168.1.3 -port=8999 -
userName=Administrator -password=myPassword

ECHO Create the policy named GRAPHICS to secondary

DswCli.exe -policy -add -name="GRAPHICS to secondary" -
fileExtension=JPG,JPEG,BMP,GIF,PNG,RAW -daily="00:00" -primaryToSecondary -
description="Moves all graphic files to secondary storage. Runs daily at
midnight." -serverName=192.168.1.3 -port=8999 -userName=Administrator -
password=myPassword

ECHO Associate the policy to myPair

DswCli.exe -associate -policyId="GRAPHICS to secondary" -pairId=myPair -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword

ECHO Create the policy named OLD FILES to secondary

DswCli.exe -policy -add -name="OLD FILES to secondary" -lastModified="gt2w" -
lastAccessed="gt2w" -primaryToSecondary -description="Moves files that have
not been modified or accessed for over two weeks to secondary. Runs weekly on
Saturday morning at midnight" -weekly="05@00:00" -serverName=192.168.1.3 -
port=8999 -userName=Administrator -password=myPassword

ECHO Associate the policy to myPair

DswCli.exe -associate -policyId="OLD FILES to secondary" -pairId=myPair -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword

ECHO Create the policy named ACCESSED FILES to primary

DswCli.exe -policy -add -name="ACCESSED FILES to primary" -lastModified="lt1d"
-primaryToSecondary -description="Moves files that were accessed within the
```

```
last day to the primary. Runs hourly every day." -hourly -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword

ECHO Associate the policy to myPair

DswCli.exe -associate -policyId="ACCESSED FILES to primary" -pairId=myPair -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword
```

3.10.2 Running the Policies Manually

The following command uses a Dynamic File Services CLI command to run the three policies manually for the pair named myPair:

```
ECHO Manually run all policies

DswCli.exe -run -policyIdList="OLD FILES to secondary","ACCESSED FILES to
primary","OLD FILES to secondary" -pairId=myPair -serverName=192.168.1.3 -
port=8999 -userName=Administrator -password=myPassword
```

3.10.3 Deleting the Policies

The following example uses the Dynamic File Services CLI to delete the three policies. The policies' associations to the pair are also deleted.

```
ECHO Delete the policies

DswCli.exe -policy -delete -policyId="GRAPHICS to secondary" -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword

DswCli.exe -policy -delete -policyId="OLD FILES to secondary" -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword

DswCli.exe -policy -delete -policyId="ACCESSED FILES to primary" -
serverName=192.168.1.3 -port=8999 -userName=Administrator -password=myPassword
```

3.10.4 Deleting the Pair Relationship

The following example uses the Dynamic File Services CLI to delete the link between the primary path and secondary path. No files are deleted.

```
DswCli.exe -pair -delete -pairId="myPair" -serverName=192.168.1.3 -port=8999 -
userName=Administrator -password=myPassword
```

Dynamic File Services File System Inventory Utility

4

The Novell Dynamic File Services (DynamicFS) File System Inventory utility (`DswInventory.exe`) creates an inventory of the files in a pair, and writes the report to a file. On computers where the DynamicFS Service is installed, the File System Inventory utility is found in the directory where you installed DynamicFS. By default, DynamicFS is installed in the `C:\Program Files\Dynamic File Services` directory. The output inventory files are written in XML format. You can use a text editor or an XML editor to display the output of the inventories that you run manually.

IMPORTANT: A file system inventory of each pair is automatically generated daily with the pair history run. For information, see "Viewing the Pair History" in the *Dynamic File Services 1.5 Administration Guide*.

4.1 DswInventory

4.1.1 Description

The Dynamic File Services File System Inventory utility is used to create an inventory of the file system and write the desired output to a file. You must create a command file for each report that you want to create that specifies the options to use and the output file where you want write the results.

For information about creating the command file, see Section 4.2, "Preparing a Command File for a File System Inventory," on page 46.

4.1.2 Syntax

You use the following syntax to run the utility:

```
DswInventory.exe commandFile [commandFile2...]
```

Log in to the DynamicFS server as the Administrator user or a user with Administrator privileges, then issue the command in the Command Prompt console. It does not matter if the user is also a member of the `Dynamic File Services` group.

IMPORTANT: If remote shares are used in pairs, you must log in as a domain user with Administrator privileges on the DynamicFS server that also has Active Directory rights on the remote shares and NTFS file system access rights on the secondary storage locations. Otherwise, a secondary location is reported as missing. One way to do this is to add the administrator user as a member of the Dynamic File Services Storage Rights (`DFSStorageRights`) group.

4.2 Preparing a Command File for a File System Inventory

Before you can use the Dynamic File Services File System Inventory tool, you must create a text file (referred to as the command file) where you specify the path to be inventoried, the type of reports to create, the filenames to use for the output reports, and the inventory options to use. You can create multiple command files to generate different inventory reports that meet the criteria that are specified in the different command files.

In a command file, specify the following information about the inventory report that you want to create. Put each command on a separate line in the following order:

```
inventory_path
report_type
[inventory_option]
```

IMPORTANT: If there are errors in any parameter that you specify, the generated report files are empty.

The syntax for each of the required and optional elements is described in more detail in the following sections:

- Section 4.2.1, “Inventory Path,” on page 46
- Section 4.2.2, “Report Types and Filenames,” on page 47
- Section 4.2.3, “Action List Filename,” on page 47
- Section 4.2.4, “Inventory Options,” on page 47

4.2.1 Inventory Path

Specify the path that you want to inventory for this report. The inventory path can be the primary path for the pair or for any path in the pair.

`inventory_path`

Specify the full path, including the drive letter. For example:

```
C:\DATA\dir1\dir2
```

A command file can contain multiple paths. Place each path on a separate line. The combined output is written to the same report file. To write the inventory for each path to separate output files, create a separate command file for each path.

4.2.2 Report Types and Filenames

You can generate a summary report, a detailed report, or both reports. The summary report contains the statistics about the files, but does not contain the filenames. The detailed report includes both statistics and the matching filenames.

Specify a different filename for each report. The output files are in the `.xml` format.

Report Option	Description
`/summary=`*`summary_report_filename`*`.xml`	After an inventory is performed, creates a summary report file with the specified filename.
`/detailed=`*`detailed_report_filename`*`.xml`	After an inventory is performed, creates a detailed report file with the specified filename.

For example:

```
/summary=DATA_summary.xml
/detailed=DATA_detailed.xml
```

4.2.3 Action List Filename

You can request that a list of the filtered files be written to a separate file by using the /actionlist parameter. Specify a filename for a file where a list of files will be written.

Action List Option	Description
`/actionlist=`*`filename`*	Requests a list of files to be generated in the specified file.
`/actionlistappend`	Append the list of files to the specified action list file instead of overwriting its existing content.

4.2.4 Inventory Options

Specify one inventory option per line. If no inventory options are specified, then all options are enabled for the report. The inventory results are written to the report files that you requested.

You can specify none, one, or multiple general inventory options in any combination:

Inventory Option	Description
`/access`	Inventories files by last access time.
`/create`	Inventories files by creation time.
`/modify`	Inventories files by modification time.
`/owner`	Inventories files by owner name.
`/size`	Inventories files by file length.
`/extension`	Inventories files by file extension.

Inventory Option	Description
`/empty`	Tracks empty files and folders and adds the list to the report.

If you want to specify constraints for any one of the inventory options, you must specify constraints for each of the inventory options that you use in the same command file. For each parameter type, you can specify only one of its constraints.

In the following commands, the time duration notation `ddd.hh:mm:ss` indicates days (0 to 999), hours (0 to 24), minutes (0 to 60), and seconds (0 to 60). You can also specify days (ddd) alone.

Inventory Option	Description
`/access>`*`ddd.hh:mm:ss`*	Inventories files by last access times that are greater than the specified time duration.
`/access<`*`ddd.hh:mm:ss`*	Inventories files by last access times that are less than the specified time duration.
`/create>`*`ddd.hh:mm:ss`*	Inventories files by creation times that are greater than the specified time duration.
`/create<`*`ddd.hh:mm:ss`*	Inventories files by creation times that are less than the specified time duration.
`/modify>`*`ddd.hh:mm:ss`*	Inventories files by modification times that are greater than the specified time duration.
`/modify<`*`ddd.hh:mm:ss`*	Inventories files by modification times that are less than the specified time duration.
`/owner=`*`name`*`[,`*`nextName`*`...]`	Inventories files by the specified owner name or names. Delimit multiple names with a comma and no spaces.
`/size>amount`	Inventories files by file length that is greater than the amount specified. Specify the amount in bytes. For example, to inventory files greater than 1 MB, specify: `/size>1024`
`/size<amount`	Inventories files by file length that is less than the amount specified. Specify the amount in bytes. For example, to inventory files less than 1 MB, specify: `/size<1024`
`/extension=*.`*`extension`*`[,*.`*`extension2`*`...]`	Inventories files with the specified file extension. Separate entries with a comma and no spaces.

4.3 Example of a General Inventory

In this example, assume that you want an inventory for the Dynamic File Services pair that has a primary path of `e:\`. You perform the following tasks to manually generate a report:

- Section 4.3.1, "Create a Command File," on page 49
- Section 4.3.2, "Run the File System Inventory Utility," on page 49
- Section 4.3.3, "View the Summary Report," on page 49
- Section 4.3.4, "View the Detailed Report," on page 50

4.3.1 Create a Command File

Use a text editor to create a command file called `FScommands.txt` in the `Dynamic File Services` folder. The first line is the primary path for the pair. The second line requests a summary report to be created and specifies the output file for the summary report. The third line requests a detailed report to be created and specifies the output file for the detailed report. No inventory options are specified, so all inventory options are enabled.

```
e:\
/summary=e:\mySummary.xml
/detailed=e:\myDetails.xml
```

4.3.2 Run the File System Inventory Utility

1. Log in to the server as the Administrator user, or as a user in the Administrators group.
2. Open a Command Prompt console, then go to the `Dynamic File Services` folder.
3. At the prompt, enter

   ```
   DswInventory.exe FSCommands.txt
   ```

4.3.3 View the Summary Report

The summary results are written to the `e:\mySummary.xml` file. The following is sample output of a summary report:

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
- <DswInventory GenerationDateTime="8/27/2009 3:10:37 PM" generation="summary"
platform="Win32NT" OS="Microsoft Windows NT 5.2.3790 Service Pack 2">
- <folderlist>
- <folder>
- <![CDATA[ e:\
  ]]>
  </folder>
  </folderlist>
- <list type="Accessed">
  <criteria filter="Within Last Day" filecount="31" totalsize="74811"
sizeunit="1024" />
  </list>
- <list type="Creation">
  <criteria filter="Within Last Day" filecount="31" totalsize="74811"
sizeunit="1024" />
  </list>
- <list type="EmptyFiles">
```

```
  <criteria filter="Empty Files" filecount="11" totalsize="0" sizeunit="0" />
  </list>
- <list type="Extension">
  <criteria filter=".10file" filecount="10" totalsize="0" sizeunit="1024" />
  <criteria filter=".doc" filecount="1" totalsize="57" sizeunit="1024" />
  <criteria filter=".docx" filecount="1" totalsize="57" sizeunit="1024" />
  <criteria filter=".exe" filecount="1" totalsize="16" sizeunit="1024" />
  <criteria filter=".gif" filecount="1" totalsize="888" sizeunit="1024" />
  <criteria filter=".jpeg" filecount="1" totalsize="468" sizeunit="1024" />
  <criteria filter=".jpg" filecount="5" totalsize="2569" sizeunit="1024" />
  <criteria filter=".ods" filecount="1" totalsize="3" sizeunit="1024" />
  <criteria filter=".odt" filecount="4" totalsize="828" sizeunit="1024" />
  <criteria filter=".pdf" filecount="1" totalsize="641" sizeunit="1024" />
  <criteria filter=".rtf" filecount="1" totalsize="1" sizeunit="1024" />
  <criteria filter=".txt" filecount="1" totalsize="0" sizeunit="1024" />
  <criteria filter=".xml" filecount="2" totalsize="6" sizeunit="1024" />
  <criteria filter=".zip" filecount="1" totalsize="69277" sizeunit="1024" />
  </list>
- <list type="Modified">
  <criteria filter="Within Last Day" filecount="3" totalsize="69283"
sizeunit="1024" />
  <criteria filter="1 Month - 2 Months" filecount="1" totalsize="16"
sizeunit="1024" />
  <criteria filter="6 Months - 1 Year" filecount="27" totalsize="5512"
sizeunit="1024" />
  </list>
- <list type="Owner">
  <criteria filter="Administrators" filecount="31" totalsize="74811"
sizeunit="1024" />
  </list>
- <list type="Length">
  <criteria filter="Less than 1KB" filecount="2" totalsize="2" sizeunit="1024"
/>
  <criteria filter="1KB - 4KB" filecount="1" totalsize="3" sizeunit="1024" />
  <criteria filter="4KB - 16KB" filecount="1" totalsize="5" sizeunit="1024" />
  <criteria filter="16KB - 64KB" filecount="6" totalsize="193" sizeunit="1024"
/>
  <criteria filter="64KB - 256KB" filecount="1" totalsize="161"
sizeunit="1024" />
  <criteria filter="256KB - 1MB" filecount="8" totalsize="5170"
sizeunit="1024" />
  <criteria filter="64MB - 256MB" filecount="1" totalsize="69277"
sizeunit="1024" />
  </list>
  </DswInventory>
```

4.3.4 View the Detailed Report

The detailed results are written to the `e:\myDetails.xml` file. The following is sample output from a detailed report. Omitted entries are replaced by an ellipsis (…).

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
- <DswInventory GenerationDateTime="8/27/2009 3:10:37 PM"
generation="detailed" platform="Win32NT" OS="Microsoft Windows NT 5.2.3790
Service Pack 2">
- <folderlist>
- <folder>
- <![CDATA[ e:\
  ]]>
  </folder>
  </folderlist>
- <list type="Accessed">
- <criteria filter="Within Last Day" filecount="31" totalsize="74811"
sizeunit="1024">
- <information name="Spreadsheet.ods" matchvalue="8/26/2009 7:50:17 PM">
- <![CDATA[ e:\Primary\subfolder\Text Files\Spreadsheet.ods
  ]]>
  </information>
…
  </criteria>
  </list>
- <list type="Creation">
- <criteria filter="Within Last Day" filecount="31" totalsize="74811"
sizeunit="1024">
- <information name="Spreadsheet.ods" matchvalue="8/26/2009 7:50:17 PM">
- <![CDATA[ e:\Primary\subfolder\Text Files\Spreadsheet.ods
  ]]>
  </information>
…
  </criteria>
  </list>
- <list type="EmptyFiles">
- <criteria filter="Empty Files" filecount="11" totalsize="0" sizeunit="0">
- <information name="10file1.10file" matchvalue="0">
- <![CDATA[ e:\Primary\subfolder\10Files.10file\10file1.10file
  ]]>
  </information>
…
  </criteria>
  </list>
- <list type="Extension">
- <criteria filter=".10file" filecount="10" totalsize="0" sizeunit="1024">
- <information name="10file1.10file" matchvalue=".10file">
- <![CDATA[ e:\Primary\subfolder\10Files.10file\10file1.10file
  ]]>
  </information>
…
  </criteria>
- <criteria filter=".doc" filecount="1" totalsize="57" sizeunit="1024">
- <information name="Proposal.doc" matchvalue=".doc">
- <![CDATA[ e:\Primary\subfolder\Text Files\Proposal.doc
  ]]>
  </information>
  </criteria>
- <criteria filter=".docx" filecount="1" totalsize="57" sizeunit="1024">
- <information name="Advanced&.docx" matchvalue=".docx">
- <![CDATA[ e:\Primary\subfolder\Text Files\Advanced&.docx
  ]]>
  </information>
  </criteria>
- <criteria filter=".exe" filecount="1" totalsize="16" sizeunit="1024">
- <information name="GimmeFiles.exe" matchvalue=".exe">
- <![CDATA[ e:\Primary\subfolder\GimmeFiles.exe
  ]]>
…
  </information>
  </criteria>
```

```
- <criteria filter=".gif" filecount="1" totalsize="888" sizeunit="1024">
- <information name="poppies1920.gif" matchvalue=".gif">
- <![CDATA[ e:\Primary\subfolder\Pictures\poppies1920.gif
  ]]>
  </information>
  </criteria>
- <criteria filter=".jpeg" filecount="1" totalsize="468" sizeunit="1024">
- <information name="backtrack.jpeg" matchvalue=".jpeg">
- <![CDATA[ e:\Primary\subfolder\Pictures\backtrack.jpeg
  ]]>
  </information>
  </criteria>
- <criteria filter=".jpg" filecount="5" totalsize="2569" sizeunit="1024">
- <information name="arctica1920.jpg" matchvalue=".jpg">
- <![CDATA[ e:\Primary\subfolder\Pictures\arctica1920.jpg
  ]]>
  </information>
  </criteria>
- <criteria filter=".ods" filecount="1" totalsize="3" sizeunit="1024">
- <information name="Spreadsheet.ods" matchvalue=".ods">
- <![CDATA[ e:\Primary\subfolder\Text Files\Spreadsheet.ods
  ]]>
  </information>
  </criteria>
- <criteria filter=".odt" filecount="4" totalsize="828" sizeunit="1024">
- <information name="Investment Final.odt" matchvalue=".odt">
- <![CDATA[ e:\Primary\subfolder\Text Files\Investment Final.odt
  ]]>
  </information>
…
  </criteria>
- <criteria filter=".pdf" filecount="1" totalsize="641" sizeunit="1024">
- <information name="dep_stats.pdf" matchvalue=".pdf">
- <![CDATA[ e:\Primary\subfolder\Text Files\dep_stats.pdf
  ]]>
  </information>
  </criteria>
- <criteria filter=".rtf" filecount="1" totalsize="1" sizeunit="1024">
- <information name="Another Document.rtf" matchvalue=".rtf">
- <![CDATA[ e:\Primary\subfolder\Text Files\Another Document.rtf
  ]]>
  </information>
  </criteria>
- <criteria filter=".txt" filecount="1" totalsize="0" sizeunit="1024">
- <information name="Some Document.txt" matchvalue=".txt">
- <![CDATA[ e:\Primary\subfolder\Text Files\Some Document.txt
  ]]>
  </information>
  </criteria>
- <criteria filter=".xml" filecount="2" totalsize="6" sizeunit="1024">
- <information name="myDetails.xml" matchvalue=".xml">
- <![CDATA[ e:\myDetails.xml
  ]]>
  </information>
…
  </criteria>
- <criteria filter=".zip" filecount="1" totalsize="69277" sizeunit="1024">
- <information name="Text Files.zip" matchvalue=".zip">
- <![CDATA[ e:\Primary\subfolder\Text Files.zip
```

```
  ]]>
  </information>
  </criteria>
  </list>
- <list type="Modified">
- <criteria filter="Within Last Day" filecount="3" totalsize="69283"
sizeunit="1024">
- <information name="Text Files.zip" matchvalue="8/26/2009 4:01:18 PM">
- <![CDATA[ e:\Primary\subfolder\Text Files.zip
  ]]>
  </information>
…
  </criteria>
- <criteria filter="1 Month - 2 Months" filecount="1" totalsize="16"
sizeunit="1024">
- <information name="GimmeFiles.exe" matchvalue="7/17/2009 2:00:44 PM">
- <![CDATA[ e:\Primary\subfolder\GimmeFiles.exe
  ]]>
  </information>
  </criteria>
- <criteria filter="6 Months - 1 Year" filecount="27" totalsize="5512"
sizeunit="1024">
- <information name="Spreadsheet.ods" matchvalue="12/16/2008 8:29:00 AM">
- <![CDATA[ e:\Primary\subfolder\Text Files\Spreadsheet.ods
  ]]>
  </information>
…
  </criteria>
  </list>
- <list type="Owner">
- <criteria filter="Administrators" filecount="31" totalsize="74811"
sizeunit="1024">
- <information name="myDetails.xml" matchvalue="Administrators">
- <![CDATA[ e:\myDetails.xml
  ]]>
  </information>
…
  </criteria>
  </list>
- <list type="Length">
- <criteria filter="Less than 1KB" filecount="2" totalsize="2"
sizeunit="1024">
- <information name="Another Document.rtf" matchvalue="7">
- <![CDATA[ e:\Primary\subfolder\Text Files\Another Document.rtf
  ]]>
  </information>
…
  </criteria>
- <criteria filter="1KB - 4KB" filecount="1" totalsize="3" sizeunit="1024">
- <information name="Spreadsheet.ods" matchvalue="2274">
- <![CDATA[ e:\Primary\subfolder\Text Files\Spreadsheet.ods
  ]]>
  </information>
  </criteria>
- <criteria filter="4KB - 16KB" filecount="1" totalsize="5" sizeunit="1024">
- <information name="myDetails.xml" matchvalue="4597">
- <![CDATA[ e:\myDetails.xml
  ]]>
  </information>
  </criteria>
- <criteria filter="16KB - 64KB" filecount="6" totalsize="193"
sizeunit="1024">
- <information name="Proposal.doc" matchvalue="57856">
- <![CDATA[ e:\Primary\subfolder\Text Files\Proposal.doc
  ]]>
  </information>
…
  </criteria>
- <criteria filter="64KB - 256KB" filecount="1" totalsize="161"
sizeunit="1024">
- <information name="Eastern Fire.jpg" matchvalue="164026">
- <![CDATA[ e:\Primary\subfolder\Pictures\Eastern Fire.jpg
  ]]>
  </information>
  </criteria>
- <criteria filter="256KB - 1MB" filecount="8" totalsize="5170"
sizeunit="1024">
- <information name="Rough (Formated).odt" matchvalue="782959">
- <![CDATA[ e:\Primary\subfolder\Text Files\Rough (Formated).odt
  ]]>
  </information>
- <information name="dep_stats.pdf" matchvalue="655518">
…
  </criteria>
- <criteria filter="64MB - 256MB" filecount="1" totalsize="69277"
sizeunit="1024">
- <information name="Text Files.zip" matchvalue="70938669">
- <![CDATA[ e:\Primary\subfolder\Text Files.zip
  ]]>
  </information>
  </criteria>
  </list>
  </DswInventory>
```

4.4 Example of a Filtered Inventory

In this example, assume that you want a filtered inventory for the Dynamic File Services pair that has a primary path of `e:\`. You want to find JPG files with file sizes greater than 1 MB. You perform the following tasks to manually generate a report:

- Section 4.4.1, “Create a Command File,” on page 54
- Section 4.4.2, “Run the File System Inventory Utility,” on page 55
- Section 4.4.3, “View the Summary Report,” on page 55
- Section 4.4.4, “View the Detailed Report,” on page 55

4.4.1 Create a Command File

Use a text editor to create a command file called `FSCommands.txt` in the Dynamic File Services folder. The first line is the primary path for the pair. The second line requests a summary report to be created and specifies the output file for the summary report. The third line requests a detailed report to be created and specifies the output file for the detailed report. No inventory options are specified, so all inventory options are enabled.

```
e:\
/summary=e:\mySummary.xml
/detailed=e:\myDetails.xml
/size>1024
/extension=*.jpg
```

4.4.2 Run the File System Inventory Utility

1. Log in to the server as the Administrator user, or as a user in the Administrators group.
2. Open a Command Prompt console, then go to the `Dynamic File Services` folder.
3. At the prompt, enter

   ```
   DswInventory.exe FSCommands.txt
   ```

4.4.3 View the Summary Report

The summary results are written to the `e:\mySummary.xml` file. The following is sample output of a summary report:

```
 <?xml version="1.0" encoding="utf-8" standalone="yes" ?>
- <DswInventory GenerationDateTime="8/27/2009 3:13:10 PM" generation="summary"
platform="Win32NT" OS="Microsoft Windows NT 5.2.3790 Service Pack 2">
- <folderlist>
- <folder>
- <![CDATA[ e:\
  ]]>
  </folder>
  </folderlist>
- <list type="Extension">
  <criteria filter=".jpg" filecount="5" totalsize="2569" sizeunit="1024" />
  </list>
- <list type="Length">
  <criteria filter="64KB - 256KB" filecount="1" totalsize="161"
sizeunit="1024" />
  <criteria filter="256KB - 1MB" filecount="4" totalsize="2408"
sizeunit="1024" />
  </list>
  </DswInventory>
```

4.4.4 View the Detailed Report

The detailed results are written to the `e:\myDetails.xml` file. The following is sample output from a detailed report:

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
- <DswInventory GenerationDateTime="8/27/2009 3:13:10 PM"
generation="detailed" platform="Win32NT" OS="Microsoft Windows NT 5.2.3790
Service Pack 2">
- <folderlist>
- <folder>
- <![CDATA[ e:\
  ]]>
  </folder>
  </folderlist>
```

```
- <list type="Extension">
- <criteria filter=".jpg" filecount="5" totalsize="2569" sizeunit="1024">

- <information name="arctica1920.jpg" matchvalue=".jpg">
- <![CDATA[ e:\Primary\subfolder\Pictures\arctica1920.jpg
  ]]>
  </information>

- <information name="Eastern Fire.jpg" matchvalue=".jpg">
- <![CDATA[ e:\Primary\subfolder\Pictures\Eastern Fire.jpg
  ]]>
  </information>

- <information name="eventide1920.jpg" matchvalue=".jpg">
- <![CDATA[ e:\Primary\subfolder\Pictures\eventide1920.jpg
  ]]>
  </information>

- <information name="lastlight1920.jpg" matchvalue=".jpg">
- <![CDATA[ e:\Primary\subfolder\Pictures\lastlight1920.jpg
  ]]>
  </information>

- <information name="vigil1920.jpg" matchvalue=".jpg">
- <![CDATA[ e:\Primary\subfolder\Pictures\vigil1920.jpg
  ]]>
  </information>
  </criteria>
  </list>

- <list type="Length">
- <criteria filter="64KB - 256KB" filecount="1" totalsize="161"
sizeunit="1024">

- <information name="Eastern Fire.jpg" matchvalue="164026">
- <![CDATA[ e:\Primary\subfolder\Pictures\Eastern Fire.jpg
  ]]>
  </information>
  </criteria>
- <criteria filter="256KB - 1MB" filecount="4" totalsize="2408"
sizeunit="1024">

- <information name="vigil1920.jpg" matchvalue="642827">
- <![CDATA[ e:\Primary\subfolder\Pictures\vigil1920.jpg
  ]]>
  </information>

- <information name="lastlight1920.jpg" matchvalue="705456">
- <![CDATA[ e:\Primary\subfolder\Pictures\lastlight1920.jpg
  ]]>
  </information>

- <information name="eventide1920.jpg" matchvalue="544622">
- <![CDATA[ e:\Primary\subfolder\Pictures\eventide1920.jpg
  ]]>
  </information>
```

```
- <information name="arctica1920.jpg" matchvalue="572311">
- <![CDATA[ e:\Primary\subfolder\Pictures\arctica1920.jpg
  ]]>
  </information>
  </criteria>
  </list>
  </DswInventory>
```

4.5 Additional Information

A file system inventory of each Dynamic File Services pair is automatically generated daily with the pair history run. You can use the Management Console to view graphical displays of this report, and to drill down into the report to see the individual files in various categories. For information, see "Viewing the Pair History" in the *Dynamic File Services 1.5 Administration Guide*.

Dynamic File Services Synchronize Pair Utility

5

The Novell Dynamic File Services (DynamicFS) Synchronize Pair utility (`DswSyncPair.exe`) provides a way to detect and report conflicts for duplicate files and mismatched ACL permissions and attributes on folders. This report is helpful for identifying information about duplicate files or mismatched folder metadata that might exist after restoring the primary and secondary data from separate backup media. The service must be stopped before you run the tool. The tool can be run at any time when the service is not running, including in Windows Safe Mode.

5.1 DswSyncPair

5.1.1 Description

The Dynamic File Services Synchronize Pair utility is used to detect duplicate files in the pair structure or to detect folders with attribute or ACL permission differences. It can generate reports in CSV and XML format. The service must be stopped before you run the tool. The tool can be run at any time, including in Windows Safe Mode.

5.1.2 Syntax

Stop the service, then run the following commands as the Administrator user or as a user with Administrator privileges on the server where Dynamic File Services is installed. It does not matter if the user is also a member of the `Dynamic File Services` group.

IMPORTANT: If remote shares are used in pairs, you must log in as a domain user with Administrator privileges on the DynamicFS server that also has Active Directory rights on the remote shares and NTFS file system access rights on the secondary storage locations. Otherwise, a secondary location is reported as missing. One way to do this is to add the administrator user as a member of the Dynamic File Services Storage Rights (`DFSStorageRights`) group.

```
DswSyncPair.exe -pair="<pairname | guid>" [options]
```

```
DswSyncPair.exe –source="path" –target="path" [options]
```

If you are using this command in a script, you must escape the quotation mark characters by preceding them with a backslash (\). You can also use the `-silent` option to turn off the screen output. For example:

```
DswSyncPair.exe -pair=\"<pairname | guid>\" [options] -silent

DswSyncPair.exe –source=\"path\" –target=\"path\" [options] -silent
```

5.1.3 Using the Utility

1. Log in to the Dynamic File Services server as the Administrator user or a user with Administrator privileges. It does not matter if the user is also a member of the `Dynamic File Services` group.
2. The Dynamic File Service must not be running when you start the Synchronize Pair utility. If policies are running, wait until they are done, or stop them manually. After policies have stopped, in the *Service Controller* menu, select *Stop Service*.
3. Open a Command Prompt console, then change directory to go to the `C:\Program Files\Dynamic File Services` folder (or the folder where you installed Dynamic File Services).
4. At the command prompt, enter one of the following commands:

   ```
   DswSyncPair.exe -pair="<pairname | guid>" [options]
   DswSyncPair.exe –source="path" –target="path" [options]
   ```
5. After the report is done, in the *Service Controller* menu, select *Start Service*.

5.1.4 Check Action Options

`-files`

If this option is specified, a check is performed for duplicate files on the specified source and target paths.

Example

```
-files
```

`-folders`

If this option is specified, a check is performed for folder attribute and ACL permission differences on the specified source and target paths.

Example

```
-folders
```

5.1.5 Control Options

`-h`, `--help`

Displays help for `DswSyncPair.exe`, then exits.

`-pair="<pairname | guid>"`

Use this option to look for the specified pair in the pair database to determine the paths to use for the source and target paths. Do not use this option with the `-source` and `-target` options.

Example

`-pair="MyPair"`

`-silent`

If this option is specified, screen output is not generated.

Example

`-silent`

`-source="`*`path`*`"`

Use this option to specify the path to use for the primary path. This option must be used in combination with the `-target` option.

Do not use this option with the -pair option.

Example

`-source="c:\primary"`

`-target="path"`

Use this option to specify the path to use for the secondary path. This option must be used in combination with the `-source` option.

Do not use this option with the `-pair` option.

Example

`-target="g:\shadow"`

5.1.6 Report Options

`-csv=”reportname”`

Use this option to generate an output report in CSV format.

If this option is used with the `-files` option, the output file is named *`reportname`*`.files.csv`.

If this option is used with the `-folders` option, the output file is named *`reportname`*`.folders.csv`.

Example

`-csv=”cvsReport”`

The possible reports generated are `csvReport.files.csv` and `csvReport.folders.csv`.

`-xml="reportname"`

Use this option to generate an output report in XML format.

If this option is used with the `-files` option, the output file is named *`reportname`*`.files.xml`.

If this option is used with the `-folders` option, the output file is named *`reportname`*`.folders.xml`.

Example

`-xml=”xmlReport”`

The possible reports generated are `xmlReport.files.xml` and `xmlReport.folders.xml`.

5.1.7 Examples

- "Check for Duplicate Files and Produce a CSV Report" on page 62
- "Check for Folders with Mismatched Attributes and ACLs and Produce an XML Report" on page 62
- "Check Files and Folders and Produce CSV and XML Reports" on page 62

Check for Duplicate Files and Produce a CSV Report

```
DswSyncPair.exe -pair="My DSW Pair" -files -csv="myCsvReport"
```

Looks in the pair database for the source and target paths of the pair named My DSW Pair. Checks for duplicate files on the source and target paths. Produces a report in CSV format. The report file generated is `myCsvReport.files.csv`.

Check for Folders with Mismatched Attributes and ACLs and Produce an XML Report

```
DswSyncPair.exe -pair="My DSW Pair" -folders -xml="myXmlReport"
```

Looks in the pair database for the source and target paths of the pair named My DSW Pair. Checks for folders that have mismatched attributes and ACLs on the source and target paths. Produces a report in XML format. The report file generated is `myXmlReport.folders.xml`.

Check Files and Folders and Produce CSV and XML Reports

```
DswSyncPair.exe -pair="My DSW Pair" -folders -files -xml="myXmlReport"
-csv=”myCsvReport”
```

Looks in the pair database for the source and target paths of the pair named My DSW Pair. Checks for duplicate files and for folders that have mismatched attributes and ACLs on the source and target paths. Produces a report in XML format and in CSV format.

The report files generated are:

```
myCsvReport.files.csv
myCsvReport.folders.csv
myXmlReport.files.xml
myXmlReport.folders.xml
```

5.2 Additional Information

For information about using the Dynamic File Services Synchronize Pair utility for reporting on files and folders in a pair, see the following sections in the *Novell Dynamic File Services 1.5 Administration Guide* (http://www.novell.com/documentation/dynamic_file_services/):

- "Reporting Conflicts for Attributes and ACL Permissions on Folders"
- "Reporting Conflicts for Duplicate Files"

Dynamic File Services Configuration Dump Utility

6

The Novell Dynamic File Services (DynamicFS) Configuration Dump utility (`DswDump.exe`) reports information about the configuration settings, pairs, policies, files, error events, and logs to a file called `Config.txt` in the folder where you installed Dynamic File Services. This report is helpful for record-keeping and troubleshooting. The tool can be run at any time, with service running or not running, including in Windows Safe Mode.

- Section 6.1, “DswDump,” on page 63
- Section 6.2, “Config.txt Output,” on page 64

6.1 DswDump

- Section 6.1.1, “Description,” on page 63
- Section 6.1.2, “Syntax,” on page 64

6.1.1 Description

The Dynamic File Services Configuration Dump utility consolidates current information about Dynamic File Services running on the server, and writes it all to a single file. It includes the follwing information:

- Server hardware and operating system
- Active Directory domain
- Service configuration
- Folders and files in the `Dynamic File Services` folder (or the folder where you installed Dynamic File Services)
- Pair information
- Policy information
- Audit information
- Microsoft Event Logger event messages
- Service and Enforcer log event messages

The information is dumped into the `Config.txt` file in the `C:\Program Files\Dynamic File Services` folder (or the folder where you installed Dynamic File Services). For an overview of the output, see Section 6.2, “Config.txt Output,” on page 64.

6.1.2 Syntax

Log in to the server as the Administrator user or as a user with Administrator privileges.

Open a Command Prompt console, change directory to go to the `C:\Program Files\Dynamic File Services` folder (or the folder where you installed Dynamic File Services), then enter

```
DswDump.exe
```

The tool can be run at any time, with the service running or not running, including in Windows Safe Mode.

6.2 Config.txt Output

The results of the Dynamic File Services Configuration Dump utility are written to the `Config.txt` file in the `C:\Program Files\Dynamic File Services` folder (or the folder where you installed Dynamic File Services). The report includes the following major categories:

```
[ DswDump Runtime Information ]
  Startup path

[ Windows Configuration ]
  OS Version
  OS Service Pack
  Domain
  Machine Name
  Processor
  Total Memory

[ Dynamic File Services Configuration ]
  [ Registry Settings = SOFTWARE\Novell\Dynamic File Services\Setup ]
  [ Registry Settings = Hardware\Description\System\CentralProcessor\0 ]
  [ Snapshot Information ]
  [ Filter Information ]

[ Active Directory Information ]
  Domain name
  Domain context
  [ Published Shares ]
    [ Share ]

[ Dsw Folder Hierarchy ]
  [ Folder ]
    [ Child Folders ]
    [ Child Files ]
      [ File ]

[ Pairs ]
  [ Pair Database Contents ]
  [ Pair List ]
  [ Pair Details ]
    [ Pair ]
      [ Associated Pair Policies ]
        [ Pair Policy ]
  Folder flags = < None | IncludeFolders | ExcludeFolders >
  [ Include Folders ] or [ Exclude Folders ]
  [ Pair Health ]
 [ Pair Summary History ]
[ Policies ]
  [ Policy Database Contents ]
  [ Policies List ]
  [ Policy Details ]
    [ Policy ]

[ Audit Information ]
  [ Audit Config Contents ]
  [ Audit Log Contents ]

[ MS Event Logger ]
  [ Dynamic File Services ]
  [ Dynamic File Services Snap Shot System ]
  [ DswEnforcer ]

[ Log files ]
  [ Log File Contents for ...DswDump.log ]
  [ Log File Contents for ...DswEnforcer.log ]
  [ Log File Contents for ...DswMcpCore.log ]
```