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# dscl

Directory Service command line utility.

Create, read, and manage Directory Service data. If invoked without any commands, dscl runs in an interactive mode, reading commands from standard input. Interactive processing is terminated by the quit command. (dscl and the GUI 'Directory utility' replace the older 'NetInfo Manager')

## Syntax

dscl [options] datasource [command]

#### Options |

Prompt for password -р Authenticate as user -u user -P password Authentication password

targeted local node database file path -f filepath

Don't strip off prefix from DirectoryService API constants -raw Print out record(s) or attribute(s) in XML plist format -plist -url Print record attribute values in URL-style encoding quiet - no interactive prompt -q

#### Commands:

-read [path [key ...]] -readall [path [key ...]] -readpl path key plist\_pa -readpli path key value\_i -list path [key] -search path key val -create record\_path [key -createpl record\_path key -createpli record\_path ke -append record\_path key v -merge record\_path key va -delete path [key [val ... -deletepl record\_path key -deletepli record\_path key -change record\_path key o -changei record\_path key -diff path1 path2 [key ... -passwd user\_path [new\_pas

Available only in interactive

-cd dir

-pushd [dir]

-popd

-auth [user [password]]

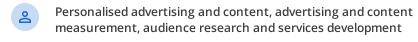
-authonly [user [password]

-quit

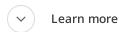
Leading dashes ("-") are optional for

dscl operates on a datasource specif DNS hostname or IP address. Node character, which specifies the local do (SS64)

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Do not consent

Consent

**Manage options** 

.2 or later) host specified by paths beginning with a dot (".") lress form is used then the user

must specify the -u option and either the -P or -p options to specify an administrative user and password on the remote host to authenticate with to the remote host. The exception to this is if "localhost" is specified.

assing passwords on the command line is inherently insecure and can cause password exposure. For better security do not provide the password as part of the command and you will be securely prompted.

# Path Specification

There are two modes of operation when specifying paths to operate on. The two modes correspond to whether the datasource is a node or a host. In the case of specifying a node, the top level of paths will be record types. Example top level paths would be:

/Users/alice /Groups/admin

In the case of specifying a host as a data source, the top level of paths correspond to Open Directory plug-ins and Search Paths. One can specify the plug-in to traverse to a node name, after which the paths are equivalent to the former usage. The following might be the equivalent paths as the above paths:

/NetInfo/root/Users/alice /LDAPv3/10.0.1.42/Groups/admin

If path components contain keys or values with embedded slash characters, the slash characters must be escaped with a leading backslash character. Since the shell also processes escape characters, an extra backslash is required to correctly specify an escape. For example, to

read a mount record with the name "Idapserver:/Users" in the "/Mounts" path, the following path would be used:

dscl . -read /Mounts/ldaphost:\/Users

All pathnames are case-sensitive.

#### Commands

The action of each command is described below. Some commands have aliases. For example, "cat" and "." are aliases for "read".

## read [path [key ...]]

Prints a directory. Each of the properties are printed one per line. The property key is followed by a colon, then a space-separated list of the values for that property. Note that a value which contains embedded spaces will appear identical to a pair of values.

If The -raw flag for raw output has been given, then read prints the full DirectoryService API constant for record and attribute types.

If the -url flag has been specified then printed record path attribute values are encoded in the style of URLs. This is useful if a script or program is trying to process the output since values will not have any spaces or other control characters. Alias: cat

#### readall [path [key ...]]

readall prints all the records of a given type. The output of readall is formatted in the same way as read with a "-" on a line as a delimeter between records.

#### readpl path key plist\_path

Prints the contents of plist path

If the plist\_path is the key for a country the key for a string, number, book

### readpli path key value\_inde

Prints the contents of plist\_path the value for the path.

If the plist\_path is the key for a country the key for a string, number, book

### list path

Lists the subdirectories of the g preceded by an index number the

When used in interactive mode,

### search path key val

Searches for records that match are Directory Service record att

Creates a record, property, or v

create record\_path [key [va

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e for the path.

\_path. If plist\_path is

then a whitespace, and then

\_path. If plist\_path is

search path, the names are ath. Alias: Is

path or a record type path. Valid keys

d if it does not exist. If a key is given,

then a property with that key will be created. Alias: mk

WARNING - If a property with the given key already exists, it will be destroyed and a new property will be created in its place. To add values to an existing property, use the append or merge commands.

If values are included in the command, these values will be set for the given key.

NOTE - Not all directory nodes support a property without a value. An error will be given if you attempt to create a property with no value in such a directory node.

### createpl record\_path key plist\_path val1 [val2 ...]

Creates a string, or array of strings at plist\_path.

If you are creating a value at the root of a plist that is an array, use "0" as the plist path.

If only val1 is specified, a string will be created at plist\_path. If val1 val2 ... are specified, an array of strings will be created at plist\_path.

WARNING - If a value with the given plist path already exists, it will be destroyed and a new value will be created in its place.

createpli record\_path key value\_index plist\_path val1 [val2 ...]

Creates a string, or array of strings at plist\_path for the plist at value\_index of the key.

If you are creating a value at the root of a plist that is an array, use "0" as the plist path.

If only val1 is specified, a string will be created at plist\_path. If val1 val2 ... are specified, an array of strings will be created at plist path.

WARNING - If a value with the given plist\_path already exists, it will be destroyed and a new value will be created in its place.

append record\_path key val ...

Appends one or more values to a property in a given record. The property is created if it does not exist.

merge record\_path key val ...

Appends one or more values to a property in a given directory if the property does not already have those values.

The property is created if it does not exist.

change record\_path key old\_val new\_val

Replaces the given old value in the list of values of the given key with the new value in the specified record.

changei path key index val

Replaces the value at the given index in the list of values of the given key with the new value in the specified record. index is an integer value. An

diff path1 path2 key ...

Compares the data from path1

index of 1 specifies the first value

delete path [key [val ...]]

Delete a directory, property, or very type and record paths. If a key is removed from the property with

deletepl record\_path key p

Deletes a value in a plist. If no vaplist path.

deletepli record\_path key

Deletes a value for the plist at value deletepli deletes the values with

passwd user\_path [new\_paswd

Changes a password for a user specifying the -u and -P flags or authenticated then the user's old them.

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ry. This can only be used on record re given, those values will be

en, deletepl deletes the values within

If one or more values are given,

nenticated to the node (either by a new password. If you are not active mode, you will be prompted for

#### **Interactive Commands**

cd dir

Set the current directory. Path names for other dscl commands can be relative to the current directory.

pushd path

Similar to the pushd command commonly found in Unix shells. When a path is specified it sets the current directory while pushing the previous directory on to the directory stack. If no path is specified it exchanges the top two elements of the directory stack. It will also print the final directory stack. Alias: pd

popd

Pops the directory stack and returns to the new top directory. It will also print the final directory stack.

auth [user [password]]

Authenticate as the named user, or as "root" if no user is specified. If a password is supplied, then that password is used for authentication, otherwise the command prompts for a password. Alias: su

If dscl is run in host mode, then when this command is run the current directory must be in the subdirectories of a node.

authonly [user [password]]

Used to verify the password of a named user, or of "root" if no user is specified. If a password is supplied, then that password is used for authentication, otherwise the command prompts for a password.

If dscl is run in host mode, then when this command is run the current directory must be in the subdirectories of a node.

#### quit

Ends processing of interactive commands and terminates the program. Alias: q

#### command history

The up and down arrow keys will scan through the command history.

#### tab completion

When pathnames are being typed, pressing the tab key will result in a search to auto-complete the typed partial subdirectory name. It will also attempt to correct capitilization in the process.

## Diagnostics

dscl will return -1 (255) on error.

#### Examples

View a record in the local directory no

\$ dscl . -read /Users/ww

Create or replace the UserShell attrib

\$ dscl . -create /Users/

Create or replace the test key of the record:

\$ dscl . -createpl /User

List the uniqueID values for all user re

\$ dscl /LDAPv3/ldap.comp

Append a value that has spaces in it:

\$ dscl . -append /Users/

Check the SecureToken Status for us

\$ dscl . -read /Users/us

"Employees must be given responsil Robert Heller

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#### Related macOS commands

Local man page: dscl - Command line

createhomedir - Create and populate home directories on the local computer.

diskutil - Disk utilities.

profiles - Profiles Tool.

sysadminctl - Administer system user accounts.

Stack Exchange - Create a local macOS administrator account from the command line.

DirectoryService(8)

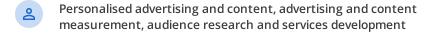
DirectoryServiceAttributes(7)

Equivalent (Linux) bash command: Idapmodify - LDAP modify entry and LDAP add entry tools.

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