dnsutl
Name Server
Administration Utilities

Reference Manual

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This document describes dnsutl version 1.6
and was prepared 30 June 2000.

NAME

dnsutl – utilities to make DNS easier to configure

The *dnsutl* package is distributed under the GNU General Public License, see the LICENSE section, below, for more information.

DESCRIPTION

The *dnsutl* package is a collection of tools to make administering DNS easier. These include:

dns-rev
Take the forward DNS mapping and generate the reverse mapping.

dns-boot-check
Check your *named*(8) configuration for self-consistency.

dns-hosts
Take the forward DNS mapping and generate the */etc/hosts* file.

dns-ng
Take the forward DNS mapping and generate the */etc/netgroup* file.

dns-ethers
By using a bogus record type, you can keep the MAC address with the IP address, and generate the */etc/ethers* file.

dns-bootp
Using the MAC and IP information, you can generate the */etc/bootptab* file.

dns-bootparams
Using the MAC and IP information, you can generate the Sun */etc/bootparams* file.

All of these programs are both faster than shell scripts, and more robust when faced with all the peculiar semantics of DNS resource files. They even understand the `$include` directive.

ARCHIVE SITE

The latest version of *dnsutl* is available from:

URL:	www.canb.auug.org.au/~millerp/dnsutl/	
File:	dnsutl.1.6.README	# the README from the tarball
File:	dnsutl.1.6.lsm	# an LSM package spec
File:	dnsutl.1.6.ps.gz	# the manual in PostScript
File:	dnsutl.1.6.spec	# a RedHat package spec
File:	dnsutl.1.6.tar.gz	# the complete source

BUILDING

Complete instructions for configuring, building, testing and installing *dnsutl* may be found in the *BUILDING* file included in this distribution.

LICENSE

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This package is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

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NEW IN THIS RELEASE

A number of features and bug fixes have been added to *dnsutl* with this release. For excruciating detail, and also acknowledgements of those who generously sent me feedback, please see the *etc/CHANGES.** files included in this distribution.

Version 1.6

• The ‘‘IN LOC’’ record type (see RFC 1876) is now understood.

• There is a new *named*(8) configuration checker. See *dns-boot-check*(1) for more information.

Version 1.5

• There is a new *dns-hosts-import* command, used to convert your */etc/hosts* file into DNS format. Useful when you first convert to using DNS.

• There is a new *dns-ethers-import* command, used to convert your */etc/ethers* file into DNS format. Useful when you first convert to using these DNS utilities.

• There is now a PostScript reference manual available, which includes the README and BUILDING files, and also the manual entries. Numerous examples have been added to the man pages.

• A bug has been fixed which caused a core dump when you forgot to specify an origin.

Version 1.4

No public release.

Version 1.3

• The code had been ported to Linux.

• There is now support for bootparams, so you can generate consistent bootparams tables from the DNS tables.

• There is now support for bootp, so you can generate consistent bootp tables from the DNS tables.

Version 1.2

• The size of the netgroups is limited to ten items, with recursive lists generated where the set needs to be larger.

• The code is now much more portable, and uses a GNU Autoconf generated configure script.

NAME

dnsutl – utilities to make DNS easier to configure

SPACE REQUIREMENTS

You will need about 1MB to unpack and build the *dnsutl* package. Your milage may vary.

SITE CONFIGURATION

The **dnsutl** package is configured using the *configure* program included in this distribution.

The *configure* shell script attempts to guess correct values for various system-dependent variables used during compilation, and creates the *Makefile* and *common/config.h* files. It also creates a shell script *config.status* that you can run in the future to recreate the current configuration.

Normally, you just *cd* to the directory containing *dnsutl*'s source code and type

```
% ./configure
...lots of output...
%
```

If you're using *csh* on an old version of System V, you might need to type

```
% sh configure
...lots of output...
%
```

instead to prevent *csh* from trying to execute *configure* itself.

Running *configure* takes a minute or two. While it is running, it prints some messages that tell what it is doing. If you don't want to see the messages, run *configure* with the *--quiet* option; for example,

```
% ./configure --quiet
%
```

To compile the **dnsutl** package in a different directory from the one containing the source code, you must use a version of *make* that supports the *VPATH variable,* such as *GNU make*. *cd* to the directory where you want the object files and executables to go and run the *configure* script. *configure* automatically checks for the source code in the directory that *configure* is in and in .. (the parent directory). If for some reason *configure* is not in the source code directory that you are configuring, then it will report that it can't find the source code. In that case, run *configure* with the option `--srcdir=`*DIR*, where *DIR* is the directory that contains the source code.

By default, *configure* will arrange for the *make install* command to install the **dnsutl** package's files in */usr/local/bin*, */usr/local/man*, etc. You can specify an installation prefix other than */usr/local* by giving *configure* the option `--prefix=`*PATH*.

You can specify separate installation prefixes for architecture-specific files and architecture-independent files. If you give *configure* the option `--exec-prefix=`*PATH* the **dnsutl** package will use *PATH* as the prefix for installing programs and libraries. Data files and documentation will still use the regular prefix. Normally, all files are installed using the same prefix.

configure ignores any other arguments that you give it.

On systems that require unusual options for compilation or linking that the *dnsutl* package's *configure* script does not know about, you can give *configure* initial values for variables by setting them in the environment. In Bourne-compatible shells, you can do that on the command line like this:

```
$ CC='gcc -traditional' LIBS=-lposix ./configure
...lots of output...
$
```

Here are the *make* variables that you might want to override with environment variables when running *configure*.

Variable: CC
: C compiler program. The default is *cc*.

Variable: LIBS
: Libraries to link with, in the form `-l`*foo* `-l`*bar*. The *configure* script will append to this, rather than replace it.

If you need to do unusual things to compile the package, the author encourages you to figure out how *configure* could check whether to do them, and mail diffs or instructions to the author so that they can be included in the next release.

BUILDING DNSUTL

All you should need to do is use the

```
% make
...lots of output...
%
```

command and wait. When this finishes you should see a directory called *bin* containing several files including: *dns-hosts*, *dns-ng*, and *dns-rev*.

You can remove the program binaries and object files from the source directory by using the

```
% make clean
...lots of output...
%
```

command. To remove all of the above files, and also remove the *Makefile* and *common/config.h* and *config.status* files, use the

```
% make distclean
...lots of output...
%
```

command.

The file *aux/configure.in* is used to create *configure* by a GNU program called *autoconf*. You only need to know this if you want to regenerate *configure* using a newer version of *autoconf*.

Things That Can Go Wrong

The *configure* script looks for a program called ''soelim'', which is used to remove include directives from (n)roff input. It uses it when constructing the files to install for the *man*(1) pages. The rather bold assumption is made that you are using GNU Groff, with the patch for **–I** include search directory command line options. The patch may be obtained from http://www.canb.auug.org.au/~millerp/groff-1.11a.patch

TESTING DNSUTL

The *dnsutl* package comes with a test suite. To run this test suite, use the command

```
% make sure
...lots of output...
Passed All Tests
%
```

The tests take a few seconds each, with a few very fast, and a couple very slow, but it varies greatly depending on your CPU.

If all went well, the message

```
Passed All Tests
```

should appear at the end of the make.

INSTALLING DNSUTL

As explained in the *SITE CONFIGURATION* section, above, the *dnsutl* package is installed under the */usr/local* tree by default. Use the `--prefix=`*PATH* option to *configure* if you want some other path.

All that is required to install the *dnsutl* package is to use the

```
% make install
...lots of output...
%
```

command. Control of the directories used may be found in the first few lines of the *Makefile* file if you want to bypass the *configure* script.

GETTING HELP

If you need assistance with the *dnsutl* program, please do not hesitate to contact the author at

```
Peter Miller <millerp@canb.auug.org.au>
```

Any and all feedback is welcome.

When reporting problems, please include the version number given by the

```
% dns-hosts -version
dns-hosts version 1.6.D001
...warranty disclaimer...
%
```

command. Please do not send this example; run the program for the exact version number.

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NAME

dns-boot-check – check /etc/named.boot file

SYNOPSIS

dns-boot-check [*option*...] *filename*

dns-boot-check -Help

dns-boot-check -VERSion

DESCRIPTION

The *dns-boot-check* program is used to check the *named*(8) configuration file for correctness. It checks for things like the forwards and backwards mappings exactly corresponding, and for the name server records all having address records.

The filename on the command line is the file to be checked. It defaults to */etc/named.boot* if not specified.

Suggestions for additional checks that *dns-boot-check*(1) could perform are most welcome.

OPTIONS

The following options are understood:

-Help

Provide some help with using the *dns-boot-check* program.

-I*directory*

This option may be used to specify a directory to search for include files. It may be used more than once, the directories will be searched in the order given.

-VERSion

Print the version of the *dns-boot-check* program being executed.

All other options will produce a diagnostic error.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-boot-check* command will exit with a status of 1 on any error. The *dns-boot-check* command will only exit with a status of 0 if there are no errors.

EXAMPLES

To check your *named*(8) configuration, you need only say

```
dns-boot-check
```

and the file *named*(8) configuration file will be read, and also all of the files it refers to. Various cross checks will be made between the files, too.

If you want to check a *named*(8) configuration, but without installing it first (which can be important if you need to guarantee continuity of service) put you new configuration files together in a temporary directory, with relative paths.

```
dns-boot-check -I. etc/named.boot
```

This will access all of the files as if they were below "." (the current directory) rather than absolute. This can simplify configuration management issues, too.

Suggestions for additional checks that *dns-boot-check*(1) could perform are most welcome.

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The *dns-boot-check* program comes with ABSOLUTELY NO WARRANTY; for details use the '*dns-boot-check -VERSion Warranty*' command. The *dns-boot-check* program is free software, and you are welcome to redistribute it under certain conditions; for details use the '*dns-boot-check -VERSion Redistribution*' command.

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NAME

dns-bootp – generate bootp tables from DNS tables

SYNOPSIS

dns-bootp [*option...*][infile [*outfile*]]

dns-bootp -Help

dns-bootp -VERSion

DESCRIPTION

The *dns-bootp* program is used to generate the */ertc/bootptab* file from the forward DNS tables. This is supplemented with an additional ‘‘bootp’’ class.

The output format is described in the *bootpd (8)* manual entry.

BOOTP TYPES

The ‘‘bootp’’ class has the following defined types:

bf The absolute path of the bootfile.

bs Bootfile size in 512-octet blocks. It is best to leave this unset.

cs A list of one or more cookie servers. These will be translated into IP addresses on output.

ds A list of one or more DNS servers. These will be translated into IP addresses on output.

gw A list of one or more gateways (routers). These will be translated into IP addresses on output.

ha The name of a host with a defined ‘‘ether a’’ record. This will be translated into an Ethernet address on output. This should *not* be set, as it is automatically generated from the ‘‘ether a’’ record.

hd The absolute path of the bootfile home directory.

hn Set the value to "yes" is the hostname should be sent to RFC1048 clients.

ht This field encodes the hardware type. The most useful value is ‘‘ethernet’’, see *bootpd*(8) for more information.

im A list of one or more impress server. These will be translated into IP addresses on output.

ip The name of a host with a defined ‘‘in a’’ record. This will be translated into an IP address on output. This should *not* be set, as it is automatically generated from the ‘‘in a’’ record.

lg A list of one or more log servers. These will be translated into IP addresses on output.

lp A list of one or more LPR servers. These will be translated into IP addresses on output.

ns A list of one or more IEN-116 servers. These will be translated into IP addresses on output.

rl A list of one or more resource location servers. These will be translated into IP addresses on output.

sm Host subnet mask

sr The name of the server to boot from. This will be translated into an IP address on output.

tc Table continuation, points to similar "template" host entry, usually in a file prepended to the output. Many host entries share common values for certain tags (such as name servers, etc.). Rather than repeatedly specifying these tags, a full specification can be listed for one host entry and shared by others via the tc (table continuation) mechanism. The generated output will always place the ‘‘tc’’ entry first. Information explicitly specified for a host always overrides information implied by a ‘‘tc’’ reference.

to Time offset in seconds from UTC, the time zone. If set to ‘‘auto’’ it will use the time server’s timezone.

ts A list of one or more time servers. These will be translated into IP addresses on output.

vm The vendor magic cookie selector. The most useful value is ‘‘auto’’ or don’t set it. See *bootpd*(8) for additional mystification.

T* There is also a generic tag, T*n*, where *n* is an RFC1048 vendor field tag number. See *bootpd*(8) for more addition mystification.

THE * DEFAULT

The special host name ‘‘*’’ may be used to specify defaults. These may be over-riden by specific entries. The most recently see default of each type anme is remembered. This may be exploited, for example, to set different servers and gateways for different networks.

OPTIONS

The following options are understood:

-Help

Provide some help with using the *dns-bootp* program.

-VERSion

Print the version of the *dns-bootp* program being executed.

All other options will produce a diagnostic error.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-bootp* command will exit with a status of 1 on any error. The *dns-bootp* command will only exit with a status of 0 if there are no errors.

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NAME

dns-bootparams – generate /etc/bootparams entries from DNS tables

SYNOPSIS

dns-bootparams [*option...*][*infile* [*outfile*]]
dns-bootparams -Help
dns-bootparams -VERSion

DESCRIPTION

The *dns-bootparams* program is used to generate the */etc/bootparams* entries from DNS tables.

If the input file is not named, or the name '-' is used, the standard input is read.

If the output file is not named, or the name '-' is used, the startdard output is written.

BOOTPARAM TYPES

The "bootparam" class has the following types:

aarch
: The application architecture. Expects one argument. Legal values are "sparc" or "i386". Usually used to substitute into other records. This can usually be derived from "in hinfo" records if not supplied, so it commonly is not given explicitly. Can still be used in $substitutions even if derived from the "in hinfo" records.

boottype
: The boot type. Expects one argument. Legal values are "in" and nothing else.

display
: Used for i386/i86pc.

install
: The server and path of the Solaris CD image. Often contains $substitutions from other records, particularly $server and $aarch.

install_config
: Expects two arguments. The server and path of the directory containing the install rules script. Often contains $substitutions from other records, particularly $server.

karch
: The kernel architecture. Expects one argument. Legal values include: "i86pc", "sun4", "sun4c", "sun4m", etc.

keyboard
: Used for i386/i86pc.

mouse
: Used for i386/i86pc.

root
: Expects two arguments. The server and path of the root directory to mount as a diskless client while installing solaris on the native disk. Often contains $substitutions from other records, particularly $server, $aarch and $karch.

server
: The name of the install server. Expects one argument. Used to parameterise other records.

term
: The terminal type. Expects one argument. Legal values are terminal names from termcap, usually "sun". Specifying this makes install much faster.

THE * DEFAULT

The special host name "*" may be used to specify defaults. These may be over-riden by specific entries. The most recently see default of each type anme is remembered. This may be exploited, for example, to set different servers and gateways for different networks.

Substitutions are performed after the defaults are applied, so that *root*, for example, may contain $substitutions. It is usually sufficient to have a single "karch" record trigger the entire bootparam entry in the output.

OPTIONS

The following options are understood:

-Verbose
: This option may be used to see what *dns-bootparams* deciphers each resource record as.

-Help
: This option may be used to get more information about how to used th *dns-bootparams* program.

-VERSion
: This option may be used to see what version of the *dns-bootparams* program is running.

-I*directory*
: This option may be used to set the search path for include files.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-bootparams* command will exit with a status of 1 on any error. The *dns-bootparams* command will only exit with a status of 0 if there are no errors.

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NAME

dns-ethers-import – generate DNS tables from /etc/ethers entries

SYNOPSIS

dns-ethers-import [*option...*] *filename...*
dns-ethers-import -Help
dns-ethers-import -VERSion

DESCRIPTION

The *dns-ethers-import* program is used to read your */etc/ethers* file and produce a DNS-formatted database. This is used to maintain a database with the IP address and the MAC address in the same file. This helps find omissions and inconsistencies.

OPTIONS

The following options are understood:

-Domain *name*
This option may be used to set the domain name in the generated file. Defaults to you system domain name, if set, otherwise "example.com".

-Help
Provide some help with using the *dns-ethers-import* program.

-VERSion
Print the version of the *dns-ethers-import* program being executed.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-ethers-import* command will exit with a status of 1 on any error. The *dns-ethers-import* command will only exit with a status of 0 if there are no errors.

EXAMPLE

If you have an */etc/ethers* file which looks like this:

```
2:7:1:f:b7:fb      mercury
2:60:8c:2d:20:c4   venus
8:0:20:79:1f:d     earth
aa:0:4:0:86:53     mars
8:0:2b:99:49:ad    jupiter
0:40:10:56:43:57   saturn
0:aa:0:69:7c:5b    neptune
0:0:e8:a4:0:25     uranus
8:0:9:d:2a:87      pluto
```

By using the following command

```
% dns-ethers-import /etc/ethers ethers-tmp
%
```

You will see an output file of the form

```
$origin example.com.
@            in     soa    example.com. hostmaster.example.com. (
                           3      ; serial
```

```
                                10800  ; refresh: 3 hours
                                1800   ; retry: 30 minutes
                                604800 ; expire: 1 week
                                86400 ); minimum: 1 day
      mercury            ether  a      2:7:1:f:b7:fb
      venus        ether  a      2:60:8c:2d:20:c4
      earth        ether  a      8:0:20:79:1f:d
      mars         ether  a      aa:0:4:0:86:53
      jupiter            ether  a      8:0:2b:99:49:ad
      saturn       ether  a      0:40:10:56:43:57
      neptune            ether  a      0:aa:0:69:7c:5b
      uranus       ether  a      0:0:e8:a4:0:25
      pluto        ether  a      8:0:9:d:2a:87
```

You are expected to manually edit this into the rest of the database. You especially need to put sensable values into the SOA record.

See *dns-ethers*(1) for how to retrieve your */etc/ethers* file once you have imported it.

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NAME

dns-ethers – generate /etc/ethers entries from DNS tables

SYNOPSIS

dns-ethers [*option...*][*infile* [*outfile*]]
dns-ethers -Help
dns-ethers -VERSion

DESCRIPTION

The *dns-ethers* program is used to generate the */etc/ethers* entries from DNS tables.

If the input file is not named, or the name '-' is used, the standard input is read.

If the output file is not named, or the name '-' is used, the startdard output is written.

A fake DNS type of "ether" is used, instead of the usual "in" type, to enable the use of the "a" to store the addresses.

OPTIONS

The following options are understood:

-Verbose
This option may be used to see what *dns-ethers* deciphers each resource record as.

-Help
This option may be used to get more information about how to used th *dns-ethers* program.

-VERSion
This option may be used to see what version of the *dns-ethers* program is running.

-I*directory*
This option may be used to set the search path for include files.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-ethers* command will exit with a status of 1 on any error. The *dns-ethers* command will only exit with a status of 0 if there are no errors.

EXAMPLE

The idea is that you have all of the information concerning each computer in the one file. This makes it less likely that something will be omitted, and simpler to change if the name or IP address changes.

Given a database file called "*example.com*" and which contains the following text

```
$origin example.com.
@       in      soa     exmaple.com. hostmaster.example.com. (
                        990101001     ; serial
                        10800         ; refresh: 3 hours
                        1800          ; retry: 30 minutes
                        3600000       ; expire: 1000 hours
                        86400 )       ; minimum: 24 hours
mercury         in      a       182.168.1.1
        ether   a       2:7:1:f:b7:fb
```

```
        in     hinfo  "IBM-PC 486" "MSDOS"
venus   in     a      182.168.1.2
        ether  a      2:60:8c:2d:20:c4
        in     hinfo  "IBM-6000/590" "UNIX AIX 3.2.5"
earth   in     a      182.168.1.3
        ether  a      08:00:20:79:1f:0d
        in     hinfo  "Sun-4/5 (SPARCstation 5)" "UNIX SunOS 5.4"
mars    in     a      182.168.1.4
        ether  a      aa:0:4:0:86:53
        in     hinfo  "DEC-Alpha 3000" "UNIX OSF/1 V3.2"
jupiter        in     a      182.168.1.5
        ether  a      8:0:2b:99:49:ad
        in     hinfo  "DEC-VXT2000+ XTerminal" "Other: X11R5"
        bootp  tc     dec-vxt-2000
saturn  in     a      182.168.1.6
        ether  a      0:40:10:56:43:57
        in     hinfo  "Apple-Macintosh IIsi" "MacOS 7.5.3"
neptune        in     a      182.168.1.7
        ether  a      0:aa:0:69:7c:5b
        in     hinfo  "IBM-PC" "MSDOS"
uranus  in     a      182.168.1.8
        ether  a      0:0:e8:a4:0:25
        in     hinfo  "IBM-PC" "MSDOS"
pluto   in     a      182.168.1.9
        ether  a      8:0:9:d:2a:87
        in     hinfo  "HP-Laser-Jet 4" "None"
lp      in     cname  pluto
```

You can generate the */etc/ethers* file using the following command

```
% dns-ethers example.com /etc/ethers
%
```

Here is what you would see as the output

```
2:7:1:f:b7:fb mercury
2:60:8c:2d:20:c4    venus
8:0:20:79:1f:d      earth
aa:0:4:0:86:53      mars
8:0:2b:99:49:ad     jupiter
0:40:10:56:43:57    saturn
0:aa:0:69:7c:5b     neptune
0:0:e8:a4:0:25      uranus
8:0:9:d:2a:87 pluto
```

Note that the output uses relative names.

Makefile

All of this can be automated using the following makefile fragment:

```
/etc/ethers: example.com
        dns-ethers example.com $@
```

By doing this, all you need to do is edit the *example.com* file, and the use the *make*(1) command to bring everything up-to-date.

If you were using NIS, NIS+ or LDAP you would update them, rather than the static file.

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AUTHOR

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NAME

dns-filter – filter DNS database files

SYNOPSIS

dns-filter [*option*...][*infile* [*outfile*]]

dns-filter -Help

dns-filter -VERSion

DESCRIPTION

The *dns-filter* program is used to filter various things out of DNS database files. The filters may removes entries by class, type or name.

OPTIONS

The following options are understood:

-Help

Provide some help with using the *dns-filter* program.

-Allow_Class *name*

This option may be used to limit the classes permitted. You may use this option more than once, only the classes named will be passed through. By default, all classes are passed.

-Delete_Class *name*

This option may be used to limit the classes permitted. You may use this option more than once, the classes named will not be passed through. By default, no classes are deleted.

-Allow_Type *name*

This option may be used to limit the types permitted. You may use this option more than once, only the types named will be passed through. By default, all classes are passed.

-Delete_Type *name*

This option may be used to limit the types permitted. You may use this option more than once, the types named will not be passed through. By default, no types are deleted.

-Automatic_Time_Stamp

This option may be used to automatically update the time stamp in SOA records based on the current time. The time stamp will have a granularuty of 86 seconds.

-Delete_Foreign_Names

This option may be used to delete A and NS records which reference names in domains outside the domain specified in the closest preceeding SOA record.

-No_Line_Numbers

This option may be used to inhibit the generation of `$line` directives in the output. They confuse NAMED, but they are useful if the output of dns-filter is to be fed into one of the other utilities in the *dnsutl* package. By default `$line` directives are emitted.

-VERSion

Print the version of the *dns-filter* program being executed.

-I*directory*

This option may be used to set the search path for include files.

All other options will produce a diagnostic error.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-filter* command will exit with a status of 1 on any error. The *dns-filter* command will only exit with a status of 0 if there are no errors.

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dns-filter version 1.6,

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AUTHOR

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NAME

dns-hosts-import − generate DNS tables from /etc/hosts entries

SYNOPSIS

dns-hosts-import [*option*...] *filename*...

dns-hosts-import -Help

dns-hosts-import -VERSion

DESCRIPTION

The *dns-hosts-import* program is used to read your */etc/hosts* file and generate a DNS forward map from it, as a first step to configuring DNS.

OPTIONS

The following options are understood:

-Help

Provide some help with using the *dns-hosts-import* program.

-VERSion

Print the version of the *dns-hosts-import* program being executed.

All other options will produce a diagnostic error.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-hosts-import* command will exit with a status of 1 on any error. The *dns-hosts-import* command will only exit with a status of 0 if there are no errors.

EXAMPLE

If you have an */etc/hosts* file which looks like this:

```
182.168.1.1 mercury
182.168.1.2 venus
182.168.1.3 earth
182.168.1.4 mars
182.168.1.5 jupiter
182.168.1.6 saturn
182.168.1.7 neptune
182.168.1.8 uranus
182.168.1.9 pluto lp
```

By using the following command

```
% dns-hosts-import /etc/hosts hosts-tmp
%
```

You will see an output file of the form

```
$origin example.com.
@             in     soa    example.com. hostmaster.example.com. (
                            3      ; serial
                            10800  ; refresh: 3 hours
                            1800   ; retry: 30 minutes
                            604800 ; expire: 1 week
```

```
                              86400 ); minimum: 1 day
mercury             in     a      182.168.1.1
venus        in     a      182.168.1.2
earth        in     a      182.168.1.3
mars         in     a      182.168.1.4
jupiter             in     a      182.168.1.5
saturn       in     a      182.168.1.6
neptune             in     a      182.168.1.7
uranus       in     a      182.168.1.8
pluto        in     a      182.168.1.9
lp           in     cname  pluto
```

You are expected to manually edit this into the rest of the database. You especially need to put sensable values into the SOA record.

See *dns-hosts*(1) for how to retrieve your */etc/hosts* file once you have imported it.

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AUTHOR

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NAME

dns-hosts − generate /etc/hosts entries from DNS tables

SYNOPSIS

dns-hosts [*option...*][*infile* [*outfile*]]
dns-hosts -Help
dns-hosts -VERSion

DESCRIPTION

The *dns-hosts* program is used to generate the */etc/hosts* entries from DNS tables.

If the input file is not named, or the name '-' is used, the standard input is read.

If the output file is not named, or the name '-' is used, the startdard output is written.

OPTIONS

The following options are understood:

-Delete_Foreign_Names
This option may be used to delete A and NS records which reference names in domains outside the domain specified in the closest preceeding SOA record.

-Verbose
This option may be used to see what *dns-hosts* deciphers each resource record as.

-Help
This option may be used to get more information about how to used th *dns-hosts* program.

-VERSion
This option may be used to see what version of the *dns-hosts* program is running.

-I*directory*
This option may be used to set the search path for include files.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-hosts* command will exit with a status of 1 on any error. The *dns-hosts* command will only exit with a status of 0 if there are no errors.

EXAMPLE

The idea is that you have all of the information concerning each computer in the one file. This makes it less likely that something will be omitted, and simpler to change if the name or IP address changes.

Given a database file called "*example.com*" and which contains the following text

```
$origin example.com.
@       in      soa     exmaple.com. hostmaster.example.com. (
                        990101001     ; serial
                        10800         ; refresh: 3 hours
                        1800          ; retry: 30 minutes
                        3600000       ; expire: 1000 hours
                        86400 )       ; minimum: 24 hours
mercury         in      a       182.168.1.1
```

```
        ether  a      2:7:1:f:b7:fb
        in     hinfo  "IBM-PC 486" "MSDOS"
venus   in     a      182.168.1.2
        ether  a      2:60:8c:2d:20:c4
        in     hinfo  "IBM-6000/590" "UNIX AIX 3.2.5"
earth   in     a      182.168.1.3
        ether  a      08:00:20:79:1f:0d
        in     hinfo  "Sun-4/5 (SPARCstation 5)" "UNIX SunOS 5.4"
mars    in     a      182.168.1.4
        ether  a      aa:0:4:0:86:53
        in     hinfo  "DEC-Alpha 3000" "UNIX OSF/1 V3.2"
jupiter        in     a      182.168.1.5
        ether  a      8:0:2b:99:49:ad
        in     hinfo  "DEC-VXT2000+ XTerminal" "Other: X11R5"
        bootp  tc     dec-vxt-2000
saturn  in     a      182.168.1.6
        ether  a      0:40:10:56:43:57
        in     hinfo  "Apple-Macintosh IIsi" "MacOS 7.5.3"
neptune        in     a      182.168.1.7
        ether  a      0:aa:0:69:7c:5b
        in     hinfo  "IBM-PC" "MSDOS"
uranus  in     a      182.168.1.8
        ether  a      0:0:e8:a4:0:25
        in     hinfo  "IBM-PC" "MSDOS"
pluto   in     a      182.168.1.9
        ether  a      8:0:9:d:2a:87
        in     hinfo  "HP-Laser-Jet 4" "None"
lp      in     cname  pluto
```

You can generate the */etc/ethers* file using the following command

```
% dns-hosts example.com /etc/ethers
%
```

Here is what you would see as the output

```
182.168.1.1   mercury
182.168.1.2   venus
182.168.1.3   earth
182.168.1.4   mars
182.168.1.5   jupiter
182.168.1.6   saturn
182.168.1.7   neptune
182.168.1.8   uranus
182.168.1.9   pluto lp
```

Note that the output uses relative names.

Makefile

All of this can be automated using the following makefile fragment:

```
/etc/hosts: example.com
        dns-hosts example.com $@
```

By doing this, all you need to do is edit the *example.com* file, and the use the *make*(1) command to bring everything up-to-date.

If you were using NIS, NIS+ or LDAP you would update them, rather than the static file.

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Version 2, June 1991

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NAME

dns-ng – generate /etc/netgroup entries from DNS tables

SYNOPSIS

dns-ng [*option*...][*infile* [*outfile*]]

dns-ng -Help

dns-ng -VERSion

DESCRIPTION

The *dns-ng* program is used to generate a netgroup file from DNS information.

Each host is given a netgroup. Higher-level netgroups can be created from patterns applied to the HINFO field.

OPTIONS

The following options are understood:

-Help
: Provide some help with using the *dns-ng* program.

-VERSion
: Print the version of the *dns-ng* program being executed.

-Group *name pattern*
: In addition to one netgroup for each host, a netgroup of the given name will be created for all hosts with a second HINFO field matching the given pattern. This option may be specified more than once. The first pattern match found is used, machines are not placed in more than one of these groups. Patterns are regular expressions.

-Delete_Foreign_Names
: This option may be used to delete A and NS records which reference names in domains outside the domain specified in the closest preceeding SOA record.

-I*directory*
: This option may be used to set the search path for include files.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-ng* command will exit with a status of 1 on any error. The *dns-ng* command will only exit with a status of 0 if there are no errors.

EXAMPLE

The idea is that you have all of the information concerning each computer in the one file. This makes it less likely that something will be omitted, and simpler to change if the name or IP address changes.

By using netgroups, you can assign NFS mount permissions (the */etc/exports* file) and rlogin permissions (the */etc/hosts.equiv* file) based on the kind of machine they are.

Given a database file called ‘‘*example.com*’’ and which contains the following text

```
$origin example.com.
@       in      soa     exmaple.com. hostmaster.example.com. (
                        990101001     ; serial
```

```
                        10800        ; refresh: 3 hours
                        1800         ; retry: 30 minutes
                        3600000      ; expire: 1000 hours
                        86400 )      ; minimum: 24 hours
mercury       in     a      182.168.1.1
      ether   a      2:7:1:f:b7:fb
      in      hinfo  "IBM-PC 486" "MSDOS"
venus in      a      182.168.1.2
      ether   a      2:60:8c:2d:20:c4
      in      hinfo  "IBM-6000/590" "UNIX AIX 3.2.5"
earth in      a      182.168.1.3
      ether   a      08:00:20:79:1f:0d
      in      hinfo  "Sun-4/5 (SPARCstation 5)" "UNIX SunOS 5.4"
mars  in      a      182.168.1.4
      ether   a      aa:0:4:0:86:53
      in      hinfo  "DEC-Alpha 3000" "UNIX OSF/1 V3.2"
jupiter       in     a      182.168.1.5
      ether   a      8:0:2b:99:49:ad
      in      hinfo  "DEC-VXT2000+ XTerminal" "Other: X11R5"
      bootp   tc     dec-vxt-2000
saturn in     a      182.168.1.6
      ether   a      0:40:10:56:43:57
      in      hinfo  "Apple-Macintosh IIsi" "MacOS 7.5.3"
neptune       in     a      182.168.1.7
      ether   a      0:aa:0:69:7c:5b
      in      hinfo  "IBM-PC" "MSDOS"
uranus in     a      182.168.1.8
      ether   a      0:0:e8:a4:0:25
      in      hinfo  "IBM-PC" "MSDOS"
pluto in      a      182.168.1.9
      ether   a      8:0:9:d:2a:87
      in      hinfo  "HP-Laser-Jet 4" "None"
lp    in      cname  pluto
```

You can generate the */etc/netgroup* file using the following command

```
% dns-ng example.com /etc/netgroup \
      -g pc MSDOS -g mac MacOS \
      -g unix UNIX -g other '.*'
%
```

Here is what you would see as the output

```
mercury (mercury,-,) (mercury.example.com,-,)
venus (venus,-,) (venus.example.com,-,)
earth (earth,-,) (earth.example.com,-,)
mars (mars,-,) (mars.example.com,-,)
jupiter (jupiter,-,) (jupiter.example.com,-,)
saturn (saturn,-,) (saturn.example.com,-,)
neptune (neptune,-,) (neptune.example.com,-,)
uranus (uranus,-,) (uranus.example.com,-,)
```

```
pluto (pluto,-,) (pluto.example.com,-,) (lp,-,) (lp.example.com,-,)
unix venus earth mars
mac saturn
pc mercury neptune uranus
other jupiter pluto
```

Note that the output uses relative names.

Makefile

All of this can be automated using the following makefile fragment:

```
/etc/netgroup: example.com
        dns-ng example.com $@ -g pc MSDOS \
                -g mac MacOS -g unix UNIX -g other '.*'
```

By doing this, all you need to do is edit the *example.com* file, and the use the *make*(1) command to bring everything up-to-date.

If you were using NIS, NIS+ or LDAP you would update them, rather than the static file, especially since on many systems the static file doesn't do anything.

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AUTHOR

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NAME

dns-rev – generate reverse name mappings

SYNOPSIS

dns-rev [*option...*][*infile* [*outfile*]]

dns-rev -Help

dns-rev -VERSion

DESCRIPTION

The *dns-rev* program is used to generate the reverse name mapping for *.in-addr.arpa* addresses for DNS to use.

If the input file is not named, or the name '-' is used, the standard input is read.

If the output file is not named, or the name '-' is used, the startdard output is written.

OPTIONS

The following options are understood:

-Network_Mask *number*
: Set the network mask to the number given. This should be in the useual dot notation. Defaults to the 255.255.255.0 class C mask.

-Network *number*
: Set the network to the number given. This should be in the usual dot notation. Need not be given if there is only one network in the input file.

-Verbose
: This option may be used to see what *dns-rev* deciphers each resource record as.

-Automatic_Time_Stamp
: This option may be used to automatically update the time stamp in SOA records based on the current time. The time stamp will have a granularuty of 86 seconds.

-Delete_Foreign_Names
: This option may be used to delete A and NS records which reference names in domains outside the domain specified in the closest preceeding SOA record. This is of most se in removing external name servers from the reverse maps.

-Help
: This option may be used to get more information about how to used th *dns-rev* program.

-VERSion
: This option may be used to see what version of the *dns-rev* program is running.

-I*directory*
: This option may be used to set the search path for include files.

All other options will produce a diagnostic error. Options may be abbreviated, the minimum abbreviation is shown in upper-case. Options are case insensitive. Options and file names may be mixed arbitrarily on the command line.

EXIT STATUS

The *dns-rev* command will exit with a status of 1 on any error. The *dns-rev* command will only exit with a status of 0 if there are no errors.

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dns-rev version 1.6,

The *dns-rev* program comes with ABSOLUTELY NO WARRANTY; for details use the '*dns-rev -VERSion Warranty*' command. The *dns-rev* program is free software, and you are welcome to redistribute it under certain conditions; for details use the '*dns-rev -VERSion Redistribution*' command.

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