

NIH Invented Here, package manager for pkgsrc

Aleksey Cheusov
cheusov@NetBSD.org

Minsk, Belarus, 2011

Overview

Available commands

```
nih help          - Display help message
nih refresh       - Download pkg_summary(5) and SHA512 files
nih install
  nih update      - Install or update packages
nih uninstall
  nih delete
  nih remove      - Uninstall packages
```

Overview

Available commands

<code>nih verify</code>	- Verify packages integrity
<code>nih status</code>	- Show the status of installed packages
<code>nih info</code>	- Show information about package
<code>nih meta</code>	- Output available/installed meta packages
<code>nih leaf</code>	- Output or remove leaf packages
<code>nih list</code>	- List packages
<code>nih mark</code>	- Mark packages
<code>nih deps</code>	- Show dependencies
<code>nih clean-cache</code>	- Clean-up cache directory with binaries

Overview

Available options

```
nih -h          - Display help message
nih -V          - Display nih version
nih -y          - Answer 'Yes' to all questions
nih <command> -h - Display help message for a <command>
```

nih refresh

how it works

```
# nih refresh
```

```
Downloading pkg_summary.bz2...
```

```
Downloading SHA512.bz2...
```

```
#
```

pkg_summary(5)

format

```
PKGNAME=abcde-2.3.99.7
PKGPATH=audio/abcde
COMMENT=Command-line utility to rip and encode an audio CD
HOMEPAGE=http://code.google.com/p/abcde/
FILE_SIZE=54738
DEPENDS=cd-discid>=0.7
DEPENDS=id3-[0-9]*
DEPENDS=id3v2-[0-9]*
DEPENDS=cdparanoia>=3.0.9.7
...
        <empty line>
PKGNAME=abook-0.6.0rc2
COMMENT=Text-based addressbook program
...
```

nih list

suboptions

```
-a|-I    output all installed packages
-u       output packages installed by user
```

how it works

```
# nih list -u
ImageMagick-6.6.6.5nb1 Package for display and interac...
SDL-1.2.14nb1          Simple DirectMedia Layer, a cross-...
a2ps-4.14nb1           Formats an ascii file for printing...
abcde-2.3.99.7         Command-line utility to rip and en...
aspell-english-6.0.0nb1 English language support for a...
aspell-russian-0.99f7.1nb1 Russian language support fo...
aumix-2.8nb7           Set mix levels (ncurses interface ...
...
#
```

nih info

suboptions

```
-b      search in pkg_summary.txt (the default)
-o      search using pkg_online
-I      search in installed packages

-r      raw output in pkg_summary(5) format
-q      quiet mode, do not print "No matches found" to stderr
```


nih info

how it works

```
# nih info dict-server
```

```
-----  
PKGNAME:          dict-server-1.12.0  
DEPENDS:          libmaa>=1.2.0  
COMMENT:          Dictionary Service Protocol server  
SIZE_PKG:         389441  
HOMEPAGE:         http://www.dict.org/  
LICENSE:          gnu-gpl-v2  
PKGPATH:          textproc/dict-server  
PKGTOOLS_VERSION:20100204  
REQUIRES:  
    /usr/lib/libc.so.12  
    /usr/lib/libm.so.0  
    /usr/lib/libz.so.1  
    /usr/pkg/lib/libmaa.so.2  
DESCRIPTION:  
    The Dictionary Server Protocol (DICT) is a TCP...  
    ...  
#
```

nih verify

suboptions

-m	check the checksums of installed files
-l -U	check the REQUIRES/PROVIDES coherence
-L	check existence of library files listed in REQUIRES
-d	check the presence of dependencies

nih verify

how it works

```
# nih verify -m
----- checksums -----
/usr/pkg/bin/pkgdep fails MD5 checksum
# pkg_delete -f libmaa
Package 'libmaa-1.2.0' is still required
                                by other packages:
    paexec-0.16.1nb1
    dict-client-1.12.0nb1
    dict-server-1.12.0nb1
# nih verify -d
----- dependencies/conflicts -----
d: not_found libmaa>=1.3.0 <- dict-1.12.0nb1
d: not_found libmaa>=1.3.0 <- dictd-1.12.0nb1
d: not_found libmaa>=1.3.0 <- paexec-0.16.1nb1
#
```

nih verify

how it works

```
# nih verify -l
----- REQUIRES/PROVIDES coherence -----
l: not_found /usr/pkg/lib/libmaa.so.3 paexec-0.16.1nb1
l: not_found /usr/pkg/lib/libmaa.so.3 dict-1.12.0nb1
l: not_found /usr/pkg/lib/libmaa.so.3 dictd-1.12.0nb1
#
```

nih leaf

suboptions

- t output only PKGNAME
- R remove automatically installed leaf packages
- n don't actually deinstall packages,
just report the steps that would be taken.

nih mark

suboptions

- u mark packages as "installed by user"
- a mark packages as "installed as a dependency"

nih mark

how it works

```
# nih leaf  
gmake-3.82nb2          GNU version of 'make' utility  
automake-1.11.1nb1    GNU Standards-compliant  
                        Makefile generator  
  
# nih mark -u gmake  
# nih leaf  
automake-1.11.1nb1    GNU Standards-compliant  
                        Makefile generator  
  
#
```


nih delete

suboptions

`-n` don't actually deinstall packages,
 just report the steps that
 would be taken if it were.

nih delete

how it works

```
# nih remove -n libmaa
```

```
Getting a list of installed packages...
```

```
Generating an update plan...
```

```
----- UPDATE PLAN -----
```

```
The following packages will be removed
```

```
dict-mueller7-1.2 paexec-0.16.1nb1
```

```
libmaa-1.3.0 pkg_conflicts-0.4.0nb1
```

```
dict-client-1.12.0nb1 dict-server-1.12.0nb1
```

```
dict-data-1.8.0nb1 pkg_online-client-0.12.1
```

```
distbb-9nb20110511 pkg_online-server-0.12.1
```

```
Proceed (y/N)? y
```

```
Removing package dict-data-1.8.0nb1...
```

```
Removing package dict-mueller7-1.2...
```

```
Removing package pkg_conflicts-0.4.0nb1...
```

```
Removing package distbb-9nb20110511...
```

```
Removing package pkg_online-server-0.12.1...
```

```
...
```

```
#
```

nih install

suboptions

- n don't actually install a package,
 just report the steps that
 would be taken if it were.
- d download binaries only, do not update
 installed packages

nih install

how it works

```
# nih install editors/emacs22
Getting a list of installed packages...
Generating an update plan...
----- UPDATE PLAN -----
The following packages will be installed
    emacs-22.3nb13
The following packages will be installed
                        as auto-removable
    giflib-4.1.6 jpeg-8c perl-5.12.2nb2
    png-1.5.1 tiff-3.9.4nb3
Proceed (y/N)? y
Downloading package emacs-22.3nb13.tgz...
Installing package png-1.5.1 as a dependency...
Installing package giflib-4.1.6 as a dependency...
...
Installing package emacs-22.3nb13...
Updating pkgdb...
Done.
#
```

nih install

how it works

```
# nih install emacs- vim
```

```
Getting a list of installed packages...
```

```
Generating an update plan...
```

```
----- UPDATE PLAN -----
```

```
The following packages will be removed
```

```
  png-1.5.1 giflib-4.1.6 jpeg-8c perl-5.12.2nb2  
  tiff-3.9.4nb3 emacs-22.3nb13
```

```
The following packages will be installed
```

```
  vim-7.2.446
```

```
The following packages will be installed
```

```
                                as auto-removable
```

```
  vim-share-7.2.446
```

```
Proceed (y/N)?
```

nih search

suboptions

- b search in pkg_summary.txt (the default)
- o search using pkg_online
- I search in installed packages

- s output search strategies
- f output search fields
- 1 display 1-line information
about packages (default)
- 3 display short information
about packages
- 9 display full information
about packages
- r raw output in pkg_summary(5) format
- q quiet mode

nih search

how it works

```
# nih search -of
```

```
synonym | full name
```

```
-----
```

```
  p  PKGPATH
  n  PKGNAME
empty PKGBASE
      DEPENDS
      BUILD_DEPENDS
      CONFLICTS
      HOMEPAGE
  c  COMMENT
      LICENSE
      ONLYFOR
      NOTFOR
  m  MAINTAINER
  C  CATEGORIES
  f  PLIST
  d  DESCRIPTION
```

```
#
```

nih search

how it works

```
# nih search -os
```

```
synonym | full name | description
```

```
-----
```

empty	exact	Match headwords exactly
p	prefix	Match prefixes
	nprefix	Match prefixes (skip, count)
s	substring	Match substring occurring anywhere in a headword
u	suffix	Match suffixes
r	re	POSIX 1003.2 (modern) regexps
	regexp	Old (basic) regular expressions
x	soundex	Match using SOUNDEX algorithm
v	lev	Match headwords within Levenshtein distance one
w	word	Match separate words
f	first	Match the first word
l	last	Match the last word

```
#
```


nih search

how it works

```
# nih search -o m:p:ahoka
audio/cmus - Cmus is a small, fast and ...
games/pokerth - Texas Holdem poker with on...
lang/see - JavaScript interpreter and...
mail/sylpheed - Gtk based e-mail and netne...
shells/mksh - MirBSD Korn Shell
textproc/hunspell - Improved spellchecker
textproc/hunspell-hu_HU - Hungarian dictionary for h...
wip/mplayer-snapshot(mplayer) - Fast, cross-platform m...
wip/mplayer-snapshot-share(mplayer-share) - Documentat...
wip/umurmur - Mumble (murmur) server for...
www/opera - Opera web browser
#
```

nih search

how it works

```
# nih search -o DEPENDS:s:webkit
devel/devhelp          - Documentation viewer based ...
devel/qtscriptgenerator - Tool that generates Qt bind...
finance/gnucash        - Personal or business financ...
graphics/shotwell     - Shotwell is a photo organiz...
wip/blam               - Blam is a feed reader for G...
wip/deforaos-surfer   - DeforaOS desktop web browser
wip/froggymicroblog(frogmicroblog) - C# twitter identi...
wip/gmpc-wikipedia    - GMPC plugin showing wikiped...
wip/gwibber           - Open source microblogging c...
wip/libgtask          - Library for asynchronous an...
wip/py-webkit(py26-webkitgtk) - Python bindings for the...
wip/surf              - Surf is a fast and minimali...
wip/webkit-sharp      - Webkit-sharp Bindings webki...
www/epiphany          - The web browser for the GNO...
www/kazehakase        - Web browser with multiple l...
www/liferea-current(liferea) - Simple FeedReader clone ...
www/midori            - Lightweight web browser usi...
#
```

nih search

how it works

```
# nih search -o dns server
net/dhisd - DynDNS server
net/fpdns - Fingerprinting DNS servers
net/maradns - Secure DNS server for *NIX...
net/mydns-mysql - MySQL-based DNS server
net/mydns-pgsql - PostgreSQL-based DNS server
net/nsd - Authoritative-only DNS server
net/p5-Net-DNSServer - Perl5 module to be used as...
net/powerdns - Modern, advanced and high ...
net/powerdns-recursor(pdns-recursor) - PowerDNS resolv...
net/rootprobe - Root DNS server performanc...
net/unbound - DNS resolver and recursive...
sysutils/wbm-bind8 - Webmin module for managing...
wip/ldapdns(ldapdns-cvs) - Tiny, fast authoritative n...
wip/py-oak(py26-oak) - Authoritative/recursive DN...
#
```

nih search

how it works

```
# nih search -o dict C:w:textproc -spell \  
                -japanese -chinese -korean -festlex  
misc/lookup      - Electric dictionary agent ...  
textproc/dict-client - Dictionary Service Protoco...  
textproc/dict-dictionaries(dict-data) - Dictionary dat...  
textproc/dict-mueller7 - English-Russian dictionary...  
textproc/dict-server - Dictionary Service Protoco...  
textproc/dictem   - Dictionary client (RFC-222...  
textproc/diction  - GNU version of diction and...  
textproc/dikt     - Dictionary protocol client...  
textproc/eb       - C library for accessing EB...  
textproc/eblook   - Interactive command-line i...  
textproc/ebview   - GTK2 based EPWING dictiona...  
textproc/emacs-dict-client - Emacs package for talking...  
textproc/p5-Net-Dict - Client API for the DICT pr...  
textproc/xfce4-dict-plugin - Xfce dictionary server pl...  
wip/dict-est-rus  - DICTD data for Estonian-Ru...  
...  
#
```

nih search

how it works

```
# nih search FILE_SIZE:awk:'fvalue+0 > 100000000'  
games/flightgear-data      - FlightGear Simulator data files  
misc/kdeartwork4           - Artwork for the KDE integrate...  
x11/kdebase-workspace4    - base workspace for the KDE 4 ...  
misc/kdeedu4               - Edutainment, cation tools fo...  
games/kdegames4           - Games for the KDE integrated ...  
x11/kdelibs4               - Support libraries for the KDE...  
x11/kdelibs4               - Support libraries for the KDE...  
misc/kdepim4               - Personal Information Manageme...  
misc/openoffice3           - Integrated office productivit...  
x11/qt4-docs               - Documentation for the QT C++ ...  
games/supertuxkart        - Free 3D kart racing game  
games/ufoai                 - UFO Alien Invasion  
games/warmux                - Battle game  
games/wesnoth               - Fantasy turn-based strategy game  
misc/zyGrib-maps           - High resolution map files for...  
#
```

The End