

Pxechn.c32

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pxechn.c32 - Chainboot to new Network Boot Program (NBP)

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SYNOPSIS

```
pxechn.c32 [-h | --help | -?]  
pxechn.c32 -r FILE  
pxechn.c32 FILE [OPTIONS]
```

DESCRIPTION

Chainboot to a new Network Boot Program (NBP) *FILE* with options to adjust PXE packet #3 (PXENV_PACKET_TYPE_CACHED_REPLY) to alter end behavior.

FILE may be either a filename, an IP::FN (192.168.1.1::path/to/file.0) , or a URL.

FILE is parsed to adjust the DHCP *sname* field/option 66 and *file* field/option 67.

OPTIONS

-c *CONFIG*

config file for PXELINUX (DHCP Option 209).

-h, --help, -?

Print *help*/usage information; invalid options will also cause this.

-o *OPT.TYPE=VALUE*

Set *option*.

OPT is in decimal input format (see below).

TYPE specifies the output type and input syntax (listed here in between unpaired curved right single quotation marks and 1 character long):

_ *'b'*yte,

_ *'w'*ord(2B),

_ *'l'*ong(4B),

_ *'q'*uad(8B),

_ character *'s'*tring, and

_ colon-separated *'h'*ex string

TYPE is case insensitive; bytes must have 2 digits and each byte must be separated.

byte, word, long and quad input values must meet the criteria for decimal input.

-p *PATH*

path option for PXELINUX (DHCP Option 210).

-r

restart. Call the PXE stack with `PXENV_RESTART_TFTP`. *Must* be the only option, and before *FILE*.

-S

Set *sip* based on *sname* field/option 66 (by direct IP if using a period-delimited address, or otherwise by DNS).

-t *SECONDS*

timeout option for PXELINUX (DHCP Option 211).

-w

After loading, *wait* for user input before booting.

-W

Enable specific options for WDS (Windows Deployment Services). *FILE* (or its overrides for DHCP fields *siaddr* and *file*) must point at the WDS server.

Note: As of 2012-05-31, there is a known issue with gPXE/iPXE, at least with `undionly.kkpxe`.

DECIMAL INPUT

All parameters that are defaulted to decimal format are processed by `strtoul(3)` with a base of 0, which allows alternate formats and finds a suitable non-space separating character.

EXAMPLES

- a. Load *nbp.0* and set PXELINUX config (option 209).

```
pxechn.c32 http://myhost.dom.loc/path/nbp.0 -c myconfig
```

- b. Load *gpxelinux.0* from the current directory, set prefix, wait to execute, set first config, set the domain name and 2 domain name servers (case mixed to show insensitivity; 10.1.1.2 and 172.23.77.236).

```
pxechn.c32 gpxelinux.0 -p http://10.1.1.4/tftp/ -w -c myconfig -o 15.s=domain.loc -o 6.x=0A:01:01:02:ac:17:4D:Ec -
```

- c. Load *gpxelinux.0* (relative to the current directory and not altering *sname*/option 66), set the PXELINUX path prefix, wait after loading, set option 160 to 0x12 0x34 0x56 0x78, and option 197 to 0x00 0xD0 0xDE 0x00.

```
pxechn.c32 gpxelinux.0 -p http://10.1.1.4/tftp/ -w -o 0xA0.x=12:34:56:78 -x 197.x=00:d0:de:00
```

- d. Load *wdsnbp.com* from 10.1.1.8 and copy DHCP Option 66 to DHCP field *sname* if there is room.

```
pxechn.c32 10.1.1.8:boot\x86\wdsnbp.com -W
```

- e. Load *wdsnbp.com* from 10.1.1.4, point packets to 10.1.1.8 for use with WDS, copy DHCP Option 66 to DHCP field *sname* if there is room and decode this to an IPv4 address.

```
pxechn.c32 10.1.1.4:boot\x86\wdsnbp.com -W -o 66.x=0a:01:01:08 -S
```

NOTES

Please note that some NBPs may ignore packet #3 by either not examining it at all or by issuing its own DHCP DISCOVER/REQUEST, negating all DHCP field/option modifications by pxechn.c32, including Microsoft Windows Server 2008R2 WDS's wdsnbp.com. See also option -W.

URL specifications in *FILE* that include user/password before the host will currently cause the *siaddr* field to not be set properly.

The non-space constraint is due to how Syslinux variants parse the command line as of 2012-09-16.

As of version 6.03, pxechn.c32 has no use when booting with syslinux.efi. Do not expect it to work in UEFI mode.

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