

Debian Netinst Installer ignores network and locale preseed.cfg settings upon PXE/TFTP boot

As you came along I suppose you stumbled across the same issue as me, didn't you?

As far as I'm concerned, I can only tell that this issue rises when netbooting Debian-Installer through PXE/TFTP in combination with a preseed.cfg file, while the latter one being downloaded from a HTTP web-server.

This behaviour has been observed with Debian Lenny and older versions and can cause quite some headache upon setup automation if not taken into account.

To summarize the situation before we dig into more details:

- I want to netboot Debian-Installer (the Debian "netinst" image) through PXE/TFTP.
- Debian netinst is launched through pxelinux, as supposed by all common documentation out there
- I want a preseed.cfg to be dynamically downloaded from a web-server during installation to achieve an automatic installation

Issue Observed: Despite of having set the "debian-installer/locale", "console-keymaps-at/keymap" and other settings within the preseed.cfg, Debian-Installer keeps asking you for language, keyboard and other values straight after bootup

This article won't dig into the details of setting up the required boot environment and it's particular configuration. I assume you have all of that in place already.

Your current configuration will most likely look like this in your **pxelinux.cfg/default** file:

```
label debian507
  MENU INDENT 1
  MENU LABEL -> Debian GNU 5.0.7
  kernel /images/Debian/5.0.7/i386/linux
  append vga=normal initrd=/images/Debian/5.0.7/i386/initrd.gz ramdisk_size=65536
  root=/dev/rd/0 devfs=mount,dall rw auto
  url=http://some.webserver/configs/Debian/5.0.7/i386/preseed.cfg --
```

Within your preseed.cfg you define some settings with the intend of a full automation. Here's an excerpt of mine:

```
# keyboard and locale settings
#####

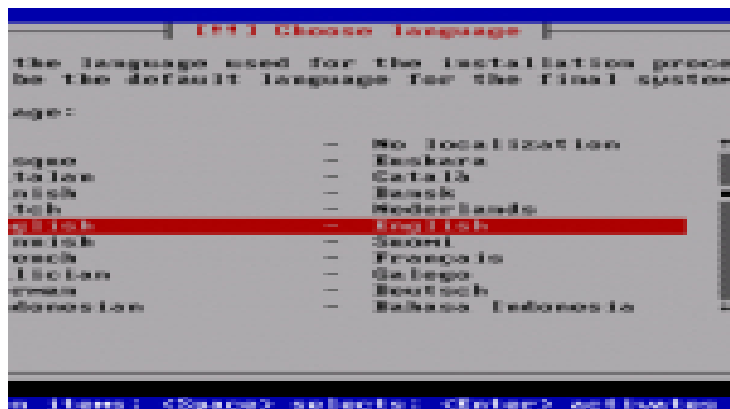
d-i  debian-installer/locale string en_US
d-i  console-keymaps-at/keymap select sg-latin1

# networking
#####

d-i  netcfg/disable_dhcp boolean false
d-i  netcfg/get_hostname string localhost
```

```
d-i netcfg/get_domain string localdomain  
d-i netcfg/choose_interface select eth0
```

You now would probably expect that having these lines in your preseed.cfg would cause Debian-Installation to stop prompting you after bootup. Instead you still end up being bugged with these prompts:



```
| (F) Configure the network |
+-----+
a multiple network interfaces. Choose the one
which interface during the installation. If
selected network interface found has been selec
k interface:
selected Name: Services IP:192.168.1.100 Net:10
selected Name: Services IP:192.168.1.100 Net:10
+-----+
n Name: <Space> select: <Enter> activate
```

```
| (F) Configure the network |
+-----+
the hostname for this system.
is a single word that identifies your system
as don't know what your hostname should be.
instruction. If you are setting up your own line
something up here.
+-----+
n Name: <Space> select: <Enter> activate
```

```
| (F) Configure the network |
+-----+
ee is the part of your Internet address to t
e. It is often something that ends in .com.
you are setting up a home network, you can n
but make sure you use the same domain name
+-----+
n Name: <Space> select: <Enter> activate
```

Now to the question, what causes this behaviour.

Essentially this is sort of a chicken-and-egg problem within Debian-Installer.
Due to it's internal architecture, the installer consists of multiple parts as lined out in the [Debian-Installer internals documentation](#), which take care about the various stages.

First we have the debian-installer-startup and debian-installer binaries, which care about all the init stuff.
Second we have the main-menu component, which does all the questioning and installation using the underlying debconf framework.

Well, so far so good. debian-installer will take care about a preliminary network setup so it can actually download the preseed.cfg file and will launch menu-menu afterwards.

If will however only do so AFTER questioning for system locale, keyboard and basic network settings - just at a stage, where it simply didn't (and in fact couldn't) download the preseed.cfg file.

So, here's the chicken: We want to get rid of the questioning by using a preseed.cfg, which cannot be download before answering some initial questions.

Here's the egg: To get rid of the questioning, we need the help of a preseed.cfg.

Well, there's of course the possibility, to include the preseed.cfg to the initrd image.

This imposes however a problem, as it may harden upgrades and especially automatic installation with different configurations.

Luckily, there is a way to work around this is by includubg these settings with the kernel append parameters through PXELinux as shown below:

```
label debian507
  MENU INDENT 1
  MENU LABEL -> Debian GNU 5.0.7
  kernel /images/Debian/5.0.7/i386/linux
  append vga=normal initrd=/images/Debian/5.0.7-2.6.32-bpo/i386/initrd.gz ramdisk_size=65536
    root=/dev/rd/0 devfs=mount,dall rw auto
    url=http://some.webserver/configs/Debian/5.0.7/i386/preseed.cfg
    locale=en_US console-keymaps-at/keymap=sg-latin1
    interface=eth0 hostname=localhost domain=localdomain --
```

This would indeed cause debian-installer to not prompt for the initial settings, continue with the network initialization, download the preseed.cfg and proceed to main-menu, which would then use the downloaded preseed configuration.

So, you're here reading this. Maybe just because you slipped this little information in the official documentation?

Ahem ... it's right [there](#):

quote
An important difference between the preseeding methods is the point at which the preconfiguration file is loaded and processed. For initrd preseeding this is right at the start of the installation, before the first question is even asked. For file preseeding this is after the CD or CD image has been loaded. For network preseeding it is only after the network has been configured.

Obviously, any questions that have been processed before the preconfiguration file is loaded cannot be preseeded (this will include questions that are only displayed at medium or low priority, like the first hardware detection run). Section B.2.2, 'Using boot parameters to preseed questions?' offers a way to avoid these questions being asked.

end quote

My point for writing this topic: If you're just getting started with preseeding using on of the many HowTo's out there, without reading the official docs as well, this particular issue is very likely to slip ;-)