

Requirements

HW: 2 nic device

OS: Ubuntu server 17.10

```
apt install bash debootstrap schroot syslinux nfs-kernel-server tftpd-hpa  
xorriso pigz zfsutils-linux
```

Optional config

```
apt install isc-dhcp-server
```

network config nano /etc/netplan/01-netcfg.yaml

```
# This file describes the network interfaces available on your system  
# For more information, see netplan(5).  
network:  
  version: 2  
  renderer: networkd  
  ethernets:  
    ens3:  
      dhcp4: no  
      addresses: [10.1.22.2/24]  
      gateway4: 192.168.122.1  
      nameservers:  
        addresses: [8.8.8.8,8.8.4.4]  
    ens4:  
      dhcp4: yes
```

Build livenet environment

Preparazione dell'ambiente zfs

```
zpool create livenet /dev/sdb
```

```
zfs create livenet/images
```

```
zfs create livenet/boot
```

Download package git clone <https://github.com/scipioni/livenet-server.git> edit /etc/default/livenet like this

```
# folder that contains livenet system  
BASE=/livenet
```

```
IMAGES=${BASE}/images
BOOT=${BASE}/boot
```

Trivial FTP

edit /etc/default/tftp-hpa

```
TFTP_USERNAME="tftp"
TFTP_DIRECTORY="/zfsp_livenet/boot"
TFTP_ADDRESS="0.0.0.0:69"
TFTP_OPTIONS="--secure"
```

DHCP

Abilitare dhcpd su specifica scheda

Editare la riga in

/etc/default/isc-dhcp-server

```
INTERFACESv4="ens3"
```

Configurazione dhcpd

editare il file /etc/dhcp/dhcpd.conf al termine service isc-dhcp-service restart

```
ddns-update-style none;
authoritative;

option domain-name          "livenet";
option domain-name-servers  8.8.8.8;

allow bootp;
allow booting;

option space PXE;
# Code 1: Multicast IP address of bootfile
option PXE.mtftp-ip code 1 = ip-address;
# Code 2: UDP port that client should monitor for MTFTP responses
option PXE.mtftp-cport code 2 = unsigned integer 16;
# Code 3: UDP port that MTFTP servers are using to listen for MTFTP requests
option PXE.mtftp-sport code 3 = unsigned integer 16;
# Code 4: Number of secondes a client must listen for activity before trying
#         to start a new MTFTP transfer
option PXE.mtftp-tmout code 4 = unsigned integer 8;
```

```
option PXE.mtftp-delay code 5 = unsigned integer 8;
# Code 5: Number of secondes a client must listen before trying to restart
# a MTFTP transfer
option PXE.discovery-control code 6 = unsigned integer 8;
option PXE.discovery-mcast-addr code 7 = ip-address;
set vendor-string = option vendor-class-identifier;

class "PXE" {
    match if substring(option vendor-class-identifier, 0, 9) = "PXECient";
    option vendor-class-identifier "PXECient";
    vendor-option-space PXE;
    option PXE.mtftp-ip 0.0.0.0;
}

class "Etherboot" {
    match if substring(option vendor-class-identifier, 0, 9) = "Etherboot";
    option vendor-class-identifier "Etherboot";
    vendor-option-space PXE;
    option PXE.mtftp-ip 0.0.0.0;
}

class "LIVENET" {
    match if (substring(option vendor-class-identifier,0,7) = "LIVENET") or
(substring(option vendor-class-identifier,0,9) = "PXECient") or
(substring(option vendor-class-identifier,0,9) = "Etherboot");
    log ( info, "Packet from PXE or LIVENET client");
}

shared-network "clients" {
    subnet 10.1.22.0 netmask 255.255.255.0 {
        option subnet-mask 255.255.255.0;
        option routers 10.1.22.2;
        #default-lease-time 28800;
        #max-lease-time 86400;

        pool {
            # restringe il lease solo alla classe LIVENET
            allow members of "LIVENET";
            range 10.1.22.10 10.1.22.100;
            filename "/pxelinux.0";
            next-server 10.1.22.2;
        }
    }
}
```

From:

<https://wiki.csgalileo.org/> - **Galileo Labs**

Permanent link:

<https://wiki.csgalileo.org/projects/livenet/server?rev=1520894721>

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