

# DHCP4-Dienst mit festen IPv4-Adressen

[dhcpcd/KVM Bug](#) beachten <sup>1)</sup>

## Pakete

Debian (ab 6.0):

```
isc-dhcp-server
```

openSuSE (ab 12.1):

```
dhcp-server
```

centos (6) :

```
dhcp
```

## Konfiguration

/etc/dhcp/dhcpd.conf : ( debian ab 6.0 )

/etc/dhcpd.conf : ( openSuSE 12.1, centos 6 )

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

log-facility local7;

subnet 192.168.1.0 netmask 255.255.255.0 {
    option domain-name "linuxhotel.de";
    option routers 192.168.1.1;
    option broadcast-address 192.168.1.255;
    default-lease-time 600;
    max-lease-time 7200;
}

use-host-decl-names on;

host notebook24 {
    hardware ethernet 00:16:d3:b9:a0:3e;
    fixed-address 192.168.1.224;
}
```

## Debian ab 6.0

/etc/default/isc-dhcp-server :

```
INTERFACES="eth0"
```

## SuSE

/etc/sysconfig/dhcpd:

```
DHCPD_INTERFACE="eth0"
```

## CentOS (bis 6)

/etc/sysconfig/dhcpd :

```
# Command line options here  
DHCPDARGS="eth0"
```

# Testen

## Debian, CentOS 5.3

```
dhcpd -t
```

## SuSE

```
rcdhcpd check-syntax
```

# starten

## openSuSE (ab 12.1)

```
service dhcpd start  
chkconfig dhcpd on
```

## debian (ab 6.0)

```
service isc-dhcp-server restart
```

## centos (ab 7)

```
service dhcpd start
```

## Client testen

DHCP Anfrage ohne Änderung:

## Debian (ab 6.0)

```
dhclient -d -sf /bin/true eth0
```

## openSuSE (12.3)

```
dhcpcd --test eth0
```

## openSuSE (ab 42.1)

```
/usr/lib/wicked/bin/wickedd-dhcp4 --test eth0
```

## IP-Adress-Pool

[/etc/dhcp/dhcpd.conf](#)

```
subnet 192.168.227.0 netmask 255.255.255.0 {
    range 192.168.227.50 192.168.227.69;
    ...
}
```

```
dhcpd -t
service isc-dhcp-server restart
dhclient -d -sf /bin/true eth0
dhcp-lease-list
```

## Clientseitiges DNS über DHCP konfigurieren

[/etc/dhcp/dhcpd.conf](#)

```
option domain-name "z03.example.org";  
option domain-name-servers 192.168.202.13;  
option domain-search "linuxhotel.de", "z03.example.org";
```

## DHCP Client

### DHCP Server Optionen überschreiben

Beispiel: eigene DNS-Informationen in die `resolv.conf` eintragen

[/etc/dhcp/dhclient.conf](#)

```
supersede domain-name "z03.test";  
supersede domain-name-servers 192.168.203.101;
```

## Tools

- [Webmin - incl. DHCP und DNS Modul](#) ( in Debian Sarge enthalten, in Etch nicht mehr )
- [Maintain - web based management tool for DNS and DHCP](#)

## OMAPI / omshell

Ist eine Möglichkeit einen laufenden DHCP-Server ohne Neustart zu steuern ( leases, etc. ).

## DHCP Failover

Debian 5.0

( noch nicht getestet )

```
mv /etc/dhcp3/dhcpd.conf /etc/dhcp3/dhcpd.common.conf  
scp /etc/dhcp3/dhcpd.common.conf  
notebook25.linuxhotel.de:/etc/dhcp3/dhcpd.common.conf
```

## dhcpd.common.conf

/etc/dhcp3/dhcpd.common.conf :

```
subnet 192.168.1.0 netmask 255.255.255.0 {
  pool {
    failover peer "dhcp-failover";
    range 192.168.1.100 192.168.1.189;
  }
  option domain-name "linuxhotel.de";
  option domain-name-servers 192.168.1.4, 192.168.1.6;
  option routers 192.168.1.1;
  option broadcast-address 192.168.1.255;
}
```

## Primary

/etc/dhcp3/dhcpd.conf :

```
failover peer "dhcp-failover" {
  primary ; # declare this to be the primary server
  address notebook20.linuxhotel.de;
  port 520;
  peer address notebook25.linuxhotel.de;
  peer port 520;
  max-response-delay 60;
  max-unacked-updates 10;
  load balance max seconds 3;
  mclt 1800;
  split 128;
}
```

```
include "/etc/dhcp3/dhcpd.common.conf";
```

```
/etc/init.d/dhcp3-server restart
```

## Secondary

```
/etc/init.d/dhcp3-server stop
```

/etc/dhcp3/dhcpd.conf :

```
failover peer "dhcp-failover" {
  secondary;
  address notebook25.linuxhotel.de;
  port 520;
```

```
peer address notebook20.linuxhotel.de;
peer port 520;
max-response-delay 60;
max-unacked-updates 10;
load balance max seconds 3;
}
```

```
include "/etc/dhcp3/dhcpd.common.conf";
```

```
rm /var/lib/dhcp3/dhcpd.leases~
> /var/lib/dhcp3/dhcpd.leases
/etc/init.d/dhcp3-server start
```

Sekunden entsprechend mclt Eintrag warten ...

## Primary oder Secondary synchronisieren

z.B. nach Got P00LREQ, answering negatively! Peer may be out of leases or database inconsistent im Log ...

```
/etc/init.d/dhcp3-server stop
rm /var/lib/dhcp3/dhcpd.leases~
> /var/lib/dhcp3/dhcpd.leases
/etc/init.d/dhcp3-server start
```

Sekunden entsprechend mclt Eintrag warten ...

1)

Lösungsmöglichkeiten um UDP Checksum-Problem in KVM zu vermeiden:

- in KVM e1000 als Netzwerkkarte auswählen,
- oder: TX offloading in der Netzwerkkarte ausschalten
- oder: mit iptables die Checksumme erzeugen

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