Temat: Serwer DHCP	
Kierunek: Automatyka i Robotyka	**Data**: 13.05.2021
Kurs: SCR – sieci komputerowe	**Nr grupy**: E12-95g
Prowadzący: Dr inż. Jerzy Greblicki	
Autorzy: Tomasz Marut 252926 Piotr Kuboń 252871	**Ocena**:

1. Serwer DHCP

1.1. W celu uruchomienia serwera DHCP na maszynie wirtualnej wykonano poniższe polecenia:

```
peter@peter-VirtualBox:~$ sudo apt-get install isc-dhcp-server
Reading package lists... Done
Building dependency tree
```

```
peter@peter-VirtualBox:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        ether 08:00:27:a0:9f:4c  txqueuelen 1000  (Ethernet)
        RX packets 21  bytes 6947 (6.9 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 95  bytes 14811 (14.8 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.1.25  netmask 255.255.255.0  broadcast 192.168.1.255
        inet6 fe80::5df3:b3d8:4128:d5  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:0c:e8:37  txqueuelen 1000  (Ethernet)
        RX packets 3968  bytes 5236315 (5.2 MB)
        RX errors 0  dropped 20  overruns 0  frame 0
        TX packets 1405  bytes 122998 (122.9 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 373  bytes 33059 (33.0 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 373  bytes 33059 (33.0 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

```
peter@peter-VirtualBox:~$ sudo nano /etc/default/isc-dhcp
```

```
  GNU nano 4.8                /etc/default/isc-dhcp-server                Modified
# Defaults for isc-dhcp-server (sourced by /etc/init.d/isc-dhcp-server)

# Path to dhcpd's config file (default: /etc/dhcp/dhcpd.conf).
#DHCPDv4_CONF=/etc/dhcp/dhcpd.conf
#DHCPDv6_CONF=/etc/dhcp/dhcpd6.conf

# Path to dhcpd's PID file (default: /var/run/dhcpd.pid).
#DHCPDv4_PID=/var/run/dhcpd.pid
#DHCPDv6_PID=/var/run/dhcpd6.pid

# Additional options to start dhcpd with.
#       Don't use options -cf or -pf here; use DHCPD_CONF/ DHCPD_PID instead
#OPTIONS=""

# On what interfaces should the DHCP server (dhcpd) serve DHCP requests?
#       Separate multiple interfaces with spaces, e.g. "eth0 eth1".
INTERFACESv4="enp0s8"
INTERFACESv6=""
```

```
peter@peter-VirtualBox:~$ sudo nano /etc/dhcp/dhcpd.conf
```

```
  GNU nano 4.8                  /etc/dhcp/dhcpd.conf                  Modified
# dhcpd.conf
#
# Sample configuration file for ISC dhcpd
#
# Attention: If /etc/ltsp/dhcpd.conf exists, that will be used as
# configuration file instead of this file.
#

# option definitions common to all supported networks...
#option domain-name "example.org";
#option domain-name-servers ns1.example.org, ns2.example.org;

default-lease-time 600;
max-lease-time 7200;

# The ddns-updates-style parameter controls whether or not the server will
# attempt to do a DNS update when a lease is confirmed. We default to the
# behavior of the version 2 packages ('none', since DHCP v2 didn't
# have support for DDNS.)
ddns-update-style none;

# If this DHCP server is the official DHCP server for the local
# network, the authoritative directive should be uncommented.
authoritative;
```

```
# A slightly different configuration for an internal subnet.
subnet 192.168.1.0 netmask 255.255.255.0 {
  range 192.168.1.100 192.168.1.200;
#  option domain-name-servers ns1.internal.example.org;
#  option domain-name "internal.example.org";
  option subnet-mask 255.255.255.0;
  option routers 192.168.1.255;
  option broadcast-address 192.168.1.255;
  default-lease-time 600;
  max-lease-time 7200;
}
```

```
peter@peter-VirtualBox:~$ sudo systemctl start isc-dhcp-server
peter@peter-VirtualBox:~$ sudo systemctl status isc-dhcp-server
● isc-dhcp-server.service - ISC DHCP IPv4 server
     Loaded: loaded (/lib/systemd/system/isc-dhcp-server.service; enabled; ven>
     Active: active (running) since Wed 2021-05-26 22:20:45 CEST; 14s ago
       Docs: man:dhcpd(8)
   Main PID: 4631 (dhcpd)
      Tasks: 4 (limit: 1107)
     Memory: 5.9M
     CGroup: /system.slice/isc-dhcp-server.service
             └─4631 dhcpd -user dhcpd -group dhcpd -f -4 -pf /run/dhcp-server/>

maj 26 22:20:45 peter-VirtualBox dhcpd[4631]: Wrote 0 leases to leases file.
maj 26 22:20:45 peter-VirtualBox sh[4631]: Wrote 0 leases to leases file.
maj 26 22:20:45 peter-VirtualBox dhcpd[4631]: Listening on LPF/enp0s8/08:00:27>
maj 26 22:20:45 peter-VirtualBox sh[4631]: Listening on LPF/enp0s8/08:00:27:0c>
maj 26 22:20:45 peter-VirtualBox dhcpd[4631]: Sending on   LPF/enp0s8/08:00:27>
maj 26 22:20:45 peter-VirtualBox sh[4631]: Sending on   LPF/enp0s8/08:00:27:0c>
maj 26 22:20:45 peter-VirtualBox dhcpd[4631]: Sending on   Socket/fallback/fal>
maj 26 22:20:45 peter-VirtualBox sh[4631]: Sending on   Socket/fallback/fallba>
maj 26 22:20:45 peter-VirtualBox dhcpd[4631]: Server starting service.
maj 26 22:20:51 peter-VirtualBox dhcpd[4631]: DHCPREQUEST for 192.168.1.18 fro>
lines 1-20/20 (END)
```

Jak można zauważyć serwer działa prawidłowo, co było celem ćwiczenia.