

QUẢN TRỊ MẠNG: BÁO CÁO TUẦN 2 CÀI ĐẶT VÀ CẤU HÌNH DNS SERVER

Sinh viên: Phan Đồng Thiên Long

Mã số sinh viên: 3118410242

Hãy thực hiện các yêu cầu sau:

1/ Đối với server sử dụng hệ điều hành CentOS 7, thực hiện cài đặt dịch vụ DNS:

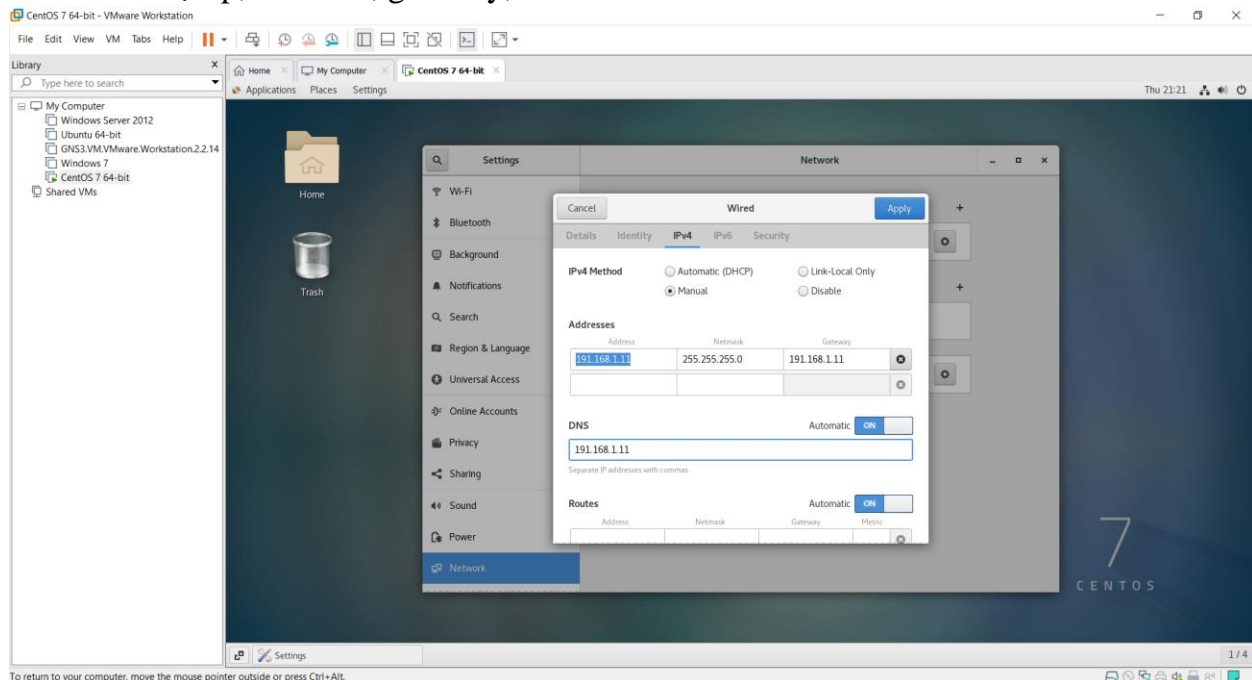
- DNS: quản lý tên miền: sgu.edu.vn trở về địa chỉ: 192.168.1.210/24, qtm.vn trở về địa chỉ 192.168.1.200/24 và lab.net trở về địa chỉ: 172.16.0.1/16

2/ Đối với server sử dụng hệ điều hành windows server 2012, thực hiện cài đặt dịch vụ DNS:

- DNS: quản lý tên miền: IT.net trở về địa chỉ: 192.168.1.150/24, data.org trở về địa chỉ: 172.16.20.5/16, và relax.com trở về địa chỉ: 210.5.3.100/16.

3/ Hãy cấu hình để máy CentOS7 và máy Windows server có thể trao đổi quá trình phân giải tên với nhau.

Đặt ip, netmask, gateway, dns cho IPv4 và disabled IPv6.



Cấu hình file `/etc/named.conf`

```
long@localhost:/home/long
File Edit View Search Terminal Help
GNU nano 2.3.1 File: /etc/named.conf Modified

//
// named.conf
//
// Provided by Red Hat bind package to configure the ISC BIND named(8) DNS
// server as a caching only nameserver (as a localhost DNS resolver only).
//
// See /usr/share/doc/bind*/sample/ for example named configuration files.
//
// See the BIND Administrator's Reference Manual (ARM) for details about the
// configuration located in /usr/share/doc/bind-{version}/Bv9ARM.html

options {
    listen-on port 53 { 192.168.1.11; };
    #listen-on-v6 port 53 { ::1; };
    directory      "/var/named";
    forwarders      {192.168.1.1; };
    dump-file       "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    recursing-file  "/var/named/data/named.recursing";
    secroots-file   "/var/named/data/named.secroots";
    allow-query     { localhost; 192.168.1.0/24; };

    /*
     - If you are building an AUTHORITATIVE DNS server, do NOT enable recursion.
     - If you are building a RECURSIVE (caching) DNS server, you need to enable
       recursion.
     - If your recursive DNS server has a public IP address, you MUST enable access
       control to limit queries to your legitimate users. Failing to do so will
       cause your server to become part of large scale DNS amplification
       attacks. Implementing BCP38 within your network would greatly
       reduce such attack surface
    */
    recursion yes;

    dnssec-enable no;
    dnssec-validation no;
}
```

^G Get Help ^O WriteOut ^R Read File ^V Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell

[Settings] long@localhost:/home/long Home

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

```
GNU nano 2.3.1      File: /etc/named.conf      Modified
};
zone "vnlab.com.vn" IN {
    type master;
    file "forward.vnlab.com.vn";
    allow-update { none; };
};
zone "sgu.edu.vn" IN {
    type master;
    file "forward.sgu.edu.vn";
    allow-update { none; };
};
zone "qtm.vn" IN {
    type master;
    file "forward.qtm.vn";
    allow-update { none; };
};
zone "lab.net" IN {
    type master;
    file "forward.lab.net";
    allow-update { none; };
};
zone "1.168.192.in-addr.arpa" IN {
    type master;
    file "reverse.vnlab.com.vn";
    allow-update { none; };
};
zone "0.16.172.in-addr.arpa" IN {
    type master;
    file "reverse.lab.net";
    allow-update { none; };
};

include "/etc/named.rfc1912.zones";
include "/etc/named.root.key";
```

Cấu hình file /var/named/forward.vnlab.com.vn

```
long@localhost:/home/long
File Edit View Search Terminal Help
GNU nano 2.3.1 File: /var/named/forward.vnlab.com.vn

$TTL 86400
@      IN      SOA      server.vnlab.com.vn. root.vnlab.com.vn. (
        2019210901      ;Serial
        3600            ;Refresh
        1800            ;Retry
        604800          ;Expire
        86400           ;Minimum TTL
)
@      IN      NS       server.vnlab.com.vn.
@      IN      A        192.168.1.11
server IN      A        192.168.1.11

[ Read 12 lines ]
^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page
^X Exit          ^J Justify       ^W Where Is     ^V Next Page
^K Cut Text      ^C Cur Pos
^U UnCut Text    ^T To Spell
```

Cấu hình file /var/named/forward.sgu.edu.vn

```
long@localhost:/etc/sysconfig/network-scripts
File Edit View Search Terminal Help
GNU nano 2.3.1 File: /var/named/forward.sgu.edu.vn

$TTL 86400
@      IN      SOA      server1.sgu.edu.vn. root.lab.net. (
        2019210901      ;Serial
        3600            ;Refresh
        1800            ;Retry
        604800          ;Expire
        86400           ;Minimum TTL
)
@      IN      NS       server1.sgu.edu.vn.
@      IN      A        192.168.1.210
server1 IN      A        192.168.1.210

[ Read 12 lines ]
^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text      ^C Cur Pos
^X Exit          ^J Justify       ^W Where Is     ^V Next Page     ^U UnCut Text    ^T To Spell
```

Cấu hình file /var/named/forward.qtm.vn

```
GNU nano 2.3.1      File: /var/named/forward.qtm.vn

$TTL 86400
@      IN      SOA      server2.qtm.vn. root.lab.net. (
        2019210901      ;Serial
        3600            ;Refresh
        1800            ;Retry
        604800          ;Expire
        86400           ;Minimum TTL
)
@      IN      NS       server2.qtm.vn.
@      IN      A        192.168.1.200
server2 IN      A        192.168.1.200

[ Read 12 lines ]
^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text      ^C Cur Pos
^X Exit          ^J Justify       ^W Where Is     ^V Next Page     ^U UnCut Text    ^T To Spell
```

Cấu hình file /var/named/reverse.vnlab.com.vn

```
GNU nano 2.3.1          File: /var/named/reverse.vnlab.com.vn          Modified
$TTL 86400
@      IN      SOA      server.vnlab.com.vn. root.vnlab.com.vn. (
;      2019210901      ;Serial
;      3600            ;Refresh
;      1800            ;Retry
;      604800          ;Expire
;      86400           ;Minimum TTL
)
@      IN      NS       server.vnlab.com.vn.
@      IN      PTR      vnlab.com.vn.
server IN      A        192.168.1.11
11     IN      PTR      server.vnlab.com.vn.
;
@      IN      NS       server1.sgu.edu.vn.
@      IN      PTR      sgu.edu.vn.
server1 IN      A        192.168.1.210
210    IN      PTR      server1.sgu.edu.vn.
;
@      IN      NS       server2.qtm.vn.
@      IN      PTR      qtm.vn.
server2 IN      A        192.168.1.200
200    IN      PTR      server2.qtm.vn.
;
```

^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell

Cấu hình file /var/named/forward.lab.net

```
long@localhost:/home/long
File Edit View Search Terminal Help
GNU nano 2.3.1 File: /var/named/forward.lab.net Modified

$TTL 86400
@      IN      SOA      server3.lab.net. root.lab.net. (
        2019210901      ;Serial
        3600            ;Refresh
        1800            ;Retry
        604800          ;Expire
        86400           ;Minimum TTL
)
@      IN      NS       server3.lab.net.
@      IN      A        172.16.0.1
server3 IN      A        172.16.0.1

^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text      ^C Cur Pos
^X Exit          ^J Justify       ^W Where Is      ^V Next Page     ^U UnCut Text    ^T To Spell
```

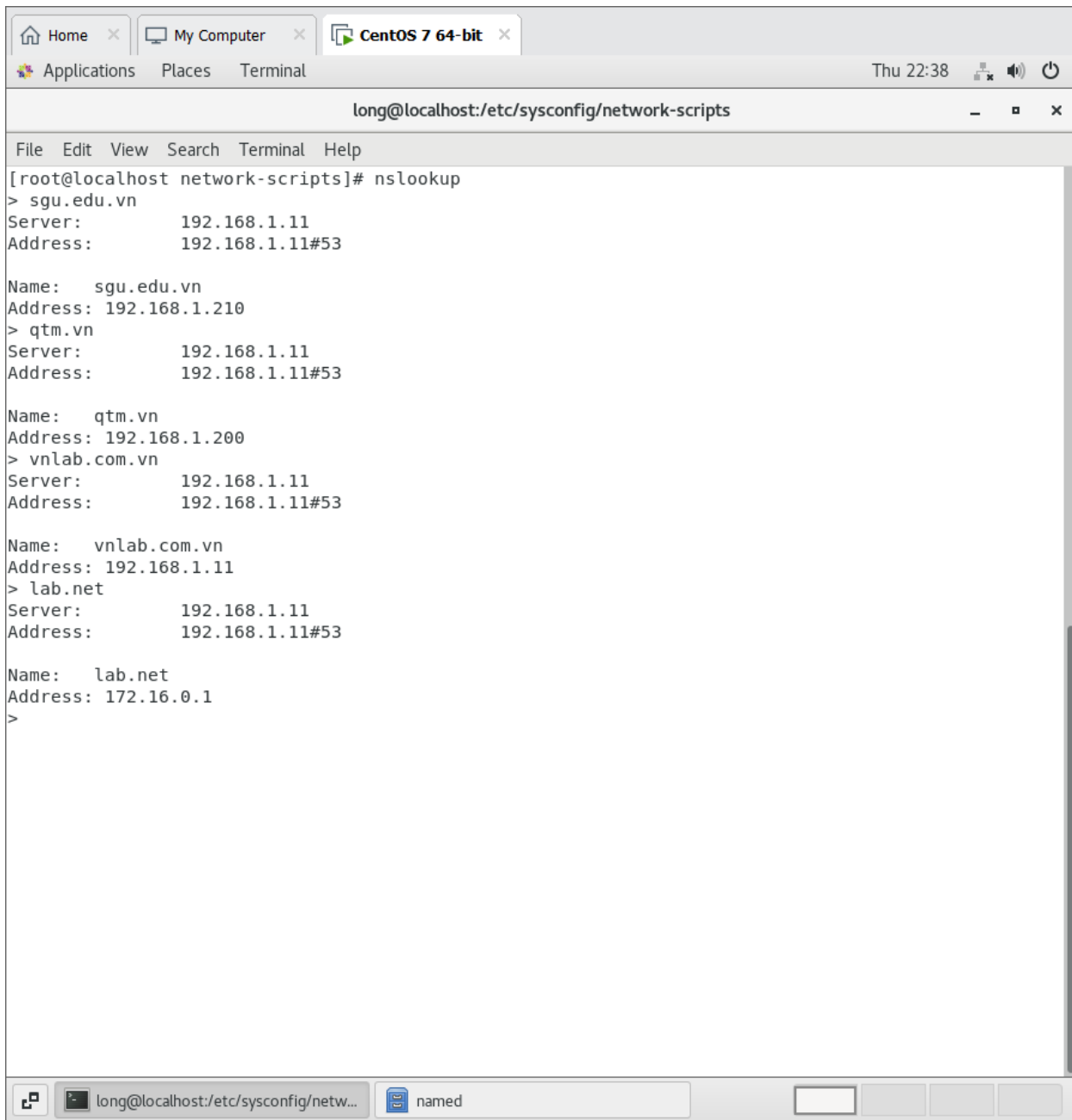
Cấu hình file /var/named/reverse.lab.net


```
long@localhost:/home/long
File Edit View Search Terminal Help
GNU nano 2.3.1 File: /var/named/reverse.lab.net Modified

$TTL 86400
@      IN      SOA      server3.lab.net. root.lab.net. (
        2019210901      ;Serial
        3600            ;Refresh
        1800            ;Retry
        604800          ;Expire
        86400           ;Minimum TTL
)
@      IN      NS       server3.lab.net.
@      IN      PTR      lab.net.
server3 IN      A        172.16.0.1
1      IN      PTR      server3.lab.net.

^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text      ^C Cur Pos
^X Exit          ^J Justify       ^W Where Is     ^V Next Page     ^U UnCut Text    ^T To Spell
```

a. Kết quả



The screenshot shows a terminal window titled "CentOS 7 64-bit" with the user "long" at "localhost". The terminal displays the output of the "nslookup" command for four domains. The first three domains (sgu.edu.vn, qtm.vn, and vnlab.com.vn) all point to the server 192.168.1.11. The fourth domain, lab.net, points to the server 172.16.0.1. The terminal window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The status bar at the bottom shows the current directory as "long@localhost:/etc/sysconfig/netw..." and the running process as "named".

```
long@localhost:/etc/sysconfig/network-scripts
File Edit View Search Terminal Help
[root@localhost network-scripts]# nslookup
> sgu.edu.vn
Server:          192.168.1.11
Address:         192.168.1.11#53

Name:   sgu.edu.vn
Address: 192.168.1.210
> qtm.vn
Server:          192.168.1.11
Address:         192.168.1.11#53

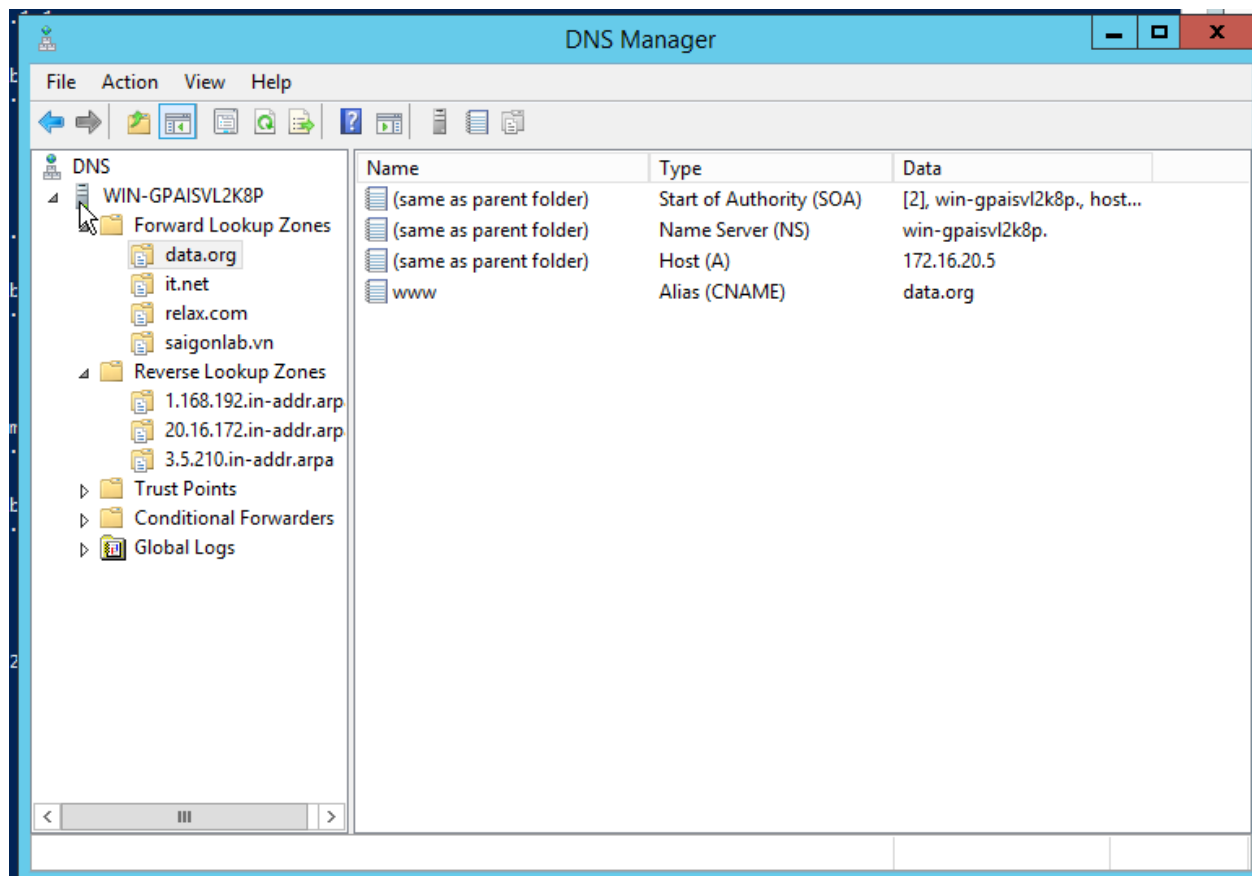
Name:   qtm.vn
Address: 192.168.1.200
> vnlab.com.vn
Server:          192.168.1.11
Address:         192.168.1.11#53

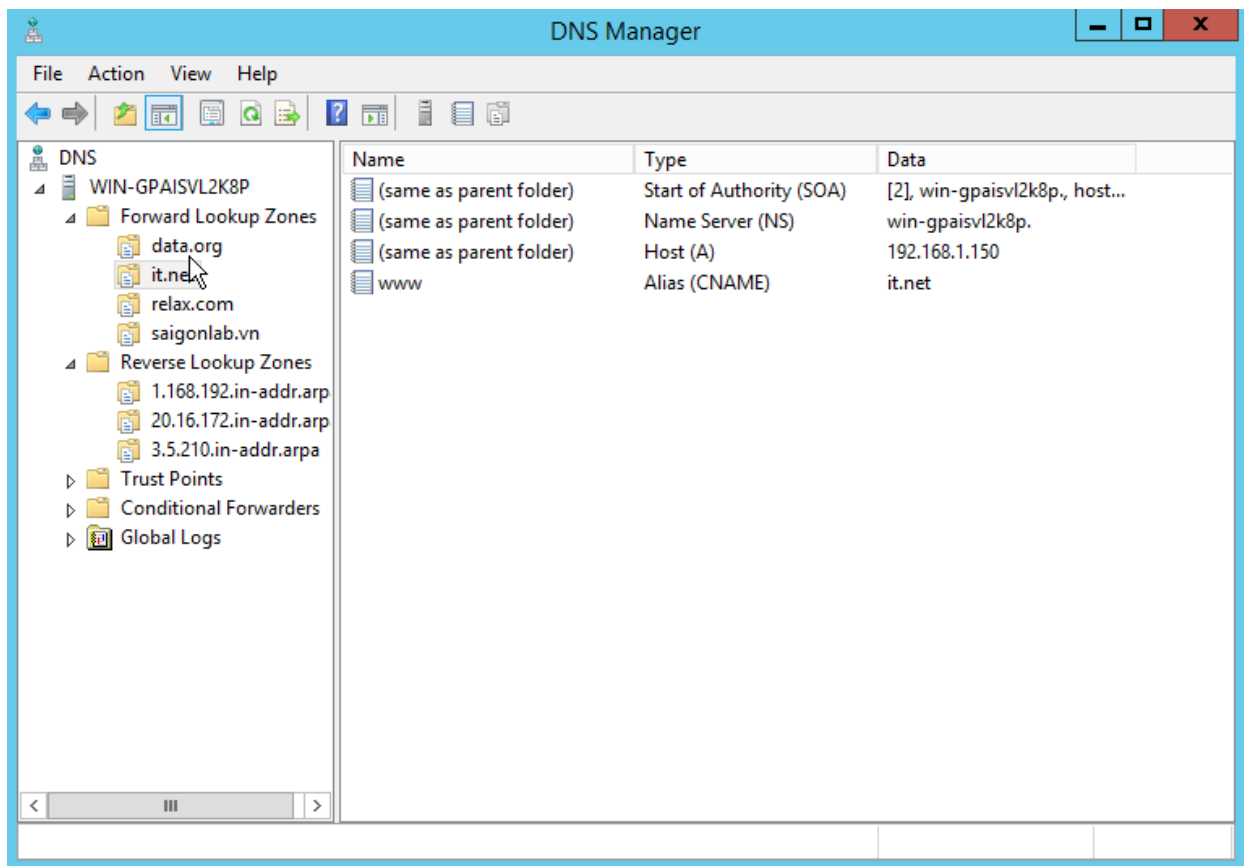
Name:   vnlab.com.vn
Address: 192.168.1.11
> lab.net
Server:          192.168.1.11
Address:         192.168.1.11#53

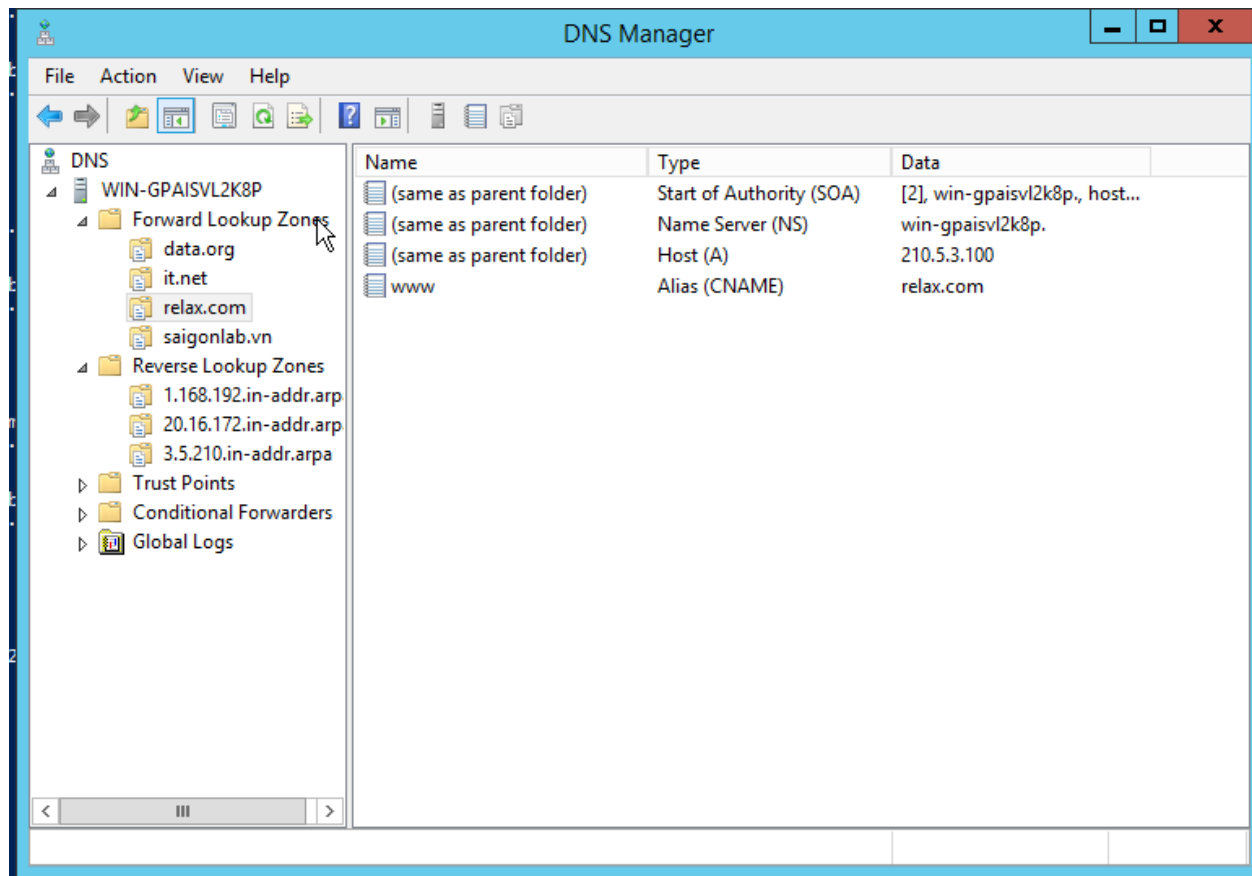
Name:   lab.net
Address: 172.16.0.1
>
```

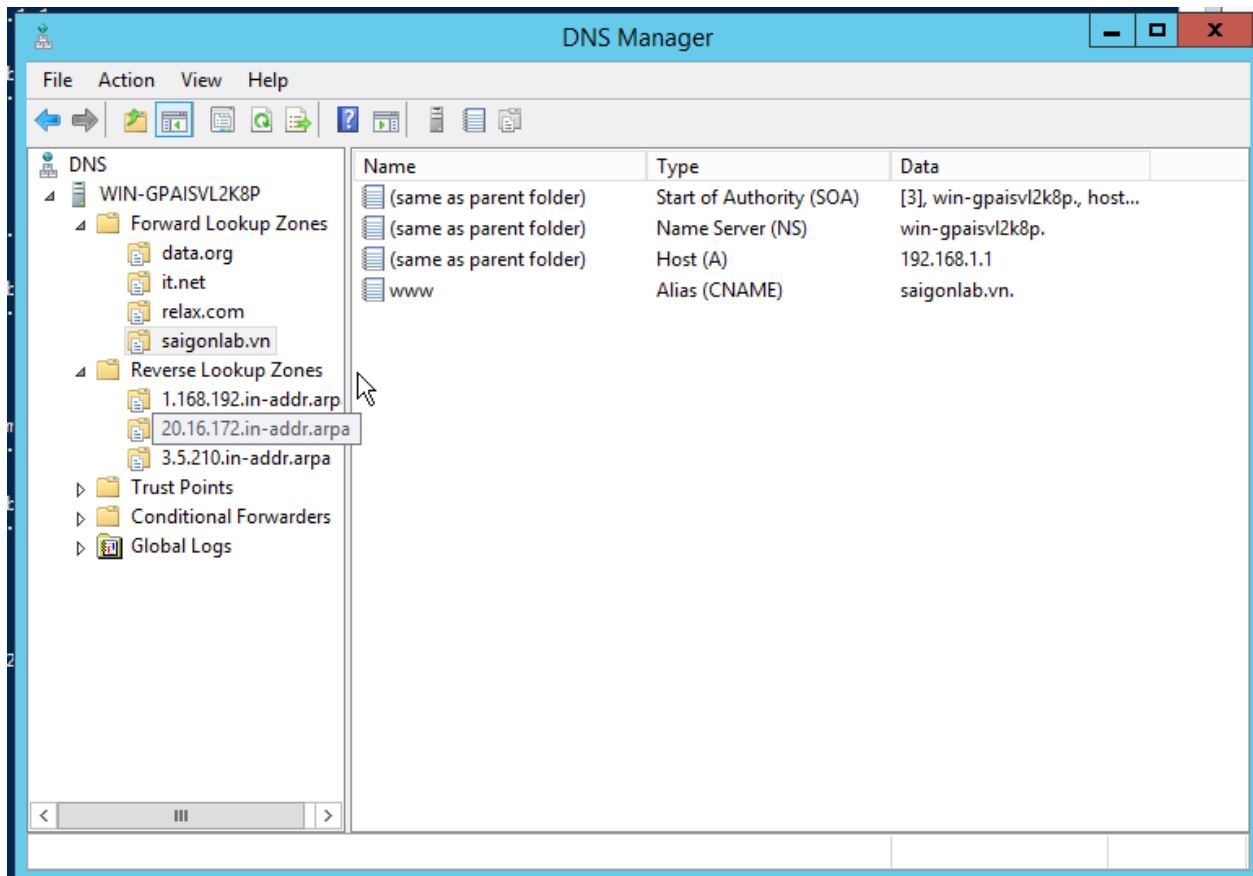
2/ Kết quả Cấu hình trên windows server 2012

Cấu hình zone thuận cho data.org, it.net, relax.com, saigonlab.vn

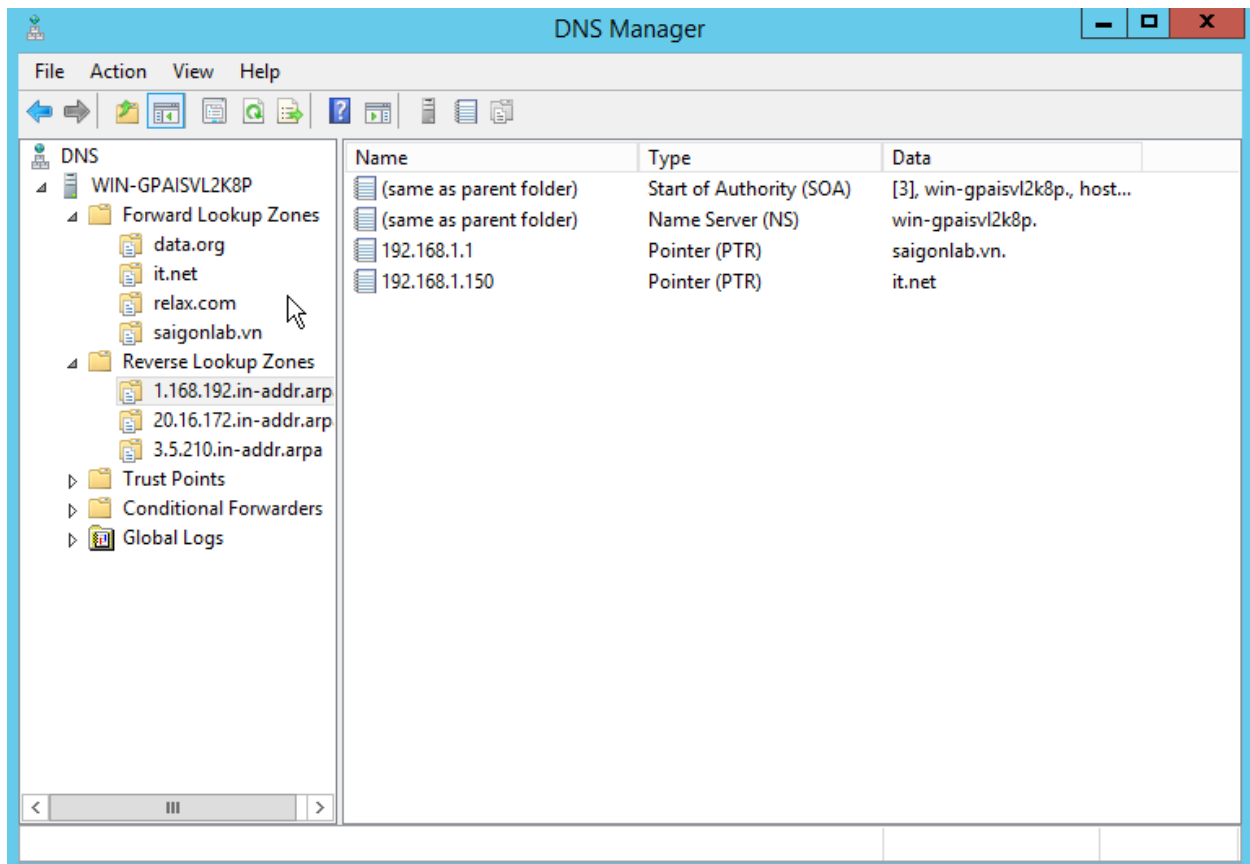


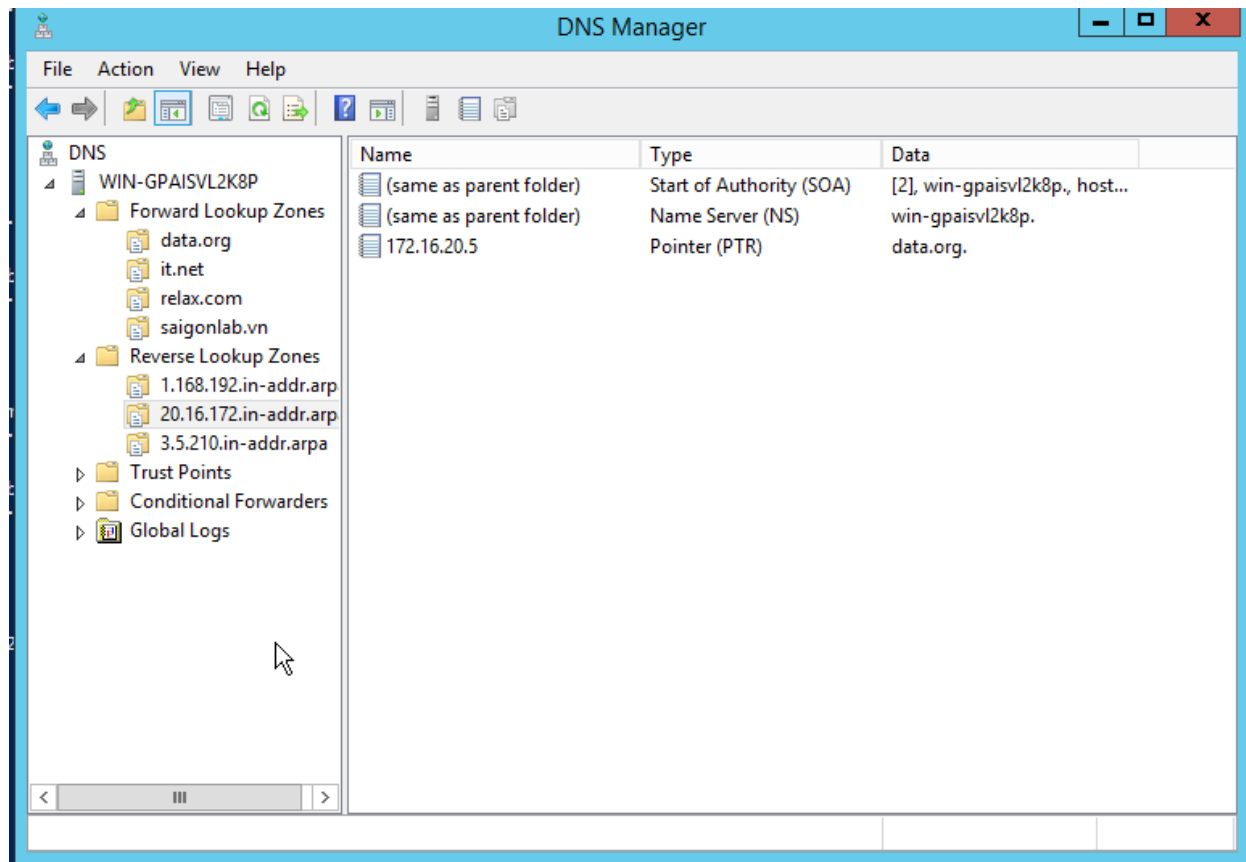


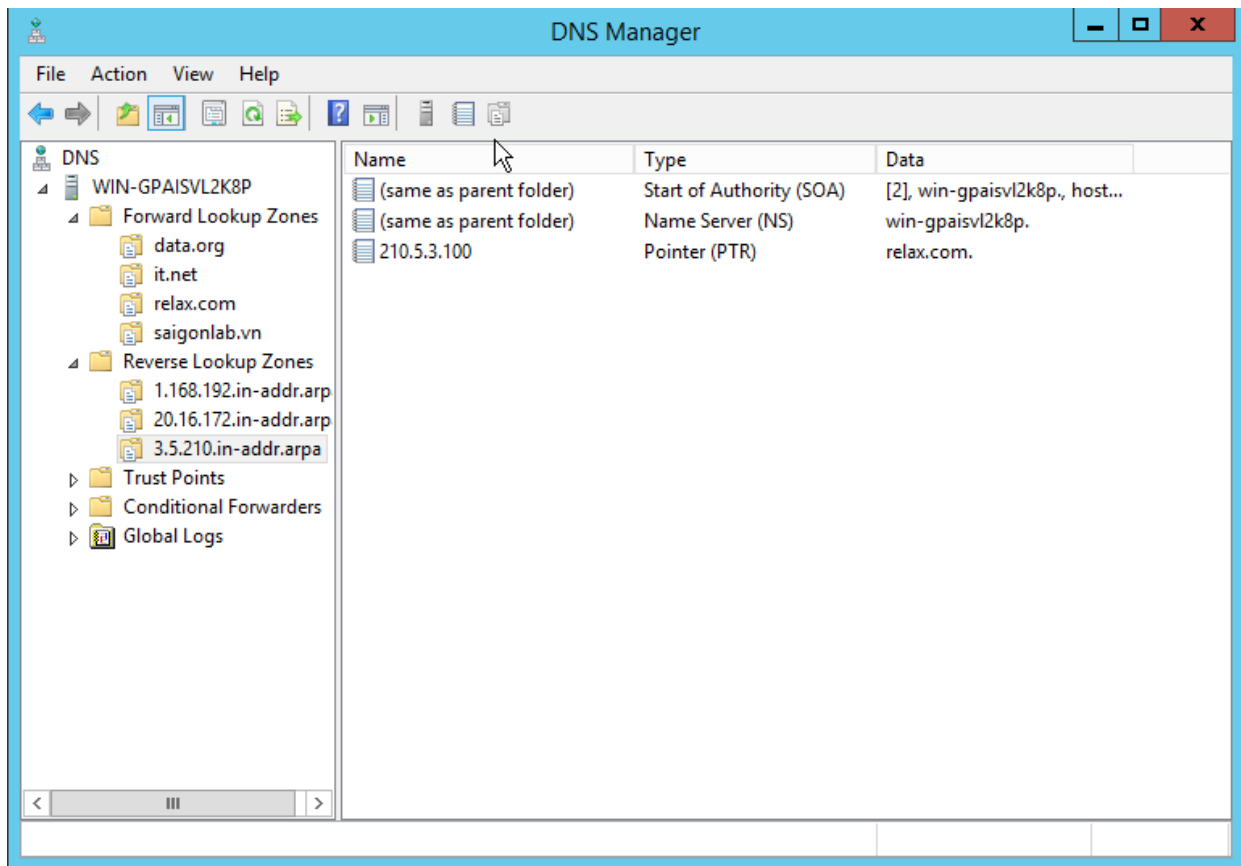




Cấu hình zone nghịch cho data.org, it.net, relax.com, saigonlab.vn







Kết quả

