

Thực hiện cấu hình DNS server

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Hoàn thành 3/3

1/Cấu hình DNS, Forwarder ,backup trên Windows Server

Internet Protocol Version 4 (TCP/IPv4) Properties

General

server dns1

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address:

192 . 168 . 1 . 1

Subnet mask:

255 . 255 . 255 . 0

Default gateway:

192 . 168 . 1 . 1

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses

Preferred DNS server:

192 . 168 . 1 . 1

Alternate DNS server:

. . .

☐ Validate settings upon exit

Advanced...

OK

Cancel

Internet Protocol Version 4 (TCP/IPv4) Properties

General

server dns2

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address:

192 . 168 . 1 . 61

Subnet mask:

255 . 255 . 255 . 0

Default gateway:

192 . 168 . 1 . 61

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses

Preferred DNS server:

192 . 168 . 1 . 61

Alternate DNS server:

. . .

☐ Validate settings upon exit

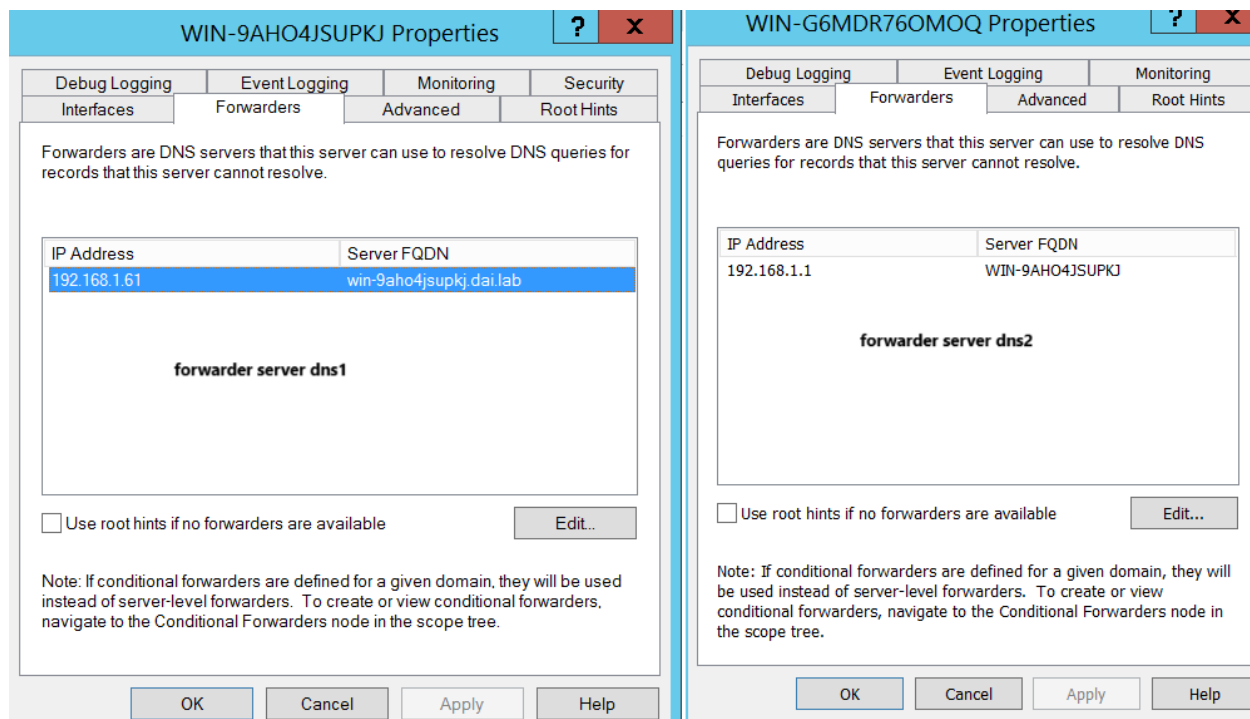
Advanced...

OK

Cancel

DNS	Name	Type	Data
WIN-9AHO4JSUPKJ	(same as parent folder)	Start of Authority (SOA)	[1], win-9aho4jsupkj,....
Global Logs	(same as parent folder)	Name Server (NS)	win-9aho4jsupkj.
Forward Lookup Zones	(same as parent folder)	Host (A)	192.168.1.1
sgu.edu.vn	dns1	Host (A)	192.168.1.1
Reverse Lookup Zones	www	Alias (CNAME)	sgu.edu.vn
1.168.192.in-addr.arpa			
Trust Points			
Conditional Forwarders			

DNS	Name	Type	Data
WIN-G6MDR76OMOQ	(same as parent folder)	Start of Authority (SOA)	[1], win-g6mdr76omoq, hostmaster.
Global Logs	(same as parent folder)	Name Server (NS)	win-g6mdr76omoq.
Forward Lookup Zones	(same as parent folder)	Host (A)	192.168.1.51
HuynhTanDuong.edu.vn	www	Alias (CNAME)	dn2.HuynhTanDuong.edu.vn
Reverse Lookup Zones	dns2	Host (A)	192.168.1.51
1.168.192.in-addr.arpa			
Trust Points			
Conditional Forwarders			



```
C:\Users\Administrator>nslookup dns1.sgu.edu.vn
Server: sgu.edu.vn
Address: 192.168.1.1
                                test nslookup trên server dns1
Name: dns1.sgu.edu.vn
Address: 192.168.1.1

C:\Users\Administrator>nslookup dns2.HuynhTanDuong.edu.vn
Server: dns1.sgu.edu.vn
Address: 192.168.1.1
Non-authoritative answer:
Name: dns2.HuynhTanDuong.edu.vn
Address: 192.168.1.61

C:\Users\Administrator>nslookup dns2.huynhtandung.edu.vn
Server: huynhtandung.edu.vn
Address: 192.168.1.61
                                test nslookup trên server dns2
Name: dns2.huynhtandung.edu.vn
Address: 192.168.1.61

C:\Users\Administrator>nslookup dns1.sgu.edu.vn
Server: dns2.huynhtandung.edu.vn
Address: 192.168.1.61
Non-authoritative answer:
Name: dns1.sgu.edu.vn
Address: 192.168.1.1
```

Thực hiện backup server dns2 sang dns1 (em đã xóa zone sgu.edu.vn trên dns1 để demo backup)

The screenshot shows the Windows DNS Manager interface. The first window displays the 'HuynhTanDuong.edu.vn' properties, with the 'Name Servers' tab selected. It shows two name servers: 'dns1.HuynhTanDuong.edu.vn' (IP: 192.168.1.1) and 'dns2.HuynhTanDuong.edu.vn' (IP: 192.168.1.61). A note indicates that 'dns2' is the server to be backed up to 'dns1'. The second window shows the same properties, but 'dns1.HuynhTanDuong.edu.vn' is now selected. The third window shows the DNS console with the 'HuynhTanDuong.edu.vn' zone selected. The fourth window shows the DNS console with the '1.168.192.in-addr.arpa' zone selected.

2/ Thực hiện cấu hình dns server trên CentOS

The screenshot shows a CentOS terminal window with the following content:

```

[Open] [server dns1] named.rfc1912.zones [Save] [etc]
};
zone "sgu.edu.vn" IN { // Khai báo tên miền cần quản lý
    type master; // Đây là máy chủ phân giải chính
    file "forward.sgu.edu.vn"; // Tên file lưu trữ record.
    allow-update { none; }; // không cho phép tự động update
};

zone "1.168.192.in-addr.arpa" IN { // Khai báo zone của lớp 192.168.1.0
    type master; // Đây là máy chủ phân giải chính
    file "reverse.192.168.1.0"; // Tên file lưu trữ record.
    allow-update { none; }; // không cho phép tự động update
};

[Open] [reverse.192.168.1.0] reverse.192.168.1.0 [Save] [var/named]
$TTL 86400
@ IN SOA server.sgu.edu.vn. root.sgu.edu.vn. (
    201107001 ; Serial
    3600 ; Refresh
    1800 ; Retry
    604800 ; Expire
    86400 ; Minimum TTL
)
@ IN NS server.sgu.edu.vn.
1 IN PTR server.sgu.edu.vn.
1 IN PTR sgu.edu.vn.

[Open] [forward.sgu.edu.vn] forward.sgu.edu.vn [Save] [var/named]
$TTL 86400
@ IN SOA server.sgu.edu.vn. root.sgu.edu.vn. (
    2018210901 ; Serial
    3600 ; Refresh
    1800 ; Retry
    604800 ; Expire
    86400 ; Minimum TTL
)
@ IN NS server.sgu.edu.vn.
@ IN A 192.168.1.1
server IN A 192.168.1.1

[Open] [nslookup] nslookup
> sgu.edu.vn
Server: 192.168.1.1
Address: 192.168.1.1#53

Name: sgu.edu.vn
Address: 192.168.1.1
1.1.168.192.in-addr.arpa name = server.sgu.edu.vn.
1.1.168.192.in-addr.arpa name = sgu.edu.vn.
>

```

named.rfc1912.zones
/etc
Save

server dns2
Open
forward.HuynhTanDuong.edu.vn
/var/named
Save

```

};
allow-update { none; };

zone "HuynhTanDuong.edu.vn" IN {
    type master;
    file "forward.HuynhTanDuong.edu.vn";
    allow-update { none; };
};

zone "1.168.192.in-addr.arpa" IN {
    type master;
    file "reverse.192.168.1.0";
    allow-update { none; };
};

```

reverse.192.168.1.0
/var/named
Save

\$TTL 86400
@ IN SOA server.HuynhTanDuong.edu.vn. root.HuynhTanDuong.edu.vn. (
 2018210901 ; Serial
 3600 ; Refresh
 1800 ; Retry
 604800 ; Expire
 86400 ; Minimum TTL
)
@ IN NS server.HuynhTanDuong.edu.vn.
@ IN A 192.168.1.61
server IN A 192.168.1.61

[root@localhost htd]# nslookup
> HuynhTanDuong.edu.vn
Server: 192.168.1.61
Address: 192.168.1.61#53

Name: HuynhTanDuong.edu.vn
Address: 192.168.1.61
> 192.168.1.61
61.1.168.192.in-addr.arpa name = HuynhTanDuong.edu.vn.
61.1.168.192.in-addr.arpa name = server.HuynhTanDuong.edu.vn.

Thực hiện forwarders giữa 2 server dns

```

options {
    listen-on port 53 { 192.168.1.1; 127.0.0.1; };
    #listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    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;any; };
    forwarders {192.168.1.61;};
}

options {
    listen-on port 53 { 127.0.0.1;192.168.1.61; };
    #listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    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;any; };
    forwarders {192.168.1.1;};
}

```

[root@server etc]# nslookup
> sgu.edu.vn
Server: 192.168.1.1
Address: 192.168.1.1#53

Name: sgu.edu.vn
Address: 192.168.1.1
> HuynhTanDuong.edu.vn
Server: 192.168.1.1
Address: 192.168.1.1#53

Non-authoritative answer:
Name: HuynhTanDuong.edu.vn
Address: 192.168.1.61
>

[root@server htd]# nslookup
> HuynhTanDuong.edu.vn
Server: 192.168.1.61
Address: 192.168.1.61#53

Name: HuynhTanDuong.edu.vn
Address: 192.168.1.61
> sgu.edu.vn
Server: 192.168.1.61
Address: 192.168.1.61#53

Non-authoritative answer:
Name: sgu.edu.vn
Address: 192.168.1.1
>

named.conf

Save

forward.HuynhTanDuong.edu.vn

Save

configuration located in /usr/share/doc/bind-1version/v9ARM.html

dùng máy dns2 để backup HuynhTanDuong.edu.vn (192.168.1.61) sang dns1 (192.168.1.1)

ptions {

listen-on port 53 { 127.0.0.1;192.168.1.61; };

#listen-on-v6 port 53 { ::1; };

directory "/var/named";

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;any; };

allow-transfer {localhost; 192.168.1.1;};

forwarders {192.168.1.1;};

reverse.192.168.1.0

Save

named.rfc1912.zones

Save

file named.empty;

allow-update { none; };

};

zone "HuynhTanDuong.edu.vn" IN {

type slave;

file "slaves/forward.HuynhTanDuong.edu.vn";

masters {192.168.1.61;};

};

zone "1.168.192.in-addr.arpa" IN {

type slave;

file "slaves/reverse.192.168.1.0";

masters {192.168.1.61;};

};

\$TTL 86400

@ IN SOA server.HuynhTanDuong.edu.vn. root.HuynhTanDuong.edu.vn. (

2018210901 ; Serial

3600 ; Refresh

1800 ; Retry

604800 ; Expire

86400 ; Minimum TTL

)

@ IN NS server.HuynhTanDuong.edu.vn.

@ IN NS secondary.HuynhTanDuong.edu.vn.

@ IN A 192.168.1.61

server IN A 192.168.1.61

secondary IN A 192.168.1.1

[root@server htd]# nslookup

> server.HuynhTanDuong.edu.vn

Server: 192.168.1.61

Address: 192.168.1.61#53

Name: server.HuynhTanDuong.edu.vn

Address: 192.168.1.61

> secondary.HuynhTanDuong.edu.vn

Server: 192.168.1.61

Address: 192.168.1.61#53

Name: secondary.HuynhTanDuong.edu.vn

Address: 192.168.1.1

> HuynhTanDuong.edu.vn

Server: 192.168.1.61

Address: 192.168.1.61#53

Name: HuynhTanDuong.edu.vn

Address: 192.168.1.61

[root@server slaves]# ls

forward.HuynhTanDuong.edu.vn reverse.192.168.1.0

[root@server slaves]# nslookup

> HuynhTanDuong.edu.vn

Server: 192.168.1.1

Address: 192.168.1.1#53

Name: HuynhTanDuong.edu.vn

Address: 192.168.1.61

> server.HuynhTanDuong.edu.vn

Server: 192.168.1.1

Address: 192.168.1.1#53

Name: server.HuynhTanDuong.edu.vn

Address: 192.168.1.61

> secondary.HuynhTanDuong.edu.vn

Server: 192.168.1.1

Address: 192.168.1.1#53

Name: secondary.HuynhTanDuong.edu.vn

Address: 192.168.1.1

3/Forwarder giữa CentOS (192.168.1.61) và Windows server (192.168.1.1)

Bên windows server có 1 zone để test

DNS

WIN-9AHO4JSUPKJ

Global Logs

Forward Lookup Zones

DaiHocSaiGon.edu.vn

Reverse Lookup Zones

1.168.192.in-addr.arpa

Trust Points

Conditional Forwarders

Name	Type	Data
(same as parent folder)	Start of Authority (...)	[1], win-9aho4jsupkj,...
(same as parent folder)	Name Server (NS)	win-9aho4jsupkj.
(same as parent folder)	Host (A)	192.168.1.1
dns1	Host (A)	192.168.1.1
www	Alias (CNAME)	dns1.DaiHocSaiGon....

Bên CentOS có 1 zone để test là HuynhTanDuong.edu.vn đã dùng ở trên.

```

zone "HuynhTanDuong.edu.vn" IN {
    type master;
    file "forward.HuynhTanDuong.edu.vn";
    allow-update { none; };
};

zone "1.168.192.in-addr.arpa" IN {
    type master;
    file "reverse.192.168.1.0";
    allow-update { none; };
};

```

Cấu hình forwarder

```

options {
    listen-on port 53 { 127.0.0.1; 192.168.1.61; };
    #listen-on-v6 port 53 { ::1; };
    directory "/var/named";
    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; any; };
    allow-transfer { localhost; 192.168.1.1; };
    forwarders { 192.168.1.1; };
}

```

Debug Logging	Event Logging	Monitoring	Security
Interfaces	Forwarders	Advanced	Root Hints

Forwarders are DNS servers that this server can use to resolve DNS queries for records that this server cannot resolve.

IP Address	Server FQDN
192.168.1.61	<Attempting to resolve...>

Test kết quả:

```

[root@server etc]# nslookup
> DaiHocSaiGon.edu.vn
Server:      192.168.1.61
Address:     192.168.1.61#53

```

```

Non-authoritative answer:
Name:   DaiHocSaiGon.edu.vn
Address: 192.168.1.1
>

```

```

C:\Users\Administrator>nslookup
Default Server:  daihocsaigon.edu.vn
Address:  192.168.1.1

> HuynhTanDuong.edu.vn
Server:  daihocsaigon.edu.vn
Address:  192.168.1.1

Non-authoritative answer:
Name:    HuynhTanDuong.edu.vn
Address:  192.168.1.61

```