

Department of Computer Science and Engineering

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**Report :** 01.

**Experiment Name :** Linux Server Configuration.

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**REMARKS**

**Introduction:** Linux Server is most secured server. Using a PC workstation students learn to install, configure, manage and maintain a Linux Server, an Apache Web Server, to ensure mail security and to manage the Linux network. Considering the fact that split-horizon DNS is a "best practice", which is exactly what you want to do, you now have to determine where to place the DNS server. "Internal" servers should be on your local corporate network. "External" servers can be directly connected to the Internet. I suggest that you place the DNS server in your DMZ, behind a firewall if possible. This will provide another security layer, which is never bad if you can handle the configuration easily. "Internal" or "external" DNS server setups should be exactly the same, except for the BIND configuration.

**DNS:** The domainnamesystemor dnsis a service on a tcp/ip network that enables clients to

Translate names into ip addresses. Actually dnsis much more than that, but let's keep it Simple for now. When you use a browser to go to a website, then you type the name of that website in the url bar. But for your computer to actually communicate with the web server hosting said Website, your computer needs the ip address of that web server. That is where dnscomes in. In wireshark you can use the dnsfilter to see this traffic



**Installation:** At a terminal prompt, enter the following command to install DNS:

**sudo apt-get install bind9**

A very useful package for testing and troubleshooting DNS issues is the dnsutils package. Very often these tools will be installed already, but to check and/or install dnsutils enter the following:

**sudo apt-get install dnsutils**.

**Overview:**

The DNS configuration files are stored in the /etc/bind directory. The primary configuration file is /etc/bind/named.conf.

The *include* line specifies the filename which contains the DNS options. The *directory* line in the /etc/bind/named.conf.options file tells DNS where to look for files. All files BIND uses will be

relative to this directory.The file named /etc/bind/db.root describes the root nameservers in the world. The servers change over time, so the /etc/bind/db.root file must be maintained now and then.

**Configuration:**

**Step # 1:** Define foo.com domain:

We need to add foo.com domain to bind configuration file /etc/bind/named.conf.local

Open this file and append following text (zone and reverse zone for foo.com):

**Code:**

$ sudo vi /etc/bind/named.conf.local

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Add foo.com zone:

**Code:**

zone "foo.com" {

type master;

file "/

etc/bind/zones/foo.com.zone";

};

zone "1.55.202.in-addr.arpa" {

type master;

file "/etc/bind/zones/rev.1.55.202.in-addr.arpa";

};

Save the file.

**Step # 2:** Create a /etc/bind/zones/ directory:

**Code:**

$ sudo mkdir /etc/bind/zones

$ sudo mkdir /etc/bind/zones

**Step # 3:** Create a zone file for foo.com domain:

Now create a zone file /etc/bind/zones/foo.com.zone

**Code:**

$ sudo vi /etc/bind/zones/foo.com.zone

Append following text:

**Code**:

foo.com. IN SOA ns1.foo.com. admin.foo.com. (

2006071801

28800

3600

604800

38400 )

foo.com. IN NS ns1.foo.com.

foo.com. IN MX 10 mta.foo.com.

www IN A 202.55.1.2

mta IN A 202.55.1.2

ns1 IN A 202.55.1.2

Create the reverse zone file:

**Code:**

$ sudo vi /etc/bind/zones/rev.1.55.202.in-addr.arpa

Append following text:

**Code**:

@ IN SOA ns1.foo.com. admin.foo.com. (

2006071801; serial

28800; refresh, seconds

604800; retry, seconds

604800; expire, seconds

86400 ); minimum, seconds

IN NS ns1.foot.com.

2 IN PTR foo.com

Save the file and restart the BIND server:

**Code:**

$ sudo /etc/init.d/bind9 restart

**Test it:**

**Code:**

$ nslookup foo.com

Server: 202.55.1.2

Address: 202.55.1.2#53

Name: foo.com

Address: 202.55.1.2

**Discussion:**

1. In this report is structured around the Linux Server.
2. In this Report we learn about configuration about Linux server.
3. We learn how a server works and communicate with another.