



Lab Exercise 1 – BIND Installation

Objectives

Understand the concept of Domain Name System, particularly installation and setup of BIND DNS.

Background

For this lab we will be using BIND, a free/open-source DNS application. Bind is the complete DNS software, which can be used as an authoritative or caching server or both. It is currently the most widely used DNS application on the Internet and is maintained by the Internet Services Consortium (ISC). The current version as of writing is Bind 9.9.5-P1.

What You Need

- **DNS Bind:**
 - Current version: Bind 9.9.5-P1
 - Download from <http://ftp.isc.org/isc/bind9/9.9.3/bind-9.9.5-P1.tar.gz>
- **OpenSSL** <http://openssl.org/source/>
 - Current version: openssl-1.0.1h
- Operating System (preferred): Linux
- Optional Software: Unbound, NSD, PowerDNS

Steps:

A. Access to the servers

Using the VM

1. Login to your assigned servers using a remote access tool (Terminal for Linux/Mac platform, or SSH software such as PuTTY for Windows).

```
ssh nsadmin@192.168.101.1 (for server1)
password: nslab
```

Using LiveCD

1. You will be provided with a LiveCD running on Ubuntu. Boot this LiveCD.
2. If you are using Linux or Mac, the LiveCD may not be necessary.

B. Installing BIND from source

1. Download BIND source from www.isc.org. For our lab purposes, the BIND installer is already included in the working servers assigned to you and can be found in `/usr/local/src/` folder.
2. Go to the folder containing the installer and unpack the source file

```
server1$ cd /usr/local/src
```
3. Installation and compilation are done by the root or a user with 'superuser' privileges. Please use 'sudo' before each the command.

```
sudo <command>
sudo bash
```

4. OpenSSL is required in some features of DNS such as DNSSEC. So we will first install this. (Note: OpenSSL may already be installed in your system, but we will use the current SSL version, so we will install from source).

```
tar xvzf openssl-1.0.1c.tar.gz
cd openssl-1.0.1c
./config
make
make install
make clean
```

The default location is at `/usr/local/ssl`. Check that you have this folder.

5. Install BIND.

Unpack the package installer

```
tar xvzf bind-9.9.2.tar.gz
cd bind-9.9.2
```

Configure with the following options

```
./configure --with-openssl=/usr/local/ssl
```

NOTES
<p>You can specify a specific prefix/directory to be the default installation:</p> <pre>./configure --with-openssl=/usr/local/ssl/ --prefix=/var/named</pre> <p>If not, however, the default location of the installation are as follows</p> <ul style="list-style-type: none"><code>/etc</code> for system configuration (named.conf)<code>/usr/local/sbin</code> for system binaries (named, RNDC, DNSSEC)<code>/usr/local/bin</code> for local/user binaries (dig, host, nslookup, nsupdate)

Compile the package

```
make
```

Install BIND. The default installation folder is in `/usr/local/sbin`. Alternatively, you can specify another folder using the `--prefix` option.

```
sudo make install
make clean
```

6. Verify the installation. Find the location where named is installed.

which named

Check the version number. If there was a previous BIND installation, this will tell you whether it is pointing to the new installation or not.

named -v