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## [BIND Installation and Configuration Guide](#)

### *Installing a DNS Server on your own Linux box*

The Domain Name System, among other things, translates domain names, also known as computer hostnames, into IP addresses. DNS has become an essential component of Internet use as it makes possible to attach easy to remember domain names (such as [www.softpedia.com](http://www.softpedia.com)) to hard to remember IP addresses (such as 193.226.140.167), making Internet usage a lot easier. BIND (Berkeley Internet Name Domain) is the most used DNS server, especially for Unix-like systems and has reached the version 9. Among other important features, BIND includes TISG, DNS notify, nsupdate, rndc flush, views, multiprocessor support and IPv6. Unlike past versions of BIND, which have had a large number of serious security vulnerabilities (version 4 and 8), BIND 9 is a rewrite, providing a much better security. [Downloading and Installing](#) You can download BIND 9.3.2 from [here](#).

[Extract it:](#)`tar xfz bind-9.3.2.tar.gz`[Build it:](#)`cd bind-9.3.2sed -i -e '247a #undef SO_BSDCOMPAT' lib/isc/unix/socket.c &&./configure --prefix=/usr --sysconfdir=/etc --enable-threads --with-libtool &&make`[Test it:](#)As root, set up some test interfaces:  
`bin/tests/system/ifconfig.sh up`As an unprivileged user, run the test suite:`make check 2>&1 | tee check.log`As root again, clean up the test interfaces:  
`bin/tests/system/ifconfig.sh down`Issue the following command to check if all 144 tests completed successfully:`grep "R:PASS" check.log | wc -l`If no errors occurred, it's time for the next step.[Install it:](#)As root, issue the following command to finally install the BIND package:`make install &&chmod 755 /usr/lib/{lib{bind9,isc}{,cc,cfg},lwres,dns}.so.*.?.?} &&cd doc &&install -v -d -m755 /usr/share/doc/bind-9.3.2/{arm,draft,misc,rfc} &&install -v -m644 arm/*.html /usr/share/doc/bind-9.3.2/arm &&install -v -m644 draft/*.txt /usr/share/doc/bind-9.3.2/draft &&install -v -m644 rfc/* /usr/share/doc/bind-9.3.2/rfc &&install -v -m644 misc/{dnssec,ipv6,migrat*,options,rfc-compliance,roadmap,sdb} /usr/share/doc/bind-9.3.2/misc`The commands from 'cd doc' to end are installing the additional package documentation. Optionally, you can omit any or all of them.[Configuring BIND](#)The files used for BIND configuration are *named.cfg*, *root.hints*, *127.0.0*, *rndc.conf* and *resolv.conf*. This guide will configure BIND to run in a chroot jail as the unprivileged user, named. This is a more secure configuration because, in case of an attack, only a few files in the named home directory will be compromised. Issue the following commands as root in order to create the unprivileged user and group *named*:`groupadd -g 20 named &&useradd -c "BIND Owner" -g named -s /bin/false -u 20 named``install -d -m770 -o named -g named /srv/named`Set up some files, directories and devices needed by BIND:`mkdir /srv/named &&cd /srv/named &&mkdir -p dev etc/namedb/slave var/run &&mknod /srv/named/dev/null c 1 3 &&mknod /srv/named/dev/random c 1 8 &&chmod 666 /srv/named/dev/{null,random} &&mkdir /srv/named/etc/namedb/pz &&cp /etc/localtime /srv/named/etc`Next, you must generate a key for use in the *named.conf* and *rndc.conf* files with the command:`rndc-confgen -b 512 | grep -m 1 "secret" | cut -d "" -f 2`Download this [named.conf](#) file and save it as */srv/named/etc/named.conf*. From this file, named will read the location of the zone files, root name servers and secure DNS keys. Next, download this [rndc.conf](#) and save it as */etc/rndc.conf*. The *rndc.conf* file contains information for controlling named operations with the *rndc* utility. Now it's time to create a zone file. You can download [this](#) file and save it as */srv/named/etc/namedb/pz/127.0.0*. Create the *root.hints* file. Download [this](#) file and save it as */srv/named/etc/namedb/root.hints*. You must ensure there are no leading spaces in this file. Create or modify the */etc/resolv.conf* file to use your new domain server. Add these two lines but replace *yourdomain.com* with your own valid domain name:`search yourdomain.comnameserver`

127.0.0.1 Set the permissions on the chroot jail issuing the command: **chown -R named.named /srv/named**  
**Starting BIND** To start BIND, you have to issue the following command which you can add to rc.local script so it's started on every Linux boot:  
**/usr/sbin/named -u named -t /srv/named -c /srv/named/etc/named.conf**  
**Testing BIND**  
Test out your new BIND 9 installation. First, query the local host address with *dig*: **dig -x 127.0.0.1**  
Next, try an external name lookup also using *dig*: **dig softpedia.com** Here, you can see in what IP addresses is translated the softpedia.com domain and also its authority servers.