

**INSTALL DAN KONFIGURASI DNS SERVER
SISTEM TERDISTRIBUSI**



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DNS SERVER

DNS adalah singkatan dari Domain Name System. Ini adalah sistem yang digunakan untuk menghubungkan nama domain (misalnya, www.mutia.com) dengan alamat IP yang sesuai. DNS memungkinkan kita untuk menggunakan nama-nama yang mudah diingat untuk mengakses situs web, alamat email, dan layanan jaringan lainnya, daripada harus menghafal serangkaian angka yang rumit. Sistem DNS mengonversi nama domain menjadi alamat IP yang diperlukan untuk mengarahkan koneksi ke server yang tepat.

➤ INSTALISASI DNS

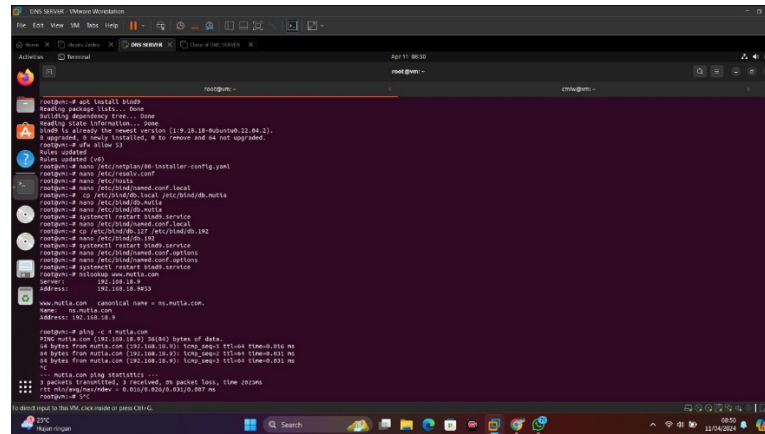
```
root@mutia:~# apt install bind9
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
bind9 is already the newest version (1:9.18-18ubuntu22.04.2).
0 upgraded, 0 newly installed, 0 to remove and 64 not upgraded.
root@mutia:~# allow 53
Rules updated
Rules updated (vs)
root@mutia:~# nano /etc/netplan/00-installer-config.yaml
root@mutia:~# nano /etc/resolv.conf
root@mutia:~# nano /etc/hosts
root@mutia:~# nano /etc/bind/named.conf.local
root@mutia:~# cp /etc/bind/db.local /etc/bind/db.mutia
root@mutia:~# nano /etc/bind/db.mutia
root@mutia:~# nano /etc/bind/db.mutia
root@mutia:~# nano /etc/bind/db.mutia
root@mutia:~# systemctl restart bind9.service
root@mutia:~# nano /etc/bind/named.conf.local
root@mutia:~# cp /etc/bind/db.127 /etc/bind/db.192
root@mutia:~# nano /etc/bind/db.192
root@mutia:~# systemctl restart bind9.service
root@mutia:~# nano /etc/bind/named.conf.options
root@mutia:~# nano /etc/bind/named.conf.options
root@mutia:~# systemctl restart bind9.service
root@mutia:~# nslookup www.mutia.com
Server:
192.168.18.9
Address: 192.168.18.9#53
www.mutia.com canonical name = ns.mutia.com.
Name: ns.mutia.com
Address: 192.168.18.9

root@mutia:~# ping -c 4 mutia.com
PING mutia.com (192.168.18.9) 56(84) bytes of data:
64 bytes from mutia.com (192.168.18.9): icmp_seq=1 ttl=64 time=0.010 ms
64 bytes from mutia.com (192.168.18.9): icmp_seq=2 ttl=64 time=0.031 ms
64 bytes from mutia.com (192.168.18.9): icmp_seq=3 ttl=64 time=0.031 ms
64 bytes from mutia.com (192.168.18.9): icmp_seq=4 ttl=64 time=0.031 ms
--- mutia.com ping statistics ---
4 packets transmitted, 3 received, 0% packet loss, time 202ms
rtt min/avg/max/mdev = 0.010/0.026/0.031/0.007 ms
root@mutia:~#
```

```
root@mutia:~# apt install bind9
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
bind9 is already the newest version (1:9.18-18ubuntu22.04.2).
0 upgraded, 0 newly installed, 0 to remove and 64 not upgraded.
root@mutia:~# allow 53
Rules updated
Rules updated (vs)
root@mutia:~# nano /etc/netplan/00-installer-config.yaml
root@mutia:~# nano /etc/resolv.conf
root@mutia:~# nano /etc/hosts
root@mutia:~# nano /etc/bind/named.conf.local
root@mutia:~# cp /etc/bind/db.local /etc/bind/db.mutia
root@mutia:~# nano /etc/bind/db.mutia
root@mutia:~# nano /etc/bind/db.mutia
root@mutia:~# nano /etc/bind/db.mutia
root@mutia:~# systemctl restart bind9.service
root@mutia:~# nano /etc/bind/named.conf.local
root@mutia:~# cp /etc/bind/db.127 /etc/bind/db.192
root@mutia:~# nano /etc/bind/db.192
root@mutia:~# systemctl restart bind9.service
root@mutia:~# nano /etc/bind/named.conf.options
root@mutia:~# nano /etc/bind/named.conf.options
root@mutia:~# systemctl restart bind9.service
root@mutia:~# nslookup www.mutia.com
Server:
192.168.18.9
Address: 192.168.18.9#53
www.mutia.com canonical name = ns.mutia.com.
Name: ns.mutia.com
Address: 192.168.18.9

root@mutia:~# ping -c 4 mutia.com
PING mutia.com (192.168.18.9) 56(84) bytes of data:
64 bytes from mutia.com (192.168.18.9): icmp_seq=1 ttl=64 time=0.010 ms
64 bytes from mutia.com (192.168.18.9): icmp_seq=2 ttl=64 time=0.031 ms
64 bytes from mutia.com (192.168.18.9): icmp_seq=3 ttl=64 time=0.031 ms
64 bytes from mutia.com (192.168.18.9): icmp_seq=4 ttl=64 time=0.031 ms
--- mutia.com ping statistics ---
4 packets transmitted, 3 received, 0% packet loss, time 202ms
rtt min/avg/max/mdev = 0.010/0.026/0.031/0.007 ms
root@mutia:~#
```

➤ KONFIGURASI



```
GNU nano 6.2 /etc/resolv.conf
# This is /run/systemd/resolve/stub-resolv.conf managed by man:systemd-resolved(8).
# Do not edit.

#
# This file might be symlinked as /etc/resolv.conf. If you're looking at
# /etc/resolv.conf and seeing this text, you have followed the symlink.
#
# This is a dynamic resolv.conf file for connecting local clients to the
# internal DNS stub resolver of systemd-resolved. This file lists all
# configured search domains.
#
# Run "resolvectl status" to see details about the uplink DNS servers
# currently in use.
#
# Third party programs should typically not access this file directly, but only
# through the symlink at /etc/resolv.conf. To manage man:resolv.conf(5) in a
# different way, replace this symlink by a static file or a different symlink.
#
# See man:systemd-resolved.service(8) for details about the supported modes of
# operation for /etc/resolv.conf.

nameserver 192.168.18.9
nameserver 192.168.18.1
options edns0
search mutia.com
```

```
GNU nano 6.2 /etc/hosts
127.0.0.1    localhost
127.0.1.1    vm
192.168.18.9 mutia.com
# The following lines are desirable for IPv6 capable hosts
::1          ip6-localhost ip6-loopback
fe00::0      ip6-localnet
ff00::0      ip6-mcastprefix
ff02::1      ip6-allnodes
ff02::2      ip6-allrouters
```

➤ TEST TAMBAH CLIENT DAN MONITORING

```
GNU nano 6.2 /etc/bind/named.conf.local
//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "mutia.com" {
    type master;
    file "/etc/bind/db.mutia";
};
zone "18.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/db.192";
};
```

```

GNU nano 6.2 /etc/bind/db.mutia
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ns.mutia.com. root.mutia.com. (
                        2      ; Serial
                        604800 ; Refresh
                        86400  ; Retry
                        2419200 ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ns.mutia.com.
@         IN      A        192.168.18.9
@         IN      MX       10      mail.mutia.com.
ns        IN      A        192.168.18.9
www       IN      CNAME    ns
mail      IN      A        192.168.18.9

```

```

GNU nano 6.2 /etc/bind/named.conf.local
//
// Do any local configuration here
//
// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "mutia.com" {
    type master;
    file "/etc/bind/db.mutia";
};
zone "18.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/db.192";
};

```

```

GNU nano 6.2 /etc/bind/db.192
;
; BIND reverse data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ns.mutia.com. root.mutia.com. (
                        1      ; Serial
                        604800 ; Refresh
                        86400  ; Retry
                        2419200 ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ns.mutia.com.
1         IN      PTR      ns.mutia.com.
1         IN      PTR      www.mutia.com
1         IN      PTR      mail.mutia.com

```

```

GNU nano 6.2 /etc/bind/named.conf.options
options {
    directory "/var/cache/bind";

    // If there is a firewall between you and nameservers you want
    // to talk to, you may need to fix the firewall to allow multiple
    // ports to talk. See http://www.kb.cert.org/vuls/id/800113

    // If your ISP provided one or more IP addresses for stable
    // nameservers, you probably want to use them as forwarders.
    // Uncomment the following block, and insert the addresses replacing
    // the all-0's placeholder.

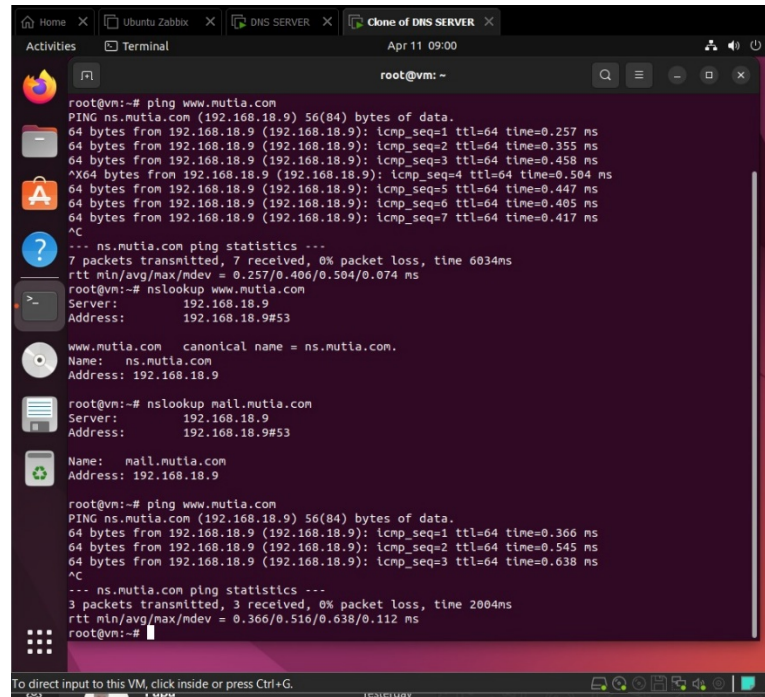
    forwarders {
        8.8.8.8;
        8.8.4.4;
    };

    //=====
    // If BIND logs error messages about the root key being expired,
    // you will need to update your keys. See https://www.isc.org/bind-keys
    //=====
    dnssec-validation auto;

    listen-on-v6 { any; };
};

```

➤ SISI CLIENT



```
root@vm:~# ping www.mutia.com
PING ns.mutia.com (192.168.18.9) 56(84) bytes of data.
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=1 ttl=64 time=0.257 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=2 ttl=64 time=0.355 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=3 ttl=64 time=0.458 ms
^X64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=4 ttl=64 time=0.504 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=5 ttl=64 time=0.447 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=6 ttl=64 time=0.405 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=7 ttl=64 time=0.417 ms
^C
--- ns.mutia.com ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6034ms
rtt min/avg/max/ndev = 0.257/0.406/0.504/0.074 ms
root@vm:~# nslookup www.mutia.com
Server:      192.168.18.9
Address:     192.168.18.9#53

www.mutia.com canonical name = ns.mutia.com.
Name:   ns.mutia.com
Address: 192.168.18.9

root@vm:~# nslookup mail.mutia.com
Server:      192.168.18.9
Address:     192.168.18.9#53

Name:   mail.mutia.com
Address: 192.168.18.9

root@vm:~# ping www.mutia.com
PING ns.mutia.com (192.168.18.9) 56(84) bytes of data.
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=1 ttl=64 time=0.366 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=2 ttl=64 time=0.545 ms
64 bytes from 192.168.18.9 (192.168.18.9): icmp_seq=3 ttl=64 time=0.638 ms
^C
--- ns.mutia.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2004ms
rtt min/avg/max/ndev = 0.366/0.516/0.638/0.112 ms
root@vm:~#
```

➤ HASIL

