



# DNS- BIND9

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- BIND9 Samba AD
- " DNS"
- " DNS"
- 
- (SRV-)
  - (Kerberos NTP)
- IPv6-c
- 
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- Astra Linux Special Edition .10015-01 ( 1.7)
- Astra Linux Special Edition .10152-02 ( 4.7)
- Astra Linux Special Edition .10015-01 ( 1.6)
- Astra Linux Special Edition .10015-16 . 1 . 2
- Astra Linux Special Edition .10265-01 ( 8.1)
- Astra Linux Common Edition 2.12

 .:

- " DHCP/TFTP-" [Astra Linux Special Edition 1.5](#)

bind9 Astra Linux. [DNS bind9](#) (. [synaptic](#)) :

```
sudo apt install bind9
```

bind9 bind9utils. :


- named-checkconf — ;
- named-checkzone — DNS;
- rndc — DNS.


bind9 bind9utils, dnsutils, DNS:

```
sudo apt install dnsutils
```

dnsutils :

- dig - DNS- ;
- nslookup - IP-( " ");
- nsupdate - DNS.

 bind named. , , named, , bind bind., bind:bind, named:named, .

 DNS [DHCP](#), () DNS.

BIND9 /etc/bind :

/etc/bind/named.conf	. , (.).
/etc/bind/named.conf.options	
/etc/bind/named.conf.local	DNS
/etc/bind/named.conf.default-zones	" " , localhost /etc/bind/db.local /etc/bind/127.db

. man named.conf (5).

## BIND9 Samba AD

BIND9 BIND9\_DLZ DNS- .BIND9 DNS- Samba AD

### " DNS"

DNS- ( ), DNS- / .

bind9 , , .. DNS- .

, DNS IP- 192.168.32.1, DNS IP- 192.168.32.100. ( , , 77.88.8.8 77.88.8.1):

1. /etc/bind/named.conf.options options | , :

```
forwarders {
    192.168.32.1;
    77.88.8.8;
    77.88.8.1;
};
```

2. , DNS , IPv6:

```
listen-on {
    127.0.0.1;
    192.168.32.100;
};
listen-on-v6 {
    none;
};
```

3. :

```
sudo named-checkconf
```

- ;

4. :

```
sudo systemctl restart bind9
```

DNS- dig:

1. :

```
dig @localhost www.astralinux.ru | grep msec
-----
;; Query time: 15 msec
```

, 15 msec;  
2. (, 5):

```
dig @localhost www.astralinux.ru | grep msec
-----
;; Query time: 0 msec
```

## " DNS"

DNS-, (DNS-). DNS-

:

- localnet.example.ru;
- DNS dns.localnet.example.ru 192.168.32.211;
- host host.localnet.example.ru 192.168.32.96.

bind:

1. /etc/bind/named.conf.options ;
2. /etc/bind/named.conf.local . :

```
zone "localnet.example.ru" {
    type master;
    file "/etc/bind/zones/db.localnet.example.ru";
};

zone "32.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/zones/db.32.168.192";
};
```

3. /etc/bind/zones , :

```
sudo mkdir /etc/bind/zones
sudo cp /etc/bind/db.local /etc/bind/zones/db.localnet.example.ru
sudo cp /etc/bind/db.127 /etc/bind/zones/db.32.168.192
sudo chown -R bind:bind /etc/bind/zones
```

4. /etc/bind/zones/db.localnet.example.ru:

```
$TTL 604800
@ IN SOA dns.localnet.example.ru. admin.localnet.example.ru. (
    3 ; Serial
    604800 ; Refresh
    86400 ; Retry
    2419200 ; Expire
    604800 ) ; Negative Cache TTL
; name servers - NS records - DNS-
IN NS dns.localnet.example.ru.
; name servers - A records - , () DNS
dns.localnet.example.ru. IN A 192.168.32.211
; 192.168.32.0/24 - A records - ()
host.localnet.example.ru. IN A 192.168.32.96
```

5. /etc/bind/zones/db.32.168.192 :

```
$TTL 604800
@ IN SOA localnet.example.ru. admin.localnet.example.ru. (
    3 ; Serial
    604800 ; Refresh
    86400 ; Retry
    2419200 ; Expire
    604800 ) ; Negative Cache TTL ;
; name servers
IN NS dns.localnet.example.ru.
; PTR Records
211 IN PTR dns.localnet.example.ru. ; 192.168.32.211
96 IN PTR host.localnet.example.ru. ; 192.168.32.96
```

6. :

```
sudo named-checkconf
sudo named-checkzone localnet.example.ru /etc/bind/zones/db.localnet.
example.ru
sudo named-checkzone 32.168.192.in-addr.arpa /etc/bind/zones/db.
32.168.192
```

7. :

```
sudo systemctl restart bind9
```

:

```
dig @localhost host.localnet.example.ru
```

.,:

- localnet.example.ru
- DNS dns.localnet.example.ru 192.168.32.211
- host host.localnet.example.ru 192.168.32.96
- DNS dns2.localnet.example.ru 192.168.32.212

:

1. DNS /etc/bind/named.conf.local . :

```
zone "localnet.example.ru" {
    type master;
    file "/etc/bind/zones/db.localnet.example.ru";
    allow-transfer { 192.168.32.212; }; #
};

zone "32.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/zones/db.32.168.192";
    allow-transfer { 192.168.32.212; }; #
};
```

2. DNS /etc/bind/named.conf.options - ("") 192.168.32.212:

```
forwarders {
    77.88.8.8;
    77.88.8.1;
};

listen-on {
    127.0.0.1;
    192.168.32.212; #
};
```

3. /etc/bind/named.conf.local:

```

zone "localnet.example.ru" {
    type slave;
    file "slaves/db.nyc3.example.ru";
    masters { 192.168.32.211; }; #
};

zone "32.168.192.in-addr.arpa" {
    type slave;
    file "slaves/db.32.168.192";

    masters { 192.168.32.211; }; #
};

```

4. :

```

sudo named-checkconf
sudo systemctl restart bind9

```

## (SRV-)

(SRV-) — DNS, . RFC 2782. ,, Kerberos. SRV- ( - /etc/bind/zones/db.localnet.example.ru).

:

```

_service._proto.name TTL class SRV priority weight port target

```

:

- service - ;
- proto - , \_tcp \_udp;
- name - , ;
- TTL - DNS, ;
- class- DNS, ( IN);
- priority - , ;
- weight - ;
- port - TCP UDP, ;;
- target - , .

## (Kerberos NTP)

```
$ORIGIN samdom.example.ru.
$TTL 1h
@ IN SOA dns.samdom.example.ru. root.samdom.example.ru. (

    2 ; Serial
    604800 ; Refresh
    86400 ; Retry
    2419200 ; Expire
    604800 ) ; Negative Cache TTL
;

    IN NS dns.samdom.example.ru.
@ IN AAAA ::1
dns.samdom.example.ru. IN A 10.0.2.254
dhcp.samdom.example.ru. IN A 10.0.2.254
kdc.samdom.example.ru. IN A 10.0.2.253
ntp.samdom.example.ru. IN A 10.0.2.253
;kerberos
_kerberos TXT "SAMDOM.EXAMPLE.RU"
kerberos CNAME kdc
_kerberos._udp SRV 0 0 88 kdc
                SRV 0 0 88 kdc
                SRV 0 0 88 kdc
_kerberos-master._udp SRV 0 0 88 kdc
_kerberos-adm._tcp SRV 0 0 749 kdc
_kpasswd._udp SRV 0 0 464 kdc
;ntp server
_ntp._udp IN SRV 0 100 123 ntp.samdom.example.ru.
```

## IPv6-c

, , IPv6 (, IPv6 ), /etc/bind/named.conf.local :

```
server ::/0 {
    bogus yes;
};
```