

DNS- BIND9

- - BIND9 Samba AD
 - " DNS"
 - " DNS"
 - (SRV-)
 - (Kerberos NTP)
- IPv6-
- .
 -



:

- Astra Linux Special Edition .10015-01 (1.7), .10015-10
- Astra Linux Special Edition .10015-17
- Astra Linux Special Edition .10015-37 (7.7)
- Astra Linux Special Edition .10015-03 (7.6)
- Astra Linux Special Edition .10152-02 (4.7)
- Astra Linux Special Edition .10015-01 (1.6)
- Astra Linux Special Edition .10015-16 . 1
- Astra Linux Special Edition .10015-16 . 2
- Astra Linux Special Edition .10265-01 (8.1)
- Astra Linux Common Edition 2.12



.:

- " DHCP/TFTP-" Astra Linux (UEFI Legacy BIOS).

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
```

2. , 15 msec;
(, 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;                                           # master ,
    file "/etc/bind/zones/db.localnet.example.ru"; #
};

zone "32.168.192.in-addr.arpa" {                            #
    type master;                                           # master , , ,
    file "/etc/bind/zones/db.32.168.192";                # 192.168.32.0/24,
};
```

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-

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

```

server ::/0 {
    bogus yes;
};

```