DNS- BIND9

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

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- 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
```

, 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;                                    #  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;
};
```

.

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