

- Rejestracja/wykupienie domeny, która ma działać w publicznym systemie DNS

Domena xdd.com.pl

Hosting DNS WŁĄCZONY

Provider Name Servers

dns.home.pl
dns2.home.pl
dns3.home.pl

DZIAŁANIA ▾

Rejestracja domeny AKTYWNY

Wygasa
5 cze 2024

Wystawianie zamówienia
odnowienia
Włączone

Cena odnowienia
202,95 zł/1 rok

OPCJE ▾

Opcje zaawansowane

Kontakty domeny
[Michał Pawelek](#)

DZIAŁANIA ▾

- Skonfigurowanie z wykorzystaniem dwóch dowolnych serwerów VPS (posiadających publiczny adres IPv4 oraz adres IPv6 unikalny globalny) zakupioną domenę DNS tak, aby na jednym była przechowywana strefa podstawowa, a na drugim strefa zapasowa

VPS1:

```

mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.default-zones  [-M--] 37 L:[ 9+23 32/ 36] *(561 / 569b) 0034 0x022 [*][X] ^
zone "localhost" {
<----->type master;
<----->file "/etc/bind/db.local";
};
zone "127.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.127";
};
zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};
zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};
zone "xdd.com.pl" {
<----->type master;
<----->file "/etc/bind/db.xdd.com.pl";
};
1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit

```

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/db.xdd.com.pl [-M--] 0 L:[ 1+17 18/ 20] *(329 / 331b) 0010 0x00A [*][X] ^
; BIND data file for local loopback interface
;
$TTL<--->604800
@<----->IN<----->SOA<----->dns1.xdd.com.pl. root.xdd.com.pl. (
<-----><-----><-----> 6<-----> Serial
<-----><-----><-----> 604800<-----> Refresh
<-----><-----><-----> 86400<-----> Retry
<-----><-----><-----> 2419200<-----> Expire
<-----><-----><-----> 604800<-----> Negative Cache TTL
;
@<----->IN<----->NS<----->dns1.xdd.com.pl.
dns1<--->IN<----->A<----->164.90.164.135

@<----->IN<----->NS<----->dns2.xdd.com.pl.
dns2<--->IN<----->A<----->139.59.150.131

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-01]:/etc
/etc/bind/named.conf.default-zones [-M--] 2 L:[ 13+24 37/ 40] *(666 / 669b) 0010 0x00A [*][X] ^
};

zone "127.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.127";
};

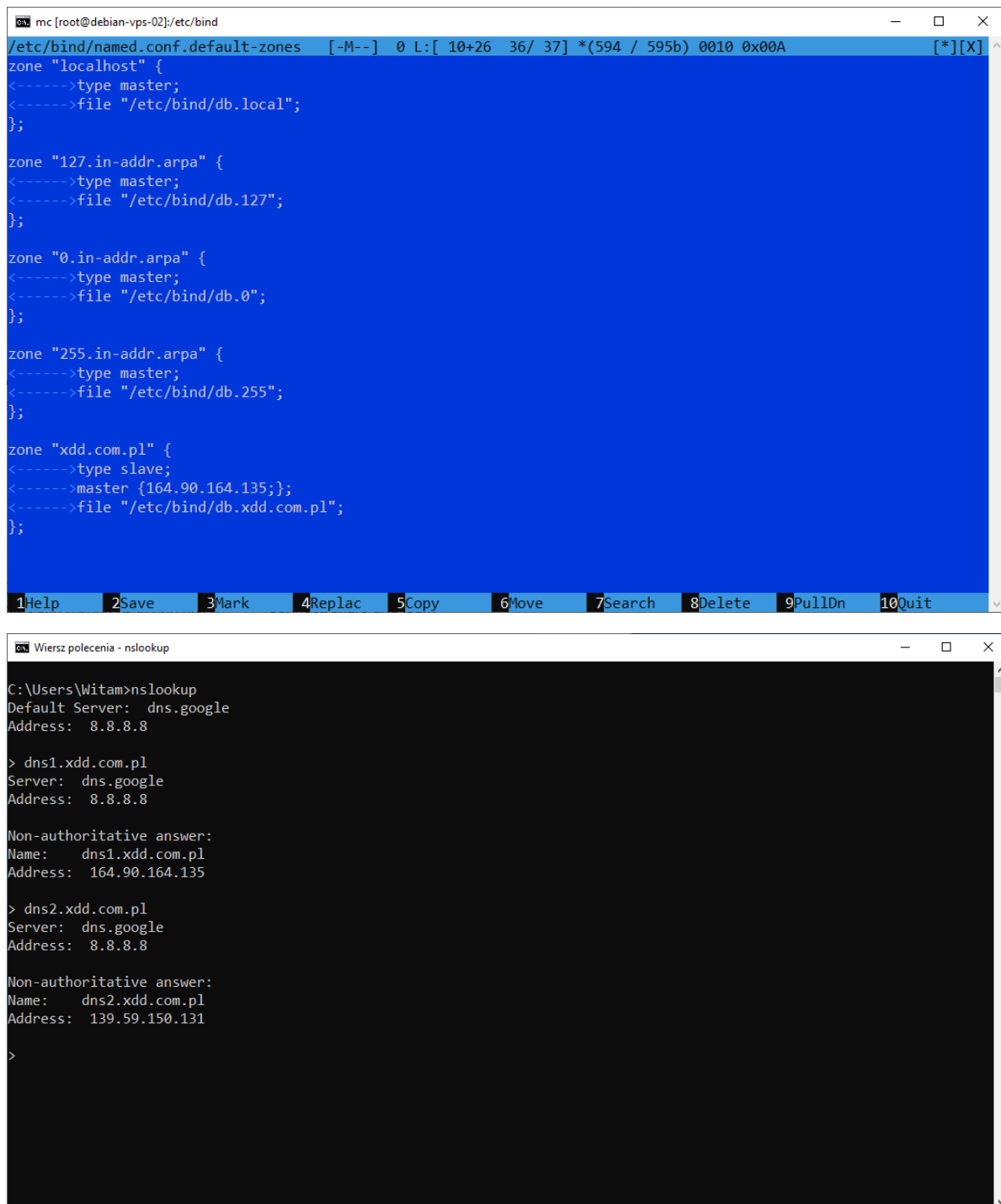
zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "xdd.com.pl" {
<----->type master;
<----->file "/etc/bind/db.xdd.com.pl";
<----->notify yes;
<----->allow-update { none; };
<----->allow-transfer {139.59.150.131;};
<----->allow-query {0.0.0.0/0;};
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

VPS2 (zapas):



```
mc [root@debian-vps-02]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 0 L:[ 10+26 36/ 37] *(594 / 595b) 0010 0x00A [*][X] ^
zone "localhost" {
<----->type master;
<----->file "/etc/bind/db.local";
};

zone "127.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "xdd.com.pl" {
<----->type slave;
<----->master {164.90.164.135;};
<----->file "/etc/bind/db.xdd.com.pl";
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit v

Wiersz polecenia - nslookup
C:\Users\Witam>nslookup
Default Server: dns.google
Address: 8.8.8.8

> dns1.xdd.com.pl
Server: dns.google
Address: 8.8.8.8

Non-authoritative answer:
Name: dns1.xdd.com.pl
Address: 164.90.164.135

> dns2.xdd.com.pl
Server: dns.google
Address: 8.8.8.8

Non-authoritative answer:
Name: dns2.xdd.com.pl
Address: 139.59.150.131

>
```

- Skonfigurowanie podstawowego serwera DNS tak, aby automatycznie powiadamiał serwer podrzędny o zmianach dokonanych w strefie, i uniemożliwiał nikomu poza serwerem podrzędnym transferu strefy, jak również uniemożliwiał żadnemu urządzeniu dynamicznej modyfikacji rekordów w strefie domeny

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.default-zones [----] 2 L: [ 13+24 37/ 40] *(666 / 669b) 0010 0x00A [*][X] ^
};

zone "127.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "xdd.com.pl" {
<----->type master;
<----->file "/etc/bind/db.xdd.com.pl";
<----->notify yes;
<----->allow-update { none; };
<----->allow-transfer { 139.59.150.131; };
<----->allow-query { 0.0.0.0/0; };
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

- Skonfigurowanie podstawowego serwera DNS tak, aby rekordy które "trafią" do pamięci podręcznej klientów DNS (komputerów na których ktoś wpisał do jakiejś aplikacji naszą poddomenę), wygasły w tej pamięci podręcznej po 2 godzinach (czyli czas reakcji klientów w sieci, propagacji dokonanej zmiany w sieci, na dokonywane przez administratorów zmiany w ramach strefy, np. zmiana adresu IP dla poddomeny, ma być nie większy niż dwie godziny).

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/db.xdd.com.pl [-M--] 12 L: [ 1+ 3 4/ 20] *(59 / 329b) 0010 0x00A [*][X] ^
; BIND data file for local loopback interface
;
$TTL<-->7200
@<----->IN<----->SOA<----->dns1.xdd.com.pl. root.xdd.com.pl. (
<-----><-----><-----> 7<-----><-----> Serial
<-----><-----><-----> 604800<-----><-----> Refresh
<-----><-----><-----> 86400<-----><-----> Retry
<-----><-----><-----> 2419200<-----><-----> Expire
<-----><-----><-----> 604800 )<-----><-----> Negative Cache TTL
;
@<----->IN<----->NS<----->dns1.xdd.com.pl.
dns1<----->IN<----->A<----->164.90.164.135

@<----->IN<----->NS<----->dns2.xdd.com.pl.
dns2<----->IN<----->A<----->139.59.150.131

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

- Skonfigurować z wykorzystaniem jednego serwera VPS tak, aby była na nim przechowywana strefa podstawowa domeny Gliwice.xdd.com.pl a następnie skonfigurować dla niej delegację domeny w ramach strefy podstawowej xdd.com.pl

VPS 3:

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 47 L: [ 9+23 32/ 36] *(579 / 585b) 0010 0x00A [*][X] ^

zone "localhost" {
<----->type master;
<----->file "/etc/bind/db.localhost";
};

zone "127.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "gliwice.xdd.com.pl" {
<----->type master;
<----->file "/etc/bind/db.gliwice.xdd.com.pl";
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/db.gliwice.xdd.com.pl [-M--] 38 L: [ 1+14 15/ 16] *(336 / 337b) 0010 0x00A [*][X] ^

; BIND data file for local loopback interface
;
$TTL<-->604800
@<----->IN<----->SOA<----->gliwice.xdd.com.pl. root.gliwice.xdd.com.pl. (
<-----><-----><-----> 2<----->; Serial
<-----><-----><-----> 604800<----->; Refresh
<-----><-----><-----> 86400<----->; Retry
<-----><-----><-----> 2419200<----->; Expire
<-----><-----><-----> 604800 )<----->; Negative Cache TTL
;
@<----->IN<----->NS<----->gliwice.xdd.com.pl.
dns1<----->IN<----->A<----->164.90.164.152
@<----->IN<----->A<----->164.90.164.152
www<----->IN<----->A<----->164.90.164.152

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

VPS 1:

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/db.xdd.com.pl [-M--] 31 L:[ 1+ 5 6/ 23] *(115 / 390b) 0009 0x009 [*][X]
;
; BIND data file for local loopback interface
;
$TTL<-->7200
@<----->IN<----->SOA<----->dns1.xdd.com.pl. root.xdd.com.pl. (
<-----><-----><-----> 2<-----><-----> Serial
<-----><-----><-----> 604800<-----><-----> Refresh
<-----><-----><-----> 86400<-----><-----> Retry
<-----><-----><-----> 2419200<-----><-----> Expire
<-----><-----><-----> 604800 )<-----><-----> Negative Cache TTL
;
@<----->IN<----->NS<----->dns1.xdd.com.pl.
dns1<-->IN<----->A<----->164.90.164.135

@<----->IN<----->NS<----->dns2.xdd.com.pl.
dns2<-->IN<----->A<----->139.59.150.131

gliwice>IN<----->NS<----->dns1.gliwice
dns1.gliwice<-->IN<----->A<----->164.90.164.152

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

- Na wszystkich serwerach VPS, poza serwerem podstawowym dla domeny xdd.com.pl należy wyłączyć możliwość obsługi zapytań rekursywnych, dla wszystkich za wyjątkiem własnego komputera (pozostawione tak na cele diagnostyczne)

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.options [-M--] 55 L:[ 16+13 29/ 46] *(970 /1439b) 0010 0x00A [*][X]
<----->// the all-0's placeholder.

<----->// forwarders {
<----->// <-->0.0.0.0;
<----->// };

<----->//=====
<----->// 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;

<----->recursion no;
<----->allow-recursion {127.0.0.0/8; 176.102.81.229;};

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

<----->recursion yes; # enables recursive queries
allow-recursion { trusted; }; # allows recursive queries from "trusted" clients
listen-on { 164.90.164.135; }; # dns1 private IP address - listen on private network only
allow-transfer { trusted; }; # disable zone transfers by default
<----->allow-query { any; };

forwarders {
8.8.8.8;
8.8.4.4;
<-----><----->1.1.1.1;

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

- Skonfigurowanie na serwerze utrzymującym podstawową strefę dla domeny gliwice.xdd.com.pl, dodatkowo strefę podstawową dla lokalnej domeny DNS pawelek.pl i następnie skonfigurowanie na serwerze utrzymującym podstawową strefę domeny xdd.com.pl usługę warunkowego przesyłania dalej na potrzeby tej domeny pawelek.pl (tak, aby jeżeli ktoś wyśle zapytanie DNS dotyczące dowolnej domeny DNS pawelek.pl do serwera utrzymującego podstawową strefę domeny xdd.com.pl, to aby potrafił w sposób właściwy obsłużyć to zapytanie)

VPS 3:

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 0 L: [ 17+22 39/ 44] *(654 / 659b) 0010 0x00A [*][X] ^
<----->file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "gliwice.xdd.com.pl" {
<----->type master;
<----->file "/etc/bind/db.gliwice.xdd.com.pl";
};

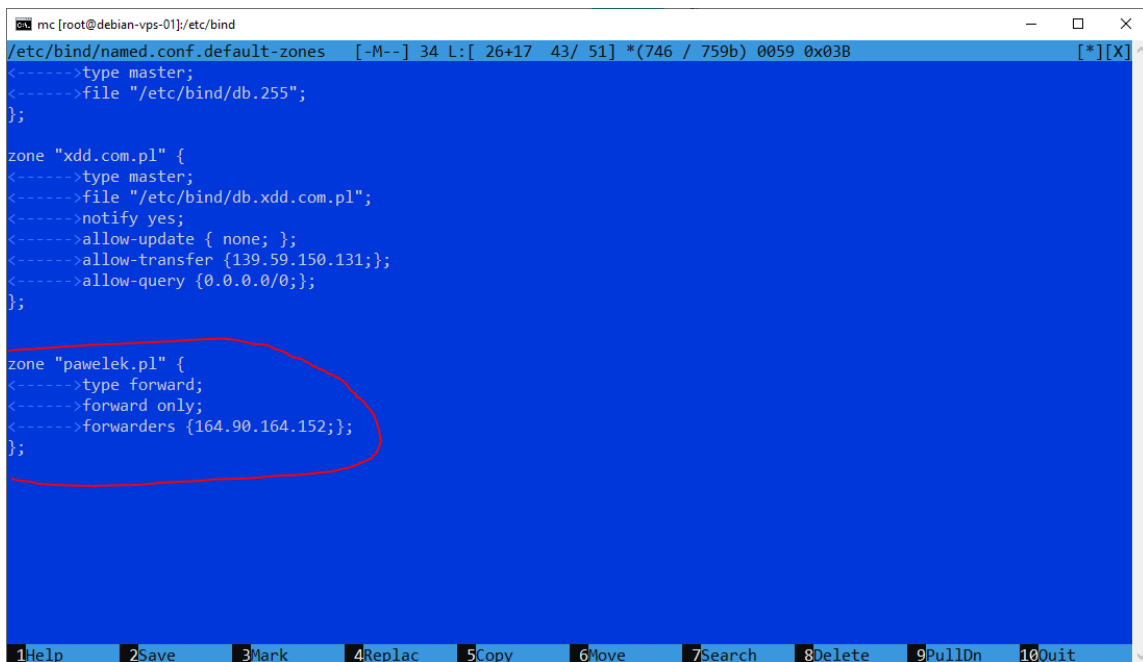
zone "pawelek.pl" {
<----->type master;
<----->file "/etc/bind/db.pawelek.pl";
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/db.pawelek.pl [-M--] 38 L: [ 1+12 13/ 14] *(263 / 264b) 0010 0x00A [*][X] ^
;
; BIND data file for local loopback interface
;
$TTL<--->604800
@<----->IN<----->SOA<----->pawelek.pl. root.pawelek.pl. (
<-----><-----><-----> 4<-----> Serial
<-----><-----><-----> 604800<-----> Refresh
<-----><-----><-----> 86400<-----> Retry
<-----><-----><-----> 2419200<-----> Expire
<-----><-----><-----> 604800 )<-----> Negative Cache TTL
;
@<----->IN<----->NS<----->pawelek.pl.
@<----->IN<----->A<----->164.90.164.152

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

VPS 1:



```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.default-zones  [-M--] 34 L:[ 26+17 43/ 51] *(746 / 759b) 0059 0x03B [*][X] ^
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "xdd.com.pl" {
<----->type master;
<----->file "/etc/bind/db.xdd.com.pl";
<----->notify yes;
<----->allow-update { none; };
<----->allow-transfer {139.59.150.131;};
<----->allow-query {0.0.0.0/0;};
};

zone "pawelek.pl" {
<----->type forward;
<----->forward only;
<----->forwarders {164.90.164.152;};
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

Trzeba też w pliku */etc/bind/named.conf.options* zmienić *dnssec-validation auto;* na *dnssec-validation no;*

- Utworzenie w ramach domeny:
 1. xdd.com.pl oraz www.xdd.com.pl nakierowane na adres IPv4 oraz IPv6 serwera VPS ze strefą podstawową
 2. sklep.xdd.com.pl nakierowane w ramach mechanizmu pseudo-loadbalancingu na adres IPv4 oraz IPv6 obydwu serwerów VPS (ze strefą podstawową i zapasową)
 3. xdd.com.pl nakierowane na adres na adres IPv4 oraz IPv6 serwera VPS ze strefą zapasową, na potrzeby usługi poczty elektronicznej
 4. gliwice.xdd.com.pl oraz www.gliwice.xdd.com.pl nakierowane na adres IPv4 oraz IPv6 serwera VPS ze strefą podstawową dla domeny gliwice.xdd.com.pl


```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/db.xdd.com.pl [-M--] 0 L: [ 17+26 43/ 44] *(845 / 846b) 0010 0x00A [*][X] ^
dns1<-->IN<-->A<-->164.90.164.135

@<-->IN<-->NS<-->dns2.xdd.com.pl.
dns2<-->IN<-->A<-->139.59.150.131

@<-->IN<-->A<-->164.90.164.135
www<-->IN<-->A<-->164.90.164.135
@<-->IN<-->AAAA<-->2a03:b0c0:3:d0:13c8:8001
www<-->IN<-->AAAA<-->2a03:b0c0:3:d0:13c8:8001
sklep<-->IN<-->A<-->164.90.164.135
sklep<-->IN<-->A<-->139.59.150.131
sklep<-->IN<-->AAAA<-->2a03:b0c0:3:d0:13c8:8001
sklep<-->IN<-->AAAA<-->2a03:b0c0:3:d0:bc6:4001
@<-->IN<-->MX<-->139.59.150.131
@<-->IN<-->MX<-->2a03:b0c0:3:d0:bc6:4001
gliwice<-->IN<-->A<-->164.90.164.152
www.gliwice<-->IN<-->A<-->164.90.164.152
gliwice<-->IN<-->A<-->2a03:b0c0:3:d0:13ea:c001
www.gliwice<-->IN<-->A<-->2a03:b0c0:3:d0:13ea:c001
```

```
Wiersz polecenia - nslookup

C:\Users\Witam>nslookup
Default Server: dns.google
Address: 8.8.8.8

> sklep.xdd.com.pl
Server: dns.google
Address: 8.8.8.8

Non-authoritative answer:
Name: sklep.xdd.com.pl
Addresses: 164.90.164.135
          139.59.150.131

> set type=AAAA
> sklep.xdd.com.pl
Server: dns.google
Address: 8.8.8.8

Non-authoritative answer:
Name: sklep.xdd.com.pl
Addresses: 2a03:b0c0:3:d0:bc6:4001
          2a03:b0c0:3:d0:13c8:8001

>
```

- Dokonanie takiej konfiguracji na serwerze utrzymującym podstawową strefę domeny gliwice.xdd.com.pl,, aby własny komputer w domu korzystał z osobnej konfiguracji strefy dla w/w domeny (np. nazwa Gliwice.xdd.com.pl oraz www.gliwice.xdd.com.pl mają być nakierowane na adres IP: 1.1.1.1) niż wszystkie pozostałe komputery, i nie były dla niego również obsługiwane zapytania rekursywne.

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 22 L:[ 1+ 4 5/ 56] *(108 / 814b) 0010 0x00A [*][X] ^
// prime the server with knowledge of the root servers

view "wewn" {
<----->match-clients {any;};
<----->recursion yes;

zone "." {
<----->type hint;
<----->file "/usr/share/dns/root.hints";
};

// be authoritative for the localhost forward and reverse zones, and for
// broadcast zones as per RFC 1912

zone "localhost" {
<----->type master;
<----->file "/etc/bind/db.localhost";
};

zone "127.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};
1Help 2Save 3Mark 4Replac 5Copy 6love 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 0 L:[ 38+27 65/ 65] *(958 / 958b) <EOF> [*][X] ^
<----->notify yes;
<----->allow-update { none; };
<----->allow-transfer {139.59.150.131;};
<----->allow-query {0.0.0.0/0;};
};

zone "pawelek.pl" {
<----->type forward;
<----->forward only;
<----->forwarders {164.90.164.152;};
};

view "zewn" {
<----->match-clients {176.102.81.229;};
<----->recursion no;
<----->zone "xdd.com.pl" {
<----->type "master";
<----->file "/etc/bind/ext.xdd.com.pl"
<----->};
<----->};
1Help 2Save 3Mark 4Replac 5Copy 6love 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/ext.xdd.com.pl [-M--] 39 L:[ 1+14 15/ 19] *(267 / 271b) 0010 0x00A [*][X] ^
;
; BIND data file for local loopback interface
;
$TTL<-->7200
@<----->IN<----->SOA<----->xdd.com.pl. root.xdd.com.pl. (
<-----><-----><-----> 4<-----><-----> Serial
<-----><-----><-----> 604800<-----><-----> Refresh
<-----><-----><-----> 86400<-----><-----> Retry
<-----><-----><-----> 2419200<-----><-----> Expire
<-----><-----><-----> 604800 )<-----><-----> Negative Cache TTL
;

gliwice>IN<----->A<----->1.1.1.1
www.gliwice<----->IN<----->A<----->1.1.1.1

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

Dla zarejestrowanej domeny w publicznym systemie DNS, należy skonfigurować pełną obsługę DNSSEC, ze zgłoszonym do operatora rekordem DS, i z wdrożoną automatyczną rotacją kluczy ZSK - obsługa DNSSEC ma zostać zrealizowana zarówno dla domeny głównej {wybierz_co_chcesz}.pl jak również delegowanej domeny gliwice.xdd.com.pl

```
mc [root@debian-vps-01]:/etc/bind
/etc/bind/named.conf.options [-M--] 44 L:[ 13+15 28/ 48] *(963 /1497b) 0010 0x00A [*][X] ^
<----->// 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 {
<----->// <----->0.0.0.0;
<----->// };

<----->//=====
<----->// 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-enable yes;
<----->dnssec-validation auto;
<----->key-directory "var/cache/bind/keys";

<----->recursion no;
<----->allow-recursion {127.0.0.0/8; 176.102.81.229;};

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

<----->recursion yes; # enables recursive queries
allow-recursion { trusted; }; # allows recursive queries from "trusted" clients
listen-on { 164.90.164.135; }; # dns1 private IP address - listen on private network only
allow-transfer { trusted; }; # disable zone transfers by default
<----->allow-query { any; };

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-01]:/etc/bind
root@debian-vps-01:/# mkdir -p /var/cache/bind/keys
root@debian-vps-01:/# cd /var/cache/bind/keys
root@debian-vps-01:/var/cache/bind/keys# dnssec-keygen -a ECDSA256SHA256 -3 xdd.com.pl
Generating key pair.
Kxdd.com.pl.+013+03510
root@debian-vps-01:/var/cache/bind/keys# dnssec-keygen -f KSK -a ECDSA256SHA256 -3 xdd.com.pl
Generating key pair.
Kxdd.com.pl.+013+50646
root@debian-vps-01:/var/cache/bind/keys# ls -la /var/cache/bind/keys/K*
-rw-r--r-- 1 root root 339 Jun 13 20:29 /var/cache/bind/keys/Kxdd.com.pl.+013+03510.key
-rw----- 1 root root 187 Jun 13 20:29 /var/cache/bind/keys/Kxdd.com.pl.+013+03510.private
-rw-r--r-- 1 root root 339 Jun 13 20:30 /var/cache/bind/keys/Kxdd.com.pl.+013+50646.key
-rw----- 1 root root 187 Jun 13 20:30 /var/cache/bind/keys/Kxdd.com.pl.+013+50646.private
root@debian-vps-01:/var/cache/bind/keys#
```

```
mc [root@debian-vps-01]:/var/cache/bind/keys
/var/cache/bind/keys/db.xdd.com.pl [-M--] 0 L:[ 1+ 9 10/ 51] *(177 / 965b) 0010 0x00A [*][X]
;
; BIND data file for local loopback interface
;
%TTL<-->7200
%INCLUDE /var/cache/bind/keys/Kxdd.com.pl.+013+50646.key
%INCLUDE /var/cache/bind/keys/Kxdd.com.pl.+013+03510.key

@<----->IN<----->SOA<----->dns1.xdd.com.pl. root.xdd.com.pl. (
<-----><-----><-----> 3<----->; Serial
<-----><-----><-----> 604800<----->; Refresh
<-----><-----><-----> 86400<----->; Retry
<-----><-----><-----> 2419200<----->; Expire
<-----><-----><-----> 604800 )<----->; Negative Cache TTL
;

gliwice>IN<----->NS<----->dns1.gliwice
dns1.gliwice<-->IN<----->A<----->164.90.164.152

@<----->IN<----->NS<----->dns1.xdd.com.pl.
dns1<-->IN<----->A<----->164.90.164.135

@<----->IN<----->NS<----->dns2.xdd.com.pl.
dns2<-->IN<----->A<----->139.59.150.131

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

chmod g+r /var/cache/bind/keys/K*

```
mc [root@debian-vps-01]:/var/cache/bind/keys
root@debian-vps-01:/var/cache/bind/keys# root@debian-vps-01:/var/cache/bind/keys# dnssec-signzone -A -3 $(head -c 1000 /dev/random | sha1sum | cut -b 1-16) -N INCREMENT -o xdd.com.pl -t db.xdd.com.pl
Verifying the zone using the following algorithms:
- ECDSAP256SHA256
Zone fully signed:
Algorithm: ECDSAP256SHA256: KSKs: 1 active, 0 stand-by, 0 revoked
                                ZSKs: 1 active, 0 stand-by, 0 revoked
db.xdd.com.pl.signed
Signatures generated:          18
Signatures retained:           0
Signatures dropped:            0
Signatures successfully verified: 0
Signatures unsuccessfully verified: 0
Signing time in seconds:        0.016
Signatures per second:         1125.000
Runtime in seconds:            0.020
root@debian-vps-01:/var/cache/bind/keys#
```

```
mc [root@debian-vps-01]:/var/cache/bind/keys
/var/cache/bind/keys/db.xdd.com.pl.signed [----] 0 L: [ 67+ 0 67/142] *(2465/5496b) 0009 0x009 [*][X]
<-----><-----><----->7200<-->A<----->164.90.164.152
dns1.gliwice.xdd.com.pl. 7200<-->IN A<-->164.90.164.152
www.gliwice.xdd.com.pl. 7200<-->IN A<-->164.90.164.152
dns2.xdd.com.pl. <----->7200<-->IN A<-->139.59.150.131
<-----><-----><----->7200<-->RRSIG<-->A 13 4 7200 (
<-----><-----><-----><-----><----->20230713195728 20230613195728 3510 xdd.com.pl.
<-----><-----><-----><-----><----->9MAY4rPbtaQAMV5vWp4+ZFGjxw1s+AU2r6L8
<-----><-----><-----><-----><----->aZut8gyUyFJP+7DNNFWnglRXLtwDx7kcZCp1
<-----><-----><-----><-----><----->uFNXt1e7lakA4Q== )
sklep.xdd.com.pl. <----->7200<-->IN A<-->139.59.150.131
<-----><-----><----->7200<-->IN A<-->164.90.164.135
<-----><-----><----->7200<-->RRSIG<-->A 13 4 7200 (
<-----><-----><-----><-----><----->20230713195728 20230613195728 3510 xdd.com.pl.
<-----><-----><-----><-----><----->quk+77AjaXlrFp9HifawG8j9pp/zgnzaPppI
<-----><-----><-----><-----><----->62G7hY6ivtCtmi3tSzfueNTU2ANTn3gZ9Ns6
<-----><-----><-----><-----><----->fEzy1Tg/e+uSfQ== )
<-----><-----><----->7200<-->AAAA<-->2a03:b0c0:3:d0::bc6:4001
<-----><-----><----->7200<-->AAAA<-->2a03:b0c0:3:d0::13c8:8001
<-----><-----><----->7200<-->RRSIG<-->AAAA 13 4 7200 (
<-----><-----><-----><-----><----->20230713195728 20230613195728 3510 xdd.com.pl.
<-----><-----><-----><-----><----->1nBVXAi04TChH0Br3VONIynL4PsH+bg8myEI
<-----><-----><-----><-----><----->w5cQkllxcYfdEyWUx5XUS5USJzbVarhEiP+K
<-----><-----><-----><-----><----->x7lmqtW/JgSlig== )
www.xdd.com.pl. <----->7200<-->IN A<-->164.90.164.135
<-----><-----><----->7200<-->RRSIG<-->A 13 4 7200 (
<-----><-----><-----><-----><----->20230713195728 20230613195728 3510 xdd.com.pl.
<-----><-----><-----><-----><----->RNqilXNR1QlWvCK52z9yInTwWkSxZ/n2y7Td
<-----><-----><-----><-----><----->kMRCXbLGLTMRyJvNOxPP6TqEQVR/X0d8FaA1
1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

To samo robimy dla VPS 3 (ten który posiada strefe gliwice.)

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/named.conf.options [-M--] 45 L:[ 1+22 23/ 27] *(876 / 905b) 0010 0x00A [*][X] ^
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 {
<----->// <---->0.0.0.0;
<----->// };

<----->//=====
<----->// 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
<----->//=====
<----->dnsec-enable yes;
<----->dnsec-validation auto;
<----->key-directory "/var/cache/bind/keys";

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

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

```
mc [root@debian-vps-03]:/etc/bind
root@debian-vps-03:/# mc

root@debian-vps-03:/# root@debian-vps-03:/# mkdir /var/cache/bind/keys
root@debian-vps-03:/# cd /var/cache/bind/keys/
root@debian-vps-03:/var/cache/bind/keys# dnssec-keygen -a ECDSA256SHA256 -3 gliwice.xdd.com.pl
Generating key pair.
Kgliwice.xdd.com.pl.+013+59253
root@debian-vps-03:/var/cache/bind/keys# dnssec-keygen -f KSK -a ECDSA256SHA256 -3 gliwice.xdd.com.pl
Generating key pair.
Kgliwice.xdd.com.pl.+013+44567
root@debian-vps-03:/var/cache/bind/keys# ls -la ./K*
-rw-r--r-- 1 root root 355 Jun 13 21:10 ./Kgliwice.xdd.com.pl.+013+44567.key
-rw----- 1 root root 187 Jun 13 21:10 ./Kgliwice.xdd.com.pl.+013+44567.private
-rw-r--r-- 1 root root 356 Jun 13 21:10 ./Kgliwice.xdd.com.pl.+013+59253.key
-rw----- 1 root root 187 Jun 13 21:10 ./Kgliwice.xdd.com.pl.+013+59253.private
root@debian-vps-03:/var/cache/bind/keys#
```

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/db.gliwice.xdd.com.pl [-M--] 64 L:[ 1+ 6 7/ 20] *(192 / 469b) 0010 0x00A [*][X] ^
;
; BIND data file for local loopback interface
;
$TTL<-->604800
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+44567.key
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.key

@<----->IN<----->SOA<----->gliwice.xdd.com.pl. root.gliwice.xdd.com.pl. (
<-----><-----><-----> 3<----->; Serial
<-----><-----><-----> 604800<----->; Refresh
<-----><-----><-----> 86400<----->; Retry
<-----><-----><-----> 2419200<----->; Expire
<-----><-----><-----> 604800<----->; Negative Cache TTL
;
@<----->IN<----->NS<----->gliwice.xdd.com.pl.
dns1<----->IN<----->A<----->164.90.164.152
@<----->IN<----->A<----->164.90.164.152
www<----->IN<----->A<----->164.90.164.152

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

`mv /etc/bind/db.gliwice.xdd.com.pl /var/cache/bind/keys/db.gliwice.xdd.com.pl`

`chmod g+r /var/cache/bind/keys/*`

```
mc [root@debian-vps-03]:/etc/bind
root@debian-vps-03:/var/cache/bind/keys# root@debian-vps-03:/var/cache/bind/keys# chmod g+r /var/cache/bind/keys/*
root@debian-vps-03:/var/cache/bind/keys# dnssec-signzone -A -3 $(head -c 1000 /dev/random | sha1sum | cut -b 1-16) -N IN
CREMENT -o gliwice.xdd.com.pl -t db.gliwice.xdd.com.pl
Verifying the zone using the following algorithms:
- ECDSAP256SHA256
Zone fully signed:
Algorithm: ECDSAP256SHA256: KSKs: 1 active, 0 stand-by, 0 revoked
                        ZSKs: 1 active, 0 stand-by, 0 revoked
db.gliwice.xdd.com.pl.signed
Signatures generated:      11
Signatures retained:      0
Signatures dropped:        0
Signatures successfully verified: 0
Signatures unsuccessfully verified: 0
Signing time in seconds:    0.008
Signatures per second:     1375.000
Runtime in seconds:         0.044
root@debian-vps-03:/var/cache/bind/keys#
```

```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 63 L:[ 17+15 32/ 44] *(595 / 677b) 0034 0x022 [*][X] ^
<----->file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

zone "gliwice.xdd.com.pl" {
<----->type master;
<----->file "/var/cache/bind/keys/db.gliwice.xdd.com.pl.signed";
};

zone "pawelek.pl" {
<----->type master;
<----->file "/etc/bind/db.pawelek.pl";
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

Wykonujemy na VPS 3 polecenie „cat dsset-gliwice.xdd.com.pl.” i umieszczamy w pliku strefy w VPS 1:

```
mc [root@debian-vps-01]:/var/cache/bind/keys
/var/cache/bind/keys/db.xdd.com.pl [-M--] 14 L:[ 1+19 20/ 49] *(359 / 931b) 0109 0x06D [*][X] ^
;
; BIND data file for local loopback interface
;
%TTL<-->7200
%INCLUDE /var/cache/bind/keys/Kxdd.com.pl.+013+50646.key
%INCLUDE /var/cache/bind/keys/Kxdd.com.pl.+013+03510.key

@<----->IN<----->SOA<----->dns1.xdd.com.pl. root.xdd.com.pl. (
<-----><-----><-----> 4<-----><-----> Serial
<-----><-----><-----> 604800<-----><-----> Refresh
<-----><-----><-----> 86400<-----><-----> Retry
<-----><-----><----->2419200<-----><-----> Expire
<-----><-----><-----> 604800 )<-----><-----> Negative Cache TTL
;

gliwice.xdd.com.pl.<----->IN<----->DS<----->44567<----->13<----->2<-----><----->2F305C04E028C9670F2308C5ABA3A2C0DD68B0EC74E58A9AFB19A37C
gliwice>IN<----->NS<----->dns1.gliwice
dns1.gliwice<----->IN<----->A<----->164.90.164.152

@<----->IN<----->NS<----->dns1.xdd.com.pl.
dns1<----->IN<----->A<----->164.90.164.135

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```



```
mc [root@debian-vps-01]:/var/cache/bind/keys
root@debian-vps-01:/var/cache/bind/keys# mc

root@debian-vps-01:/var/cache/bind/keys# root@debian-vps-01:/var/cache/bind/keys#dnssec-signzone -A -3 $(head -c 1000 /dev/random | shasum | cut -b 1-16) -N INCREMENT -o xdd.com.pl -t db.xdd.com.pl
Verifying the zone using the following algorithms:
- ECDSAP256SHA256
Zone fully signed:
Algorithm: ECDSAP256SHA256: KSKs: 1 active, 0 stand-by, 0 revoked
                                ZSKs: 1 active, 0 stand-by, 0 revoked
db.xdd.com.pl.signed
Signatures generated:          20
Signatures retained:          0
Signatures dropped:            0
Signatures successfully verified: 0
Signatures unsuccessfully verified: 0
Signing time in seconds:       0.012
Signatures per second:        1666.666
Runtime in seconds:            0.020
root@debian-vps-01:/var/cache/bind/keys#
```

Testy:

```
OpenSSH SSH client
root@debian-vps-03:/# dig ds xdd.com.pl

;<<>> DiG 9.16.37-Debian <<>> ds xdd.com.pl
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 17897
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;xdd.com.pl.                IN      DS

;; ANSWER SECTION:
xdd.com.pl.                 86286   IN      DS      50735 8 2 4E2028C5F5CD02B411AE5CD1F52E03AA53C9AB51C4C43044D1F1345E BB48E8D2

;; Query time: 4 msec
;; SERVER: 67.207.67.3#53(67.207.67.3)
;; WHEN: Wed Jun 14 23:53:29 UTC 2023
;; MSG SIZE rcvd: 87

root@debian-vps-03:/#
```

```
OpenSSH SSH client
root@debian-vps-03:/# root@debian-vps-03:/# dig +dnssec dns1.xdd.com.pl

; <<>> DiG 9.16.37-Debian <<>> +dnssec dns1.xdd.com.pl
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 29790
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: do; udp: 512
;; QUESTION SECTION:
;dns1.xdd.com.pl.                IN      A

;; ANSWER SECTION:
dns1.xdd.com.pl. 3600 IN A 164.90.164.135
dns1.xdd.com.pl. 3600 IN RRSIG A 8 4 3600 20240612213112 20230613213112 35283 xdd.com.pl. TryZ/EM6aT/T6
kaaAQ05UbJJo5ngAt5AwMrZrprgns/U0eUdPrJYxeXgU jj/ohHYFF79pXHvQkxT9xmGhzlGJsF6z74MptVHD/10ggVXqERgLPSTd NXtNBPeOohuWQDP0YfD
InRNCUYGYZFu+mT/jT1coj1jfSUqpXts+ewl MZg=

;; Query time: 36 msec
;; SERVER: 67.207.67.3#53(67.207.67.3)
;; WHEN: Wed Jun 14 23:57:22 UTC 2023
;; MSG SIZE rcvd: 230

root@debian-vps-03:/#
```

```
OpenSSH SSH client
root@debian-vps-03:/# dig +dnssec www.gliwice.xdd.com.pl

; <<>> DiG 9.16.37-Debian <<>> +dnssec www.gliwice.xdd.com.pl
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 21458
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

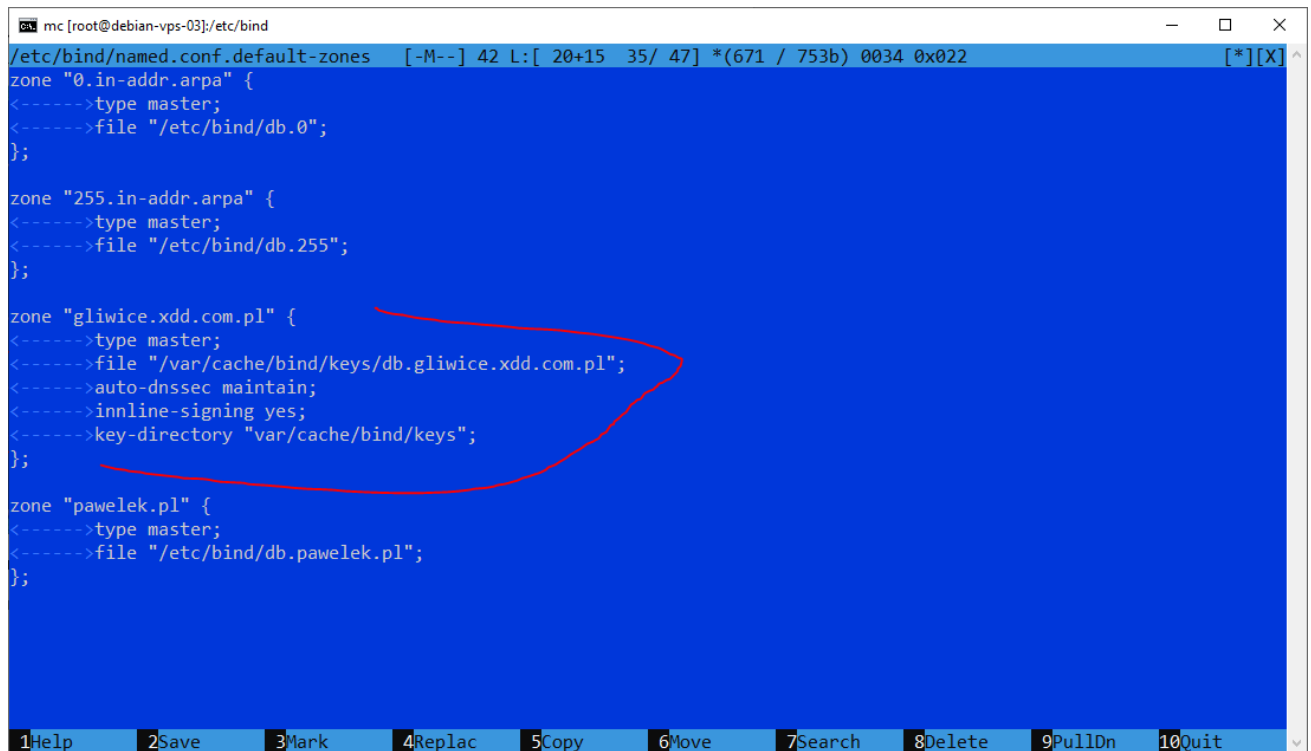
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags: do; udp: 512
;; QUESTION SECTION:
;www.gliwice.xdd.com.pl.        IN      A

;; ANSWER SECTION:
www.gliwice.xdd.com.pl. 3600 IN A 164.90.164.152
www.gliwice.xdd.com.pl. 3600 IN RRSIG A 8 5 3600 20240612213112 20230613213112 35283 xdd.com.pl. m4gGls0WTHqyq
s4cNfn2/EGmUp9ICqftGyVQ3XX406jBQEBGy25snX0w PeDkdeJDWFufMPVXt5ae1K0EKpp+R2s4lIgBYXTvPrgrdb10zF7+c368m Gd0x53TjalbEXnb+x0D
NmjGuMXHViokv1vh/D9qS6GFkAadNQKD0DoCr +GM=

;; Query time: 24 msec
;; SERVER: 67.207.67.3#53(67.207.67.3)
;; WHEN: Wed Jun 14 23:59:00 UTC 2023
;; MSG SIZE rcvd: 237

root@debian-vps-03:/#
```

Automatyczna wymiana kluczy:



```
mc [root@debian-vps-03]:/etc/bind
/etc/bind/named.conf.default-zones [-M--] 42 L: [ 20+15 35/ 47] *(671 / 753b) 0034 0x022 [*][X] ^
zone "0.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
<----->type master;
<----->file "/etc/bind/db.255";
};

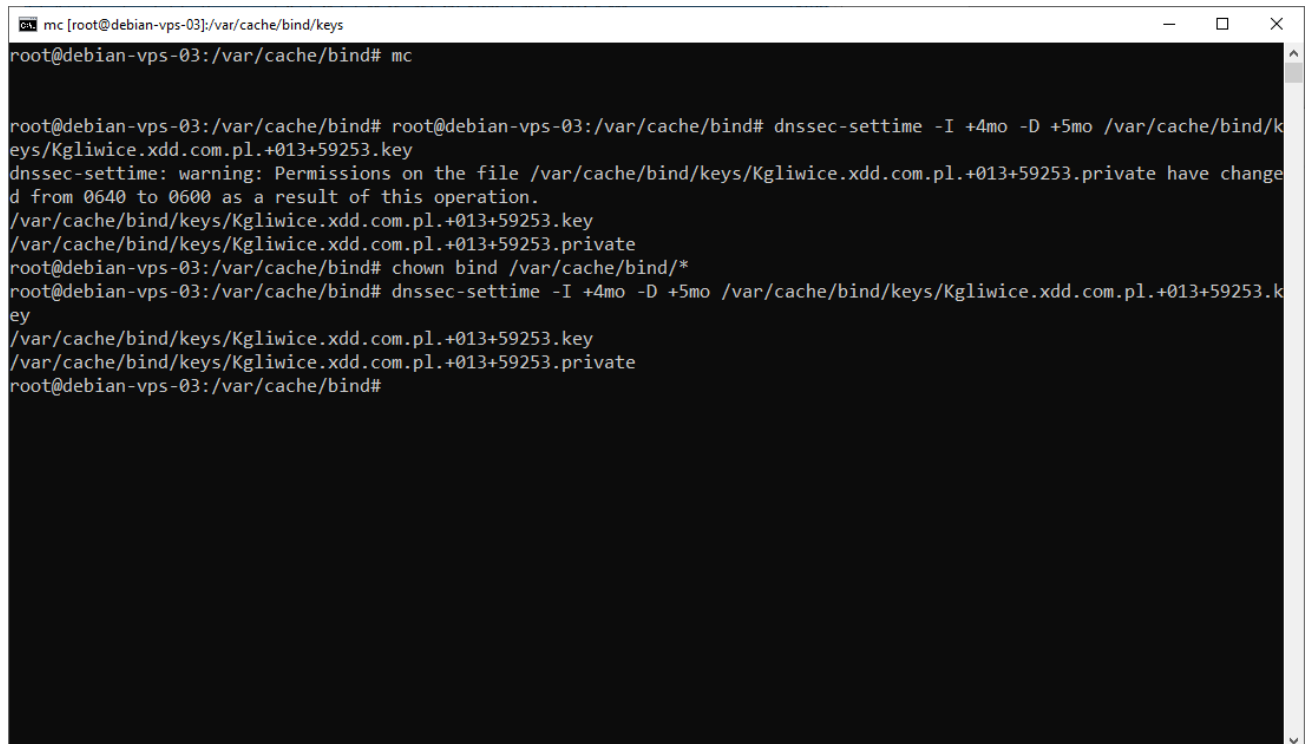
zone "gliwice.xdd.com.pl" {
<----->type master;
<----->file "/var/cache/bind/keys/db.gliwice.xdd.com.pl";
<----->auto-dnssec maintain;
<----->inline-signing yes;
<----->key-directory "var/cache/bind/keys";
};

zone "pawelek.pl" {
<----->type master;
<----->file "/etc/bind/db.pawelek.pl";
};

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit v
```

chgrp bind /var/cache/bind/*

chmod g+r /var/cache/bind/*



```
mc [root@debian-vps-03]:/var/cache/bind/keys
root@debian-vps-03:/var/cache/bind# mc

root@debian-vps-03:/var/cache/bind# root@debian-vps-03:/var/cache/bind# dnssec-settime -I +4mo -D +5mo /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.key
dnssec-settime: warning: Permissions on the file /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.private have changed from 0640 to 0600 as a result of this operation.
/var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.key
/var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.private
root@debian-vps-03:/var/cache/bind# chown bind /var/cache/bind/*
root@debian-vps-03:/var/cache/bind# dnssec-settime -I +4mo -D +5mo /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.key
/var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.key
/var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.private
root@debian-vps-03:/var/cache/bind#
```

```
mc [root@debian-vps-03]:/var/cache/bind/keys
root@debian-vps-03:/var/cache/bind/keys# root@debian-vps-03:/var/cache/bind/keys# dnssec-keygen -S Kgliwice.xdd.com.pl.+013+59253 -I +7mo -D +8mo
Generating key pair.
Kgliwice.xdd.com.pl.+013+24095
root@debian-vps-03:/var/cache/bind/keys# dnssec-keygen -S Kgliwice.xdd.com.pl.+013+24095 -I +10mo -D +11mo
Generating key pair.
Kgliwice.xdd.com.pl.+013+20617
root@debian-vps-03:/var/cache/bind/keys# dnssec-keygen -S Kgliwice.xdd.com.pl.+013+20617 -I +13mo -D +14mo
Generating key pair.
Kgliwice.xdd.com.pl.+013+62025
root@debian-vps-03:/var/cache/bind/keys# dnssec-keygen -S Kgliwice.xdd.com.pl.+013+62025 -I +16mo -D +17mo
Generating key pair.
Kgliwice.xdd.com.pl.+013+18309
root@debian-vps-03:/var/cache/bind/keys#
```

```
mc [root@debian-vps-03]:/var/cache/bind/keys
/var/cache/bind/keys/db.gliwice.xdd.com.pl [-M--] 60 L: [ 1+10 11/ 24] *(448 / 729b) 0046 0x02E [*][X] ^
;
; BIND data file for local loopback interface
;
$TTL<-->604800
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+44567.key
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+59253.key
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+24095.key
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+20617.key
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+62025.key
$INCLUDE /var/cache/bind/keys/Kgliwice.xdd.com.pl.+013+18309.key

@<----->IN<----->SOA<----->gliwice.xdd.com.pl. root.gliwice.xdd.com.pl. (
<-----><-----><-----> 5<-----><-----> Serial
<-----><-----><-----> 604800<-----><-----> Refresh
<-----><-----><-----> 86400<-----><-----> Retry
<-----><-----><-----> 2419200<-----><-----> Expire
<-----><-----><-----> 604800 )<-----><-----> Negative Cache TTL
;
@<----->IN<----->NS<----->gliwice.xdd.com.pl.
dns1<----->IN<----->A<----->164.90.164.152
@<----->IN<----->A<----->164.90.164.152
www<----->IN<----->A<----->164.90.164.152

1Help 2Save 3Mark 4Replac 5Copy 6love 7Search 8Delete 9PullDn 10Quit
```

Powtórzyć proces dla głównej domeny

```
OpenSSH SSH client
root@debian-vps-03:/# dig dnskey xdd.com.pl

;<>> DiG 9.16.37-Debian <>> dnskey xdd.com.pl
;; global options: +cmd
;; Got answer:
;; ->>HEADER<- opcode: QUERY, status: NOERROR, id: 3298
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;xdd.com.pl.                IN      DNSKEY

;; ANSWER SECTION:
xdd.com.pl.                86232   IN      DNSKEY  256 3 8 AwEAAcCpDvmGvtLh+rKqQxzBUHkpo1iKEHnPU06syBORTFvU+zFvaDik UAPoRlY
vSPxNy1B1PKSg0XA+SqWCj5djSgju3MaRt8NzFofG/k0i1++C 6yRl4+XRCBipPUl16xNTU+nt5aFsP0vBhxRJ+6ycZW7+J+urIQxhgJBe wpa0xQnB
xdd.com.pl.                86232   IN      DNSKEY  257 3 8 AwEAAbdD49IsZpMM1MsGsndvIOjYM/C7DW+0nPX8zg9vq0a3fQ7W2R1V Zqm2/I2
PB3XaLUFWmBFFmahyyta9JaZv5znQXyqR4V88+QI1yiKSW5yc csFyLzGQSHy3cohPNiilRIH0hYE0wTf+V/FVc99x88H1tbYwN9u/1/f9 F9vx6hFf

;; Query time: 0 msec
;; SERVER: 67.207.67.3#53(67.207.67.3)
;; WHEN: Wed Jun 14 23:55:45 UTC 2023
;; MSG SIZE rcvd: 335

root@debian-vps-03:/#
```

ANSWER

```
xdd.com.pl. 86400 DNSKEY 257 3 8 AwEAAbdD49IsZpMM1MsGsndvIOjYM/C7DW+0nPX8zg9vq0a3fQ7W2R1VZqm2/I2PB3XaLUFWmBFFmahyyta9JaZv5znQ
xdd.com.pl. 86400 DNSKEY 256 3 8 AwEAAcCpDvmGvtLh+rKqQxzBUHkpo1iKEHnPU06syBORTFvU+zFvaDikUAPoRlYvSPxNy1B1PKSg0XA+SqWCj5djSgju3MaRt8NzFofG/k0i1++C 6yRl4+XRCBipPUl16xNTU+nt5aFsP0vBhxRJ+6ycZW7+J+urIQxhgJBe wpa0xQnB
```