docker network create --subnet=172.20.0.0/16 nagoya-net

**named.conf.options**:

|  |
| --- |
| options { |
|  | directory "/var/cache/bind"; |
|  |  |
|  | recursion yes; |
|  | listen-on { any; }; |
|  |  |
|  | forwarders { |
|  | 8.8.8.8; |
|  | 8.8.4.4; |
|  | }; |
|  | }; |

**named.conf.local**

|  |
| --- |
| zone "nagoya-foundation.com" { |
|  | type master; |
|  | file "/etc/bind/zones/db.nagoya-foundation.com"; |
|  | }; |

**db.nagoya-foundation.com**

|  |  |
| --- | --- |
|  | $TTL 604800 |
|  | @ IN SOA ns1.nagoya-foundation.com. root.nagoya-foundation.com. ( |
|  | 3 ; Serial |
|  | 604800 ; Refresh |
|  | 86400 ; Retry |
|  | 2419200 ; Expire |
|  | 604800 ) ; Negative Cache TTL |
|  | ; |
|  | ; name servers - NS records |
|  | IN NS ns1.nagoya-foundation.com. |
|  |  |
|  | ; name servers - A records |
|  | ns1.nagoya-foundation.com. IN A 172.20.0.2 |
|  |  |
|  | host1.nagoya-foundation.com. IN A 172.20.0.3 |
|  | host2.nagoya-foundation.com. IN A 172.20.0.4 |

|  |  |
| --- | --- |
|  | FROM ubuntu:bionic |
|  |  |
|  | RUN apt-get update \ |
|  | && apt-get install -y \ |
|  | bind9 \ |
|  | bind9utils \ |
|  | bind9-doc |
|  |  |
|  | # Enable IPv4 |
|  | RUN sed -i 's/OPTIONS=.\*/OPTIONS="-4 -u bind"/' /etc/default/bind9 |
|  |  |
|  | # Copy configuration files |
|  | COPY named.conf.options /etc/bind/ |
|  | COPY named.conf.local /etc/bind/ |
|  | COPY db.nagoya-foundation.com /etc/bind/zones/ |
|  |  |
|  | # Run eternal loop |
|  | CMD ["/bin/bash", "-c", "while :; do sleep 10; done"] |

docker build -t bind9 .

docker run -d --rm --name=dns-server --net=nagoya-net --ip=172.20.0.2 bind9

docker exec -d dns-server /etc/init.d/bind9 start

$ sudo docker run -d --rm --name=host1 --net=nagoya-net --ip=172.20.0.3 --dns=172.20.0.2 ubuntu:bionic /bin/bash -c "while :; do sleep 10; done"$

sudo docker run -d --rm --name=host2 --net=nagoya-net --ip=172.20.0.4 --dns=172.20.0.2 ubuntu:bionic /bin/bash -c "while :; do sleep 10; done"

docker exec -it host1 bash

ping host2.nagoya-foundation.com