# Influence of DNSSEC

The network testing for DNSSEC feasibility analysis in china

Methods

a) Cooperate with main ISPs to check the network infrastructure (130K equipments)
b) Test thousands resolvers in these ISPs
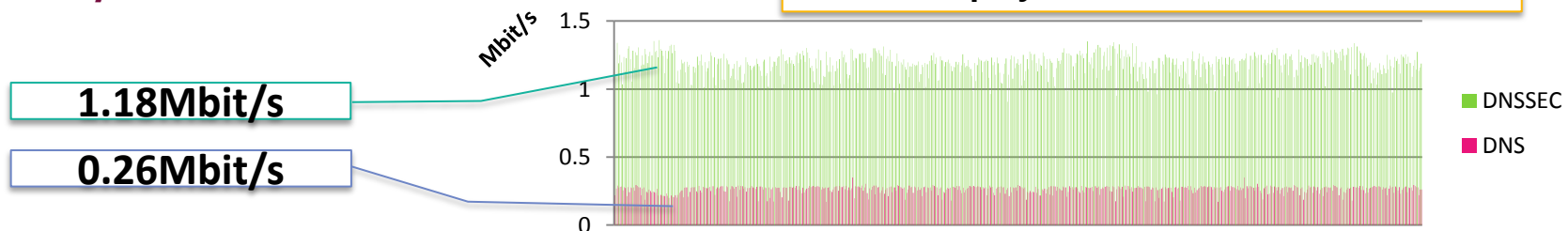c) Cover most areas and most ISPs in the mainland of China

Problems

- MTU problem
- Firewall should support EDNS0
- DNS performance

DNS performance

DNS

DNS

MTU

internet

Router

EDNS0

Firewall

End users
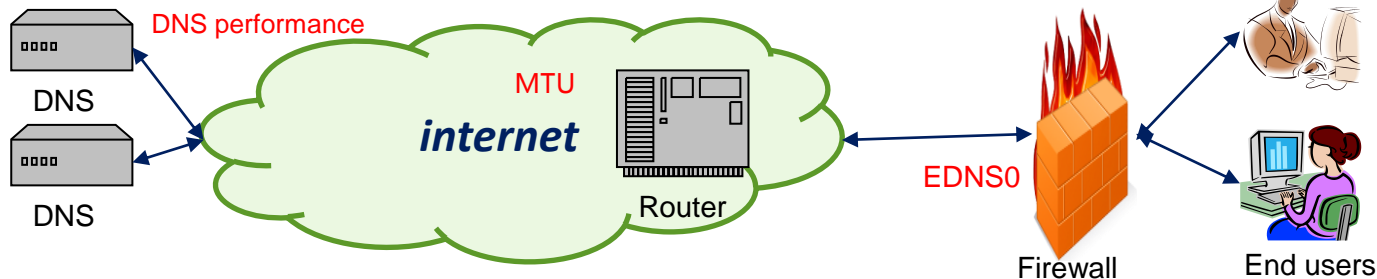
3000 queries/second

Network bandwidth grows to 4.5 times after DNSSEC deployment

Mbit/s

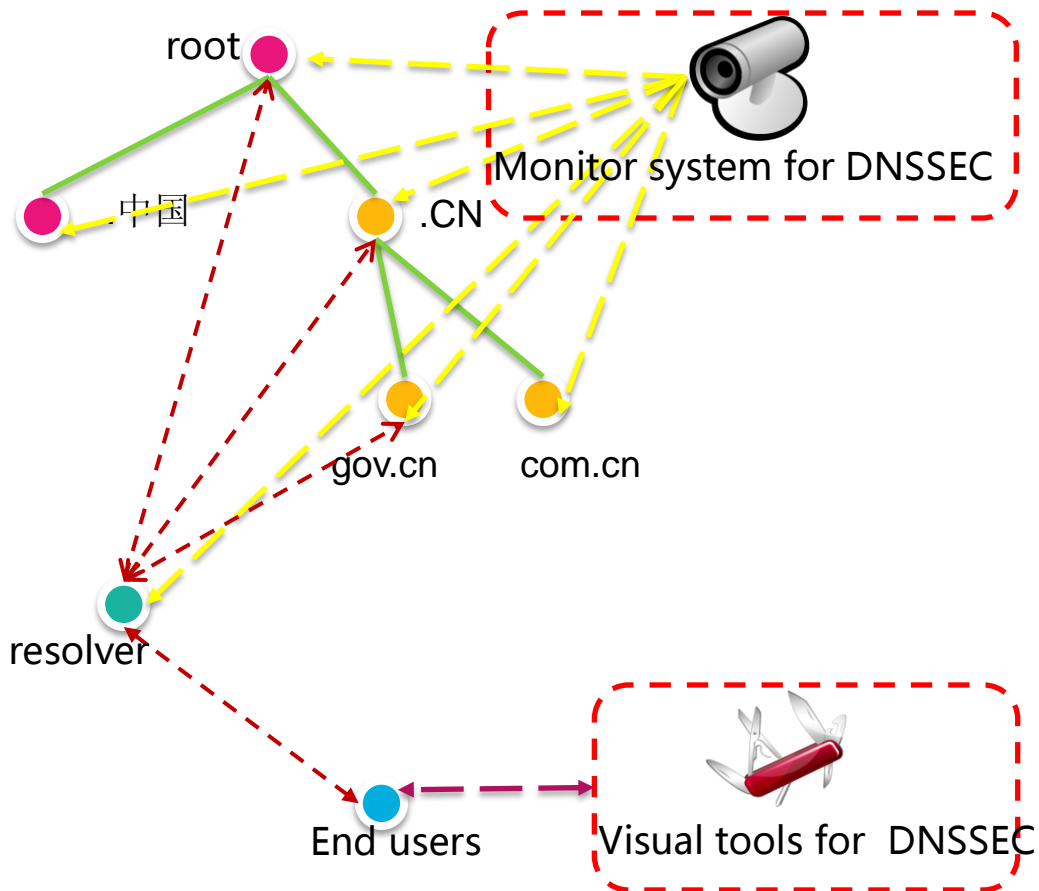1.5

1.18Mbit/s

1

0.26Mbit/s

0.5

0

■ DNSSEC
■ DNS

DNS&DNSSEC bandwidth comparison

More issues should be considered before DNSSEC deployment

◆ DDOS attack
◆ Amplification attack

DDOS attack

Amplification attack

Domain name system

root

中国

.CN

Monitor system for DNSSEC

gov.cn   com.cn

resolver
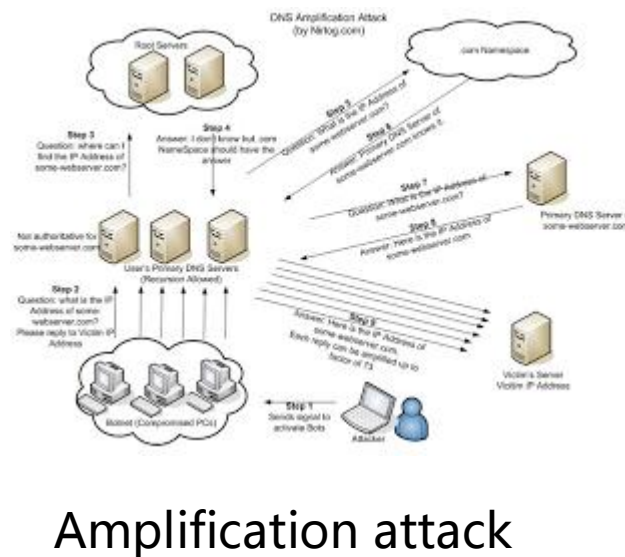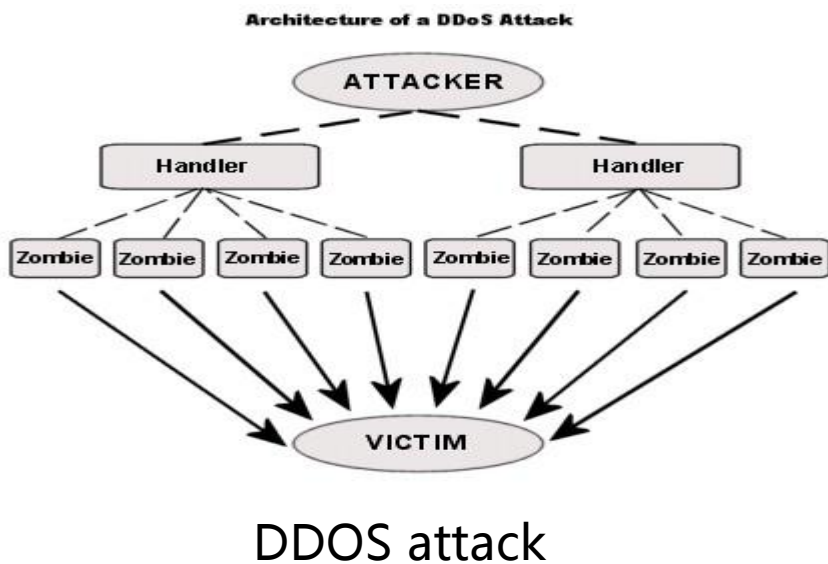
End users   Visual tools for DNSSEC

More tools are being developed by CNNIC

We are developing

- **Monitor system for DNSSEC**
  a) Monitoring name server
  b) Monitoring resolver
  c) Monitoring important third level domains
- **Visual tools for end users**
  a) Check DNSSEC packets
  b) Analyze the trust train of DNSSEC
  c) Give reasonable warning for end users

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