

DNSSEC

Validation Performance Testing

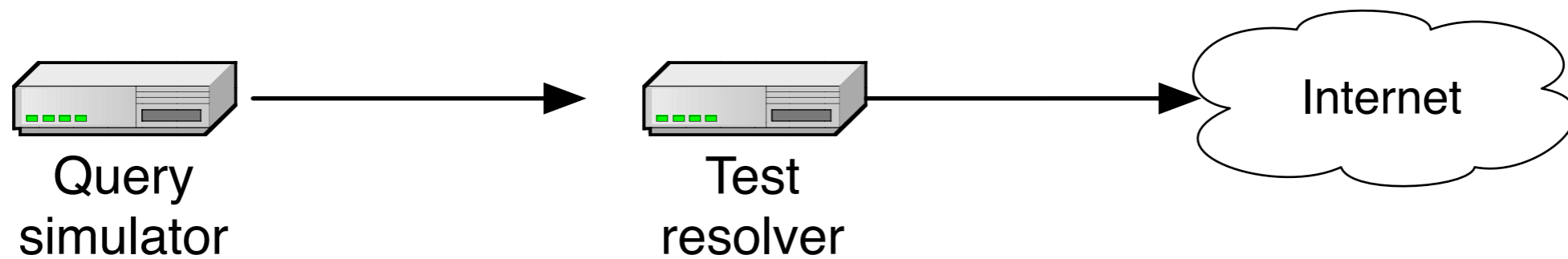
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What is the performance hit on a typical ISP resolver if they would enable DNSSEC validation for .SE today?

Tested Software

- ISC BIND 9.3.2
- Nominum CNS 1.6.0.3

Test Setup



Dual AMD Opteron 2.4 GHz
FreeBSD/amd64 5.4

Intel Pentium III 1.4 GHz
FreeBSD/i386 4.9

Query Test Data

- 1 hour (15.00-16.00 MET) queries from customers of a large Swedish ISP.
- Queries recorded via tcpdump and anonymized using tcpreplay.
- Average query load 966 qps.

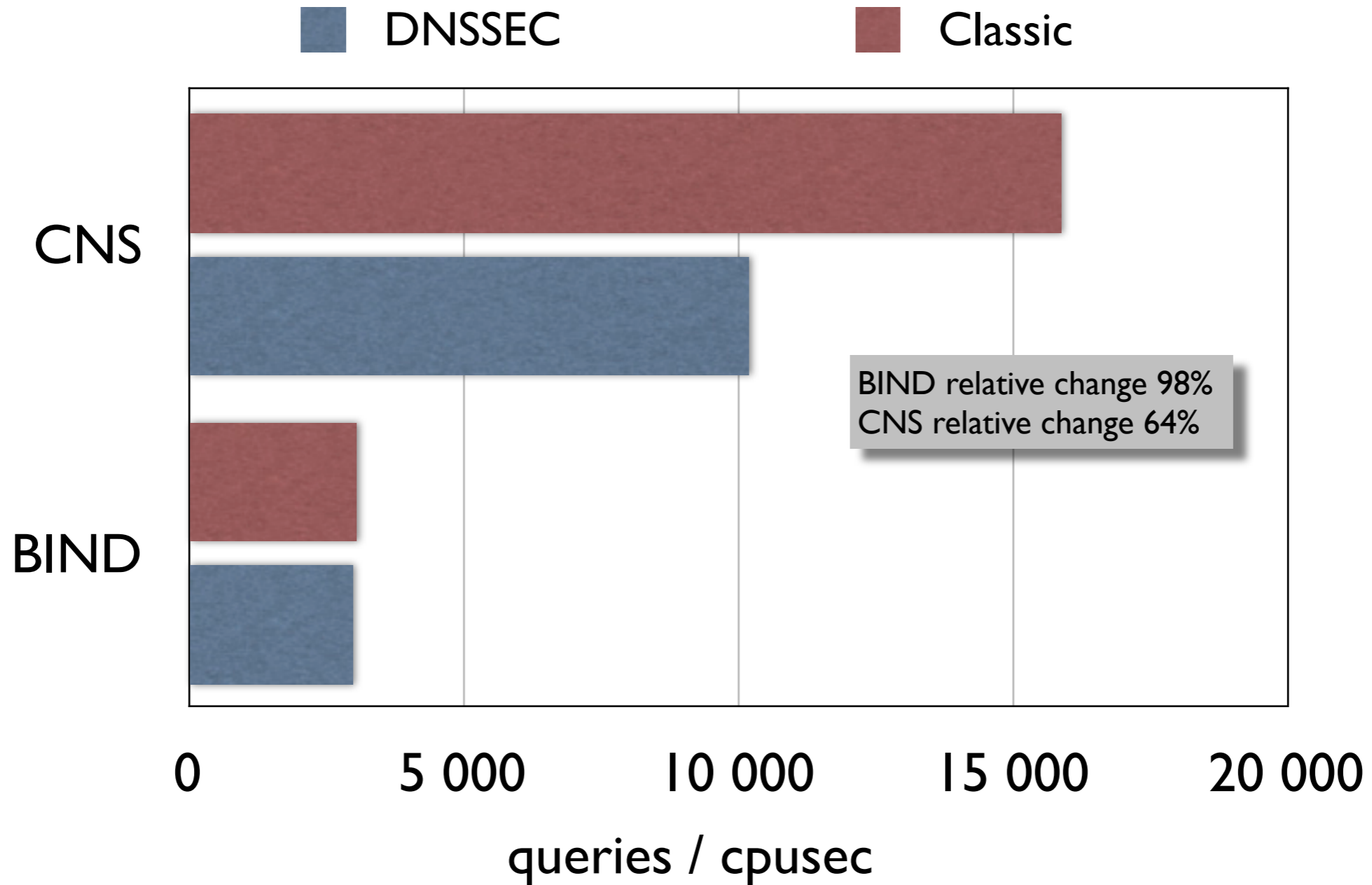
Test Methodology

- Query sent to test resolver using tcpreplay.
- 1st test with validation disabled.
- 2nd test with validation enabled.

Measurement

- Queries per seconds measured.
- Name server CPU time usage measured.
- queries / cpusec used as comparison.

Test Results



Observations

– Not Conclusions

- No major performance hit with BIND.
- CNS always faster than BIND, but is relatively slower than BIND when you enable DNSSEC.