



MEN&MICE

there is a better way

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September 2004**

DNS Performance Monitoring

Agenda

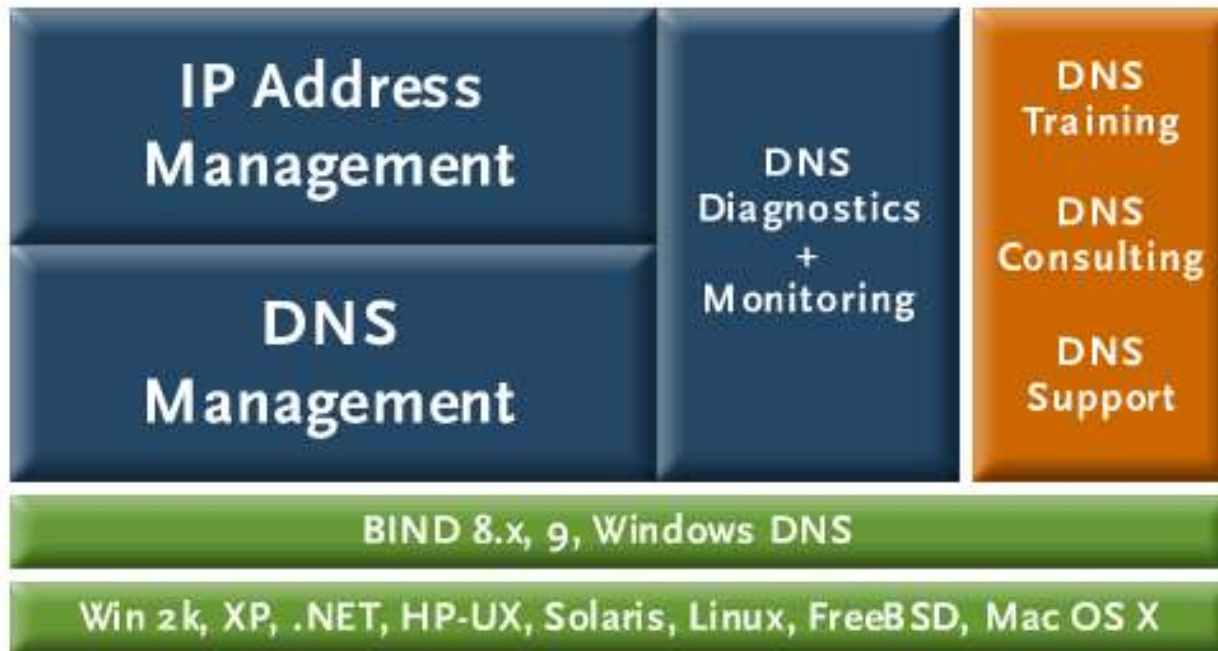
- Men & Mice, the company
- The Performance Monitoring Product
- Live Demo

Men & Mice, the Company

- Located in Reykjavik, Iceland
- Founded 1990
- We concentrate only on DNS and IP Address Management
- Small and flexible staff
- DNS/IPAM Products, Research, Consulting, Training

Comprehensive DNS & IP Address management products/services

Men & Mice Suite



**Over 10.000 customers, world wide
Including 23% of Fortune 1000**

DNS Performance Monitoring

- Goals
 - Framework to collect and analyze DNS traffic data from DNS Server and Network gateways
 - Monitoring high volume DNS traffic
 - Flexible and extend able architecture
 - Not revolutionary but useful

DNS Performance Monitoring – Technical Details

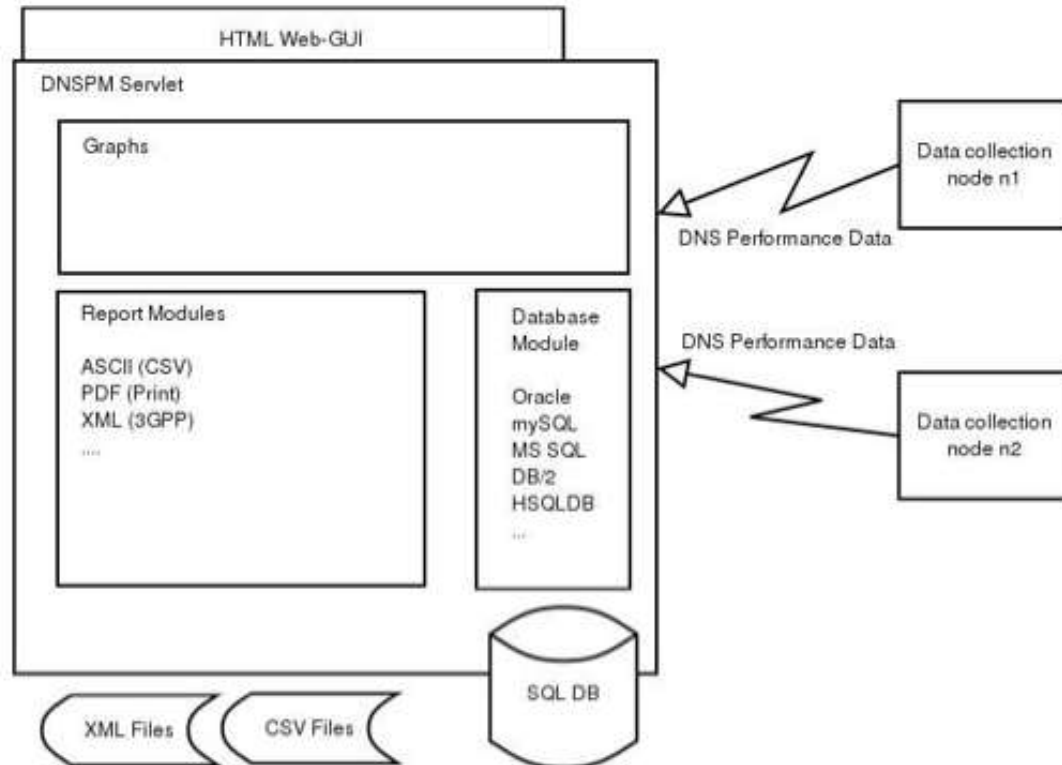
- Small Data collection probe
 - Install on DNS Servers
 - or as an appliance on a switch monitor port
 - Works on Solaris, Linux, *BSD, Mac OS X
 - Windows 2000, 2003 Support possible
- DNS data is read from the network and send to the central DNS Performance Monitor Application

DNS Performance Monitoring – Technical Details

- The Central DNS Performance Monitor Application stores Data into SQL Database
 - HSQLDB (build in) for small deployments
 - MySQL, PostgreSQL, Oracle, DB/2 ..., for Enterprise and high volume deployment
 - Every JDBC supported Database possible

DNS Performance Monitoring – Technical Details

Architecture Overview:



DNS Performance Monitoring – Features

- Feature development is customer driven
- The framework is very flexible
- If your report is not in today, it might be tomorrow (just ask for it)
- Works with all (RFC compliant) DNS Server
- Reports to screen (Web Browser) or to backend export modules (XML, CSV, structured text, ...)

DNS Performance Monitoring – Features

- Graph: Number of Queries, Answers, NXDOMAIN, Errors
- Graph: RoundTripTimes (Max, Average, Min)
- Report: Client Hosts (Names/IP Addresses)
- Report: DNS Server asked (Names/IP Addresses)
- Report: DNS Query Data (Query Section)

DNS Performance Monitoring – Features

- Report: Return codes (Error conditions)
- Report: Record Types
- Report: Top Level and Second Level Domain
- Report: RTT by TLD or SLD, DNS Server (local) or DNS Server (remote)

DNS Performance Monitoring – Availability

- Software Solution for Unix/Windows/Mac OS X
direct from Men & Mice or Reseller (n3k)
–<http://www.menandmice.com>
- Appliance Hardware from AllInstall
–<http://www.allinstall.de>
–Build under license (Same code)
- Source code option available

Demo

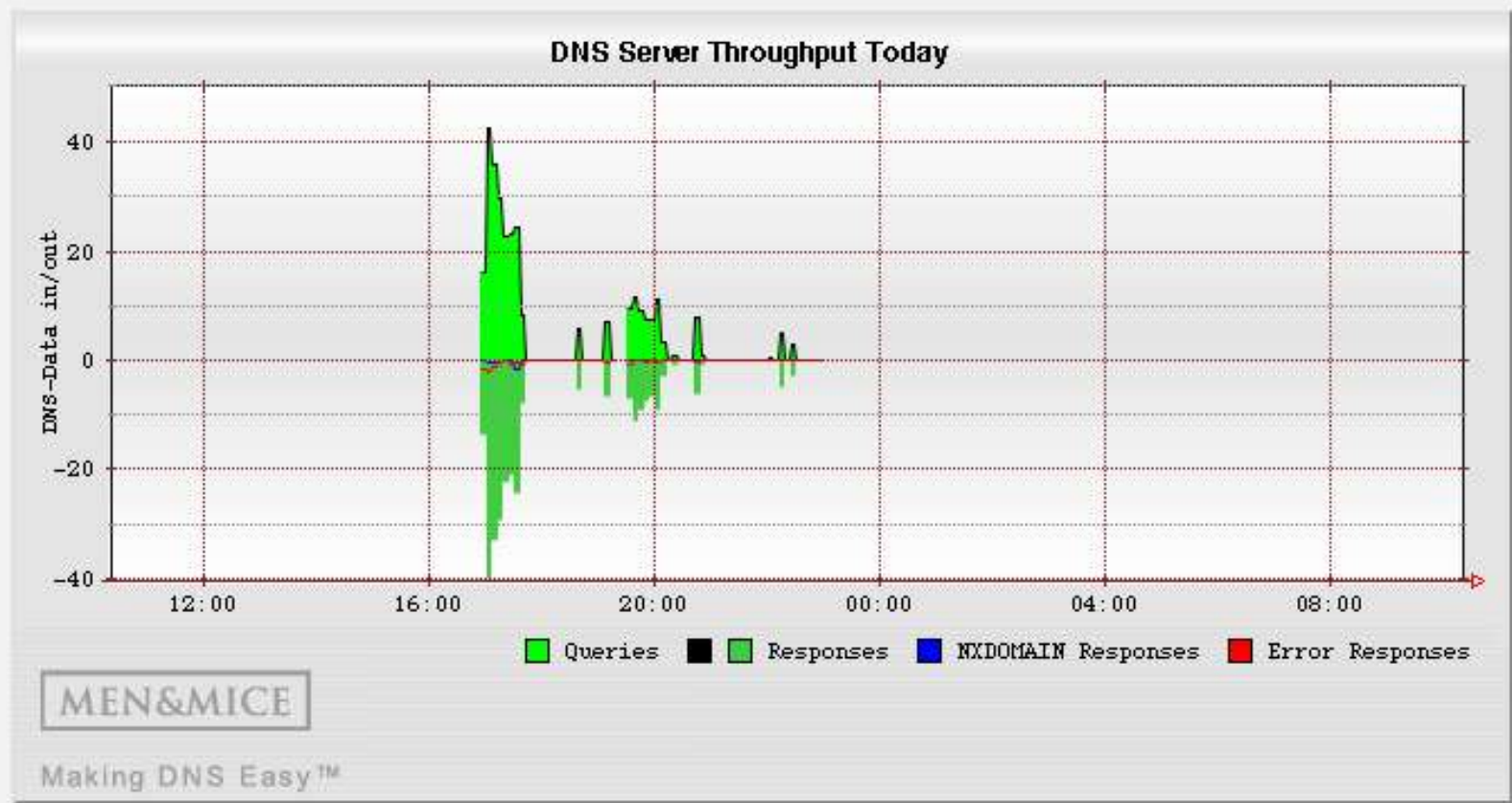
Live Demo



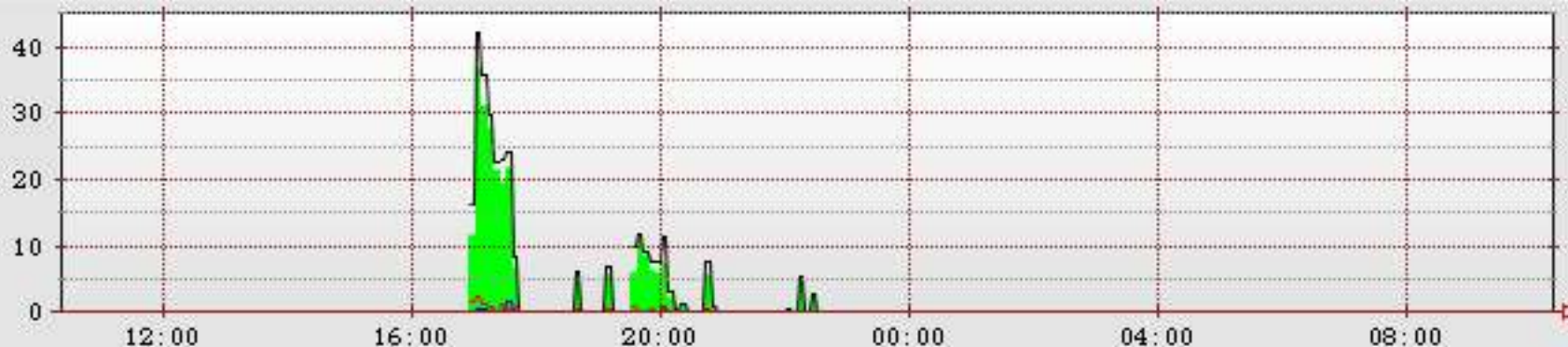
DNS Expert Performance Monitor

Throughput Status RoundTrip Report Log Out

Global DNS Server Throughput



DNS Server Queries Today



■ no Error ■ Query ■ NXDOMAIN ■ other Error
avgin=5.0 query/sec
avger=4.37 NoError/sec
avger=0.12 NxDomain/sec
avger=0.24 Other/sec

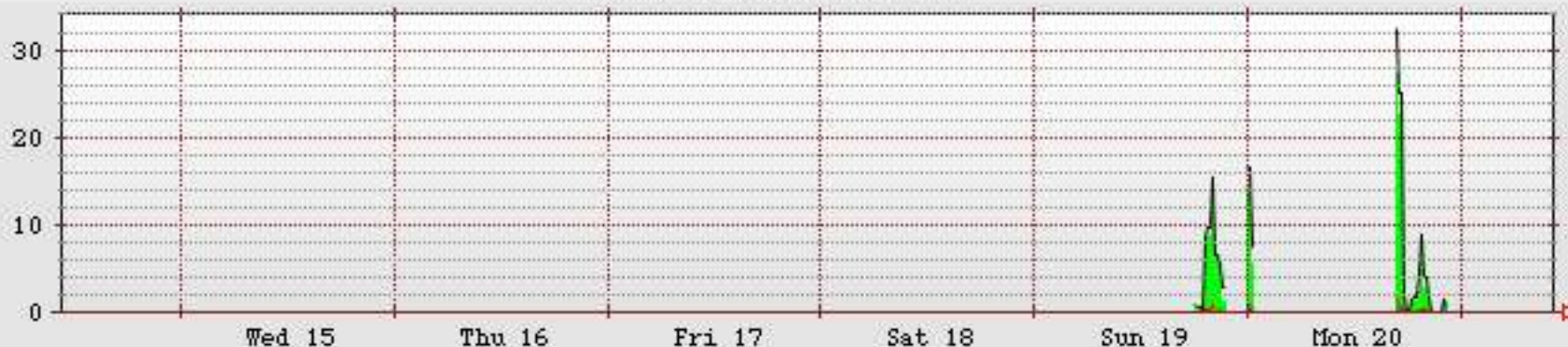


Queries [q/sec]

Making DNS Easy™

Time: 21-09-2004 10:19:50

DNS Server Queries this Week



■ no Error ■ Query ■ NXDOMAIN ■ other Error
avgin=5.6 query/sec
avger=4.88 NoError/sec
avger=0.12 NxDomain/sec
avger=0.30 Other/sec

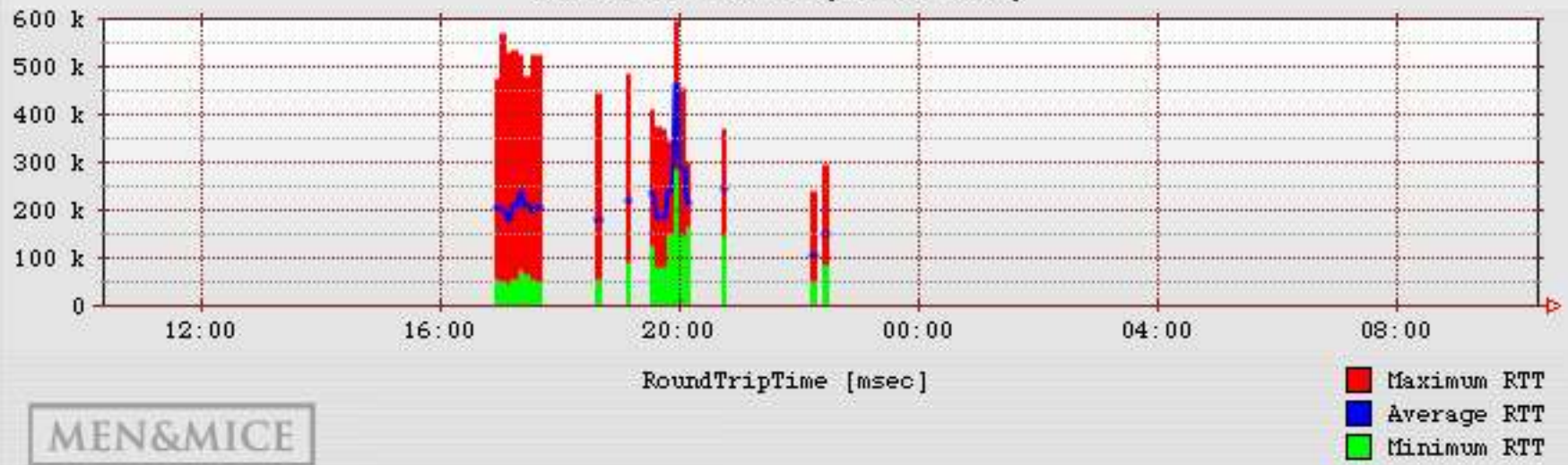


Queries [q/sec]

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Time: 21-09-2004 10:19:52

DNS Server RoundTripTimes Today

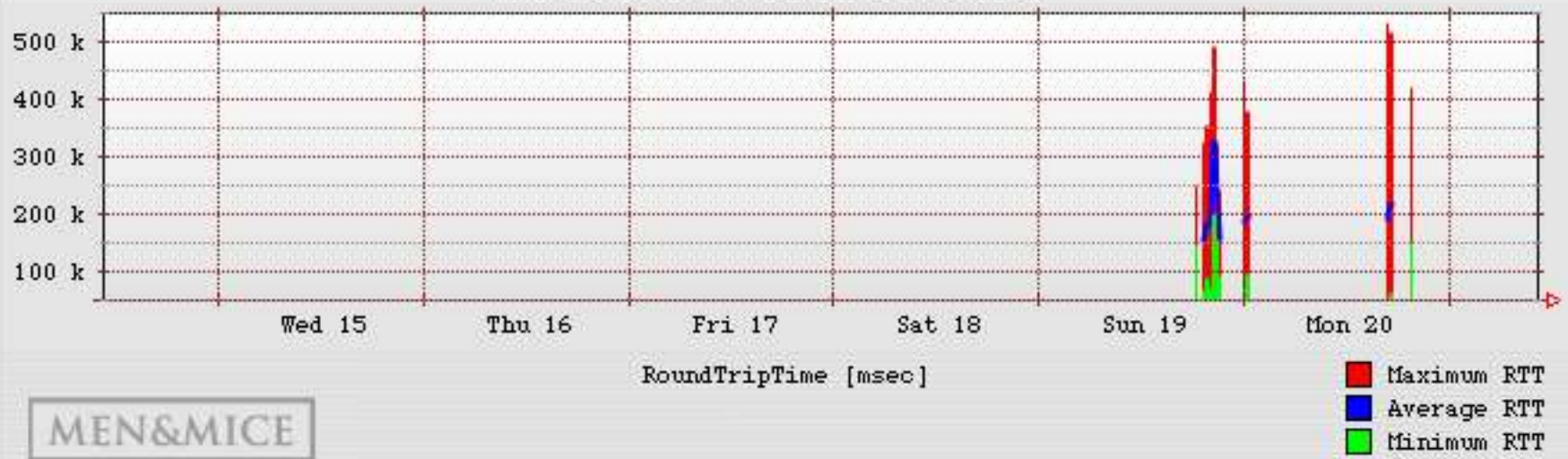


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Time: 21-09-2004 10:21:12

DNS Server RoundTripTimes this Week



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Time: 21-09-2004 10:21:12



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Throughput













Status

RoundTrip

Report

Log Out

Query DNS-Data Report:

	DNS-Data	Queries
	clover.rsr.rupar.puglia.it	105
	arco.rsr.rupar.puglia.it	88
	ns2.accsi.net	54
	info.cn.net	53
	27.1.11.16.in-addr.arpa	52
	23.1.11.16.in-addr.arpa	51
	ns1.rti.rsr.rupar.puglia.it	50
	ns2.rti.rsr.rupar.puglia.it	50
	panda.cstnet.net.cn	48
	5.200.66.138.in-addr.arpa	45
	11.202.16.192.in-addr.arpa	44
	ns1.accsi.net	43



DNS Expert Performance Monitor

Throughput

Status

RoundTrip

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Log Out

Top Level Domain Detail for TLD = be

Dir.	Time	Node	Type	Source Addr.	Dest. Addr.	ReturnCode	DNS Data
>	2004.09.20 10:42:03	Vigor101	A?	192.168.1.101	193.0.14.129	NOERROR	ns.belbone.be
>	2004.09.20 10:42:04	Vigor101	A6?	192.168.1.101	193.0.14.129	NOERROR	ns.belbone.be
>	2004.09.20 10:42:04	Vigor101	A?	192.168.1.101	193.0.14.129	NOERROR	ns2.belbone.be
>	2004.09.20 10:42:04	Vigor101	A6?	192.168.1.101	193.0.14.129	NOERROR	ns2.belbone.be
€	2004.09.20 10:43:27	Vigor101	A?	193.0.14.129	192.168.1.101	NOERROR	ns.belbone.be
>	2004.09.20 10:43:28	Vigor101	A?	192.168.1.101	192.134.1.1	NOERROR	ns.belbone.be
€	2004.09.20 10:43:36	Vigor101	A6?	193.0.14.129	192.168.1.101	NOERROR	ns.belbone.be
>	2004.09.20 10:43:37	Vigor101	A6?	192.168.1.101	192.134.1.1	NOERROR	ns.belbone.be
€	2004.09.20 10:43:43	Vigor101	A?	193.0.14.129	192.168.1.101	NOERROR	ns2.belbone.be
>	2004.09.20 10:43:45	Vigor101	A?	192.168.1.101	192.134.1.1	NOERROR	ns2.belbone.be
€	2004.09.20 10:27:13	Vigor101	A6?	193.0.14.129	192.168.1.101	NOERROR	ns2.belbone.be
>	2004.09.20 10:27:14	Vigor101	A6?	192.168.1.101	192.134.1.1	NOERROR	ns2.belbone.be
€	2004.09.20 10:27:57	Vigor101	A?	192.134.1.1	192.168.1.101	NOERROR	ns.belbone.be
>	2004.09.20 10:27:58	Vigor101	A?	192.168.1.101	195.13.1.13	NOERROR	ns.belbone.be
€	2004.09.20 10:28:05	Vigor101	A6?	192.134.1.1	192.168.1.101	NOERROR	ns.belbone.be
>	2004.09.20 10:28:07	Vigor101	A6?	192.168.1.101	195.13.1.13	NOERROR	ns.belbone.be
€	2004.09.20 10:28:13	Vigor101	A?	192.134.1.1	192.168.1.101	NOERROR	ns2.belbone.be
>	2004.09.20 10:28:14	Vigor101	A?	192.168.1.101	195.13.1.13	NOERROR	ns2.belbone.be
€	2004.09.20 10:28:24	Vigor101	A6?	192.134.1.1	192.168.1.101	NOERROR	ns2.belbone.be
>	2004.09.20 10:28:25	Vigor101	A6?	192.168.1.101	195.13.1.13	NOERROR	ns2.belbone.be
€	2004.09.20 10:29:33	Vigor101	A?	195.13.1.13	192.168.1.101	NOERROR	ns.belbone.be
€	2004.09.20 10:29:34	Vigor101	A6?	195.13.1.13	192.168.1.101	NOERROR	ns.belbone.be








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Throughput Status RoundTrip Report Log Out

Query ReturnCode Report:

	Type	Queries
 NOERROR		13824
 SERVFAIL		440
 NXDOMAIN		359
 FORMATERR		330
 REFUSED		14

Time: 21-09-2004 10:21:42



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Throughput













Status

RoundTrip

Report

Log Out

Query Top Level Domains Report:

	Top Level Domain	Queries
	arpa	7399
	net	2330
	com	986
	de	928
	it	532
	edu	485
	au	422
	ca	275
	cn	264
	fr	216
	jp	216
	org	215



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Throughput Status RoundTrip Report Log Out

Vigor101 Statistics Report:

Label	Value
Node:Vigor101	20-09-2004 10:23:40 - 21-09-2004 10:23:40
Sum of all queries	16036
Sum of all successfull responses	13824
Sum of NXDOMAIN (Domain not found) responses	359
Sum of other error responses	784
SuccessRate (%)	92

Time: 21-09-2004 10:23:40