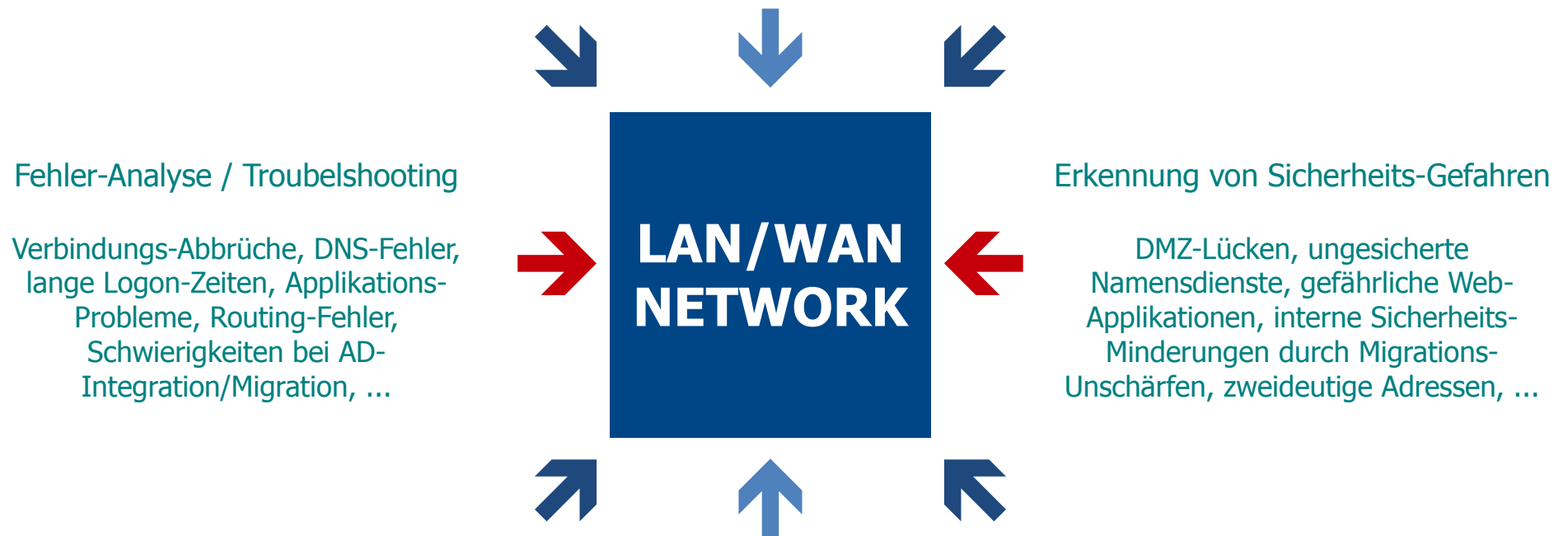
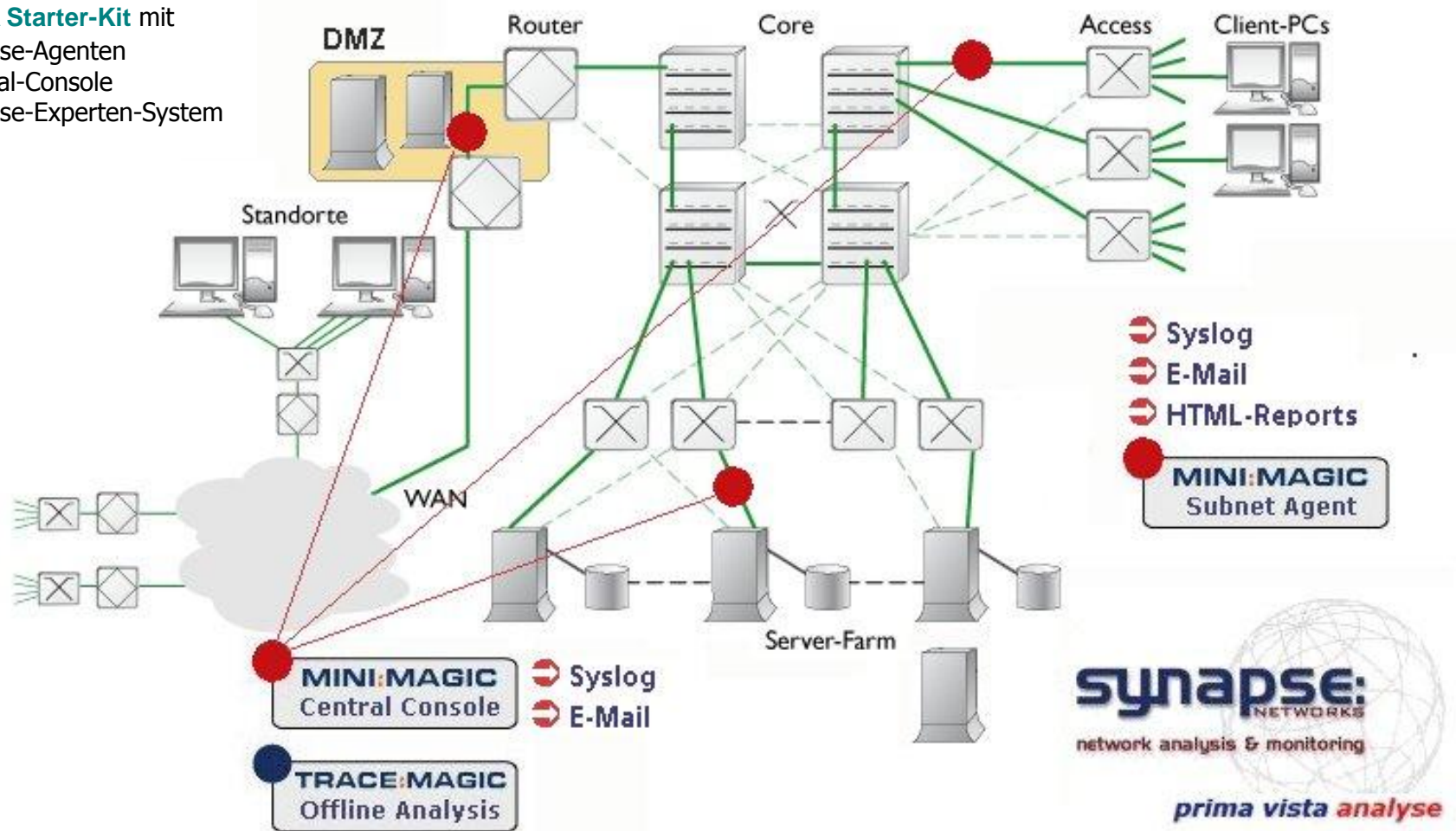


Synapse Networks - Magic Distributed Monitoring & Analysis (SYN-MA)



- SYN-MA Starter-Kit** mit
- 3 Analyse-Agenten
 - 1 Zentral-Console
 - 1 Analyse-Experten-System



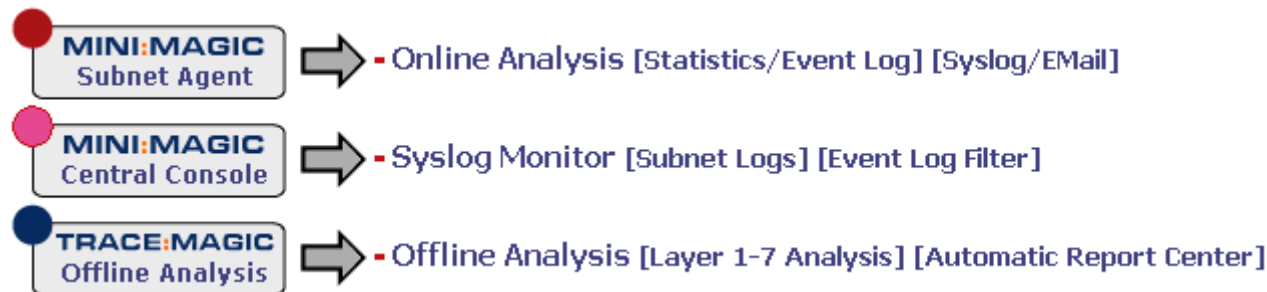
Synapse Networks - Magic Distributed Monitoring & Analysis (SYN-MA)

Ein typischer, erster Aufbau der **SYN-MA** beginnt mit folgender Einrüstung von Messtechnik:

- Analyse-Agenten in ...
 - ➔ DMZ (Internet)
 - ➔ RZ / Domain Server (DHCP,DNS,AD)
 - ➔ Subnet / zunächst beginnend mit einer ersten, repräsentativen Client-Workgroup
 - ➔ Außenstellen / verteilte Standorte (weltweit)

Diese Analyse-Agenten sind Standard-PCs (Windows-XP, 2 GB RAM, 1-2 TB USB-Festplatte).

- Zentrale Überwachungs-Konsole zum Empfang der Syslog-Meldungen der Analyse-Agenten
- Zentrales Experten-System zur Offline-Analyse binärer Messdaten bei speziellem Klärungsbedarf



Synapse Networks - Magic Distributed Monitoring & Analysis (SYN-MA)

Häufige Schwachstellen in LAN+DMZ

Viele Fehler und Gefahren werden nicht erkannt, weil die Standard-Ausrüstung Beschränkungen aufweist.

Firewalls schützen zwar, können aber komplexe Szenarien nicht erkennen und nicht dokumentieren.

Intruder Detection Systems (IDS) sind ebenfalls auf eher eindimensionale Ereignisse ausgerichtet.

Proxy-Server können Applikations-Auffälligkeiten nur begrenzt erkennen und blocken.

Analyse-Hardware-Appliances liefern zu viel Statistik und zu wenig Erkenntnis und sind zu teuer.

Anwender-Klagen über mangelnde Geschwindigkeit („**Das Netzwerk ist langsam**“) bzw. Ursachen von Performance-Problemen können mit diesen Mitteln kaum aufgeklärt werden.

Synapse Experten-Analyse in LAN+DMZ

Der **Datenverkehr** wird an den entscheidenden Punkten des Netzwerkes vollständig aufgezeichnet (24/7).

Ring Buffer: Die Aufzeichnungen erzeugen ein **Daten-Archiv** mit einem über Tage oder Wochen mitwandernden Zeitfenster. Im Schadensfall ist dadurch volle **Beweisfähigkeit** gegeben.

Online-Analyse: Bereits während der Aufzeichnung hochwertige Analyse der aufgezeichneten Daten (Layer 1-7) und **Online-Warnungen** per **Syslog** und **E-Mail** durch die verschiedenen Subnetz-Agenten; ausgedehnte Tabellen und Ereignis-Protokolle.

Online-Monitoring: Eine zentrale Syslog-Console empfängt die Meldungen der Subnetz-Agenten (Filterung, Speicherung, Benachrichtigung).

Offline-Analyse: Bei Bedarf weitere Verarbeitung der Messdaten durch marktführendes **Experten-System**. Automatische Reports.

Synapse Networks - Magic Distributed Monitoring & Analysis (SYN-MA)

Fernwartung durch Synapse

SYN-MA ist für den Kunden am sinnvollsten, wenn ausgebildetes Analyse-Personal die Überwachung und Pflege übernimmt.

Synapse Networks GmbH bietet ein **SYN-MA Starter-Kit** mit

- Analyse-Agenten für 3 Subnetze bzw. 3 Messpunkte (z.B. DMZ, Domain-Server, Client-Workgroup)
- Zentral-Konsole (Syslog-Empfänger)
- TraceMagic Analyse Experten-System

samt Remote-Überwachung und Beratung ab **1.500 EUR** im Monat (12 Monate Laufzeit, Software wird leihweise überlassen, PC-Hardware stellt der Kunde).

Selbstverständlich können die Software-Lizenzen auch erworben werden, wenn der Kunde die Betreuung selbst leisten kann.

Erfahrung + Referenz

Synapse Networks GmbH betreut u.a. Institutionen

- der öffentlichen Hand (Bund+Land)
- der Finanzwelt
- der verarbeitenden Industrie

Sowohl **re**-aktive Störfall-Analyse wie auch **pro**-aktive System- und Struktur-Analyse werden hierdurch mit einem Höchstmaß an Automation und Präzision möglich.

Sprechen Sie uns an!

A handwritten signature in black ink that reads "Ihr Synapse Team".

Analysis Report Viewer Statistiken+Tabellen / Letzte Aktualisierung: = 2010-07-16 01:07:20

Config Trace Files [0] Basic Data [1] Error+Event Monitor [2] Event Log+Mail [3] Host+Error Statistics [4] Filter + Security

License Level = 4 | Analysis Level = 4 | Die Funktionen und Statistiken/Tabellen dieses Registerblatts sind lizenziert+freigeschaltet = OK.

UDP Packets	3 589	
TCP Packets	93 746	
> TCP Session attempts (TCP-SYN)	818	
> TCP Sessions granted (SYN/ACK)	677	
> TCP Sessions unacknowledged (SYN->???)	147	
> TCP Sessions denied (SYN->RST)	5	***
> TCP Sessions reset (ACK/RST)	285	***
> TCP SYN repeated attempts / poss. port attacks (TCP-SYN) (no HTTP ports)	322	***
> TCP retransmissions / equal sequence numbers (Eq/ReTx) (data carrying packets)	284	***
> TCP duplicate packets / same TCP packet (L4-PDU) seen multiple times / no TCP-ReTx / no routed	11	***
> TCP empty packets (TCP-ACK w/o data)	35 927	
> TCP data-carrying packets	57 819	
WINS Packets	115	
> WINS Client Requests	115	
> WINS Broadcast Packets	115	***
DNS Packets	3 415	
> DNS Client Requests	1 748	
> DNS Server Replies (total)	1 667	
> DNS Server Replies / OK	1 528	
> DNS Server Replies / Error	139	***
> DNS Svr.Err. 02 = SERVFAIL = Internal failure while processing request (e.g. OS error / forwarding tin	30	***
> DNS Svr.Err. 03 = NXDOMAIN = Some name that ought to exist, does not exist.	108	***
> DNS Svr.Err. 04 = NOTIMP = The name server does not support the specified Opcode.	1	***
> DNS Private Domain Root Server Unresolved	4	***
> DNS Public --TLD-- Root Server Resolved	12	***
> DNS client (or forwarding server) sends multiple requests for same DNS name resolution	320	***
HTTP all ports / all packets	21 367	
> HTTP Client packets	6 136	
> HTTP Server packets	15 231	
> HTTP(80,8080): all Rx/Tx packets	21 221	
> HTTP(80,8080): all requests: GET	573	
> HTTP(80,8080): all requests: POST	4	
> HTTP(?/other): Ports = 51000	146	
> HTTP(?/other): all Rx/Tx packets	146	
> HTTP(?/other): all requests: GET	17	
> HTTP(?/other): all requests: POST	3	
> HTTP GET request with "X-Forwarded-For" statement / poss. unwanted if outbound via HTTP proxy	6	***
> HTTP server response contains "iFrame" tag / assumably advertising frame (ok)	4	***

2010-07-16 01:14:34 866x961IP_Stats_(9)/START -> IP_Stats_(9)/STOP ->

Analysis Report Viewer Statistiken+Tabellen / Letzte Aktualisierung: = 2010-07-16 01:07:20

Config Trace Files [0] Basic Data [1] Error+Event Monitor [2] Event Log+Mail [3] Host+Error Statistics [4] Filter + Security

License Level = 4 | Analysis Level = 4 | Die Funktionen und Statistiken/Tabellen dieses Registerblatts sind lizenziert+freigeschaltet = OK.

> TCP data-carrying packets	57 819	
WINS Packets	115	
> WINS Client Requests	115	
> WINS Broadcast Packets	115	***
DNS Packets	3 415	
> DNS Client Requests	1 748	
> DNS Server Replies (total)	1 667	
> DNS Server Replies / OK	1 528	
> DNS Server Replies / Error	139	***
> DNS Svr.Err. 02 = SERVFAIL = Internal failure while processing request (e.g. OS error / forwarding tin	30	***
> DNS Svr.Err. 03 = NXDOMAIN = Some name that ought to exist, does not exist.	108	***
> DNS Svr.Err. 04 = NOTIMP = The name server does not support the specified Opcode.	1	***
> DNS Private Domain Root Server Unresolved	4	***
> DNS Public --TLD-- Root Server Resolved	12	***
> DNS client (or forwarding server) sends multiple requests for same DNS name resolution	320	***
HTTP all ports / all packets	21 367	
> HTTP Client packets	6 136	
> HTTP Server packets	15 231	
> HTTP(80,8080): all Rx/Tx packets	21 221	
> HTTP(80,8080): all requests: GET	573	
> HTTP(80,8080): all requests: POST	4	
> HTTP(?/other): Ports = 51000	146	
> HTTP(?/other): all Rx/Tx packets	146	
> HTTP(?/other): all requests: GET	17	
> HTTP(?/other): all requests: POST	3	
> HTTP GET request with "X-Forwarded-For" statement / poss. unwanted if outbound via HTTP proxy	6	***
> HTTP server response contains "iFrame" tag / assumably advertising frame (ok)	4	***
SSL all packets	541	
> SSL Client packets	259	
> SSL Server packets	282	
SECURITY: Poss.Security Problem(s)		
> TCP SYN repeated attempts / poss. port attacks (TCP-SYN) (no HTTP ports)	322	***
> DNS Svr.Err. 02 = SERVFAIL = Internal failure while processing request (e.g. OS error / forwarding tin	30	***
> DNS Private Domain Root Server Unresolved	4	***
> DNS Public --TLD-- Root Server Resolved	12	***
> HTTP GET request with "X-Forwarded-For" statement / poss. unwanted if outbound via HTTP proxy	6	***
> HTTP server response contains "iFrame" tag / assumably advertising frame (ok)	4	***

2010-07-16 01:14:45 866x961IP_Stats_(9)/START -> IP_Stats_(9)/STOP ->

Analysis Report Viewer Statistiken+Tabellen / Letzte Aktualisierung: = 2010-07-16 01:07:20

This is a status message.

Import Tables / DONE. (10/10)

Config Trace Files [0] Basic Data [1] Error+Event Monitor [2] Event Log+Mail [3] Host+Error Statistics [4] Filter + Security (DMZ+LAN)

License Level = 4 | Analysis Level = 4 | Die Funktionen und Statistiken/Tabellen dieses Registerblatts sind lizenziert+freigeschaltet = OK.

[0] MAC [1] APP [2] IP Router(s) [3] IP Hop(s) [4] IP Hosts (Rx/Tx) [5] Servers/Ports [6] Port Statistics [7] Name Services (Rx/Tx) [8] HTTP [9] Cx Errors

DHCP Clients WINS + DNS Statistics DNS Client Requests Name Service Statistics Rx/Tx

DNS Pkts. (Req+Rep)

WINS + DNS Statistics / 754 Names

Sortieren der Tabellen-Spalten: Maus-Doppelklick in der Tabelle -> Maus-Fiad auf/ab drehen

#	DNS Name	IP Address	WINS Pkts. (Req+Rep)	DNS Pkts. (Req+Rep)	Client Requests	Svr.Repl. (total)	Svr.Repl. :Hits	Svr.Repl.
691	a1282.g.akamai.net	0x 5C7B4858 = 92.123.72.88	0	4	2	2	2	
690	rosenbauer.de	0x 51A9914A = 81.169.145.74	0	4	2	2	2	
689	g-ecx.images-amazon.com	0x 51162275 = 81.22.34.117	0	4	2	2	2	
688	content.yieldmanager.com	0x 5C7B4859 = 92.123.72.89	0	4	2	2	2	
687	fltotal.ivvbox.de	0x C12E3F92 = 193.46.63.146	0	4	2	2	2	
686	stats.welt.de	0x C332B0BD = 195.50.176.189	0	4	2	2	2	
683	lon-g003.uk.intellitxt.com	0x 3E20610D = 62.32.97.13	0	4	2	2	2	
682	statse.webtrends.akadns.net	0x 42967519 = 66.150.117.25	0	4	2	2	2	
680	asn.advolution.de	0x D50929D6 = 213.9.41.214	0	4	2	2	2	
678	axelspringer.122.2o7.net	0x 42EB8F76 = 66.235.143.118	0	4	2	2	2	
675	completion.amazon.co.uk	0x 57EE571F = 87.238.87.31	0	4	2	2	2	
671	ecx.images-amazon.com	0x 51162275 = 81.22.34.117	0	4	2	2	2	
670	z-ecx.images-amazon.com	0x CCA07B7E = 204.160.123.126	0	4	2	2	2	
669	a2047.x.akamai.net	0x 5C7B4482 = 92.123.68.130	0	4	2	2	2	
668	www.eyebalster.georedirector.akadns.net	0x 5C7B4472 = 92.123.68.114	0	4	2	2	2	
667	www.aktion-deutschland-hilft.de	0x 5046B7D5 = 80.70.183.213	0	4	2	2	2	
665	www.egyptarchive.co.uk	0x 4D5C4B01 = 77.92.75.1	0	4	2	2	2	
661	www.medion.com	0x 3EB48397 = 62.180.131.151	0	4	2	2	2	
660	www.faszination-aegypten.de	0x 52A56552 = 82.165.101.82	0	4	2	2	2	
657	www.friedrichsbad-team.de	0x 5519570C = 85.25.87.12	0	4	2	2	2	
656	www.postbank.de	0x 3E996925 = 62.153.105.37	0	4	2	2	2	
655	www.cartoonland.de	0x 576AFD44 = 87.106.253.68	0	4	2	2	2	
651	www.tsc-seesteufel.de	0x 52A54B87 = 82.165.75.135	0	4	2	2	2	
648	www.autobild.de.dns.boreus.de	0x C332B032 = 195.50.176.50	0	4	2	2	2	
647	www.swd-netz.de	0x C23B3064 = 194.59.48.100	0	4	2	2	2	
644	www.dvgn-cert.com	0x 51162275 = 81.22.34.117	0	4	2	2	2	
642	static-doubleclick-net.1.google.com	0x 51162275 = 81.22.34.117	0	4	2	2	2	
641	mg-web.mc-wetter.de	0x C3E2A1D8 = 195.226.161.216	0	4	2	2	2	
640	m.de.yahoo.com	0x 57F87A7A = 87.248.122.122	0	4	2	2	2	
639	m.webtrends.com	0x 42967521 = 66.150.117.33	0	4	2	2	2	
638	plista.s3.amazonaws.com	0x 57EE5687 = 87.238.86.135	0	4	2	2	2	
637	v.movad.de	0x 5572950D = 85.114.149.13	0	4	2	2	2	
636	too6.mail.ru	0x 5E64B2D8 = 94.100.178.216	0	4	2	2	2	

2010-07-16 01:19:36 1680x1050

Event Log

Config | Event Log | Ping Notes + SysLog | \WINS.DNS.DHCP> | <: ARP> | <zone> | <: ARP;detected> | ICMP Unreachable (Host/Network) | etc. | [??]

```

14:38:35 .620889 :: 194.59.48.100 << 79.242.120.147 :: [ ] :: TCP-SYN ( 80 <- 49621) -> TCP Session attempt (TCP-SYN)
14:38:35 .621077 :: 79.242.120.147 << 194.59.48.100 :: [ ] :: TCP-S/A (49621 <- 80) -> TCP Session granted (SYN/ACK)
14:38:35 .624973 :: 194.59.48.200 << 194.176.0.1 :: [ ] :: DNS Server Reply [C<-S] -> [!] [gamapa.de] [XID=0x BBDE] [IP/TTL= 61] [UDP] [Ports: 54803 <- 53] = OK
14:38:35 .628213 :: 194.176.0.1 << 194.59.48.200 :: [ ] :: DNS Client Request [C->S] -> [?] [mailin15.datevnet.de] [XID=0x E237] [IP/TTL=126] [UDP] [Ports: 53 <- 54803]
14:38:35 .697293 :: 194.59.48.200 << 194.176.0.1 :: [ ] :: DNS Server Reply [C<-S] -> [!] [229.66.24.189.in-addr.arpa] [XID=0x 7C35] [IP/TTL= 61] [UDP] [Ports: 54803 <- 53] = OK
14:38:35 .702339 :: 194.59.51.200 << 10.21.0.116 :: [ ] :: DNS Client Request [C->S] -> [?] [secureaccess.atkearney.com] [XID=0x 3246] [IP/TTL=122] [UDP] [Ports: 53 <- 62046]
14:38:35 .703031 :: 194.176.0.1 << 194.59.51.200 :: [ ] :: DNS Client Request [C->S] -> [?] [secureaccess.atkearney.com] [XID=0x 185C] [IP/TTL=126] [UDP] [Ports: 53 <- 65354]
14:38:35 .705551 :: 194.59.51.200 << 194.176.0.1 :: [ **] :: DNS Server Reply [C<-S] -> [~] [go.enbw.net ] [XID=0x 220F] [IP/TTL= 61] [UDP] [Ports: 65354 <- 53] = DNS Svr.Err. 03 = 1
14:38:35 .706032 :: 10.21.0.116 << 194.59.51.200 :: [ **] :: DNS Server Reply [C<-S] -> [~] [go.enbw.net ] [XID=0x 50E6] [IP/TTL=126] [UDP] [Ports: 52433 <- 53] = DNS Svr.Err. 03 = 1
14:38:35 .722312 :: 194.59.51.200 << 10.21.0.116 :: [ ] :: DNS Client Request [C->S] -> [?] [www.catalogus.de] [XID=0x 0F1F] [IP/TTL=122] [UDP] [Ports: 53 <- 53609]
14:38:35 .722769 :: 194.176.0.1 << 194.59.51.200 :: [ ] :: DNS Client Request [C->S] -> [?] [www.catalogus.de] [XID=0x 4860] [IP/TTL=126] [UDP] [Ports: 53 <- 65354]
14:38:35 .741279 :: 194.59.48.200 << 194.176.0.1 :: [ ] :: DNS Server Reply [C<-S] -> [!] [175.180.241.96.in-addr.arpa] [XID=0x 714B] [IP/TTL= 61] [UDP] [Ports: 54803 <- 53] = OK
14:38:35 .789496 :: 194.59.48.70 << 80.187.34.134 :: [***] :: TCP-ReTx (26862 <- 52106) -> TCP retransmission / equal sequence numbers (Eq/ReTx) (data carrying packet) (# 13650 -> # 14187)
14:38:35 .873827 :: 194.59.48.200 << 194.176.0.1 :: [ ] :: DNS Server Reply [C<-S] -> [!] [fo-anyycs-d.ay1.b.yahoodns.net] [XID=0x E1E5] [IP/TTL= 61] [UDP] [Ports: 54803 <- 53] = OK = 216.115.111.4:
14:38:35 .874489 :: 10.19.0.21 << 194.59.48.200 :: [ ] :: DNS Server Reply [C<-S] -> [!] [fo-anyycs-d.ay1.b.yahoodns.net] [XID=0x C837] [IP/TTL=126] [UDP] [Ports: 59928 <- 53] = OK = 216.115.111.4:
14:38:35 .936504 :: 194.176.0.1 << 194.59.48.200 :: [ ] :: DNS Client Request [C->S] -> [?] [254.13.151.41.in-addr.arpa] [XID=0x 9C57] [IP/TTL=126] [UDP] [Ports: 53 <- 54803]
14:38:35 .954723 :: 74.6.136.65 << 194.59.51.112 :: [***] :: TCP-ReTx ( 25 <- 18470) -> TCP retransmission / equal sequence numbers (Eq/ReTx) (data carrying packet) (# 13781 -> # 14234)
14:38:35 .962437 :: 194.59.51.112 << 10.18.0.29 :: [ ] :: TCP-SYN ( 25 <- 62736) -> TCP Session attempt (TCP-SYN)
14:38:35 .962437 :: 194.59.51.112 << 10.18.0.29 :: [***] :: TCP SYN repeated attempt / poss. port attack (TCP-SYN) (no HTTP port) 25 <- 62736 / Threshold: 12 SYN pkts. to same server port in sequence / Poss.Secur:
14:38:35 .962634 :: 10.18.0.29 << 194.59.51.112 :: [ ] :: TCP-S/A (62736 <- 25) -> TCP Session granted (SYN/ACK)
14:38:35 .978623 :: 194.59.48.100 << 217.92.137.129 :: [***] :: HTTP( 80) GET : HTTP GET request with "X-Forwarded-For" statement / poss. unwanted if outbound via HTTP proxy server / Poss.Security Problem
14:38:36 .010603 :: 10.18.0.29 << 194.59.51.112 :: [ ] :: TCP-FIN (62736 <- 25) -> TCP Session correctly terminated (TCP-FIN)
14:38:36 .011116 :: 194.59.51.112 << 10.18.0.29 :: [ ] :: TCP-FIN ( 25 <- 62736) -> TCP Session correctly terminated (TCP-FIN)
14:38:36 .049982 :: 217.92.137.129 << 194.59.48.100 :: [ ] :: HTTP/1.1 200 OK / Content-type: text/html
14:38:36 .103445 :: 194.59.51.200 << 194.176.0.1 :: [ ] :: DNS Server Reply [C<-S] -> [!] [ntv.ivvbox.de] [XID=0x 367E] [IP/TTL= 61] [UDP] [Ports: 65354 <- 53] = OK = 193.46.63.121
14:38:36 .104127 :: 10.21.0.116 << 194.59.51.200 :: [ ] :: DNS Server Reply [C<-S] -> [!] [ntv.ivvbox.de] [XID=0x 52DF] [IP/TTL=126] [UDP] [Ports: 62911 <- 53] = OK = 193.46.63.121
14:38:36 .127316 :: 194.148.224.125 << 194.59.51.112 :: [ ] :: TCP-SYN ( 25 <- 18680) -> TCP Session attempt (TCP-SYN)
  
```

[6] # 14781 :: 2010-02-17 14:38:36 .699828 :: 194.176.0.1 << 194.59.48.200 :: [] :: DNS Client Request [C->S] -> [?] [a1.pantherodn.com] [XID=0x 6CB5] [IP/TTL=126] [UDP] [Ports: 92

2010-07-16 01:16:36 1670:615

