



# Global Information Assurance Certification Paper

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# **SNAP Certification Practical**

## **10 Detects with analysis**

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Grade: 87/ Pass  
See comments in RED.**

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## Detect 1:

Mar 16 19:06:54.114 host1 kernel: 226 IP packet dropped

(fsuj83.rz.uni-jena.de[XXX.XXX.XXX.XXX]->host1. [ x.x.x.1]: Protocol=TCP[SYN]

Port 49442->512): Restricted Port: Protocol=TCP[SYN] Port 49442->512

(received on interface x.x.x.1)

Mar 16 19:06:54.269 host1 ftpd[14378]: 121 Statistics: duration=0.05

id=7DBqm sent=63 rcvd=103 src=XXX.XXX.XXX.XXX/49441 proto=ftp (Authentication failed)

Mar 16 19:06:54.277 host1 httpd[14989]: 121 Statistics: duration=0.07

id=7DPKT sent=168 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49443

srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host1.

op=POST arg=/cgi-bin/perl result="403 Forbidden" proto=http (request denied by process)

Mar 16 19:06:54.288 host1 httpd[14989]: 121 Statistics: duration=0.07

id=7DPkU sent=147 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49444

srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host1.

op=POST arg=/cgi-bin/phf?Qname=x%0a/bin/sh+-s%0a result="403 Forbidden" proto=http (request denied by process)

Mar 16 19:06:54.295 host1 httpd[14989]: 121 Statistics: duration=0.07

id=7DPKW sent=95 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49445

srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host1.

op=GET arg=/cgi-bin/aglimpse/80|IFS=\_;CMD

=\_echo\;echo\_id-aglimpse\;uname\_-a\;id;eval\$CMD; result="403 Forbidden"

proto=http (request denied by process)

Mar 16 19:06:54.300 host1 httpd[14989]: 121 Statistics: duration=0.08  
id=7DPkX sent=57 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49446  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host1.  
op=GET arg=/cgi-bin/view-source?cgi-bin/view-source result="403 Forbidden"  
proto=http (request denied by process)

Mar 16 19:06:54.305 host1 httpd[14989]: 121 Statistics: duration=0.08  
id=7DPkY sent=73 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49447  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host1.  
op=POST arg=/cgi-bin/nph-test-cgi result="403 Forbidden" proto=http  
(request denied by process)

Mar 16 19:06:54.310 host1 httpd[14989]: 121 Statistics: duration=0.08  
id=7DPkZ sent=69 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49448  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host1.  
op=POST arg=/cgi-bin/test-cgi result="403 Forbidden" proto=http (request  
denied by process)

Mar 16 19:06:54.107 host2 kernel: 226 IP packet dropped  
(fsuj83.rz.uni-jena.de[XXX.XXX.XXX.XXX]->host2[ x.x.x.1]: Protocol=TCP[SYN]  
Port 49450->512): Restricted Port: Protocol=TCP[SYN] Port 49450->512  
(received on interface x.x.x.1)

Mar 16 19:06:54.255 host2 ftpd[16398]: 121 Statistics: duration=0.06  
id=9eNKb sent=63 rcvd=103 src=XXX.XXX.XXX.XXX/49449 proto=ftp (Authentication  
failed)

Mar 16 19:06:54.263 host2 httpd[16394]: 121 Statistics: duration=0.06  
id=9f5SW sent=168 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49451  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host2.  
op=POST arg=/cgi-bin/perl result="403 Forbidden" proto=http (request denied  
by process)

Mar 16 19:06:54.271 host2 httpd[16394]: 121 Statistics: duration=0.07  
id=9f5SX sent=147 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49452  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host2.  
op=POST arg=/cgi-bin/phf?Qname=x%0a/bin/sh+-s%0a result="403 Forbidden"  
proto=http (request denied by process)

Mar 16 19:06:54.275 host2 httpd[16394]: 121 Statistics: duration=0.07  
id=9f5SY sent=95 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49453  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host2.  
op=GET arg=/cgi-bin/aglimpse/80|IFS=\_;CMD  
=\_echo\\;echo\_id-aglimpse\\;uname\_-a\\;id;eval\$CMD; result="403 Forbidden"  
proto=http (request denied by process)

Mar 16 19:06:54.280 host2 httpd[16394]: 121 Statistics: duration=0.07  
id=9f5SZ sent=57 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49454  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host2.  
op=GET arg=/cgi-bin/view-source?cgi-bin/view-source result="403 Forbidden"  
proto=http (request denied by process)

Mar 16 19:06:54.285 host2 httpd[16394]: 121 Statistics: duration=0.07  
id=9f5T0 sent=73 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49455

srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host2.  
op=POST arg=/cgi-bin/nph-test-cgi result="403 Forbidden" proto=http  
(request denied by process)

Mar 16 19:06:54.289 host2 httpd[16394]: 121 Statistics: duration=0.07  
id=9f5T1 sent=69 rcvd=402 srcif=le1 src=XXX.XXX.XXX.XXX/49456  
srcname=fsuj83.rz.uni-jena.de dstif=le1 dst= x.x.x.1/80 dstname=host2.  
op=POST arg=/cgi-bin/test-cgi result="403 Forbidden" proto=http (request  
denied by process)

### **Analysis 1:**

These packets suggest the following information:

- Appears to be automated.
- Source Ports are high.
- Attempted to connect using port 512/tcp (exec).
- Most attacks were common CGI-BIN attacks.
- De is the country code for Germany. From this information we can figure out what time zone the attack originated from and possibly the thought process behind the attack. **Agree, but does this mean .de was actually the origin? -2**

## Detect 2:

Mar 13 23:40:01.771369 209.166.41.8,53 -> 10.0.1.1,111 PR tcp len 20 40 -S  
Mar 13 23:41:10.128107 209.166.41.8,53 -> 10.0.2.1,111 PR tcp len 20 40 -S  
Mar 13 23:42:03.888377 209.166.41.8,53 -> 10.0.3.1,111 PR tcp len 20 40 -S  
Mar 14 04:12:06.818904 209.166.41.8,53 -> 10.0.1.2,111 PR tcp len 20 40 -S  
Mar 14 04:13:13.846747 209.166.41.8,53 -> 10.0.2.2,111 PR tcp len 20 40 -S  
Mar 14 04:14:07.132362 209.166.41.8,53 -> 10.0.3.2,111 PR tcp len 20 40 -S  
Mar 14 08:28:23.719263 209.166.41.8,53 -> 10.0.0.3,111 PR tcp len 20 40 -S  
Mar 14 08:29:30.881752 209.166.41.8,53 -> 10.0.1.3,111 PR tcp len 20 40 -S  
Mar 14 08:30:25.284416 209.166.41.8,53 -> 10.0.2.3,111 PR tcp len 20 40 -S  
Mar 14 08:31:18.807869 209.166.41.8,53 -> 10.0.3.3,111 PR tcp len 20 40 -S  
Mar 14 12:55:31.960881 209.166.41.8,53 -> 10.0.0.4,111 PR tcp len 20 40 -S  
Mar 14 12:56:39.329164 209.166.41.8,53 -> 10.0.1.4,111 PR tcp len 20 40 -S  
Mar 14 12:57:33.761394 209.166.41.8,53 -> 10.0.2.4,111 PR tcp len 20 40 -S  
Mar 14 12:58:40.860329 209.166.41.8,53 -> 10.0.3.4,111 PR tcp len 20 40 -S

## Analysis 2:

These packets suggest the following information:

- This is a Host Scan.
- All packets had a source port of 53 (DNS).
- Normal traffic rarely uses port 53 as a source port unless the source is a DNS server.
- Slow Scan. The attacker sent one packet per machine over a 13 hour time period. This method is used to hide packets. This is actually a 'Stealth Scan', or half-open scan. Your analysis is correct that the slow scanning is a method for hiding the packets. -5
- Searching for RPC vulnerabilities on various hosts. No mention of destination port 111. This guy is actually looking for vulnerabilities in SunRPC/Portmapper. A wide RPC vulnerability scan might have taken into account any number of ports. -5

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### **Detect 3: Good.**

Mar 7 16:05:02.985 firewall kernel: 232 Sending ICMP port unreachable.

Original packet (206.251.19.88->firewall.mydomain.edu[10.0.0.1]:

Protocol=UDP Port 2814->33434) received on interface 10.0.0.1

(probable traceroute as ttl=1)

Mar 7 16:10:30.271 firewall kernel: 232 Sending ICMP port unreachable.

Original packet (167.8.29.52->firewall.mydomain.edu[10.0.0.1]:

Protocol=UDP Port 2711->33434) received on interface 10.0.0.1

(probable traceroute as ttl=1)

### **Analysis 3: Good.**

These packets suggest the following information:

- Using trace route port 33434.
- TTL = 1. This can indicate that intelligence gathering might have been done. For more information see <http://packetstorm.securify.com/UNIX/audit/firewalk/firewalk-final.html>.
- Trace route packets were sent by two different IP addresses 5 minutes apart.
- The firewall does not allow trace routes into its network.

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## Detect 4:

Mar 11 23:44:16 morton kernel: Packet log: input DENY eth0 PROTO=6

205.229.221.1:4183 63.224.27.201:53 L=60 S=0x00 I=40348 F=0x4000 T=49 SYN (#64)

Mar 11 23:44:17 www kernel: Packet log: input DENY eth0 PROTO=6

205.229.221.1:4187 63.224.27.205:53 L=60 S=0x00 I=40388 F=0x4000 T=49 SYN (#51)

Mar 11 23:44:26 www kernel: Packet log: input DENY eth0 PROTO=6

205.229.221.1:4187 63.224.27.205:53 L=60 S=0x00 I=40656 F=0x4000 T=49 SYN (#51)

## Analysis 4:

These packets suggest the following information:

- Automated Host Scan. Scanned two hosts 63.224.27.201.3 | 63.224.27.201.205.
- Possible DNS Zone Transfer. **This might also be simple host ID efforts. -1**
- Scanning for 53/tcp (DNS).

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## **Detect 5:**

Mar 6 10:46:34 ardvark kernel: Packet log: input DENY eth0 PROTO=6

64.24.22.102:4974 209.46.114.11:143 L=60 S=0x00 I=18800 F=0x4000 T=48 SYN (#54)

Mar 6 10:46:37 ardvark kernel: Packet log: input DENY eth0 PROTO=6

64.24.22.102:4974 209.46.114.11:143 L=60 S=0x00 I=19166 F=0x4000 T=48 SYN (#54)

Mar 6 10:46:42 ardvark kernel: Packet log: input DENY eth0 PROTO=6

64.24.22.102:4974 209.46.114.11:143 L=60 S=0x00 I=19768 F=0x4000 T=48 SYN (#54)

## **Analysis 5: Good.**

These packets suggest the following information:

- IMAP scan. 143/TCP (IMAP).
- Probably automated. Source ports stay consistent throughout the scan.

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## **Detect 6:**

Mar 11 18:24:56 morton kernel: Packet log: input DENY eth0 PROTO=6

194.87.6.47:3529 63.224.27.201:3128 L=48 S=0x00 I=30462 F=0x0000 T=45 SYN (#64)

Mar 11 19:42:56 morton kernel: Packet log: input DENY eth0 PROTO=6

194.87.6.47:3645 63.224.27.201:3128 L=48 S=0x00 I=54327 F=0x0000 T=45 SYN (#64)

## **Analysis 6: Good.**

These packets suggest the following information:

- Ring Zero (Port 3128|Squid Proxy).
- This type of scanning began the following September. SANS released information about this in October. Ports 8080 and 1080 were also being scanned.

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## **Detect 7:**

Mar 8 00:42:37 library portsentry[8852]: attackalert: Unknown Type: Packet Flags: SYN:  
1 FIN: 1 ACK: 0 PSH: 0 URG: 0 RST: 0 from host: 192.168.0.2/192.168.0.2 to TCP port:  
109

## **Analysis 7: Good.**

These packets suggest the following information:

- Probing port 109 (POP2).
- This scan used a SYN|FIN combination. This combination is not normal according to RFC 793.
- This type of traffic is normally used to sneak by IDS systems and some Firewalls.
- This combination could also be used in OS Fingerprinting. An older version of Linux used to reply to SYN|FIN combinations with SYN|FIN|ACK.

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## **Detect 8:**

01 Mar 00 07:29:58 udp 64.32.14.98.137 ->

10.16.98.215.137 2 0 116 0 TIM

01 Mar 00 07:30:07 udp 64.32.14.98.137 ->

10.16.98.216.137 2 0 116 0 TIM

01 Mar 00 07:30:13 udp 64.32.14.98.137 ->

10.16.98.217.137 3 0 174 0 TIM

## **Analysis 8: Good.**

These packets suggest the following information:

- Packets use port 137/udp (NetBios).
- Very well could be normal traffic.
- NetBios is used mainly in a Windows environment.
- Because of the information it gives out NetBios traffic should be blocked at the router level or Firewall level.

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## Detect 9:

Feb 29 12:29:49 host1 portsentry[524]: attackalert:

Connect from host: 206.49.154.100/206.49.154.100 to UDP port: 31337

Feb 29 12:29:49 host1 portsentry[524]: attackalert:

Connect from host: 206.49.154.100/206.49.154.100 to UDP port: 31337

Feb 29 12:29:49 host2 portsentry[420]: attackalert:

Connect from host: 206.49.154.100/206.49.154.100 to UDP port: 31337

Feb 29 12:32:40 host3 portsentry[16512]: attackalert:

Connect from host: 206.49.154.100/206.49.154.100 to UDP port: 31337

## Analysis 9:

These packets suggest the following information:

- Trying to use UDP port 31337 to communicate.
- 31337/udp is most commonly associated with Back Orifice. **Correct.**
- After discovering such a probe one should inspect servers and clients for BO and other Trojans that might have been installed after BO was installed.

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## Detect 10:

Mar 7 22:48:40 www kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:1527 63.224.27.205:1243 L=48 S=0x00 I=23649 F=0x4000 T=111 SYN

Mar 7 22:48:40 morton kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:1523 63.224.27.201:1243 L=48 S=0x00 I=22625 F=0x4000 T=113 SYN

Mar 7 22:48:40ooky kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:1526 63.224.27.204:1243 L=48 S=0x00 I=23393 F=0x4000 T=111

Mar 4 06:12:06 morton kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:2264 63.224.27.201:1243 L=48 S=0x00 I=19830 F=0x4000 T=113 SYN

Mar 4 06:12:06ooky kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:2267 63.224.27.204:1243 L=48 S=0x00 I=20598 F=0x4000 T=111

Mar 4 06:12:06 www kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:2268 63.224.27.205:1243 L=48 S=0x00 I=20854 F=0x4000 T=111 SYN

Mar 2 05:25:43 morton kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:3836 63.224.27.201:1243 L=48 S=0x00 I=16548 F=0x4000 T=113 SYN

Mar 2 05:25:43 www kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:3840 63.224.27.205:1243 L=48 S=0x00 I=17572 F=0x4000 T=111 SYN

Mar 2 05:25:43ooky kernel: Packet log: input DENY eth0 PROTO=6  
207.175.252.210:3839 63.224.27.204:1243 L=48 S=0x00 I=17316 F=0x4000 T=111

## Analysis 10:

These packets suggest the following information:

- Host Scan.
- Looking for TCP port 1243. This port is associated with the BackDoor-G and SubSeven Trojan. **Good.**
- Slow scan. Scanned over a five-day period. Most likely trying to hide the packets.
- Scanned either in the early morning or late at night. Again hoping not to be detected.



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