comendo
Managed Internet Security

Annual Security Report by Comendo A/S

Third Edition, 2004.

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Introduction

The 2004 Security Report is the third annual report from Comendo A/S. Since our first Security Report we've seen an explosive growth in the spam aswell as the virus percentage in e-mail. But spam and virus wasn't the only problems for Internet users in 2004. Spyware has become one of the fastest growing problems for Internet users. Spyware is infecting millions of Internet users with trojan horses, system and personal monitors every day. Monitoring user behavior and stealing personal information is only a few of the skills mastered by Spyware applications. There are more than 40.000 known spyware applications today and hundreds are discovered every week.

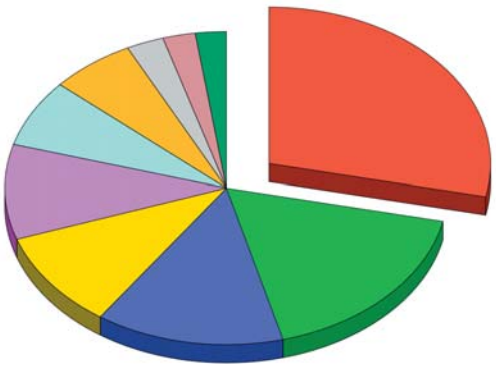
The Datasource

Every time an e-mail passes through the system, the result of the scanning is written on-the-fly to our database logging system. The statistics from Comendo A/S is the result of our real-time scanning of more than four million e-mails every day. All of which is logged and written into our comprehensive database system.
More than 4.500 companies from Europe are protected daily from virus threats, spyware, spam mail and hackers. The size of the companies varies from 5 to 9.000 employees and covers all areas of the industry sector. This provides some of the most comprehensive, real-time data and analysis available.

The viruses of 2004

We've blocked more than 68.000.000 viruses for our customers. 53.000.000 of those during 2004. The following breakdown shows the 10 most active of them all, the first one for all the viruses we've blocked, the second one shows the top 10 for 2004.

Four worms on the alltime top 10 list and accountable for more than 27% of all the viruses we've ever blocked, makes Netsky the most "successful" virus ever. Sober.i, the runnerup, has only been active for 7 weeks and has still managed to climb to an impressive second highest position on the alltime list.

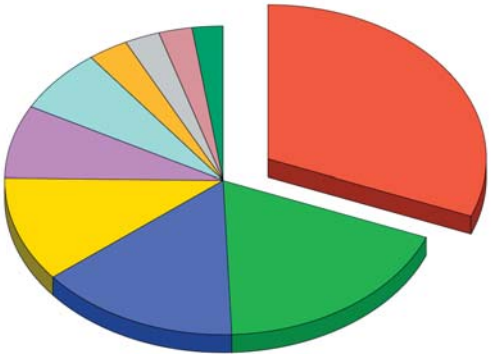


Graph showing top 10 viruses - Alltime

Top 10 viruses - Alltime

1. w32/netsky.p (16,04%)
2. w32/sober.i (9,55%)
3. w32/lovgate.r (7,70%)
4. w32/netsky.b (5,71%)
5. w32/sobig.f (5,54%)*
6. w32/netsky.d (3,95%)
7. w32/sober.g (3,50%)
8. w32/netsky.z (1,54%)
9. w32/zafi.b (1,35%)
10. w32/mydoom.a (1,28%)

* Sobig.f has been pushed down to a fifth position on the alltime top 10 list, but still holds the record of most aggressive outbreak. The first month Sobig.f was active, the virus percentage in mail increased to 57%! Sobig.f was, however, timelimited and stopped spreading after only a few weeks. Otherwise the numbers could have looked very different.



Graph showing top 10 viruses - 2004

Top 10 viruses - 2004

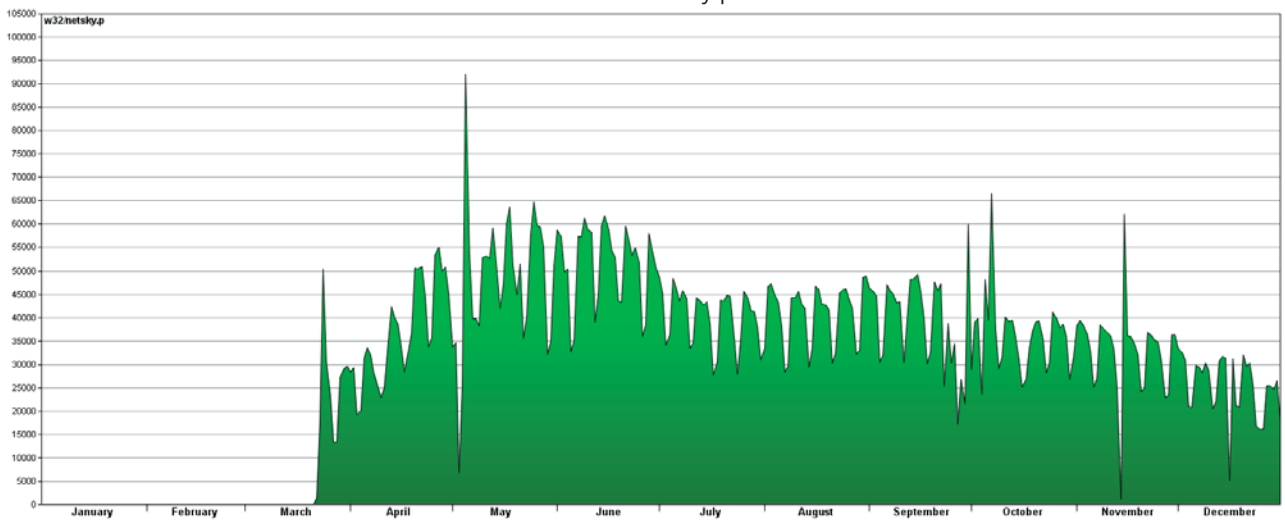
1. w32/netsky.p (19,25%)
2. w32/sober.i (11,45%)
3. w32/lovgate.r (9,24%)
4. w32/netsky.b (6,85%)
5. w32/netsky.d (4,74%)
6. w32/sober.g (4,20%)
7. w32/netsky.z (1,85%)
8. w32/zafi.b (1,62%)
9. w32/mydoom.a (1,54%)
10. w32/netsky.q (1,42%)

The most active virus of all is also the most active for 2004, Netsky.p. Moreover, the first four positions in the top 10 list for 2004 are the same as the top 10 alltime list. The Netsky family of viruses occupies 50% of the positions on the list and is accountable for more than 34% of the viruses in 2004.

Do they last?

Some stay, some go away as fast as they came. The following graphs shows the aggressiveness of the 2004 top 10 viruses. The spikes appear monday through friday when Internet users really have the chance to click on the e-mail attached files.

1. w32/netsky.p

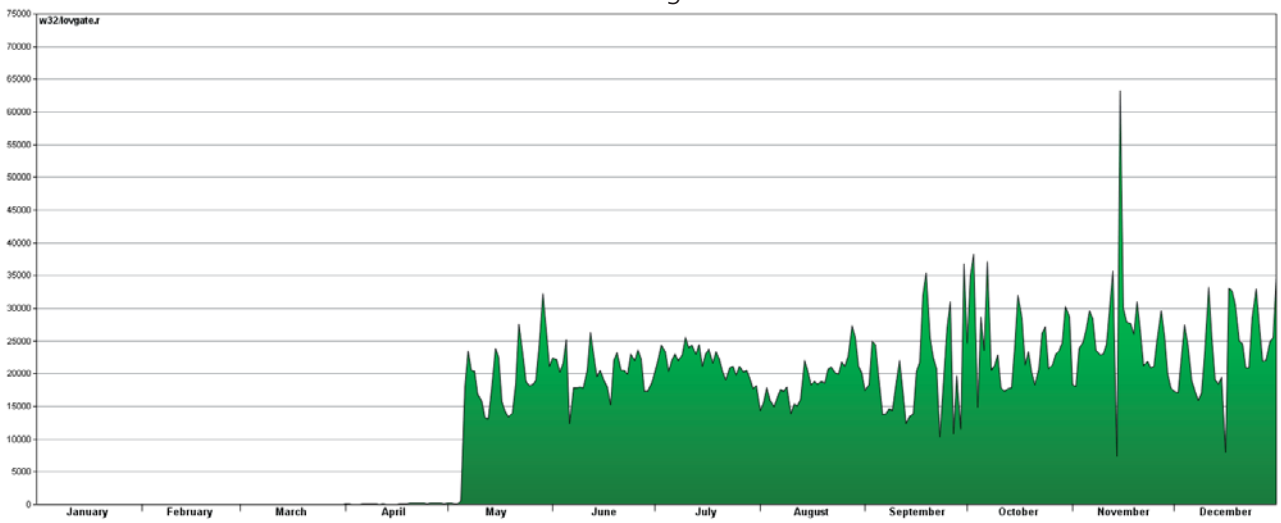


It took Netsky.p more than a month to peak, but the massive activity has made Netsky.p the most active virus in 2004. As the graph shows, it has been slowly decreasing in activity, but we're convinced that we'll be seeing plenty of Netsky.p in 2005.

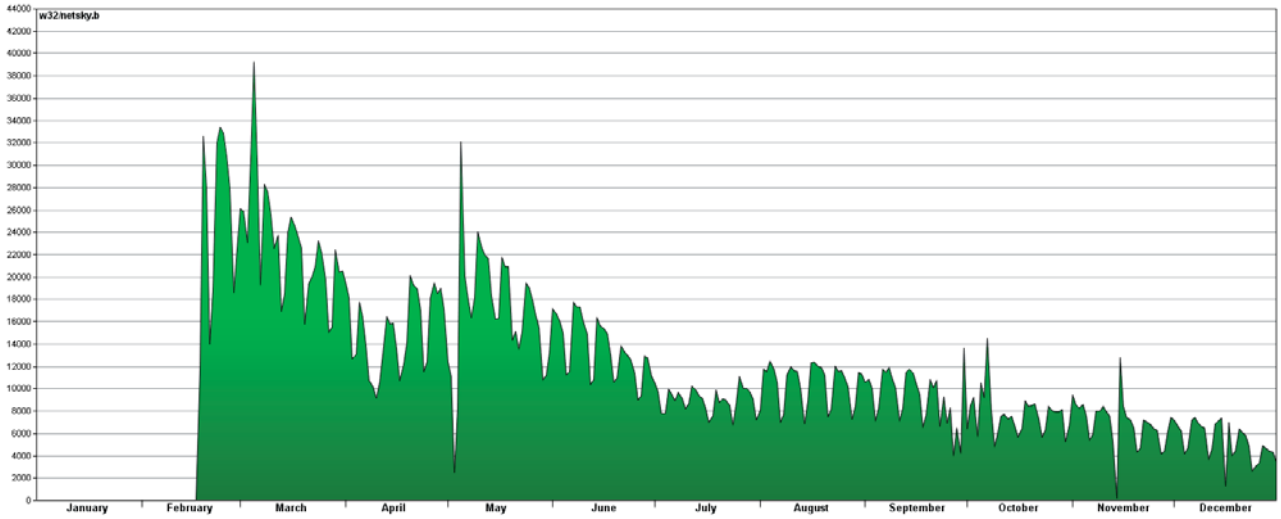
2. w32/sober.i

It took only 6 weeks for Sober.i to become the second most active virus in 2004. The graph shows the massive increase of Sober.i and we fear the Sober.i activity will rise even further during the beginning of 2005.

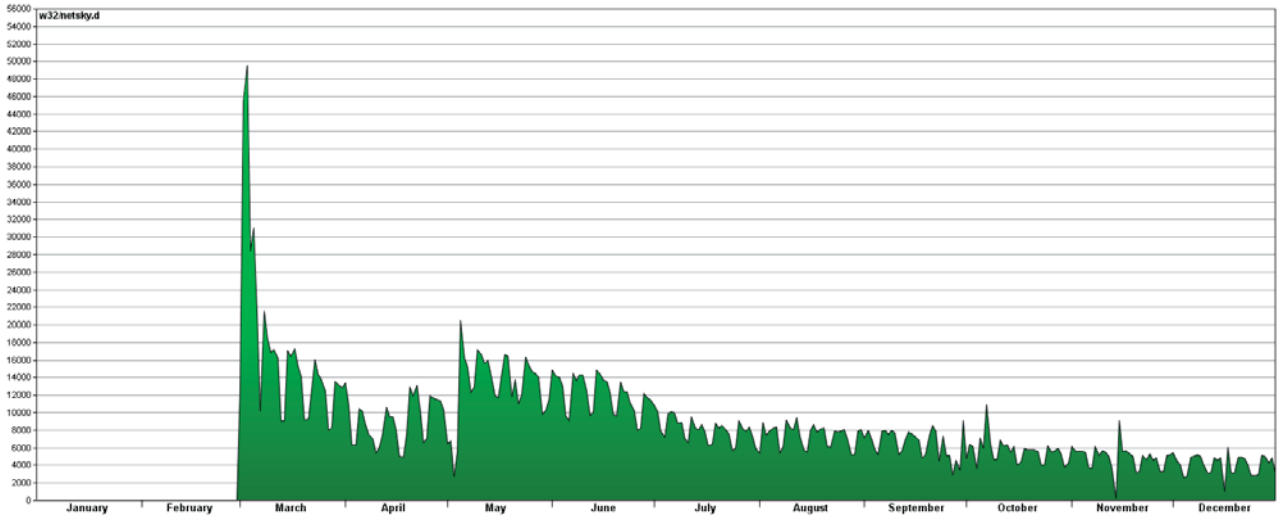
3. w32/lovgate.r



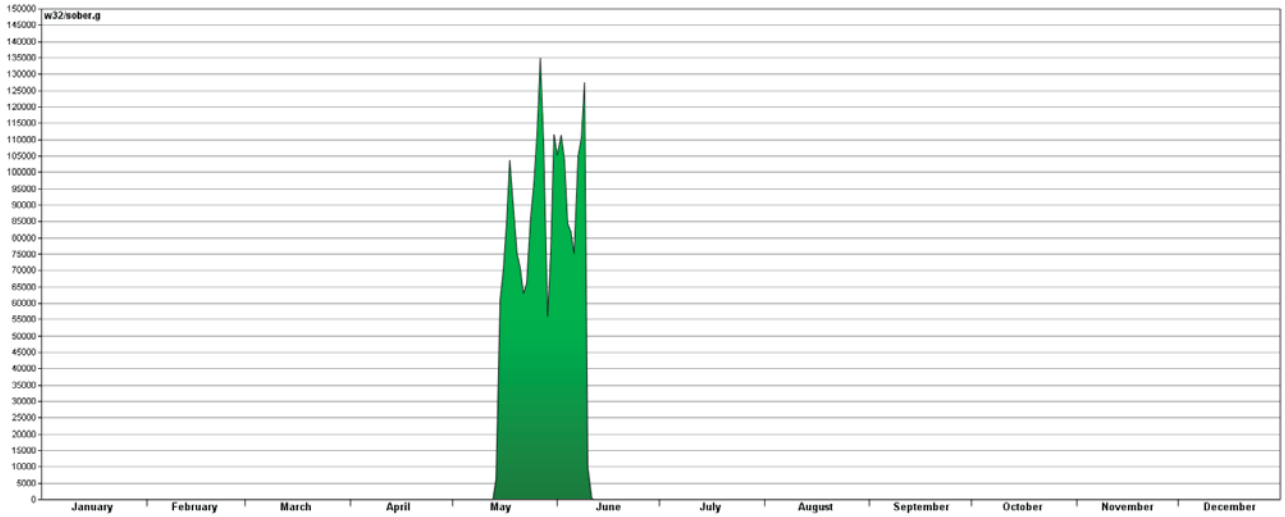
4. w32/netsky.b



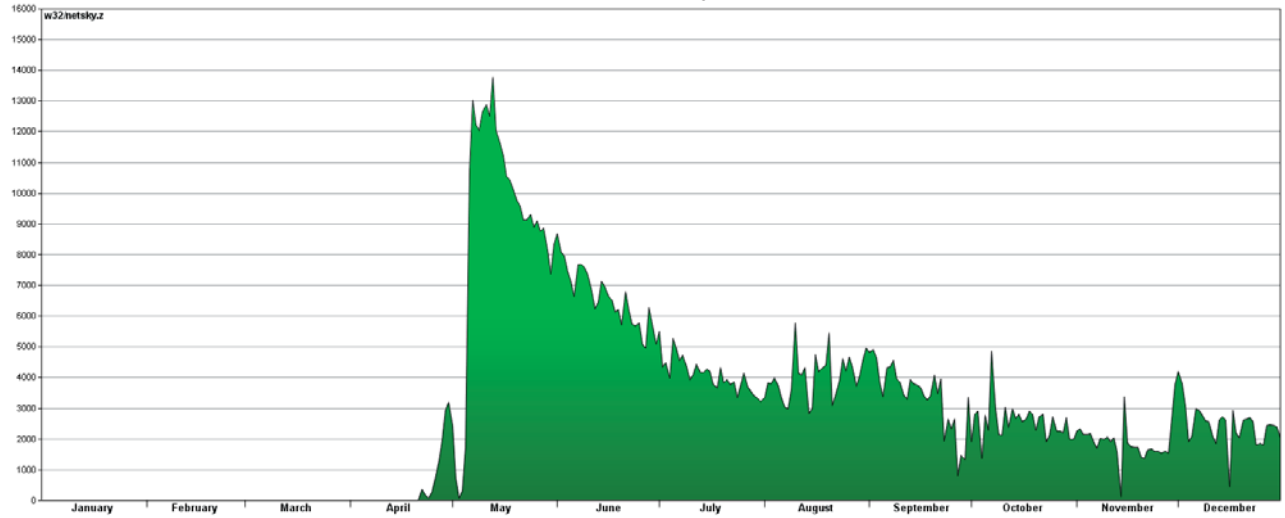
5. w32/netsky.d



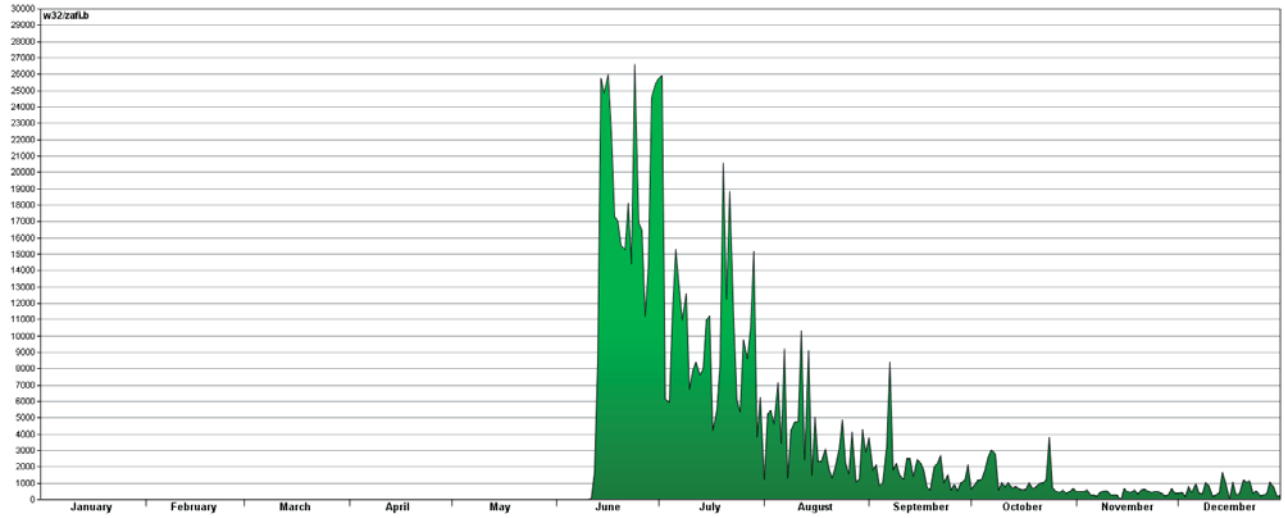
6. w32/sober.g



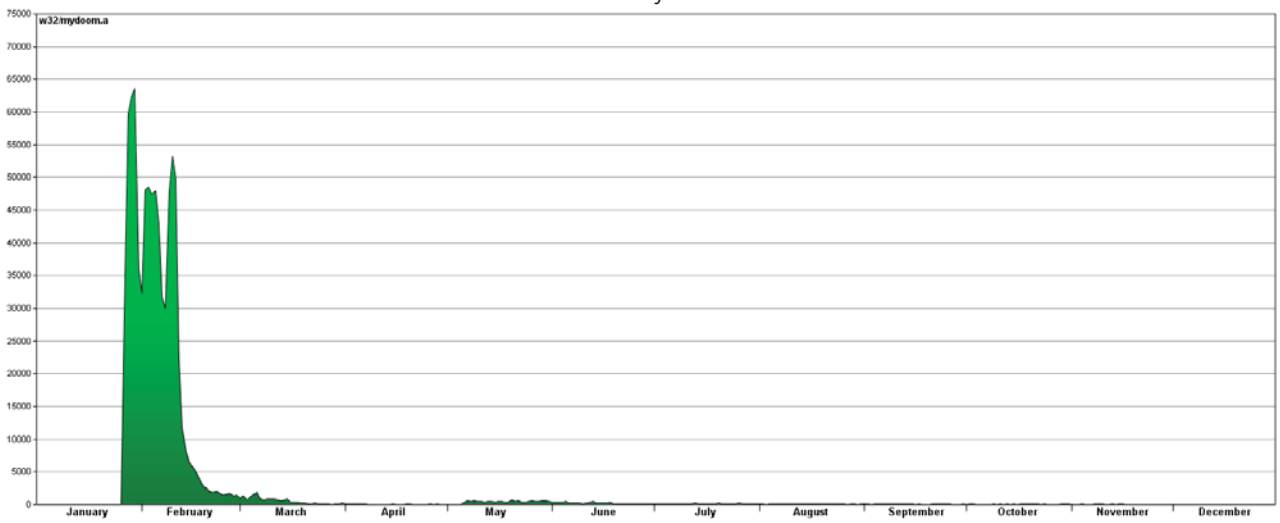
7. w32/netsky.z



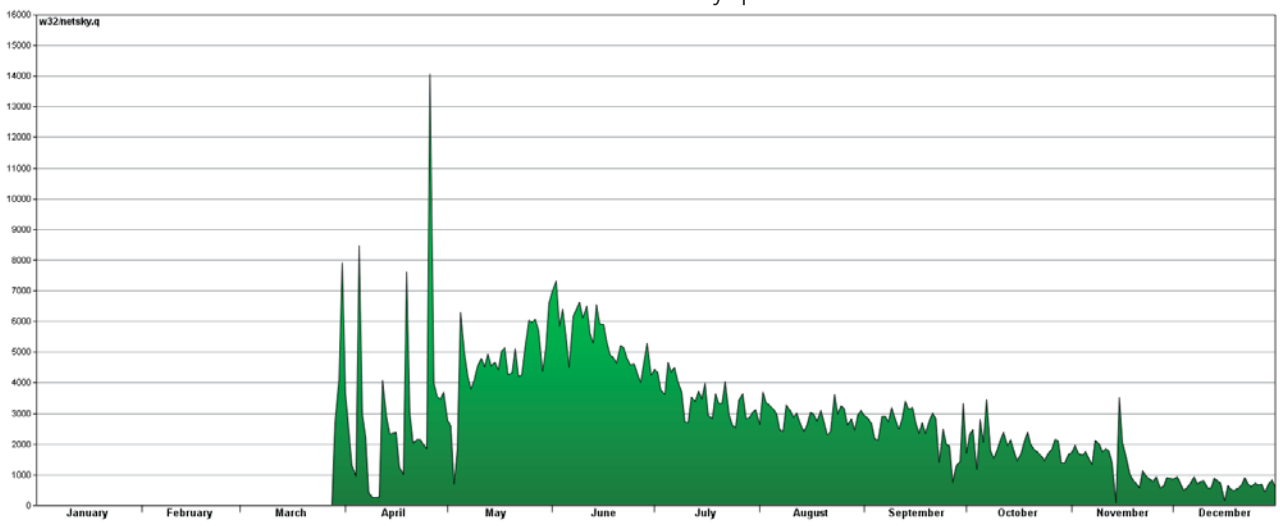
8. w32/zafi.b



9. w32/mydoom.a

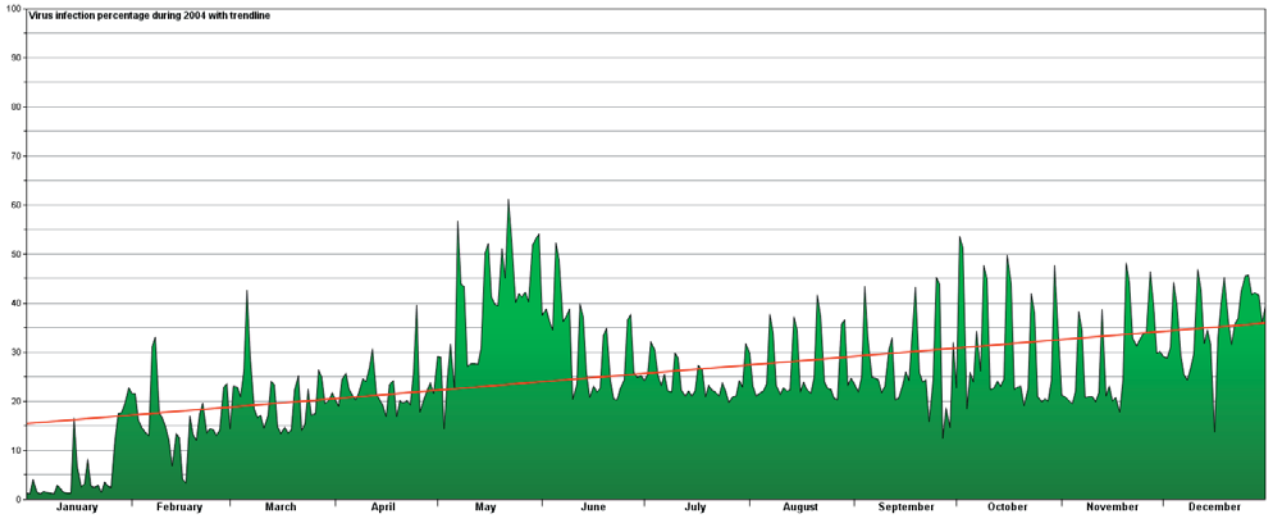


10. w32/netsky.q

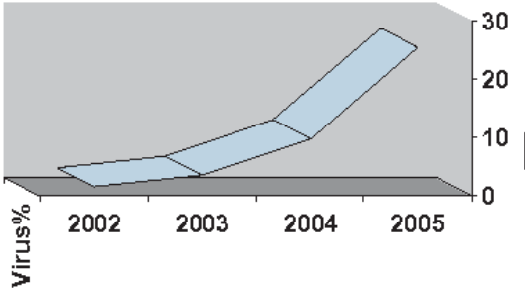


Virus activity level 2004

We blocked more than 53.000.000 viruses for our customers during 2004. The virus activity level shows the percentage of e-mail infected with virus. As seen in the graph, May was the most virusactive month in 2004. Not strange, because three of the Top 10 viruses in 2004, namely Sober.g, Netsky.z and Netsky.P, peaked during the month of May.



The red line across the graph shows the disturbing trend of the virus activity. Towards the end of 2004 Sober.i, accelerated the viruspercentage to more than 29%.



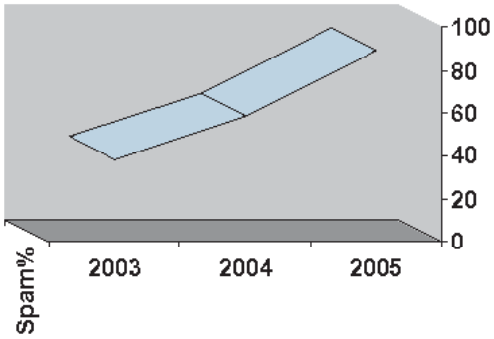
Graph showing increase in virus activity 2002 - 2004, plus predicted 2005 level.

Average annual virus activity

Year	2002	2003	2004	2005
Virus %	1,56%	3,5%/14,7*	9,8%	25,5%

*The shown virus percentage for 2003 is very much influenced by the month Sobig.f had a huge outbreak. August 2003 experienced a virus percentage at a staggering 57,3%! Add this month to the calculation and the average virus percentage for 2003 was 14,7%.

The 2005 figures are calculated from the average factor from the past two years. Should the virus activity rise with factor 2,6, we'll experience virus in one of four e-mails in 2005.
In December 2004 the virus percentage has been above average because of Sober.i, the second most active virus in 2004, and the average virus percentage for december has been 29,2%.



Graph showing increase in spam level 200 - 2004, plus predicted 2005 level.

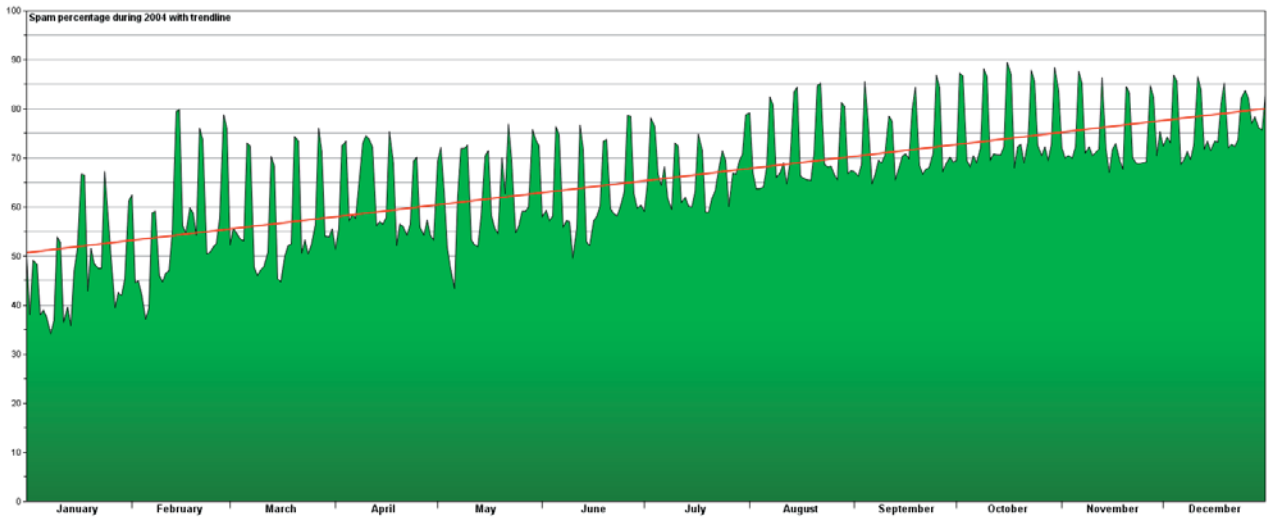
Spam level 2004

The day by day spam level for 2004 shows how much spam we've detected and blocked for our customers. In total this amounts to more than 560.000.000 (560 millions) spammails we've blocked for our customers.

Average annual spam level

Year	2003	2004	2005
Virus %	38,39%	58,5%	89,1%

The 2005 figures are calculated from the average factor from the past year. Should the spam level rise with a factor 1,52 like the previous year, we'll see spam in nine out of ten e-mails in 2005.



The red line across the graph shows the calculated trend of the spam level.

Double up!

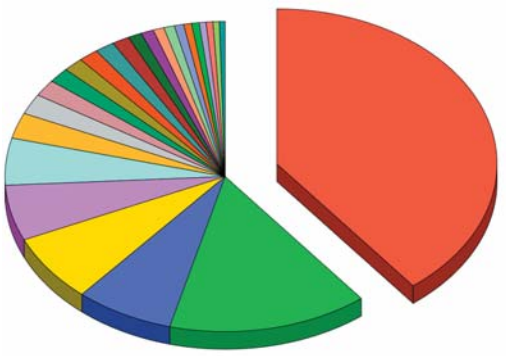
Towards the end of 2004 the spam percentage was 80% and since we started the year with approximately 40% spam, the spam has doubled during 2004! This is in accordance with the 58,5% average spam percentage for 2004 and also in accordance with our prediction of an average spam percentage in 2005 of 89,1%.

Cost: 26,5 million Euro

Imagine a spammail occupies 10 seconds of an average Internet users time. If an Internet user is paid 17,00 Euro per hour by his employer, the total of 560 million spammails would have cost 26.444.444 Euro.

Where does it come from?

Again this year we've made a list of the countries we've blocked most spam from. And again this year, USA tops the list and have pulled away from the rest with an impressive increase of approximately 9%! This occurs in 2004, the year of the CAN-SPAM act. Even a powerful legislation like the CAN-SPAM act cannot prevent the spammers from gaining territory! It is notable that Sweden, Norway and especially Denmark, has a much lower sender percentage in 2004 compared to 2003. We see this as a clear result of the ongoing effort by organisations like DK-CERT, who works hard trying to close every open relay spotted.



Graph showing legends for the top 25 spam sending countries.

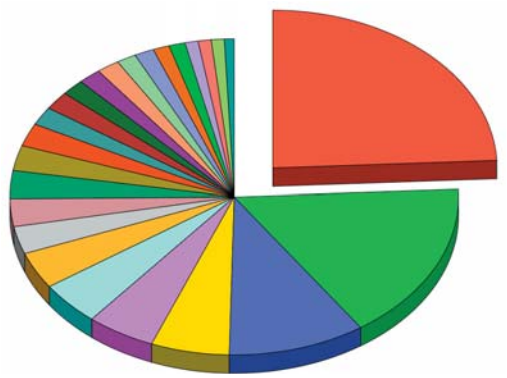
Top 25 spam sending countries

Country	2004	2003
USA	39,38%	30,63%
Unknown	14,66%	2,25%
Korea (South)	7,23%	4,91%
Denmark	7,04%	26,26%
China	5,79%	7,26%
Canada	4,89%	3,16%
Brazil	2,68%	2,84%
France	2,13%	1,23%
Germany	1,75%	1,47%
Great Britain (UK)	1,56%	1,58%
Sweden	1,48%	3,16%
Spain	1,45%	1,15%
Holland	1,44%	0,81%
Israel	1,26%	New
Mexico	1,01%	1,04%
Japan	0,94%	0,58%
Taiwan	0,79%	0,70%
Poland	0,79%	0,42%
Italy	0,68%	0,67%
Australia	0,59%	0,57%
Chile	0,55%	0,49%
Norway	0,50%	1,40%
Hong Kong	0,50%	0,51%
Argentina	0,46%	0,67%
Switzerland	0,43%	New

Important! To be on the list as a spam sending country, does not mean that the spam origins from that particular country. It means we received the spam from an IP address in that country.

Where does it come from?

This years Top 25 virus sending countries shows some amazing jumps in numbers. While countries like Sweden, Norway and Denmark have limited their virus spreading, it has gone the other way for countries like USA, China, France and Great Britain. Clearly, this is direct result of much more focus on e-mail security and less open relays in the particular country.
As more and more get Internet broadband access in countries like China, Poland, Russian Federation and Brazil, more get exposed to the virus phenomenon, thus the radical change in their virus sending percentage.



Graph showing legends for the top 25 virus sending countries.

Top 25 virus sending countries

Country	2004	2003
DK	24,24%	50,60%
USA	16,24%	3,26%
China	9,88%	0,57%
Norway	5,65%	24,01%
France	4,94%	0,33%
Great Britain (UK)	4,47%	0,98%
Germany	3,76%	1,30%
Spain	2,82%	0,26%
Poland	2,82%	0,16%
Sweden	2,82%	10,39%
Russian Federation	2,59%	0,18%
Brazil	2,35%	0,16%
Italy	1,88%	0,74%
Turkey	1,88%	New
Canada	1,65%	0,30%
Korea (South)	1,65%	0,16%
Holland	1,65%	0,35%
Australia	1,41%	0,39%
Finland	1,41%	0,39%
Egypt	1,18%	New
Hong Kong	1,18%	0,15%
Austria	0,94%	New
India	0,94%	0,14%
Malaysia	0,94%	New
Belgium	0,71%	0,12%

Important! To be on the list as a virus sending country, does not mean that the virus origins from that particular country. It means we received the virus from an IP address in that country.

Concluded

What will the year 2005 bring to the world of Internet security? We speculate the following:

The annual average virus percentage will increase from 9,8 to 16%. We do not believe it will increase with the same factor as the previous years. Should that be the case, the virus percentage will be 25,5%.

The annual average spam percentage will increase from 58,5 to 89,1%. This is the same increase factor as the previous year and we believe it will hold in 2005 as well.

Spyware will become a household problem, as everyone will experience the spyware problem firsthand. An anti-spyware software package will become as common as the anti-virus software package.

Phishing is a new term to most Scandinavians. The concept is invented to lure personal and/or account information (mostly from a bank or an Ebay account) from unknowning users. This is done by sending a mail which looks like a mail sent from a bank or from Ebay, requesting an information update. The problem has been increasing rapidly in the USA and has reached Europe in the middle of 2004. We predict an explosive increase of phishing attempts in 2005 and we'll help our customers battle the scammers by offering an anti-phishing product very soon.

Breakdown of 2004

Most active virus	Netsky.p
Most aggressive virus	Sober.i
Virus percentage in e-mail	9,8%
Spam percentage	58,5%

Top virus sending country	Denmark
Top spam sending country	USA
Total virus blocked	53.000.000
Total spam blocked	560.000.000

Virus percentage increase '03 -> '04	280%
Spam percentage increase '03 -> '04	52%
Virus percentage increase 2004	118%
Spam percentage increase 2004	53%