1 Quick Reference for VirScan Plus

Dipl.-Ing. Ralph Roth
Finkenweg 24, D 78658 Zimmern o. R.
rose_swe@gmx.net
http://come.to/rose_swe

1.1 Quick Reference

This is a short "**Quick Reference**" for English users that wish to evaluate the **VirScan Plus (VSP)** package.

1.2 Contents

1 QUICK REFERENCE FOR VIRSCAN PLUS 1

1.1 Quick Reference 1

1.2 Contents 3

1.3 What is a Computer Virus? 4

1.4 What is a Worm? 4

1.5 What is a Trojan horse? 4

2 VIRSCAN PLUS (VSP) 5

2.1 Synopsis 5

2.2 Requirements 5

2.3 Command line Options 5

2.4 Short Description of the Options 7

2.5 Environment Variable 8

2.6 Examples 8

3 CLEANING OF VIRUSES 8

4 TESTING THE SCANNER? 8

4.1 Suggested Options for Testing 9

4.1.1 File viruses 9

4.1.2 Boot viruses (on disks) 9

4.1.3 Limits 9

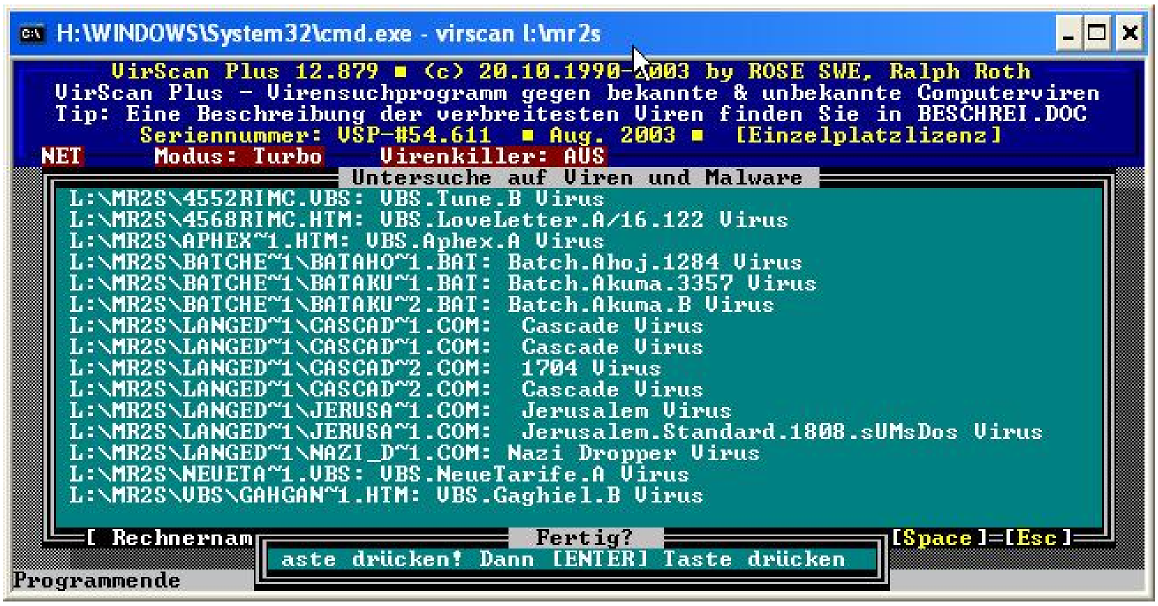
4.2 Bugs? 9

5 THE SHAREWARE- AND THE REGISTERED VERSION 10

6 INTEGRATED VIRUS SELF CHECKING 10

7 QUESTIONS? 11

8 LICENSE 11



```
        VirScan Plus 12.879 ■ (c) 20.10.1990-2003 by ROSE SWE, Ralph Roth
    VirScan Plus - Virensuchprogramm gegen bekannte & unbekannte Computerviren
    Tip: Eine Beschreibung der verbreitesten Viren finden Sie in BESCHREI.DOC
          Seriennummer: VSP-#54.611  ■ Aug. 2003 ■  [Einzelplatzlizenz]
  NET       Modus: Turbo    Virenkiller: AUS
                      Untersuche auf Viren und Malware
     L:\MR2S\4552RIMC.VBS: VBS.Tune.B Virus
     L:\MR2S\4568RIMC.HTM: VBS.LoveLetter.A/16.122 Virus
     L:\MR2S\APHEX~1.HTM: VBS.Aphex.A Virus
     L:\MR2S\BATCHE~1\BATAHO~1.BAT: Batch.Ahoj.1284 Virus
     L:\MR2S\BATCHE~1\BATAKU~1.BAT: Batch.Akuma.3357 Virus
     L:\MR2S\BATCHE~1\BATAKU~2.BAT: Batch.Akuma.B Virus
     L:\MR2S\LANGED~1\CASCAD~1.COM:  Cascade Virus
     L:\MR2S\LANGED~1\CASCAD~1.COM:  Cascade Virus
     L:\MR2S\LANGED~1\CASCAD~2.COM:  1704 Virus
     L:\MR2S\LANGED~1\CASCAD~2.COM:  Cascade Virus
     L:\MR2S\LANGED~1\JERUSA~1.COM:  Jerusalem Virus
     L:\MR2S\LANGED~1\JERUSA~1.COM:  Jerusalem.Standard.1808.sUMsDos Virus
     L:\MR2S\LANGED~1\NAZI_D~1.COM: Nazi Dropper Virus
     L:\MR2S\NEUETA~1.VBS: VBS.NeueTarife.A Virus
     L:\MR2S\VBS\GAHGAN~1.HTM: VBS.Gaghiel.B Virus

   [ Rechnernam             Fertig?                 [Space]=[Esc]
                 aste drücken! Dann [ENTER] Taste drücken
Programmende
```

Screen shoot of VSP scanning an infected directory

1.3 What is a Computer Virus?

A computer virus is a program that requires a host in order to make copies of it. Viruses may infect (copy to, and spread from) program files, programs in disk sectors (MNR and boot sectors), text files (scripts), and files that use macros. The ability to self-replicate distinguishes viruses from programs that do not, and this parasitic nature is neither an accident, nor a computer glitch. All viruses are created by people who know how to write computer programs.

1.4 What is a Worm?

As intranets and the Internet have grown in popularity, e-mail has evolved from a convenience to a necessity. Virus vandals know that, and they've invented new ways to use e-mail to spread viruses, and especially, worms. A worm program is similar to a virus. It is considered by some to be a subset of a virus in that it makes copies of itself but does so without needing to modify a host. Like viruses, worms may (or may not) do things other than replicate.

1.5 What is a Trojan horse?

Even though a Trojan horse is sometimes also called Trojan, it's more a Greek. The Greeks build the so-called 'Trojan horse' in the fight about Trojan to get into the town, so they are the real snoops. Trojan horse programs are named for the giant wooden horse that concealed Greek soldiers who used it to invade the ancient city of Troy. Like that famous trick, a Trojan horse program conceals hidden programming. The hidden function may just be a joke, or something annoying, but vandals often use Trojan horse programs to destroy other people's data, knowing that some people will run any program that has an interesting file name, or promises to perform a useful function.

A Trojan is a program that has gotten onto your machine without your knowledge and contains malicious code that would for example allows persons using another computer to connect to yours over a network. Typical Trojans are open to anyone trying to connect (any person on your local network or even the internet). Special Trojans are designed to make you machine accessible just to the person who infected your computer with the Trojan.

2 VirScan Plus (VSP)

2.1 Synopsis

VirScan Plus is a program to detect computer viruses, worms and Trojan Horses. VirScan Plus is both a very fast signature scanner and a so-called heuristic scanner.

Beside its blazing speed it has many configuration options. It can detect mutants of viruses; it can by-pass stealth type viruses as well as it will scan for Trojans, jokes, scripts viruses (VBS, HTML etc.), IRC worms, malware and dropper programs. VirScan Plus is able to disassemble and decrypt files using many advanced approaches and a software emulator. This generic detection, named heuristic analysis, is a technique that makes it possible to detect unknown viruses by searching for suspicious instruction sequences rather than relying on any signature. VirScan Plus is therefore able to detect suspicious instruction sequences and to detect yet unknown viruses!

2.2 Requirements

An Intel AT (80486 CPU or better), 540 KB of free memory and MS-DOS 6.0+ is enough (or FreeDOS 1.0, Caldera DOS 7.x)!

2.3 Command line Options

```
VIRSCAN
      DRIVE:\ [DRIVE:\]] [DIRECTORY] [/?] [/ALL] [/AUTO] [/BOOT]
      [/BATCH] [/CDROM] [/COLLECT] [/CONT] [/DEL] [/Directory]
      [/EXTR] [/Ffile.ext] [/HEUR] [/HILFE] [/IVT] [/JN]
      [/KILL] [/LAPTOP] [/LESEN] [/LOG[=]] [/MEMHI] [/MORE]
      [/MULTI] [/MEHR] [/MEM] [/MUTANT] [/NOMEM] [/NOPART]
      [/NOSIG] [/NOSCRIPT] [/NOTROJ] [/PRT] [/PROZ]
      [/Q] [/REG] [/REP]
      [/SHOWLOG] [/SICHER] [/SPEICHER] [/TURBOAUS] [/ULTRA]
      [/UNB] [/VL] [/WIN] [/ZEIT] [Search Mask]
```

Customers familiar with the American or UNIX parameter syntax (minus sign) instead of the slash (' / ') can also use the minus sign (' - ') to start an option..

```
Example: -Ivt is equivalent to /Ivt
```

⚠ Note: There must be at least one blank between the individual arguments! The arguments are not case sensitive. Options can be set using the environment variable VIRSCAN (set VIRSCAN=...). To unset an option set by setting VIRSCAN=... you can use the "-" at the end of the option (for example: set VIRSCAN=/auto -> VirScan a: -auto-).

2.4 Short Description of the Options

```
Option             Short Description
------             ------------------
/?                 Shows a short German help.
/ALL               Scan recursively ALL files (*.*). This option
                   must be used with caution, it will trigger
                   false positives!
/ANALYZE           Tries to determine the type of virus (COM/EXE/TSR)
/AUTO              Autopilot. Scans all drives, except disc drives
                   and CD-ROMs.
/BATCH             Batch mode, do not wait for a key press.
/BOOT              Scan files for boot viruses too. (Droppers)
/CDROM             The autopilot feature shall scan CD-ROM's too!
/COLL              Creates a report format suitable to generate a
                   virus collection (see also vspzoo.bat etc.).
/CONT              Continues scanning of specified drives. Ideal
                   for permanent background scans under Win or OS/2
/D.                Scan current directory. /D.. the parent dir.
/Dxx               Scan directory xx.
/DEL               Delete infected files. Unrecoverable!
/EXTR              Generates a virus search string (only in
                   registered version)
/H /HILFE          Load a quick reference in German language.
/HEUR              Use second level of the heuristic code analyzer.
                   Only recommended for virus experts (only in
                   registered version available)! Key files for
                   AV people doing testing are available.
/KILL              Kill virus if possible (see VIRSCAN.TXT for a
                   list of removable viruses).
/LAPTOP            Use B/W color.
/LESEN             Shows the file VIRSCAN.DOC.
/LOG               Log infected files to VIRSCAN.LOG
/LOG=path\file     Save report into specified file. /LOG:file
                   is also correct.
/MULTI /MORE /MEHR Scan multiple disc drives.
/MEM               Scan main memory (0-640 KB).
/MEMHI             Scan high memory too (640 - 1024 KB + A20).
/MUTANT            Relaxed scanning for mutated virus strains.
                   Warning: Many false positive alarms will occur!
/NOMEM             Skip 'Quick Memory Scan' features.
/NOPART            Skip checking of Partition and MBR
/NOSCRIPT          Skip checking for script viruses and IRC/VBS worms.
/NOSIG             Do not use signatures. Use only AVR modules
                   and the code analyzer.
/NOTROJ /NOTRJ     Skip scanning for Trojans and droppers (VBS).
/PR  /PRT  /PRN    Print report.
/PROZ              Show processor/co-processor type and CPU speed
/Q   /QUIET        Quiet mode (no sound).
/REP /REPORT       Log EVERY scanned file to VIRSCAN.LOG
/ULTRA             Faster scanning (approx. 70% detection).
/SHOWLOG           Shows the file VIRSCAN.LOG.
/SHOWKEY           Shows the registration information of your
                   key file ROSE.KEY.
/UNB               Scan for unknown generic viruses.
                   Better use option /HEUR
/VL                Make a virus list.
/VTC               Special predefined switch for anti virus testing.
/WIN               If you have problems using VSP under windows...
/ZEIT              don't report suspicious time/date (62 sec, year
                   2095, month: 15 or day: 0/32)
```

```
C:                  Scan drive  C:\  (recursively)
D:\XX               Scan directory D:\XX (recursively)
. (dot)             Scan all files in the CURRENT directory.
c:\dos\command.com scans a single file.
```

⚠ If some of the signature files (VIRSCAN.TRJ, VIRSCAN.ICR or VIRSCAN.WSM) are missing, then the options /NOTRJ, /NOVBS and /NOSCRIPT are set by the program automatically!

2.5 Environment Variable

```
e.g.:              set VIRSCAN=/auto /MEMHI /IVT -unb
or:                SET VIRSCAN=/Option /Option /Option ...
```

2.6 Examples

Maximum security:

```
      VirScan -auto -IVT -unb /boot
```

Scan multiple discs in drive A: and print the results:

```
      VirScan a: /MEHR /PRN
```

3 Cleaning of Viruses

⚠ VirScan cleaning abilities are limited. VSP can remove most of the viruses found in Germany as well as almost all Boot/MBR viruses. If you have encountered a virus VSP can not remove please send me this virus for programming a cleaner. With the VSP package you will find in the TOOLS subdirectory the following generic cleaners:

- RVK - ROSE VIRUS KILLER, generic cleaner for, even polymorph encrypted viruses infecting COM files.
- MBR-Kill, generic cleaner and immunisisier for boot viruses infecting your MBR.
- BootKill, generic cleaner for boot viruses infecting your discs. For system discs use the program SYS supplied with DOS! Please read the .DOC files first, before using the cleaners! Special cleaners are available, request the file RVIRKILL

4 Testing the Scanner?

Testing a virus scanner is not an easy task and should be only done by experts on a large virus collection!

⚠ VirScan Plus doesn't scan for boot viruses in files nor does it use its boot virus heuristic on files. If you want to test VirScan Plus against boot viruses you must use the option /BOOT to scan boot viruses too. Use also the option /ALL if your boot virus images have no standard extension (.BIN, .IMG, .BOO). Please remember than this option slows down the scanning speed. If you want to test the boot virus heuristic then you have to scan infected discs!

You can use then the option /HEUR to enable extra heuristic on boot sector viruses, which will catch all unencrypted boot viruses I have encountered!

Files with the extension .DOS, .IMG, .BIN and .BOO, as well as all scripts (e.g. .HTML or .VBS etc.) and IRC scripts (.INI etc) are scanned too.

Use the option /HEUR to test the heuristic abilities on file and boot viruses.

4.1 Suggested Options for Testing

4.1.1 File viruses

```
VirScan <directory> /log=c:\tmp\vtc.log /batch /boot /all /q /zeit /nomem
/unb /mutant
```

You can also use the option /VTC that sets all the major switches for a test environment (sets /BATCH, /BOOT, /ALL /Q, /ZEIT, /MUTANT & /NOMEM). If you want you can also add the option /heur to maximize the hitting rate!

```
VirScan <directory> /log=vtc.log /vtc
```

4.1.2 Boot viruses (on disks)

```
VirScan <drive:> /log=c:\tmp\vtc.log /q /nomem /unb /multi
```

or

```
VirScan <drive:> /log=vtc.log /vtc /multi
```

4.1.3 Limits

⚠ VirScan Plus is currently not able to scan inside archives (ARJ, ZIP and LHA etc.) as well as macros viruses!

4.2 Bugs?

⚠ This program can only handle filenames with at least 79 (67+12) char length (including paths) - this is a limitation of the DOS box! If you have longer filenames (Win 95/Win-NT supports 252 chars) you have to map your paths. Detection has been added for LAN-Manager, NetWare based networks and Microsoft compatible networks (e.g.: Gateway for Novell NetWare etc.) Under Novell NetWare this is an easy job, just take a look at MAP.EXE

⚠ VSP has problems with displaying the proper size of drives larger than 2 GB - this is a limitation from the old MS-DOS interrupts, that can only handle drives up to 2 GB (Int 21h, AH=36h - 2^32 * 512 bytes). Scanning is NOT affect from this MS-DOS limitation!

5 The Shareware- and the registered version

The difference between the shareware version and the registered version of VSP is: VSP registered has the options /HEUR and /EXTR enabled. The registered version doesn't have the shareware beg screens!

When registering you will get the newest version on disk with additionally tools and documentations (approx 2 MB unpacked), as well as the newest version of VSP. Beside that you are entitled to support (FAX; Email, Voice) and obtaining new releases for the half price.

6 Integrated virus self checking

The program contains an integrated checksum tester to alert the user on a possible virus infection. The checksum for the program can be found in the file with the extension „.XXX“. The checksum in the file as well as the main program must not be changed nor modified in any case! Otherwise, the main program regards itself being possibly infected by a virus (a virus still unknown to the program)!

The following features of the EXE-file are monitored and checked for modifications every time the program is executed:

- Checksum (CRC32) - If only one bit of the program is changed by a virus, the checksum will no longer match (own secure routine, according to ANSI X3.66 - CRC-Poly is: 0xDEBB20E3).
- File size - If a program becomes one or two KB longer, it is infected!
- Overlay size - If the program uses overlays („.OVR“).

⚠ I strongly recommend not making any changes to the EXE & XXX-file since the program will not run any more! The file with the extension „.XXX“ also contains the creation date and the standard MD5 checksum that can be checked with other tools like md5dir from ROSE SWE. Verifying the CRC32 checksum takes approx. 1 seconds (depending on computer type and hard disk drive). In to my opinion a passable effort! If the checksum is OK, the program is being executed. Otherwise a detailed error report with indications of possible error reasons will be displayed.

7 Questions?

Any suggestions, improvements, bugs or undetected viruses you found? Please write to the address found in the file ROSEBBS.TXT (contains full address, Email, PGP-key, FAX-number etc.) or visit our home page.

8 License

NOTICE TO USER: You should read the following terms and conditions carefully before using this software. Your use of this software indicates your full acceptance of this license agreement and warranty. BY INSTALLING THIS SOFTWARE YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.

The SOFTWARE is owned and copyrighted by ROSE SWE. Your license confers no title or ownership in the SOFTWARE and should not be construed as a sale of any right in the SOFTWARE.

No Warranty. The Software is being delivered to you AS IS and ROSE SWE makes no warranty as to its use or performance. ROSE SWE AND ITS SUPPLIERS DO NOT AND CANNOT WARRANT THE PERFORMANCE OR RESULTS YOU MAY OBTAIN BY USING THE SOFTWARE OR DOCUMENTATION. ROSE SWE AND ITS SUPPLIERS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AS TO NONINFRINGEMENT OF THIRD PARTY RIGHTS, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL ROSE SWE OR ITS SUPPLIERS BE LIABLE TO YOU FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES, INCLUDING ANY LOST PROFITS OR LOST SAVINGS, EVEN IF AN ROSE SWE REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR FOR ANY CLAIM BY ANY THIRD PARTY.

In short: This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. If you do NOT agree simply do NOT install this software!

/* the end */