

The Microsoft MSERT tool can find web shells related to the Exchange Server attack campaign

Microsoft has just released a new update to MSERT, which comes with the ability to detect web shells deployed in recent Exchange Server attacks.

Earlier on March 2, Microsoft publicly disclosed that up to four Exchange Server zero-day vulnerabilities were being abused in a large-scale attack against Outlook servers on the web (Outlook on the web. - OWA) was revealed. These four vulnerabilities are currently being tracked with identifiers CVE-2021-26855, CVE-2021-26857, CVE-2021-26858, and CVE-2021-27065, respectively.

Known as 'ProxyLogon', these flaws are being thoroughly exploited by Chinese-sponsored hacker groups to steal email messages, collect login credentials, and deploy web shells for access. access to a wide range of targeted intranet systems.

In making this offensive campaign public announcement, Microsoft also released updated signatures for Microsoft Defender to add the ability to detect unauthorized installed web shells by abusing zero vulnerabilities. -day above.

These web shells are detected by Microsoft Defender with the following specific information:

1. Exploit: Script / Exmann.A! Dha
2. Behavior: Win32 / Exmann.A
3. Backdoor: ASP / SecChecker.A
4. Backdoor: JS / Webshell
5. Trojan: JS / Chopper! Dha
6. Behavior: Win32 / DumpLsass.A! Attk
7. Backdoor: HTML / TwoFaceVar.B

For organizations that don't use Microsoft Defender, the Redmond company has added update signatures to their Microsoft Safety Scanner stand-alone tool to add the ability to find and remove web shells used in hacking campaigns. this work.

Microsoft Safety Scanner helps to remove web shell

Microsoft Safety Scanner, also known as Microsoft Emergency Response Assistant (MSERT), is a portable standalone anti-software tool that includes a Microsoft Defender signature to scan and remove detected malware

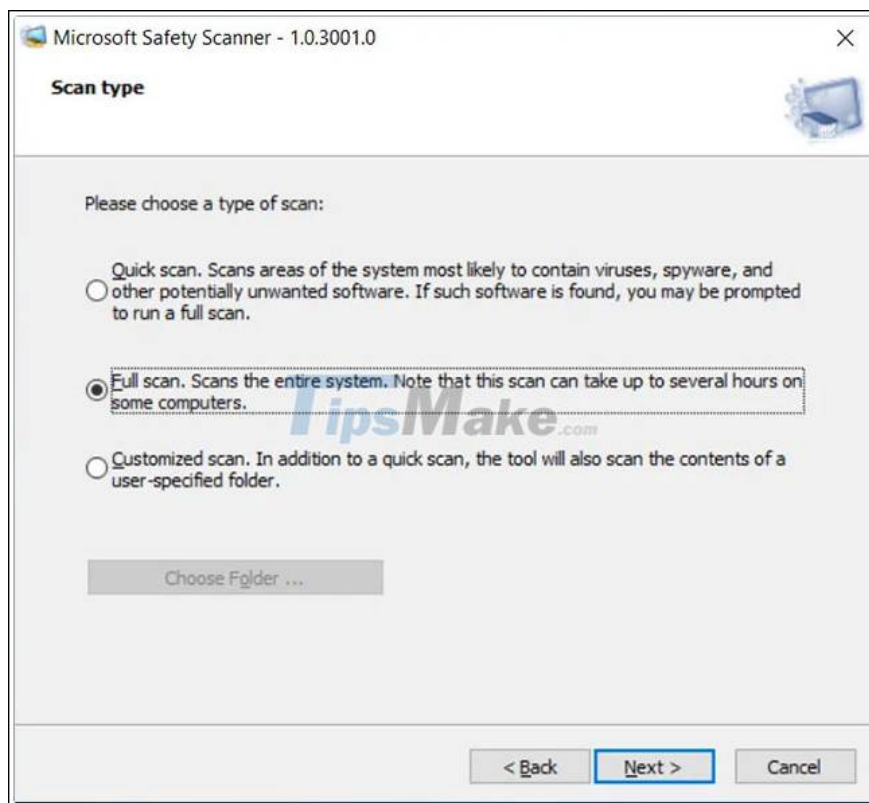
MSERT can be considered as an on-demand scanner and will not provide any real-time protection. Therefore, this tool should only be used for spot scanning and should not be considered as a standalone antivirus program.

Furthermore, MSERT will also automatically delete any detected files and not quarantine them if you don't start the program with the / N argument, as in `msert.exe / N`. To scan web shells and not delete them, you can also use the PowerShell script described at the end of the article.

The Microsoft Safety Scanner can be downloaded as a 32-bit or 64-bit executable and used to perform on-site scans when needed.

After launching the program, agree to the license agreements and you will be taken to a screen to choose a scan type.

Microsoft generally recommends that users choose the 'Full scan' option to scan the entire server.



Depending on the size of your installation, the full scan might take quite a while. Therefore, you can perform a 'Customized scan' of each important folder, such as:

1. % IIS installation path% `aspnet_client` *
2. % IIS installation path% `aspnet_clientsystem_web` *
3. % Exchange Server installation path% `FrontEndHttpProxyowaauth` *
4. Configured temporary ASP.NET files path
5. % Exchange Server Installation% `FrontEndHttpProxyecpauth` *

After the scan is finished, MSERT will report which files have been deleted and their specific names.



For more detailed information on which files have been deleted, you can refer to the file% SYSTEMROOT% debugmsert.log, as shown below.

```
+msert.log - Notepad2
File Edit View Settings I
100 Microsoft Safety Scanner v1.0, (build 1.331.2610.0)
101 Started On Sun Mar 07 12:13:18 2021
102
103 Extended Scan Results : C:\inetpub
104 -----
105 ->Scan ERROR: resource process://pid:104,ProcessStart:13259618322377604 (code 0x00000005 (5))
106 ->Scan ERROR: resource process:Microsoft Safety Scanner Finished On Sun Mar 07 12:17:51 2021
107
108
109 Return code: 0 (0x0)
110 Process://pid:400,ProcessStart:132596183401785758 (code 0x00000005 (5))
111 ->Scan ERROR: resource process://pid:476,ProcessStart:132596183487227333 (code 0x00000005 (5))
112 ->Scan ERROR: resource process://pid:500,ProcessStart:132596183487666157 (code 0x00000005 (5))
113 ->Scan ERROR: resource process://pid:620,ProcessStart:132596183500184949 (code 0x00000005 (5))
114 ->Scan ERROR: resource process://pid:2880,ProcessStart:132596183829902628 (code 0x00000005 (5))
115 ->Scan ERROR: resource process://pid:6924,ProcessStart:132596189922669348 (code 0x00000005 (5))
116 ->Scan ERROR: resource process://pid:1056,ProcessStart:132596190940653363 (code 0x00000005 (5))
117 ->Scan ERROR: resource process://pid:6924,ProcessStart:132596189922669348 (code 0x00000005 (5))
118 ->Scan ERROR: resource process://pid:1056,ProcessStart:132596190940653363 (code 0x00000005 (5))
119 ->Scan ERROR: resource process://pid:2880,ProcessStart:132596183829902628 (code 0x00000005 (5))
120 ->Scan ERROR: resource file://C:\pagefile.sys (code 0x00000021 (33))
121 ->Scan ERROR: resource file://C:\pagefile.sys (code 0x00000021 (33))
122 ->Scan ERROR: resource process://pid:2880,ProcessStart:132596183829902628 (code 0x00000005 (5))
123 ->Scan ERROR: resource process://pid:2880,ProcessStart:132596183829902628 (code 0x00000005 (5))
124 Threat detected: Backdoor:ASP/Chopper.F!dha
125 File://C:\inetpub\wwwroot\aspnet_client\AM8vog2c.asp
126 SigSeq: 0x00007429BFE376D3
127 SHA1: 6b4773521f3658477226e1937ed4c7da5020fb3
128
129 Extended Scan Removal Results
130 -----
131 Start 'remove' for file://\?C:\inetpub\wwwroot\aspnet_client\AM8vog2c.asp
132 Operation succeeded !
133
134
135 Results Summary:
136 -----
137 Found Backdoor:ASP/Chopper.F!dha and Removed!
138 Microsoft Safety Scanner Finished On Sun Mar 07 12:17:47 2021
139
140
141 Return code: 6 (0x6)
142
Ln 1:142 Col 1 Sel 0 7:08 KB ANSI CR-LF INS Default Text
```

Once you're done using MSERT, you can uninstall the tool by deleting the executable msert.exe.

PowerShell scripts support finding web shells

If you want to scan web shells without deleting them, you can use a new PowerShell script called `detector_webshells.ps1` created by Latvian CERT.

This script will display files containing specific strings used by web shell, but not Microsoft Exchange, in ProxyLogon attacks. The advantage of `detector_webshells.ps1` is that it will not delete the file and facilitate further analysis later.

```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\Administrator\Downloads>powershell .\detect_webshells.ps1
Found suspicious files (not used by Exchange, typical webshell location):

FullName                                     LastWriteTime
-----
C:\inetpub\wwwroot\aspnet_client\system_web\Tx2tWfMb.aspx 3/7/2021 11:46:07 AM

Server requires further examination to confirm the breach and determine it's extent
Consider sending malware (webshells and other) samples to cert@cert.lv for further
analysis

C:\Users\Administrator\Downloads>
```

You can find more information on how to use this script in the CERT-LV project's GitHub repository.

In addition, Microsoft has just released a PowerShell script called `Test-ProxyLogon.ps1`, which can be used to look for intrusion index (IOC) related to ProxyLogon attacks in log files. Exchange and OWA.

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