

ASEC REPORT

VOL.26 | 2012.03

AhnLab Monthly Security Report

1. Malicious Code Trend
2. Security Trend
3. Web Security Trend

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AhnLab

AhnLab Security Emergency response Center

ASEC (AhnLab Security Emergency Response Center) is a global security response group consisting of virus analysts and security experts. This monthly report is published by ASEC, and it focuses on the most significant security threats and the latest security technologies to guard against these threats. For further information about this report, please refer to AhnLab, Inc.'s homepage (www.ahnlab.com).

CONTENTS

SECURITY TREND – FEB. 2012

01. Malicious Code Trend

a. Malicious Code Statistics 05

- Top 20 Malicious Code Reports
- Top 20 Distributed Malicious Codes
- Top 20 New Malicious Code Reports
- Breakdown of Primary Malicious Code Types
- Monthly Breakdown of Primary Malicious Code Types
- Breakdown of New Malicious Code Types

b. Malicious Code Issues 11

- A malicious code that steals all document files on a PC
- Someone could be watching you. Webcam-activating malicious code
- Malicious script preying on vulnerabilities of modified MS12-004 discovered
- Online game hacking codes targeted at Windows Vista and Windows 7 discovered

c. Mobile Malicious Code Issues 16

- A Windows malicious code included in Android applications

02. Security Trend

a. Security Statistics 17

- Microsoft Security Updates – February 2012

03. Web Security Trend

a. Web Security Statistics 18

- Web Security Summary
- Monthly Blocked Malicious URLs
- Monthly Change in the Number of Reported Malicious Code Types
- Monthly Change in Domains with Malicious Code
- Monthly Change in URLs with Malicious Code
- Top Distributed Types of Malicious Code
- Top 10 Distributed Malicious Codes

b. Web Security Issues 21

- Feb. 2012 Malicious Code Intrusion: Website
- Top 10 malicious codes distributed via websites

1. SECURITY TREND – FEB. 2012

01. Malicious Code Trend a. Malicious Code Statistics

Top 20 Malicious Code Reports

Statistics collected by the ASEC show that 13,663,774 malicious codes were reported in February 2012. This is a decrease of 287,127 from the 13,950,901 reported in the previous month (Fig. 1-1). As with the previous month, JS/Agent was again the most reported malicious code this month, followed by Malware/Win32.generic and Trojan/Win32.adh, respectively. In addition, 5 new malicious codes were reported this month ([Table 1-1]).



[Fig. 1-1] Monthly Malicious Code Reports

Ranking	↑↓	Malicious Code	Reports	Percentage
1	—	JS/Agent	634,569	12.1%
2	▲4	Malware/Win32.generic	605,987	11.6%
3	—	Trojan/Win32.adh	515,485	9.8%
4	—	Trojan/Win32.Gen	476,930	9.1%
5	▲2	Trojan/Win32.fakeav	399,725	7.6%
6	▼1	Textimage/Autorun	373,495	7.1%
7	▼5	Trojan/Win32.hdc	372,184	7.1%
8	NEW	VBS/Agent	184,235	3.5%
9	NEW	Html/Downloader	176,299	3.4%
10	▼2	Adware/Win32.korad	173,314	3.3%
11	—	Win-Trojan/Agent.465408.T	162,671	3.1%
12	▼2	Trojan/Win32.agent	159,320	3.0%
13	NEW	Downloader/Win32.agent	151,895	2.9%
14	▼2	Trojan/Win32.genome	148,405	2.8%
15	NEW	Win-Adware/Korad.1038848	144,429	2.8%
16	—	Html/Iframe	120,890	2.4%
17	▲3	Backdoor/Win32.asper	116,878	2.3%
18	▲1	Packed/Win32.morphine	108,609	2.1%
19	NEW	Html/Agent	107,304	2.0%
20	▼5	ASD.PREVENTION	105,767	2.0%
			5,238,391	100.0%

[Table 1-1] Top 20 Malicious Code Reports

Top 20 Distributed Malicious Codes

The table below shows the percentage breakdown of the top 20 malicious code variants reported this month. For February 2012, Trojan/Win32 is the most reported malicious code, representing 29.1% (2,615,181 reports) of the top 20 malicious code variants, followed by Win-Trojan/Agent (786,315 reports) and Malware/Win32 (678,114 reports).

Ranking	↑↓	Malicious Code	Reports	Percentage
1	—	Trojan/Win32	2,615,181	29.1%
2	▲2	Win-Trojan/Agent	786,315	8.8%
3	▲3	Malware/Win32	678,114	7.5%
4	▲4	Win-Adware/Korad	653,582	7.3%
5	▼3	JS/Agent	635,895	7.1%
6	▼3	Adware/Win32	481,296	5.4%
7	▼2	Downloader/Win32	442,207	4.9%
8	▼1	Textimage/Autorun	373,568	4.2%
9	—	Win-Trojan/Downloader	336,090	3.7%
10	—	Win-Trojan/Onlinegamehack	308,737	3.4%
11	NEW	Win-Trojan/Korad	212,842	2.4%
12	▼1	Backdoor/Win32	209,213	2.3%
13	▼1	Win32/Virut	186,558	2.1%
14	NEW	VBS/Agent	184,236	2.1%
15	NEW	Html/Downloader	176,299	2.0%
16	▼3	Win32/Conficker	175,937	2.0%
17	▼2	Win32/Autorun.worm	135,790	1.5%
18	▼1	Win32/Kido	135,597	1.5%
19	▼1	Packed/Win32	134,559	1.4%
20	—	Html/Iframe	120,890	1.3%
			8,982,906	100.0%

[Table 1-2] Top 20 Distributed Malicious Codes

Top 20 New Malicious Code Reports

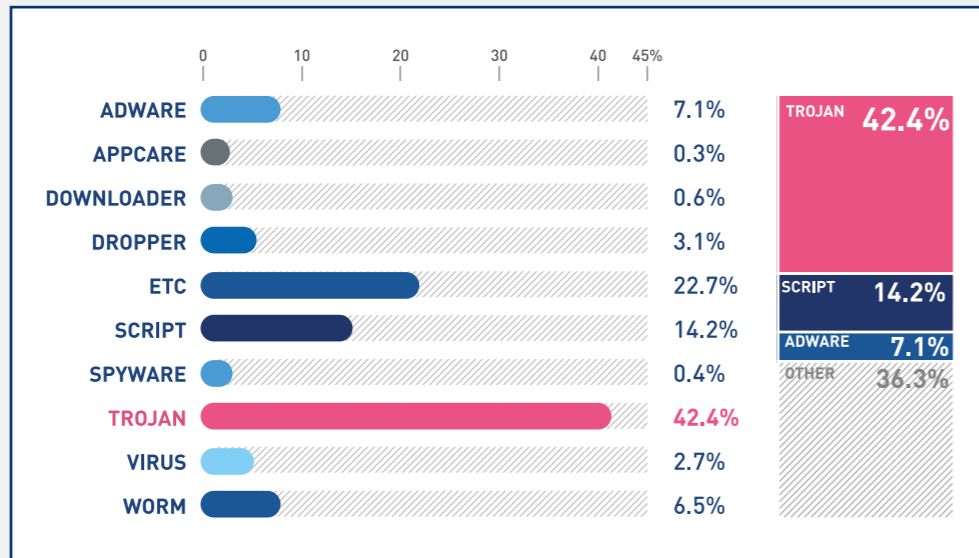
The table below shows the percentage breakdown of the top 20 new malicious codes reported this month. For February 2012, Win-Adware/KorAd.1038848 is the most reported new malicious code, representing 20% (144,429 reports) of the top 20 new malicious codes, followed by Win-Trojan/Korad.450560.C (54,806 reports).

Ranking	↑↓	Malicious Code	Reports	Percentage
1	—	Win-Adware/KorAd.1038848	144,429	20.0%
2	—	Win-Trojan/Korad.450560.C	54,806	7.6%
3	—	Win-Adware/KorAd.1491456	50,617	7.0%
4	—	Win-Adware/KorAd.1277440	41,880	5.8%
5	—	Win-Adware/Pop2Click.591872	39,984	5.5%
6	—	Win-Trojan/Agent.959536	37,382	5.2%
7	—	Win-Trojan/Korad.796160	35,776	5.0%
8	—	Win-Adware/KorAd.229376.E	33,735	4.7%
9	—	Win-Trojan/Korad.446464.B	33,320	4.6%
10	—	Win-Trojan/Agent.1738240.J	30,964	4.3%
11	—	Win-Trojan/Fakeav.797696.B	27,146	3.8%
12	—	Win-Adware/Shortcut.316928	26,772	3.7%
13	—	Win-Adware/KorAd.454656.J	24,315	3.4%
14	—	Win-Trojan/Agent.416880	22,681	3.1%
15	—	Win-Adware/KorAd.417280	20,823	2.9%
16	—	Win-Trojan/Startpage.871016	20,761	2.9%
17	—	Win-Trojan/Agent.2008340.B	20,467	2.8%
18	—	Win-Trojan/Agent.946256	20,388	2.8%
19	—	Win-Adware/KorAd.61440	18,167	2.5%
20	—	Win-Trojan/Korad.458752.C	17,851	2.4%
			722,264	100.0%

[Table 1-3] Top 20 New Malicious Code Reports

Breakdown of Primary Malicious Code Types

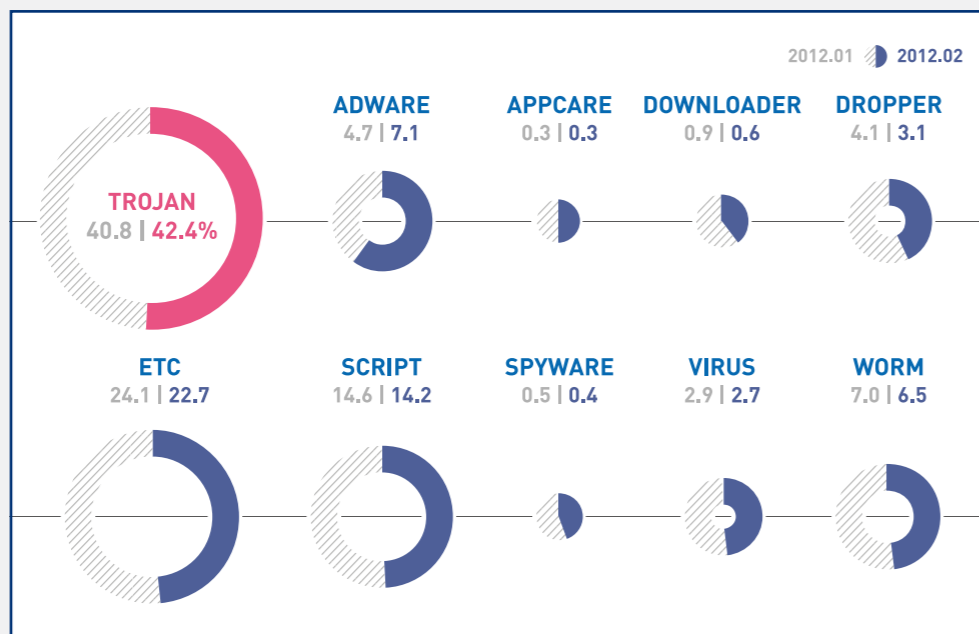
The chart below categorizes the top malicious codes reported this month. For February 2012, Trojan is the most reported malicious code, representing 42.4% of the top reported malicious codes, followed by script (14.2%) and adware (7.1%).



[Fig. 1-2] Breakdown of Primary Malicious Code Types

Monthly Breakdown of Primary Malicious Code Types

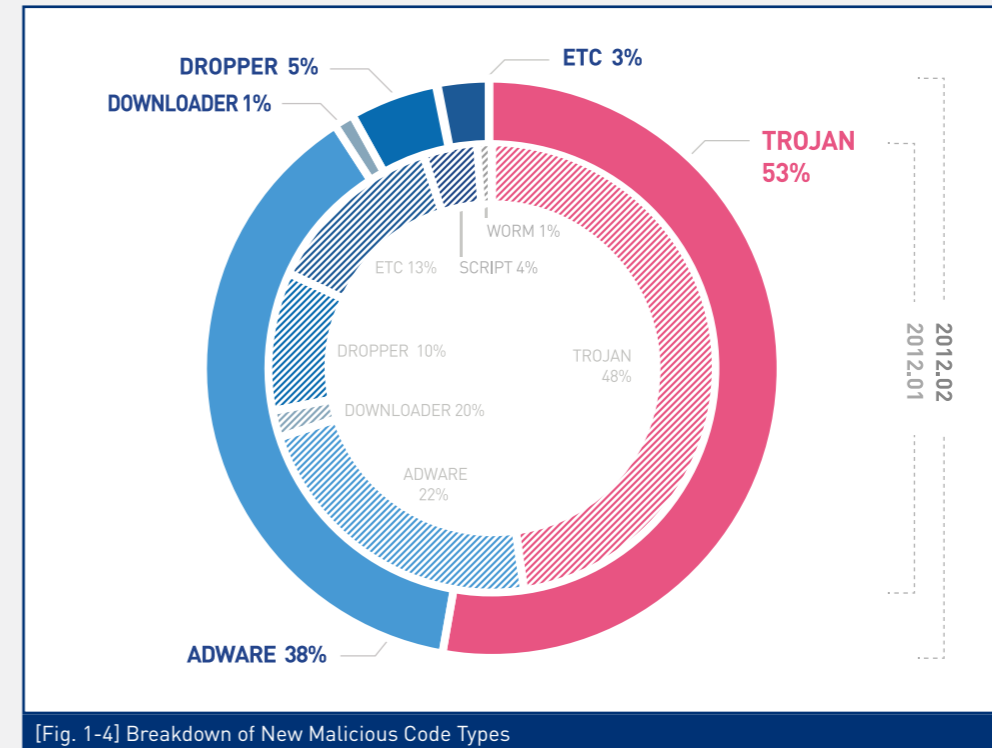
Fig. 1-3 represents the comparison of this month's malicious codes with those of last month. Compared to last month, the number of Trojan and adware increased, whereas the number of script, worm, dropper, virus, downloader and spyware decreased. The number of appcare is similar to that of the previous month.



[Fig. 1-3] Monthly Breakdown of Primary Malicious Code Types (Feb. 2012 vs. Jan. 2012)

Breakdown of New Malicious Code Types

For February 2011, Trojan is the most reported new malicious code, representing 53% of the top reported new malicious codes, followed by adware (38%) and dropper (5%).



[Fig. 1-4] Breakdown of New Malicious Code Types

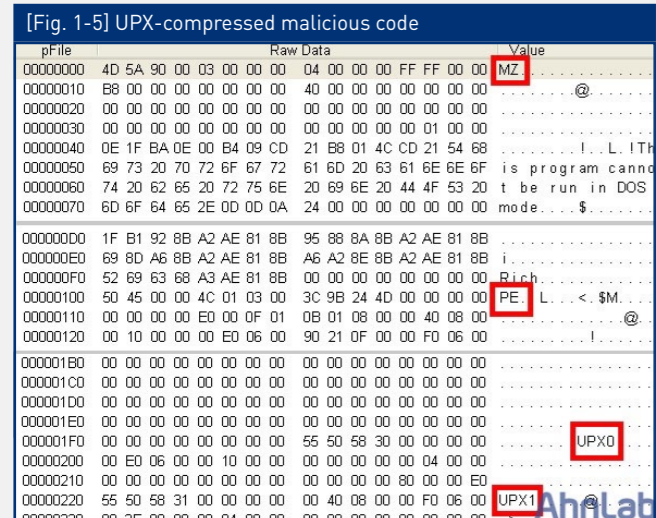
01. Malicious Code Trend b. Malicious Code Issues

A malicious code that steals all document files on a PC

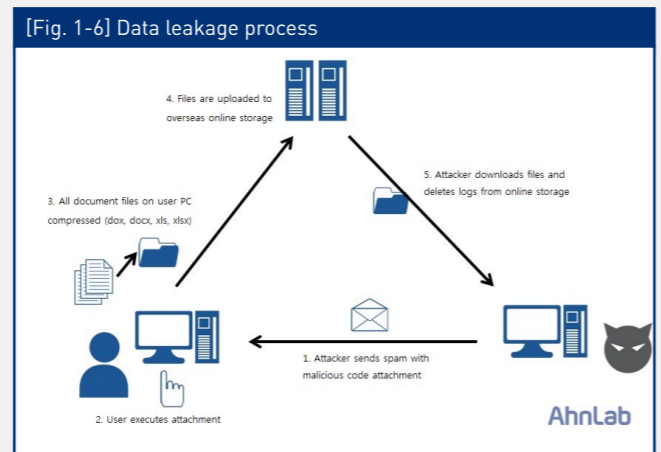
A malicious code disguised as a FedEx invoice e-mail that steals all MS Word files (doc, docx) and MS Excel files (xls, xlsx) on a victim's PC has been reported. The e-mail is sent with the subject "Your package is available for pickup.NO#8248." While home users in Korea are not at great risk from this malicious code as e-mail written in foreign languages is identified as spam, users who send and receive high volumes of e-mail in English at work and those who frequently use FedEx international freight service should exercise caution.

There have been other cases of malicious codes distributed via a fake logistics service e-mail in the past. The names of well-known global logistics service providers such as DHL, UPS and FedEx have been used to distribute rogue anti-viruses.

The name of the malicious code attached to the fake FedEx e-mail is FedEx_Invoice.exe. If the file is executed, a malicious executable file with a "txt" extension deceives the user into thinking that it is a safe and legitimate file. As seen in Fig. 1-5, it has been compressed more than 2 times using UPX to make analysis difficult.



When the user executes the attached file, all MS Word and Excel files on the PC are compressed and uploaded to online storage overseas. The online storage is run by a company called Sen****ce, a legitimate online storage service provider.



When the malicious code is executed, it searches the entire computer to find document files. The document files found are then saved as a .zip file with a random name in c:\Documents and Settings\Administrator\Local Settings\Temp. Fig. 1-7 shows the .zip file of the stolen document files generated when the malicious code is executed.

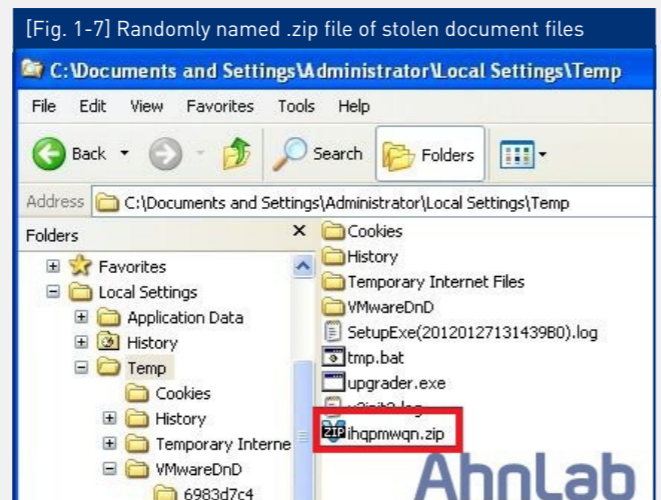
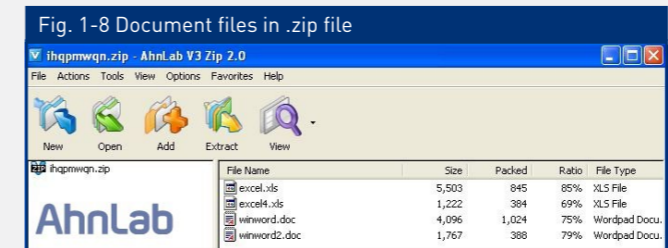


Fig. 1-8 shows a list of the folders and files in the .zip file. Note that document files in divided disks' partitions and additional disk drives (including external disk drives) are also included.



Once the document files are compressed, a transmission log is left on a server as shown in Fig. 1-9 before the compressed document files are sent to the online storage. It is speculated that a transmission log is created to notify the attacker that the user's PC has been attacked and to collect statistics.

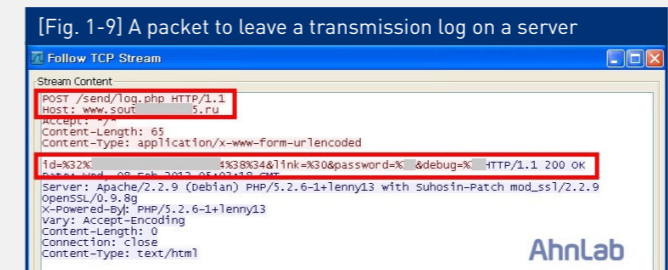
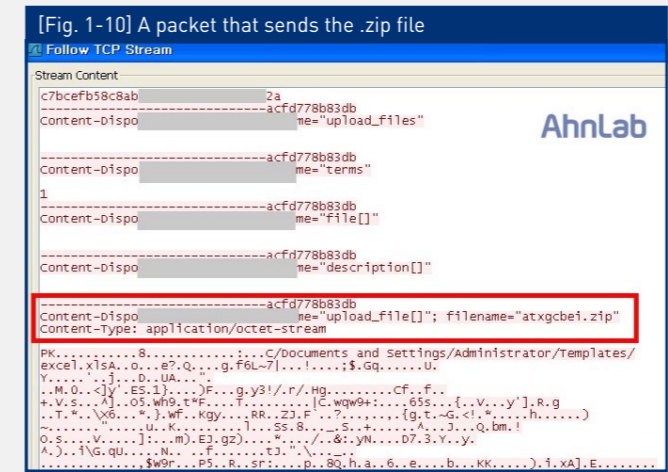
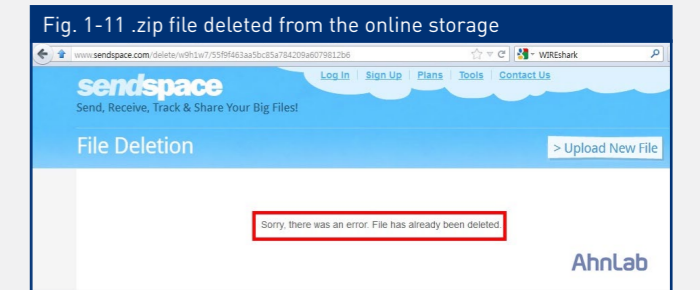


Fig. 1-10 shows a packet that sends the .zip file. This malicious code performs searching, compressing and sending of document files. The malicious code creator can be assumed to have a good understanding of the file upload/download structure of the online storage provider used in this attack.



When connection to the upload address identified through analyzing the transmission packet is attempted, a message saying that the file has been deleted and cannot be found is shown in Fig. 1-11. It is speculated that this is due to the stolen

file's deletion from the online storage after being downloaded by the attacker.



The majority of computer users store most document files on their work PCs. Also, many users do not password-lock document files, so they are vulnerable to data leakage attack via junk mail, messaging, social engineering, and malicious code infection.

This malicious code is different from the form of APT (Advanced Persistent Threat) attack which has increasingly become an issue for many organizations. APT attacks are focused on specific targets and APT attackers patiently coordinate the efforts of identifying and exploiting existing vulnerabilities to penetrate the target organization's network. Conversely, this newly discovered malicious code is sent to random people, and steals all document files on victims' PCs.

- Spyware/Win32.Zbot (2012.02.07.03)
- Trojan/Win32.Gen (2012.02.14.00)

8 ways to keep your computer free from malicious codes

1. Use a trustworthy anti-spam program to filter out spam /junk mail.
2. Don't open an e-mail from an unknown sender or with a suspicious subject; delete it.
3. Update anti-virus programs to the latest version and use real-time protection.
4. Don't execute files attached to incoming e-mail immediately. Execute them after scanning with an anti-virus program.
5. Don't click on suspicious website links included in e-mail.
6. Install all latest security updates for Windows, IE and MS Office.
7. Don't store important document files on PCs.
8. Develop a habit of password-locking important document files.

Someone could be watching you. Webcam-activating malicious code

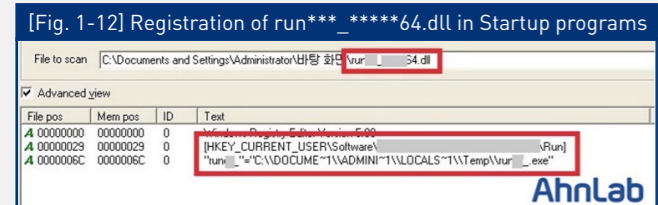
What if you were being watched and you didn't know about it? Indeed, it is an alarming thought. A malicious code that spies on the user of an infected PC through a connected webcam has been discovered. Unlike malicious codes that steal data or interfere with system operation, this malicious code poses a grievous threat to the privacy of victims.

The malicious code then tries to connect to a server located in Russia; it seems to have originated from Russia. No reports of this malicious code have been made in Korea as of yet. However, users of foreign websites are advised to take precautions.

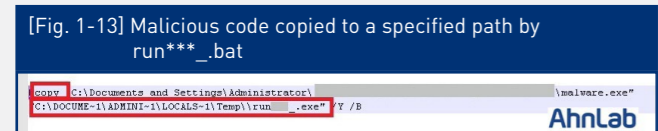
When infected, it creates additional files in the following location:

```
C:\Documents and Settings\Administrator\Local Settings\Temp\  
Run***_****64.dll, run***_exe, run***_log, run***_dllsid, run***_bat
```

"run***_64.dll" has a command in the registry for adding itself to Startup programs. While its extension is dll, it is actually a .txt file. Once registered in startup, the malicious code will be executed every time Windows starts up.



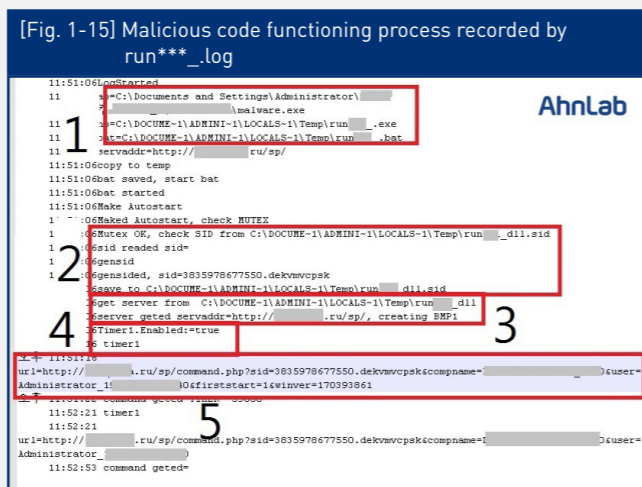
"run***_bat" copies the initially executed malicious code to the path C:\Documents and Settings\Administrator\Local Settings\Temp\.



The "run***_dllsid" file saves a randomly generated character string to identify an infected PC.



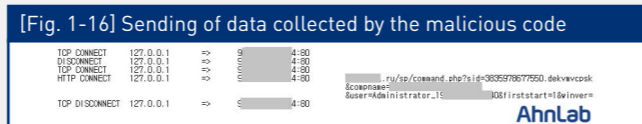
The run***_log file generates log files recording the activities of the malware.



The following is the functioning process recorded in the log file.

- Malicious code is copied to C:\Documents and Settings\Administrator\Temp\
- Identifier of infected PC is generated and saved as a file
- Target server (for sending captured images to) is specified and captured images are saved as BMP files
- Timer set (59000ms = 1 minute)
- Infected PC's OS version, user name, PC name and SID data are sent to a designated server
- Stay undetected and get the next command from the server

Fig. 1-15 shows the server URL with the domain .ru, which represents Russia. The network is connected to the malicious code server and data is sent at 1-minute intervals.



In summary, this malicious code takes a photograph every 1 minute using a webcam connected to the user's PC, saves it as a BMP file and then sends it to the code writer along with the PC data.

The activity of malicious codes is no longer limited to user account data stealing (online game hacking) or bank account information stealing (phishing). Malicious codes are continuing to evolve and now there are Trojan horses that can literally peek into your private life. Users must guard against malicious codes to prevent their privacy from becoming seriously jeopardized. To guard against such malicious codes:

1. Update anti-virus programs to the latest version.
2. If you're a Windows XP user, install the latest service pack and

- all security updates.
3. Use IE 8.0 or a higher version or another browser.
4. Regularly scan PCs for malicious codes.
5. Disable laptop webcams in System Settings when not used.
6. Disconnect webcams from PCs when not used.

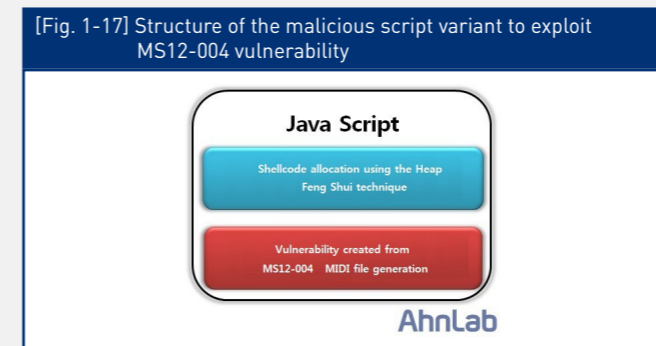
V3 detects this malicious code as:

- Win-Trojan/Backdoor.762880 (2012.02.21.00)

Malicious script preying on vulnerabilities of modified MS12-004 discovered

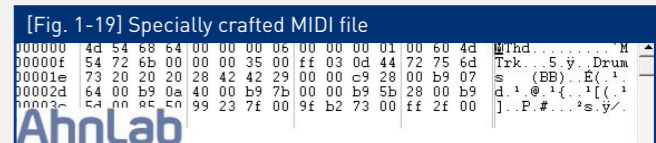
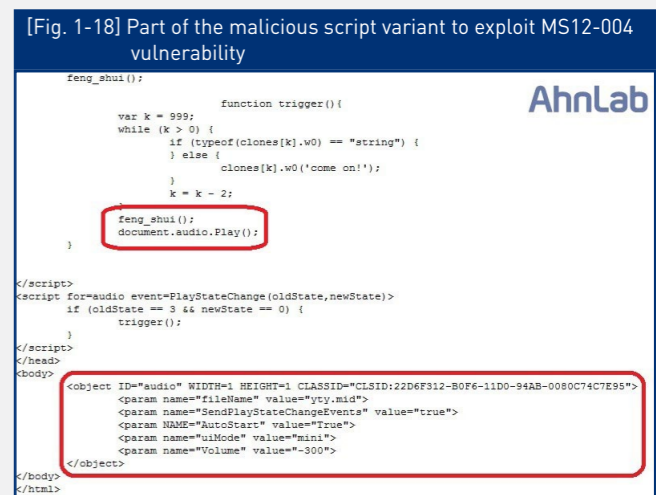
The ASEC discovered the distribution of a malicious code that takes advantage of MS12-004 Windows media vulnerability (CVE-2012-0003) on January 27, 2012. In turn, Microsoft announced that the vulnerability can be removed by the security patch distributed on January 11, 2012. It is speculated that this malicious code has been distributed in Far East Asia, including Korea and China, with online gaming data as the target.

On February 2, 2012, a variant of malicious script that takes advantage of MS12-004 vulnerability by using a technique called "Heap Feng Shui" was discovered on a Korean website. This malicious script is estimated to have been distributed on January 30, 2012. Its structure is shown in Fig. 1-17.



Heap Feng Shui is a technique first announced by Black Hat Europe in 2007. It manipulates the heap space on the browser through sequential Java Script allocation.

The script is designed to call file yty.mid, but the actual attacks would not have been successful as the MIDI file is damaged as shown in Fig. 1-19.



The shellcode of this malicious code downloads and executes i.exe (20,480 bytes) from a system located in Korea. The i.exe was created using Visual Basic and steals user data of certain online games made in Korea and reads certain ASP files.

72 variants of malicious scripts exploiting MS12-004 vulnerability were detected by V3 over the weekend. As such, distribution of this malicious code is expected to continue along with other online game-related malicious codes. Users must install the latest Windows security patch to guard against such malicious codes.

V3 detects this malicious code as:

- Downloader/Win32.Small
- HTML/Ms12-004
- Exploit/Ms12-004
- JS/Redirector
- SWF/Cve-2011-2140
- JS/Cve-2010-0806

Online game hacking codes targeted at Windows Vista and Windows 7 discovered

An online game hacking code targeted at Windows Vista and Windows 7 users has been discovered. Up until now, most online game hacking codes were targeted at Windows XP users, but this newly discovered online game hacking code identifies the OS of a target PC and attacks in a way specifically designed for a particular OS.

1. Windows XP

With Windows XP, C:\Windows\System32\ws2help.dll continues to be changed to a malicious file. Once the malicious code functions, the original file name under the path C:\Windows\System32 is changed to ws2helpXP.dll or ws2help.dll.[random]. tmp and malicious file ws2help.dll is created.



2. Windows Vista or Windows 7

This malicious code generates himym.dll under C:\Windows\System32\ on Windows Vista or Windows 7. However, system file modification or deletion identified on Windows XP was not found.

This malicious code can be detected and treated using the following removal provided by AhnLab.

<Download V3 GameHack Kill Removal>

<http://www.ahnlab.com/kr/site/download/vacc/vaccView.do?seq=105>

As this malicious code is distributed through websites, security updates are to be installed immediately upon release to prevent infection.

Adobe Flash Player Update: <http://asec.ahnlab.com/728>

Windows Security Update: <http://asec.ahnlab.com/221>

Java Update: <http://asec.ahnlab.com/758>

V3 detects this malicious code as:

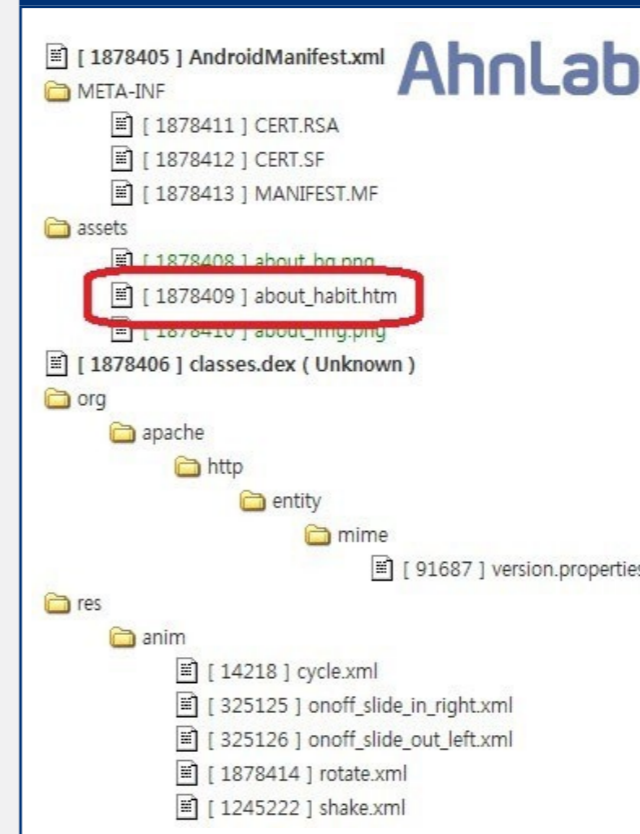
- Win-Trojan/Patched.64000.B (2012.02.26.00)
- Win-Trojan/Patcher.135680 (2012.02.26.00)
- Win-Trojan/Patcher.133632 (2012.02.27.00)

01. Malicious Code Trend c. Mobile Malicious Code Issues

A Windows malicious code included in Android applications

On February 3, 2012, the ASEC discovered a Windows malicious code in certain Android applications. These Android apps have the structure shown in Fig. 1-21. Script file about_habit.htm (123,196 bytes), marked in red, was found inside.

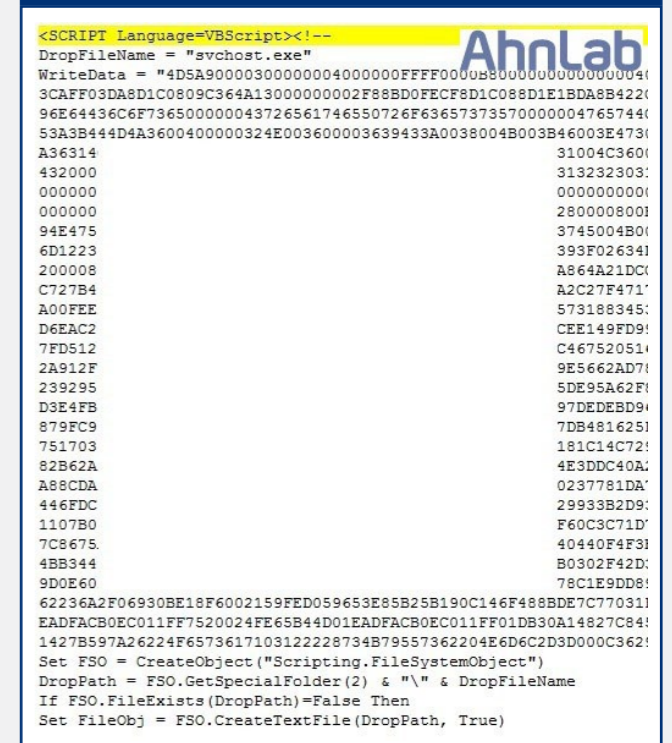
[Fig. 1-21] Visual basic script found inside an Android application



This about_habit.htm is not a general HTML file, but a visual basic script with the following structure.

This visual basic script file is named svchost.exe (61,357 bytes) and generates and executes malicious codes that function on Windows OS. However, it cannot function on Android OS and

[Fig. 1-22] Visual basic script for generating malicious codes



none of the application's internal codes have been designed to use the script in external memory.

As such, it is speculated that this visual basic script file was accidentally included during application development.

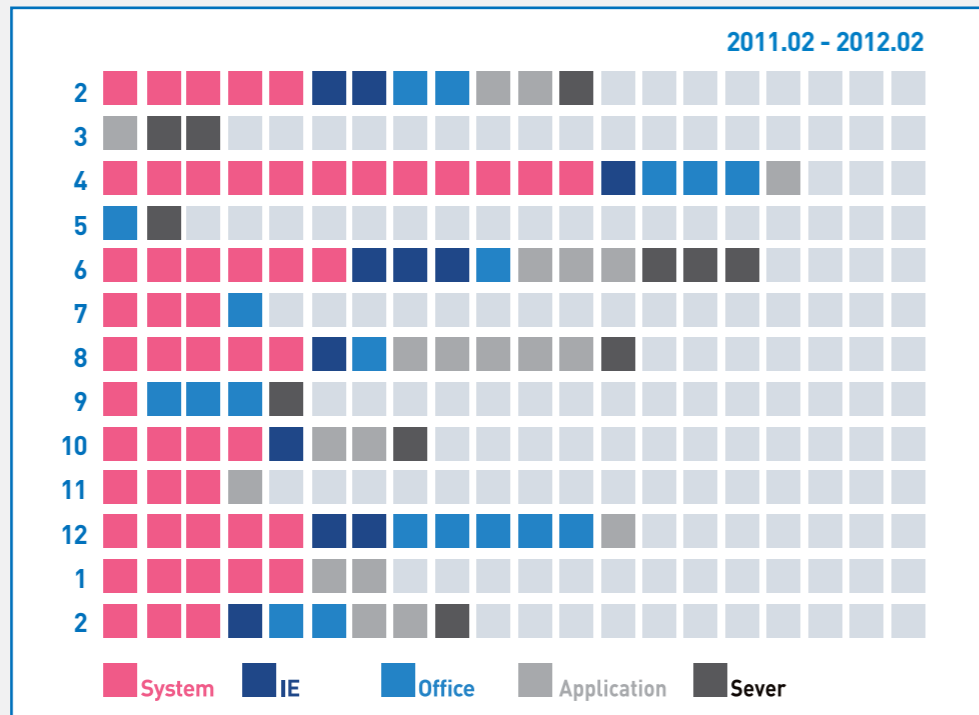
V3 detects this malicious code as:

- VBS/Agent
- Win-Trojan/Krap.61357

02. Security Trend
a. Security Statistics

Microsoft Security Updates – February 2012

Microsoft issued 9 security updates this month (4 critical and 5 important). The security update released this month comprehensively addresses the vulnerabilities of Internet Explorer and Windows. Also included is MS12-013, a patch for vulnerabilities in C Runtime Library.



[Fig. 2-1] MS Security Updates

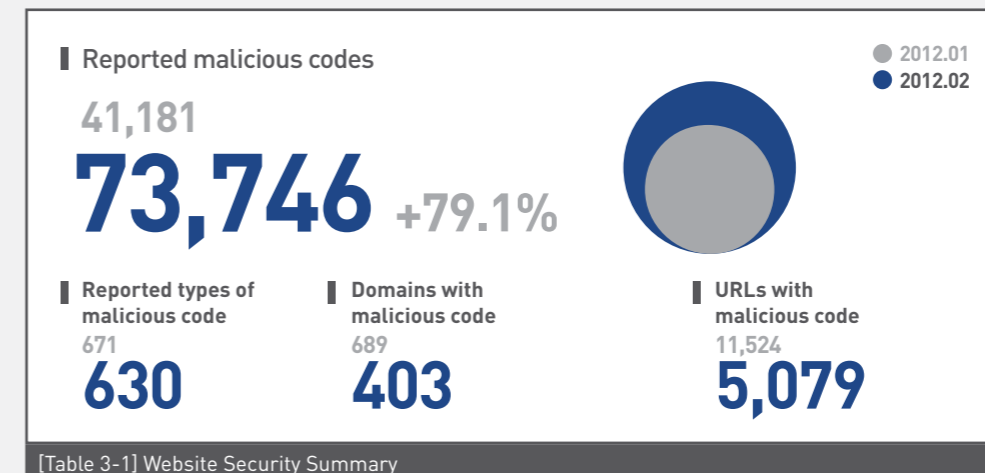
Severity	Vulnerability
Critical	Vulnerability in Windows kernel-mode drivers could allow remote code execution [2660465]
Critical	Cumulative Security Update for Internet Explorer [2647516]
Critical	Vulnerability in C Runtime Library could allow remote code execution [2654428]
Important	Vulnerability in Ancillary Function Driver could allow elevation of privilege [2645640]
Important	Vulnerability in Indeo Codec could allow remote code execution [2661637]
Critical	Vulnerability in .NET Framework and Microsoft Silverlight could allow remote code execution [2651026]
Important	Vulnerability in Color control panel could allow remote code execution [2643719]

[Table 2-1] MS Security Updates for Feb, 2012

03. Web Security Trend
a. Web Security Statistics

Website Security Summary

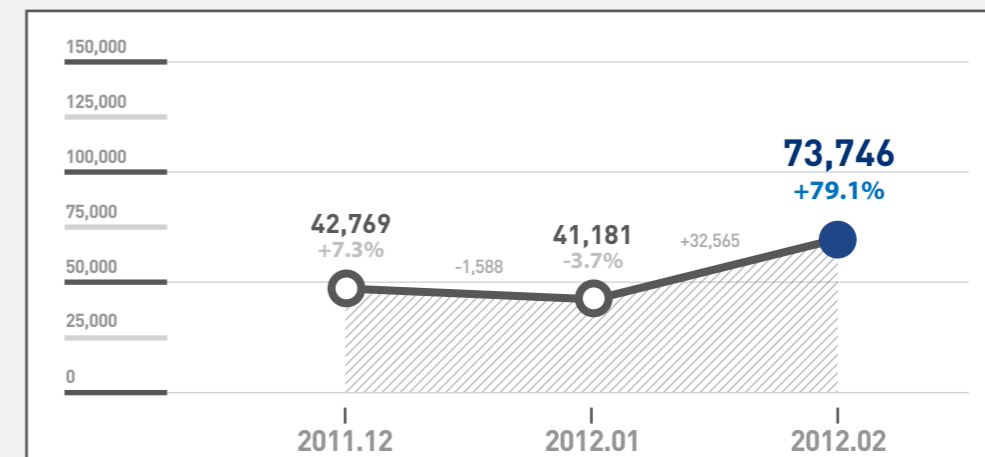
This month, SiteGuard (AhnLab's web browser security service) blocked 73,746 websites that distributed malicious codes. 630 types of malicious code, 403 domains with malicious code and 5,079 URLs with malicious code were found. The numbers of reported types of malicious code and domains and URLs with malicious code decreased from last month, but the number of reported malicious codes increased.



[Table 3-1] Website Security Summary

Monthly Change in Blocked Malicious URLs

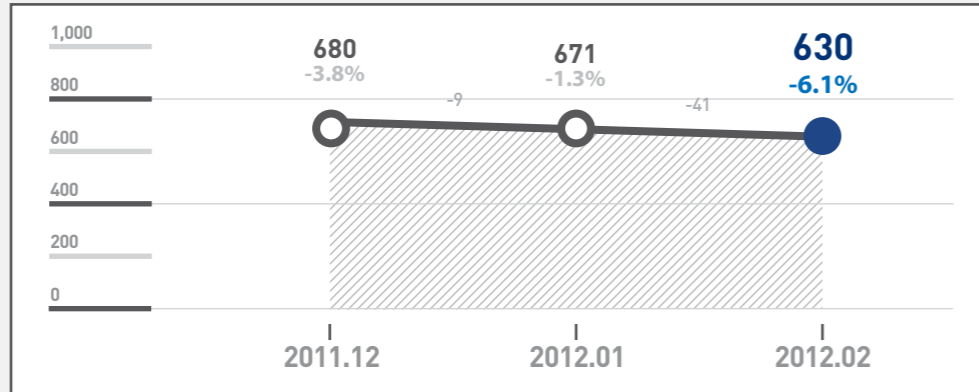
For February 2012, the number of reported blocked malicious URLs increased 79% from 41,181 the previous month to 73,746.



[Fig. 3-1] Monthly Change in Blocked Malicious URLs

Monthly Change in the Number of Reported Malicious Code Types

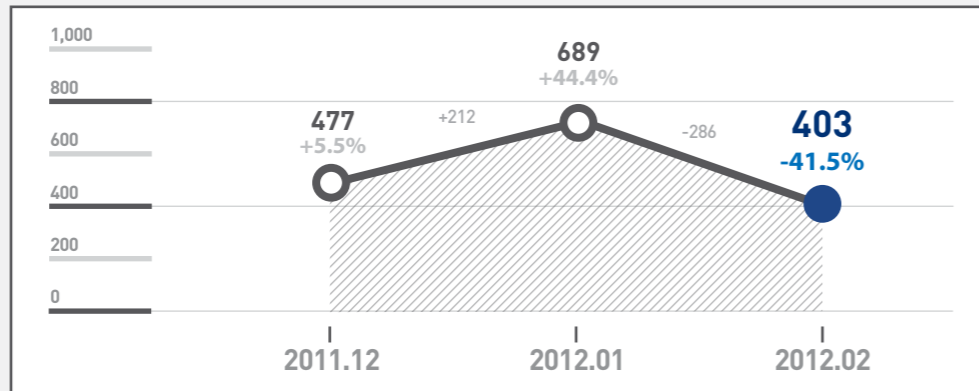
For February 2012, the number of reported types of malicious code decreased 6% from 671 the previous month to 630.



[Fig. 3-2] Monthly Change in the Number of Reported Malicious Code Types

Monthly Change in Domains with Malicious Code

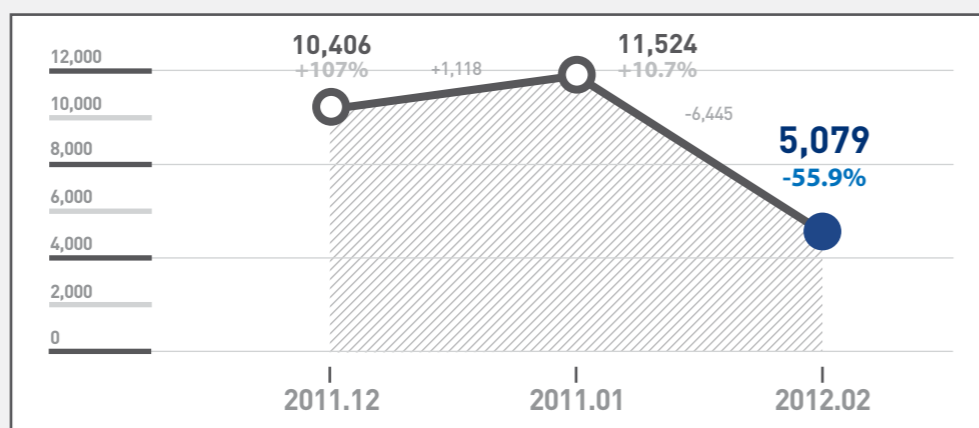
403 domains were found with malicious codes in February 2012, a 42% fall from the 689 found in the previous month.



[Fig. 3-3] Monthly Change in Domains with Malicious Code

Monthly Change in URLs with Malicious Code

For February 2012, the number of reported URLs with malicious code decreased 56% from 11,524 the previous month to 5,079.



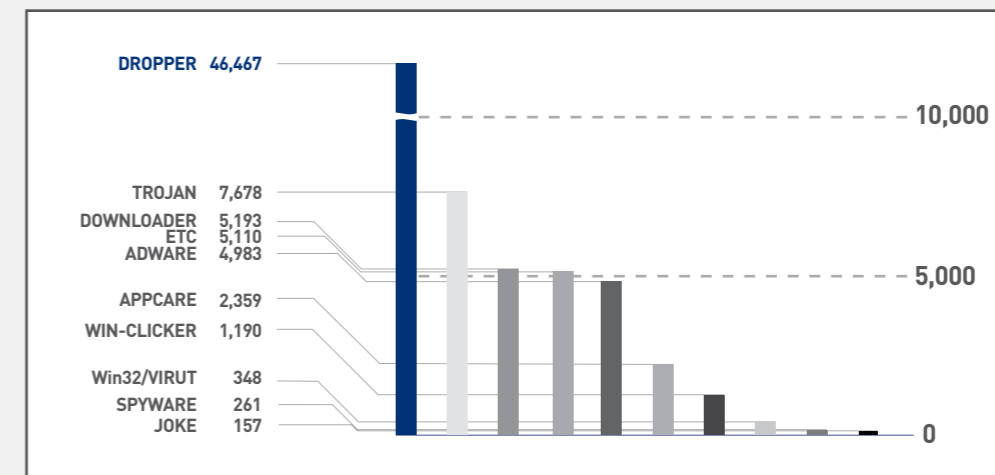
[Fig. 3-4] Monthly Change in URLs with Malicious Code

Top Distributed Types of Malicious Code

For February 2012, dropper is the top distributed type of malicious code, with 46,467 (63%) cases reported, followed by Trojan, with 7,678 (10.4%) cases reported.

TYPE	Reports	Percentage
DROPPER	46,467	63.0%
TROJAN	7,678	10.4%
DOWNLOADER	5,193	7.0%
ADWARE	4,983	6.8%
APPCARE	2,359	3.2%
WIN-CLICKER	1,190	1.6%
Win32/VIRUT	348	0.5%
SPYWARE	261	0.4%
JOKE	157	0.2%
ETC	5,110	6.9%
	73,746	100.0%

[Table 3-2] Top Distributed Types of Malicious Code



[Fig. 3-5] Top Distributed Types of Malicious Code

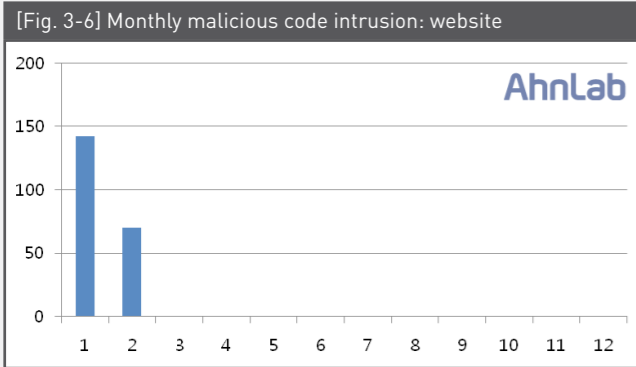
Top 10 Distributed Malicious Codes

Ranking	↑↓	Malicious Code	Reports	Percentage
1	NEW	Win-Dropper/KorAd.2008816	44,877	77.8%
2	▲1	Downloader/Win32.Korad	2,403	4.2%
3	▲2	Win-AppCare/WinKeyfinder.973512	2,143	3.7%
4	▲2	Adware/Win32.KorAd	2,141	3.7%
5	▼1	Downloader/Win32.Totoran	1,592	2.8%
6	NEW	Win-Clicker/Agent.22528.B	1,190	2.1%
7	NEW	Trojan/Win32.HDC	980	1.7%
8	NEW	Win-Adware/ToolBar.Cashon.308224	924	1.6%
9	▼7	Downloader/Win32.Genome	839	1.5%
10	▼2	Win-Trojan/Buzus.430080.J	594	0.9%
			57,683	100.0%

[Table 3-3] Top 10 Distributed Malicious Codes

03. Web Security Trend
b. Web Security Issues

Feb. 2012 Malicious Code Intrusion: Website



The chart above shows the number of websites intruded to distribute malicious codes. It is speculated that a reduction in external attacks, with a national holiday having fallen over a weekend, is the reason for the number falling by one half.

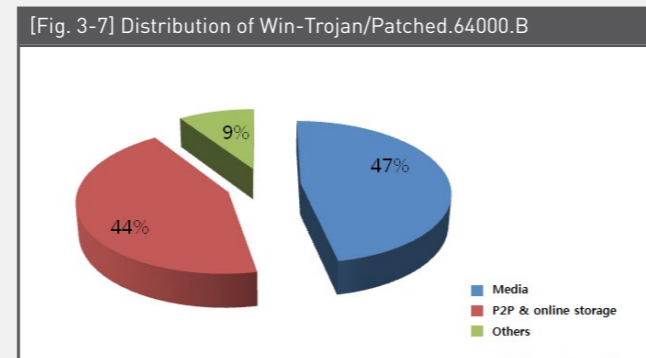
Top 10 malicious codes distributed via websites

[Table 3-4] Top 10 malicious codes distributed via websites

Ranking	Threat	URL
1	Win-Trojan/Patched.64000.B	32
2	Win-Trojan/Onlinegamehack.61440.DI	25
3	Win-Trojan/Onlinegamehack.61440.DH	24
4	Win-Trojan/Patcher.135680	24
5	Dropper/Onlinegamehack.85360	16
6	Win-Trojan/Onlinegamehack.51244	15
7	Win-Trojan/Onlinegamehack.35672.B	15
8	Dropper/Onlinegamehack.86056	15
9	Win-Trojan/Patched.64512.B	13
10	Win-Trojan/Onlinegamehack.139264.CV	11

The table above shows the top 10 malicious codes distributed via websites this month. As with the previous month, online game hacking Trojan horses were the most prevalent. Win-Trojan/Patched.64000.B is the most reported malicious code, distributed via 32 compromised websites.

As for the types of site, distribution via media websites is the most reported, followed by distribution via P2P, online storage and others, as shown below.



VOL. 26
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