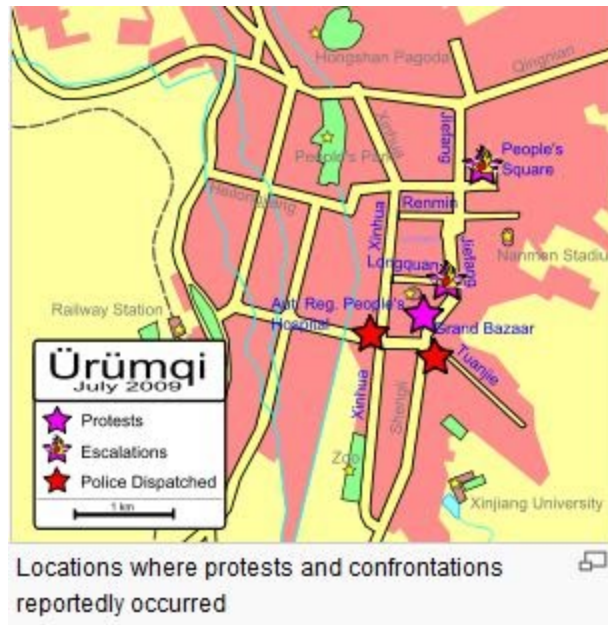
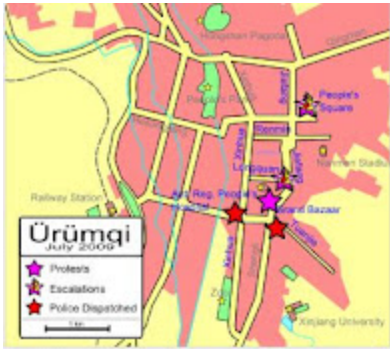


# Jul 25 Mac Olyx backdoor + Gh0st Backdoor in RAR archive related to July 2009 Ürümqi riots in China (Samples included)

[contagiodump.blogspot.com/2011/07/jul-25-mac-olyx-gh0st-backdoor-in-rar.html](http://contagiodump.blogspot.com/2011/07/jul-25-mac-olyx-gh0st-backdoor-in-rar.html)



The recently discovered Backdoor for Mac Olyx ([Criminals gain control over Mac with BackDoor.Olyx](#)) was used for targeted attacks (or what it appears to be), which is not surprising. As [Microsoft pointed out](#), in addition to malware, the package contains an html page and photos from a Wikipedia page for events dated July 5, 2009, however it appears that all photos relate to one event - [July 2009 Ürümqi riots in China](#).



Locations where protests and confrontations reportedly occurred

"Government censors disabled keyword searches for "Urumqi", and blocked access to Facebook and Twitter as well as local alternatives Fanfou and Youku. Chinese news sites mainly fed from Xinhua news service for updates about the rioting in Urumqi, comments features on websites were disabled on some stories to prevent negative posts about the lack of news. Internet connections in Urumqi were reportedly down. Many unauthorized postings on local sites and Google were said to have been "harmonised" by government censors, and emails containing terms related to the riots were blocked or edited to prevent discord."

Perhaps the trojans found in the package Ghostnet backdoor as [Backdoor:Win32/Remosh.A](#) and the new [Backdoor:MacOS\\_X/Olyx.A](#) were destined for a Chinese human rights activist, as he/she would be likely to be interested in this particular event update. In addition, it is known that many of the [Gh0stnet](#) targets were human rights activists.



## General File Information

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**MD5:** 93a9b55bb66d0ff80676232818d5952f

**File Type:** Mach-O I386

**Malware:** Backdoor.Olyx

**MD5:** f65fbeb945348ad2e1a123ef5cee65d3

**File Type:** Windows PE EXE

**Malware:** Ghostnet backdoor

## Download

---



Download the package (including [93a9b55bb66d0ff80676232818d5952f](#) and [f65fbeb945348ad2e1a123ef5cee65d3](#)) as a password protected archive (contact me if you
















need the password).

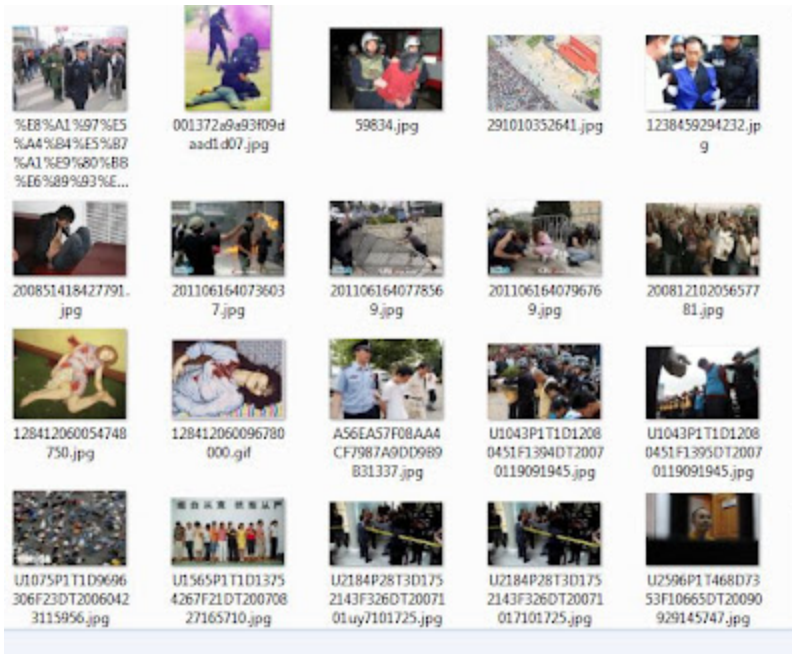
All the thanks and credits go Kyle Yang, who was very kind to share (thank you, Kyle!!!)

(If you downloaded it on July 27 from 7:00 to 11:30 am UTC, please do it again, the pass was wrong but the scheme will work now)



## Additional information and Analysis links

Name	Date modified	Type	Size
 2011061640736037.jpg	6/16/2011 6:22 PM	Paint.NET Image	13 KB
 2011061640796769.jpg	6/16/2011 6:22 PM	Paint.NET Image	16 KB
 2011061640778569.jpg	6/16/2011 6:22 PM	Paint.NET Image	19 KB
 load(1).css	6/16/2011 5:10 PM	CSS Document	40 KB
 load.css	6/16/2011 5:10 PM	CSS Document	59 KB
 geoiplookup.wikimedia[1]	6/16/2011 4:45 PM	WIKIMEDIA[1] File	1 KB
 load(1).php	6/16/2011 4:45 PM	PHP File	12 KB
 index.php	6/16/2011 4:45 PM	PHP File	4 KB
 search-ltr.png	6/16/2011 4:45 PM	PNG image	1 KB
 load.php	6/16/2011 4:45 PM	PHP File	14 KB
 poweredby_mediawiki_88x31.png	6/16/2011 4:45 PM	PNG image	4 KB
 wikimedia-button.png	6/16/2011 4:45 PM	PNG image	3 KB
 MobileRedirect.js	6/16/2011 4:45 PM	JScript Script File	2 KB
 Current events 2009 July 5	6/16/2011 4:24 PM	File	50 KB
 Video-Current events 2009 July 5.exe	6/14/2011 11:29 PM	Application	201 KB



Microsoft Malware Protection center posted an excellent analysis with a lot of details, which you can find at the link below: [Backdoor Olyx - is it malware on a mission for Mac?](#)  
 Original report of Olyx backdoor by Dr.Web [Criminals gain control over Mac with BackDoor.Olyx](#)

**MD5:** 93a9b55bb66d0ff80676232818d5952f

**File Type:** Mach-O I386

**Malware:** Backdoor.Olyx

I am not a Mac or RE expert, I just made a few screenshots of the disassembled Mach-O file with Microsoft comments, which I thought were relevant. Please correct me if needed :)

```
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
  <key>Label</key>
  <string>com.google.com.tstartup 1.0</string>
  <key>ProgramArguments</key>
  <array>
    <string>/Library/Application Support/Google/startp</string>
  </array>
  <key>RunAtLoad</key>
  <true/>
  <key>LaunchOnlyOnce</key>
  <true/>
</dict>
</plist>
```

```

; Attributes: bp-based frame
__main proc near
var_41C= byte ptr -41Ch
var_1C= dword ptr -1Ch
arg_4= dword ptr 0Ch

push ebp
mov  ebp, esp
push edi
push esi
push ebx
sub  esp, A2Ch
mov  edi, [ebp+arg_4]
mov  eax, ds:__stack_chk_guard_ptr
mov  edx, [eax]
mov  [ebp+var_1C], edx
xor  edx, edx
mov  dword ptr [esp], offset a1one ; char *
call  _getenv
mov  esi, eax
mov  dword ptr [esp+4], 1FFh ; mode t
mov  dword ptr [esp], offset a1libraryapplica ; char *
call  _mkdir
mov  dword ptr [esp+4], 1E2Ch ; char a1libraryapplica[
mov  dword ptr [esp], 1E30h ; a1libraryapplica db '/Library/Application Support/google'
call  _fopen$UNI32003
mov  ebx, eax
mov  [esp+0Ch], eax
mov  dword ptr [esp+8], 9E5Ch
mov  dword ptr [esp+4], 1
mov  eax, ds:off_7024

```

"It disguises itself as a Google application support file by creating a folder named 'google' in the /Library/Application Support directory"  
 ~ Microsoft Malware Protection Center

```

mov  dword ptr [esp+4], 1FFh ; mode t
mov  dword ptr [esp], offset a1libraryapplica ; char *
call  _mkdir
mov  dword ptr [esp+4], 1E2Ch ; char a1libraryapplica[
mov  dword ptr [esp], 1E30h ; a1libraryapplica db '/Library/Application Support/google'
call  _fopen$UNI32003

```

```

mov  [esp], ebx ; char *
call  _mkdir
mov  dword ptr [esp+8], 400h
mov  [esp+4], esi
mov  [esp], ebx
call  __strcpy_chk
mov  dword ptr [esp+8], 400h
mov  dword ptr [esp+4], 1E30h
mov  [esp], ebx
call  __strcpy_chk
mov  [esp+4], ebx ; char *
mov  dword ptr [esp], offset a1one ; char *
call  _rename
call  _fork
test  eax, eax
jnz  short loc_3BE2

loc_3BE2:
mov  dword ptr [esp], offset a1one ; char *
call  _remove
mov  dword ptr [esp+4], offset a1one ; char *
mov  eax, [edi]
mov  [esp], eax ; char *
call  _rename

loc_3BE2:
mov  dword ptr [esp+4], 1E2Ch ; char a1libraryapplica[
mov  dword ptr [esp], 1E30h ; a1libraryapplica db '/Library/Application Support/google'
call  _fopen$UNI32003

```

in the /Library/Application Support directory, the backdoor installs as 'startp'.  
 ~ Microsoft Malware Protection Center

```

mov  ebx, [ebp+arg_4]
call  __strcpy_chk
mov  dword ptr [esp+8], 400h
mov  [esp+4], esi
mov  [esp], ebx
call  __strcpy_chk
mov  dword ptr [esp+8], 400h
mov  dword ptr [esp+4], 1E30h
mov  [esp], ebx
call  __strcpy_chk
mov  [esp+4], ebx ; char *
mov  dword ptr [esp], offset a1one ; char *
call  _rename
call  _fork
test  eax, eax
jnz  short loc_3BE2

loc_3BE2:
mov  dword ptr [esp], offset a1one ; char *
call  _remove
mov  dword ptr [esp+4], offset a1one ; char *
mov  eax, [edi]
mov  [esp], eax ; char *
call  _rename

loc_3BE2:
mov  dword ptr [esp+4], 1E2Ch ; char a1libraryapplica[
mov  dword ptr [esp], 1E30h ; a1libraryapplica db '/Library/Application Support/google'
call  _fopen$UNI32003

```

"It also keeps a copy in the temporary folder as 'google.tmp'"  
 ~ Microsoft Malware Protection Center

**MD5:** f65fbef945348ad2e1a123ef5cee65d3

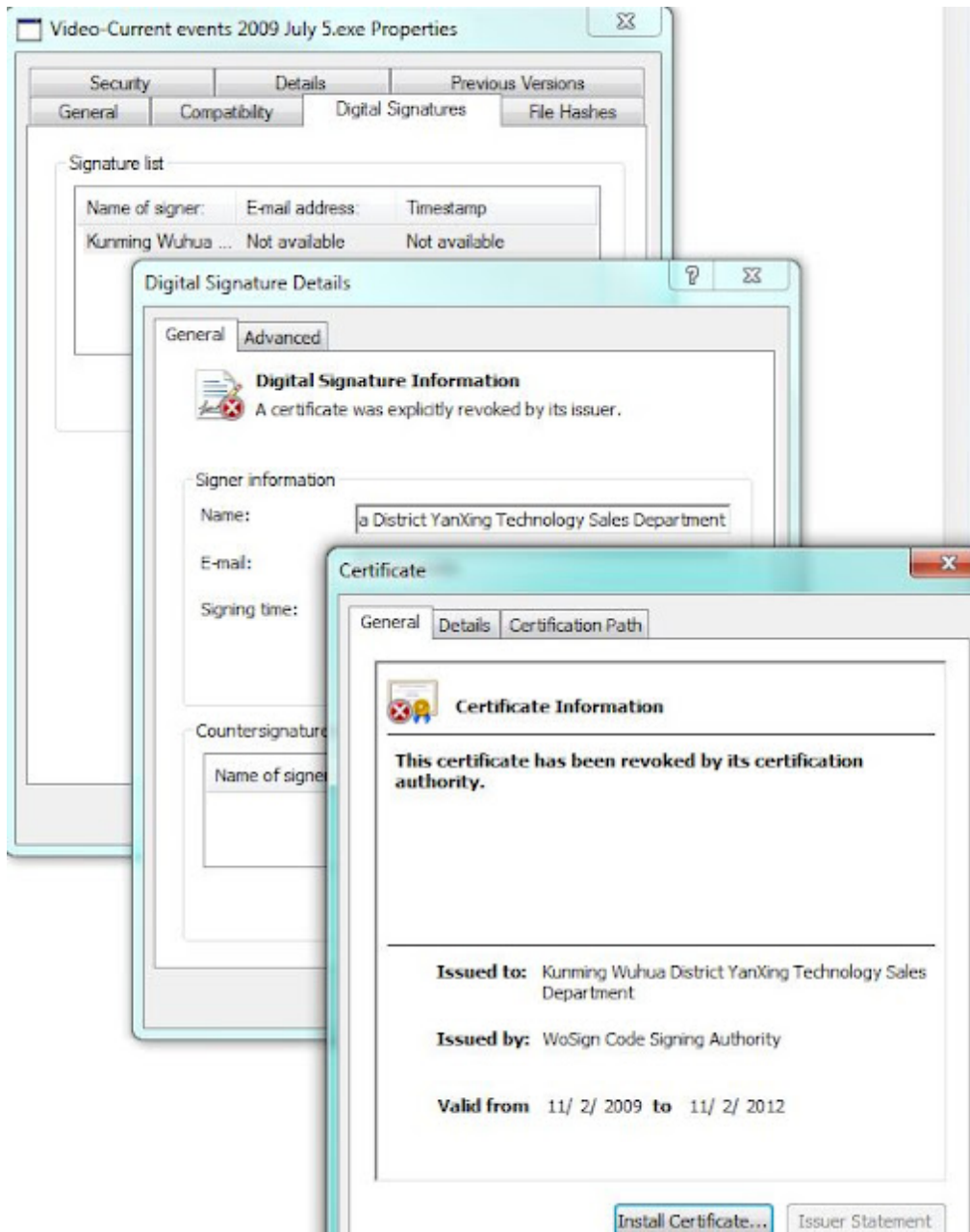
**File Type:** Windows PE EXE

**Malware:** Ghostnet backdoor

**Anubis Analysis** <http://anubis.iseclab.org/>

[http://anubis.iseclab.org/?action=result&task\\_id=1ae9dcfb36d882e541d8fa26d533a9d39&format=html](http://anubis.iseclab.org/?action=result&task_id=1ae9dcfb36d882e541d8fa26d533a9d39&format=html)

Here is a screenshot of the certificate, which was revoked and some strings from the binary





```

00404324: SSZ00404324_RegOpenKeyExA 'RegOpenKeyExA'.0
00404334: SSZ00404334_RegQueryInfoKeyA 'RegQueryInfoKeyA'.0
00404348: SSZ00404348_RegQueryValueExA 'RegQueryValueExA'.0
0040435C: SSZ0040435C_RegSetValueExA 'RegSetValueExA'.0
0040436C: SSZ0040436C_RegCreateKeyA 'RegCreateKeyA'.0
0040437C: SSZ0040437C_RegEnumKeyA 'RegEnumKeyA'.0
00404388: SSZ00404388_Kernel32_dll 'Kernel32.dll'.0
00404398: SSZ00404398_CopyFileA 'CopyFileA'.0
004043A4: SSZ004043A4_DeviceIoControl 'DeviceIoControl'.0
004043B4: SSZ004043B4_FindResourceA 'FindResourceA'.0
004043C4: SSZ004043C4_LoadResource 'LoadResource'.0
004043D4: SSZ004043D4_SizeofResource 'SizeofResource'.0
004043E4: SSZ004043E4_LockResource 'LockResource'.0
004043F4: SSZ004043F4_shell32_dll 'shell32.dll'.0
00404400: SSZ00404400_ShellExecuteA 'ShellExecuteA'.0
0040470C: SSZ0040470C_shell32_dll 'shell32.dll'.0
00404718: SSZ00404718_SNGetSpecialFolderLocation 'SNGetSpecialFolderLocation'.0
00404734: SSZ00404734_SNGetPathFromIDListA 'SNGetPathFromIDListA'.0
00404EE4: SSZ00404EE4_APPDATA 'APPDATA'.0
00404EF4: SSZ00404EF4_Environment 'Environment'.0
00405010: SSZ00405010_Users_Public_ 'Users\Public'.0
00405028: SSZ00405028_AFAF2EE_837C_4EA5_B933_998F94A '(AFAF2EE-837C-4EA5-B933-998F94AEC654)\'.0
00405058: SSZ00405058_ProgramData_ 'ProgramData'.0
00405070: SSZ00405070_TEMP_TEMP 'TEMP\TEMP'.0
00405084: SSZ00405084_TEMP_ 'TEMP'.0
004054EC: SSZ004054EC_notepad_exe 'notepad.exe'.0
00405AF0: SSZ00405AF0_shell32_dll 'shell32.dll'.0
00405AFC: SSZ00405AFC_IsUserAnAdmin 'IsUserAnAdmin'.0
00406D94: SSZ00406D94_nls_ 'nls'.0
00406E70: SSZ00406E70_AD18BB45B27C8946AD19A0760E749458 'AD18BB45B27C8946AD19A0760E749458AE29A05BB2478847AF82A15A8D778E46AC'.0
00408120: SSZ00408120_PackedCatalogItem 'PackedCatalogItem'.0
004081F4: SSZ004081F4_SYSTEM_CurrentControlSet_Service 'SYSTEM\CurrentControlSet\Services\MinSock2\Parameters\Protocol_Cat'.0
004082F4: SSZ004082F4_PathName_ 'PathName'.0
004086D0: SSZ004086D0_SOFTWARE_Microsoft_Windows_Curre 'SOFTWARE\Microsoft\Windows\CurrentVersion\Run'.0
00408708: SSZ00408708_Kernel_Fault_Check_ 'Kernel Fault Check'.0
0040871C: SSZ0040871C_Kernel_Fault_Check_ 'Kernel Fault Check'.0
004088B0: SSZ004088B0_dumprep_exe 'dumprep.exe'.0
004088C0: SSZ004088C0_open_ 'open'.0
00408A54: SSZ00408A54_b750_tbl_ 'b750.tbl'.0
00408A80: SSZ00408A80_SYSTEM_CurrentControlSet_Service 'SYSTEM\CurrentControlSet\Services\MinSock2\mswsock32'.0
00408B80: SSZ00408B80_dxdiag_exe 'dxdiag.exe'.0
00408D8C: SSZ00408D8C_Global_ '\\.\Global'.0
00408D80: SSZ00408D80_ '\\.\'.0
00408D8C: SSZ00408D8C_port_ 'port'.0
00408FE0: SSZ00408FE0_SysFader_ 'SysFader'.0
00409054: SSZ00409054_Error_ 'Error'.0
0040905C: SSZ0040905C_Runtime_error_at_00000000 'Runtime error at 00000000'.0
00409208: SSZ00409208_UCL_data_compression_library_ '00h.00h.00h.'UCL data compression library.'.00h.'$Copyright: UCL <C
0040934A: SSZ0040934A_1_83_ '1.83'.0
0040934F: SSZ0040934F_Jul_20_2004_ 'Jul 20 2004'.0

```



## Automated Scans

### Current events 2009 July 5

Submission date:2011-07-27 05:07:51 (UTC)

Result:19 /43 (44.2%)

<http://www.virustotal.com/file-scan/report.html?>

[id=a5c1b89b26007f4672409e0e7a3ab85135a0ffc01c74c4b6d49084da7fe9def5-1311743271](http://www.virustotal.com/file-scan/report.html?id=a5c1b89b26007f4672409e0e7a3ab85135a0ffc01c74c4b6d49084da7fe9def5-1311743271)

AhnLab-V3	2011.07.27.00	2011.07.27	MacOS_X/Olyx
Avast	4.8.1351.0	2011.07.26	MacOS:Olyx [Trj]
Avast5	5.0.677.0	2011.07.26	MacOS:Olyx [Trj]
BitDefender	7.2	2011.07.27	MAC.OSX.Backdoor.Olyx.A
Comodo	9524	2011.07.27	UnclassifiedMalware
DrWeb	5.0.2.03300	2011.07.27	BackDoor.Olyx.1
Emsisoft	5.1.0.8	2011.07.27	Backdoor.OSX.Olyx!IK
F-Secure	9.0.16440.0	2011.07.27	Backdoor:OSX/Olyx.A
GData	22	2011.07.27	MAC.OSX.Backdoor.Olyx.A
Ikarus	T3.1.1.104.0	2011.07.27	Backdoor.OSX.Olyx

Kaspersky 9.0.0.837 2011.07.27 Backdoor.OSX.Olyx.a  
Microsoft 1.7104 2011.07.26 Backdoor:MacOS\_X/Olyx.A  
NOD32 6327 2011.07.27 OSX/Olyx.A  
PCTools 8.0.0.5 2011.07.27 Backdoor.Olyx  
Sophos 4.67.0 2011.07.27 OSX/Bckdr-RID  
Symantec 20111.1.0.186 2011.07.27 Backdoor.Olyx  
TrendMicro-HouseCall 9.200.0.1012 2011.07.27 OSX\_OLYX.WA  
VBA32 3.12.16.4 2011.07.26 BackDoor.OSX.Generic  
VirusBuster 14.0.140.0 2011.07.26 Backdoor.OSX.Olyx.A

Additional information

Show all

MD5 : 93a9b55bb66d0ff80676232818d5952f

**Video-Current events 2009 July 5.exe** - WINDOWS BINARY Submission date:2011-07-27

05:00:39 (UTC)

Result:19/ 43 (44.2%)

<http://www.virustotal.com/file-scan/report.html?>

[id=d2f45192f22ef62a694facd0604b12c8c748ac94a6d8a2913f4beec7f04be1c1-1311742839](http://www.virustotal.com/file-scan/report.html?id=d2f45192f22ef62a694facd0604b12c8c748ac94a6d8a2913f4beec7f04be1c1-1311742839)

AhnLab-V3 2011.07.27.00 2011.07.27 Win-Trojan/Olyx.205480  
AntiVir 7.11.12.130 2011.07.27 BDS/Olyx.A  
BitDefender 7.2 2011.07.27 Backdoor.Wolyx.A  
Comodo 9524 2011.07.27 TrojWare.Win32.Magania.~AD  
DrWeb 5.0.2.03300 2011.07.27 Trojan.PWS.Multi.228  
Emsisoft 5.1.0.8 2011.07.27 Trojan-PWS.Win32.Hangame.cl!IK  
eSafe 7.0.17.0 2011.07.26 Win32.Backdoor.Troja  
GData 22 2011.07.27 Backdoor.Wolyx.A  
Ikarus T3.1.1.104.0 2011.07.27 Trojan-PWS.Win32.Hangame.cl  
McAfee 5.400.0.1158 2011.07.27 Artemis!F65FBEB94534  
McAfee-GW-Edition 2010.1D 2011.07.26 Heuristic.BehavesLike.Win32.AdSpyware.A  
Microsoft 1.7104 2011.07.26 Backdoor:Win32/Wolyx.A  
NOD32 6327 2011.07.27 Win32/Delf.OBY  
Panda 10.0.3.5 2011.07.26 Suspicious file  
PCTools 8.0.0.5 2011.07.27 Backdoor.Trojan  
Symantec 20111.1.0.186 2011.07.27 Backdoor.Trojan  
TrendMicro-HouseCall 9.200.0.1012 2011.07.27 BKDR\_WOLYX.WA  
VIPRE 9978 2011.07.27 Trojan.Win32.Generic.pak!cobra  
VirusBuster 14.0.140.0 2011.07.26 Backdoor.Wolyx!YVAf5CV8Y34

MD5 : f65fbef945348ad2e1a123ef5cee65d3

Anubis Analysis

[http://anubis.iseclab.org/?](http://anubis.iseclab.org/)



[action=result&task\\_id=1ae9dcbf36d882e541d8fa26d533a9d39&format=html](http://blogs.technet.com/b/mmpc/archive/2011/07/25/backdoor-olyx-is-it-malware-on-a-mission-for-mac.aspx)

## Traffic

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<http://blogs.technet.com/b/mmpc/archive/2011/07/25/backdoor-olyx-is-it-malware-on-a-mission-for-mac.aspx>

121.254.173.57

Host reachable, 234 ms. average

121.254.128.0 - 121.254.255.255

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