## OPERATION HANGOVER

Unveiling an Indian Cyberattack Infrastructure

## **APPENDIXES**

A: Telenor samples

B: Some examples of installers

C: Malware string indicators

D: Paths extracted from executables

E: Domain names

F: IP addresses

G: Sample MD5's

### Appendix A: Samples extracted from Telenor intrusion

```
00bd9447c13afbbb7140bef94e24b535, msupl.exe
02d6519b0330a34b72290845e7ed16ab, conhosts.exe
05c983831cad96da01a8a78882959d3e, svcohst.exe
10d8d691ec5c75be5dbab876d39501f1, cpyf.exe
1579467859b48085bdf99b0a1a8c1f86, splitter.exe
1676ded041404671bfb1fcfe9db34dcf, msspr.exe
21a52fedba7d5f4080a8070236f24a81, taskbase.exe
3eddb4a2c427ebba246ba2fa22dbdc50, vcmm.dll
61abb92f0fa605c62dab334c225ef770, winhost.exe
6367c72ef246798c2e8153dd9828e1fa, waulct.exe
82837a05f8e000245f06c35e9ddc3040, srsr.exe
85ce84970182be282436317ebc310c8e, msiep.exe
98ce593bfaeddbbbe056007525032e0d, msspr.exe
9d724c66844d52397816259abdf58cea, vmcc.dll
a25d1e14498dd60535c5645ed9f6f488, oprs.exe
bd52237db47ba7515b2b7220ca64704e, few important operational documents.doc.exe
bfd2529e09932ac6ca18c3aaff55bd79, windwn.exe
ca26ca59bafa3ae727560cd31a44b35d, winsvcr.exe
ecc8b373e61a01d56f429b2bd9907e09, chrm.exe
edc4bdfd659279da90fc7eab8a4c6de3, zfscu.dll
f21ca71866a6484a54cd9651282572fd, vtlp.dll
```

# Appendix B: Some related cases based on behaviour and malware similarity parameters.

Name: "Pending\_Electricity\_Bill\_(December-January).pdf.exe",

MD5: 681757936109f7c6e65197fdbb6a8655

Content: Pending Electricity Bill (December-January).pdf

Content: wincert.exe C&C: chkpoint.info

Name: "Horsemeat\_scandal\_another\_Irish\_company\_suspends\_burger\_production.exe"

MD5: f52154ae1366ae889d0783730040ea85

 $Content: Horsemeat\_scandal\_another\_Irish\_company\_suspends\_burger\_production.docx$ 

Content: wincert.exe C&C: chkpoint.info

Name: Unknown

MD5: f8b0e04506e57bfa2addade04e9a93d4

Content: "Indian\_Involvement\_in\_Afghanistan.pdf"

Content: smsss.exe
Content: systems.exe
Content: csrsss.exe
Content: test.vbs
Content: start1.bat
C&C: sonification.com

Name: important.doc.exe

MD5: a7a223cebe5d89aa2d36864cb096b1b3

Content: important.doc Content: smsss.exe Content: exploer.exe Content: ims.exe Content: test.vbs Content: start1.bat

C&C: sonification.com; researcherzone.net;

Name: Unknown, probably "ENRC\_\_DEBT\_\_INVESTORS\_\_2012\_\_for\_\_your\_\_Reference.exe"

MD5: e40205cba4e84a47b7c7419ab6d77322

Content: "ENRC\_\_DEBT\_\_INVESTORS\_\_2012\_\_for\_\_your\_\_Reference.docx"

Content: cftmont.exe

C&C: macsol.org; openhostingtalk.com;

Name: Unknown, probably "Deatils\_for\_the\_ENRC\_Board\_Meeting\_X1098977e79.exe"

MD5: a5a740ce2f47eada46b5cae5facfe848

Content: "Deatils\_for\_the\_ENRC\_Board\_Meeting\_X1098977e79.docx"

Content: acsrsss.exe

C&C: systoolsonline.org

Name: "Parminder bansil fraud with Nucleus software Full details.exe"

MD5: a7b5fce4390629f1756eb25901dbe105

Content: scan.docx Content: winsvcr.exe Content: wincert.exe Content: wins.vbs

C&C: skylarzone.org; onlinestoreapp.net;

Name: "Reliance limited sustantibility issues full report 576676y8778.exe"

MD5: 0d5956dac2ac56f292ee8fa121450973

Content: Details.docx Content: wauclt.exe Content: wincerrt.exe Content: wins.vbs

C&C: competitveedge.org; crystalrepo.org;

Name: update112.exe

MD5: 66203f184e4fdb004c0d24ede011ce6e

Content: msnger.exe Content: igfxtrye.exe

C&C: wearwellgarments.eu; mysharpens.com;

Name: hp.exe

MD5: 74e571f9accf9fe1b4ea6ee0e02a5180

Content: Mendhar.doc Content: isass.exe C&C: forest-fire.com Name: Unknown

MD5: 0f65c1202881f5c0e3d512aa64162716

Content: 20120316.pdf Content: update.exe Content: alg.exe

C&C: forest-fire.com; mailtranet.com;

Name: Unknown, probably "Details\_for\_the\_ENRC\_Board\_Meeting\_X10FR333\_2012.exe"

MD5: 2895a9b0cf22cd45421d634dc0f68db1

Content: Details\_for\_the\_ENRC\_Board\_Meeting\_X10FR333\_2012.docx

Content: avcsrss.exe

C&C: ezservicesenter.org; casinoaffiliatepartners.net;

Name: Unknown, probably "McKinsey\_Quaterly\_Newsletter\_2012\_\_\_\_\_.exe"

MD5: 602f66b23b55dd2a22cd84e34c5b8476

Content: McKinsey\_Quaterly\_Newsletter\_2012\_\_\_\_\_.docx

Content: cfmon.exe

C&C: casinoaffiliatepartners.net; openhostingtalk.com;

Name: important.exe

MD5: a1cad6b71ab30577ea8e204fab01ed47

Content: imprtant.jpg Content: snmse.exe

C&C: cryptoanalysis.net

Name: Unknown, probably "Detail description of ferro chrome silicon and ferro chrome.exe"

MD5: 2102a18dc20dc6654c03e0e74f36033f

Content: Detail\_description\_of\_ferro\_chrome\_silicon\_and\_ferro\_chrome.docx

Content: ctmon.exe C&C: macsol.org

Name: webmailapp.exe

MD5: 22a3a1d5a89866a81152cd2fc98cd6e2

Content: Ink.bat Content: jre.exe Content: dwm.exe

C&C: mobnetserver.com

Name: exploer.exe, winl.exe, lasss.exe

MD5: 634e4c640c4d7845a88faa5e0838ec0e

Content: winword.exe
Content: ssmss.exe
C&C: matrixfanclub.net

Name: Unknown

MD5: FFC2C9969B6A3B27FF96B926E9A6C18A

Content: ssmss.exe
Content: spoolsv.exe
C&C: follow-ship.com

Name: Unknown, probably "Taliban target creator, blow up ISI jihad lab.doc.exe"

MD5: E14B7985764E737333D531DAABF55970

Content: Taliban target creator, blow up ISI jihad lab.doc

Content: winword.exe
Content: csres.exe
Content: svchost.exe
C&C: redgolfclub.info

Name: Unknown, probably "MIRZAGHALIB......IN2011.doc.exe"

MD5: 0680B9E247B2779799D4B32582F566C8

Content: MIRZAGHALIB......IN2011.doc

Content: CSRSSS.exe Content: SMSSS.exe Content: start1.bat Content: SYSTEMSS.exe

Content: test.vbs

C&C: sonification.com

Name: "agni5\_inda's\_deadliest\_ballistic\_nuclear\_missile.exe"

MD5: 06E80767048F3EDEFC2DEA301924346C

Content: 1.pdf
Content: csrsss.exe
Content: dectop.ini
Content: lsasss.exe
Content: start.bat
Content: start1.bat
Content: test.vbs

## Appendix C: Malware string indicators.

Text strings found inside malware.

```
HANGOVER 1.2.2 (C++ uploader)
Unable to load conf
Drives are:
%c:/
Could not upload file...
encrypted
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
]Tfufss/mph
Uploading files to web server...
Source Directory:
%d out of %d uploaded
IMAGE
Dec: Couldn't open file:
enc_
Dec: Couldn't create file:
7kmL||HHt98jdf4z#F1+25jf7+3MIG
Enc: Couldn't open file:
Enc: Couldn't create file:
Couldn't open source:
MBVDFRESCT
90B452BFFF3F395ABDC878D8BEDBD152
Excep while up %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
{CAF1C46F-D91d7-C912F7F4F609}
WINAPP
[CryptProvider::Enc] Unable to encrypt data:
[CryptProvider::Enc] Unable to decrypt data:
[ProvHandle::ProvHandle] Unable to create provider:
Microsoft Enhanced Cryptographic Provider v1.0
[CrypHash::CryptHash] Unable to create hash:
[CryptKey::CryptKey] Unable to create key:
```

 $E:\My\lan scanner\Task\HangOver 1.2.2\Release\Http\_t.pdb$ 

```
HANGOVER 1.3.2 (C++ uploader)
Unable to load conf
Drives are:
%c:/
Could not upload file...
encrypted
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
]Tfufss/mph
Uploading files to web server...
Source Directory:
%d out of %d uploaded
IMAGE
Dec: Couldn't open file:
enc_
Dec: Couldn't create file:
7kmL | | HHt98jdf4z\#F1+25jf7+3MIG
Enc: Couldn't open file:
Enc: Couldn't create file:
Couldn't open source:
MBVDFRESCT
90B452BFFF3F395ABDC878D8BEDBD152
Excep while up %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
/c xcopy "
cmd
open
yahoo
windows dirctory
{AHAn4T-TRAH-PI12F7110903}
WINAPP
[CryptProvider::Enc] Unable to encrypt data:
[CryptProvider::Enc] Unable to decrypt data:
[ProvHandle::ProvHandle] Unable to create provider:
Microsoft Enhanced Cryptographic Provider v1.0
[CrypHash::CryptHash] Unable to create hash:
[CryptKey::CryptKey] Unable to create key:
D:\Monthly Task\September 2011\HangOver 1.3.2 (Startup)\Release\Http_t.pdb
```

```
HANGOVER 1.5.3 (C++ uploader)
%c:/
%userprofile%
encrypted
\sample2.txt
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
]Tfufss/mph
%d out of %d uploaded
0mbohvbhf/qiq
hvbhf
/qiq
tpojgjdbupo/dpn
EMSCBVDFRT
F390395ABFBD452BFFC87BE8D8DBD152
Excep while up %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
cmd
open
/c xcopy "
     /Y
dekstop.ico
EXE
mozila
windows dirctory
{2FC02671-E810-48b3-96DE-C4284E94EFC9}
WINAPP
T:\final project backup\uploader version backup\HangOver 1.5.3 (Startup)\Release\Http_t.pdb
```

#### HANGOVER 1.5.4 (C++ uploader) %c:/ %userprofile% encrypted \sample2.txt Uploaded file %s to web server Failed to upload file %s Didn't upload %s, because server already has this file ]Tfufss/mph %d out of %d uploaded Onztibs/qiq hvbhf /qiq nztibsqfot/dpn EMSCBVDFRT F390395ABFBD452BFFC87BE8D8DBD152 Excep while up %s: %s Content-Type: multipart/form-data; boundary=%s Content-Disposition: form-data; name="uploaddir" Content-Disposition: form-data; name="filename"; filename="%s" Content-Type: text/plain Content-Transfer-Encoding: binary Content-Disposition: form-data; name="submit" value="submit" --%s-bad cast /c xcopy " **/**Y cmd open dektpMSI89.ico EXE mozilall windows dirctory {67FC0221-E016-48B3-8D9H-E894C854YF92} WINAPP T:\final project backup\uploader version backup\fud all av hangover1.5.4\with icon +shortcut link\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

#### HANGOVER 1.5.7 (C++ uploader)

%c:/

%userprofile%

encrypted

%s%04d%02d%02d%02d%02d%02d.%s

\nts.txt

Uploaded file %s to web server

Failed to upload file %s

]Tfufss/mph

%d out of %d uploaded

tqbsl/qiq

o11c5v/dpn

**EMSFRTCBVD** 

F39D45E70395ABFB8D8D2BFFC8BBD152

Excep while up %s: %s

Content-Type: multipart/form-data; boundary=%s

--%5

Content-Disposition: form-data; name="uploaddir"

Content-Disposition: form-data; name="filename"; filename="%s"

Content-Type: text/plain

Content-Transfer-Encoding: binary

Content-Disposition: form-data; name="submit" value="submit"

--%s--

windows dirctory

C:\Users\Yash\Desktop\New folder\HangOver 1.5.7 (Startup) uploader\Release\Http\_t.pdblink\HangOver 1.5.3

(Startup)\Release\Http\_t.pdb

```
RON 2.00 (Appin) (C++ uploader)
VERSIONTYPE{he3l4m5k2n4m5kgs8c9f9}
Reg
Write
Option Explicit
on error resume next
Dim objShell, strRoot, strModify
strRoot = "
Set objShell = CreateObject("WScript.Shell")
strModify = objShell.
(strRoot,
","REG SZ")
strModify = null
WScript.Quit
ScheduledTime
In OnTimer...
Available drives are:
Could not upload file...
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
%d out of %d files were successfully uploaded to server
\Program Files
\WINDOWS
\Temp
\Local Settings
\Start Menu
\Application Data
\UserData
\Cookies
\Favorites
\SendTo
\NetHood
\PrintHood
\LocalService
\NetworkService
File Found %s
Fail to find Write time of file %s
Fail to Access file %s
File %s is inserted in list
File found with different Pattern :: %s
Uploading files to web server...
backup%Y%m%d%H%M%S
Source Directory:
\detail.txt
Search Process Failed
Started by timer
Couldn't open source file:
sendFile
FFF3F395A90B452BB8BEDC878DDBD152
access.php
Exception occurred while uploading file %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
SetTimer returned %d
%sBackup-%s.log
C:\BNaga\kaam\Appin SOFWARES\RON 2.0.0\Release\Ron.pdb
```

```
RON 2.31 (Tourist) (C++ uploader)
CONTENT-LENGTH:
GET
HTTP/1.1
Host:
Connection: keep-alive
]tztubn/fyf
xfcnjdsptpguvqebuf/ofu
0jnbhft0ubtliptu/fyf
[MONTHLYDESX]
/c
In OnTimer...
Available drives:
%c:
Could not upload file...
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
%d out of %d files were successfully uploaded to server
\Program Files
\WINDOWS
\Temp
\Local Settings
\Start Menu
\Application Data
\UserData
\Cookies
\Favorites
\SendTo
\NetHood
\PrintHood
\LocalService
\NetworkService
\ProgramData
File Found %s
%s_%02d_%02d_%04d_%02d_%02d_%02d.%s
Fail to find Write time of file %s
Fail to Access file %s
File %s is inserted in list
File found with different Pattern :: %s
Uploading files to web server...
backup%Y%m%d%H%M%S
Source Directory:
\csb.log
Search Process Failed
Started by timer
Couldn't open source file:
BUGMAAL
2BB8FFF3F39878DDB5A90B45BEDCD152
Exception occurred while uploading file %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
SetTimer returned %d
%Y-%m-%d
%sInfo-%s.log
%c -
Y:\Uploader\HTTP\Tourist uplo\Tourist Uplo 2.3.1\Release\Ron.pdb
```

#### RON 2.33 (C++ uploader) CONTENT-LENGTH: GET HTTP/1.1 Host: Connection: keep-alive ]mqtbtt/fyf np{jmbvqebuf/dpn 0qmvhjo/uyu Global\{FABF2E92-DA28-C7851754D733} In OnTimer... Available drives: %c: Could not upload file... Uploaded file %s to web server Failed to upload file %s Didn't upload %s, because server already has this file %d out of %d files were successfully uploaded to server Uploading files to web server... backup%Y%m%d%H%M%S Source Directory: \csb.log Search Process Failed \Program Files \WINDOWS \Temp \Local Settings \Start Menu \Application Data \UserData \Cookies \Favorites \SendTo \NetHood \PrintHood \LocalService \NetworkService File Found %s Fail to find Write time of file %s Fail to Access file %s Started by timer Couldn't open source file: $\mathsf{sMAAL}$ 2BB8FFF3F39878DDB5A90B45BEDCD152 Exception occurred while uploading file %s: %s Content-Type: multipart/form-data; boundary=%s --%s Content-Disposition: form-data; name="uploaddir" Content-Disposition: form-data; name="filename"; filename="%s" Content-Type: text/plain Content-Transfer-Encoding: binary Content-Disposition: form-data; name="submit" value="submit" --%s--SetTimer returned %d %sInfo-%s.log Info\*.log E:\Datahelp\UPLO\HTTP\NEW Up For Trinity\RON 2.3.3\Release\Ron.pdb

```
RON 2.43 (Tourist) (C++ uploader)
In OnTimer...
/c xcopy
cmd
open
appdata
windows dirctory
Global\{C78517FA-D28A-BF254D111010}
%02X
Available drives:
%c:
Could not upload file...
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
%d out of %d files were successfully uploaded to server
Uploading files to web server...
backup%Y%m%d%H%M%S
Source Directory:
\ksb.log
Search Process Failed
\*.*
File Found %s
Fail to find Write time of file %s
Fail to Access file %s
Started by timer
Couldn't open source file:
SIMPLE
78DDB5A902BB8FFF3F398B45BEDCD152
Exception occurred while uploading file %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
SetTimer returned %d
%sReport-%s.txt
Report*.txt
S:\final project backup\task information\task of september\Tourist 2.4.3 (Down Link On Resource) -L\Release\Ron.pdb
```

#### RON 2.45 (Tourist) (C++ uploader) %userprofile% Appl icati on Data Global\{C7121E67-D28A-BF25KD72EKK3} windows dirctory %02X Available drives: %c: Could not upload file... Uploaded file %s to web server Failed to upload file %s Didn't upload %s, because server already has this file %d out of %d files were successfully uploaded to server Uploading files to web server... backup Source Directory: \ksb.log Search Process Failed Fail to find Write time of file %s Fail to Access file %s Couldn't open source file: **SPLIME** 5A902B8B45BEDCB8FFF3F39D152 Exception occurred while uploading file %s: %s Content-Type: multipart/form-data; boundary=%s Content-Disposition: form-data; name="uploaddir" Content-Disposition: form-data; name="filename"; filename="%s" Content-Type: text/plain Content-Transfer-Encoding: binary Content-Disposition: form-data; name="submit" value="submit"

N:\payloads\Trinity\Uploader\Tourist 2.4.5 (Down Link On Resource) -L(fud norton360internet security)\Release\Ron.pdb

--%s--%sReport-%s.txt

%c -Report\*.txt

#### Babylon 5.11 (C++ uploader)

In OnTimer...

happyfeet

StartServiceCtrlDispatcher: Error %ld, OpenSCManager failed, error code = %d Failed to create service %s, error code = %d

Service %s installed

OpenService failed, error code = %d

Failed to delete service %s

Service %s removed

Service %s stoped

ControlService failed, error code = %d

Service %s started

StartService failed, error code = %d

RegisterServiceCtrlHandler failed, error code = %d

SetServiceStatus failed, error code = %d

Information Loaded

Fail To Load Information

Unable to load configuration file.

**Loaded Settings** 

Unable to send files to server. Check your connection and settings

Available drives:

%c:

Could not upload file...

Uploaded file %s to web server

Failed to upload file %s

Didn't upload %s, because server already has this file

%d out of %d files were successfully uploaded

\Program Files

**\WINDOWS** 

\Temp

\Local Settings

\Start Menu

\Application Data

\UserData

**\Cookies** 

\Favorites

\SendTo

\NetHood

\PrintHood \LocalService

\NetworkService

File Found %s

Fail to find Write time of file %s

Fail to Access file %s

File %s is inserted in list

File found with different Pattern :: %s

Uploading files to web server...

Source Directory:

\csb.log

Search Process Failed

dectop.ini

SerName

ServerSettings

UpDir

CDir

UpFreq

Extensions
SourceDirectory

Couldn't open source file:

sMAAI

2BB8FFF3F39878DDB5A90B45BEDCD152

tata.php

#### Babylon 5.11 continued (C++ uploader)

Exception occurred while uploading file %s: %s Content-Type: multipart/form-data; boundary=%s

--%s

Content-Disposition: form-data; name="uploaddir"

Content-Disposition: form-data; name="filename"; filename="%s"

Content-Type: text/plain

Content-Transfer-Encoding: binary

Content-Disposition: form-data; name="submit" value="submit"

--%s--

SetTimer returned %d %sInfo-%s.log

Info\*.log

EFile Couldn't open

enc\_

EFile Couldn't

7dasgfhgrtyethgfdhgfhgfgMIGG#F17 EncryptFile: Couldn't open source file: EncryptFile: Couldn't create encrypted file:

vector<T> too long

[CryptProvider::Enc] Unable to encrypt data: [CryptProvider::Enc] Unable to decrypt data: [ProvHandle::ProvHandle] Unable to create provider: Microsoft Enhanced Cryptographic Provider v1.0 [CrypHash::CryptHash] Unable to create hash:

[CryptKey::CryptKey] Unable to create key:

Y:\Uploader\HTTP\HTTP Babylon 5.1.1\HTTP Babylon 5.1.1\Httpbackup\Release\HttpUploader.pdb

#### Ron Dragonball 1.00 (C++ uploader)

Global\{2F3A8556-D28A-8F1BghS4POMD}

%02X

Available drives:

%c:

Could not upload file...

Uploaded file %s to web server

Failed to upload file %s

Didn't upload %s, because server already has this file

%d out of %d files were successfully uploaded to server

Uploading files to web server...

backup

Source

Directory:

\ksb.log

Search Process Failed

 $%s_{02d}_{02d}_{02d}_{02d}_{02d}_{02d}_{02d}_{02d}_{02d}$ 

Fail to find Write time of file %s

Fail to Access file %s

Couldn't open source file:

SIMPLE

5A9DCB8FFF3F02B8B45BE39D152

Exception occurred while uploading file %s: %s

Content-Type: multipart/form-data; boundary=%s

Content-Disposition: form-data; name="uploaddir"

Content-Disposition: form-data; name="filename"; filename="%s"

Content-Type: text/plain

Content-Transfer-Encoding: binary

Content-Disposition: form-data; name="submit" value="submit"

--%s--

%sReport-%s.txt Report\*.txt

 $\hbox{D:\december task backup\TRINITY PAYLOAD\Dragonball 1.0.0(WITHOUT DOWNLOAD LINK)\Release\Ron.pdb}$ 

## Ron Dragonball 1.02 (C++ uploader)

lnk

smss

windows dirctory

\smss

%02X

Available drives:

%с

Could not upload file...

Uploaded file %s to web server

Failed to upload file %s

Didn't upload %s, because server already has this file

%d out of %d files were successfully uploaded to server

Uploading files

to web server...

backup

Source

Directory:

\ksb.log

Search Process Failed

Fail to find Write time of file %s

Fail to Access file %s

Couldn't open source file:

SIMPLE

5A9DCB8FFF3F02B8B45BE39D152

Exception occurred while uploading file %s: %s Content-Type: multipart/form-data; boundary=%s

--%s

Content-Disposition: form-data; name="uploaddir"

Content-Disposition: form-data; name="filename"; filename="%s"

Content-Type: text/plain

Content-Transfer-Encoding: binary

Content-Disposition: form-data; name="submit" value="submit"

--%s--

%sReport-%s.txt

Report\*.txt

 $\label{thm:composition} C:\Documents\ and\ Settings\ abc\ Desktop\ Dragonball\ 1.0.2 (WITHOUT\ DOWNLOAD\ LINK)\ Release\ Ron.pdb\ Dragonball\ 1.0.2 (WITHOUT\ DOWNLOAD\ LINK)\ Release\ Ron.pdb\ Dragonball\ Dra$ 

```
Ron FirstBlood (C++ uploader)
MONEYMATRA{G53UTDFWMC997654LMD}
Reg
Write
Option Explicit
on error resume next
Dim objShell, strRoot, strModify
strRoot = "
Set objShell = CreateObject("WScript.Shell")
strModify = objShell.
(strRoot,'
","REG_SZ")
strModify = null
WScript.Quit
Hello World
InstallID
In OnTimer...
Available drives are:
Could not upload file...
Uploaded file %s to web server
Failed to upload file %s
Didn't upload %s, because server already has this file
%d out of %d files were successfully uploaded to server
\Program Files
\WINDOWS
\Temp
\Local Settings
\Start Menu
\Application Data
\UserData
\Cookies
\Favorites
\SendTo
\NetHood
\PrintHood
\LocalService
\NetworkService
File Found %s
%s_%02d_%02d_%04d_%02d_%02d_%02d.%s
Fail to find Write time of file %s
Fail to Access file %s
File %s is inserted in list
File found with different Pattern :: %s
Uploading files to web server...
backup%Y%m%d%H%M%S
Source Directory:
\detail.txt
Search Process Failed
Started by timer
Couldn't open source file:
sendFile
FFF3F395A90B452BB8BEDC878DDBD152
Exception occurred while uploading file %s: %s
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
SetTimer returned %d
%sBackup-%s.log
Backup*.log
C:\BNaga\kaam\kaam\New_FTP_HttpWithLatestfile2\Release\Ron.pdb
```

```
Bitmask (C++ keylogger)
Layout File
SYSTEM\CurrentControlSet\Control\Keyboard Layouts\%s
KbdLayerDescriptor
Edit
tips_class32_asdasd
getkey/
Log.txt
[ESC]
[INSERT]
[MENU]
[ENTER]
[BKSP]
url = %s
Mozilla Firefox
Internet Explorer
Session Start = %s %s
_____
Windows Title = %s
Content-Type: multipart/form-data; boundary=%s
Content-Transfer-Encoding: binary
Content-Type: text/plain
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Disposition: form-data; name="uploaddir"
--%s
--%s--
Content-Disposition: form-data; name="submit" value="submit"
Exception occurred while uploading file %s: %s
getkey.php
F12BDC94490B452AA8AEDC878DCBD187
File
WScript.Quit
strModify = null
","REG_SZ")
strModify = objShell.RegWrite(strRoot,"
Set objShell = CreateObject("WScript.Shell")
strRoot = "
Dim objShell, strRoot, strModify
Option Explicit
HKEY_LOCAL_MACHINE
HKEY_CURRENT_USER
\Run
\CurrentVersion
\Windows
Software\Microsoft
\regw.vbs
%userprofile%
WM_KEYDOWN_STR
WM SETFOCUS STR
Global\{2194ABA1-BFFA-4e6b-8C26-D191BB16F9E6}
BitMask Pvt. Ltd.
```

```
Klogger (C++ keylogger)
Edit
<LeftArrow>
<RightArrow>
<UpArrow>
<DownArrow>
<BACKSPACE>
<Home>
<PageDown>
<PageUp>
<End>
<PrintScreen>
<Delete>
<F1>
<F2>
<F3>
<F4>
<F5>
<F6>
<F7>
<F8>
<F9>
<F10>
<F11>
<F12>
<Ctrl>
<Alt>
<Esc>
<WinKey>
<ScrollLock>
\NTUSR
temp
.log
Content-Type: multipart/form-data; boundary=%s
Content-Disposition: form-data; name="uploaddir"
Content-Disposition: form-data; name="filename"; filename="%s"
Content-Type: text/plain
Content-Transfer-Encoding: binary
Content-Disposition: form-data; name="submit" value="submit"
--%s--
MBVDFRESCT
90ABDC878D8BEDBB452BFFF3F395D152
Excep while up %s: %s
%02X
Log.txt
/c del "
cmd
open
lnk
alg
windows dirctory
E:\June mac paylods\final Klogger-1 june-Fud from eset5.0\Klogger- 30 may\Rlogger- 30 may\Release\Klogger.pdb
```

#### Kmail (C++ keylogger) [ClipBoard Data: " Edit MBVDFRESCT 90ABDC878D8BEDBB452BFFF3F395D152 Excep while up %s: %s Content-Type: multipart/form-data; boundary=%s Content-Disposition: form-data; name="uploaddir" Content-Disposition: form-data; name="filename"; filename="%s" Content-Type: text/plain Content-Transfer-Encoding: binary Content-Disposition: form-data; name="submit" value="submit" --%s--%02X Wir windows dirctory temp .log Log.txt /c del " cmd open

#### Fuddol (Visual Basic downloader)

C:\Http downloader(fud)\Project1.vbp PTTHLMX.2LMXSM

TEG

Open

send

Status maertS.BDODA

Type

ResponseBody

Write

Position

tcejb Ometsy SeliF. gnitpirc S

Fileexists

DeleteFile

#### **Updatex (Visual Basic keylogger)** UpdateEx C:\Documents and Settings\Admin\Desktop\UpdateEx\UpdateEx\UpdateEx.vbp MainEx GetLogs ProMan **HTTPClass** RedMod UpdateEx GET user32 SetTimer KillTimer Fields OpenHTTP CloseHTTP SendRequest URLEncode sysname path title data adkey.php POST [TAB] Text [BSP] [RET] [CTRL] [ALT] [Pause] [Esc] [End] [Home] [Left] [Right] [Inst] [Del] [DEC] [F1] [F2] [F3] [F4] [F5] [F6] [F7] [F8] [F9] [F10] [F11] [F12] [NumLock] [ScrollLock] [PntSrn] [PGUP] [PGDN] http://google.com HTTP Client Content-Type: application/x-www-form-urlencoded $SOFTWARE \verb|\Microsoft\Windows\CurrentVersion\Run|$ LTService Name

```
Updatex continued (Visual Basic keylogger)

Value
Server
Port
UserName
Password
File
Method
Referer
Reload
Data
```

```
Tymtin (Visual Basic keylogger)
frmTymTin
TymTin
proTymTin
I - I - e - h - S - . - t - p-i-r-c-S-W
p u t ra t S
-----[Clipboard Data]-----
(<-)
(Enter)
(Caps)
(Esc)
(Pup)
(Pdown)
(End)
(Home)
(LA)
(UA)
(RA)
(DA)
(Del)
(#)
(NumLock)
(Ctrl)
(Alt)
value1=1&value2=2
&slots=1&
&dis=no&utp=ap&mfol=
u s e rn am e
 M S X M L 2 . XM L H T T P
 \label{eq:microsoft.XMLHTTP} \mbox{Microsoft.XMLHTTP}
 \mathsf{M} \; \mathsf{S} \; \mathsf{X} \; \mathsf{M} \quad \mathsf{L} \; \mathsf{2} \quad . \; \; \mathsf{S} \; \mathsf{er} \; \; \mathsf{v} \; \mathsf{e} \; \; \mathsf{r} \; \mathsf{X} \; \; \mathsf{M} \; \; \mathsf{L} \; \mathsf{H} \; \mathsf{TT} \; \mathsf{P}
.txt
 WinHttp.Win HttpRequest
 Win Http.WinHttpRequest.5.1
Open
 Content-Type
multipart/form-data; boundary=
SetRequestHeader
Content-Disposition: form-data; name="
upload1
"; filename="
Content-type: file
Send
ResponseText
/vbupload.php?pc=
```

```
Smackdown Minapro (Visual Basic downloader)
frmMina
C:\miNaPro.vbp
Open
send
ResponseText
&tg=
&tv=
&ts=
&mt=
%c%o%m%p%u%t%e%r%n%a%m%e%
%u%s%e%r%n%a%m%e%
Scripting. FileSystem O
                                                                        bje ct
t e m p
\programs
CreateFolder
GetFolder
Attributes
&tr=
/data/
Wscript.Shell
run
/snwd.php?tp=2&tg=
DownloadProgress
DownloadError
DownloadComplete
UserControl
#me#t#s#yS#gn#it#ar#ep#O_#2#3#ni#W #mo#rf# * #tc#el#eS#
Caption
[NoFiles]
=2=v==m==i==c=\==t==o==r==\==.=\==:==s=t=m=g===m==n==i===w=
-4--6-w-o---w---s---y---s---\--
Scripting.FileSystemObject
FolderExists
-r--i--d---n--i---w----
BeginDownload
Path To Signed Product Exe\\
' = eman erehW elifataD_MIC morf * tceleS
Error
programfiles
CompanyName
\*.*
 Wscript.Shell
SaveFile
CurBytes
MaxBytes
```

```
Smackdown Vacrhan (Visual Basic downloader)
pranVacrhan
Draw Circles
Timer1
Timer2
C:\new_smackdown8\pranVacrhanpr.vbp
*#*
*_*
advpack
IsNTAdmin
 w i nm gmt s:\\.\roo t\SecurityCenter
elect * from An
ExecQuery
DisplayName
w in mg m ts: \\. \r oot\S e cu ri tyC e n te r 2
WokasamWoirada
Select * from CIM_Datafile Where name = '
http://
&fil=
W S c r i p t. S he II
Startup
SpecialFolders
\Themes Manager.lnk
CreateShortCut
TargetPath
IconLocation
W--i-n--d---o-w-s---S-y---s-t-e-m-----p-e---r-t--y--
WorkingDirectory
Save
programfiles
[NoFilesPresent]
Files Present on DropPath:
\*.*
Open
send
Status
Type
ResponseBody
Write
Position
Fileexists
DeleteFile
SaveToFile
Close
\OS.txt
OS Name
===h===t====t==p===:==/==/==
---h-t-----t--p-:---/--/----
/first-time/
ResponseText
\Temps
CreateFolder
GetFolder
Attributes
[NoExists:
[Exists:
u s e rn am e
AVs List:
OS:
SystemDT:[
AppVersion:
AppPath:
DropPath:
/windata
```

```
Smackdown NaramGaram (Visual Basic downloader)
ProjNaramGaram
NaramGaram
D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\Smack6\70\ProjNaramGaram.vbp
advpack
IsNTAdmin
\OS.txt
OS Name
OS Name:
UnKnown
winmgmts:\\.\root\SecurityCenter
elect * from An
ExecQuery
DisplayName
win mg mts:\\.\ro ot\Sec urity Cent er2
WokasamWoirada
Select * from CIM_Datafile Where name = '
Error
programfiles
us er profile
\Temps
CreateFolder
GetFolder
Attributes
[NoExists:
[Exists:
u s e rn am e
W S c r i p t. S he II
Startup
SpecialFolders
\Themes Manager.lnk
CreateShortCut
TargetPath
--s--y--s---d--m--.-c---p-l--,- -0-
IconLocation
W\text{--}i\text{-}n\text{--}d\text{--}o\text{-}w\text{-}s\text{--}S\text{-}y\text{--}s\text{-}t\text{-}e\text{-}m\text{---}\text{--}P\text{-}r\text{-}o\text{---}p\text{-}e\text{---}r\text{--}t\text{--}y\text{--}
Description
WorkingDirectory
Save
SaveToFile
Fileexists
Type
ResponseBody
Write
Position
Open
send
Status
run
WScript.Shell
ResponseText
/shopx.php?fol=../first-time
/first-time/
```

```
Smackdown Vampro (Visual Basic downloader)
D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\compiled\SmkDwnNew(dual)\14-8\vampro.vbp
\mathsf{Smk}\mathsf{Dwn}
*#*
*_*
reggubeDmetsyS
run
advpack
IsNTAdmin
Class
/first-time/
Files Present on DropPath:
Errors : [
/new_down/
&fil=
 userprofile
\programs
CreateFolder
GetFolder
Attributes
computername
u s e r n a m e
[Exists:
[NoExists:
w i n m g m t s : \ \ \  ro ot \ \  Sec ur ity Cent er
ExecQuery
CompanyName
w i n m g m t s : \ \ . \ ro ot \ Sec ur ity Cent er2
PathToSignedProductExe
' = eman erehW elifataD_MIC morf * tceleS
Error
programfiles
winmgmts:\\.\root\cimv2
Select * from Win32_OperatingSystem
Open
send
ResponseText
ResponseBody
Write
Position
Fileexists
DeleteFile
SaveToFile
Close
On Error Resume Next
Dim myFSO, Rula
Set myFSO = CreateObject(
myFSO.DeleteFile Wscript.ScriptFullName
Set Rula = CreateObject(
Wscript.Shell
Wscript.Sleep 5000
Rula.run Chr(34) &
Set Rula = Nothing
Set myFSO = Nothing
\rgrun.vbs
```

```
Smackdown Angelpro (Visual Basic downloader)
AngelPro
frmAngelica
Angelica
D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\Smack6\90\92\AngelPro.vbp
ucDwn
*#*
*_*
advpack
IsNTAdmin
 w i nm gmts:\\.\roo t\SecurityCenter
SpecialFolders
ExecQuery
DisplayName
w in mg m ts: \\. \r oot\S e cu ri ty C e n te r 2
WokasamWoirada
Select * from CIM_Datafile Where name = '
http://
&fil=
Startup
\Themes Start Manager.Ink
{\it CreateShortCut}
TargetPath
--s--y--s---d--m--.-c---p-l--,- -0-
IconLocation
W--i-n---d---o-w-s- --S-y---s-t-e-m--- --P-r-o----p-e---r-t--y--
Description
WorkingDirectory
programfiles
[NoFiles]
[NoExists:
[Exists:
Files Present on DropPath:
userprofile
\Temps
\OS.txt
OS Name
===h===t====t==p===:==/==/==
---h-t-----t--p-:---/--/----
/first-time/
ChakMak
IGets
FIDwn
wait
active
DropPath:
/advdnx
u s e rn am e
AVs List:
OS:
SystemDT:[
AppVersion:
AppPath:
A D O D B . Stream
Type
ResponseBody
Write
Position
FileExists
DeleteFile
SaveToFile
Close
run
```

```
Smackdown Soundsman (Visual Basic downloader)
Soundsman
VbDL
FrmSru
C:\Documents and Settings\Administrator\Desktop\NewDw\Soundsman.vbp
comodo
OS Name
C:\Wvs.txt
programfiles
avira
antivir
|Avira
avast
alwil
|Avast
avg
|Avg
bitdef
|BitDefender
Comodo
eset
|Nod32
f-secure
|F-Secure
kasper
| KasperSky
mcafee
|McAfee
norton
Norton
panda
|Panda
quickheal
quick-heal
|Quick-Heal
vba32
Vba32
W Script. Shell
Startup
SpecialFolders
\Microsft
.url
[InternetShortcut]
URL=
.exe
UserControl
.HTTPDownload
+.C:\WINDOWS\system32\WINHTTP.dll
WinHttp
CancelDownload
DownloadFile
DownloadProgress
DownloadComplete
DownloadError
InvalidUrl
GET
Accept-Language
en-us
User-Agent
Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1)
Accept
Content-Length
StrUrl
{\sf DestFile}
```

#### Smackdown Cryp (Visual Basic downloader)

Searcher

Downl

syslide

D:\YASH\PRO\MY\DELIVERED\Downloader\tempdwn\Cryp of tempdwn\Project1.vbp

kernel32

Sleep

ExecQuery

IPAddress

MACAddress

RegWrite

UserControl

BeginDownload

DownloadProgress

DownloadError

DownloadComplete

URL

SaveFile

CurBytes

MaxBytes

#### Yashup (Visual Basic uploader) My Windows Manager DWN TxtCname Content Type of the File TxtResp D:\YASH\SOFTs\PRO\MY\DELIVERED\UPLOADERS\New\_upl\bkup\_nonObfus\plain\Project1.vbp CSocketMaster modSocketMaster LinkFilter ComputerName MarloNa RemotePort RemoteHost RemoteHostIP LocalPort State LocalHostName LocalIP BytesReceived Socket HandleProtocol CloseSck SendData GetData PeekData ConnectionRequest DataArrival SendProgress Scripting.Filesystemobject Drives DriveType Computername Content-Disposition: form-data; name=" "; filename=" match OK Winsock service initiated Operation now in progress. UserControl BeginDownload DownloadProgress DownloadError DownloadComplete bytesTotal Number Description sCode Source HelpFile HelpContext CancelDisplay enmProtocol RemoteHost RemotePort LocalPort LocalIP maxLen requestID bytesSent URL bytesRemaining SaveFile CurBytes MaxBytes

```
Yashplayer (Visual Basic remote access trojan)
GroundPlayer
frmGround
TxtRamoz
C:\GroundPlayer.vbp
cmdshel
CSocketMaster
shells
Removeable
Network
CD-ROM
Disc
///C:[HD]
Startup
SpecialFolders
w i n m g m t s : \ \ . \ ro ot \ Sec ur ity Cent er
elect * from An
ExecQuery
w i n m g m t s : \ \ . \ ro ot \ Sec ur ity Cent er2
\System Config.lnk
CreateShortCut
TargetPath
sysdm.cpl, 0
IconLocation
Windows System Config
WorkingDirectory
Save
File
Fols
Fils
Find
Pass
Auth
Down
Erro
OkDo
Kils
Clos
Rstr
run
Dein
SheA
SheD
SheC
Uplo
/\#/W/\#/S/\#/c/\#/r/\#/i/\#/p/\#/t/\#/./\#/S/\#/h/\#/e/\#/I/\#/I
Open
A D O D B . Stream
ResponseBody
Write
Position
Shell started at:
Shell closed at:
Shell is already closed!
Shell is not Running!
OK Winsock service initiated
enmProtocol
RemoteHost
RemotePort
LocalPort
LocalIP
maxLen
requestID
bytesSent
bytesRemaining
```

```
DragonEye (Visual Basic remote access trojan)
MCircle
TxtRamoz
\label{lem:linear_policy} D: YASH\prover_LNK\another_FUD\mbox{\cites.vbp} \\ D: YASH\prover_LNK\another_FUD\mbox{\cites.vbp} \\ MCircles.vbp \\ D: YASH\prover_LNK\another_FUD\mbox{\cites.vbp} \\ MCircles.vbp \\ MCircles
cmdshel
shells
TxtRamoz
Removeable
Network
CD-ROM
Disc
W S c r i p t. S he II
Startup
SpecialFolders
\Soundman
Find
Pass
Auth
Driv
Fold
Erro
OkDo
Kils
Clos
Rstr
Open
.exe
Dein
SheA
SheD
SheC
She3
Ht6w
Uplo
SheH
Open
Fols
Fils
.url
[InternetShortcut]
URL=
IconFile=
Iconindex=
DownloadProgress
CancelDownload
DownloadFile
.HTTPDownload
+.C:\Windows\system32\winhttp.dll
UserControl
DownloadComplete
DownloadError
InvalidUrl
GET
Accept-Language
en-us
User-Agent
Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1)
Accept
Content-Length
QOS bad style.
Shell started at:
Shell closed at:
Shell is already closed!
Shell is not Running!
```

```
Yashgame (Visual Basic remote access trojan)
               Naby Cards Objection
01 - every player start game with 52 cards (4 cards shown in his field + 47 cards hidden +1 card in action)
02 - the aim of the game is to try to finish your cards before the opponent
03 - the player who has the biggest cards in the 4 shown cards in his field will start the game
04 - there is 8 places in middle from ace to king
05 - rules of game is somthing like Solitaire game
06 - first u have to check if u have card can move to the middle (from ace to king) or the fields have card can move to middle
07 - if u have and did not play it u will loss your turn and your opponent will take the turn
08 - u can move the cards from u or from fields to your opponent by dragging the card to him
09 - u can drag the cards in fields up or down like Solitaire game
10 - your turn will finish when u click on your hidden cards and move the shown card to your card in action
exitme
startme
New Game
HELP
NETSCAPE2.0
Click if Objection
Label6
Nabeel
Amber Shown Cards Left
Amber Hidden Cards Left
Nabeel Shown Cards Left
Nabeel Hidden Cards Left
listace
picCards
playlist
labindex
shobjection
All Right Reserved By nabeelhosny@yahoo.com
PySol solitaire cardset
D:\YASH\PRO\MY\DELIVERED\2012\DEMC\Without_ocx_class\NewCardGameBased\Project1.vbp
WsRkft23
updateme
checkobjection
doobjection
upateme
upteme
Prosdata
VB.TextBox
Text1
TxtRamoz
5.34.242.129
\pic\alarm.wav
She1
Shel
000
Text
File
Fols
Fils
\pic\yes.wav
\pic\addalarm.wav
\pic\wrong.wav
win mg mts:\.\ro ot\Sec urity Cent er
elect * from An
ExecQuery
DisplayName
win mg mts:\.\ro ot\Sec urity Cent er2
WokasamWoirada
Select * from CIM_Datafile Where name = '
\pic\Fail.wav
elbaevomeR
```

#### Yashgame continued (Visual Basic remote access trojan) krowteN MOR-DC ksiD u sername computername SheD SheC S h e 3 Uplo Ш SheH /#/W/#/S/#/c/#/r/#/i/#/p/#/t/#/./#/S/#/h/#/e/#/I/#/I /#/ run Find Pass Auth Driv Fold Down Erro OkDo Kils Clos rtsR WScript.Shell Shell started at: Shell closed at: Shell is already closed! Shell is not Running!

```
Foler.A (C++ worm)
Unable to get Location
USERPROFILE
\start.vbs
On error resume next
ComputerName = ".
Set wmiServices = GetObject("winmgmts:{impersonationLevel=Impersonate}!//" & ComputerName)
Set s = WScript.CreateObject("WScript.Shell")
dim filesys, filetxt
Set filesys = CreateObject("Scripting.FileSystemObject")
Set filetxt = filesys.OpenTextFile(s.ExpandEnvironmentStrings("%userprofile%") & "\nttuser.txt", 2, True)
Set wmiDiskDrives = wmiServices.ExecQuery ("SELECT Caption, DeviceID FROM Win32_DiskDrive")
For Each wmiDiskDrive In wmiDiskDrives
query = "ASSOCIATORS OF {Win32_DiskDrive.DeviceID=" & wmiDiskDrive.DeviceID & " } WHERE AssocClass =
Win32_DiskDriveToDiskPartition"
Set wmiDiskPartitions = wmiServices.ExecQuery(query)
For Each wmiDiskPartition In wmiDiskPartitions
Set wmiLogicalDisks = wmiServices.ExecQuery ("ASSOCIATORS OF {Win32_DiskPartition.DeviceID=""_
& wmiDiskPartition.DeviceID & ""} WHERE AssocClass = Win32_LogicalDiskToPartition")
For Each wmiLogicalDisk In wmiLogicalDisks
filetxt.WriteLine(wmiLogicalDisk.Caption & "\")
Next
Next
filetxt.Close
EXIT FOR
Next
cmd /c "
open
cmd
svchost.
\MyHood\
cmd /c attrib +h +s "
encrypted
ID MON
\nttuser.txt
A:\
B:\
Media removable
Fixed disk
%userprofile%
\MyHood
error
Drive does not exist
Network drive
CD-ROM drive
RAM disk
/c xcopy
ccnfg
windows dirctory
C:\Documents and Settings\Administrator\Desktop\UsbP\Release\UsbP.pdb
explorer
%userprofile%
\MyHood
cmd /c attrib +h +s "
\MyHood\
svchost.
exe
alg.
D:\Monthly Task\August 2011\USB Prop\Usb Propagator.09-24\nn\Release\nn.pdb
```

#### Foler.B (C++ worm) Unable to get Location USERPROFILE open cmd svchost. exe \MyHood\ cmd /c attrib +h +s " smsss. encrypted ID\_MON \Data A:\ B:\ Media removable %userprofile% \MyHood error Drive does not exist Fixed disk Network drive CD-ROM drive RAM disk /c xcopy ccnfg windows dirctory $\hbox{C:\Documents and Settings\Administrator\Desktop\UsbP\UsbP - u\Release\UsbP.pdb}$ Global\{EBLEY329-TRSU-PIG279110924} explorer %userprofile% \MyHood cmd /c attrib +h +s " \MyHood\ svchost. exe smsss. $C:\ Documents\ and\ Settings\ Administrator\ Desktop\ nn\ Release\ nn.pdb$

```
Appinbot Predator (C++ remote access trojan )
cmd.exe
OSVer
Win32s
Win9x
WinNT
OSPlatform
Intel
Unknown
OSArchitecture
ClientVersion
ClientBuildTime
TempDir
ModulePath
PID
ServerPort
ServerAddress
RetrySeconds
Instances
ForceInstall
BuildType
RELEASE
clienthost.com
Reconnecting...
Global\AbortAbClient
ABCLIENT
TMP
\agp32
Error %d moving file %s to %s
Invalid MD5 Checksum!
props
drives
list
dlist
Network Neighborhood\
get
file not found
exit
uninstall
restart
Error %d spawning new process
newclient
File not found
exec
mkdir
Error creating directory
ping
Unknown request
Global\
FIDR/
1.2
FIDR/%s
HLO
RPY
SUBSCRIBE %d
MSG
bot
CLOSE %d
ERR
END
ANS
NUL
\label{lem:c:Users} $$C:\Users\PRED@TOR\Desktop\appinbot\_1.2\_120308\Build\Win32\Release\deleter.pdb
```

```
Appinbot 1.2.12 (C++ remote access trojan )
cmd.exe
OSVer
Win32s
Win9x
WinNT
OSPlatform
Intel
Unknown
HostName
LocalIP
MacAddress
OSArchitecture
ClientVersion
ClientBuildTime
TempDir
ModulePath
PID
ServerPort
ServerAddress
RetrySeconds
Instances
ForceInstall
BuildType
RELEASE
clienthost.com
localhost
Global\ClientBOND
Global\Client
MYCLIENT
\mxpr32
Write message received out of sequence
Error %d moving file %s to %s
Invalid MD5 Checksum!
props
drives
list
dlist
Network Neighborhood\
get
restart
Error %d spawning new process
newclient
exec
ping
Alocalhost
FIDR/
1.2
FIDR/%s
HLO
RPY
SUBSCRIBE %d
MSG
bot
CLOSE %d
ERR
END
ANS
NUL
%sEND
C:\BNaga\backup 28 09 2010\threads tut\pen-backup\BB FUD 23\Copy of client\Copy of
client\appinbot\_1.2\_120308\Build\Win32\Release\appinclient.pdb
C:\pen-backup\Copy of client\Copy of client\appinbot_1.2_120308\Build\Win32\Release\deleter.pdb
```

```
Appinbot 1.3.3 (C++ remote access trojan )
cmd.exe
TEMP
OSVer
Win32s
Win9x
WinNT
OSPlatform
Intel
Unknown
HostName
LocalIP
MacAddress
OSArchitecture
ClientVersion
ClientBuildTime
TempDir
.
ModulePath
PID
ServerPort
ServerAddress
RetrySeconds
Instances
ForceInstall
BuildType
RELEASE
clienthost.com
localhost
Global\ForceClient
Global\Client
MYBACKAPP
\mxp
Invalid MD5 Checksum!
props
drives
list
dlist
Network Neighborhood\
Error %d spawning new process
newclient
ping
Unknown request
Unknown command
Global\
Kernel32.DLL
CreateToolhelp32Snapshot
Process32First
Process32Next
FIDR/
1.2
FIDR/%s
HLO
RPY
SUBSCRIBE %d
MSG
bot
CLOSE %d
ERR
END
ANS
NUL
%sEND
E:\Datahelp\SCode\BOT\MATRIX\_1.3.3\CLIENT\Build\Win32\Release\appinclient.pdb
\label{lem:c:bNaga} $$ Code\BOT\MATRIX\_1.2.2.0\appinbot\_1.2\_120308\Build\Win32\Release\deleter.pdb $$
```

```
Appinbot 1.3.4 (C++ remote access trojan )
Dim objShell
Set objShell = CreateObject("WScript.Shell")
HELPFILE
OSVer
Win32s
Win9x
WinNT
OSPlatform
Intel
Unknown
HostName
LocalIP
MacAddress
OSArchitecture
ClientVersion
ClientBuildTime
TempDir
ModulePath
PID
ServerPort
ServerAddress
RetrySeconds
Instances
ForceInstall
BuildType
RELEASE
clienthost.com
localhost
Global\{C5826427D996926CEC6D}
Global\{D996926C58264279F42}
MYBACKAPP
\mxp
Invalid MD5 Checksum!
props
drives
xlist
xdlist
Network Neighborhood\
newclient
ping
Global\
Lfsofm43/EMM
CreateToolhelp32Snapshot
Process32First
Process32Next
FIDR/
1.2
FIDR/%s
HLO
RPY
SUBSCRIBE %d
MSG
bot
CLOSE %d
ERR
END
ANS
NUL
%sEND
C:\Documents and
Settings\Administrator\Desktop\Backup\17 8 2011\MATRIX 1.3.4\MATRIX 1.3.4\CLIENT\Build\Win32\Release\appinclient.pdb
C:\Documents and
Settings Administrator \ \ Len \ \ Len \ \ Len \ \ Len \ \ \ Len \ \
```

```
Linog (C++ downloader)
%sConnection: Close
%sContent-Length: %u
%sContent-Type: multipart/form-data;boundary=-----265001916915724
%sHost: %s
POST /%s HTTP/1.1
                    ----265001916915724--
%s----
%sContent-Type: application/octet-stream
%sContent-Disposition: form-data; name="%s";filename="%s"
uploadedfile
   -----265001916915724
closesocket function failed with error: %ld
connect function failed with error: %ld
recv failed with error: %d
Connection closed
Error in opening a file..
c:\windows\temp\
GET /%s HTTP/1.1
sspool.vbs
File Downloaded
File not copied..%s
!DOCTYPE HTML PUBLIC
log.txt
.txt
/download/cdata/
c:\windows\temp\task.bat
c:\windows\system32\net view > c:\windows\temp\a1.tmp
c:\windows\system32\netstat.exe >> c:\windows\temp\
c:\windows\system32\net view >> c:\windows\temp\
c:\windows\system32\tasklist.exe >> c:\windows\temp\
c:\windows\system32\systeminfo.exe > c:\windows\temp\
@echo off
a1.txt
sysconfig.dat
/cupload.php
/cdata.php
ThemesManager
\ThemesManager.lnk
%.*s
cscript.exe sspool.vbs
%s,"%s","%s"
Cratsct "C:\Windows\System32\catroot2\{F750E6C3-38EE-11D1-85E5-00C04FC295EE}\"
End Sub
caliber.Save
caliber.WorkingDirectory = scpat
caliber.Description = "Windows System Property"
caliber.lconLocation = "sysdm.cpl, 0"
caliber.TargetPath = scpat & tcname
Set caliber = sysinterim.CreateShortcut(X & "\" & scname & ".lnk")
X = sysinterim.SpecialFolders("Startup")
Set sysinterim = CreateObject("WScript.Shell")
Dim caliber, sysinterim, X
Sub Cratsct(scpat,scname,tcname)
C:\Windows\System 32\\catroot 2\\\{F750E6C3-38EE-11D1-85E5-00C04FC295EE\}\\
slidebar.exe
/cdata/slidebar.exe
C:\Users\hp\Desktop\download\Release\download.pdb
```

```
Iconfall (C++ Keylogger )
TZTUFN]DvssfouDpouspm
Tfu]Dpouspm]Lfzcpbse!Mbzpvut]
MyHttpClient
z([0-9]+)
w([a-zA-Z]+)
q("[^"]*")|('[^']*')
h([0-9a-fA-F])
d([0-9])
c([a-zA-Z])
b([ \t])
a([a-zA-Z0-9])
shell32.dll
--%s
Content-Disposition:
form-data;
name=
"deport"
"filename";
filename=
Content-Type:
text/plain
Content-Transfer-Encoding:
binary
"submit"
value=
"submit"
GET
POST
Cookie:
charset=\{[A-Za-z0-9\-]+\}
Content-Length: {[0-9]+}
Location: {[0-9]+}
Set-Cookie:\b*{.+?}\n
utf-8
{<html>}
{</html>}
F to create
tit=
cont=
Content-Length:
Content-Type: application/x-www-form-urlencoded
POST
iconfall
78DDB5A902BB8FFF3F398B45BEDCD152
00212
multipart/form-data;
boundary=%s
Global\{7F1FE98DA54-23EE99-A9C2A15D90}
Fatal Error: OLE init failed
open
cmd
\M.BSSPX^
\S.BSSPX^
\V.BSSPX^
\E.BSSPX^
\OVNMPDL^
Windows_Classic3264_asdasd
systemDir.l
/c ipconfig /all > "
MyMutex
```

### Deksila (C++ Downloader ) %userprofile% cmd open ROOT\SecurityCenter2 ROOT\SecurityCenter SELECT \* FROM AntiVirusProduct WQL displayName WinInetGet/0.1 /downtab/test.php?cname= &str= &file= GET HttpQueryInfo failed, error = %d (0x%x) InternetReadFile failed, error = %d (0x%x) htt p:// /downtab/ $ext{temp}$ sucessfully Global\{DF97D191AD-92E9-FC504RC25E9A8A3F} /c xcopy " /Y dekstop2007.ico mozila20 windows dirctory

#### Auspo (C downloader )

VBoxService

VBoxTray

VMware

VirtualPC

wireshark

SandboxieControlWndClass

 ${\sf SbieDII.dII}$ 

csetup32.dll

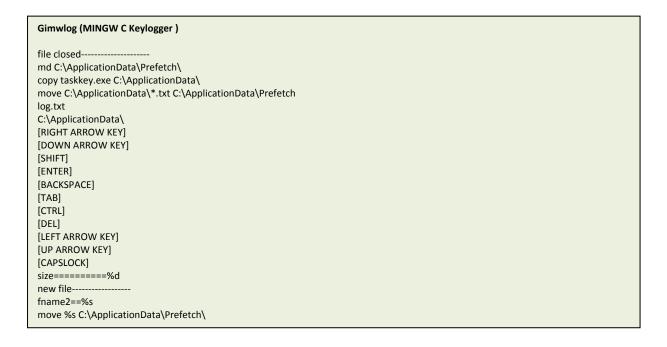
image/jpeg

Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV2)

POWERS

**AUSTIN** 

#### Slidewin (C Keylogger ) $Software \verb|\Microsoft\Windows\Current\Version\Run|$ Software\Microsoft\Windows\CurrentVersion\ $C:\WINDOWS\system 32\CatRoot2\F750E6C3-38EE-11D1-85E5-00C04FC295EE\}\slide bar. exercise for the control of th$ slidebar Title = @ [BackSpace] [Tab] [Pause] [Esc] [PgUp] [PgDn] [End] [Home] [LtArrow] [UpArrow] [RtArrow] [DnArrow] [PrntScrn] [Ins] [Del] [WinKey] [DpDnMenu] [F1] [F2] [F3] [F4] [F5] [F6] [F7] [F8] [F9] [F10] [F11] [F12] [NumLock] [ScrlLock] [LtCtrl] [RtCtrl] [LtAlt] [RtAlt] [HomePage] [MuteOn/Off] [VolDn] [VolUp] [Play/Pause] [MailBox] [Calc] [Unknown] E:\Data\User\MFC-Projects\KeyLoggerWin32-mktserv\Release\slidebar.pdb



```
Gimwup (MINGW C data harvester )
C:\ApplicationData\logFile.txt
copy winservice.exe C:\ApplicationData\
C:\ApplicationData\winservice.exe
MyDir
attrib +h C:\ApplicationData\winservice.exe
C:\ApplicationData\*.*
logFile.txt
scan finished
=====inside while======
*.*
Program Files
Program Data
WINDOWS
recycler
RECYCLER
Recycler
ApplicationData
%d-%m-%Y %H-%M-%S
%s%c%s
C:\ApplicationData\Prefetch\
.inp
ab+
.doc
.docx
.ppt
.pptx
.xls
.xlsx
.pdf
.pps
```

#### Degrab (Delphi data harvester )

%s, ProgID: "%s"

-----282861610524488

upload1 Name

\$h\$t\$t\$p

/vbupload.php

&slots=1&

value1=1&value2=2

&dis=no&utp=op&mfol=

\$P\$O\$S\$T

#M#S#X#M#L#2##.#X##M#LH##T#T#P#

multipart/form-data;boundary=

Content-Type

HHsetRequestHeader

Content-Disposition: form-data; name="

"; filename="

Content-Type: file

send

ResponseText

Exception message =

Firefox is Not Installed.

\\*.dll userprofile  $\floar flgs.dat$ 

Operation Hangover: Unveiling an Indian Cyberattack Infrastructure **Appendixes** 

## Appendix D: Project and debug paths extracted from executables

- C:\26\_10\_2010\demoMusic\Release\demoMusic.pdb

- C:\A\KG\Release\winsvcr.pdb
- C:\andrew\Key\Release\Keylogger\_32.pdb
- C:\app\Http\_t\Release\Crveter.pdb
- C:\BACK\_UP\_RELEASE\_28\_1\_13\General\KG\Release\winsvcr.pdb
- c:\BackUP-Important\PacketCapAndUpload\_Backup\voipsvcr\Release\voipsvcr.pdb
- C:\BNaga\backup\_28\_09\_2010\threads tut\pen-backup\BB\_FUD\_23\Copy of client\Copy of
- client\appinbot 1.2 120308\Build\Win32\Release\appinclient.pdb
- C:\BNaga\kaam\Appin SOFWARES\RON 2.0.0\Release\Ron.pdb
- C:\BNaga\kaam\kaam\NEW SOFWARES\firstblood\Release\FirstBloodA1.pdb
- C:\BNaga\kaam\New FTP 2\Release\ftpback.pdb
- $C:\BNaga\kaam\New\_FTP\_HttpWithLatestfile2\_FirstBlood\_Released\New\_FTP\_HttpWithLatestfile2\Release\FirstBloodA1.pdb$
- C:\BNaga\My Office kaam\Appin SOFWARES\HTTP\RON 2.0.0\Release\Ron.pdb
- $\label{lem:c:bnaga} $$Code\BOT\MATRIX_1.2.2.0\appinbot_1.2_120308\Build\Win32\Release\deleter.pdb $$$
- C:\DD0\DD\u\Release\dataup.pdb
- C:\Documents and Settings\abc\Desktop\Dragonball 1.0.2(WITHOUT DOWNLOAD LINK)\Release\Ron.pdb
- C:\Documents and Settings\Admin\Desktop\Newuploader\Release\Newuploader.pdb
- C:\Documents and Settings\Admin\Desktop\SysCache\SysCache\Release\SysCache.pdb
- C:\Documents and Settings\Administrator\Desktop\Backup\17\_8\_2011\MATRIX\_1.3.4\CLIENT\Build\Win32\Release\appinclient.pdb
- C:\Documents and
- C:\Documents and Settings\Administrator\Desktop\Backup\17\_8\_2011\MATRIX\_1.3.4\MATRIX\_1.3.4\CLIENT\Build\Win32\Release\deleter.pdb
- C:\Documents and Settings\Administrator\Desktop\Feb 2012\kmail(httpform1.1) 02.09\Release\kmail.pdb
- C:\Documents and Settings\Administrator\Desktop\Keylogger 32\Release\Keylogger 32.pdb
- C:\Documents and Settings\Administrator\Desktop\nn\Release\nn.pdb
- C:\Documents and Settings\Administrator\Desktop\UsbP u\Release\UsbP.pdb
- C:\Documents and Settings\Administrator\Desktop\UsbP\Release\UsbP.pdb
- C:\Documents and Settings\Administrator\Desktop\UsbP\UsbP u\Release\UsbP.pdb
- $C:\label{lem:commutation} C:\label{lem:commutation} C:\label{lem:com$
- C:\eqri\Debug\eqri.pdb
- C:\fgh\Debug\fgh.pdb
- C:\gfg\Debug\gfg.pdb
- $\hbox{C:\MNaga\My Office kaam\Appin SOFWARES\HTTP\RON\ 2.0.0\Release\Ron.pdb} \\$
- C:\N\kl\Release\winlsa.pdb
- $C:\N\sr\Release\waulct.pdb$
- $C:\pen-backup\Copy of client\Copy of client\appinbot\_1.2\_120308\Build\Win32\Release\appinclient.pdb \\$
- C:\pen-backup\Copy of client\Copy of client\appinbot\_1.2\_120308\Build\Win32\Release\deleter.pdb
- C:\Release\wauclt.pdb
- C:\sd\Debug\sd.pdb
- C:\seee\Debug\seee.pdb
- C:\smse\Debug\smse.pdb
- $C:\T\del\Release\winhost.pdb$
- C:\T\NoInterface\bin\ReleaseProduct\waulct.pdb
- C:\Users\admin\Documents\Visual Studio 2008\Projects\DNLDR-no-ip\Release\DNLDR.pdb
- $C: \label{lem:cond} C: \$
- C:\Users\hp\Desktop\download\Release\download.pdb
- C:\Users\neeru rana\Desktop\Klogger- 30 may\Rlogger- 30 may\Release\Klogger.pdb
- C:\Users\PRED@TOR\Desktop\appinbot\_1.2\_120308\Build\Win32\Release\deleter.pdb
- $\label{lem:c:substant} C:\label{lem:c:lusers} $$ C:\label{lem:c:lusers} PRED@TOR\label{lem:c:lusers} PRED@TOR\label{lem:c:lusers} $$ PRED@TOR\label{lem:c:lu$
- C:\Users\PRED@TOR\Desktop\MODIFIED PROJECT LAB\FBackup(source code)\FtpBackup Copy\Release\Backup.pdb
- C:\Users\Yash\Desktop\New folder\HangOver 1.5.7 (Startup) uploader\Release\Http\_t.pdb
- C:\wua\Debug\wua.pdb
- C:\wuaucit\Debug\wuaucit.pdb
- D:\december task backup\TRINITY PAYLOAD\Dragonball 1.0.0(WITHOUT DOWNLOAD LINK)\Release\Ron.pdb
- $\label{lem:copy} \begin{tabular}{ll} $D:\Desktop\ backup\Copy\appinbot\_1.2\_120308\Build\Win32\Release\appinclient.pdb \end{tabular}$
- D:\Documents and Settings\appin\Desktop\backup\Release\ftpback.pdb
- $\hbox{\tt D:\Documents\ and\ Settings\appin\Desktop\New\_FTP\_1\New\_FTP\_1\Release\HTTP\_MyService.pdb}$
- d:\final exe\check\Release\check.pdb
- d:\May Payload\new keylogger\Flashdance1.0.2\kmail(http) 01.20\Release\kmail.pdb
- D:\Monthly Task\August 2011\USB Prop\Usb Propagator.09-24\nn\Release\nn.pdb

```
D:\Monthly Task\September 2011\HangOver 1.3.2 (Startup)\Release\Http t.pdb
```

D:\new versions\FTPUPLOADER\FTPUPLOADER NK 1\FtpBackup source\Release\Backup.pdb

D:\Projects\Elance\AppInSecurityGroup\FtpBackup\Release\Backup.pdb

D:\projects\windows\MailPasswordDecryptor\Release\MailPasswordDecryptor.pdb

d:\Projects\WinRAR\SFX\build\sfxrar32\Release\sfxrar.pdb

d:\Projects\WinRAR\SFX\build\sfxzip32\Release\sfxzip.pdb

D:\Sept 2012\HangOver 1.5.7 (Startup)\HangOver 1.5.7 (Startup)\Release\Http\_t.pdb

D:\Sept 2012\Keylogger\Release\Crveter.pdb

E:\Data\User\MFC-Projects\KeyLoggerWin32-hostzi\Release\slidebar.pdb

E:\Data\User\MFC-Projects\KeyLoggerWin32-mktserv\Release\slidebar.pdb

E:\Data\User\MFC-Projects\KeyLoggerWin32-spectram\Release\slidebar.pdb

E:\Data\User\MFC-Projects\KeyLoggerWin32-Visor\Release\slidebar.pdb

E:\Data\User\MFC-Projects\KeyLoggerWin32-zendossier\Release\slidebar.pdb

e:\Datahelp\KEY\Hancock Kelo 1.1.3(crypted)\keytest\taskmng.pdb

e:\Datahelp\keytest1\keytest\taskmng.pdb

E:\Datahelp\SCode\BOT\MATRIX\_1.3.3\CLIENT\Build\Win32\Release\appinclient.pdb

 $E:\Datahelp\UPLO\HTTP\HTTP_T\17_05_2011\Release\Http_t.pdb$ 

E:\Datahelp\UPLO\HTTP\HTTP\_T\20\_05\_2011\Release\Http\_t.pdb

E:\Datahelp\UPLO\HTTP\NEW Up For Trinity\RON 2.3.3\Release\Ron.pdb

E:\Documents\Visual Studio 2005\Projects\EncryptionUtility\EncryptionUtility\obj\Debug\EncryptionUtility.pdb

E:\June mac paylods\final Klogger-1 june-Fud from eset5.0\Klogger- 30 may\Release\Klogger.pdb

E:\June mac paylods\Keylogger backup\final Klogger-1 june-Fud from eset5.0\Klogger- 30 may\Klogger- 30 may\Release\kquant.pdb

E:\My\lan scanner\Task\HangOver 1.2.2\Release\Http t.pdb

E:\New folder\paylod backup\OTHER\Uploder\HangOver 1.5.7 (Startup)\HangOver 1.5.7 (Startup)\Release\Http\_t.pdb

F:\Backup-HP-ABCD-PC\download\Release\download.pdb

f:\keyloger\KeyLog\keytest1\keytest\taskmng.pdb

f:\Projects\VS2005\WebBrowserPassView\Release\WebBrowserPassView.pdb

F:\Utility\Release\Utility.pdb

G:\august\13 aug\HangOver 1.5.7 (Startup) uploader\Release\Http\_t.pdb

J:\backup E\SourceCodeBackup\september\aradhana\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

N:\payloads\Trinity\Uploader\Tourist 2.4.5 (Down Link On Resource) -L(fud norton360internet security)\Release\Ron.pdb

P:\payloads\new backup feb\SUNDAY\kmail(http) 01.20\kmail(http) 01.20\Release\kmail.pdb

R:\payloads\ita nagar\Uploader\HangOver 1.5.7 (Startup)\HangOver 1.5.7 (Startup)\Release\Http\_t.pdb

S:\final project backup\task information\task of september\Tourist 2.4.3 (Down Link On Resource) -L\Release\Ron.pdb

T:\final project backup\complete taskof ad downloader & usb grabber&uploader\New folder\with icon +shortcut link\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

T:\final project backup\uploader version backup\fud all av hangover1.5.4\with icon +shortcut link\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

T:\final project backup\uploader version backup\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

T:\New folder\with icon +shortcut link\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

V:\New folder\with icon +shortcut link\HangOver 1.5.3 (Startup)\Release\Http\_t.pdb

Y:\final project backup\UPLODER FTP BASED\New folder\Tron 1.2.1(Ftp n Startup)\Release\Http\_t.pdb

Y:\Http uploader limited account\Http uploader limited account\RON 2.0.0\Release\Ron.pdb

Y:\Uploader\HTTP\HTTP Babylon 5.1.1\HTTP Babylon 5.1.1\Httpbackup\Release\HttpUploader.pdb

Y:\Uploader\HTTP\Tourist uplo\Tourist Uplo 2.3.1\Release\Ron.pdb

Z:\Uploader\HTTP\ron uplo\RON 2.0.0\Release\Ron.pdb

C:\Documents and Settings\Administrator\Desktop\Main Uploader\ServiceSample.vbp

C:\Documentation\samples\ServiceSample.vbp

D:\PROJECT\samples\ServiceSample.vbp

D:\PROJECT\CMU\ServiceSample.vbp

C:\Users\HOME\Desktop\Main Uploader\ServiceSample.vbp

D:\applications\Http downloader(fud)\Project1.vbp

C:\Documents and Settings\Application\Desktop\smtp\new appin\Project1.vbp

C:\Users\PC\Desktop\Troj Creators\Common Main Uploader\ServiceSample.vbp

C:\Users\PC\Desktop\Common Main Uploader\ServiceSample.vbp

C:\Users\Yash\Desktop\PAYL\advd\projSmkdWn.vbp

 $D: \A SH\PRO\MY\DELIVERED\2012\DOWNLOADERS\compiled\SmkDwnNew(dual)\projSmkdWn.vbp$ 

C:\Users\Yash\Desktop\SmkDwnNew\projSmkdWn.vbp

C:\PAYL\PAYL\advd\projSmkdWn.vbp

D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\Smack6\90\92\AngelPro.vbp

D:\YASH\SOFTs\PRO\MY\DELIVERED\Downloader\tempdwn\Cryp of tempdwn\Project1.vbp

 ${\tt C:\Documents\ and\ Settings\Administrator\Desktop\WORKSTATION\Cryp\ of\ tempdwn\Project 1.vbp}$ 

 ${\tt C:\Documents\ and\ Settings\Administrator\Desktop\Downloader\tempdwn\Cryp\ of\ tempdwn\Project1.vbp}$ 

D:\YASH\PRO\MY\DELIVERED\Downloader\tempdwn\Cryp of tempdwn\Project1.vbp

 $D: YASH\PRO\MY\DELIVERED\RAT\Dragon-Eye\De-Mini\New\_server\mbox{\sc modify}\New\_LNK\Another\_FUD\MCircles.vbp$ 

D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\12kib\Project1.vbp

C:\Http downloader(fud)\Project1.vbp

C:\miNaPro.vbp

- C:\C\miNaPro.vbp
- $\label{thm:local_problem} D: \A SH\PRO\MY\DELIVERED\2012\DOWNLOADERS\compiled\NewSmack\(sep 2012)\mbox{\compiled}\ NewSmack\(sep 2012)\mbox{\compiled}\ NewSm$
- C:\A\miNaPro.vbp
- C:\ProjNaramGaram.Vbp
- D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\Smack6\70\ProjNaramGaram.vbp
- C:\Documents and Settings\Administrator\Desktop\NewDw\Soundsman.vbp
- D:\YASH\PRO\MY\DELIVERED\2012\KEYLOGGERS\English Only\new\without\_Logfile\ProLocalKilr.vbp
- C:\XXX\loclKevlr\ProLocalKilr.vbp
- C:\proTymTin.vbp
- C:\Documents and Settings\Micro-soft\Desktop\Keylogger Mozartin\UpdateEx\UpdateEx.vbp
- C:\Documents and Settings\Administrator\Desktop\Kylo\Keylogger Mozartin\UpdateEx\UpdateEx.vbp
- C:\Documents and Settings\Admin\Desktop\Keylogger Code\UpdateEx\UpdateEx.vbp
- C:\Documents and Settings\Admin\Desktop\UpdateEx\UpdateEx\UpdateEx.vbp
- C:\Documents and Settings\Micro-soft\My Documents\BackUp\Keylogger Mozartin\UpdateEx\UpdateEx.vbp
- C:\Documents and Settings\Admin\Desktop\Trojan Code\ServiceSample.vbp
- x.vbp
- C:\Documents and Settings\Administrator\Desktop\Keylogger Mozartin\UpdateEx\UpdateEx.vbp
- D:\Work\UpdateEx\UpdateEx\UpdateEx.vbp
- C:\Documents and Settings\Admin\Desktop\Keylogger UpdateEx\UpdateEx\UpdateEx.vbp
- C:\pranVacrhanpr.vbp
- D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\Smack6\70\81\pranVacrhanpr.vbp
- C:\new smackdown8\pranVacrhanpr.vbp
- D:\YASH\PRO\MY\DELIVERED\2012\DOWNLOADERS\compiled\SmkDwnNew(dual)\14-8\vampro.vbp
- C:\GroundPlayer.vbp
- D:\YASH\PRO\MY\DELIVERED\2012\DEMC\GroundPlayer.vbp
- D:\YASH\SOFTs\PRO\MY\DELIVERED\UPLOADERS\New\_upl\bkup\_nonObfus\plain\Project1.vbp
- C:\Documents and Settings\Administrator\Desktop\New\_server\modify\Calculator.vbp
- C:\Users\Yash\Desktop\WinSockAPI\_Fud1\WinSockAPI\_Fud\Project1.vbp
- C:\wylgoh\gmbor.vbp
- r.vbp
- C:\Documents and Settings\Administrator\Desktop\SlayerUD\New\_server\Project1.vbp
- s.....vbp
- C:\H\Horiginal\Project1.vbp
- C:\cameraman.vbp
- $C: \label{lem:condition} C: \label{lem:condi$
- D:\YASH\PRO\MY\DELIVERED\2012\UPLOADER\BOTH\Project1.vbp
- $C: \label{local-condition} C: \label{local-con$
- WMI)\ServerZ\Server.vbp
- D:\YASH\PRO\MY\DELIVERED\2012\sdsdasdwasdasdasdasdasd\RAT pramala\Project1.vbp
- E:\MY\DELIVERED\2012\DOWNLOADERS\compiled\snaperCompressVb\bkups\ServerItan\Project1.vbp
- C:\Documents and Settings\Administrator\Desktop\WORKSTATION\tempdwn\_hardcoaded(Good)\wit\_LNK\_without\_office\PaintBrush.vbp

## Appendix E: Domain names connected to case

accOunts.gOOgle.cOm.srccail.com account. is tpumpen und dosierte chnik. de. continue logs. in foaccounts.facbook.com.continuelogs.info accounts.yandex.ru.continuelogs.info accounts.ymail.com.mailcache.info accounts.you-tube.com.analogwiz.org accounts. yutube. com. continue logs. in foactivetalk.org add-on-update.com addon-updates.com addoup.com admin assistance. netadvnotifier.com alr3adv.net alreadytrue.com amaxgrp.net analogwiz.org analysishunter.org anoniemvolmacht.com appinsecurity.com applehostpoint.info approvalclub.org appworldblackberry.info armordesigns.com.webmail-login.php.web-mail-services.info autowid.com autowidge.org avandtotalsecurity.com avatarfanclub.com bbc-news.com.influxlog.org bbupdate.net bikefanclub.info bkltmc.com blogpublication.org bluebird-restaurant.co.uk.infocardiology.biz bluecreams.com bmcmail.org brandsons.net braninfall.net buildyourinfo.org c0mpany4u.net cabcardinc.net cablecomsolutions.net callersview.org calling4you.com callvoipnow.com casinoaffiliatepartners.net cellgame.org centstat.org cheetah4u.net chiccounty.net chkpoint.info chroniclesupport.net clamerword.net clienttreasury.net cloudone-opsource.com cmegroups.net cmxgrp.net cobrapub.com codetesters.org com-mailservice.com competitveedge.org config-login.com connectopen.info

continuelogs.info coolhostingwebspace.com

cpbatch.org cppblog.net cr3ator01.net crestboard.org crowcatcher.net crvhostia.net cryptoanalysis.net crystalrepo.org csfserver.com cupzon.org currentnewsstore.com customerpbr.com deltaairlines.com.config.services.data.sesion.24s.digitalapp.org.evitalcare.org deltadegger.net denismoble.info devilreturns.com devinmartin.net dexlab.info digitalapp.org digitooldeals.net divinepower.info doc.gmail.com-callgate-6.65.2.0-rms-6.65.2.0-docsforum.info dosendit.com downdossiersup.net downfilesup.com downtimesupport.com easternsoft.org easyhost-ing.com easyslidesharing.net educatediary.org elementspro.org endemol.com.mailcache.info enetebookstore.com enlighten-energy.org esnucleus.org espressoday.org evitalcare.org evolvingdesk.org extrememachine.org ezservicecenter.org ezxen.org ezyvalue.net f00dlover.info facebook.comaccountsserviceloginservicemail2.serviceaccountloginservicemail.info fapize.com fasttrackagent.net fb-time.net file-easy.net filesassociate.net filesconnect.info filesforum.net fileshreader.net filetrusty.net fiservtech.org fistoffury.net fitnessapproval.org follow-ship.com fonografia.pl footwall fanclub.comforest-fire.net foxypredators.com

Operation Hangover: Unveiling an Indian Cyberattack Infrastructure Appendixes

frameworkup.org ftp.alr3ady.net ftp.braninfall.net ftp.currentnewsstore.com ftp.devilreturns.com ftp.forest-fire.net

ftp.global-internet.info

ftp.kungfu-panda.info

ftp.matrixfanclub.net

ftp.net4speed.net

ftp.nvidiaupdate.net

ftp.r3gistration.net

ftp.s3rv1c3s.net

fuzzyfile.net

gadgetscorner.org

gamezoneall.com

gauzpie.com

geonet.org.sockzon.org

get.adobe.flash.softmini.net

global-blog.net

global-internet.info

gnuvisor.com

go-jobs.net

google. accounts er vice. admin assistance. net

google.com.accountsserviceloginservice.info

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google.comaccountsserviceloginservicemailen.serviceaccountloginservicemail.info

groupskm.info

gxongame.info

h3helnsupp0ort.com

hangoutgroups.net

hangoutshop.net

hangovergroup.com.coolservice.continuelogs.info

hardwaregeeks.eu

heavenaffiliates.info

help-e.net

herbco.document.digitalapp.org

heritage-society.com

hifisure.org

hintover.com

hostmypc.net

host-stuff.net

hotbookspot.info

hotupdates.com.sockzon.org

hycoxcable.com

hycoxweb.org

i-dim.net

idsconline.net

imagebar.org

influxlog.org

infocardiology.biz

inforguide.org

infoteller.org

infraswap.org

innovatorspool.org

internet-security-suite-review.toptenreviews.com.avandtotalsecurity.com

internet-security-suite-review.toptenreviews.com.infocardiology.biz

islamic-teacher.org

itechtoys.org

jasminjorden.com

jerrycoper.org

joyfulhalloween.com

joymailserver.org

kee paway from fire.com

khalistancalling.com knight-quest.com

kungfu-panda.info

kyzosune.net

l0gin.faceb0ok.com.srccail.com

l0gin.y0utube.acc0unts.srccail.com

l0gin.yaho0.c0m.srccail.com

leicesterhigh.eu

lifelogs.org

linked-in.c0m.srcm-ail.info.srccail.com

linkedin.com-callgate-6.65.2.0-rms-6.65.2.0-

linkedin.com-uas.login-submit.account.session-full.login-3a5077708027557787984-csrftoken.buildyourinfo.org

linkspectra.com

linxauth.org

livesunshine.info

liveupdatesonline.net

login.facebook.com-confg.verify.login.src-ym.mailcache.info

login.live.com.continuelogs.info

login.live.com.mailcache.info

login.oriontelekom.rs.accountsserviceloginservice.info

login.yahoo.com-config-verify2.woline.info

logstat.info

lynberrg.com

m.ymail.com.continuelogs.info

m.ymail.com.mailcache.info

macsol.org

mail.carmel.us.exchweb.bin.auth.owalogon.asp.serviceaccountloginservicemail.info

mail.download.influxlog.org

mail.enrc.com-attachment.download.infocardiology.biz

mail.google.com-attachments.mail.u-01.infocardiology.biz

mail.joymailserver.org

mail.myorderbox.org

mail.telenor.no-cookieauth.dll-getlogon-reason-0.f ormdir-1-curl-z2fowaz2f.infocardiology.biz

mail.wildenstein.com.accountsserviceloginservice.info

mail-attachment.usercontent.evitalcare.org

mailcache.info

mailexservices.com

mailoff.org

mailservicesupport.org

mailssh.info

mailtechsolutions.org

makecmag.info

martcas.org

matewiz.org

matrixfanclub.net

maxtourguide.info

mcosine.org

megafairclub.org

megamediafile.com

mexchange.info

mgclog.com

mildstone.net

mitag.org

mktserv.info

mobiappword.com

mobileappsupport.com

mobileappworld.info

mobilemyown.info

mobilesoftwaremanagement.info

mobilessoft.net

mobiletechspa.org

mobiltechs of t.org

mobnetserver.com

momate.net

mosglobe.org

motsoul.org

mozarting.com

mozilaupdate.com

mpale.org

msfileshare.net

msoftweb.com

mujahidtarana.com my.screename.aol.com.mjtag.org

my.screenname.aol.com.accountsserviceloginservice.info

myscreenname.aol.com.srccail.com

myfilestuff.net

mymail.bezeqint.co.il.accountsserviceloginservice.info

mymyntra.net

mysharpens.com

myvoipp0wer.com

n00b4u.com

naclpro.org

net4speed.net

netmosol.info

neverforget1984.org

new-agency.us

newamazingfacts.com

newsgroupupdate.com

news-report.sockzon.org

nexterchk.net

nitr0rac3.com

nlsec.org

novelseller.org

ns1.activetalk.org

ns1.adobesoftwareupdates.com

ns1.alreadytrue.com

ns1.authserv.org

ns1.brandsons.net

ns1.braninfall.net

ns1.chronicleserv.org

ns1.competitveedge.org

ns1.continuelogs.info

ns1.ctswebup.info

ns1.dataconnects.net

ns1.directionmico.org

ns1.dmzone.info

ns1.doc-files.info

ns1.enetebookstore.com

ns1.esbasis.info

ns1.evitalcare.org

ns1.ezservicecenter.org

ns1.ezyvalue.net

ns1.f00dlover.info

ns1.forest-fire.net

ns1.foxypredators.com

ns1.go-jobs.net

ns1.gxongame.info

ns1.hackerscouncil.com

ns1.host-stuff.net

ns1.hotbookspot.info

ns1.infocardiology.biz

ns1.justdialforu.com

ns1.kjmailserv.org

ns1.knowledgepower.info

ns1.kungfu-panda.info

ns1.line-web.net

ns1.link-live.net

ns1.logserv.org

ns1.matrixfanclub.net

ns1.matrixtriology.com

ns1.maxtourguide.info

ns1.mjtag.org

ns1.naclpro.org

ns1.newamazingfacts.com

ns1.oscarneves.org

ns1.osonline.info

ns1.ozoneparty.info

ns1.pajerolive.com

ns1.parrotcatcher.com

ns1.pickmail.org

ns1.programmersheavengroup.com

ns1.racrage.info ns1.s0pp0rtdesk.com

- ns1.secuina.net
- ns1.securedocx.info
- ns1.sendsh33p.com
- ns1.servwh.org
- ns1.shopertock.net
- ns1.sockzon.org
- ns1.solraise.info
- ns1.speedaccelator.com
- ns1.sportswomen.biz
- ns1.srccail.com
- ns1.stretcherservices.net
- ns1.supersolus.org
- ns1.thedailynewsheadline.com
- ns1.wearwellgarments.eu
- ns1.woline.info
- ns1.wvsolution.org
- ns1.xmailserv.org
- ns1.zerodayexploits.org
- ns1.zonalship.org
- ns1.zoninfo.org
- ns2.activetalk.org
- ns2.alreadytrue.com
- ns2.brandsons.net
- ns2.braninfall.net
- ns2.chronicleserv.org
- ns2.competitveedge.org
- ns2.continuelogs.info
- ns2.enetebookstore.com
- ns2.esbasis.info
- ns2.evitalcare.org
- ns2.ezservicecenter.org
- ns2.ezyvalue.net
- ns2.f00dlover.info
- ns2.forest-fire.net
- ns2.foxypredators.com
- ns2.go-jobs.net
- ns2.gxongame.info
- ns2.hackerscouncil.com
- ns2.host-stuff.net
- ns 2. hot book spot. in fo
- ns2.infocardiology.biz
- ns2.knowledgepower.info
- ns2.kungfu-panda.info
- ns2.matrixfanclub.net
- ns2.maxtourguide.info
- ns2.mjtag.org
- ns2.naclpro.org
- ns2.newamazingfacts.com
- ns2.pajerolive.com
- ns2.parrotcatcher.com
- ns2.programmersheavengroup.com
- ns2.s0pp0rtdesk.com
- ns2.sendsh33p.com
- ns2.serialxbox.org
- ns2.shopertock.net
- ns2.sockzon.org
- ns2.speedaccelator.com
- ns2.sportswomen.biz
- ns2.srccail.com
- ns2.stretcherservices.net
- ns2.supersolus.org
- ns2.thedailynewsheadline.com
- ns2.vlogserv.org
- ns2.wearwellgarments.eu
- ns2.woline.info
- ns2.zerodayexploits.org
- ns2.zonrow.org
- nvidiaupdate.net

oliveglobals.com

omg-pics.net

onestop-shops.com

onlinestoreapp.net

onlinewebmail.net

opendocs.info

opendocxsupport.net

openhostingtalk.com

opensourceforum.eu

opnsrc.net

osservices.info

outgateway.com

ozonerim.net

packetwarden.net

pajerolive.com

parrotcatcher.com

periodtable.eu

pfv6jyg1rdo9ptku.mxsvr.net

pharmamkting.eu

picasa-album.com

picasa-album.net

pics-bucket.net

piegauz.net

pizzapalace.org

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primaaltus.org

privatemoneyblog.org

programmersheavengroup.com

r3gistration.net

rackitupstorenew.net

racmania.net

random123.site11.com

re-buke.com

redgolfclub.info

reliable-global.net

researcherzone.net

researchhunter.org

research work.org

rghsv.com.accountsserviceloginservice.info

rigidphotography.com

ritownship.net

ritualpoint.org

rockingdevil.net

s0pp0rtdesk.com

s3rv1c3s.net

sabores nativos. net

scrm-ail.info

search ports. in fo

secuina.net

secure.metaca fe.com-account-login-token.accounts service login.in fo

secure-copy.com

securedmx.net

secureplanning.net

secure-s.com

secure-solution.net

securingyourself.net

sendsh33p.com

server003.com

server006.com

server 721- hans. de-nserver s. de. continue logs. in fo

serverrr.com

servetools.org

serviaccive.com

serviceaccountloginservicemail.info

serviceagent.us

service-secure.net

services on line support in fo.com

servorder.org

sh3llypunk.com

share-home.net

shoperstock.com

shopertock.net

shopie.net

shopingcard.net

shopingcenter.net

shopping-hub12.com

shoppingspawn.com

shreadersupport.net

signaturedz.com

skylarzone.org

slamburger.net

smackdownfanclub.eu

smclog.org

smurfprotection.org

sochglobal.net

sockzon.org

softmini.net

softservices.org

software supdates. in fo

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sonification.com

sped0m00d.com

speedaccelator.com

spidercom.info

spiritlog.org

sports-interaction.net

sportswomen.biz

spstack.org

srccail.com

starcrunch.org

starmobnetservice.net

starshome.comeze.com

starsoel.org

store-fb.net

stretcherser vices.net

supersolus.org

supertechnoclub.com

supportanswer.net

support-tech.info

synergyrealsolutions.net

systemcrack.com

systemupd.com

systoolsonline.org

taraanasongs.com

test.enciris.eu

testerspoint.info

thedailynewsheadline.com

tmkstore.org

tollmart.org

torqspot.org

tourtime.org

tow3r.info

trade objective.net

traderspace.org

trend-mico.net

trustworthyinfo.com tulip.net.inforguide.org

undertaker.no-ip.org

unisafeservice.org

vall3y.com

viewerstalk.org

viragenonline.com

visordan.org

vkspoke.org

vkverbal.org

voip-e.net

vstrend.org

wagonact.org

wakeupindian.net

wearwellgarments.eu

webjavaupdate.com

webmail.juno.com.accountsserviceloginservice.info

webmail.stevens.edu.authenticateservicemail.accountsservicelogin.info

webmailaccountservicemail.info

web-mail-services.info

webmicrosoftupdate.net

wedzon.org

we-tour.net

whostmrage.org

wizcheck.org

wizsplit.org

wolfensteinx.net

woline.info

wondersofworld.eu

workinglab.org

worksmartplay.com

workspacecz.net

worldcitycenter.net

worldread.net16.net

worldtourismnews.info

wreckmove.org

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www.analysishunter.org

www.cytanet.com.accountsserviceloginservice.info

www.ebox.co.il.accountsserviceloginservice.info

www.email.t-online.de.accountsserviceloginservice.info

www.espressoday.org

www.facebook.com-l0giin.php.mstl0giintocpassiive-trrue.contiinue-2 fsiignin 3 factiion.handle.siignin 3 dtrrue 2 6 featture 3 dprromo.siignin 2 6 nl-10giin.php.mstl0giintocpassiive-trrue.contiinue-2 fsiignin 3 factiion.handle.siignin 3 dtrrue 2 6 featture 3 dprromo.siignin 2 faction 1 faction 2 faction

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www. facebook. com-l0g in. php. mstl0g iintoc passiive-trrue. contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. siignin 3 dtrrue 2 6 feat ture 3 dpr romo. siignin 2 6 nl-contiinue-2 f siignin 3 factiion. handle. handle.

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www.fonografia.pl

www.foxypredators.com

www.go0gle.com-service logiin.aut thserv.gx on game.info

www.google.com.accountsserviceloginservice.info

www.insing.com.accountsserviceloginservice.info

www.login.comcast.net.accountsserviceloginservice.info

www. login. or ion telekom. rs. accounts service login service. in fo

www.login.yahoo.com.accounts service logins ervice.in fo

www.m.youtube.com.accounts service logins ervice.in fo

www.mail.houseofjoyltd.com.accountsserviceloginservice.info

www.mail.luckltd.com.accounts service logins ervice.in fo

www.mail.rediff.com.accountsserviceloginservice.info

www.mexchange.info

www.microsoft.com.chiccounty.net

www.mlogin.ymail.com.continuelogs.info

www.mobiles of twa remanagement. in fo

www.my.screenname.aol.com.accountsserviceloginservice.info

www.mymail.bezeqint.co.il.accountsserviceloginservice.info

www.produkte.web.de.accounts service logins ervice.in fo

www.secure.metacafe.com-account-login-token.accountsservice login.info

www.server 721. han. de.nsserver. de. continue logs. info

www.shoperstock.com

xylotech.org

ymadmin.net

you-post.net

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youtube. comac counts service logins er vice mail 2. service account logins er vice mail. info

zendossier.org

zerodayexploits.org

zeusagency.net

zolipas.info

zonalon.org

zonalsky.org

# Appendix F: IP addresses connected to case

These are some IP addresses that have at some point been related to the HangOver attack infrastructure. Note that IP addresses are non-static, and many of these may now be in use by legitimate users.

109.203.110.103	176.31.79.49	209.85.51.152	37.59.208.94	79.142.64.97
109.235.49.147	176.31.79.50	213.5.65.20	37.59.231.161	79.142.64.98
109.235.49.148	176.31.79.51	213.5.65.223	46.182.104.70	79.142.64.99
109.235.49.157	176.31.79.56	213.5.65.24	46.182.104.72	79.142.78.101
109.235.49.158	176.61.140.119	213.5.65.31	46.182.104.83	79.142.78.102
109.235.49.188	178.32.75.192	213.5.71.20	46.182.104.85	79.142.78.107
109.235.49.193	178.32.75.193	213.5.71.24	46.182.105.40	79.142.78.109
109.235.49.235	178.32.75.194	213.5.71.26	46.182.105.41	79.142.78.110
109.235.49.236	178.32.75.195	213.5.71.27	46.182.105.43	79.142.78.111
109.235.49.43	178.32.75.196	213.5.71.28	46.182.105.60	79.142.78.112
109.235.50.191	178.32.75.197	213.5.71.31	46.4.187.60	79.142.78.120
109.235.50.215	178.32.75.198	216.188.26.235	46.4.215.38	79.142.78.76
109.235.50.233	178.33.131.34	216.24.202.100	5.34.242.129	79.142.78.79
109.235.50.246	178.33.154.49	216.24.204.243	5.39.11.72	79.142.78.80
109.235.51.100	178.33.154.51	216.24.204.245	5.39.36.56	79.142.78.83
109.235.51.153	178.33.154.52	31.170.161.136	5.39.36.57	8.22.200.44
109.235.51.254	178.33.154.53	31.170.161.56	5.39.36.58	8.23.224.90
109.235.51.50	178.33.154.54	31.170.162.23	5.39.36.59	88.198.86.168
109.235.51.51	178.33.187.74	31.214.169.86	5.39.36.60	88.198.86.172
141.101.239.128	178.33.187.75	31.214.169.87	5.39.36.61	89.207.135.120
141.8.224.25	178.33.187.76	31.3.154.110	5.39.97.57	89.207.135.239
141.8.225.7	178.33.187.77	31.3.154.111	5.39.97.58	89.207.135.242
151.237.188.167	178.33.187.78	31.3.154.113	64.120.135.137	89.207.135.61
173.199.145.140	178.33.210.30	31.3.154.114	65.75.243.251	89.45.249.129
173.224.215.230	178.33.214.194	31.3.154.115	66.148.67.20	89.45.249.136
173.233.80.145	184.107.159.18	31.3.154.116	69.43.161.179	89.45.249.139
173.233.80.146	184.154.217.250	31.3.154.117	69.43.161.180	89.45.249.208
173.233.80.147	184.154.254.51	31.3.155.106	72.44.81.88	89.45.249.41
173.233.80.152	184.154.254.54	37.221.166.15	74.117.62.170	91.214.45.187
173.233.85.134	184.22.69.109	37.221.166.36	74.117.62.181	94.102.49.199
173.236.117.205	184.82.180.105	37.221.166.42	75.127.111.100	94.102.49.201
173.236.24.250	188.165.148.68	37.221.166.47	75.127.111.143	94.102.49.202
173.236.24.251	188.165.148.70	37.221.166.48	75.127.91.118	94.102.49.203
173.236.24.252	188.240.47.145	37.221.166.49	75.127.91.16	94.102.49.204
173.236.24.254	188.240.47.220	37.221.166.53	78.46.129.193	94.102.49.55
173.236.68.99	188.241.113.27	37.221.166.55	78.46.129.194	94.102.49.56
174.120.28.61	188.241.114.160	37.221.166.58	78.46.169.168	94.102.55.80
176.31.4.128	188.241.115.127	37.221.166.61	79.142.64.177	94.185.81.151
176.31.4.129	188.241.117.163	37.221.166.7	79.142.64.178	94.185.81.152
176.31.4.130	188.95.48.99	37.221.166.8	79.142.64.181	94.185.81.153
176.31.53.165	192.210.203.181	37.221.166.9	79.142.64.183	95.143.42.195
176.31.53.166	199.119.203.102	37.46.127.75	79.142.64.32	95.143.42.217
176.31.53.167	199.119.203.103	37.46.127.76	79.142.64.34	95.143.42.218
176.31.65.124	199.119.203.85	37.46.127.77	79.142.64.36	95.154.237.11
176.31.65.125	199.119.203.86	37.46.127.78	79.142.64.37	95.211.131.144
176.31.65.126	199.204.248.107	37.46.127.79	79.142.64.39	96.30.46.216
176.31.65.127	199.71.212.164	37.46.127.81	79.142.64.47	55.50.70.210
176.31.79.48	199.71.212.183	37.59.175.130	79.142.64.49	
170.31.73.40	155.7 1.212.105	37.33.173.130	73.172.04.43	

## Appendix G: Sample MD5's

003ab666a73721404c8dae4613aec613 007d63bf9eb50c6e55125c00d32abdb6 00978e4b81ac577f328d6add75d0890e 00a0a6071c335f78c161cb4a3dcdc435 00bd9447c13afbbb7140bef94e24b535 0128f683e508c807ec76d5092eaaf22c 01774e34e8a444685b1499eef3406cd0 01a7af987d7b2f6f355e37c8580cb45a 01adea2d3707a343f5a6d149565c7ec5 01cda08113796a78702843a414f477c4 01cef8eeecbd5f9a4240d3e42c67c3c1 022894817bc575b94e1919eb1890f873 023d82950ebec016cd4016d7a11be58d 02ae85cb3677af2e5fc256e3bf7c9408 02d6519b0330a34b72290845e7ed16ab 02f3a2752b9a79ffccd99a1da8fb875c 032c4698839a52711cb18d6bc712d5b2 03f265a4e2e9a728749a6ef4e91e72b3 04293cc69b048fe1326560a457539b0c 047a1bb36e1de5f57e4a6f4d43ebf72b 04c2068c132f2c4af31f905f220503d6 0538fce0581b9233d34c6ad61a8f8139 05c983831cad96da01a8a78882959d3e 0680b9e247b2779799d4b32582f566c8 06b399d8bb5c5aeb4a04eda934ee819f 06ba10a49c8cea32a51f0bbe8f5073f1 06cbbff745c60c46e0996928c00ef28f 06e80767048f3edefc2dea301924346c 078d12eb9fc2b1665c0cc3001448b69b 0796ff1096f7456ef37d81a5b846b61b 07defd4bda646b1fb058c3abd2e1128e 0837671230288d68b99866197d79646b 08a3776a2c40e569f645a62fdd2fcac3 08f7ead1513bb921c9cdee334a370866 09947ba52932d10d3c859511a6d31e8f 09cdbd5273640ab23112b719c65e4902 0a0bcd8beb77e67a28a325d8d2a00254 0acdfd9ef4ed3e3f3d9d011aa5e7cd03 0ad9583aefede1f355759e0b674930cb 0b29cd6fc38c0459507e670e9c4547e0 0b38f87841ed347cc2a5ffa510a1c8f6 0b88f197b4266e6b78ea0dcb9b3496e9 0ba19063dea4ccae0afcd4208781f16b 0bbe6cab66d76bab4b44874dc3995d8f 0c0eb91f318da38e6684bd5250f68378 0c2cbfbe3c93b3502f9a60f5fa1188ad Ocace87b377a00df82839c659fc3adea 0d466e84b10d61031a62affcfff6e31a 0d5956dac2ac56f292ee8fa121450973

0e11b640253554595acdb7bfbf786b31 0e3282467dd99f3ceeb911cb1e8aaf5f 0e9e46d068fea834e12b2226cc8969fd 0f0e3dc18b12c7f8b1b03c73c842212c 0f47459581f6cd0e1766f1f436922ea5 0f65c1202881f5c0e3d512aa64162716 0f91c1d4ef8b239bb9a94d5546f071dd 0f98b7d1e113e5194d62bc8f20720a6b 0fbc01c38608d1b5849bf47492148588 109caa4b475927ddcc36278a32d013f2 10c0b0f7efbfc92dd13fdd0fd35ca260 10d8d691ec5c75be5dbab876d39501f1 111c0d178b3aea6c5aa7217feb0a44a3 1156011bcb049df9fbd0e6bbd7a108aa 118716061197ebcdae25d330aef97267 118ed6f8aa3f01428a95ae7ba8ef195c 11b70f93758ea494494855036818bbe3 11faa5da47a1f27de963e72631aaddd2 11fd24098d64632875d49160dc36bc6b 12874bf21a56709451f2df221c073f03 12eec20e7f672370269a9ec53cd744fb 13107b9455561e680fe8c3b9b1e8bc37 13197097b07e86516fa018a04aace83c 135a18c858bfdc5fc660f15d6e1fb147 13619025a126c56c3097d533414f2230 1370e187a12403ebf40d43285a23fed8 13fa45919341257b226f66e08da81cb4 1465248b7e2d512e426d8c72b42af47b 1487d1dc13314bf0431792b37ec67e2d 1489d2adf0328b6d7b42170095f966c9 153ac7591b9326ee63cd36180d39665e 15552ebdc4ebe5b4d2f71ab2d2e574cb 1579467859b48085bdf99b0a1a8c1f86 158ff697f8e609316e2a9fbe8111e12a 15e45c24dbe6034024fcffe4c358556b 166044bf473fc262ed97283c6e157eb5 1676ded041404671bfb1fcfe9db34dcf 168f2c46e15c9ce0ba6e698a34a6769e 16c11b381cff35283b879ec1a84f72e4 16c140fb61b6d22e02aa2b04748b5a34 16ff5f646196cf29792f5b159d1288b8 176e2277be875e55ad7211ff5e8df7a5 1785f20ad4883fee549f0aec5d20aaca 17a31d1075ebce41ba48a9efacb79d28 187dc6afa65cbdd8ee87a58271b56864 18b9e5fad0f015a0cf792818e9e0591c 18bc477fa12048fab8ec93d5ff942cf5 1972ae990751fa1b1532aa792bd5c160 1981cc08cdadc971e28768dc04d98637

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