Malware Analysis Appliance by Blue Coat Systems, Inc.

Task Details

Host: mag2, Sample ID: 257, Task ID: 1027

Task ID: 1027 Risk Level: 6

Date Processed: 2016-04-28 13:15:55 (UTC)

Processing Time: 61.08 seconds
Virtual Environment: IntelliVM

Execution Arguments: "c:\windows\temp\bed528c5bc50131efcade70bf30ac478.exe"

Sample ID: 257
Type: basic
Owner: admin

Label: bed528c5bc50131efcade70bf30ac478

Date Added: 2016-04-28 12:45:16 (UTC)

File Type: PE32:win32:gui File Size: 142190 bytes

MD5: bed528c5bc50131efcade70bf30ac478

SHA256: 183a81f2f88218d0f732815569828461fbad8fa926d11cf4ed473f3ca891750e

Description: None

Pattern Matching Results

2 PE: Nonstandard section

6 Renames file on boot

5 Creates process in suspicious location

4 Packer: NSIS [Nullsoft Scriptable Install System]

Static Events

Anomaly: PE: Contains a virtual section

Anomaly: PE: Contains one or more non-standard sections

Process/Thread Events

Creates process: C:\WINDOWS\Temp\bed528c5bc50131efcade70bf30ac478.exe

["c:\windows\temp\bed528c5bc50131efcade70bf30ac478.exe"]

Creates process: C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Au_.exe
["C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Au_.exe" _?=c:\windows\temp\]
Terminates process: C:\WINDOWS\Temp\bed528c5bc50131efcade70bf30ac478.exe

Named Object Events

Creates mutex: \BaseNamedObjects\CTF.LBES.MutexDefaultS-1-5-21-1757981266-507921405-

1957994488-1003

Creates mutex: \BaseNamedObjects\CTF.Compart.MutexDefaultS-1-5-21-1757981266-507921405-

1957994488-1003

Creates mutex: \BaseNamedObjects\CTF.Asm.MutexDefaultS-1-5-21-1757981266-507921405-

1957994488-1003

Creates mutex: \BaseNamedObjects\CTF.Layouts.MutexDefaultS-1-5-21-1757981266-507921405-

1957994488-1003

Creates mutex: \BaseNamedObjects\CTF.TMD.MutexDefaultS-1-5-21-1757981266-507921405-

1957994488-1003

Creates mutex: \BaseNamedObjects\CTF.TimListCache.FMPDefaultS-1-5-21-1757981266-

507921405-1957994488-1003MUTEX.DefaultS-1-5-21-1757981266-507921405-1957994488-1003

Creates mutex: \BaseNamedObjects\MSCTF.Shared.MUTEX.EOG

Creates semaphore: \BaseNamedObjects\shell.{A48F1A32-A340-11D1-BC6B-00A0C90312E1} \Creates semaphore: \BaseNamedObjects\shell.{7CB834F0-527B-11D2-9D1F-0000F805CA57}

File System Events

Creates: C:\DOCUME~1\Admin\LOCALS~1\Temp\

Creates: C:\Documents and Settings\Admin\Local Settings\Temp\nsx1.tmp
Creates: C:\Documents and Settings\Admin\Local Settings\Temp\nsr2.tmp
Creates: C:\Documents and Settings\Admin\Local Settings\Temp\~nsu.tmp

Creates: C:\Documents and Settings\Admin\Local Settings\Temp\~nsu.tmp\Au_.exe

Creates: C:\Documents and Settings\Admin\Local Settings\Temp\nsz3.tmp
Creates: C:\Documents and Settings\Admin\Local Settings\Temp\nst4.tmp
Creates: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp

Creates: C:\DOCUME~1

Creates: C:\DOCUME~1\Admin
Creates: C:\DOCUME~1\Admin\LOCALS~1

Creates: C:\DOCUME~1\Admin\LOCALS~1\Temp

```
C:\DOCUME~1\Admin\LOCALS~1\Temp\nss5.tmp
 Creates:
                         C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\LeftImg.bmp
 Creates:
                         C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\Header.bmp
 Creates:
 Creates:
                         C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\BtmImg.bmp
                         C:\Documents and Settings\Admin\Local
 Creates:
Settings\Temp\nss5.tmp\ButtonImg.bmp
                         C:\Documents and Settings\Admin\Local
Settings\Temp\nss5.tmp\ScrollBarImg.bmp
                         C:\Documents and Settings\Admin\Local
 Creates:
Settings\Temp\nss5.tmp\SkinnedControls.dll
                         C:\WINDOWS\Prefetch\BED528C5BC50131EFCADE70BF30AC-3498C7B2.pf
 Opens:
 Opens:
                         C:\Documents and Settings\Admin
 Opens:
                         C:\WINDOWS\system32\imm32.dll
 Opens:
                         C:\WINDOWS\system32\shell32.dll
 Opens:
                         C:\WINDOWS\system32\SHELL32.dll.124.Manifest
 Opens:
                         C:\WINDOWS\system32\SHELL32.dll.124.Config
 Opens:
                         C:\WINDOWS\WinSxS\x86 Microsoft.Windows.Common-
Controls_6595b64144ccf1df_6.0.2600.5512_x-ww_35d4ce83
 Opens:
                         C:\WINDOWS\WinSxS\x86_Microsoft.Windows.Common-
Controls_6595b64144ccf1df_6.0.2600.5512_x-ww_35d4ce83\comctl32.dll
 Opens:
                         C:\WINDOWS\WindowsShell.Manifest
 Opens:
                         C:\WINDOWS\WindowsShell.Config
 Opens:
                         C:\WINDOWS\Temp\bed528c5bc50131efcade70bf30ac478.exe
                         C:\windows\temp\bed528c5bc50131efcade70bf30ac478.exe.124.Manifest
 Opens:
 Opens:
                         C:\WINDOWS\system32\comctl32.dll
 Opens:
                         C:\WINDOWS\system32\COMCTL32.dll.124.Manifest
                         C:\WINDOWS\system32\COMCTL32.dll.124.Config
 Opens:
 Opens:
                         C:\WINDOWS\system32\rpcss.dll
 Opens:
                         C:\WINDOWS\system32\MSCTF.dll
 Opens:
                         C:\WINDOWS\system32\shfolder.dll
 Opens:
                         C:\WINDOWS\system32\setupapi.dll
 Opens:
                         C:\
 Opens:
                         C:\Documents and Settings
 Opens:
                         C:\Documents and Settings\Admin\Local Settings\Temp\nsx1.tmp
 Opens:
                         C:\WINDOWS\Temp\09f1d26a-9e7d-48d4-b7f6-3d5ffdae844f
 Opens:
                         C:\Documents and Settings\Admin\Local Settings\Temp
 Opens:
                         C:\Documents and Settings\Admin\Local Settings\Temp\~nsu.tmp
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Au_.exe
                         C:\Documents and Settings\Admin\Local Settings\Temp\~nsu.tmp\Au_.exe
 Opens:
                         C:\WINDOWS\system32\apphelp.dll
 Opens:
 Opens:
                         C:\WINDOWS\AppPatch\sysmain.sdb
 Opens:
                         C:\WINDOWS\AppPatch\systest.sdb
 Opens:
                         C:\Documents and Settings\Admin\Local Settings
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Au_.exe.Manifest
 Opens:
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Bu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Cu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Du_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Eu_.exe
 Opens:
                         C:\WINDOWS\Prefetch\AU_.EXE-34E9686B.pf
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Fu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Gu\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Hu_.exe
 Opens:
                         \label{locals-1} C:\DOCUME~1\Admin\LOCALS~1\Temp\-nsu.tmp\Iu\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Ju\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Ku\_.exe
 Opens:
                         \label{locals-1} C:\DOCUME~1\Admin\LOCALS~1\Temp\-nsu.tmp\Lu\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Mu\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Nu_.exe
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Ou_.exe
 Opens:
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Pu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Qu_.exe
 Opens:
                         \label{locals-1} C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Ru\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Su_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Tu_.exe
 Opens:
                         \label{locals-1} C:\DOCUME~1\Admin\LOCALS~1\Temp\-nsu.tmp\Uu\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Vu\_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Wu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Xu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Yu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Zu_.exe
 Opens:
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp
                         C:\DOCUME~1\Admin\LOCALS~1\Temp\~nsu.tmp\Au_.exe.124.Manifest
 Opens:
 Opens:
                         C:\Documents and Settings\Admin\Local Settings\Temp\nsz3.tmp
 Opens:
                         C:\WTNDOWS
```

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Opens: C:\WINDOWS\system32\riched20.dll
Opens: C:\WINDOWS\system32\MSCTFIME.IME
```

Opens: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp

Opens: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\LeftImg.bmp
Opens: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\Header.bmp
Opens: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\BtmImg.bmp

Opens: C:\Documents and Settings\Admin\Local

Settings\Temp\nss5.tmp\SkinnedControls.dll

Opens: C:\Documents and Settings\Admin\Local

Settings\Temp\nss5.tmp\ButtonImg.bmp

Opens: C:\Documents and Settings\Admin\Local

Settings\Temp\nss5.tmp\ScrollBarImg.bmp

Opens: C:\WINDOWS\system32\MSIMTF.dll

Opens: C:\DOCUME~1\Admin\LOCALS~1\Temp\nss5.tmp\Parameters.ini

Opens: C:\WINDOWS\Fonts\arialbd.ttf

Writes to: C:\Documents and Settings\Admin\Local Settings\Temp\nsr2.tmp

Writes to: C:\Documents and Settings\Admin\Local Settings\Temp\~nsu.tmp\Au_.exe

Writes to: C:\Documents and Settings\Admin\Local Settings\Temp\nst4.tmp

Writes to: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\LeftImg.bmp
Writes to: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\Header.bmp
Writes to: C:\Documents and Settings\Admin\Local Settings\Temp\nss5.tmp\BtmImg.bmp

Writes to: C:\Documents and Settings\Admin\Local

Settings\Temp\nss5.tmp\ButtonImg.bmp

Writes to: C:\Documents and Settings\Admin\Local

Settings\Temp\nss5.tmp\ScrollBarImg.bmp

Writes to: C:\Documents and Settings\Admin\Local

Settings\Temp\nss5.tmp\SkinnedControls.dll

Reads from: C:\WINDOWS\Temp\bed528c5bc50131efcade70bf30ac478.exe

Reads from: C:\Documents and Settings\Admin\Local Settings\Temp\nsr2.tmp

Reads from: C:\Documents and Settings\Admin\Local Settings\Temp\~nsu.tmp\Au_.exe

Reads from: C:\Documents and Settings\Admin\Local Settings\Temp\nst4.tmp
Deletes: C:\Documents and Settings\Admin\Local Settings\Temp\nsx1.tmp
Deletes: C:\Documents and Settings\Admin\Local Settings\Temp\nsz3.tmp
Deletes: C:\Documents and Settings\Admin\Local Settings\Temp\nsz3.tmp

Windows Registry Events

Creates key:

 $\label{thm:local-continuous} HKCU software \microsoft \windows \current version \explorer \mountpoints 2 \ \{f90255c2-6bc4-11e3-9fc7-806d6172696f\} \ \mbox{}$

Creates key: HKLM\system\currentcontrolset\control\session manager

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\bed528c5bc50131efcade70bf30ac478.exe

Opens key: HKLM\system\currentcontrolset\control\terminal server

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\gdi32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\user32.dll

Opens key: HKLM\system\currentcontrolset\control\session manager
Opens key: HKLM\system\currentcontrolset\control\safeboot\option

Opens key: HKLM\software\policies\microsoft\windows\safer\codeidentifiers
Opens key: HKCU\software\policies\microsoft\windows\safer\codeidentifiers

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\imm32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\ntdll.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\kernel32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\secur32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\rpcrt4.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\advapi32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution options\msvcrt.dll

Opens kov

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\shlwapi.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\shell32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\comctl32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\ole32.dll

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\version.dll

Opens key: HKLM\system\currentcontrolset\control\error message instrument\
Opens key: HKLM\system\currentcontrolset\control\error message instrument
Opens key: HKLM\software\microsoft\windows nt\currentversion\gre_initialize
Opens key: HKLM\software\microsoft\windows nt\currentversion\compatibility32
Opens key: HKLM\software\microsoft\windows nt\currentversion\ime compatibility

Opens key: HKLM\software\microsoft\windows nt\currentversion\windows
Opens key: HKLM\software\microsoft\windows nt\currentversion\winlogon

Opens key: HKLM\

Opens key: HKLM\software\microsoft\windows nt\currentversion\diagnostics
Opens key: HKLM\software\microsoft\windows\currentversion\explorer\performance

Opens key: HKLM\system\setup

Opens key: HKCU

Opens key: HKCU\software\policies\microsoft\control panel\desktop

Opens key: HKCU\control panel\desktop

Opens key:

Opens key: HKCU\software\microsoft\windows\currentversion\explorer\advanced Opens key: HKLM\software\microsoft\windows nt\currentversion\languagepack

Opens key: HKLM\software\microsoft\ole

Opens key: HKCR\interface

Opens key: HKCR\interface\{00020400-0000-c000-0000000000046}

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\msctf.dll

Opens key:

HKLM\software\microsoft\ctf\compatibility\bed528c5bc50131efcade70bf30ac478.exe

Opens key: HKLM\software\microsoft\ctf\systemshared\

Opens key: HKCU\keyboard layout\toggle Opens key: HKLM\software\microsoft\ctf\

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\shfolder.dll

Opens key: HKLM\software\microsoft\windows\currentversion\policies\explorer Opens key: HKCU\software\microsoft\windows\currentversion\policies\explorer

Opens key:

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 $08002b30309d \} \verb|\inprocserver32|$

Opens key: HKCR\clsid\{20d04fe0-3aea-1069-a2d8-08002b30309d}\inprocserver32
Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\setupapi.dll

Opens key: HKLM\system\currentcontrolset\control\minint

Opens key: HKLM\system\wpa\pnp

Opens key: HKLM\software\microsoft\windows\currentversion\setup
Opens key: HKLM\software\microsoft\windows\currentversion

Opens key: HKLM\software\microsoft\windows\currentversion\setup\apploglevels
Opens key: HKLM\system\currentcontrolset\control\computername\activecomputername

Opens key: HKLM\system\currentcontrolset\services\tcpip\parameters
Opens key: HKLM\software\policies\microsoft\system\dnsclient

Opens key: HKLM\software\microsoft\rpc\pagedbuffers

Opens key: HKLM\software\microsoft\rpc

Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

Opens key:

HKCU\software\microsoft\windows\currentversion\explorer\mountpoints2\cpc\volume

Opens key:

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11e3-9fc7-806d6172696f}\

Opens key: HKCU\software\classes\drive\shellex\folderextensions

Opens key: HKCR\drive\shellex\folderextensions

 $Opens~key: \\ HKCU\software\classes\drive\shellex\folderextensions\fibeb8a05-beee-$

4442-804e-409d6c4515e9}

Opens key: HKCR\drive\shellex\folderextensions\{fbeb8a05-beee-4442-804e-

409d6c4515e9}

Opens key: HKCU\software\classes\directory

Opens key: HKCR\directory

Opens key: HKCU\software\classes\directory\curver

Opens key: HKCR\directory\curver

Opens key: HKCR\directory\

Opens key: HKCU\software\microsoft\windows\currentversion\explorer
Opens key: HKCU\software\microsoft\windows\currentversion\explorer\
Opens key: HKCU\software\microsoft\windows\currentversion\policies\system

Opens key: HKCU\software\classes\directory\shellex\iconhandler

Opens key: HKCR\directory\shellex\iconhandler
Opens key: HKCU\software\classes\directory\clsid

Opens key: HKCR\directory\clsid

Opens key: HKCU\software\classes\folder

Opens key: HKCR\folder

Opens key: HKCU\software\classes\folder\clsid

Opens key: HKCR\folder\clsid

Opens key: HKLM\system\currentcontrolset\control\session manager\appcertdlls
Opens key: HKLM\system\currentcontrolset\control\session manager\appcompatibility
Opens key: HKLM\software\microsoft\windows nt\currentversion\image file execution

options\apphelp.dll

Opens key: HKLM\system\wpa\tabletpc
Opens key: HKLM\system\wpa\mediacenter

Opens key: HKLM\software\microsoft\windows nt\currentversion\appcompatflags\layers
Opens key: HKCU\software\microsoft\windows nt\currentversion\appcompatflags\layers

Opens key: HKLM\software\microsoft\windows

 $\verb|nt\currentversion\appcompatflags\custom\au_.exe|$

Opens key: HKLM\software\policies\microsoft\windows\safer\levelobjects

Opens key: HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\paths

Opens key:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\paths\{dda3f824-d8cb-441b-834d-bo2ofd2c1a23}

be2efd2c1a33}

Opens key: HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes

Opens key:

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 $\label{lem:hklm} HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{7fb9cd2e-3076-4df9-a57b-b813f72dbb91\}$

Opens kev:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{81d1fe15-dd9d-4762-b16d-7c29ddecae3f}

Opens key:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{94e3e076-8f53-42a5-8411-085bcc18a68d}

Opens key:

 $HKLM \setminus software \setminus policies \setminus microsoft \setminus windows \setminus after \setminus ohashes \setminus \{dc971ee5-44eb-4fe4-ae2e-b91490411bfc\}$

Opens key:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\urlzones
 Opens key:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\4096\paths
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 Opens key:

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Opens key:

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Opens key:

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Opens key:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\262144\hashes

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\262144\urlzones

Opens key: HKCU\software\policies\microsoft\windows\safer\codeidentifiers\0\paths
Opens key: HKCU\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes

Opens key:

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HKCU\software\policies\microsoft\windows\safer\codeidentifiers\4096\paths
  Opens key:
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  Opens key:
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  Opens key:
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  Opens kev:
HKCU\software\policies\microsoft\windows\safer\codeidentifiers\65536\hashes
  Opens key:
HKCU\software\policies\microsoft\windows\safer\codeidentifiers\65536\urlzones
  Opens key:
HKCU\software\policies\microsoft\windows\safer\codeidentifiers\131072\paths
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  Opens key:
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HKCU\software\policies\microsoft\windows\safer\codeidentifiers\262144\hashes
  Opens key:
HKCU\software\policies\microsoft\windows\safer\codeidentifiers\262144\urlzones
                                       HKCU\software\microsoft\windows\currentversion\explorer\shell folders
  Opens key:
  Opens key:
                                       HKLM\software\microsoft\windows nt\currentversion\image file execution
options\au_.exe
  Opens key:
                                       HKLM\software\microsoft\ctf\compatibility\au_.exe
  Opens key:
HKLM\software\microsoft\windows\currentversion\shellcompatibility\applications\au_.exe
                                       \label{lem:hklm} \verb+Kklm\+ software\+ microsoft\+ windows nt\+ current version\+ image file execution
  Opens key:
options\au_.exe\rpcthreadpoolthrottle
  Opens key:
                                       HKLM\software\microsoft\windows nt\currentversion\image file execution
options\riched20.dll
                                       HKLM\software\microsoft\windows nt\currentversion\imm
  Opens key:
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                                       \label{thm:local_hammon_hammon} \begin{tabular}{ll} HKLM \end{tabular} software \end{tabular} in the constant $$ in the const
options\msctfime.ime
  Opens key:
                                       HKCU\software\microsoft\ctf
  Opens key:
                                       HKLM\software\microsoft\ctf\systemshared
                                       HKLM\software\microsoft\windows nt\currentversion\image file execution
  Opens key:
options\skinnedcontrols.dll
                                       HKLM\software\microsoft\windows nt\currentversion\fontsubstitutes
  Opens key:
  Opens key:
                                       HKCU\software\microsoft\ctf\langbaraddin\
  Opens key:
                                       HKLM\software\microsoft\ctf\langbaraddin\
  Oueries value:
                                       HKLM\system\currentcontrolset\control\terminal server[tsappcompat]
  Queries value:
                                       HKLM\system\currentcontrolset\control\session manager[safedllsearchmode]
  Queries value:
HKLM\software\policies\microsoft\windows\safer\codeidentifiers[transparentenabled]
  Oueries value:
                                       HKLM\software\microsoft\windows
nt\currentversion\gre_initialize[disablemetafiles]
                                       HKLM\software\microsoft\windows
  Queries value:
nt\currentversion\compatibility32[bed528c5bc50131efcade70bf30ac478]
  Queries value:
                                      HKLM\software\microsoft\windows nt\currentversion\ime
compatibility[bed528c5bc50131efcade70bf30ac478]
  Queries value:
                                       HKLM\software\microsoft\windows nt\currentversion\windows[appinit_dlls]
  Queries value:
                                       HKLM\software\microsoft\windows nt\currentversion\winlogon[leaktrack]
  Queries value:
                                       HKLM\system\setup[systemsetupinprogress]
                                       HKCU\control panel\desktop[multiuilanguageid]
  Oueries value:
  Queries value:
                                       HKCU\control panel\desktop[smoothscroll]
  Queries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[enableballoontips]
                                       HKLM\system\currentcontrolset\control\session
  Queries value:
manager[criticalsectiontimeout]
  Queries value:
                                       HKLM\software\microsoft\ole[rwlockresourcetimeout]
  Queries value:
                                       HKCR\interface[interfacehelperdisableall]
  Queries value:
                                       HKCR\interface[interfacehelperdisableallforole32]
  Queries value:
                                       HKCR\interface[interfacehelperdisabletypelib]
                                       HKCR\interface\{00020400-0000-0000-c000-
  Queries value:
00000000046}[interfacehelperdisableall]
                                      HKCR\interface\{00020400-0000-0000-c000-
  Queries value:
00000000046}[interfacehelperdisableallforole32]
                                       HKLM\software\microsoft\ctf\systemshared[cuas]
  Queries value:
  Queries value:
                                       HKCU\keyboard layout\toggle[language hotkey]
  Queries value:
                                       HKCU\keyboard layout\toggle[hotkey]
```

HKCU\keyboard layout\toggle[layout hotkey]

Queries value:

```
Queries value:
                          HKLM\software\microsoft\ctf[enableanchorcontext]
 Queries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nonethood]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nopropertiesmycomputer]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nointerneticon]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nocommongroups]
 Queries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nocontrolpanel]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nosetfolders]
 Queries value:
                          HKCR\clsid\{20d04fe0-3aea-1069-a2d8-08002b30309d}\inprocserver32[]
 Queries value:
                          HKLM\system\wpa\pnp[seed]
 Queries value:
                          HKLM\system\setup[osloaderpath]
 Queries value:
                          HKLM\system\setup[systempartition]
                          HKLM\software\microsoft\windows\currentversion\setup[sourcepath]
 Oueries value:
 Queries value:
HKLM\software\microsoft\windows\currentversion\setup[servicepacksourcepath]
 Queries value:
HKLM\software\microsoft\windows\currentversion\setup[servicepackcachepath]
                          HKLM\software\microsoft\windows\currentversion\setup[drivercachepath]
 Queries value:
                          HKLM\software\microsoft\windows\currentversion[devicepath]
 Oueries value:
 Queries value:
                          HKLM\software\microsoft\windows\currentversion\setup[loglevel]
 Queries value:
                          \label{logpath} \mbox{HKLM\software\mbox{\sc urrentversion\sc tup[logpath]}} \label{logpath}
 Queries value:
HKLM\system\currentcontrolset\control\computername\activecomputername[computername]
 Queries value:
                          HKLM\system\currentcontrolset\services\tcpip\parameters[hostname]
 Queries value:
                          HKLM\system\currentcontrolset\services\tcpip\parameters[domain]
 Oueries value:
                          HKLM\software\microsoft\rpc[maxrpcsize]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\explorer\mountpoints2\cpc\volume\{f90255c2-6bc4-
11e3-9fc7-806d6172696f}[data]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\explorer\mountpoints2\cpc\volume\{f90255c2-6bc4-
11e3-9fc7-806d6172696f}[generation]
 Queries value:
                          HKCR\drive\shellex\folderextensions\{fbeb8a05-beee-4442-804e-
409d6c4515e9}[drivemask]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[dontshowsuperhidden]
                          HKCU\software\microsoft\windows\currentversion\explorer[shellstate]
 Oueries value:
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[forceactivedesktopon]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[noactivedesktop]
 Queries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nowebview]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[classicshell]
 Queries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[separateprocess]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\policies\explorer[nonetcrawling]
HKCU\software\microsoft\windows\currentversion\policies\explorer[nosimplestartmenu]
                          \label{lem:hkcu} \begin{tabular}{ll} HKCU \software \microsoft \windows \current version \explorer \advanced \cite{linear} hidden \cite{linear} \end{tabular}
 Oueries value:
 Queries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[showcompcolor]
HKCU\software\microsoft\windows\currentversion\explorer\advanced[hidefileext]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[dontprettypath]
 Oueries value:
HKCU \ software \ \verb|microsoft| windows \ \verb|currentversion| explorer \ advanced[showinfotip]|
 Oueries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[hideicons]
 Queries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[mapnetdrvbtn]
 Oueries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[webview]
                          HKCU\software\microsoft\windows\currentversion\explorer\advanced[filter]
 Oueries value:
 Oueries value:
HKCU\software\microsoft\windows\currentversion\explorer\advanced[showsuperhidden]
```

Queries value:

HKCU\software\microsoft\windows\currentversion\explorer\advanced[separateprocess]

Queries value:

HKCU\software\microsoft\windows\currentversion\explorer\advanced[nonetcrawling]

Queries value: HKCR\directory[docobject]
Queries value: HKCR\directory[browseinplace]
Queries value: HKCR\directory[isshortcut]
Queries value: HKCR\directory[alwaysshowext]
Queries value: HKCR\directory[nevershowext]

Queries value: HKLM\system\currentcontrolset\control\session

manager[pendingfilerenameoperations2]

Queries value: HKLM\system\currentcontrolset\control\session

manager[pendingfilerenameoperations]

Queries value: HKLM\system\currentcontrolset\control\session

manager[safeprocesssearchmode]

Queries value: HKLM\system\currentcontrolset\control\session

manager\appcompatibility[disableappcompat]

Queries value: HKLM\system\wpa\mediacenter[installed]

Queries value:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers[authenticodeenabled]

Queries value: HKLM\software\policies\microsoft\windows\safer\codeidentifiers[levels]

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ paths \ \{dda3f824-d8cb-441b-834d-be2efd2c1a33\} [itemdata]$

Queries value:

 $HKLM software \verb|policies| microsoft| windows safer| code identifiers \verb|0| paths| { dda3f824-d8cb-441b-834d-be2efd2c1a33} [saferflags]$

Oueries value:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{349d35ab-37b5-462f-9b89-edd5fbde1328}[itemdata]

Oueries value:

 $HKLM \software \policies \microsoft \windows \safer \code identifiers \noindent \noi$

Oueries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{349d35ab-37b5-462f-9b89-edd5fbde 1328\} \ [itemsize]$

Queries value:

Queries value:

 $\label{lem:hklm} HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{7fb9cd2e-3076-4df9-a57b-b813f72dbb91\}[itemdata]}$

Queries value:

 $\label{lem:hklm} HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{7fb9cd2e-3076-4df9-a57b-b813f72dbb91\}[hashalg]}$

Queries value:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{7fb9cd2e-3076-4df9-a57b-b813f72dbb91}[itemsize]

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{7fb9cd2e-3076-4df9-a57b-b813f72dbb91\} \ [saferflags]$

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{81d1fe15-dd9d-4762-b16d-7c29ddecae3f\} [itemdata]$

Queries value:

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{81d1fe15-dd9d-4762-b16d-7c29ddecae3f\} [itemsize]$

Queries value:

 $\label{thm:local-bound} $HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM \sim \left(\frac{31}{60}\right) - 4762 - b16d-7c29 decae3f} [saferflags] $$ HKLM$

Queries value:

 $\label{lem:hklmsoftware} HKLM\software\policies\microsoft\windows\safer\codeidentifiers\0\hashes\{94e3e076-8f53-42a5-8411-085bcc18a68d}\[itemdata]$

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{94e3e076-8f53-42a5-8411-085bcc18a68d\} \ [hashalg]$

Queries value:

 $\label{lem:hklmsoftware} HKLM software \policies \microsoft \windows \safer \code identifiers \oldshes \{94e3e076-8f53-42a5-8411-085bcc18a68d} [itemsize]$

Oueries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{94e3e076-8f53-42a5-8411-14444, \ normalized \ normaliz$

085bcc18a68d}[saferflags]

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{dc971ee5-44eb-4fe4-ae2e-b91490411bfc\} [itemdata]$

Oueries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{dc971ee5-44eb-4fe4-ae2e-b91490411bfc\} \ [hashalg]$

Oueries value:

Queries value:

 $HKLM \ software \ policies \ microsoft \ windows \ safer \ code identifiers \ 0 \ hashes \ \{dc971ee5-44eb-4fe4-ae2e-b91490411bfc\} \ [saferflags]$

Queries value:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers[defaultlevel]

Queries value:

 $HKLM \setminus software \setminus policies \setminus microsoft \setminus windows \setminus safer \setminus code identifiers [policy scope]$

Queries value: HKCU\software\microsoft\windows\currentversion\explorer\shell

folders[cache]
 Queries value:

HKLM\software\policies\microsoft\windows\safer\codeidentifiers[logfilename]

Queries value: HKLM\software\microsoft\windows nt\currentversion\compatibility32[au_]
Queries value: HKLM\software\microsoft\windows nt\currentversion\ime compatibility[au_]

Queries value: HKLM\software\microsoft\windows nt\currentversion\imm[ime file]
Queries value: HKCU\software\microsoft\ctf[disable thread input manager]

Queries value: HKLM\software\microsoft\windows

nt\currentversion\fontsubstitutes[tahoma]

Sets/Creates value: HKLM\system\currentcontrolset\control\session

manager[pendingfilerenameoperations]

Value changes: HKLM\software\microsoft\cryptography\rng[seed]

Value changes:

806d6172696f}[baseclass]

Value changes: HKLM\system\currentcontrolset\control\session

manager[pendingfilerenameoperations]