Volatility 3.0 Windows Cheat Sheet (DRAFT) by BpDZone

The Volatility Framework is a completely open collection of tools, implemented in Python under the GNU General Public License, for the extraction of digital artifacts from volatile memory (RAM) samples. The extraction techniques are performed completely independent of the system being investigated but offer visibilty into the runtime state of the system.

This is a **draft** cheat sheet. It is a work in progress and is not finished yet.

Installation

1) Install Visual Studio C++ build tools (both 64 and 32 bit)

2) Clone the latest Volatility version
git clone https://github.com/volatilityfoundation/volatility3.git

3) As of 02.2024 the plugin yara-python is not yet updated so make sure to delete it from requirements.txt before installing.
py -m pip install -r requirements.txt

4) Download symbol tables and put and extract inside "volatility3\symbols":
Windows
Mac
Linux

5) Start the installation by entering the following commands in this order.
py setup.py build
py setup.py install
Once the last commands finishes work Volatility will be ready for use.

OS Information

#Show OS & kernel details of the memory sample being analyzed.
py vol.py -f "filename" windows.info

Hashes

#Dumps user hashes from memory
py vol.py -f "filename" windows.hashdump.Hashdump

Cache

#Dumps lsa secrets from memory
py vol.py -f "filename" windows.cachedump.Cachedump

Environment Variables

#Display process environment variables
py vol.py -f "filename" windows.envars.Envars

Symlinks

#Scans for links present in a particular windows memory image.
py vol.py -f "filename" windows.symlinkscan.SymlinkScan

Network

#Scans for network objects present in a particular windows memory image.
py vol.py -f "filename" windows.netscan

#Traverses network tracking structures present in a particular windows memory image.
py vol.py -f "filename" windows.netstat

Registry

#Lists the registry hives present in a particular memory image.
py vol.py -f "filename" windows.registry.hivelist

#Scans for registry hives present in a particular windows memory image.
py vol.py -f "filename" windows.registry.hivescan

#Lists the registry keys under a hive or specific key value.
py vol.py -f "filename" windows.registry.printkey.PrintKey --key <KEY>

Command line arguments

#Lists process command line arguments.
py vol.py -f "filename" windows.cmdline.CmdLine

Services

#Lists process token sids.
py vol.py -f "filename" windows.getservicesids.GetServiceSIDs

Drivers

#List IRPs for drivers in a particular windows memory image.
py vol.py -f "filename" windows.driverirp.DriverIrp

#Scans for drivers present in a particular windows memory image.
py vol.py -f "filename" windows.driverscan.DriverScan

Processes

#Get process list (EPROCESS)
py vol.py -f "filename" windows.pslist

#Get hidden process list(malware)
py vol.py -f "filename" windows.psscan

#Get processes tree (not hidden)
py vol.py -f "filename" windows.pstree

#Dumps cached file contents from memory samples
py vol.py -f "filename" -o "output/dir" windows.dumpfiles --pid <PID>

#Prints the memory map
py vol.py -f "filename" -o "output/dir" windows.memmap --dump --pid <PID>

#Lists process open handles.
py vol.py -f "filename" windows.handles --pid <PID>

#Lists the loaded modules in a particular windows memory image.
py vol.py -f "filename" windows.dllist --pid <PID>

#Lists process token privileges
py vol.py -f "filename" windows.privileges.Privs

Files

#Scans for file objects present in a particular windows memory image.
py vol.py -f "filename" windows.filescan

#Dumps cached file contents from Windows memory samples.
py vol.py -f -o "output/dir" "filename" windows.dumpfiles

Malware General

#Lists process memory ranges that potentially contain injected code.
py vol.py -f "filename" windows.malfind.Malfind

#Lists the system call table.
py vol.py -f "filename" windows.ssdt.SSDT

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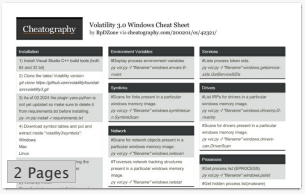

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