

Lab 9: Malware Threats

Course Name: Ethical Hacking and Offensive Security(HOD401)

Student Name: Nguyễn Trần Vinh – SE160258

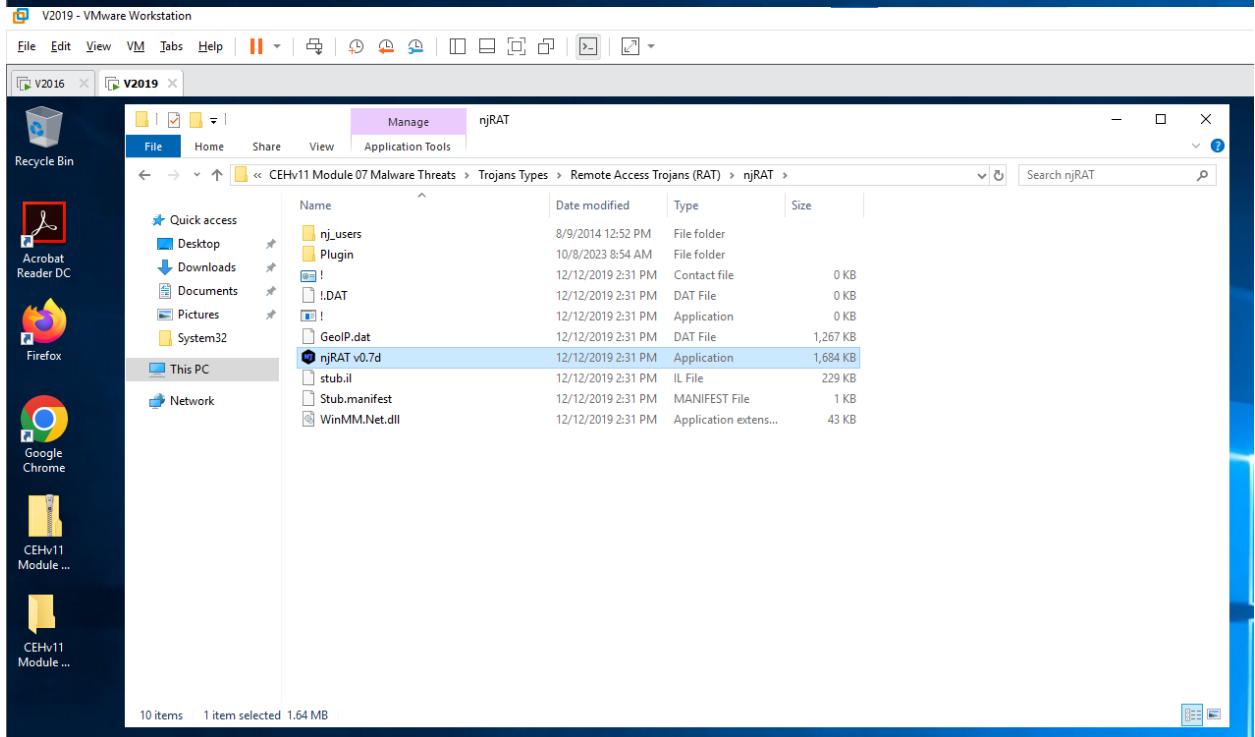
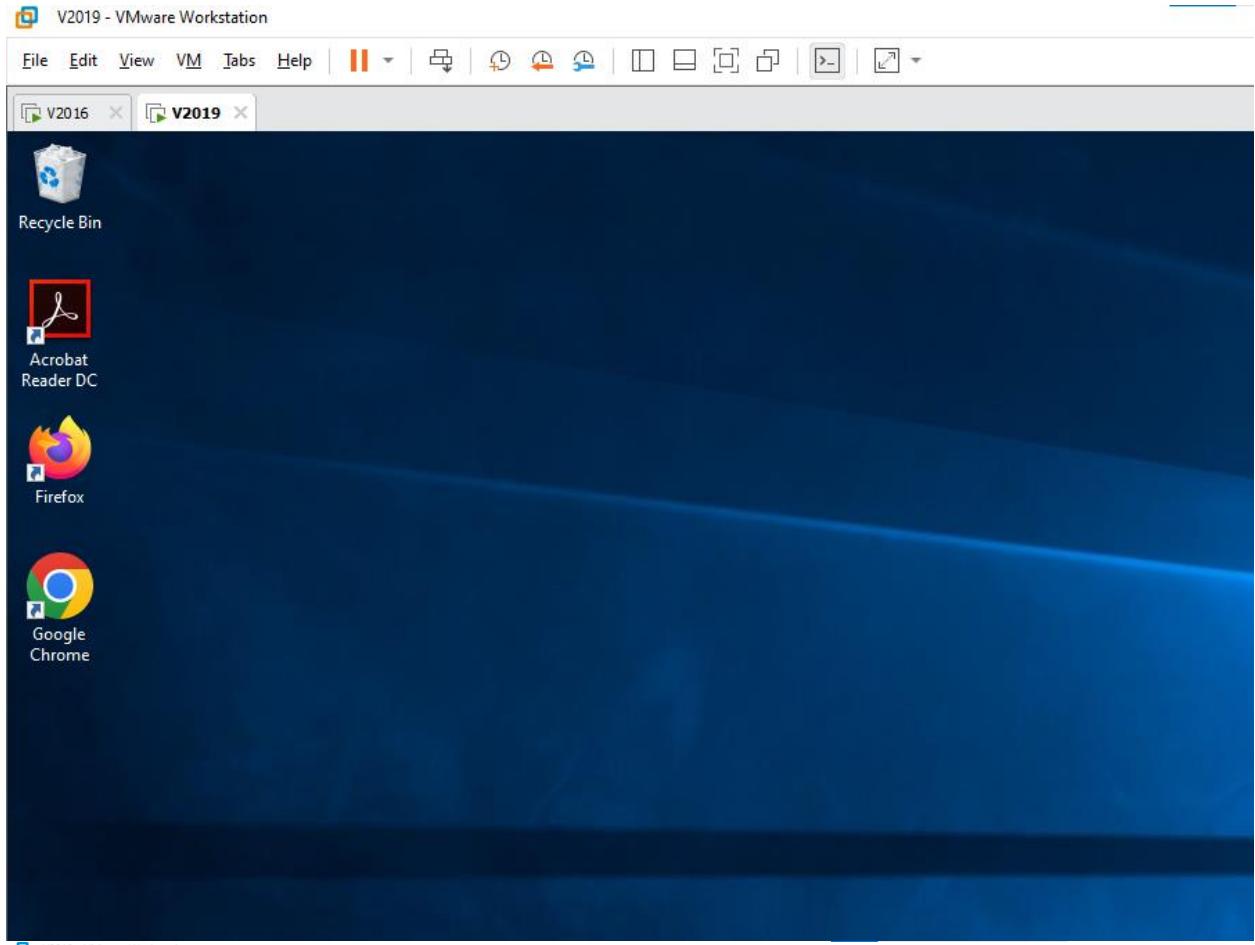
Instructor Name: Mai Hoàng Đỉnh

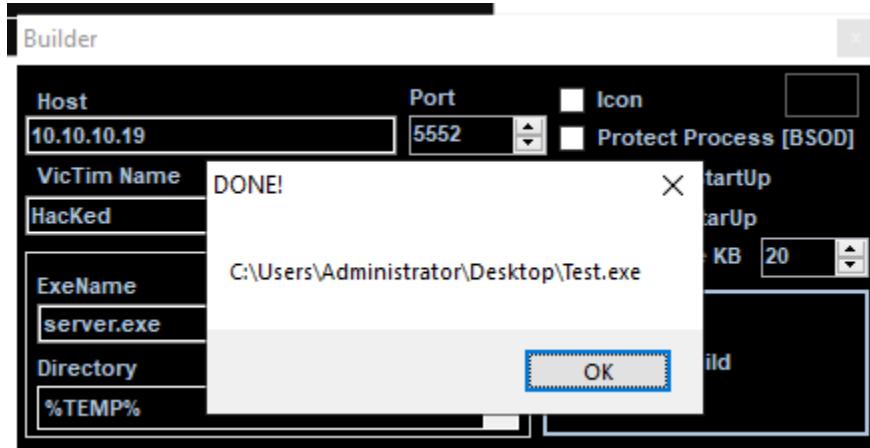
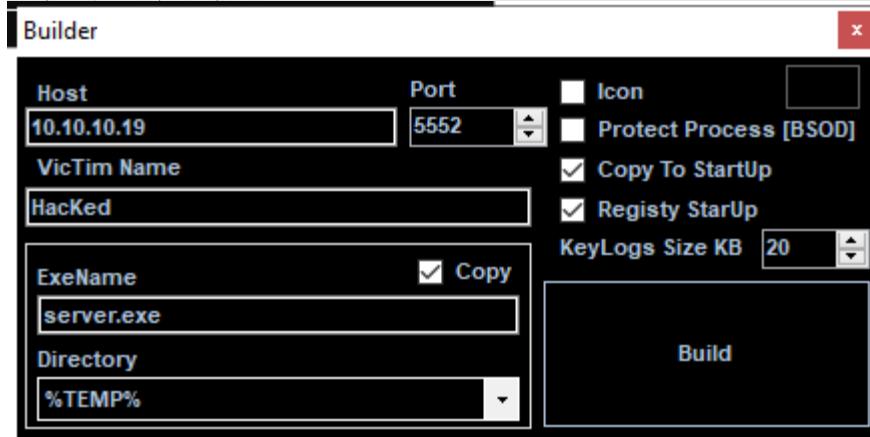
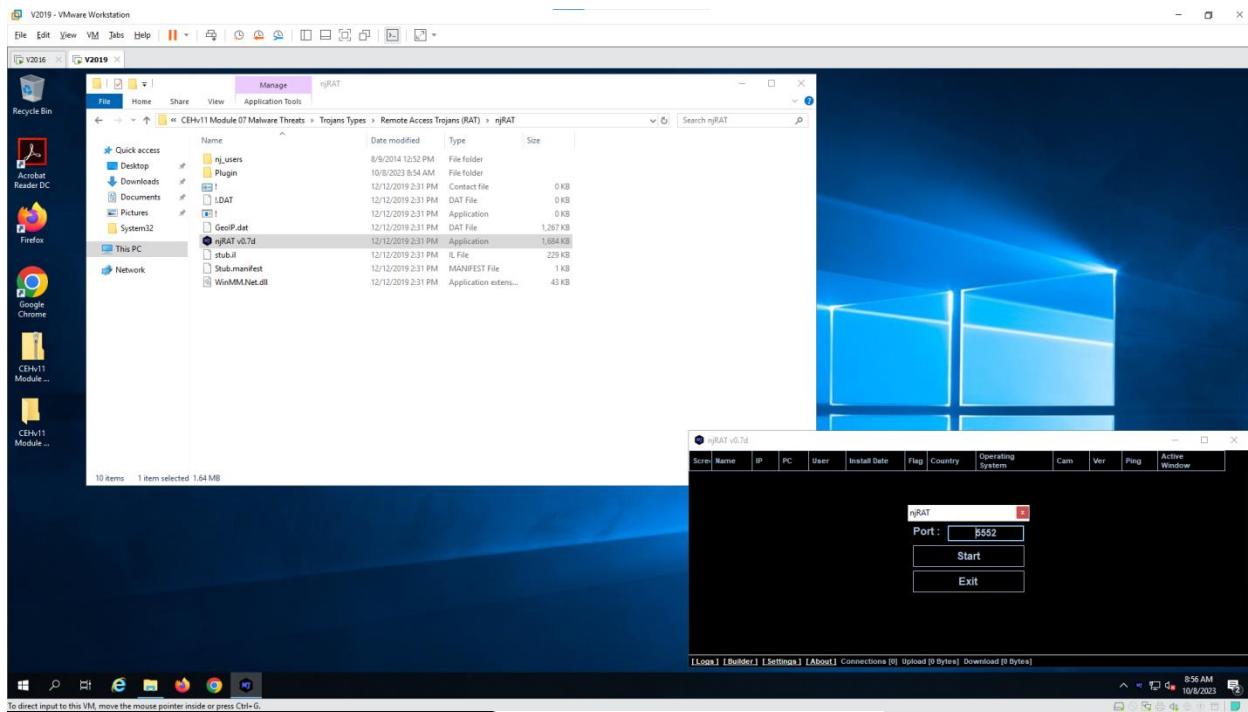
Lab Due Date: 07/10/2023

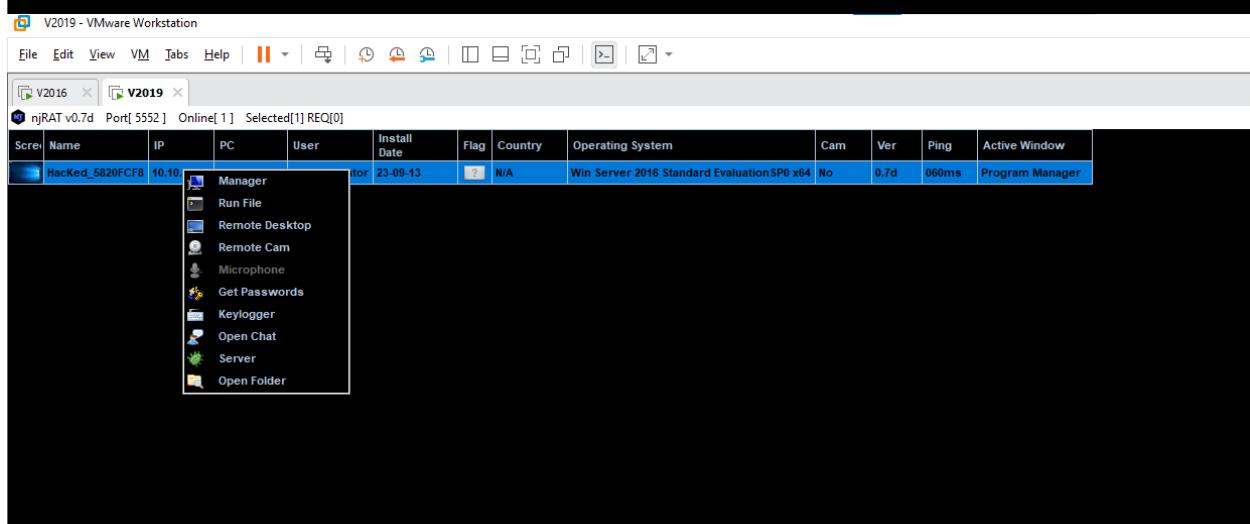
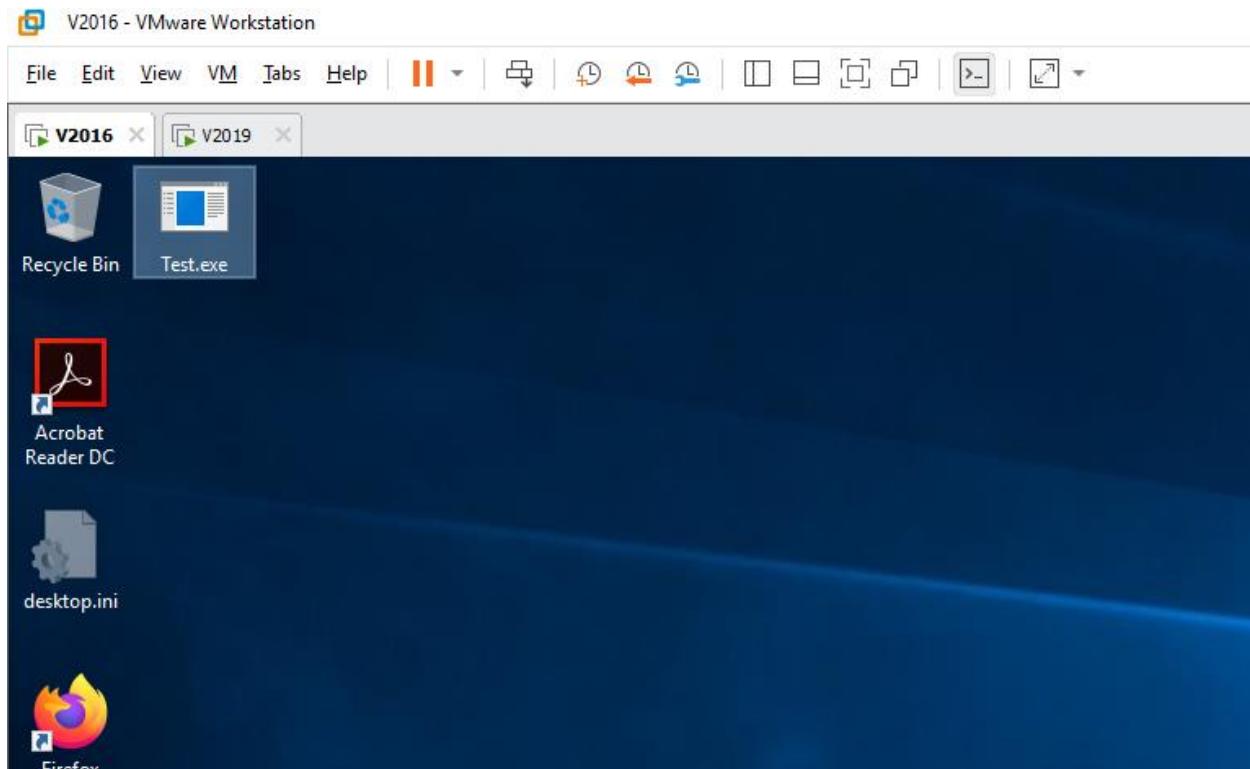
1. Gain Access to the Target System using Trojans

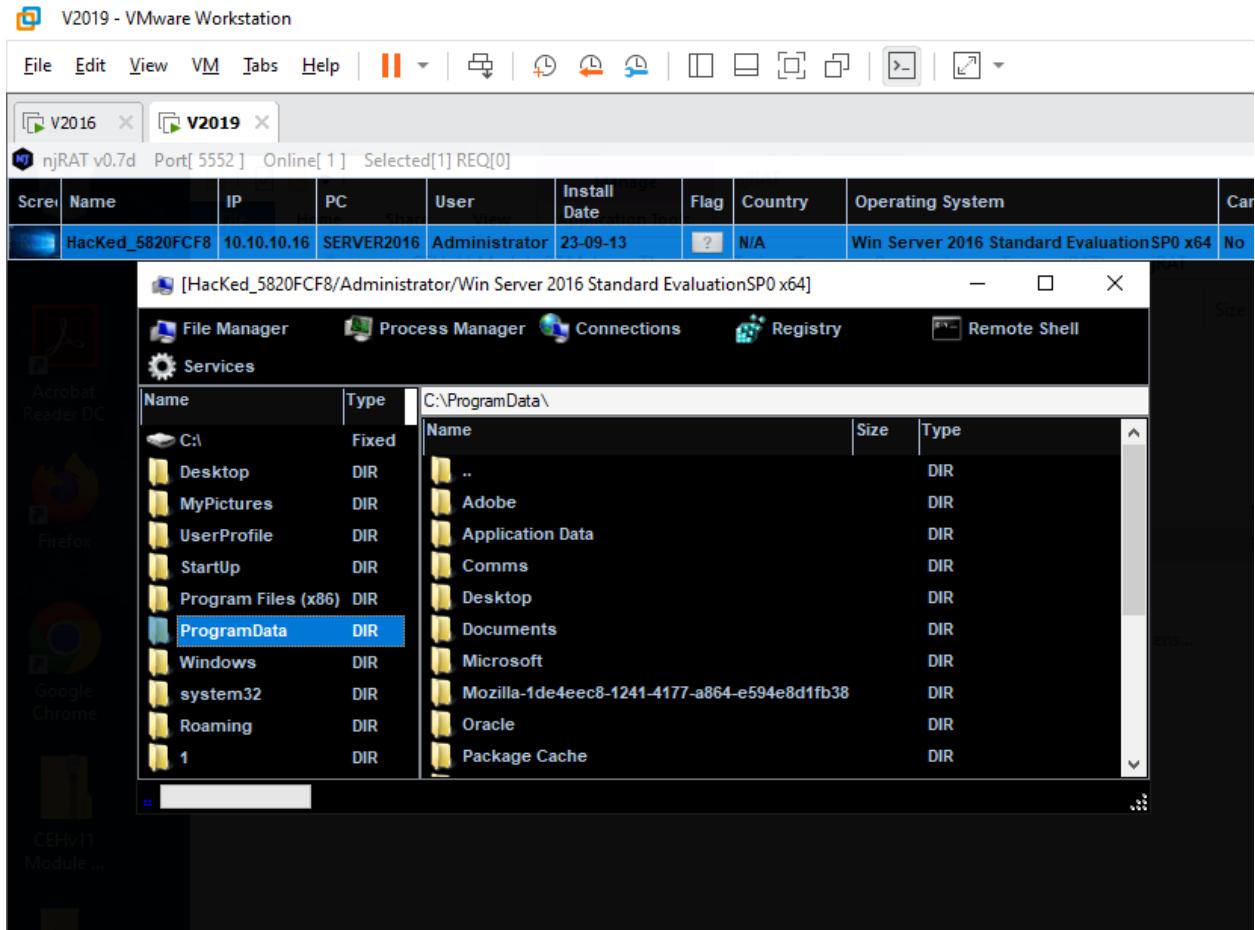
1.1 Gain Control over a Victim Machine using the njRAT RAT Trojan

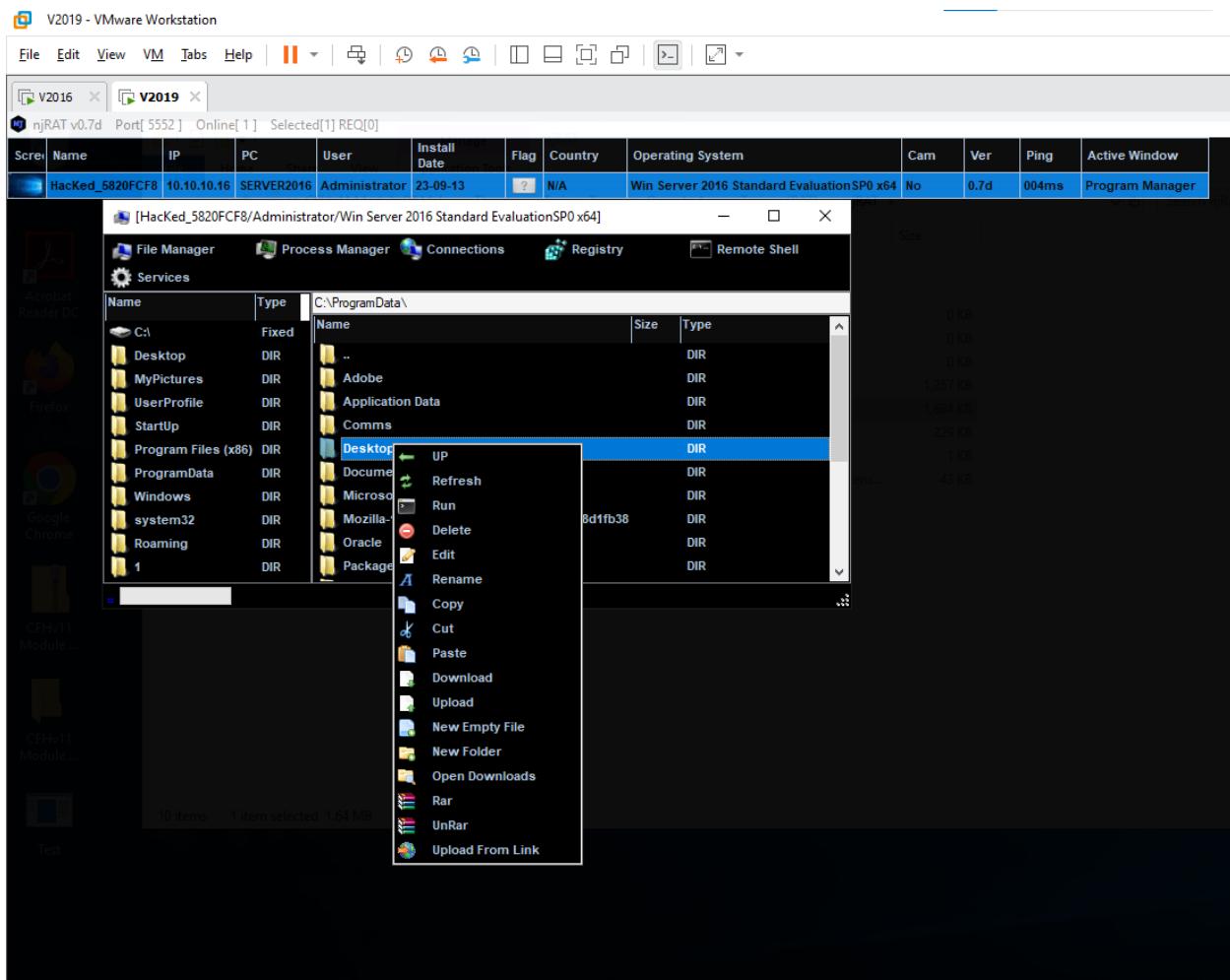
- Open Windows 10, Windows Server 2016











V2019 - VMware Workstation

[HackEd_5820FCF8/Administrator/Win Server 2016 Standard EvaluationSP0 x64]

Name	PID	Directory	User	CommandLine
audiogd.exe	3120			
cssrss.exe	360			
cssrss.exe	472			
dfssrs.exe	6040			
dfsvc.exe	2476			
dllhost.exe	3196			
dllhost.exe	4852	system32	Administrator	/Processid:(49F6E667-6658-4BD1-9DE9-6AF87F9FAF85)
dns.exe	2220			
dwm.exe	924			
explorer.exe	872	Windows	Administrator	
fontdrvhost.exe	1156			
GoogleCrashHandler.exe	1340			
GoogleCrashHandler64.exe	2612			
httpd.exe	6068			
httpd.exe	6096			
ismserv.exe	2168			
juchck.exe	2156	Java Update	Administrator	-auto
jusched.exe	5052	Java Update	Administrator	
lsass.exe	608			
Microsoft.ActiveDirectory.WebServices.exe	3740			
mqsvc.exe	2256			
msdtc.exe	768			
mysqld.exe	4572			
mysqld.exe	5496			
nfsclient.exe	2552			
RuntimeBroker.exe	1188	System32	Administrator	-Embedding
SearchUI.exe	4292	Microsoft.Windows.Cortana_cw5n1h2txyewy	Administrator	-ServerName:CortanaUI.AppXa50dqqa5gqv4a428c9y1jjw7m3btvepj.mca
server.exe	5928	1	Administrator	
services.exe	600			
ShellExperienceHost.exe	4212	ShellExperienceHost_cw5n1h2txyewy	Administrator	-ServerName:App.AppXtk181ttxbce2qsex02e8tw7hfx9xb3t.mca
sihost.exe	1796	system32	Administrator	
smss.exe	256			
snmp.exe	2448			
spools.exe	1604			
svchost.exe	776			
svchost.exe	832			
svchost.exe	968			
svchost.exe	76			
svchost.exe	596			
svchost.exe	704			
svchost.exe	1048			
svchost.exe	1100			
svchost.exe	1148			
svchost.exe	1216			
svchost.exe	1642			



V2019 - VMware Workstation

File Edit View VM Tabs Help | || ▾ | ⌂ | ⌂ | ⌂ | ⌂

V2016 X V2019 X

[Hacked_5820FCF8/Administrator/Win Server 2016 Standard EvaluationS]

File Manager Process Manager Connections

Name	PID	Directory
audiogd.exe	3120	
csrss.exe	360	
csrss.exe	472	
dfsrs.exe	6040	
dfssvc.	2476	
dllhost.	3196	
dllhost.	4852	system32
dns.exe	2220	
dwm.exe	924	
explorer.exe	872	Windows
fontdrvhost.exe	1156	
GoogleCrashHandler.exe	1340	
GoogleCrashHandler64.exe	2612	
httdd.exe	6068	

V2019 - VMware Workstation

[HackEd_5820FCF8/Administrator/Win Server 2016 Standard Evaluation SP0 x64]

LocalIP	LocalPort	RemoteIP	RemotePort	State	Process
0.0.0.0	80	0.0.0.0	0	Listen	System[4]
0.0.0.0	88	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	135	0.0.0.0	0	Listen	svchost[832]
0.0.0.0	389	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	445	0.0.0.0	0	Listen	System[4]
0.0.0.0	464	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	593	0.0.0.0	0	Listen	svchost[832]
0.0.0.0	636	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	1801	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	2103	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	2105	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	2107	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	3268	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	3269	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	3306	0.0.0.0	0	Listen	mysqld[4572]
0.0.0.0	3307	0.0.0.0	0	Listen	mysqld[5496]
0.0.0.0	3389	0.0.0.0	0	Listen	svchost[968]
0.0.0.0	5985	0.0.0.0	0	Listen	System[4]
0.0.0.0	8080	0.0.0.0	0	Listen	httpd[6068]
0.0.0.0	9389	0.0.0.0	0	Listen	Microsoft.ActiveDirectory.WebServices[3740]
0.0.0.0	47001	0.0.0.0	0	Listen	System[4]
0.0.0.0	49664	0.0.0.0	0	Listen	wininit[492]
0.0.0.0	49665	0.0.0.0	0	Listen	svchost[596]
0.0.0.0	49666	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	49668	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	49669	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	49670	0.0.0.0	0	Listen	svchost[1048]
0.0.0.0	49671	0.0.0.0	0	Listen	spoolsv[1604]
0.0.0.0	49676	0.0.0.0	0	Listen	svchost[1824]
0.0.0.0	49688	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	49690	0.0.0.0	0	Listen	dns[2220]
0.0.0.0	50031	0.0.0.0	0	Listen	dfrsr[6040]
0.0.0.0	53908	0.0.0.0	0	Listen	services[600]
10.10.1...	53	0.0.0.0	0	Listen	dns[2220]
10.10.1...	139	0.0.0.0	0	Listen	System[4]
10.10.1...	50043	20.198.1...	443	Esta...	explorer[872]
10.10.1...	50068	10.10.10...	5552	Esta...	server[5928]
10.10.1...	53909	20.198.1...	443	Esta...	svchost[1048]
127.0.0.1	53	0.0.0.0	0	Listen	dns[2220]

V2019 - VMware Workstation

File Edit View VM Tabs Help | || ▾ | ⌂ | + 🔍 🔍 🔍 | □ □ □

V2016 X V2019 X

[Hacked_5820FCF8/Administrator/Win Server 2016 Standard EvaluationSP0 x64]

File Manager Process Manager Connections Registry

LocalIP	LocalPort	RemoteIP	RemotePort	State	Process
0.0.0.0	80	0.0.0.0	0	Listen	System[4]
0.0.0.0	88	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	135	0.0.0.0	0	Listen	svchost[832]
0.0.0.0	389	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	445	0.0.0.0	0	Listen	System[4]
0.0.0.0	464	0.0.0.0	0	Kill Connection	
0.0.0.0	593	0.0.0.0	0	Listen	svchost[832]
0.0.0.0	636	0.0.0.0	0	Listen	lsass[608]
0.0.0.0	1801	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	2103	0.0.0.0	0	Listen	mqsvc[2256]
0.0.0.0	2405	0.0.0.0	0	Listen	mqsvc[2256]

V2019 - VMware Workstation

File Edit View VM Tabs Help | || ▾ | ⌂ | + 🔍 🔍 🔍 | □ □ □

V2016 X V2019 X

[Hacked_5820FCF8/Administrator/Win Server 2016 Standard EvaluationSP0 x64]

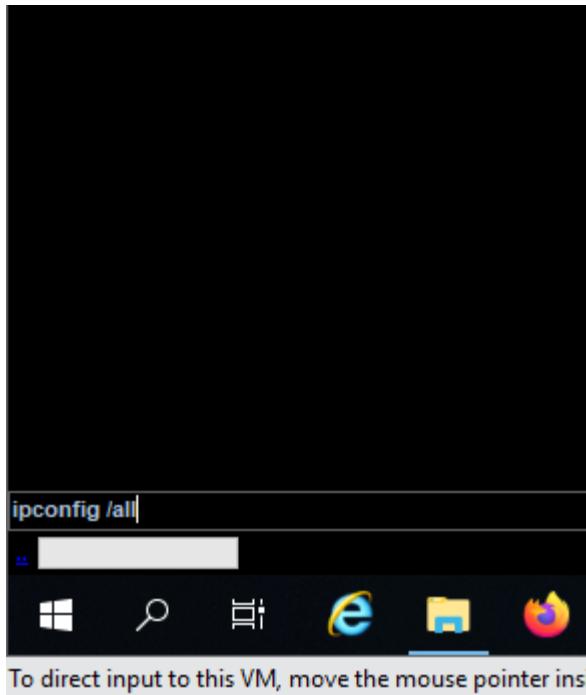
File Manager Process Manager Connections Registry Remote Shell Services

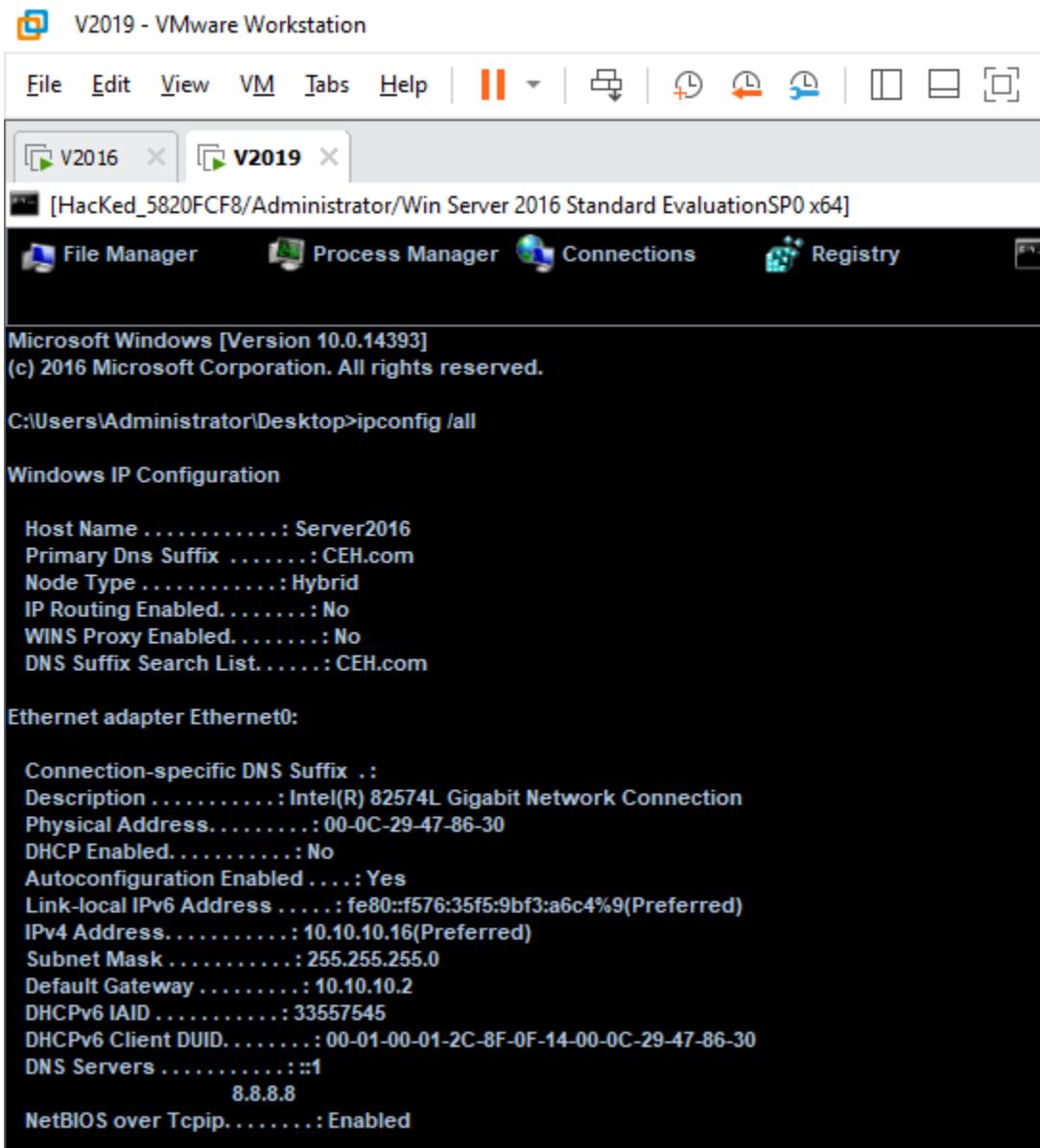
Name	Type	Value
ab	String	WinRAR

- Refresh
- Edit
- New Value
- Delete

HKEY_CLASSES_ROOT

- *
- .001
- .386
- .3g2
- .3gp
- .3gp2
- .3GPP
- .7z
- .a
- .aac
- .ac3
- .accountpicture-ms
- .acrobatsecuritysetting
- .adt
- .adts
- .





V2019 - VMware Workstation

File Manager Process Manager Connections Registry Remote Shell Services

Service	Display Name	Type	Status	Can Stop?
ADWS	Active Directory Web Services	Win32OwnProcess	Running	True
AxInstSV	ActiveX Installer Service	Win32ShareProcess	Stopped	False
AdobeARMservice	Adobe Acrobat Reader	Win32OwnProcess	Stopped	False
AJRouter	AllJoyn Router	Win32ShareProcess	Stopped	False
AppReadiness	App Readiness	Win32ShareProcess	Stopped	False
AppHostSvc	Application Host Helper Service	Win32ShareProcess	Running	True
ApplIDsvc	Application Identity	Win32ShareProcess	Stopped	False
Apinfo	Application Information	Win32ShareProcess	Running	True
ALG	Application Layer Gateway Service	Win32OwnProcess	Stopped	False
AppMgmt	Application Management	Win32ShareProcess	Stopped	False
AppXsvc	AppX Deployment Service (AppXSVC)	Win32ShareProcess	Stopped	False
aspnet_state	ASP.NET State Service	Win32OwnProcess	Stopped	False
tzautoupdate	Auto Time Zone Updater	Win32ShareProcess	Stopped	False
BITS	Background Intelligent Transfer Service	Win32ShareProcess	Stopped	False
Background Task Infrastructure Service		Win32ShareProcess	Running	False

V2019 - VMware Workstation

File Manager Process Manager Connections Registry Remote Shell Services

Dips 0 Bytes

Recycle Bin Test.exe

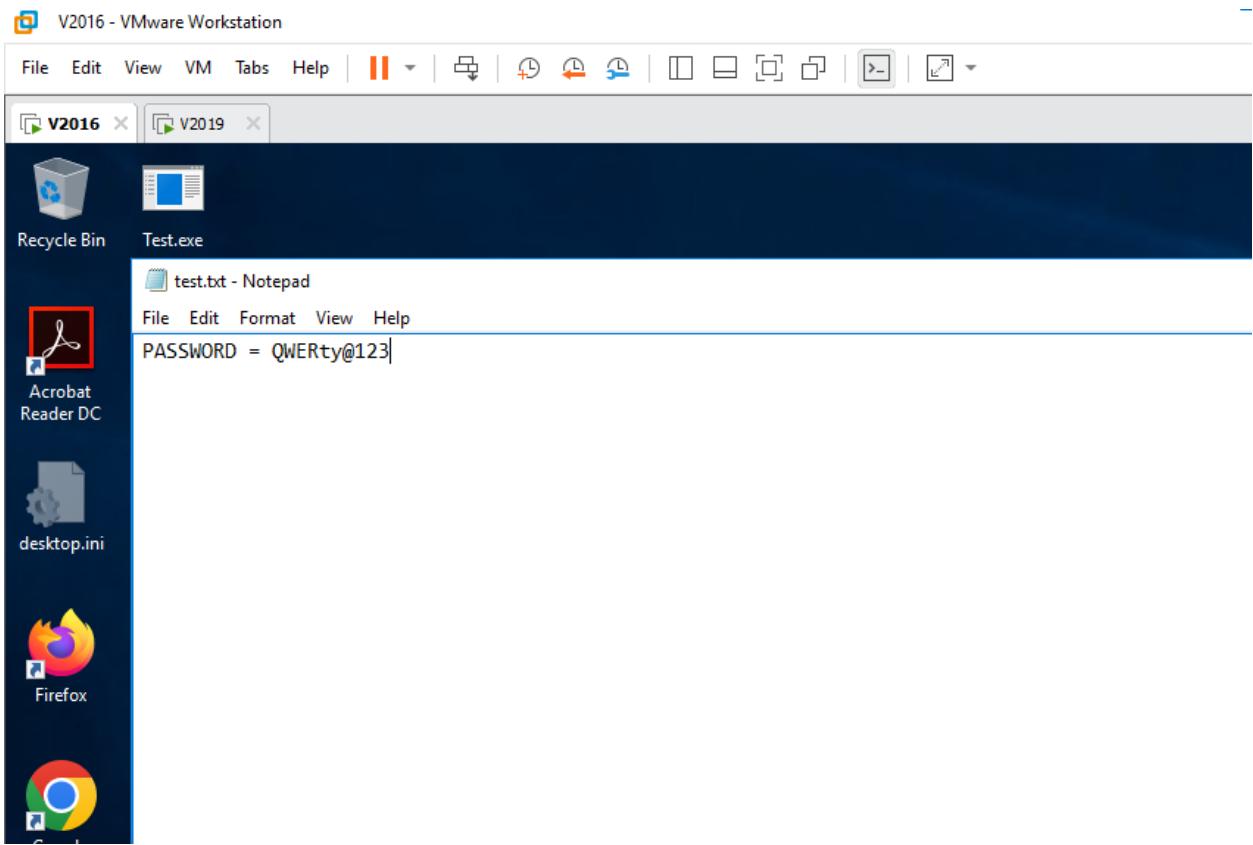
V2019 - VMware Workstation

File Manager Process Manager Connections Registry Remote Shell Services

Stop Size 475 Mouse Keyboard AutoSave

Dips 0 Bytes

Recycle Bin Test.exe



The screenshot shows the V2019 - VMware Workstation application window. At the top, there's a menu bar with File, Edit, View, VM, Tabs, Help, and various icons for managing VMs. Below the menu is a toolbar with icons for power, clone, snapshot, and settings. The main window displays a list of VMs in tabs: V2016 and V2019. The V2019 tab is active, showing the status: njRAT v0.7d Port[5552] Online[1] Selected[1] REQ[0]. A table provides details for the selected VM:

Scre	Name	IP	PC	User	Install Date	Flag	Country	Operating System	Cam	Ver	Ping
	HackEd_5820FCF8	10.10.10.16	SERVER2016	Administrator	23-09-13	?	N/A	Win Server 2016 Standard EvaluationSP0 x64	No	0.7d	534ms

On the left side, there's a vertical list of icons for various applications: Acrobat Reader DC, Firefox, Google Chrome, and two entries for CEHv11 Module ... (one with a red box around it). The central part of the screen shows a Notepad window titled [HackEd_5820FCF8/Administrator/Win Server 2016 Standard EvaluationSP0 x64]. The content of the notepad is:

```
test[ENTER]

[ 23/09/13 notepad test.txt - Notepad]
PASSWORD = QWERty@123
```

V2019 - VMware Workstation

File Edit View VM Tabs Help |

Show or hide console view

njRAT v0.7d Port[5552] Online[1] Selected[1] REQ[0]

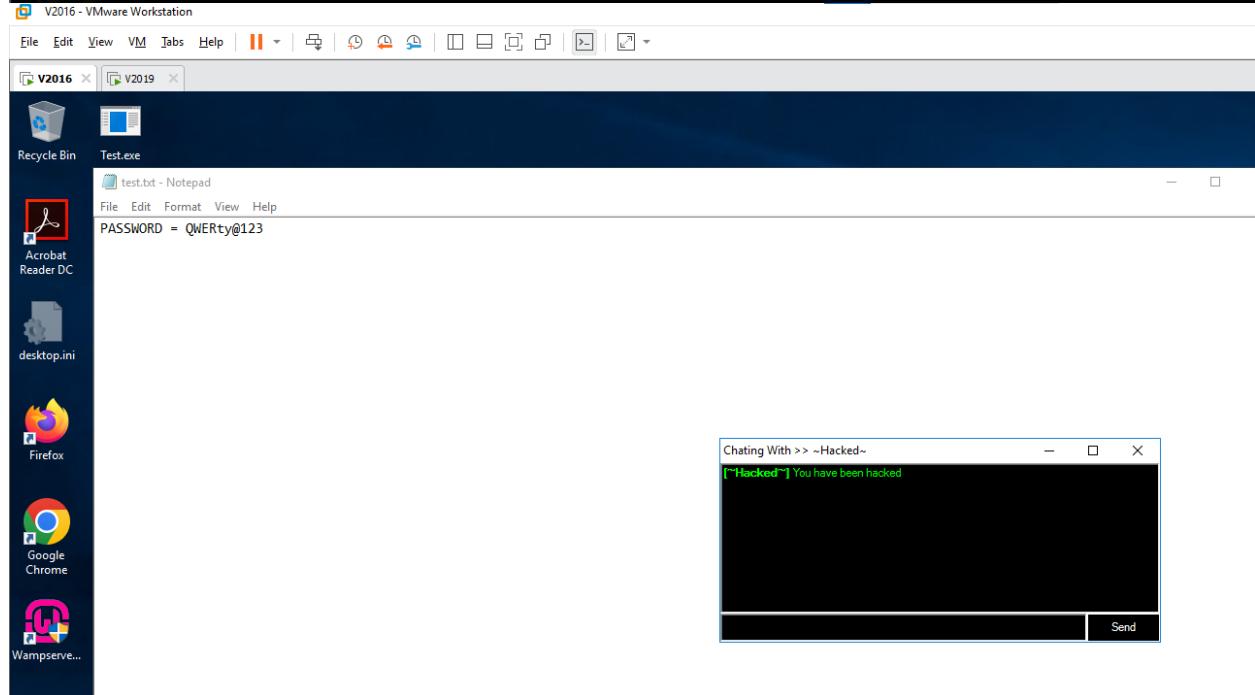
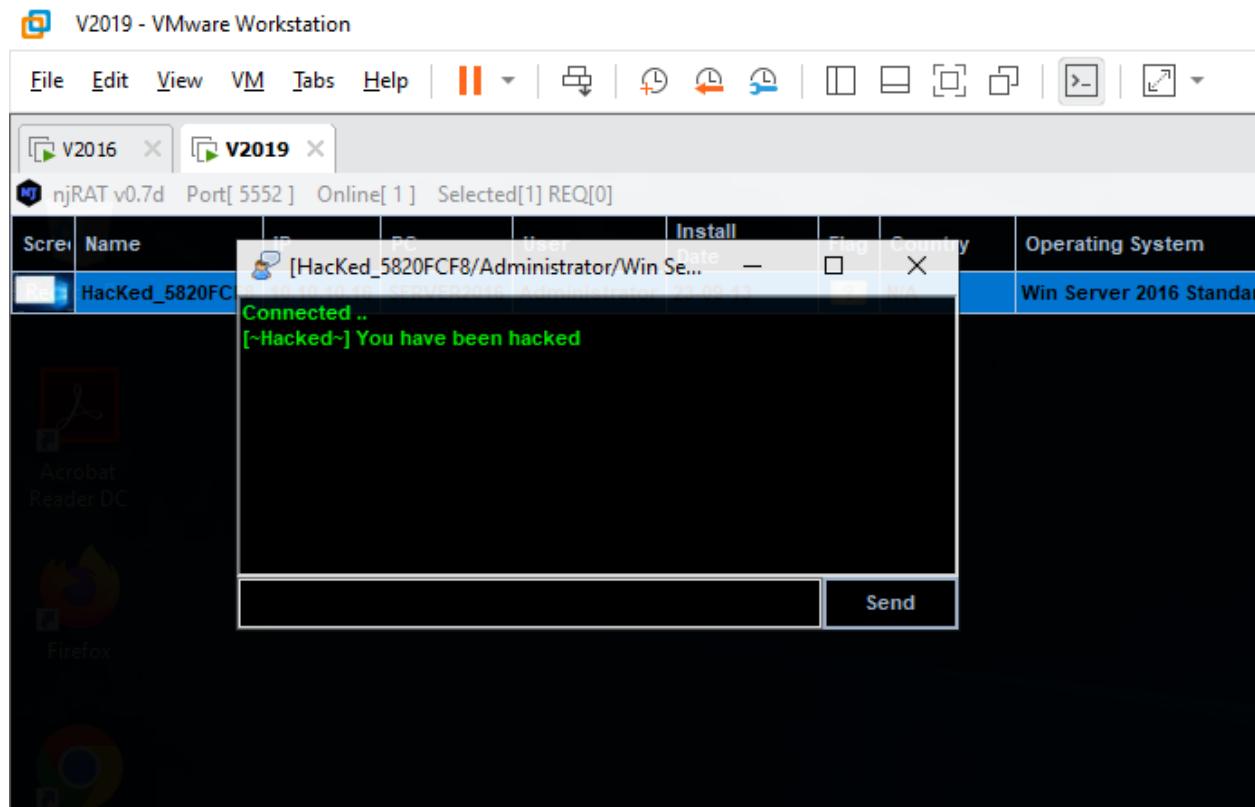
Scre	Name	IP	PC	User	Install Date	Flag	Country	Operating System	Cam	Ver	Ping	Active Window
	Hacked_5820FCFB	10.10.10.16	SERVER2016	Administrator	23-09-13		N/A	Win Server 2016 Standard Evaluation SP0 x64	No	0.7d	014ms	test.txt - Notepad

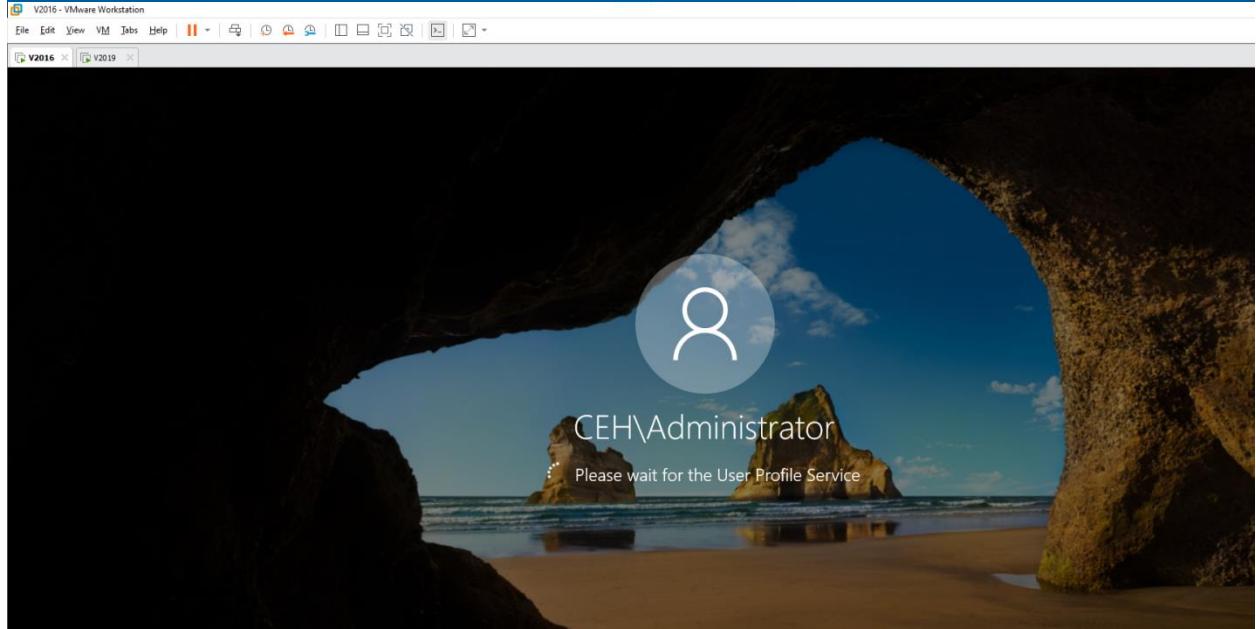
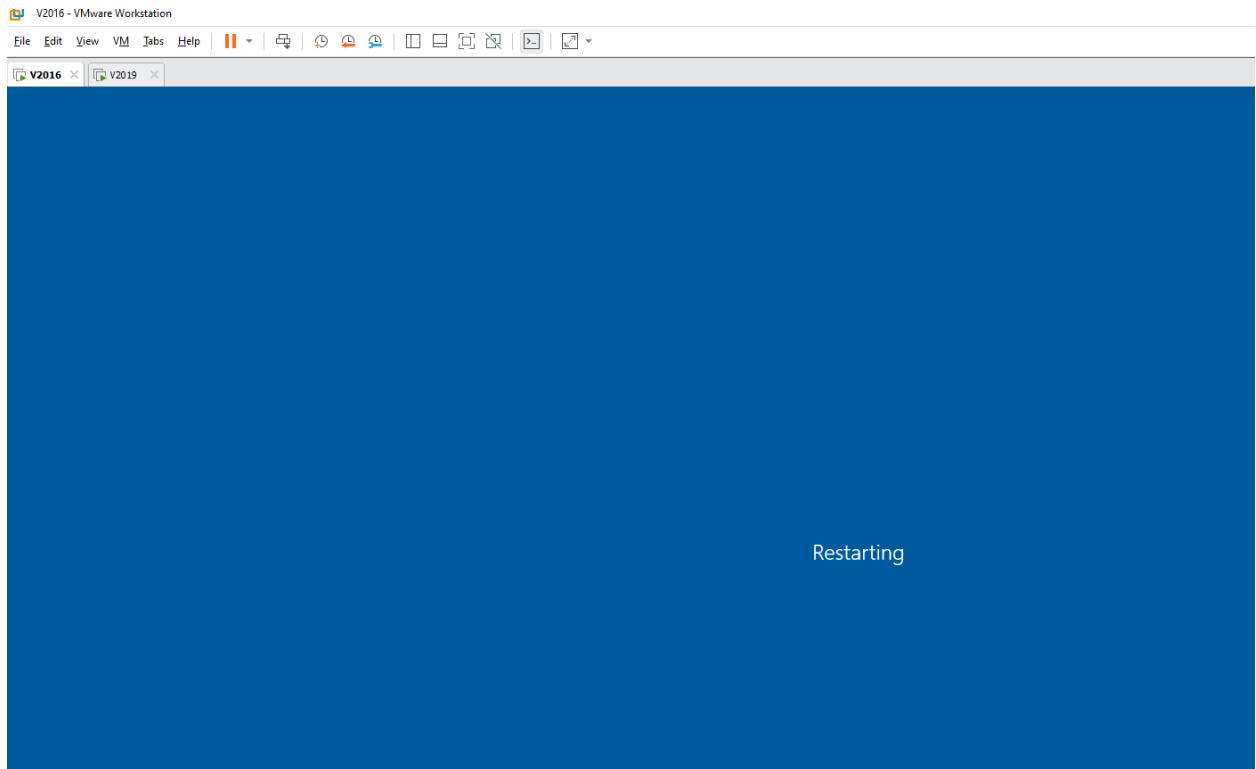
Chat

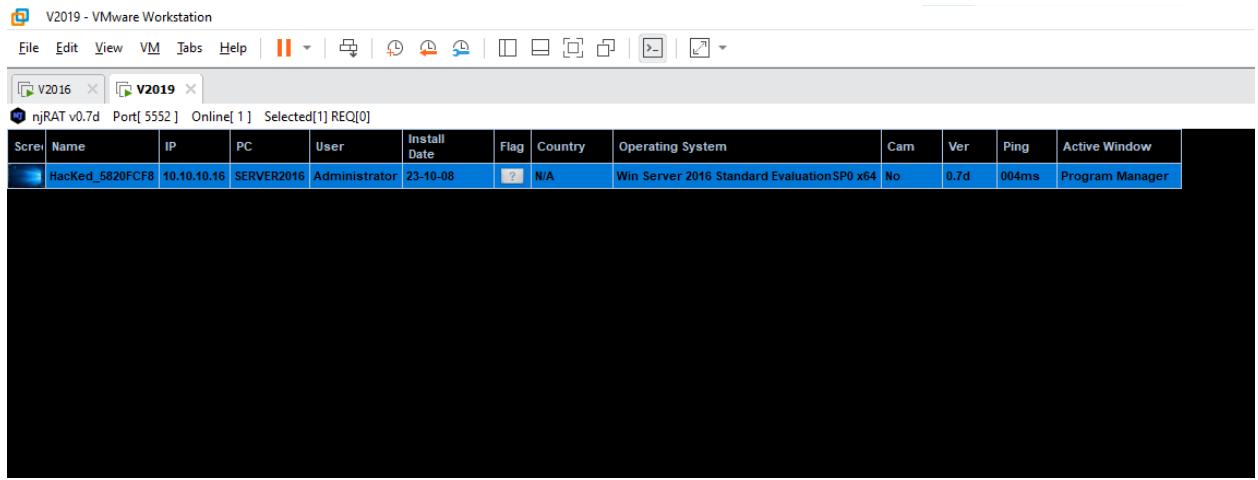
Enter Your NickName

OK Cancel

~Hacked~







1.2 Hide a Trojan using SwayzCryptor and Make it Undetectable to Various Anti-Virus Programs

- Open Windows 10

V2019 - VMware Workstation

File Edit View VM Tabs Help | || | | | | | | | | | | |

V2016 V2019

virustotal - Tìm trên Google

← → C google.com/search?q=virustotal&rlz=1C1KNTJ_enVN1075VN1075&oq=virus&gs_lcrp=EgZjaHJvbWUqCggBEAAQsQMY

Google Chrome isn't your default browser Set as default

Google virustotal

Tất cả Hình ảnh Tin tức Video Mua sắm Thêm Công cụ

Khoảng 8.170.000 kết quả (0,22 giây)

VirusTotal https://www.virustotal.com · Dịch trang này ...

VirusTotal - Home

Introducing IoC Stream, your vehicle to implement tailored threat feeds. We are hard at work. Beyond YARA Livehunt, soon you will be able to apply YARA ...

Kết quả từ virustotal.com

Virus Total

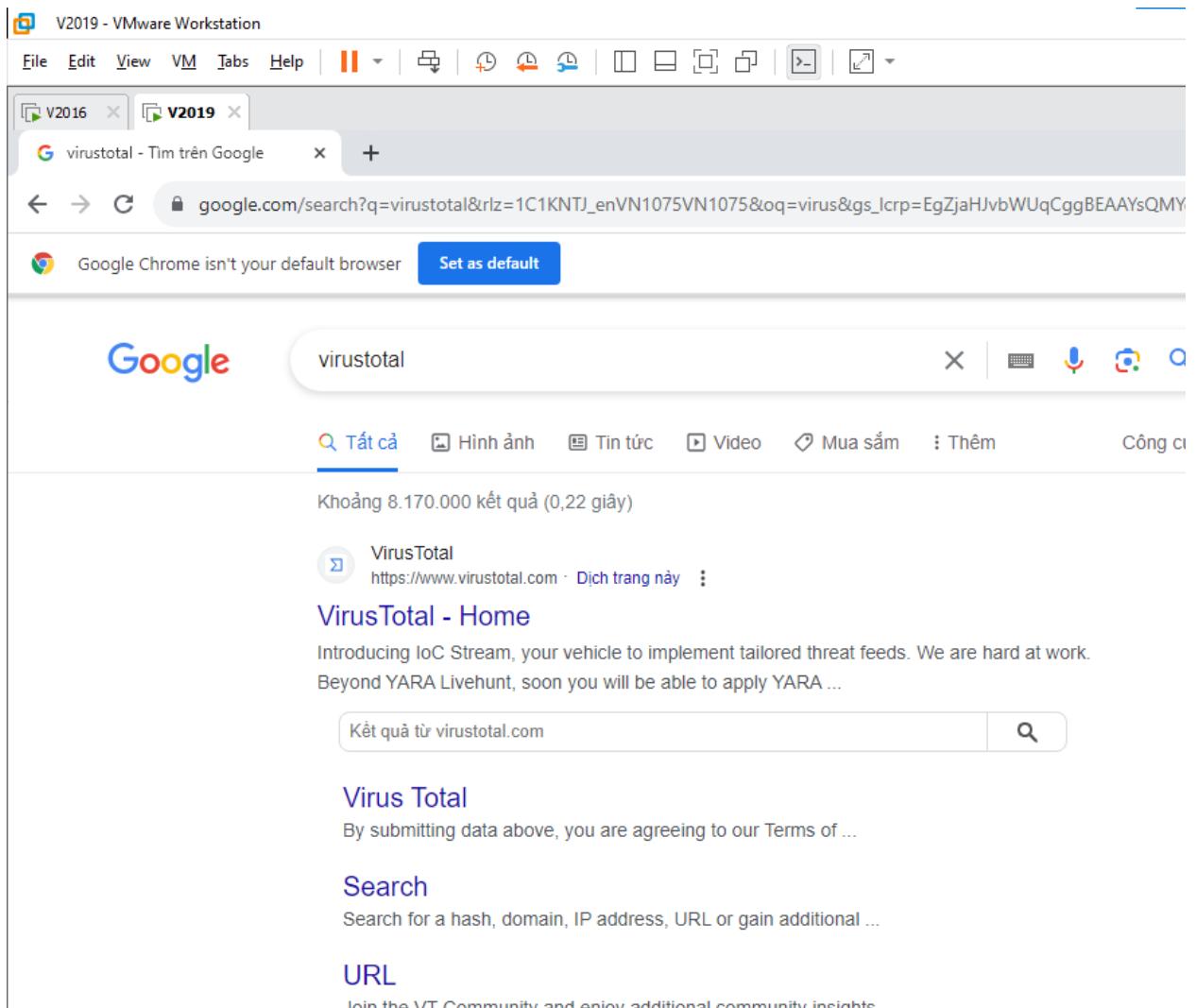
By submitting data above, you are agreeing to our Terms of ...

Search

Search for a hash, domain, IP address, URL or gain additional ...

URL

Join the VT Community and enjoy additional community insights



V2019 - VMware Workstation

File Edit View VM Tabs Help

V2016 V2019

Open This PC Desktop

Name Date modified Type Size

CEHv11 Module 07 Malware Threats 10/8/2023 8:54 AM File folder

CEHv11 Module 07 Malware Threats 2/2/2021 11:15 PM Compressed (zipp...) 517,989 KB

Test 10/8/2023 8:57 AM Application 24 KB

Organize New folder

Quick access Desktop Downloads Documents Pictures System32 This PC Network

File name: Test Open Cancel

JSTOTAL

and URLs to detect malware and other

em with the security community.

SEARCH

Choose file

By submitting data above, you are agreeing to our Terms of Service and Privacy Policy, and to the sharing of your Sample submission with the security community. Please do not submit any personal information; VirusTotal is not responsible for the contents of your submission. Learn more.

Want to automate submissions? Check our API, or access your API key.

V2019 - VMware Workstation

File Edit View VM Tabs Help

V2016 V2019

VirusTotal - File - 4af8c5c4c8a77575133e1a2230d73c2f3fc5dbce8ec1f2e8424f04666092d5a2?nocache=1

4af8c5c4c8a77575133e1a2230d73c2f3fc5dbce8ec1f2e8424f04666092d5a2

62 / 72

Community Score

62 security vendors and no sandboxes flagged this file as malicious

4af8c5c4c8a77575133e1a2230d73c2f3fc5dbce8ec1f2e8424f04666092d5a2

Test.exe

peexe assembly

Size 23.50 KB | Last Analysis Date a moment ago | EXE

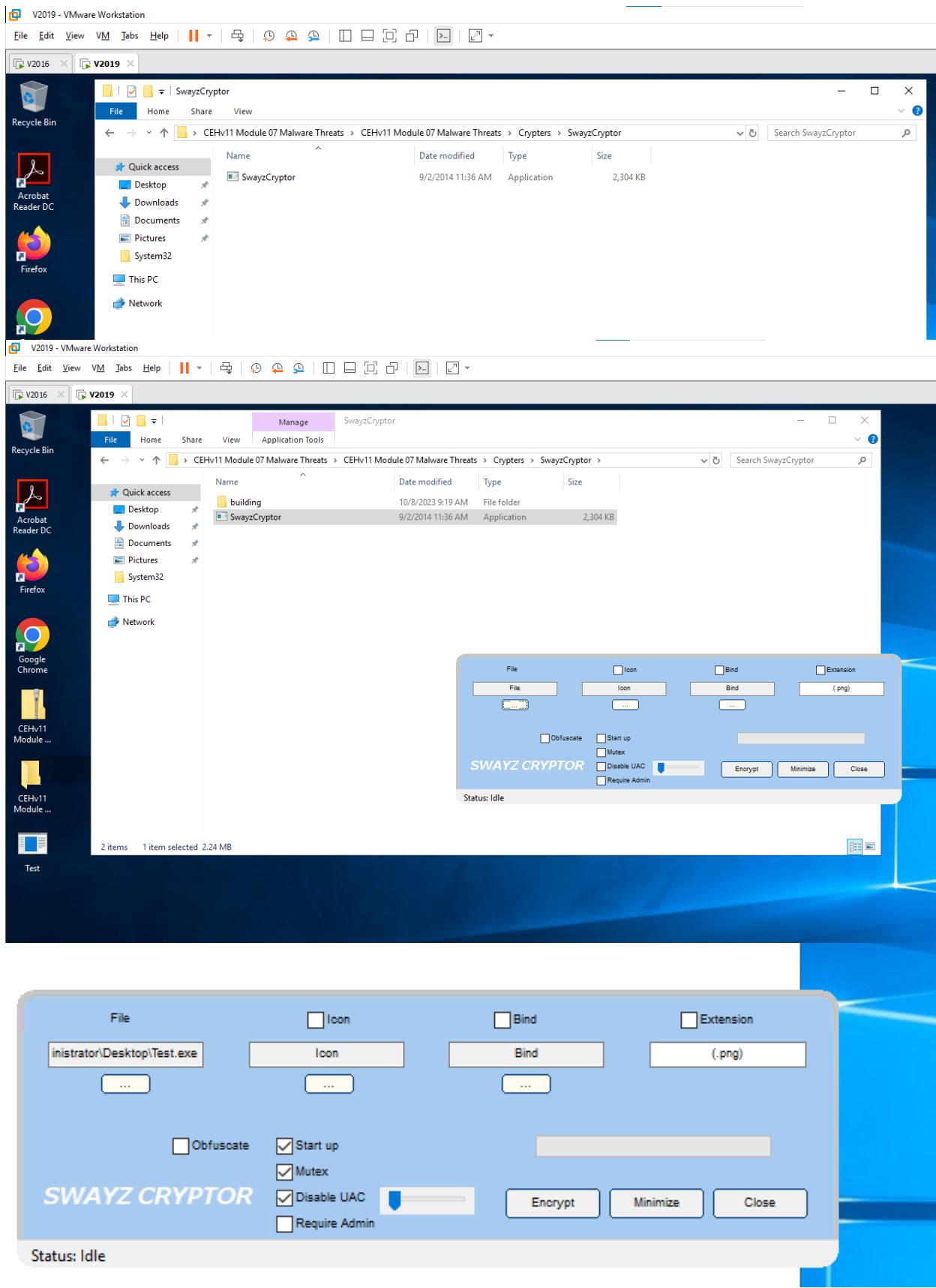
Detection Details Behavior Community

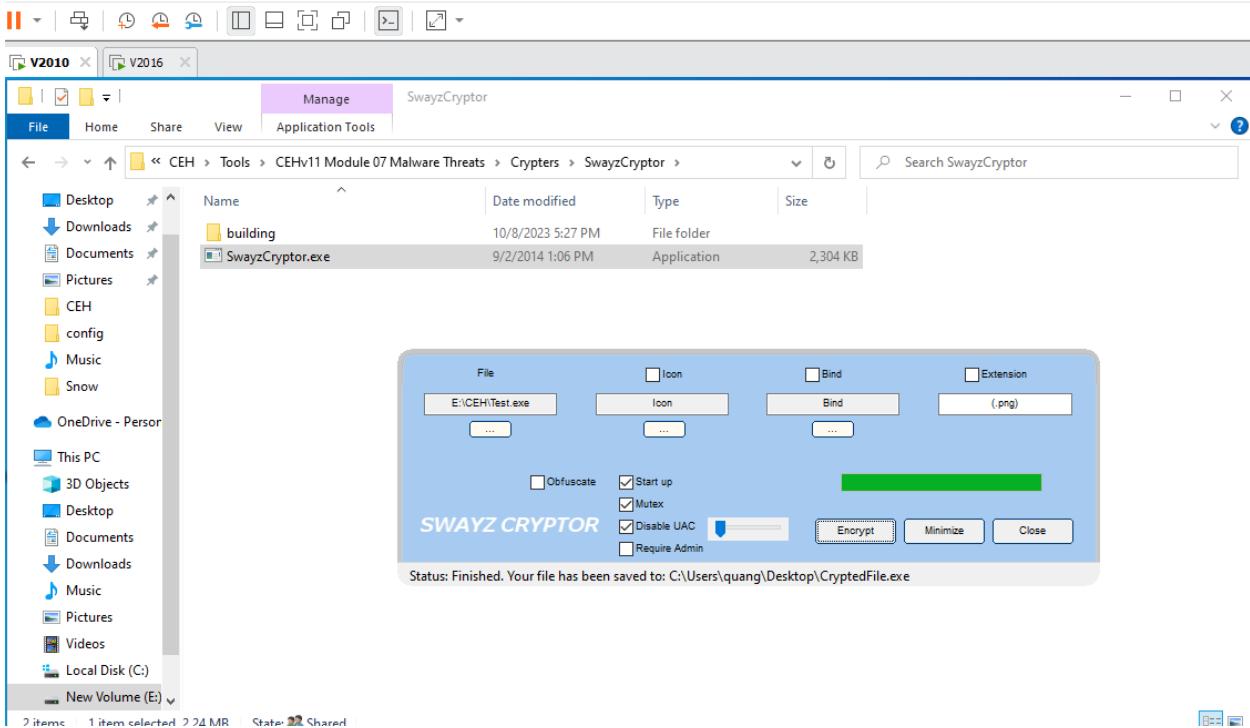
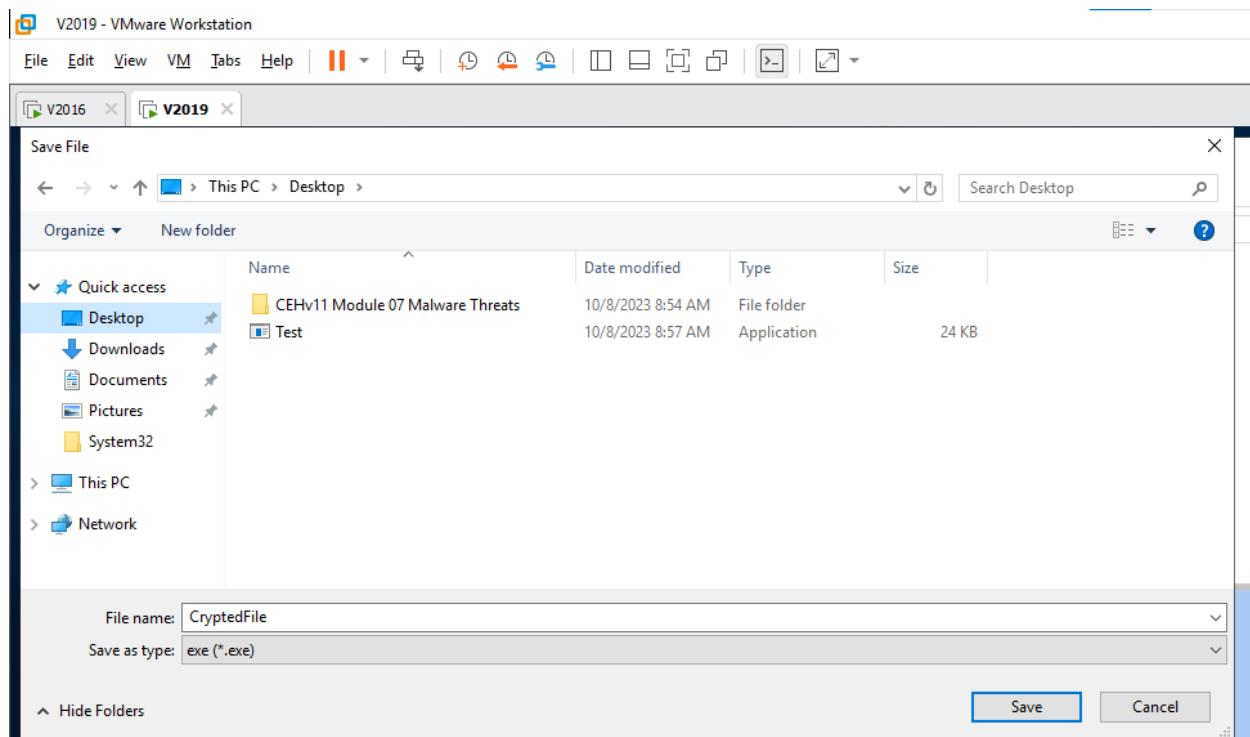
Join the VT Community and enjoy additional community insights and crowdsourced detections, plus an API key to automate checks.

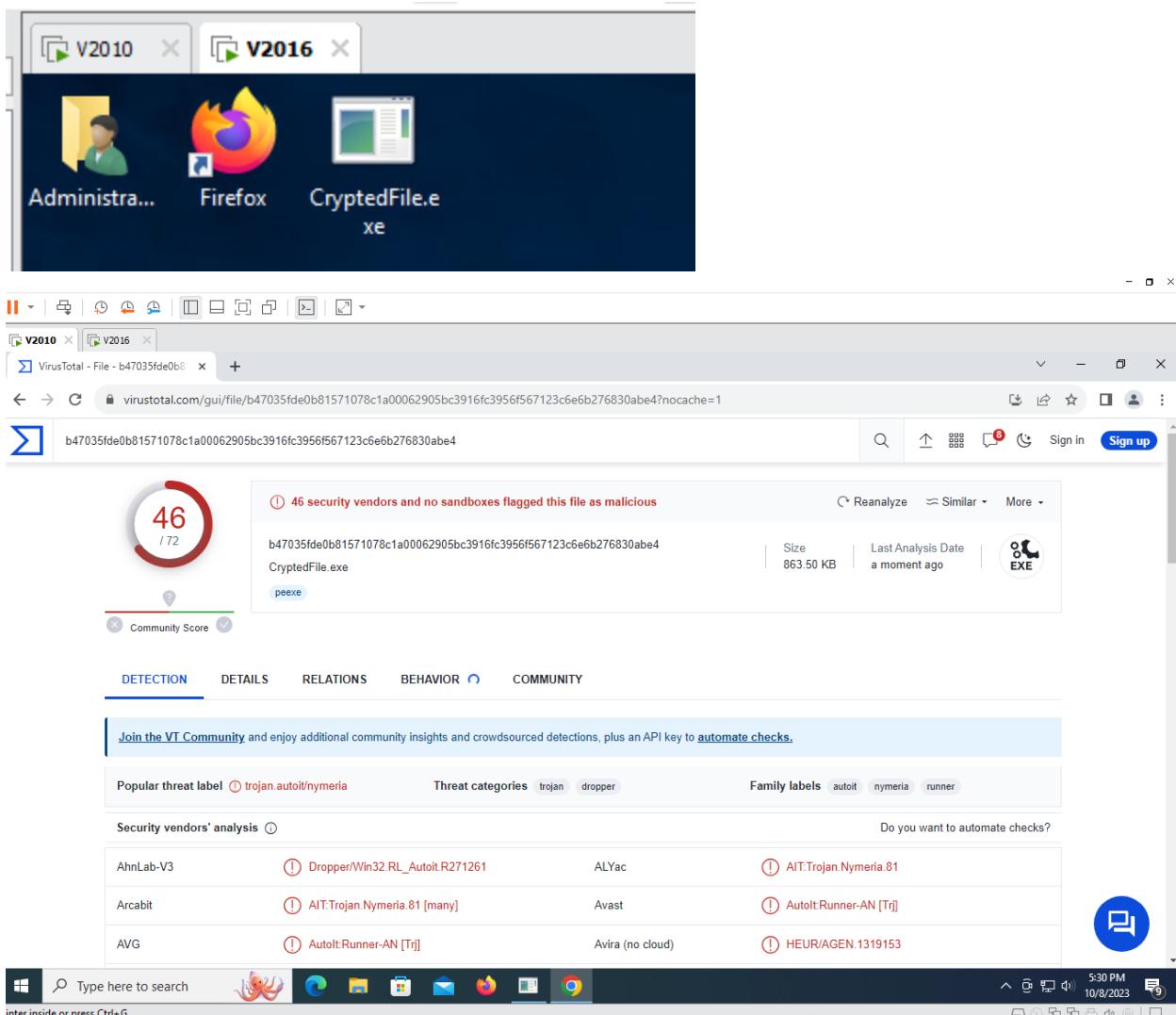
Popular threat label trojan.bladabindi/msil Threat categories Trojan dropper Family labels bladabindi msil njrat

Security vendors' analysis Acronis (Static ML) Suspicious AhnLab-V3 Win-Trojan/Zbot.24064

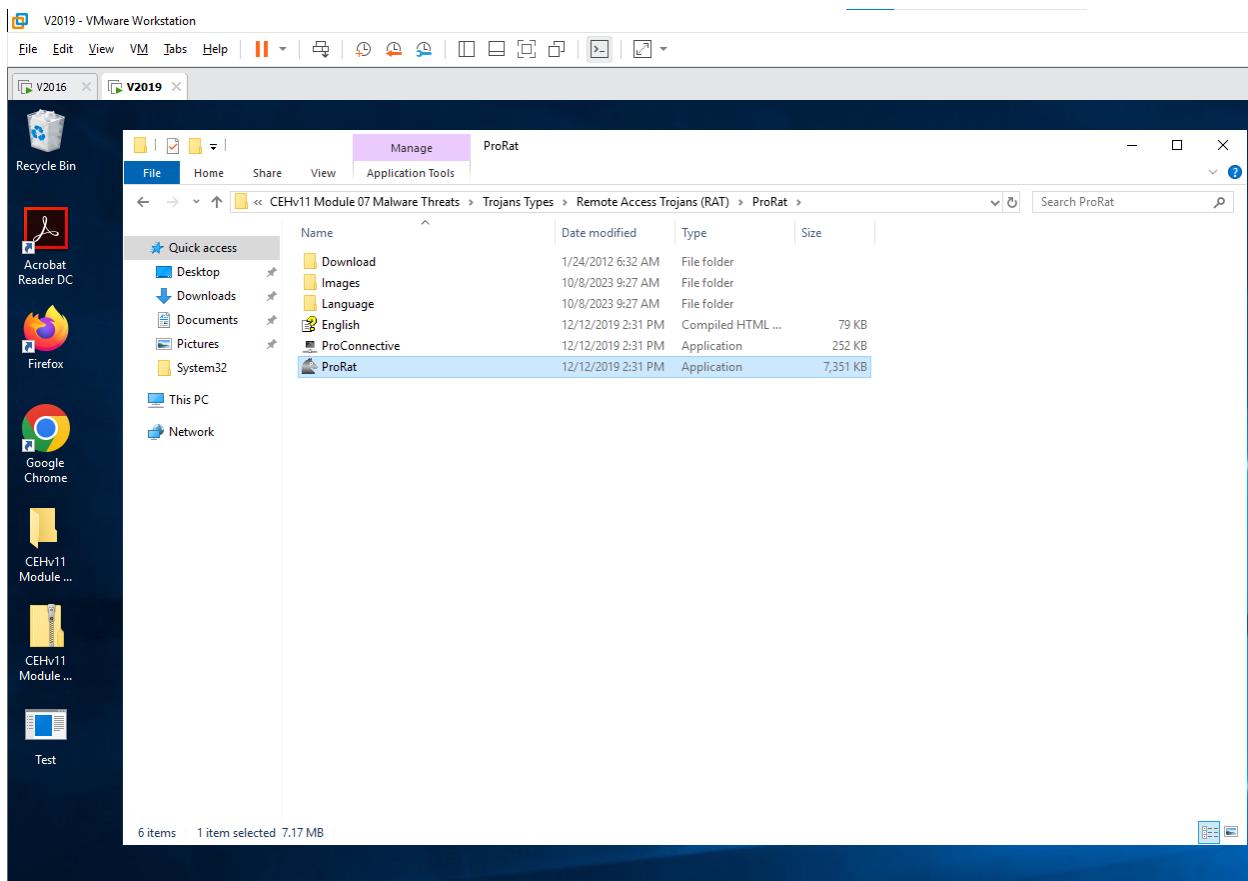
Do you want to automate checks?

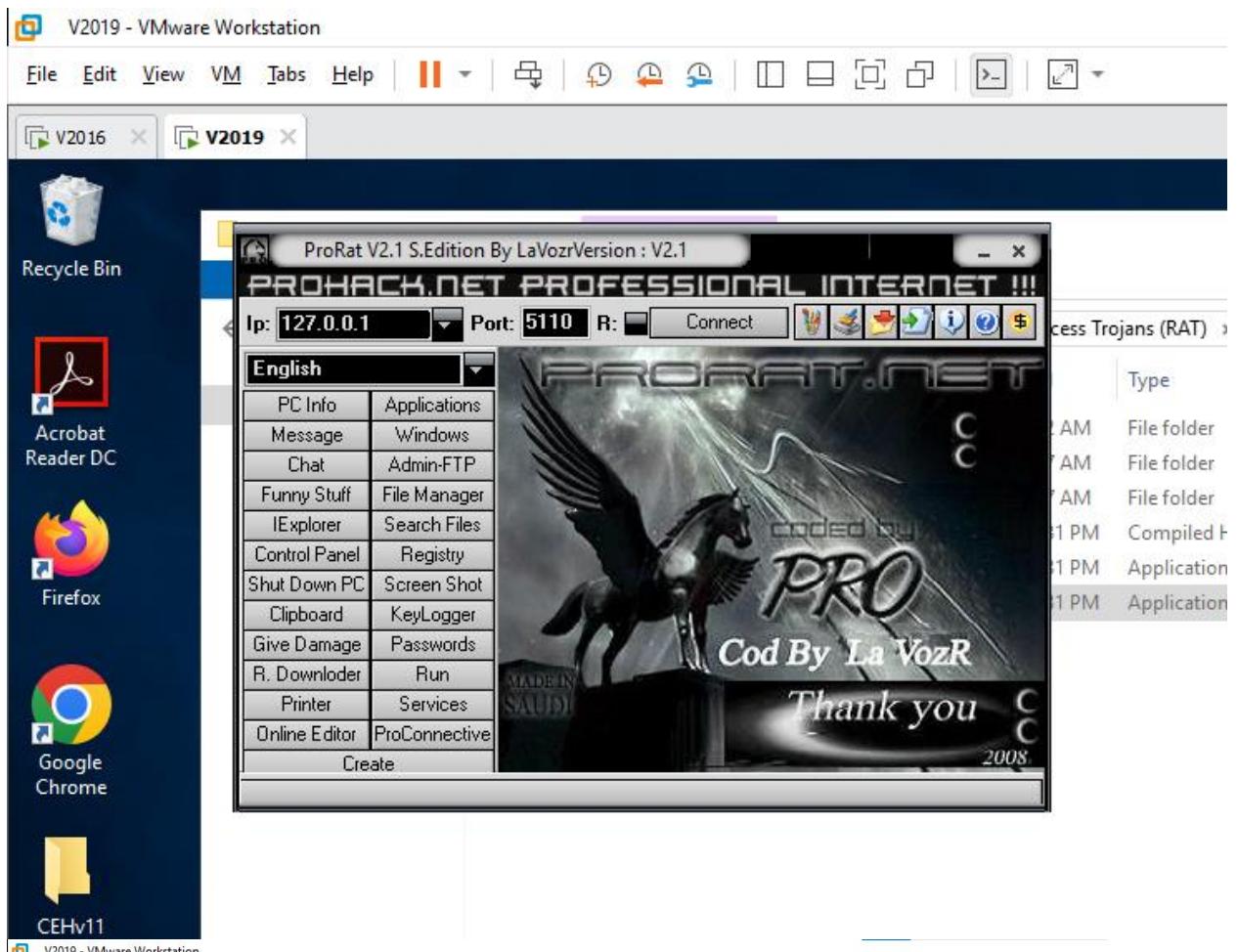


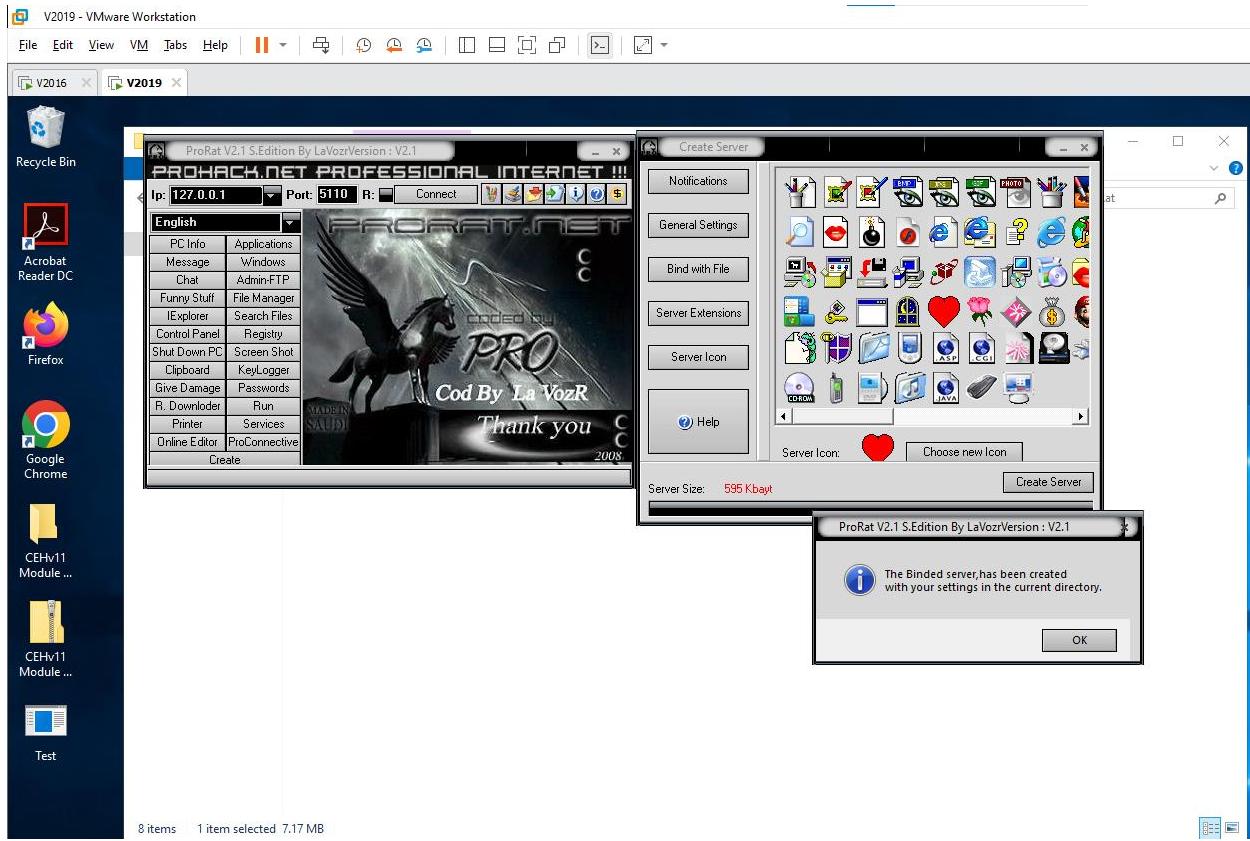


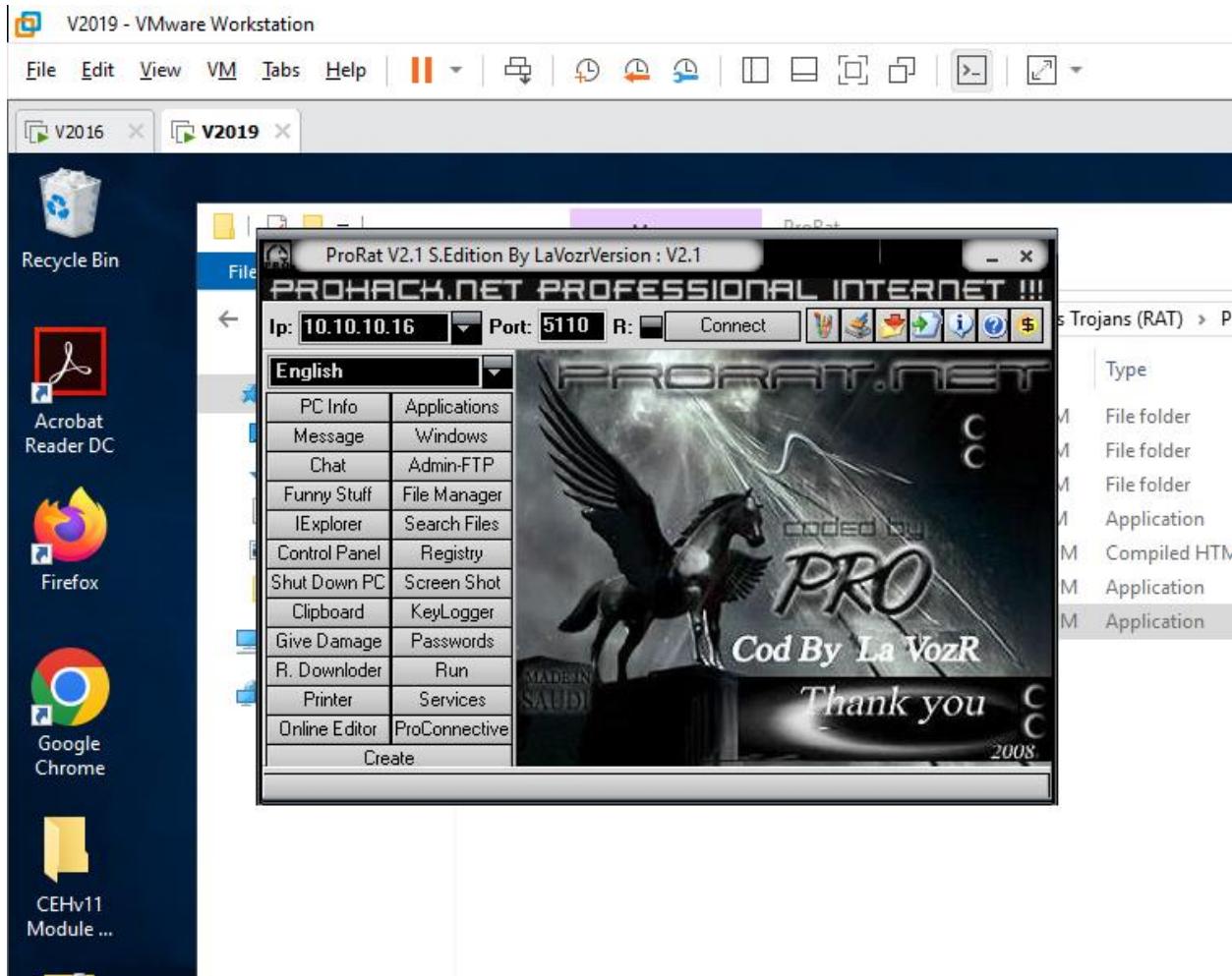


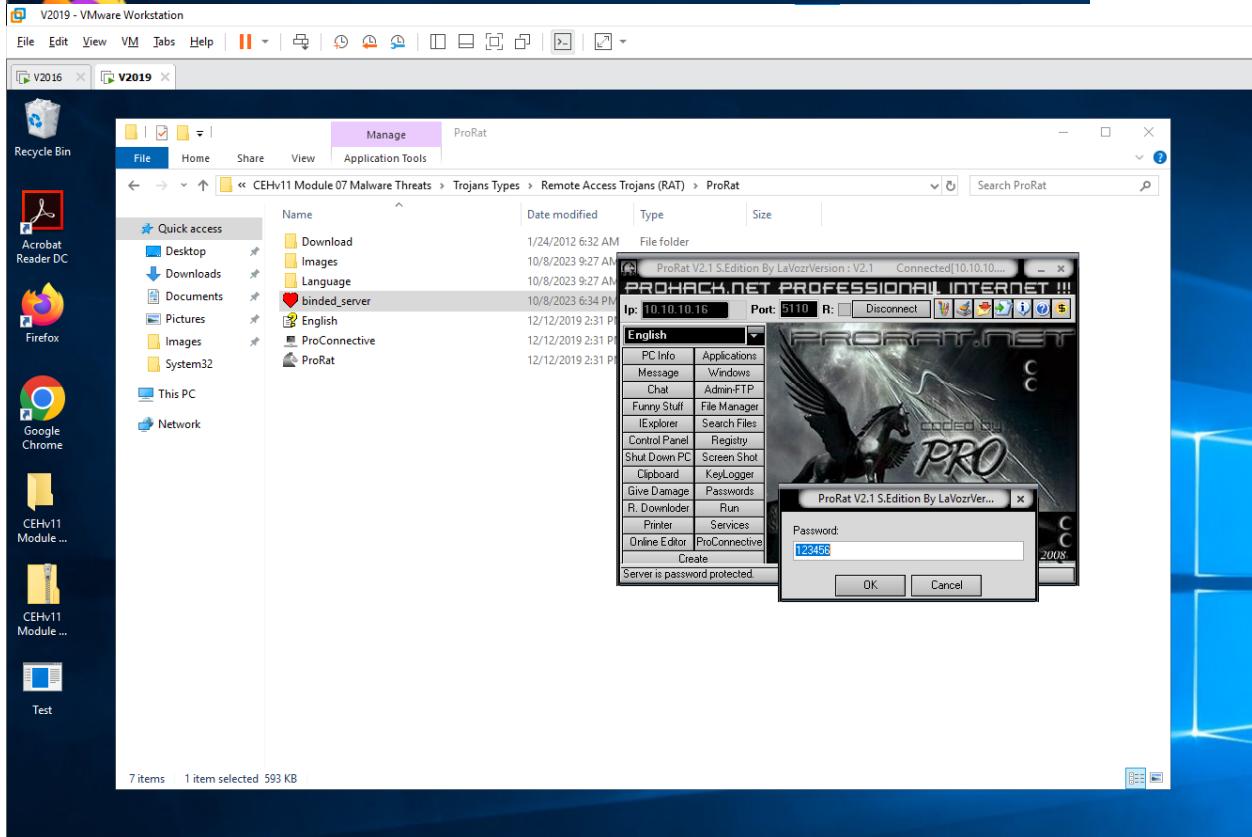
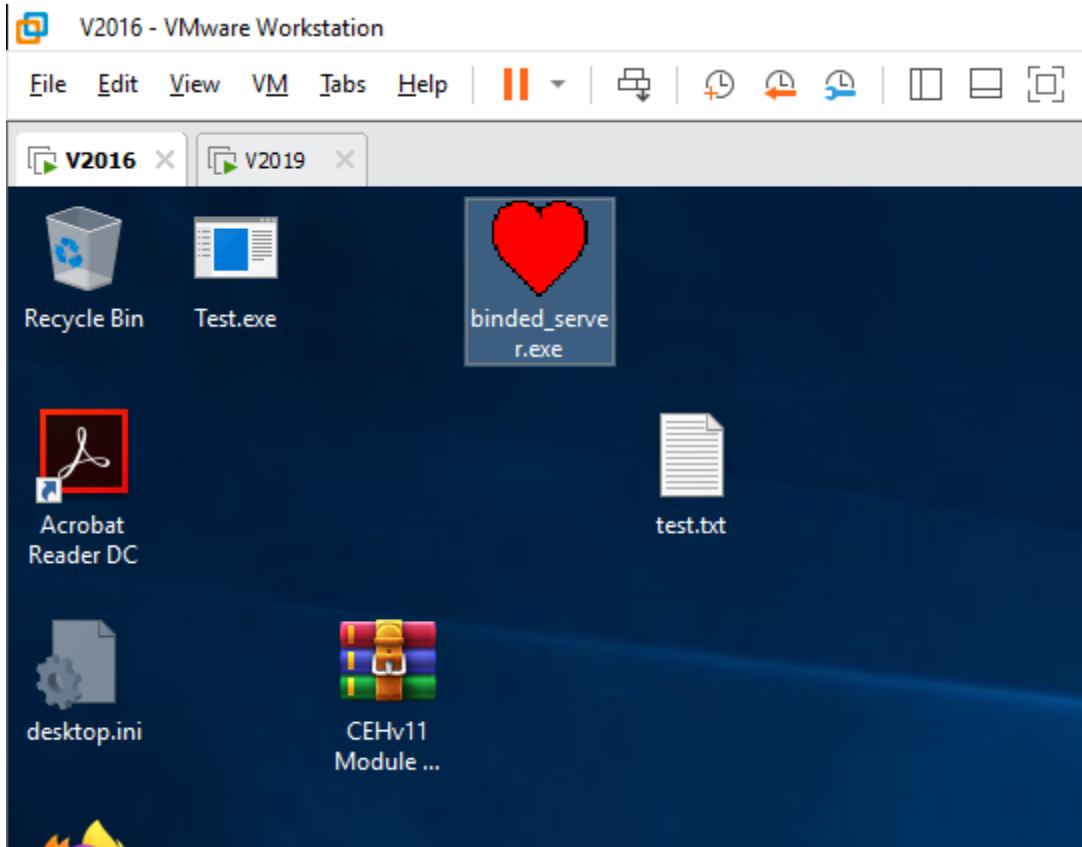
1.3 Create a Server using ProRat Tool - Open Windows 10

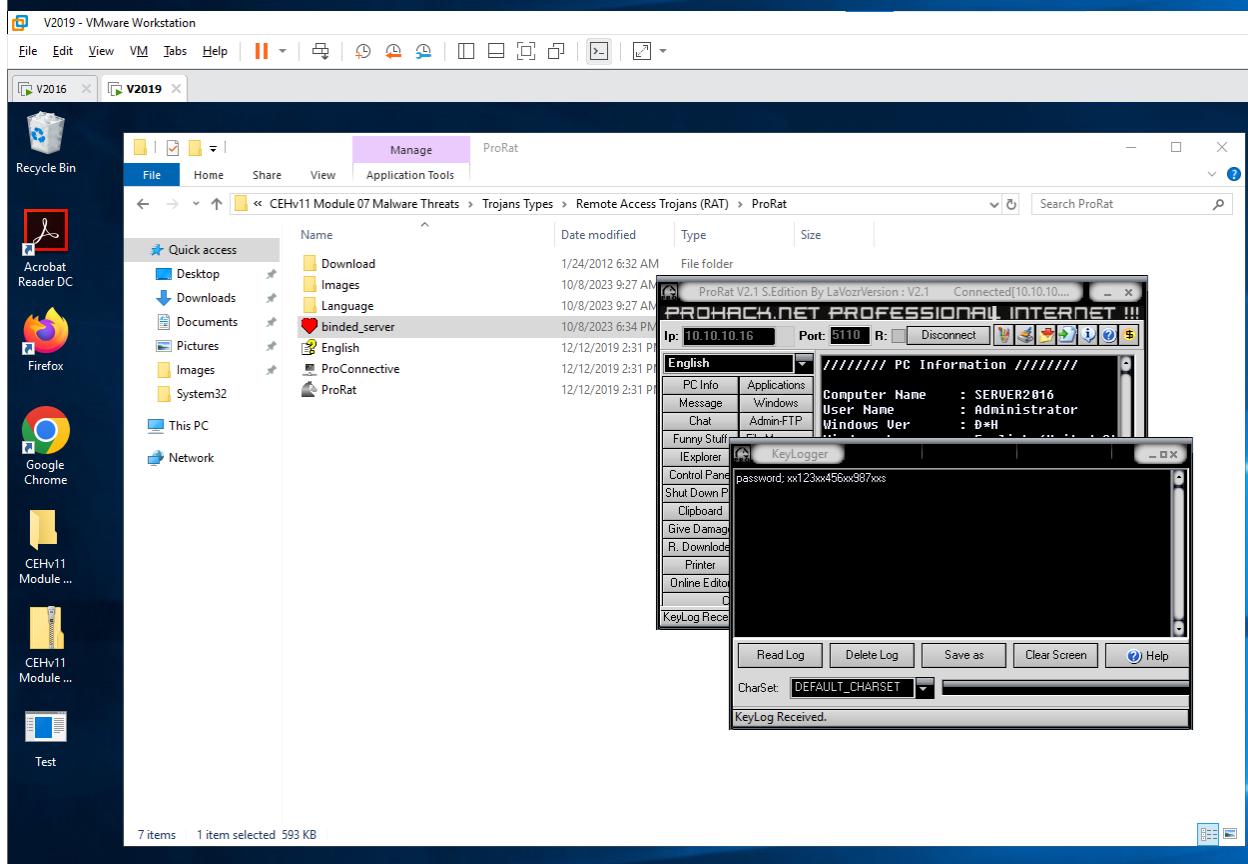
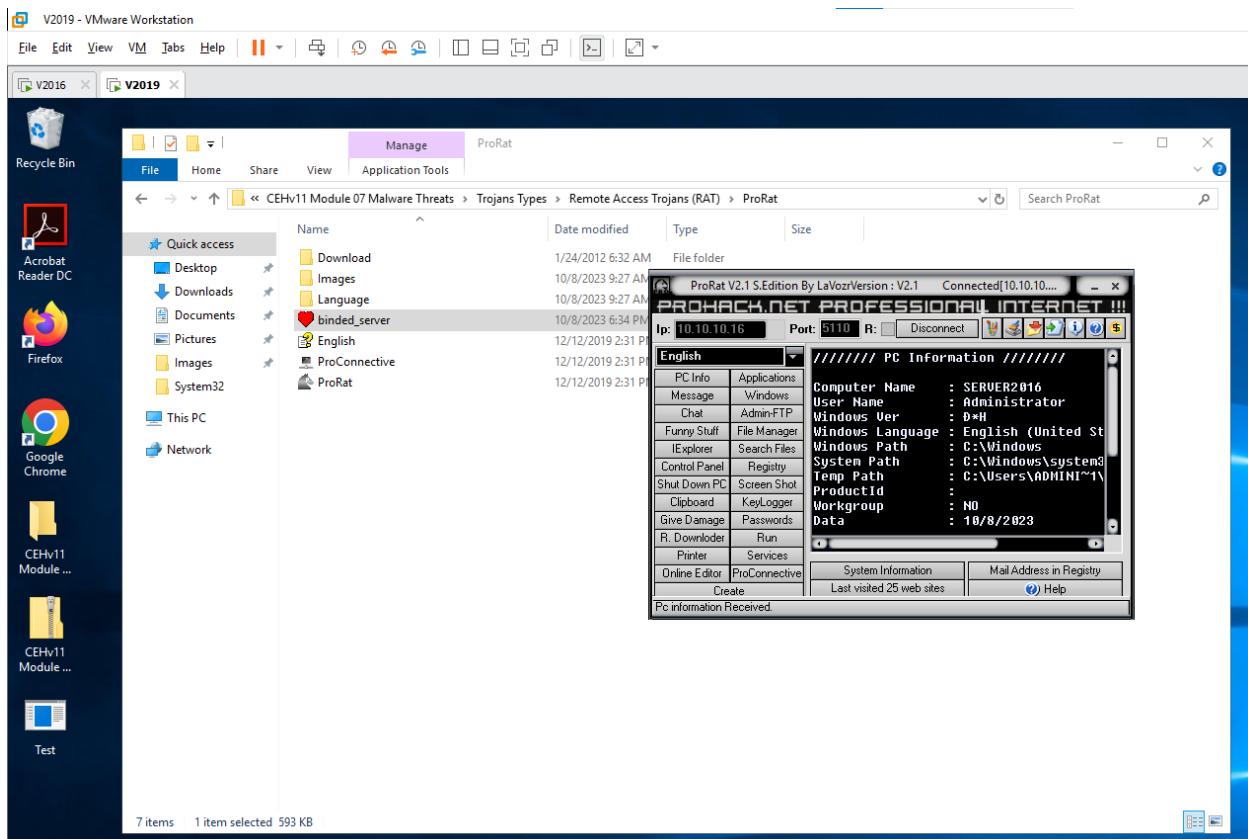


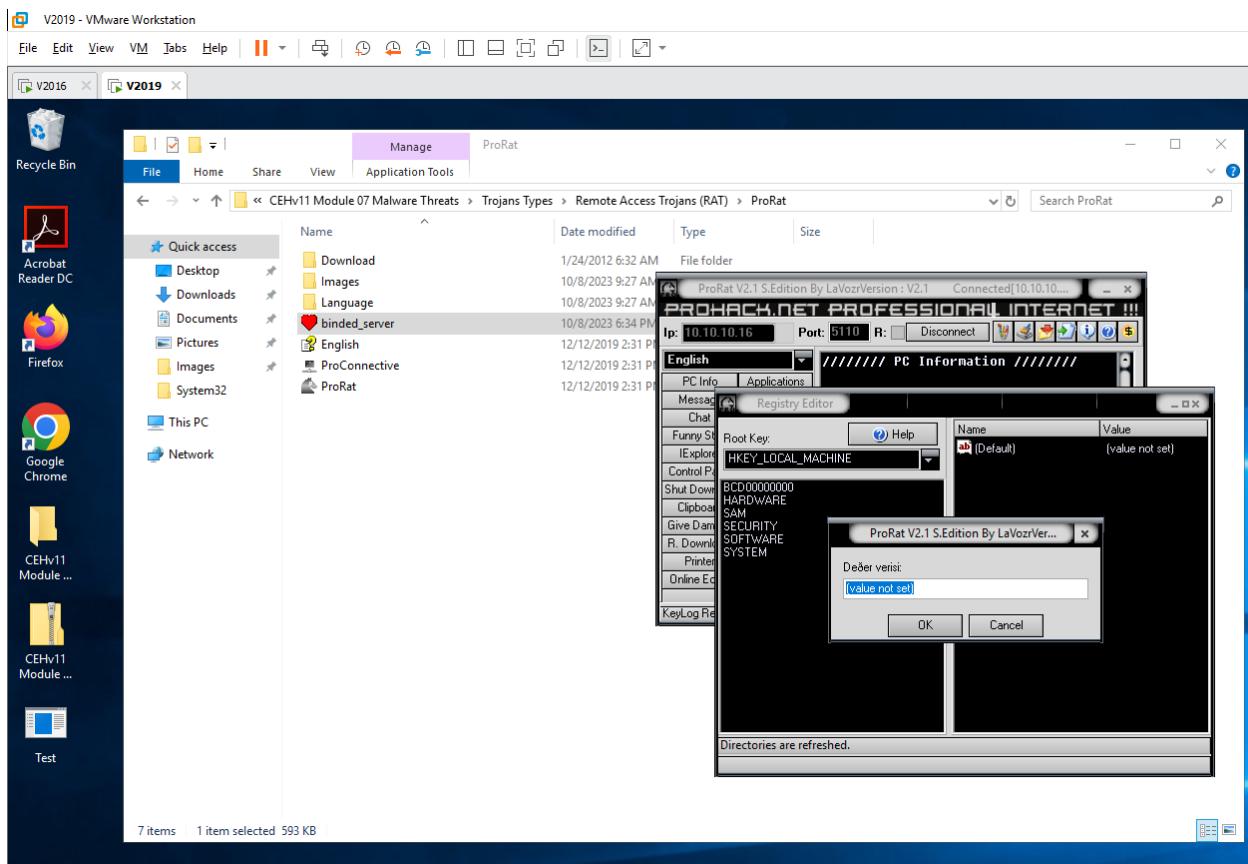






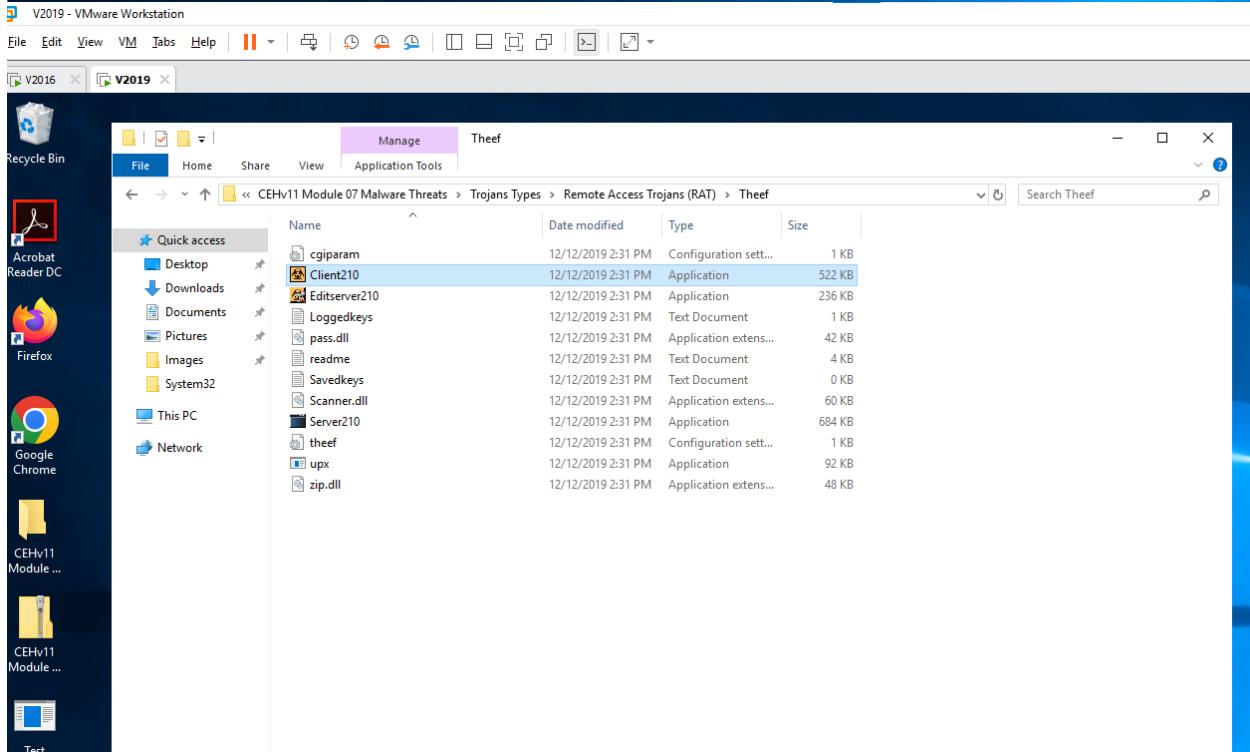
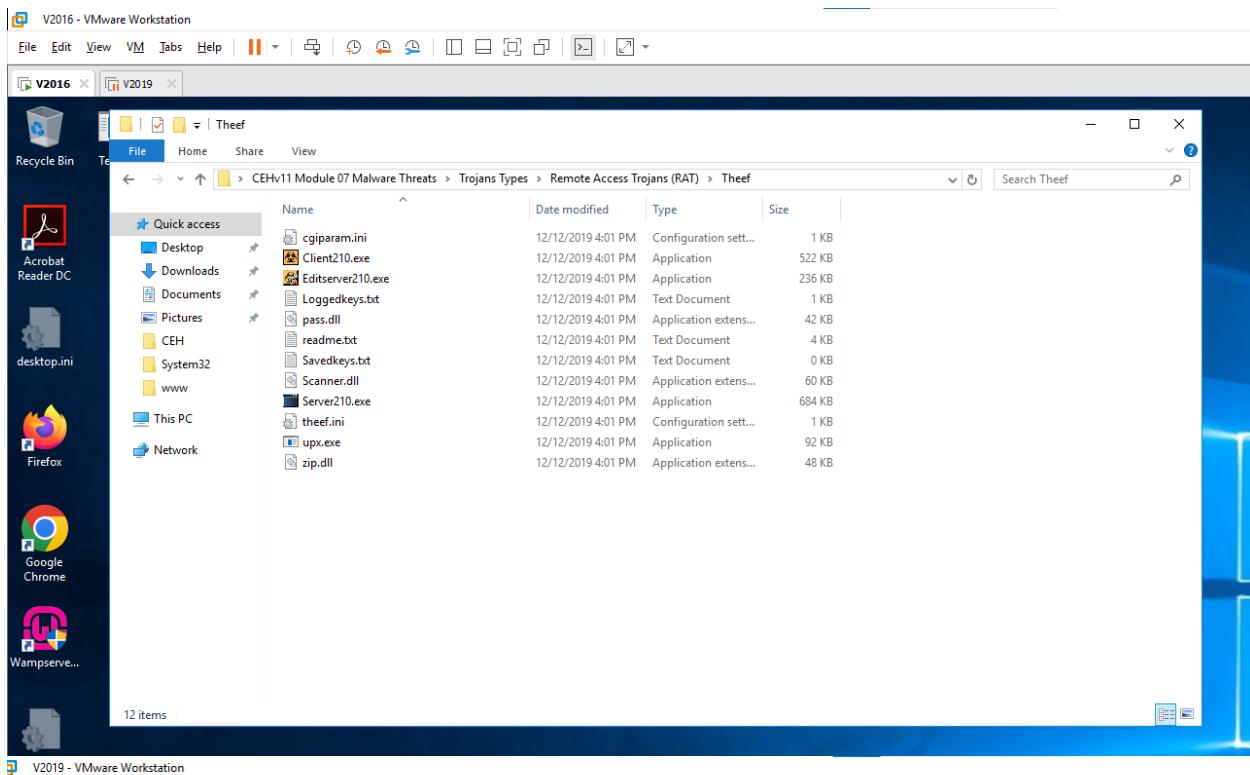


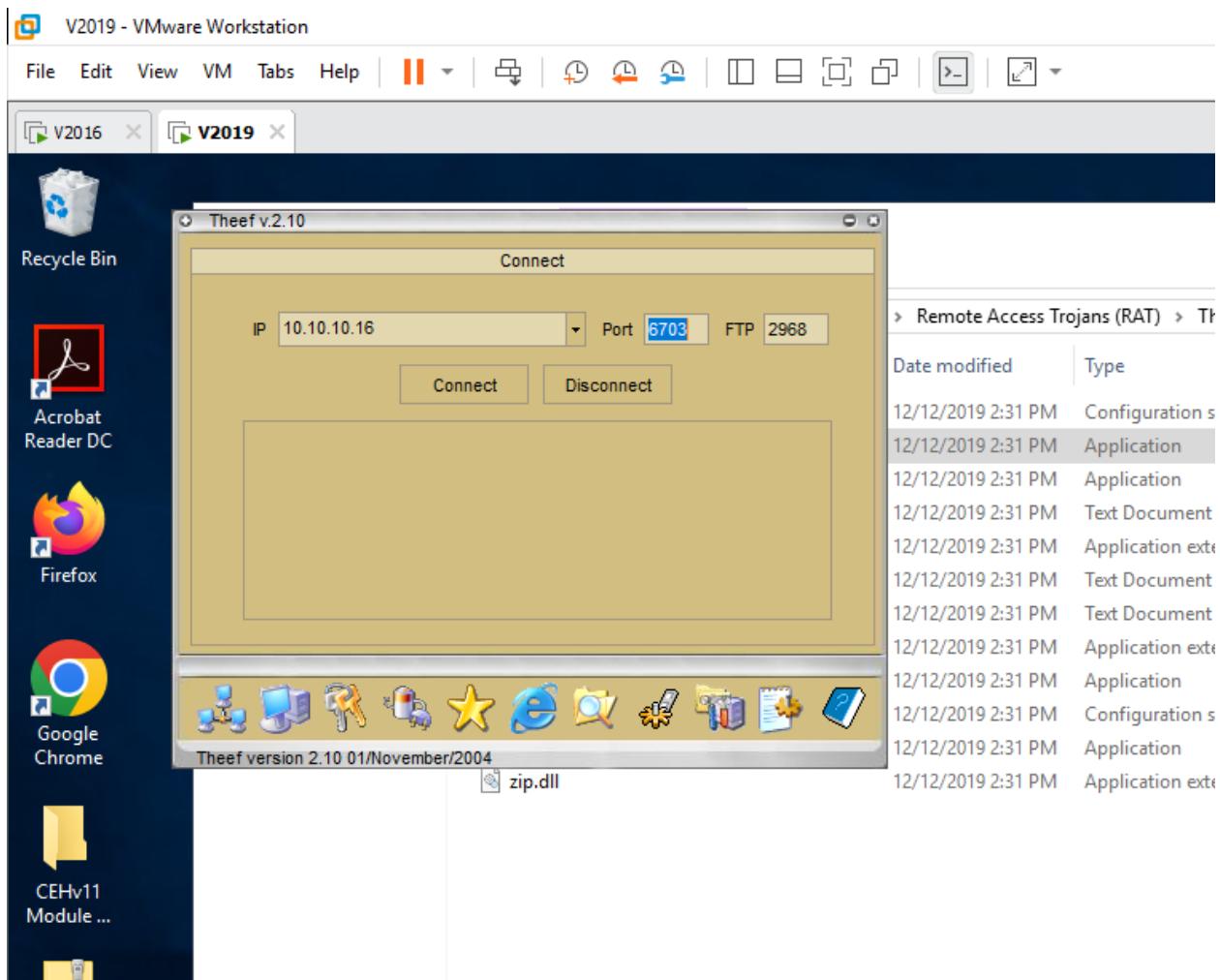


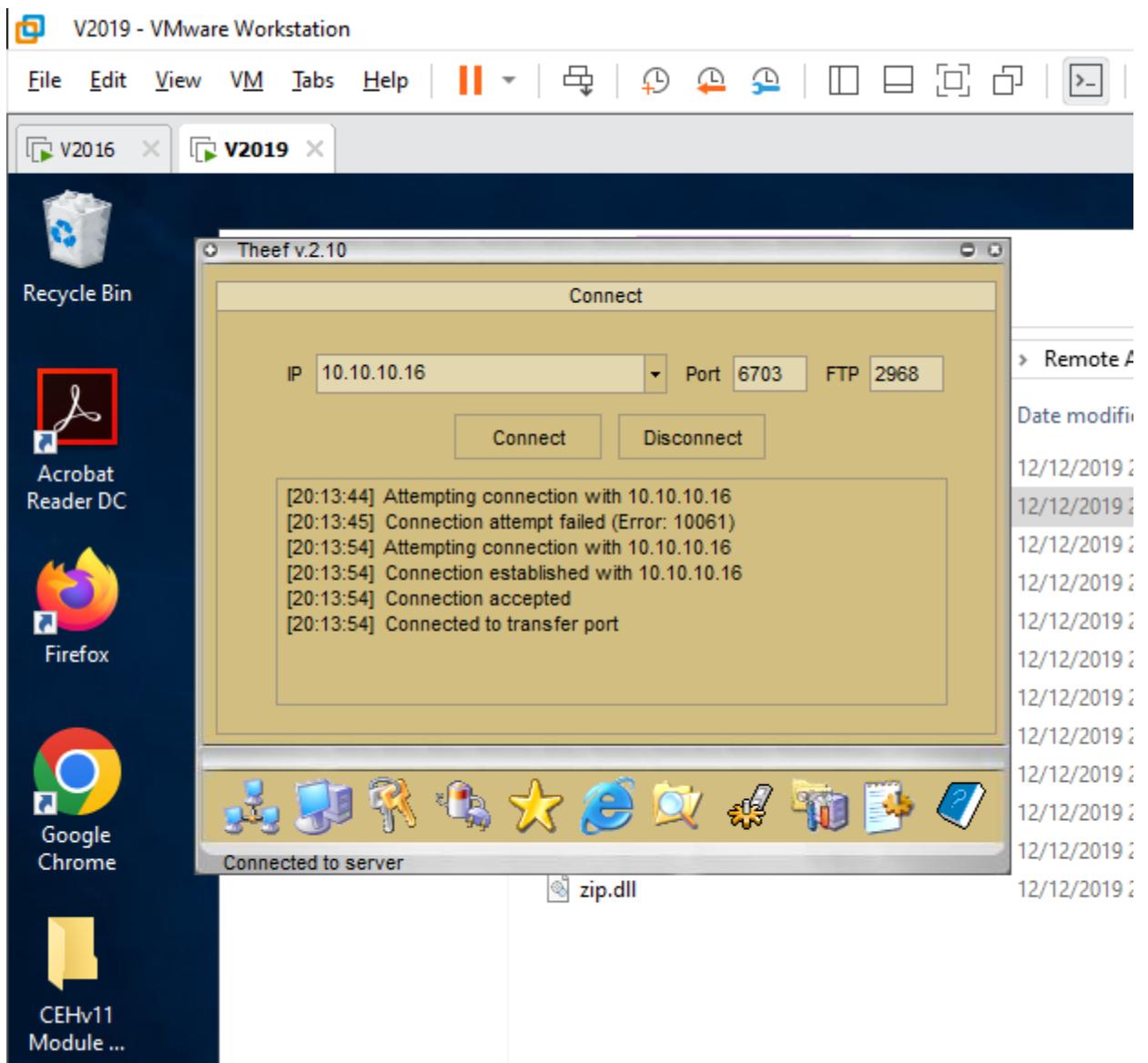


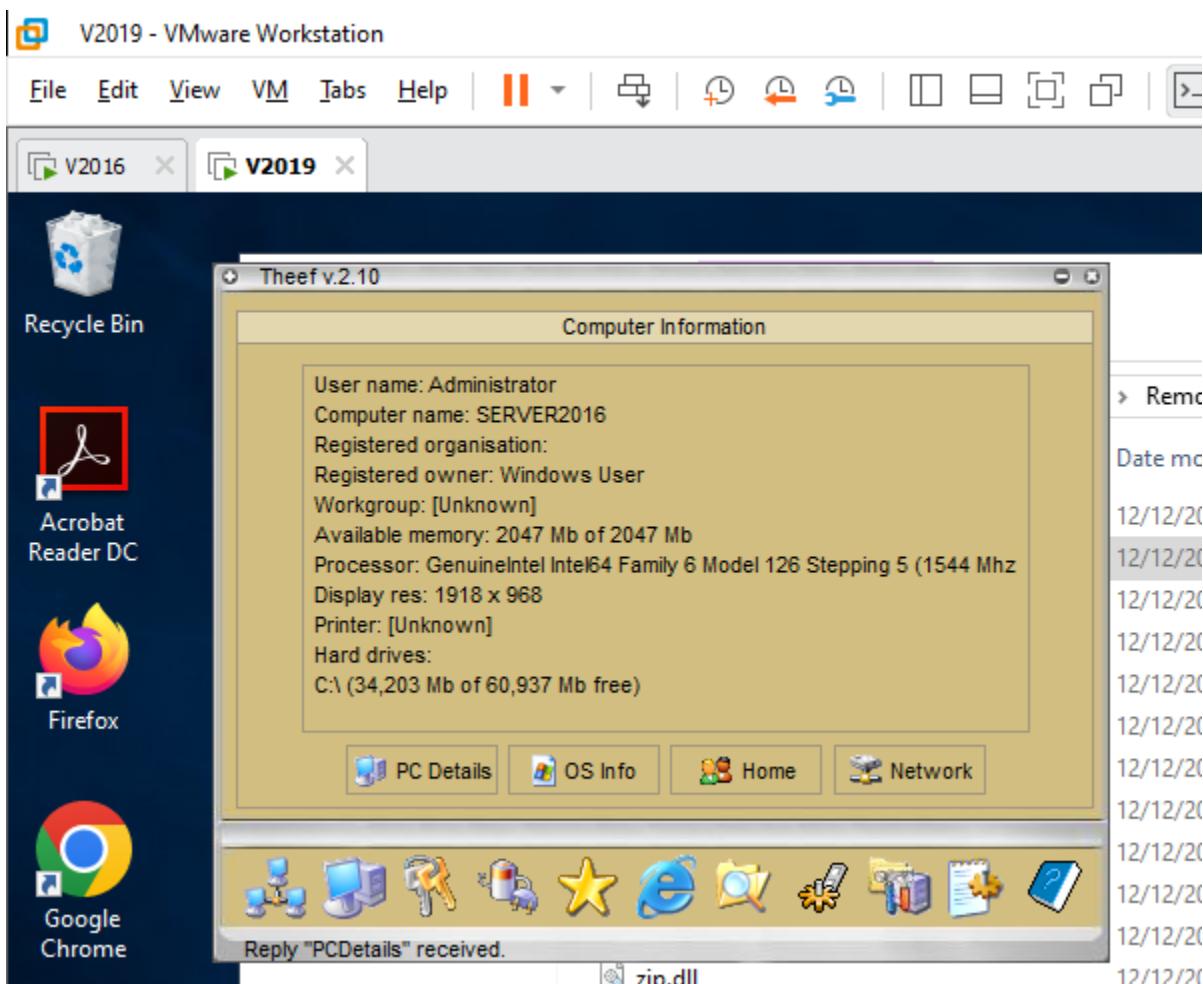
1.4 Create a Trojan Server using Theef RAT Trojan

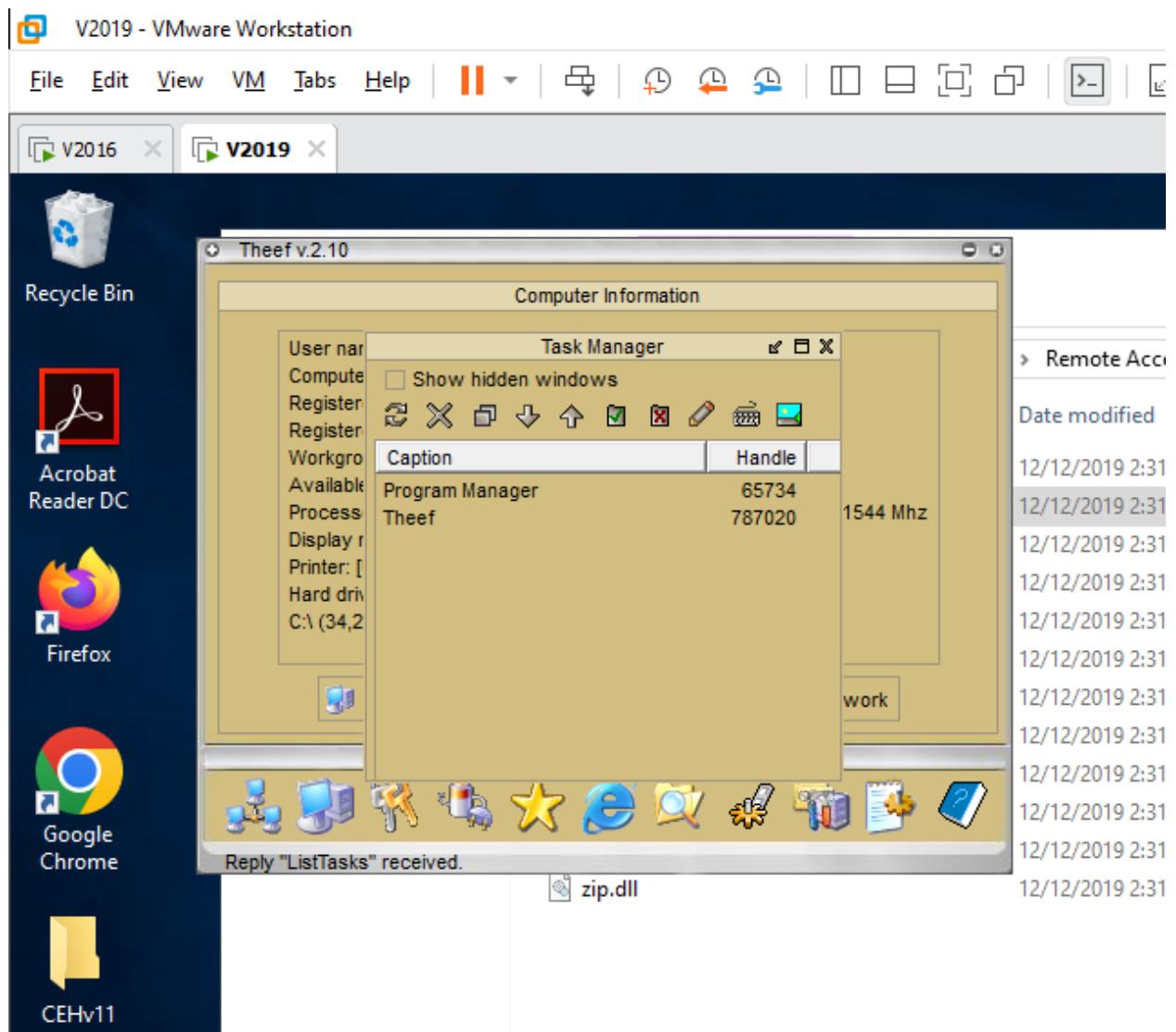
- Open Windows 10, Windows Server 2016

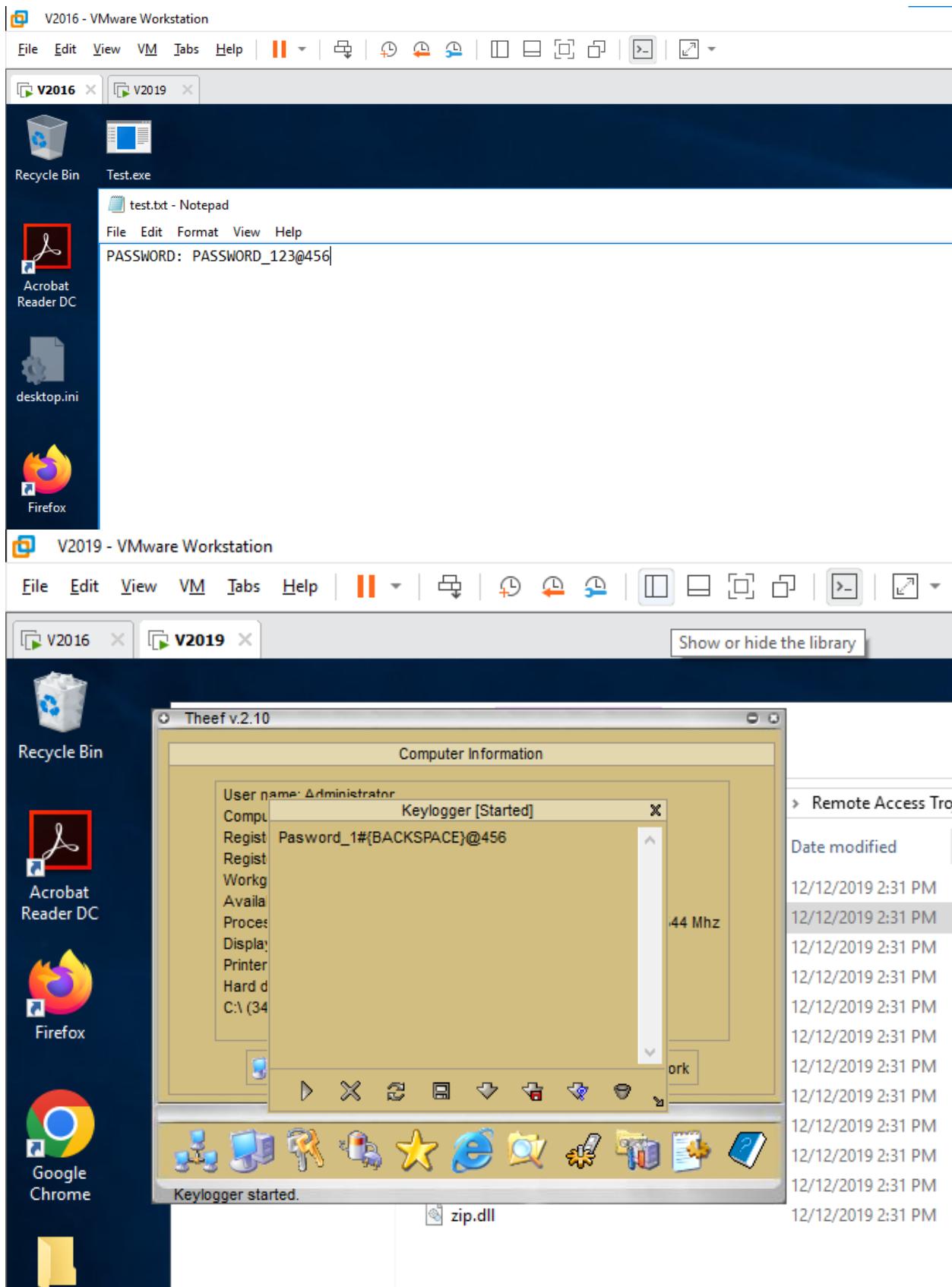












2. Infect the Target System using a Virus

- 2.1 Create a Virus using the JPS Virus Maker Tool and Infect the Target System
 - Open Windows Server 2019

