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Client Configuration Guide

Windows v2.1

This document is designed to quickly get you up and running on Microsoft Windows with the free KiTTY SSH client.

TELESPLOIT

December 1, 2017

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Overview

The Telesploit solution consists of three distinct parts: the Telesploit server, the Telesploit relay, and an SSH capable client.

Telesploit Server

The server runs a customized version of Kali Linux and is deployed within the target environment. Once network connectivity and power have been applied to the device, it will automatically connect to the relay server and create TLS encapsulated reverse SSH tunnels in its default configuration. These connections provide access to a command line interface (SSH), remote desktop (VNC), web proxy (Squid), and many other applications on the Telesploit server.

Telesploit Relay

The relay runs in the cloud and provides secure access to the Telesploit server from Internet-connected clients using SSH key-based authentication. The relay includes pre-configured IRC and Mattermost servers for team-based communication and collaboration.

Client

The client connects to the Telesploit server via the relay. Penetration testing tools, such as Metasploit, can then be run directly from the server within the target environment or proxied through the established connections.



Client Setup

KiTTY Portable Download and Setup

Download KiTTY Portable from http://www.9bis.net/kitty/. Place the program kitty_portable.exe in its own directory and run it. This will create several files and subdirectories. Close the application.

Telesploit will provide a URL to download the customized configuration files for connecting to your dedicated relay and server.

Example: https://relay-d015.telesploit.com/ b58e067ac6b7666cfbc539a4980363cc6c6cea55269916aa0285b82f2bbc4769/kitty.zip

The integrity may be validated by performing a sha256sum on the file. The value should match the subdirectory name in the URL.

CertUtil -hashfile kitty.zip SHA256

```
C:\Telesploit\support>CertUtil -hashfile kitty.zip SHA256
SHA256 hash of file kitty.zip:
b5 8e 06 7a c6 b7 66 6c fb c5 39 a4 98 03 63 cc 6c 6c ea 55 26 99 16 aa 02 85 b8 2f 2b bc 47 69
CertUtil: -hashfile command completed successfully.
```

If the checksums match then place the archive, kitty.zip, in the same directory as kitty_portable.exe and unzip it. The file telesploit-readme.txt should appear in the directory and three new files will be added to the Sessions subdirectory.

Reopening the application should reveal three new entries, Telesploit-Relay-SSH, Telesploit-Relay-SSL, and Telesploit-Server.

🔀 KiTTY Configuratio	n	<u>د</u>
Category:		
E Session		Basic options for your KITTY session
Logging		Specify the destination you want to connect to
⊡ Terminal		Host Name (or IP address) Port
- Keyboard		22
Bell		Connection type:
Features		C Raw C <u>T</u> elnet C Rlogin ⊙ <u>S</u> SH C AD <u>B</u>
⊡ · Window		C Sețial C Cygterm
Appearance Rehaviour		Load, save or delete a stored session
Translation		Saved Sessions/New Folder
Selection		
Colours		Default Settings
		Telesploit-Relay-SSH
Data		Telesploit-Relay-SSL Save (d)
Proxy		leiespioit-Server
Placin		Delete
		New folder
Serial		
Cygterm	-	

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Load each session and specify the private key that corresponds to the public key provided to Telesploit during the pre-deployment process.



Return to the Session tab and select Save. Perform this action on all three sessions.

KiTTY Configuration	×
Category:	
	Basic options for your KiTTY session
Scripting	Specify the destination you want to connect to
	Host Name (or IP address) Port
Keyboard	telesplot-relay@relay-d015.telesplot.com [22
- Bell	Connection type: ○ Raw ○ Telnet ○ Rlogin ○ SSH ○ ADB
⊡. Window	C Serial C Cygterm
Appearance	Load, save or delete a stored session
	Saved Sessions/New Folder
Selection	Telesploit-Relay-SSH
Colours	Telesploit-Relay-SSH Load
Data	Sam (1)
Proxy	Save (d)
Telnet	Delete
Filogin FI-SSH	New folder
- Serial	

Telesploit-Relay-SSH: This configuration uses a direct SSH connection to the relay server to establish tunnels for accessing SSH, VNC, and Squid and SOCKS proxies running on the server. It also creates tunnels to access the IRC and Mattermost instances running on the relay.

Telesploit-Relay-SSL: This configuration creates an SSL/TLS connection to the relay server in order to establish tunnels for accessing SSH, VNC, and Squid and SOCKS proxies running on the server. It also creates tunnels to access the IRC and Mattermost instances running on the relay. Use this configuration when outbound SSH is restricted from your environment. It requires that neat, part of the nmap suite, be installed on the local client.

Telesploit-Server: Once tunnels have been established to the relay this configuration may be used to establish console access on the server.

The readme.txt file contains the server, relay, and port assignments for your Telesploit deployment. These should be used to replace the examples given in the subsequent sections.



Establish SSH Tunnels and Connect to the Server

Once the KiTTY client has been configured for your environment, verify that you can create SSH tunnels to the relay by opening either Telesploit-Relay-SSH or Telesploit-Relay-SSL.

The first time you connect to the relay server KiTTY will pop-up a security alert indicating that the host key hasn't been cached.



If you are connecting from a trusted environment accept the relay fingerprint and enter the passphrase for your private key.

The session window will appear to hang, but the tunnels will have been established. Minimizing the window will not have an effect on you connection. Closing the window will teardown the tunnels.



With the tunnels established open another instance of KiTTY and select Telesploit-Server. The first time you connect to the server you will receive another security alert. If you are connecting from a trusted environment accept the server fingerprint and enter the passphrase for your private key. You should now have a console session on the server.



Common Tool Configuration

Please note that the SSH, VNC, Squid, and PostgreSQL services provided on the Telesploit server have been configured to only listen on localhost. If you install any additional services, such as Nessus, and do not want them to be exposed to the testing environment then restrict their access as well.

The following sections assume that you have configured the Telesploit client and established the required SSH tunnels.

Command Line Interface

Your SSH client of choice may be used by configuring it with the following values. Adjust the port number to match your Telesploit deployment.

Example SSH Configuration

Host: localhost (127.0.0.1) Username: root Password: N/A Private Key: Your SSH private key Port: 13015 Note: As with any remote console, Telesploit recommends using a detachable session, such as screen, for long running processes. This example uses KiTTY and the Telesploit-Server configuration.



Remote Desktop

Your VNC client of choice may be used by configuring it with the following values. Adjust the port number to match your Telesploit deployment.

Example VNC Configuration

Host: localhost (127.0.0.1) Username: <NONE> Password: telesploit Port: 23015

The following example uses the open source client, TightVNC.

🛣 New TightVNC	Connection	>					
Connection							
Remote Host:	127.0.0.1:23015	Connect					
Enter a name or an IP address. To specify a port number, append it after two colons (for example, mypc::5902).							
Reverse Connec Listening mode their desktops.	ctions allows people to attach your viewer to Viewer will wait for incoming connections.	Listening mode					
ngrittine viewe	TightVNC is cross-platform remote control s	oftware.					
Its source code is available to everyone, either freely (GNU GPL license) or commercially (with no GPL restrictions).							
	Version info Licensing	Configure					

You will be prompted to enter the VNC password. As the VNC server is only listening on localhost, and connectivity requires SSH key authentication, this password is superfluous and has thus been set to 'telesploit' for all deployments.

Vnc Authentication						
Connected to:	127.0.0.1:23015					
Password:	•••••					
ОК	Cancel					

Selecting the OK button will return a remote desktop on the Telesploit server.



Web Proxy

Your browser and web application assessment tools of choice (e.g. Chrome, Edge, Burp Suite, Zap) may be used by configuring them with the following values. Adjust the port number to match your Telesploit deployment.

Example Web Proxy Configuration

Host: localhost (127.0.0.1) Username: <NONE> Password: <NONE> Port: 33015

Coption	ons	× +												_	8 ×
E C Fire	refox about:preferences				G	کر Search				☆ 🖻	+	Â	۵	8	≡
					o. 111										
Gene	neral			Connection	Settings			,	*						
🍳 Sear	rch		Configure Proxies t	o Access the Internet				-							
🖴 Priva	racy & Security	Performa	No proxy Auto-detect prox	xy settings for this net <u>w</u> ork											
L Firef	fox Account	Use recor	Use system prox	cy settings onfiguration:											
		111050 500	HTTP Proxy:	127.0.0.1		Port:	33015	÷							
				✓ Use this proxy server for all prot	ocols										
		Browsing	SS <u>L</u> Proxy:	127.0.0.1		Port:	33015	*							
		✓ Use autos	ETP Proxy:	127.0.0.1		Po <u>r</u> t:	33015	4. *							
		✓ Use smoo	SO <u>C</u> KS Host:	127.0.0.1		Port:	33015	a v							
		Always us	<u>N</u> o Proxy for:	SOCKS v4 💿 SOCKS v5											
		Jearchio													
		Network	Example: .mozil	la.org, .net.nz, 192.168.1.0/24 configuration URL:											
		Configure how					Relo	ad							
⑦ Firefox	x Support				OK	Can	cel	<u>H</u> elp							

Web applications within the target environment can then be accessed by entering their IP address or Fully Qualified Domain Name along with port they are running on just as if you were testing from the local network.

Web-enabled applications running on the Telesploit server itself, such as Nessus (license not included), can be accessed by entering localhost or 127.0.0.1 and the port number.

Professional	
1 Username	
Password	
🗌 Remember Me Sign In	
© 2017 Tenable Network Security*	

In Firefox these settings can be found under Options -> Network Proxy -> Settings.

File Transfer

In addition to command line utilities, such as scp, file transfer tools like FileZilla may be used by configuring them with the following values. Adjust the port number to match your Telesploit deployment.

Example File Transfer Configuration

Host: localhost (127.0.0.1) Username: root Password: N/A Private Key: Your SSH private key Port: 13015

The following example uses FileZilla. To configure the application to use your SSH private key select Edit -> Preferences -> SFTP -> Add key file.

Host: Username: Password:	Port: Quickcon	nect -	
Local site: [home/support/demo/ y support 	Settings	Remote site:	•
Ssh demo keys bot4 bot4	Select page: Connection Conn	Public Key Authentication To support public Key authentication, FileZilla needs to know the private keys to use. Private keys: Private keys: Filename (Comment Data /home/ imported-o ssh-rsa 2048 d7:8c:48:c2:45:4c:21:7e:c2:73:cd:7c:78:6 Alternatively you can use your system's SSH agent. To do so, make sure the SSH_AUTH_SOCK environment variable is set. Other SFTP pointos Enable compression	nodified Permission Owner/Grć onnected to any server

Enter sftp://localhost in the Host field, leave the password blank to force key-based authentication, and enter the SSH port number assigned to your deployment in the Port field. Select Quickconnect, accept the SSH fingerprint, and enter the password to your private key.

M - 70 ft # 4	j 🖻 💺 🛷 📰 👧 j	* n					
Host: sftp://localhost Userr	ame: root Pass	word: Port: 1301	5 Quickconnect •				
Annue de la consection y longer en la consec							
Local site: /home/support/demo	/		v	Remote site: /root			~
 support nano .ssh demo keys telesploit-client lib64 lost+found 				▼ 2 / ► Jroot			
Filename 🔨	Filesize Filetype	Last modified		Filename 🔨	Filesize Filetype	Last modified Permission Owner/Gro	
»							
📁 keys	Directory	11/29/2017 12:		🧊 .cache	Directory	11/20/2017 drwx root root	
📁 telesploit-client	Directory	11/28/2017 04:		🥫 .config	Directory	11/07/2017 drwxr-xr-x root root	
telesploit-d015-client.tar.gz	4.5 KB gz-file	11/28/2017 04:		🥫 .dbus	Directory	11/07/2017 drwx root root	

Internet Relay Chat

The Telesploit relay has an IRC server built in and both the client and server create SSH tunnels to communicate with it. Your IRC client of choice may be used by configuring it with the following values. Adjust the port number to match your Telesploit deployment.

Example IRC Configuration

Host: localhost (127.0.0.1) Username: <ANY> Password: <NONE> Port: 53015

The following example uses HexChat.

🛚 🖨 🗉 HexChat: Network List			😣 💷 HexChat: Edit relay-d015						
User Informatio	n		localhos	Add					
Nick name:	support						Remove		
Second choice:	support_	rt							
Third choice:	support		Servers	Autojo	oin channels	Connect commands	Edit		
User name:	support		Connect to selected server only						
Networks				ect to th	nis network a	utomatically			
relay-d015		Add	🗌 Bypas	s proxy	server				
2600net		Bomovo	Use SSL for all the servers on this network						
2ch		Remove	Accept invalid SSL certificates						
AccessIRC		Edit	🕑 Use g	obal us	er informatio	n			
AfterNET		Sort	Nick nam	e:					
Aitvaras		- Environ	Conserved at						
Anthrochat		Favor	Second ci	noice:					
Skip networ	k list on startup 🗌 Show	favorites only	Realnam	e:					
			User nam	e:					
Close		Connect	Login me	thod:	Default		\$		

In addition to communication between team members, the IRC server can be used to provide updates from scanners and other tools running on the Telesploit server. Dedicate a channel for the output of each discrete activity and immediately know its status without cycling through multiple consoles or screen sessions.

T #cconl	
L/#SCall1	[21:01:24] mmp1[mmp scan report for 10.10.100.123
	[11:01:23] mapu[most is up [2:35 tatemety]. [11:01:23] mapu[most is up [2:35 tatemety].
	[21:01:23] mmp1 Act 1000 stamme ports on 10.10.100.100.100 are filtered
	[21:01:29] nmap map but (c) ((((((((((((((((((
	[21:01:13] nmap [al] 1000 scanned ports on 10.10.100.124 are filtered
	[21:01:33] nmap1 Nmap scan report for 10.10.100.125
	[21:01:35] nmap1 Host is up (2.5s latency).
	[21:01:36] nmap1 All 1000 scanned ports on 10.10.100.125 are filtered
	[21:01:38] nmap1 Nmap scan report for 10.10.100.126
	121:01:391 nmap1 Host 1s up (3.0s latency).
	[12]:01:41 mmap1 Att 1000 scanned ports on 10.10.100.126 are filtered
	[21:01:44] mmp1 mmp2 scall epo(10) 10:10:10:10:10
	[21:01:05] nmap links as the control of the line 127 are filtered
	[21:01:47] nmap1 Nmap scan report for 10.10.100.128
	[21:01:48] nmap1 Host is up (2.6s latency).
	[21:01:50] nmap1 All 1000 scanned ports on 10.10.100.128 are filtered
	[21:01:53] nmap1 Initiating Connect Scan at 20:55
	[21:01:53] nmap1 Scanning 64 hosts [1000 ports/host]
	[21:01:54] mmp1 Discovered open port 3589/CD 01 10.100.000.131
	[21:01:50] mmp1 Discovered open port 139/(cp on 10.10.100.130
	[21:01:55] mmp1 [D1500FF60 0pen [D10:10] [D10:100101]
	[21:61:59] map biscovered open port 1825/tcp on 18.10.100
	[21:02:00] nmap1 Discovered open port 135/tcp on 10.10.100.130
	[21:02:02] nmap1 Discovered open port 135/tcp on 10.10.100.131
	[21:02:03] nmap1 Discovered open port 445/tcp on 10.10.100.130
	[21:02:05] nmap1 Connect Scan Timing: About 3.37% done; ETC: 21:25 (0:29:09 remaining)
	[21:02:05] mmap1 [connect Scan Timing: About 4.19% done; EIC: 21:31 (0:34:43 remaining)
	[21:02:06] mmp1 Connect Scan Timing: About 4.99 done; EIC: 21:30 (0:39:13 remaining)
	[21:02:09] mmp1 Connect Scan Timing. About 5.14% done EC: 21:44 (0:45:21 femaling)
	[21:02:13] nump Connect Scan Timing: Abult 6.70% done: FC: 21:48 (6:49:06 remaining)
	[21:02:11] mmpl Increasing send delay for 10.10.100.131 from 0 to 5 due to 13 out of 41 dropped probes since last increase.
	[21:02:12] nmapl Connect Scan Timing: About 7.19% done; ETC: 21:51 (0:51:53 remaining)
	[21:02:14] nmap1 Connect Scan Timing: About 7.58% done; ETC: 21:55 (0:55:02 remaining)
	121:02:141 mmap1 Connect Scan Liming: About 8.556 done; EIC: 21:59 (0:58:05 remaining)
	[21:02:13] mmp1 Connect Scent Liming: Adout 9.75 doile; Etc. 22:05 (1:01:10 (MmAILING)
	[21:03:14] nmap1 [Connect Scan Timing: About 10.64% done: ETC: 22:08 (1:04:56 remaining)
	[21:04:28] nmap1 Connect Scan Timing: About 11.58% done; ETC: 22:12 (1:08:29 remaining)
	[21:07:13] nmapl Increasing send delay for 10.10.100.131 from 10 to 20 due to 11 out of 11 dropped probes since last increase.
	[21:07:14] nmap1 Connect Scan Timing: About 15.42% done; ETC: 22:11 (1:04:17 remaining)
	[21:08:56] nmap1 Connect Scan Timing: About 16.45% done; ETC: 22:17 (1:08:10 remaining)
	[21:199:51] mmap1 [connect Scan [ining: About 16.55% done; EIC: 22:22 [1:12:17 remaining]
	[21:11:6:51] mmdp1 connect Scan Timing: About 10:000 done; ETC: 22:27 (1:10:042 femalizing)
	[21:13:40] maph connect scen fining: About 16:040 done EC: 22:30 (1:26:27 remaining)
	[21:13:26] mapal Discovered open port 445/tcp on 10.10.100.131
	[21:15:24] nmap1 Connect Scan Timing: About 19.70% done; ETC: 22:36 (1:21:08 remaining)
	[21:15:53] nmap1 Discovered open port 49165/tcp on 10.10.100.131
	[21:16:00] nmap1 Connect Scan Timing: About 21.32% done; ETC: 22:31 (1:15:39 remaining)
	[21:16:25] nmapl Discovered open port 1027/tcp on 10.100.130
	[21:1b:30] mmap1 Connect Scan Imming: About 23,00% done; EIC: 22:26 (1:10:1/ remaining)
	[21:17:01] mmpj1 connect Scan Timing: About 24:95% done; ETC: 22:12 [1:09:40 Femalining]
	[21:17:39] mmp1 connect scan fining: About 27:495 bone Etc. 22:11 (4:53:46 remaining)
	[21:18:39] mapa] Connect Scan Taining: About 31.69% done: FTC: 22:08 (0:40:54 remaining)
	[21:19:30] nma01 Connect Scan Timing: About 34.28% done: ETC: 22:85 (0:46:00 remaining)
	[21:19:53] nmap1 Discovered open port 1026/tcp on 10.10.100.130
	[[21:20:31] nmapl Connect Scan Timing: About 37.10% done; ETC: 22:02 (0:42:23 remaining)
	[21:21:19] nmap1 Connect Scan Timing: About 40.07% done; ETC: 21:59 (0:38:36 remaining)
	[21:21:57] nmap1[connect Scan 1mm;ng: About 42.40% done; ETC: 21:57 (0:35:21 remaining)
	[21:22:30] mmpj Lonnect Scan Immig: About 43.00% dONE; EIC: 21:34 (0:32:13 remaining)
	[21:23:03] mmpj1 connect Scan Timing: About 48-51% done; ETC: 21:24 (0:25:14 Femalining)
	[1212543] maph [connect Scan Tuming: About 56.12% done: FTC: 21.49 (0:23:37 remaining)
	[21:26:04] mmol Discovered open port 49152/tcp on 10.10.100.131
	[21:27:27] nmap1 Connect Scan Timing: About 60,43% done: ETC: 21:48 (0:20:55 remaining)

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Stay connected on the go with mobile SSH and chat applications.



Collaboration

The Telesploit relay has a Mattermost instance installed and both the client and server create SSH tunnels to communicate with it. A web browser or Mattermost client may be used by configuring them with the following values. Adjust the port number to match your Telesploit deployment.

Example Mattermost Configuration

Host: localhost (127.0.0.1) Username: <Assigned by Mattermost Admin> Password: <Assigned by Mattermost Admin> Port: 63015

The first configured user will become the Mattermost admin. The following example uses a standard browser to access the collaboration platform.

🕑 E-Corp - Telesploit Mat 🗙	+							
(Iocalhost:63015/telesp	loit/channels/e-corp	C Q Search			合自	•		≡
@telesploit	¢ E.Corn v		34. *	Search			@	100
Telesploit .								
CHANNELS +	System 206 PM							
Allsafe Security	elliot has joined the channel.							
@ E-Corp	System 2:23 PM							
(C)Off-Topic	darlene has joined the channel.							
Town Square	D darlene 2:59 PM							
More	how's the HVAC testing going							
PRIVATE CHANNELS +	B elliot 3:00 PM							
DIDECT MESSAGES	better since we upgraded from the pi							
More	did mobley start fuzzing the firmware							
more	D darlene 3:01 PM							
	you didn't send anything							
	E elliot 3:03 PM							
	here							
	Cooling system- firmware.tar & TAR IMB							
	i have control of the cooling subsystem, but we need a persistent backdoor							
	T telesploit 3:06 PM							
	This control you think you have, it's an illusion>							
	E elliot 307 PM							
	STOP							
	D darlene 307 PM							
	stop what??							
	elliot 308 PM daemons, they don't stop working, they are always active							
	adarlene 308 PM							
	take a break elliot, get outside							
	👝 elliot 3:09 PM							
	oh I'm working from the beach, meeting somebody							
	Write a message							0
								Help

Troubleshooting

If you are unable to connect to the Telesploit server, then verify that you are able to directly connect to the relay.

If your client is configured to use an SSH connection, then try directly accessing the SSH server on the relay.

KiTTY Configuration		×
Category:		
	Basic options for your KiTTY session	
···· Logging ···· Scripting ⊡·· Terminal ···· Keyboard ···· Bell	Specify the destination you want to connect to Host Name (or IP address) test@relay-d015.telesploit.com Connection type:	
- Features ⊡- Window	O Raw O Telnet O Rlogin ⊙ SSH O ADB O Serial O Cygterm	
Appearance Behaviour Translation Selection	Load, save or delete a stored session Sav <u>e</u> d Sessions/New Folder	

You will not be able to successfully login with the above settings, but it will validate that nothing is blocking your access and that the relay is up.



If you are using SSL/TLS proxied connections, then try accessing the SSH server through the HA Proxy running on the relay using ncat. You should see output similar to the following if nothing is blocking your access and the HA Proxy and SSH server are up.



If either of the above tests result in timeouts or no connections then verify that your outbound connections are not being blocked by a firewall or Intrusion Prevention System. Contact Telesploit support for additional assistance.