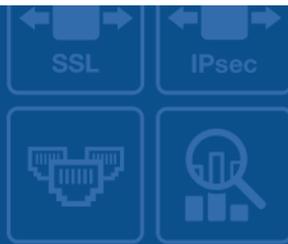




# FortiSandbox - CLI Reference Guide

VERSION 2.3.3



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FortiSandbox 2.3.3 CLI Reference Guide

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# TABLE OF CONTENTS

<b>Change Log</b> .....	<b>4</b>
<b>CLI Reference Guide</b> .....	<b>5</b>
What's New in 2.3.3 .....	5
CLI Commands .....	5
General commands .....	5
Configuration commands .....	6
System Commands .....	7
Utilities .....	14
Diagnostics .....	17

# Change Log

Date	Change Description
2017-01-19	Initial release.

# CLI Reference Guide

The FortiSandbox has CLI commands that are accessed when accessing the FortiSandbox via console or by using a SSH or TELNET client. These services must be enabled on the port1 interface.



The FortiSandbox CLI commands are intended to be used for initial device configuration and troubleshooting. Some commands are specific to hardware or VM devices.



Use `-h` or `--help` with system commands for information on how to use the command. The FortiSandbox CLI is case-sensitive.

## What's New in 2.3.3

Command	Description
<code>vm-internet</code>	<p><b>Usage:</b></p> <pre>vm-internet -h -h -h Help information. - -l Display current configuration - -s Set VM internet configuration for port3. -g&lt;gateway IP&gt; Next hop Gateway IP address -d&lt;DNS server ip&gt; DNS server IP address</pre> <p><b>Example:</b></p> <pre>vm-internet -s -g192.168.199.1 -d8.8.8.8</pre>

## CLI Commands

### General commands

Command	Description
<code>help</code>	Display list of valid CLI commands. Privilege: Full access only.
<code>?</code>	You can also enter <code>?</code> for help. Privilege: Full access only.
<code>exit</code>	Terminate the CLI session. Privilege: Full access and Read-only.

## Configuration commands

Command	Description
show	<p>Show the bootstrap configuration including the port IP address (IPv4 and IPv6), network mask, port MAC address, and default gateway. If the port is being used by sniffer, it will not be displayed.</p> <p>Example:</p> <pre>show Configured parameters: Port 1 IPv4 IP: 172.16.69.32/24 MAC: 0C:C4:7A:54:EB:5C Port 1 IPv6 IP: 2620:101:9005:69::32/64 MAC: 0C:C4:7A:54:EB:5C Port 2 IPv4 IP: 182.16.70.32/24 MAC: 0C:C4:7A:54:EB:5D Port 3 IPv4 IP: 192.168.199.32/24 MAC: 0C:C4:7A:54:EB:5E Port 4 IPv4 IP: 4.0.0.3/24 MAC: 0C:C4:7A:54:EB:5F Port 4 IPv6 IP: 4101::4/64 MAC: 0C:C4:7A:54:EB:5F IPv4 Default Gateway: 172.16.69.1</pre> <p>Privilege: Full access and Read-only</p>
set	<p>Set configuration parameters. The available attributes/values for set are:</p> <pre>port1-ip &lt;IP/netmask&gt; e.g. port1-ip 1.2.3.4/24 port2-ip &lt;IP/netmask&gt; e.g. port2-ip 1.2.3.4/24 port3-ip &lt;IP/netmask&gt; e.g. port3-ip 1.2.3.4/24 port4-ip &lt;IP/netmask&gt; e.g. port4-ip 1.2.3.4/24 port5-ip &lt;IP/netmask&gt; e.g. port5-ip 1.2.3.4/24 port6-ip &lt;IP/netmask&gt; e.g. port6-ip 1.2.3.4/24 port7-ip &lt;IP/netmask&gt; e.g. port7-ip 1.2.3.4/24 port8-ip &lt;IP/netmask&gt; e.g. port8-ip 1.2.3.4/24 default-gw &lt;IP&gt; date &lt;YYYY-MM-DD&gt; time &lt;HH:MM:SS&gt;</pre> <p>Privilege: Full access only</p>
unset	<p>Unset configuration parameters. The available attribute for unset is default-gw.</p> <p>Privilege: Full access only</p>

## System Commands

Command	Description
<code>reboot</code>	Reboot the FortiSandbox. All sessions will be terminated. The unit will go offline and there will be a delay while it restarts. <code>-f</code> to force an immediate reboot. Privilege: Full access only.
<code>config- rese t</code>	Reset the FortiSandbox configuration to factory default settings. Job data will be kept. For installed VM images, their clone numbers and <i>Scan Profile</i> settings are set back to default. Privilege: Full access only.
<code>factory- rese t</code>	Reset FortiSandbox configuration to factory default settings, delete all data. For installed VM images, only Default VMs are kept and their clone number and <i>Scan Profile</i> settings are set back to default. Example: <pre>factory-reset This command will erase your current configuration and all stored data. Do you want to continue? (y/n) Enter y to continue.</pre> Privilege: Full access only.
<code>shutdown</code>	Shut down the FortiSandbox. Example: <pre>shutdown Do you want to continue? (y/n) Enter y to continue.</pre> Privilege: Full access only.

Command	Description
status	<p>Display the FortiSandbox firmware version, serial number, system time, disk usage, image status check, Microsoft Windows VM status, VM network access configuration, and RAID information.</p> <p>Example:</p> <pre> status System:   Version: v2.20-build0143 (GA)   Serial number: FSA3KD3R00000009   System time: Wed Mar 18 10:57:35 2016   Disk Usage: 780 GB   Image status check: OK   Windows VM: Activated and Initialized   VM Internet access: On RAID Info:   RAID level: Raid-1   RAID status: OK   Virtual drive size: 3 GB   Total physical disks: 4   Physical disk states:     Slot: 0     Status: Unavailable     Size: 0 GB     Slot: 1     Status: Unavailable     Size: 0 GB     Slot: 2     Status: Unavailable     Size: 0 GB     Slot: 3     Status: Unavailable     Size: 0 GB     Slot: 4     Status: OK     Size: 1862 G </pre> <p>Privilege: Full access and Read-only.</p>
sandbox-engines	<p>Display FortiSandbox FortiGuard component versions including the Tracer Engine, Rating Engine, Traffic Sniffer, Botnet Signature Database, and IPS Signature Database, and Android engine versions.</p> <p>Example:</p> <pre> sandbox-engines Sandbox components versions:   Tracer Engine: 02003.00267   Rating Engine: 02003.00251   Traffic Sniffer: 00003.00279   Network Alerts Signature: 00002.01103   Android Analytic Engine: 02003.00012   Android Rating Engine: 02003.00012 </pre> <p>Privilege: Full access only.</p>
sandboxing-cache	<p>User can turn on/off the Sandboxing result cache. When it is off, the same file will be scanned again by Sandboxing.</p>

Command	Description
fw-upgrade	<p>Upgrade or re-install the FortiSandbox firmware via an Secure Copy (SCP) or File Transfer Protocol (FTP) server. Before running this command, the firmware file should be downloaded to a server that supports file copy with the FTP/SCP command.</p> <p>Usage:</p> <pre>fw-upgrade -h -h Help information. -l Install a VM image file from a local server. -b Download an image file from this server and upgrade the firmware. -v Download a VM image file from this server and install. -s&lt;SCP/FTP server IP address&gt; Download an image file from this server IP address. -u&lt;user name&gt; The user name for authentication. -p&lt;password&gt; The password for authentication. -f/&lt;full path of filename&gt; The full path for the image file. -t&lt;ftp   scp&gt; The protocol type, FTP or SCP. The default is SCP.</pre> <p>The system will boot up after firmware is downloaded and installed. Privilege: Full access only.</p>
cleandb	Clean up the internal database and job information.
log-purge	<p>This command will delete all your system logs. You will be prompted to confirm this action.</p> <p>Example:</p> <pre>log-purge This command will delete all your system logs. Do you want to continue? (y/n) Enter y to continue.</pre> <p>Privilege: Full access only.</p>

Command	Description
pending-jobs	<p>This command allows users to view the statistics of job queues and purge them</p> <pre>pending-jobs show purge source filetype</pre> <p>Source:</p> <pre>&lt;all ondemand rpc device sniffer adapter netshare url urlrpc urldev urladapter&gt;</pre> <p>Specifically:</p> <ul style="list-style-type: none"> <li>• <code>url</code> means URLs submitted through the On Demand page.</li> <li>• <code>urlrpc</code> means URLs submitted through JSON API.</li> <li>• <code>urldev</code> means URLs submitted from devices such as FortiMail.</li> </ul> <p>Filetype:</p> <pre>&lt;all exe pdf doc flash web url notset waiting&gt;</pre> <p>Specifically:</p> <ul style="list-style-type: none"> <li>• <code>notset</code> means jobs wont be scanned by guest image</li> <li>• <code>waiting</code> means files have not been processed to enter the job queue.</li> </ul> <p>Example:</p> <pre>pending-jobs show sniffer all Source: Sniffer, File type: Microsoft Office files (Word, Excel, PowerPoint files etc), Jobs: 0 Source: Sniffer, File type: Adobe Flash files, Jobs: 5 Source: Sniffer, File type: Executables/VBS/BAT/PS1/JAR/MSI files, Jobs: 3 Source: Sniffer, File type: Customer defined files, Jobs: 0 Source: Sniffer, File type: Android files, Jobs: 0 Source: Sniffer, File type: PDF files, Jobs: 3 Source: Sniffer, Queued Jobs: 0 Source: Sniffer, Non-VM Jobs: 0 Source: Sniffer, Not assigned jobs: 0 Source: Sniffer, Total Jobs: 0 Total Jobs: 0</pre>

Command	Description
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iptables	This command is used to enable or disable IP tables. The settings will be discarded after reboot.
----------	---

**Usage:**

```
iptables -[AD] chain rule-specification [options]
iptables -I chain [rulenum] rule-specification
[options]
iptables -R chain rulenum rule-specification
[options]
iptables -D chain rulenum [options]
iptables -[LS] [chain [rulenum]] [options]
iptables -[FZ] [chain] [options]
iptables -[NX] chain
iptables -E old-chain-name new-chain-name
iptables -P chain target [options]
iptables -6 Enable or disable IPv6 tables
iptables -h (print this help information)
```

**Privilege: Full access only.**

vm- lice nse	List or re-install embedded licenses for FortiSandbox Windows VM. Use '-h' for more information.
--------------------	--

**Usage:**

```
-h Help information.
-l List the Windows Product key information.
-b Download a file from server and burn the Windows
  Product keys to system.
-t <scp | tftp | ftp> Specify the protocol. scp:
  download via SCP. tftp: download via TFTP. ftp:
  download via FTP. By default, use scp.
-s <server ip> Download the license key file from
  this IP address. The default port for TFTP is 69.
-u <user name> The user name for server
  authentication.
-p <password> The password for server authentication.
-f <filename> The name of the license key file.
```

**Example:**

```
vm-license -l
28 keys in total
KEY_WINXP XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
.....
KEY_WIN7 XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
.....
Windows Product Keys Validation ..... Passed
```

**Privilege: Full access only.**

Command	Description
vm- stat us	<p>Show FortiSandbox VM system status.</p> <p><b>Example:</b></p> <pre>vm-status WIN7X86VM was activated and initialized WINXPVM was activated and initialized WIN10X64VM was activated and initialized WIN7X64VM was activated and initialized Virtual Hosts Initialization ..... Passed  Installed VM Images: ID Ver Name License (App Status) 4 6 WINXPVM1 Permanent Office 2010 (activated) 1 7 WINXPVM Permanent Office 2007 (activated) 64 1 WIN7X86VM Ichi Permanent 8 6 WIN7X86VM Permanent Office 2013 (activated) 2 7 WIN7X64VM Permanent 1024 1 WIN10X86VM nokey 512 1 WIN10X64VM nokey</pre> <p>If there is an issue with the FortiSandbox VM, an error message will be displayed with information on troubleshooting the problem. Privilege: Full access only.</p>
vm-reset	<p>Activate and initialize a VM image again. Sometimes it is necessary to rebuild a VM image when it is broken.</p> <p><b>Usage:</b></p> <pre>-h Help information. -n VM name.</pre>
vm- inte rnet	<p><b>Usage:</b></p> <pre>vm-internet -h -h -h Help information. - -l Display current configuration - -s Set VM internet configuration for port3. -g&lt;gateway IP&gt; Next hop Gateway IP address -d&lt;DNS server ip&gt; DNS server IP address</pre> <p><b>Example:</b></p> <pre>vm-internet -s -g192.168.199.1 -d8.8.8.8</pre>
device- auth oriz atio n	<p>Users can decide to either manually or automatically authorize a new client device.</p> <p><b>Usage:</b></p> <pre>device-authorization -[h a m l] -h Help information. -a When a new device registers, FortiSandbox will   authorize it automatically. -m When a new device registers, the user has to   authorize it manually from the WebUI. -l Display the status of device authorization. Default: manually.</pre>

Command	Description
usg- lice nse	<p>Convert the unit to be USG licensed. When a USG license is applied, only FortiGuard Distribution Network (FDN) servers in the United States can be used.</p> <p>Usage:</p> <ul style="list-style-type: none"> <li>-h Help information.</li> <li>-l List the USG license status.</li> <li>-s&lt;USG-license-string&gt; Set this unit to be USG licensed.</li> <li>-r&lt;Regular-license-string&gt; Revert the unit back to be regular one.</li> </ul>
hc- sett ings	<p>Configure the unit as a HA-Cluster mode unit.</p> <p>Usage:</p> <ul style="list-style-type: none"> <li>-h Help information.</li> <li>-l List the Cluster configuration.</li> <li>-sc Set this unit to be a HA-Cluster mode unit.</li> <li>-t&lt;N M P R&gt; Set this unit to be a HA-Cluster mode unit. <ul style="list-style-type: none"> <li>N: N/A</li> <li>M:Master unit</li> <li>P:Primary slave unit</li> <li>R:Regular slave unit</li> </ul> </li> <li>-n&lt;name string&gt; Set alias name for this unit.</li> <li>-c&lt;HA-CLUSTER name&gt; Set the HA-Cluster name for Master unit.</li> <li>-p&lt;authentication code&gt; Set the authentication code for Master unit.</li> <li>-i&lt;interface&gt; Set interface used for cluster internal communication.</li> <li>-si Set the fail-over IPs for this cluster for Master unit.</li> <li>-i&lt;interface&gt; Specify the interface for external communication</li> <li>-a&lt;IP/netmask&gt; Specify the IP address and netmask for external communication. This IP address will be applied as the alias IP of the specified interface. It must be in the same subnet as the unit IP subnet of the specified interface.</li> </ul>
hc- stat us	<p>List the status of HA-Cluster units.</p> <p>Usage:</p> <ul style="list-style-type: none"> <li>-h Help information.</li> <li>-l List the status of HA-Cluster units.</li> </ul>
hc-slave	Add/Update/Remove a slave unit to/from HA Cluster.
hc- mast er	<p>Disable/Enable the malware detection features on master unit.</p> <p>When <code>-s</code> is used, the user can turn on the file scan and determine the percentage of the scanning capacity to be used. If no number follows the <code>-s</code>, 50% will be used (half of the processing capacity will be used).</p>

Command	Description
confirm-id	<p>Validate a Microsoft Windows or Office key after contacting Microsoft customer support. For more details, please contact <a href="#">Fortinet Customer Support</a>.</p> <p>Usage:</p> <ul style="list-style-type: none"> <li>-a Add a confirmation ID.</li> <li>-k License key.</li> <li>-c Confirmation ID.</li> <li>-d Delete a confirmation ID.</li> <li>-k License key.</li> <li>-l List all confirmation IDs.</li> </ul>
remote-auth-timeout	<p>Set Radius or LDAP authentication timeout value.</p> <p>Usage:</p> <ul style="list-style-type: none"> <li>-h Help information.</li> <li>-s Set timeout value to 10 to 180 seconds. Default is 10.</li> <li>-u Unset timeout</li> <li>-l Display timeout value</li> </ul>
filesize-limit	<p>Set file size limit of different input sources.</p> <p>Usage:</p> <pre>filesize-limit [-h -l -t] -t [all ondemand netshare jsonrpc] -v200 -h Help information. -l Display the file size limitations. -t[all ondemand netshare jsonrpc] -v[file size limitation (MBytes)] (0 &lt; size &lt; 1024)</pre>
log-dropped	<p>Enable the log file drop event.</p> <p>Usage:</p> <pre>log-dropped [-h -l -e -d] -h Help information. -l Show current config. -e Enable log dropped file. -d Disable log dropped file.</pre>

## Utilities

Command	Description
ping	<p>Test network connectivity to another network host.</p> <p>Usage:</p> <pre>ping &lt;IP address&gt;</pre> <p>Privilege: Full access only.</p>

Command	Description
tcpdump	<p>Examine local network traffic.</p> <p>Usage:</p> <pre>tcpdump [-aAbdDefhHIJKlLnNOpqRStuUvxxX] [ -B size ] [ -c count ] [ -C file_size ] [ -E algo:secret ] [ -F file ] [ -G seconds ] [ -i interface ] [ -j tstamptype ] [ -M secret ] [ -r file ] [ -s snaplen ] [ -T type ] [ -V file ] [ -w file ] [ -W filecount ] [ -y datalinktype ] [ -z command ] [ -Z user ] [ expression ]</pre> <p>Privilege: Full access only.</p>
traceroute	<p>Examine the route taken to another network host.</p> <p>Usage:</p> <pre>traceroute &lt;IP address&gt;</pre> <p>Privilege: Full access only.</p>
vm-customized	<p>Install a new customized VM image</p> <p>Usage:</p> <pre>vm-customized -h Help information. -c command. -cn Install a new customized VM. -cl List installed customized VMs. -cf Upload a meta file for a customized VM. -cd Display a meta file for a customized VM. -t&lt;ftp scp&gt; The protocol type, FTP or SCP. The default is scp. -s&lt;SCP/FTP server IP address&gt; Download an image file from this server IP address. -u&lt;user name&gt; The user name for authentication. -p&lt;password&gt; The password for authentication. -f&lt;full path of filename&gt; The full path for the image file. -o&lt;OS type&gt; WindowsXP Windows7 Windows7_64 Windows81 Windows81_64 Windows10 Windows10_64 -v&lt;VM name&gt; -r Replace VM if it exists</pre> <p>Example: To install a new customized image hosted on a ftp server, execute the following command to install it:</p> <pre>vm-customized -cn -tftp -s&lt;ftp_server_ip&gt; -u&lt;username&gt; -p&lt;password&gt; -f&lt;/vdi_file_path&gt; -o&lt;Windows_type&gt; -v&lt;custom_vm_name&gt;</pre>

Command	Description
reset-scan-profile	<p>Reset clone # and file extension association of VM images to default values.</p> <p>Usage:</p> <pre>reset-scan-profile -h Help information. - -r Reset clone # and file extension association.</pre>
sandboxing-prefilter	<p>Allow user to turn on/off pre-filtering of certain file types. If a file type is associated with a guest VM image, it will be scanned by it if the file type enters the job queue as defined in the Scan Profile page. The user can turn on pre-filtering of a file type so a file of such type will be statically scanned first by an advanced analytic engine and only suspicious ones will be sandboxing scanned by the guest image. This can improve the system's scan performance, but all files will still go through an AV scan, static scan, and community cloud query steps. For the URL type, when its pre-filtering is enabled, only URLs whose web filtering rating is Unrated will be scanned inside associated guest VM image.</p> <p>Usage:</p> <pre>sandboxing-prefilter [-h -l -e -d] -t [dll pdf swf js htm url office] -h Help information. -e Enable sandboxing prefilter. -t[dll pdf swf js htm url office] Enable sandboxing prefilter for specific file types. -d Disable sandboxing prefilter. -t[dll pdf swf js htm url office] Disable sandboxing prefilter for specific file types. -l Display the status of sandboxing prefilter.</pre>
sandboxing-embeddedurl	<p>Allow user to turn on/off Sandboxing scan inside URLs of PDF and Office documents along with these files. Only randomly selected URLs will be scanned.</p> <p>Usage:</p> <pre>sandboxing-embeddedurl [-h -l -e -d] -h Help information. -e Enable sandboxing embedded url in PDF or Office documents. -d Disable status for sandboxing embedded url. -l Display the status of sandboxing prefilter.</pre>

## Diagnostics

Command	Description
<code>diagnose-debug</code>	<p>Display detailed debug logs of network share scan and communications with devices. It is useful for troubleshooting OFTP and network share scan issues.</p> <p>Usage:</p> <pre>diagnose-debug [netshare device adapter -cb adapter_icap][device_serial_number]</pre> <p>Where:</p> <ul style="list-style-type: none"><li>• <code>netshare</code>: Network share daemon</li><li>• <code>device</code>: OFTP daemon for FortiGate, FortiMail, and FortiClient devices.</li><li>• <code>adapter_cb</code>: Daemon for third party device such as Bit9 + CARBON BLACK.</li><li>• <code>adapter_icap</code>: Daemon for Internet Content Adaptation Protocol (ICAP).</li></ul>
<code>diagnose-sys-top</code>	<p>Display current system top processes and current CPU/Memory usage.</p> <p>Usage:</p> <pre>diag-sys-top [-h -l -i] -h Help information. -l &lt;value&gt; Maximum lines (default 50, maximum 100). -i &lt;value&gt; Interval to delay in seconds (default 5).</pre>
<code>diagnose-sys-perf</code>	<p>Display system performance information.</p> <p>Usage:</p> <pre>diagnose-sys-perf [-h -m] -h Help information. -m&lt;value&gt; Last hours (default 1 hour, maximum 4 weeks (40320 hours)).</pre>
<code>hardware-info</code>	<p>Display general hardware status information. Use this command to view CPU, memory, disk, and RAID information, and system time settings.</p> <p>Privilege: Full access only.</p>
<code>disk-attributes</code>	<p>Display system disk attributes.</p> <p>Privilege: Full access only.</p> <p>This CLI command is available on hardware-based FortiSandbox models only.</p>
<code>disk-errors</code>	<p>Display any system disk errors.</p> <p>Privilege: Full access only.</p> <p>This CLI command is available on hardware-based FortiSandbox models only.</p>

Command	Description
<code>disk-health</code>	Display disk health information. Privilege: Full access only. This CLI command is available on hardware-based FortiSandbox models only.
<code>disk-info</code>	Display disk hardware status information. Privilege: Full access only. This CLI command is available on hardware-based FortiSandbox models only.
<code>raid-hwinfo</code>	Display RAID hardware status information. Privilege: Full access only. This CLI command is available on hardware-based FortiSandbox models only.
<code>test-network</code>	Test the network connection. The output can be used to detect network speed and connection to FDN servers and Microsoft servers.



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High Performance Network Security



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