

Web Application Firewall

Comodo Web Application Firewall

Software Version 2.24

Administrator Guide

Guide Version 2.24.010620

Comodo Security Solutions 1255 Broad Street Clifton, NJ 07013

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1. Comodo Free ModSecurity Rules -Introduction

Web applications are arguably the most important back-end component of any online business. They are used to power many of the features most of us take for granted on a website, including web-mail, online stores, software-asa-service, payment gateways, forums, dynamic content, social media functionality and much more. A security breach on a web application can have potentially devastating implications for the site owner, including site downtime, loss of corporate data and even theft of confidential customer information. It is therefore of paramount importance that web applications are kept strongly protected against attack at all times. **Comodo Web Application Firewall** (CWAF) provides powerful, real-time protection for web applications and websites running on Microsoft IIS, Apache, LiteSpeed and Nginx based web-servers.

The following implementation approaches are available:

• Install the Comodo WAF Plugin on cPanel, DirectAdmin, Plesk or Webmin

The plugin interface will be used to download, implement and manage Comodo Mod Security rules. See 'Linux - Installing The Agent And Control Panel Plugin' and 'Windows - Install The Ruleset On Windows IIS' for help with this

• Enable Comodo as a ModSecurity vendor in cPanel, DirectAdmin or Plesk.

Admins will use each panel's native controls to download, implement and manage Comodo Mod Security rules. For setup help with this option, users should refer to the standalone guides for **cPanel**, **DirectAdmin** or **Plesk**.

• Install the Comodo WAF Plugin directly onto the webserver (aka 'Standalone' mode)

After installation, admins should use the CWAF console tool to manage updates. See 'Linux - Install The Agent And Control Panel Plugin', 'Windows - Install The Ruleset On Windows IIS' and 'Command Line Utility' for help with this.

CWAF is easy to set up and offers a customizable, rules-based traffic control system that delivers persistent protection against all known internet threats. Frequent updates to the firewall rules database means your web site is even protected against the latest, emerging hacking techniques that might be affecting other websites.

Once installed and configured, CWAF just requires the latest firewall rule sets to be downloaded and deployed to your servers. The simple web administration console allows administrators to manually download and implement the latest rule set or a rule-set from a previous version. Administrators can install the CWAF agent or the web hosting control panel plugin (currently cPanel, DirectAdmin, Webmin and Plesk plugins are available) to automatically fetch and install the new rules as soon as they become available. The plugins can also be used to configure the overall behavior of CWAF and to customize the rule sets by excluding unwanted rules from implementation.

Currently CWAF is designed for and has been tested on Microsoft IIS web server, and Apache, LiteSpeed, Nginx on Linux servers.

Guide Structure

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This guide is intended to take the administrator through the sign-up, configuration and use of Comodo Web Application Firewall.

- Comodo Web Application Firewall Introduction A high level description of the product
 - System Requirements List of compatible server environments for CWAF
 - Sign up for Web Application Firewall Help to sign-up for the product
 - Login to the Administration Console Help to log-in to the web admin console
 - The Admin Console Main Interface Description of the web administration console
- Deploy CWAF rules on Server Guidance on downloading and deploying the firewall rule sets on to the server

- Linux Install the Agent and Control Panel Plugin Help to download and deploy the firewall rule sets on Linux
 - Linux Install the Agent in Standalone Mode
- Windows Install the Ruleset on Windows IIS Help to download and deploy the firewall rule sets on Windows
- Use the Web Hosting Control Panel Plugin for Firewall Configuration Help to configure firewall
 rules and update rule sets
- Use the Agent for Firewall Configuration Guidance on manually downloading and deploying the latest version of the Firewall rulesets
- **Command Line Utility** The list of arguments for protection rule management
- Uninstall CWAF Help to remove CWAF from the web hosting control panel plugin
- Download and Install Rule Set Packages Help to manually download and deploy the firewall rule sets
- Report Problems to Comodo Post feedback to Comodo
- Submit Tickets to Comodo Report issues to Comodo
- Manage CWAF License Help to view and manage CWAF licenses, and to subscribe for other Comodo products and services
- **CVE Coverage Information** Help on Common Vulnerabilities and Exposures.

1.1. System Requirements

The Web Application Firewall can be implemented on to the following web application servers:

- Microsoft IIS web server
- Apache, LiteSpeed or Nginx web server on Linux server platform
- Mod_security 2.7.5 and higher

1.2. Sign up for Free ModSecurity Rules

You can download CWAF from Comodo Accounts Manager at https://accounts.comodo.com/cwaf/management/signup.

Sign-up for CWAF

• Visit the CWAF sign-up page at https://accounts.comodo.com/cwaf/management/signup. The Sign-up form will appear.

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сомодо Comodo Web Application Firewall **Creating Trust Online*** Signup Information 💙 Comodo Sign-Up Page Please, select currency that will be used for purchase (note that not all products can be available in currencies other than US Dollar) US Dollar V Please, select product from the list COMODO Web Application Firewall - No Card Required! Customer Information (an * indicates required fields) When paying by credit card, the billing information should be exactly as it appears on your credit card statement. For credit card verification, please ensure that your first and last name are entered as they appear on your card. **User Details** Are you an existing Comodo customer? 🔿 Yes 🖲 No Email* Email is case-sensitive Password* (8 characters min.) Password is case-sensitive Password Confirmation Password is case-sensitive First Name Last Name Telephone Number * **Contact Information** Company Name* **Company Website** Street Address Address2 City* United States Country -Unknown-State or Province Postal Code⁴

- If you are a new to customer, select 'No' for 'Are you an existing Comodo customer?' and enter the in the appropriate fields. The fields marked with * are mandatory.
- If you already have an account at Comodo Accounts Manager created while subscribing for some other
 product or you are renewing the CWAF license, select 'Yes' for 'Are you an existing Comodo customer?'.
 You will need to fill only your username and password.

ustomer Information (an * indicates requ	ired fields)	
When paying by credit card, the billing information a	should be exactly as it appears	s on your credit card statement. For credit card verificatio ard
User Details		
Are you an existing Comodo customer? 🖲 Yes 🔿 No		
Email*		
Email is case-sensitive		
Login [*]	jsmith@example.com	
(4 character min.)		
Login is case-sensitive		
Password [*]		
(8 characters min.)		-
Password is case-sensitive		
Password Confirmation [*]		

Communication Options:

 If you wish to sign up for news about Comodo products, select the check box under the 'Communication Options'. The periodical news and announcements from Comodo on new product releases, special offers upgrades and so on, will be notified to you through email.

C	ostal Code
C	mmunication Options
l	Yes! Please keep me informed about Comodo products, upgrades, special offers and pricing via email. Your information is safe with !

Terms and Conditions:

• Read the 'End User License and Subscriber Agreement' and accept to it by selecting 'I accept the Terms and Conditions' checkbox.

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Terms and Conditions ~ COMODO WEB APPLICATION FIREWALL SUBSCRIBER AGREEMENT THIS AGREEMENT CONTAINS A BINDING ARBITRATION CLAUSE. PLEASE READ THE AGREEMENT CAREFULLY BEFORE ACCEPTING THE TERMS AND CONDITIONS. IMPORTANT-PLEASE READ THESE TERMS CAREFULLY BEFORE APPLYING FOR, ACCEPTING, OR USING A COMODO WEB APPLICATION FIREWALL ACCOUNT OR SERVICES. BY USING, APPLYING FOR, OR ACCEPTING THE ACCOUNT OR SERVICES OR BY CLICKING ON "I ACCEPT" BELOW, YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, THAT YOU UNDERSTAND IT, AND THAT YOU AGREE TO BE BOUND BY ITS TERMS. IF YOU DO NOT AGREE TO THESE TERMS, DO NOT CLICK "ACCEPT" AND DO NOT APPLY FOR, ACCEPT, OR USE A COMODO WEB APPLICATION FIREWALL ACCOUNT OR THE COMODO WEB APPLICATION FIREWALL SERVICES. < > I accept the Terms and Conditions CONTINUE Terms & Conditions Comodo Security Solutions, Inc.'s privacy policy Contact Us ©Comodo Security Solutions, Inc.

Click 'Continue'

The 'Order Confirmation' page will appear.

COMODO Creating Trust Online*	
Help Contacts	SignUp Login
Signup Information $>$ 2 Confirmation $>$ 3 Order Summary	
Order Confirmation	
Please confirm your order:	
Product Product terms	Full price
COMODO Web Application Firewall 12 months	\$0.00
Total Amount:	\$0.00
Place Order Cancel	
	CAM v.9.4.29473

Click 'Place Order'

Your Order Summary will be displayed. Copy and paste your license key in a safe location.

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Services My Account Help Cont	acts			Logout
Signup Information	> 📀 Confirmation	> 3 Order	Summary	
	Order #1	8929602-4		
Comodo Security Solutions, Inc. 1255 Broad Street Clifton, NJ 07013 United States support.comodo.com	August South Others Rourise Creating State Index	Railee ETR		
Thank you for your purchase. Your order i	s complete and the confirmation will be s	ent to your email shortly.		
	Subscripti	on Details		
Product	Name		License Key	
COMODO Web Ap	868225e9-6c53-48a3-a7d5-ea933271dc3f			
INVOICE NUMBER	18929602-I3	SUBSCRIPTION	UID	bdc5312898
Order [Details			
ORDER NUMBER	18929602-4			
ORDER DATE	September 21, 2016			
ORDER TOTAL	\$0.00			
SUBSCRIPTION EXPIRES ON	September 21, 2017			
How to get started: We will send you an er	nail explaining how to download and inst	all your Comodo Software. `	You will be asked to enter y	our License Key during the
You can access your Comodo Account via subscriptions for other products, change b	https://accounts.comodo.com/acco illing and contact information, and review	unt/login. This login provide the ongoing status of your	es you with the ability to mo service.	dify you password, add

You will also receive an email containing your subscription ID, license key and instructions on downloading and installing the CWAF agent on your server.

Further Read:

- Log-in to the Administration Console
- Deploy CWAF rules on Server

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1.3. Login to the Administration Console

You can log-in to the Comodo Web Application Firewall admin interface at https://waf.comodo.com.



- Enter the username and password you created at signup
- Click 'Login'

You will be taken to the CWAF web admin console:

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1.4. The Admin Console - Main Interface

- Comodo Web Application Firewall (CWAF) uses pre-defined rule-sets to control inbound and outbound traffic to/from web apps.
- The admin console lets admins download these rule-sets and deploy them on their web application servers.
- Linux users can also install an agent that will automatically download and update the rule-sets when required.
- The agent can also install CWAF plugins for popular control panels (cPanel, Plesk, DirectAdmin and Webmin).

The admin interface has two tabs:

- Rule Set Version
- License Info

Rule Set Version

Download the ruleset version or agent you require from this interface:

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License Info

The license info tab shows your account license key, license type and license expiry date. The interface also has a link to Comodo Accounts Manager where you can renew or upgrade the license.

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Web Application Fire POWERED BY COMODO	ewall		Welcome: cwaf@comodo.com <u>Logout</u>
Ruleset version	License info	C CVE info	
Active license	е		
License info			
License: License type: free Product name: COMODO License expired at: 2020-	Web Application Firewa -05-19 14:53 UTC	all	
Manage your CAM accou	<u>ınt</u>		
	All trademarks displaye	Comodo Group, Inc. 2017. All rights reserved. d on this web site are the exclusive property of the respect	ive holders.

2. Deploy CWAF Rules On Server

- Comodo Web Application Firewall allows or denies access to a web-app based on firewall rule sets.
- Rule sets are made up from one or more individual firewall rules. Each rule contains instructions that determine whether the application is allowed access; which protocols it is allowed to use; which ports it is allowed to use and so forth.
- Comodo periodically publishes pre-defined rule sets which can be downloaded from the CWAF console.
- · Linux admins can automatically implement the latest rules by installing the CWAF Agent.

The agent can be configured to:

- · Periodically poll the CWAF server and to automatically download and install the latest firewall rule sets
- Install a web host control panel plugin to configure CWAF

See the following sections for more details on deploying the rulesets:

- Linux Install the Agent and Control Panel Plugin
- Windows Install the Ruleset on Windows IIS
- Download and install Ruleset package

2.1. Linux - Install the Agent and Control Panel Plugin

The CWAF agent can automate the deployment of firewall rule sets.

Download the CWAF agent installation file

- Log-in to the web admin console at https://waf.comodo.com
- Ensure that the 'Ruleset version' tab is open
- · Click the 'Download latest installer' link at the top right

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Web Application Firewall POWERED BY COMODO		Welcome: cmail1@yopmail.com Logos
Ruleset version	e info 🔗 CVE info	
Version Managemer	nt	calest release: 1.202 <u>Download the latest rules</u> Client agent: 2.24.3 <u>Download the latest installer</u> Vanuals <u>Quick start</u> <u>Admin guide</u>
Source: Release: Version: Apache ~ 1.x ~ 1.202 ~	Download Download full ruleset	ad Report a problem submit Ticket to support
List of rule files Selected version: 1.202 (2019-03-28 09:51:54)	Short description: CVE-2019-7328, CV CVE-2019-7344, CV CVE-2019-7344, CV CVE-2019-7587, CV vulnerability in Ad h Rukovoditel Project	CVE-2018-17377, CVE-2019-9576, CVE-2019-7327, /E-2019-7330, CVE-2019-7332, CVE-2019-7336, CVE-2019-7337, /E-2019-9107, CVE-2019-9109, CVE-2018-18712, CVE-2018-11679, CVE-2019-9016, CVE-2018-18760, /E-2019-8436, CVE-2018-20755, Arbitrary File Download vlanager WD Plugin v1.0.11 for WordPress, SQL vulnerability in t Manacement CRM 2.4thnodified
01_Init_AppsInitialization.conf		

The download dialog will appear.

Opening cwaf_client_install.sh								
You have chosen to	You have chosen to open:							
cwaf_client_i	nstall.sh							
which is: sh F	ile (739 KB)							
from: https://	/waf.comodo.	com						
What should Firefox do with this file?								
Open with	<u>B</u> rowse							
Save File								
Do this <u>a</u> utomatically for files like this from now on.								
			ОК	Cancel				

• Select 'Save' to save the file in a local drive.

The installer checks for the web server type (Apache, LiteSpeed or Nginx), and any for installed control panels (cPanel, Plesk, DirectAdmin, Webmin).

Install the web hosting control panel on to Linux server

• Transfer the agent setup file to a local folder in the server

E.g. /root

• Run it installation script with a root privileges:

bash /root/cwaf_client_install.sh

Step 1

After the script is running, the CWAF Agent will check to identify the web-server type and version:



1) Check for Apache and its version:

If Apache is not running, the following warning message will be displayed: *Running Apache required to check* **ModSecurity** *version* ".

If mod_security for Apache is not found, the following warning message will be displayed: "No installed ModSecurity for Apache found".

If an unsupported version of mod_security for Apache is detected, the following warning message will be displayed: "Warning: installed mod_security version is NOT fully tested".

2) Check for LiteSpeed and LiteSpeed mod_security:

If LiteSpeed is not found, the following warning message will be displayed: "Not found LiteSpeed web server with mod_security enabled"

3) Check for Nginx:

If Nginx is not found, the following warning message will be displayed: *Not found Nginx web server with mod_security enabled*

4) Checking for prerequisites:

If no web servers are found, the following warning message will be displayed: "Not found suitable web server, exiting".

If mod_security is not detected, the following warning message will be displayed: "Not found mod_security, exiting".

5) Check for web hosting control panel (cPanel, DirectAdmin, Webmin, Plesk, standalone etc)

If no web hosting management panel is found, you will be asked if you wish to "Continue in 'standalone' mode?"

If a web hosting control panel is found, the installer will ask for further action (or will display info in Update mode).

For example, if Plesk is detected it will say: "Found Plesk version PLESK_VERSION, continue installation?

Ensure SUDO utility is installed for the web hosting management panel (Plesk). Otherwise the following warning message will be displayed: "Not found /etc/sudoers.d directory. SUDO required for Plesk plugin

6) Check for required Perl modules:

CWAF will check for Perl modules and install them if required

If Perl modules are missing in Update mode, the following error message will be displayed: "Some required perl modules are missed, exiting"

If a module is missing during installation, the following warning message will be displayed: "Some required perl modules are missed. Install them? This can take a while"

Click 'No' to decline Perl modules auto-installation. The following message will be displayed:"Please install perl modules [PERL MISSED MODULES] manually and run installation script again"

If problems were detected, the warning message will be displayed: "CPAN is not configured! Please run [CPAN BIN] and configure it manually, then rerun this installation"

After successful installation, the following message will be displayed: "DONE, PRESS ENTER":

Step 2

Select the web platform:

- If multiple web servers are found, select the one you prefer. The following message will be displayed: "Please select your WEB platform". Otherwise, the following warning will be displayed: "WEB platform is not selected"
- If the selected web platform isn't supported, the following warning message will be displayed "Selected WEB platform [PLATFORM] is not supported" and installation will be terminated.

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Step 3

• Enter login credentials for Comodo Web Application Firewall



0			 1
'n.			
	04 5	Cancel	1

The agent will be installed on the server at */var/cpanel/cwaf* with a cPanel plugin or at */usr/local/cwaf* with a Plesk plug-in. For more details on configuring CWAF and using the plug-in, see the section **Use Web Host Control Panel plugin for Firewall Configuration**.

2.2. Linux - Install the Agent in Standalone Mode

Install the agent on the server

- Transfer the agent setup file to a local folder in the server
 - E.g. /root
- Run it installation script with a root privileges:

bash /root/cwaf_client_install.sh

If no web-host control panel is found, the agent will be installed in standalone mode. The installation steps for standalone mode are the same as for the plug-in. See **Install the Web Host Control Panel Plugin on Linux** for more details.

Step 4

Required for installation in standalone mode

Modify Apache Web Server configuration to enable 'mod_security' module and include CWAF Rules, by adding the key '*Include <CWAF_INSTALL_PATH>/etc/cwaf.conf* to the 'mod_security' configuration file.

For instance, add this string to Apache HTTPD Mod_security config in your system:

Include "/opt/cwaf/etc/cwaf.conf"

and reload Apache

After installation is complete, please restart Apache.

The agent, in this example, is installed on the server at the path /opt/cwaf. For more details on configuring CWAF using the agent, see **Use the Agent for Firewall Configuration**.

2.3. Windows - Install the Ruleset on Windows IIS

Please ensure you are running the following:

- IIS v 7.5.
- Mod_security v 2.7.5 and above

Install Mod-Security

Download and run the Mod_security installer

Mod_security can be included on any website. Add the following line to the web.config file > system.webServer section:

<ModSecurity enabled="true" configFile="c:\path\to\cwaf\modsecurity_iis.conf" />

Download and install CWAF rules

- Log-in to the web admin console at https://waf.comodo.com/
- Ensure that the 'Rule set version' tab is opened
- Select 'IIS' from the 'Source' drop-down. The rule sets contained in the selected version of the package will be listed under 'List of rule files', along with its release date and time.

Ruleset version	License info	info
Version Man	agement	Latest release: 1.201 <u>Download the latest rules</u> Client agent: 2.24.3 <u>Download the latest installer</u> Manuals <u>Quick start</u> <u>Admin guide</u>
Source: Apache Apache	Version: 1.201 Download full ruleset	Download only updates Report a problem with this version Submit Ticket to support
LiteSpeed Nginx SIIS Nginx/ModSec_3.0	-21 14:09:12) .conf	Short description: GENERIO 218570 213030 213030 UPDATED, CVE-2019-9184, CVE-2019-9575, CVE-2019-9568, CVE-2019-6340, CVE-2018-19835, CVE-2019-9110, XSS vulnerability in Collabtive 1.3, XSS vulnerability in Font Organizer plugin 2.1.1 for WordPress, SQL vulnerability in WordPress Booking Calendar Plugin v8.4.3 for WordPress, XSS vulnerability in Geo Mashup Options plugin 1.1.1.4 for WordPress, XSS vulnerability in LightGallery plugin 1.0.3 for WordPress, XSS vulnerability in WP

- Click 'Download full ruleset'
- Navigate to "C:\Program Files\ModSecurity IIS" and save the .zip file
- Extract to "C:\Program Files\"
- Restart IIS

To check CWAF for protection, send the request as shown below,

http://your.server/?a=b AND 1=1

The following warning will be displayed:

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			H		-	· ·		2
rver Error in Application "D	EFAULT WEB SITE							
					net Inf		on Se	
Error Summary								_
HTTP Error 403.0 - ModSecurity	Action							
You do not have permission to view this	directory or page							
rou do not have permission to view ans	directory or page.							_
Detailed Error Information								
Madda Madenauto TTE (Scilita)	Demosted UDI	http://io.g./ 121.00//com/s/2-shot2000000	101-1					
Notification BeginRequest	Physical Path	C:\inetpub\wwwroot\joomla\	201 = 1					
Handler StaticFile	Logon Nethod	Not yet determined						
Error Code 0x00000000	Logon User	Not yet determined						
This is a generic 403 error and means the auth	enticated user is not authorized to view	v the page.						
Things you can try:								
Create a tracing rule to track failed requests for	r this HTTP status code. For more infor	mation about creating a tracing rule for failed request	s, click <u>here</u> .					
Links and More Information								_
This generic 403 error means that the authenticated user is n code does not exist, use the steps above to gather more infor <u>View more information as</u>	ot authorized to use the requested res mation about the source of the error.	ource. A substatus code in the IIS log files should indi	cate the reason for t	the 403	error.	If a su	ibstati.	15

To run the protection rules updates

- Go to the Start > Run > cmd.exe to open a command prompt
- Run system command:

cscript.exe "C:\Program Files\ModSecurity IIS\cwaf_update.vbs"

2.4. Use the Web Hosting Control Panel Plugin for Firewall Configuration

CWAF control panel plugins let you control the firewall using your favorite control panel.

Access the CWAF cPanel plugin

- Login to cPanel on your server
- Click 'Plugins' > "Comodo WAF"

Access the CWAF DirectAdmin plugin

- Login to DirectAdmin on your server
- Go 'Admin Level' > 'Extra Features' > 'Comodo WAF'

Access the CWAF Plesk plugin

- Login to Plesk on your server
- Click 'Extensions' > "Comodo WAF Plugin".

Access the CWAF Webmin plugin

- Login to Webmin on your server
- Click on 'Servers' > 'Comodo WAF'

The Comodo Web Application Firewall configuration screen appears:

Web Application Firewall | Free ModSecurity Rules from Comodo

Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard	
(Current rules version	1.183					Rules 1.202 is available
	CWAF plugin version	2.24.3 (Latest ver	sion)				
	Web Platform	Nginx					
	Nginx version	1.15.1					
Mod	_security compatible	e yes					
	Mod_security loaded	l yes					
	Mod_security conf	f /usr/local/cwaf//n	ginx/modsec2_	_nginx.conf			
	Found websites	not available yet					

The interface has eight tabs:

- Main Version number of the currently loaded rule set, Apache server, mod-Security status, and number of websites protected. See 'View CWAF Information' for more details
- Configuration View and edit CWAF configuration parameters. See 'Configure CWAF Parameters' for more details
- Security Engine Set up rules for the Mod_security option. See 'Manage Security Engine' for more details
- Userdata Manage custom user settings, such as user rules, Mod_security options, and currently loaded rule-sets. See 'Configure Userdata' for more details.
- Feedback Submit comments and suggestions on the product. See 'Send Feedback' for more details.
- **Catalog** Specify rules that should be excluded from your deployment. See 'Manage Catalog' for more details.
- **Protection Wizard** Enable/disable rules depending on the specific web applications installed on your server. See '**Protection Wizard**' for more details.

2.4.1. View and Update CWAF Information

- The 'Main' tab in the CWAF web host control panel plugin contains general version and compatibility information about your deployment.
- You can also download the latest rules from this interface

Web Application Firewall | Free ModSecurity Rules from Comodo

Main Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard	
Current rules version	1.183					Rules 1.20
CWAF plugin version	2.24.3 (Latest ver	sion)				
Web Platform	Nginx					
Nginx version	1.15.1					
Mod_security compatible	yes					
Mod_security loaded	yes					
Mod_security conf	/usr/local/cwaf//n	ginx/modsec2_	_nginx.conf			
Found websites	not available yet					

- Current rules version The rule set version that you have installed.
- CWAF plugin version The version of the plugin that you have installed.
- Web Platform The type of web server you have installed
- <webserver> version The version number of the web server you have installed
- Mod_security compatible States whether or not your web-server and version are compatible with the mod_security rules used by the firewall.
- Mod_security loaded States whether mod-security rules are currently active on your server
- Mod_security conf Location of mod_security configuration file for your web-server type.
- Found websites Lists the number of sites hosted on the web-server

Download the latest rule set version

- Login to cPanel on your server
- Click 'Plugins' > 'Comodo WAF' > 'Main'
- Click 'Rules X.XX is available' at the far-right of the screen

A confirmation message is shown:

CONFIRM	*				
Do you really want to update current rules version?					
Update	Cancel				
	11.				

• Click 'Update'.

The updater will automatically download and deploy the latest version of the rule set.

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Wait till the page has reloaded. The 'Current rules version' will update as follows:

Web Application Firewall | Free ModSecurity Rules

Main	Configuration	Security Engine	Userdata	Feedback	Catalog
C	Current rules versio	n 1.183			
	CWAF plugin versio	n 2.24.3 (Latest ver	rsion)		
	Web Platfor	m Nginx			
	Nginx versio	n 1.15.1			
Mod_	security compatib	le yes			

Update the CWAF plugin to the latest version

- Login to cPanel on your server
- Click 'Plugins' > 'Comodo WAF' > 'Main'
- Click 'Client X.X is available' at the far-right of the screen:

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Web Application Firewall | Free ModSecurity Rules from Comodo

Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard	cWATCH
С	urrent rules version	0					Rules 1.144 is available
C	CWAF plugin version	2.18					Client 2.19 is available
	Web Platform	Apache					

A confirmation is shown as follows:

CONFIRM	×				
Do you really want to update client?					
Update	Cancel				
	///				

Click 'Update'

The updater will automatically download and install the latest version of the plugin:

LOGGING	×
Updating client	
09/07/15 13:12:49 update-client[13659] create pid file 09/07/15 13:12:49 update-client[13659] Downloading file url=https://10.8.4.107 /doc/version.dat, save to file: /usr/local/cwaf/tmp/remote.dat 09/07/15 13:12:49 update-client[13659] User-Agent: CWAF_Client/2.10 (Apache/2.2.15; Webmin/1.750) Rules/1.59 09/07/15 13:12:49 update-client[13659] local client version = 2.10 09/07/15 13:12:49 update-client[13659] Available new client version 2.11 09/07/15 13:12:49 update-client[13659] Downloading file url=https://10.8.4.107/cpanel /cwaf_client_install.sh, save to file: /usr/local/cwaf/tmp/install/cwaf_client_install.sh 09/07/15 13:12:50 update-client[13659] User-Agent: CWAF_Client/2.10 (Apache/2.2.15; Webmin/1.750) Rules/1.59 09/07/15 13:12:50 update-client[13659] script file downloaded OK 09/07/15 13:12:50 update-client[13659] running install script 09/07/15 13:12:50 update-client[13659] Running update command: bash /usr/local /cwaf/tmp/install/cwaf_client_install.shupdatemode auto 09/07/15 13:12:54 update-client[13659] remove directory /usr/local/cwaf/tmp/install 09/07/15 13:12:54 update-client[13659] update succesful! 09/07/15 13:12:54 update-client[13659] update process finished!	

Restore the rule set to the previous version

- Login to cPanel on your server
- Click 'Plugins' > 'Comodo WAF' > 'Main'

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Click 'Restore rules' at the far-right of the screen:
 Main Configuration Security Engine Userdata Feedback Catalog Protection Wizard CWATCH
 Current rules version 1.144 (Latest version)
 CWAF plugin version 2.18 (Latest version)
 Wob Diatform Anache

A confirmation appears as follows:



Click 'Restore'

The agent will revert the last update and restore the previous version of the rule set in the Mod_Security firewall.

• You can view the update logs for the details on updates at:

/var/log/CWAF/utils.log

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2.4.2. Configure CWAF Parameters

The configuration tab lets you view and modify various CWAF settings.

Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard			
CWA	CWAF main configuration								
	Debug leve	l: 1 (Critical)							
	Log directory pat	n: (Var/log/CWAF							
	Debug lo	g: utils.log							
Co	onsider subdomains	s: 🖉							
Ca	onfiguration backu):					Backup configuration		
CWA	F credential	s							
	Cornodo Logii	n: cwaf@comodo.	com						
	Comodo Password	:							
		Update config							

CWAF main configuration

- Debug level The slider lets you set how comprehensively CWAF should log events.
 - The higher the level, the more types of event are captured. Default = 0 No events logged.
 - The following table is a rough guide to the events captured at each setting.

Level	Description				
0	No events are logged.				
1					
2	Only critical events are logged.				
3					
4					
5	CWAE logs all critical and non-critical socurity warnings				
6	CWAP logs all childer and non-childer security warnings.				
7					
8	Natifications of all types are logged				
9					
10	Every event is logged.				



- Log directory path Edit the location at which the CWAF log file is stored. (Default: /var/log/CWAF)
- Debug log The name of the log file (Default: utils.log)
- **Consider subdomains** Specify whether CWAF should log events on sub-domains of your domain. (*.domain.com)
- Configuration backup Save a copy of your current configuration. The backup covers debug level, log
 directory path, login credentials, userdata and excluded rules list. You can also restore your CWAF
 configuration if required.

CWAF credentials

- **Comodo Login** The user name of the CWAF account. This field is pre-populated with the username specified when installing the agent. If you have changed your credentials for any reason, then please enter them here so the CWAF agent can login and download the latest rule sets.
- Comodo Password The password for the CWAF account. See above.

Note: DirectAdmin users - The Feedback feature is only available if you have provided credentials in these fields.

• Click the 'Update config' button to save your changes.

CONFIRM		×			
Do you really want to save changes?					
Save Cancel					
Save	Calicer	/			

• Click 'Save' at the confirmation dialog to save your changes.

2.4.3. Manage Security Engine

- The 'Security Engine' tab lets you configure various settings related to your mod_security rules
- You can also disable mod_security on certain domains

Web Application Firewall | Free ModSecurity Rules from Comodo

Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard	
Mod	Security Co	nfiguration					
	,						
	Security Engine	: On	•				Disable domains
	Audit Engine	: On	•				
Set Re	esponse Body Limit	524288					
	Audit Log	. (var/log/CWAF/n	ginx/modsec_a	audit.log			
	Audit Log Storage	. (var/log/CWAF/n	ginx				
	Audit Log Type	: Serial 🔻]				
	Debug log	. war/log/CWAF/n	ginx/modsec_(debug.log			
	Debug Leve						
	Ŭ	9 (All))		
Re	quest Body Access	: On ▼					
	Data Dir	: /tmp					
	Temp Dir	: /tmp					
	PCRE Match Limit	250000					
PCR	E Match Recursion	: 250000					
		Undate confid					
		opuate comig					

Mod Security Configuration

- Security Engine
 - On Rules are active on the domain
 - Off Rules are turned off on the domain
 - Detect Only Rules will identify attacks but won't execute any actions (block, deny, drop, allow, proxy and redirect)
- Audit Engine Configure the behavior of the audit logging engine. (*Default: Relevant Only*). Available options:
 - On Activates audit logging for all transactions
 - Off Deactivates audit logging for all transactions
 - Relevant Only Logs transactions that have triggered a warning, error, or have a status code that is considered to be relevant.
- Set Response Body Limit Set the max. size of response body in bytes. This is useful to optimize the

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time that the web server waits to post a HTTP response.

When the response limit are over the specified size it will be rejected with status code 500 (Internal Server Error). (Default: limit = 524288 (512 KB). Max limit = 1 GB)

- Audit Log You can modify the path to the main audit log file (Default: /usr/local/apache/logs/modsec_audit.log)
- Audit Log Storage You can modify the path to the audit log storage directory (Default: /usr/local/apache/logs/modsec_audit)
- Debug log You can modify the path to the debug log file (Default: usr/local/apache/logs/modsec_debug.log)
- **Debug Level** Set the level of logging the CWAF events. (*Default: 0*). The following table shows the list of levels:

Level	Description				
0	No events will be logged.				
1	All errors (intercepted requests) will be logged.				
2	All Warnings will be logged.				
3	All Notifications will be logged.				
4	Details of how transactions are handled will be logged.				
5	As above but including information about each piece of information handled.				
6					
7					
8					
9	Log everything, including very detailed debugging information				

- **Request Body Access** Specify whether request bodies will be buffered and processed by mod_security. (*Default: On*).
- Data Dir Specify the path to the persistent data (e.g., IP address data, session data, and etc.) (Default: /tmp)
- Temp Dir Specify the directory for temporary files. (Default: /tmp)
- PCRE Match Limit Lets you set a limit to the maximum amount of memory/time spent trying to match sample text to a pattern in the PCRE library. (*Default: 250000*)
- PCRE Match Recursion Lets you set the match limit recursion in the PCRE library. (Default: 250000)

Disable/enable mod_security for individual domains

- Login to cPanel on your server
- Click 'Plugins' > "Comodo WAF"
- Click the 'Disable domains' button at the far-right side

The 'Disable domains' interface will display:

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- it to the 'Disabled' list
- Click "Apply Changes" to save your configuration
- Click 'Update Config' for your save your changes. The server will restart for your settings to take effect

Note: To disable all domains, it is better to use the On/Off switch in the 'Security Engine' page.

2.4.4. Configure Userdata

The userdata tab lets you create custom rules.

Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard
Custom I # Put yo # Pleas	Rules: our custom ModSi e don't remove thi	ecurity directives her s file	e		Put your cus Full commar	stom ModSecurity directives in this field. nd reference available here.
				10		

No userdata files found in current rule set!

To add custom user rules settings, download the latest rule set version. See **View and Update CWAF Information** for more details.

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Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard		
Custom I	Rules:							
# Put yo # Pleas	our custom ModS. e don't remove thi	ecurity directives her s file	re		Put your custom ModSecurity directives in this field. Full command reference available here.			
Whitelist	ed Agents:							
# Put yo	our User-Agent wh	itelist here			Put your whitelisted user-agents here (one agent per line). COMODO provides lists of blacklisted scanners (bl_scanners) and agents (bl_agents), but users are not allowed to modify them. If one of your legitimated agents is blocking by these lists then you should whitelist this user-agent here.			
Blocked	Agents:							
# Put yo	our User-Agent bla	icklist here			Put your blocked user-agents here (one agent per line). COMODO provides lists of blacklisted scanners (bl_scanners) and agents (bl_agents), but users are not allowed to modify them.			
Blocked	Extensions:	-						
# Put yo .asa/ .asax/ .ascx/ .axd/ .backup .bak/ .bat/ .cdx/ .cer/	our extensions bla	cklist here		•	Put file exte line). If you want t you can add	nsions which will be I to disallow serving of you restricted extens	olocked (one extension per files with some extension ions here.	
Restricte	ed Headers:							
# Put ye /Proxy-(/Lock-Te /Conten /Transla /if/	# Put your headers: # Put your headers blacklist here /Proxy-Connection/ /Lock-Token/ /Content-Range/ /Translate/ /it/				Put your restricted request headers here (one header per line). By default any request headers are allowed. If your want to block some request header then you should blacklist it here.			
	l	Save						



2.4.5. Send Feedback

The feedback tab lets you send comments and suggestion on the currently loaded rule set to Comodo. Our technicians will consider all suggestions and may use them to enhance the rule set for the next version.

Weh	Application	Firewall I	Free	ModSecurity	Rules	from	Comodo
AAGD	Application	rnewan	LIGG	Mousecurity	KUIG2	nom	Comodo

Main C	onfiguration	n Security Engine	Userdata	Feedback	Catalog	Protection Wizard	
Note: do	not expe	ct response on t	nis feedba	ck. To get s	upport pl	ease use our <u>Su</u> p	oport system or Forum
Rules ver	sion: 1.2	01					
id(opti	Rule onal):						
	Type: ru	le gives false positive	•				
Mes	sage:						
		Sand Foodbee	k				
		Send reedbad	ĸ				

- · Rules version The version number of the currently loaded rule set. This field will be auto-populated
- Rule id Enter the ID number of the specific rule upon which feedback is being provided. This field is
 optional
- Type Select the type of the issue to be reported from the drop-down
- Message Type your feedback in the 'Message' field
- Click 'Send feedback' to submit your feedback to Comodo

Your feedback is much appreciated. If appropriate, it will implemented in the next update.

Note: DirectAdmin users - The **Feedback** feature is only available if you have provided credentials in the **'Configuration'** section.

2.4.6. Manage Catalog

- The catalog tab lets you specify rules that should be excluded from the currently loaded rule set
- By default the catalog is empty
- The list of domains appears only after a rule set has been downloaded
 - See View and Update CWAF Information if you need help to do this.

Main	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard	
	Config:	Global config	v			Categories count: 9	Active categories: 6
Con	tent: categorie	es list (global)				Filter by [Item ID]:	Search By Rule ID

CATEGORIES

Item ID	Description	Groups	Status	Excl
Apps	Web Applications	7	ON	•
Bruteforce	Bruteforce Protection	1	<u>OFF</u>	•
Global	Global Protection	7	ON	•
HTTP	HTTP-Related Protection	4	ON	•
Outgoing	Preventing Information Reveal	8	OFF	•
PHP	PHP Protection	1	ON	
ROR	Ruby On Rails protection	1	OFF	•
SQL	SQL Protection	1	ON	
XSS	Cross Site Scripting	1	ON	

- **Config** The scope of the operation. You can configure rules for the entire server or per-domain.
 - The catalog can be managed on three levels: categories, groups and rules.
 - Click the links in the 'Item ID' column to navigate between levels

Categories - Column Descriptions						
Column Heading	Description					
Item ID	 Variable field. Depending on the level, this field may contain: A category name A group name A rule ID number Click the link in this column to move between levels. 					
Description	Brief information about the category, group or rule.					
Groups	The number of groups in the current category					
Status	States whether the rules in this category are enabled or disabled.Click this link to enable or disable					

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Excl			 Shows whether this section contains excluded (disabled) rules. Click the icon to display a list of disabled items in the category or group 			
	Controls	CATEGORIES, GROUPS, RULES	Lets you move one level up/down in catalog hierarchy.			

Rules that should not be executed can be excluded from categories/groups.

- Block an item in the 'GROUPS' level, to block all rule defined in that group.
- Block an item at the 'RULES' level, to exclude the selected rule ID from the current group.
- · Click 'Implement' to save settings. A confirmation window will be displayed:

CONFIRM	×
Changes list: Disable group Joomla (Apps) Disable rule 210210 (Global : Protocol) Enable rule 210210 (Global : Protocol) Disable rule 210210 (Global : Protocol) Enable rule 210210 (Global : Protocol) Disable rule 210210 (Global : Protocol)	
Implement current changes?	
Implement Cancel	1.

• Click 'Implement'

The 😑 icon will appear next to blocked items. To unblock a rule, click 🤤 again.

Filter and search options:

- Select the 'Config' drop-down to change scope (Global or Per-domain)
- Start typing in 'Filter by [Item ID]' field to search word or ID number on this page
- Click the 'Search By Rule ID' button to search rule by ID from 'Filter by [Item ID]' field
- Click
 to get a list of disabled (excluded) rules for this category or group

2.4.7. Protection Wizard

· The protection wizard tab lets you disable rules affecting web applications that are not installed on your

server. This helps to reduce server load.

- Though the functionality of this section is similar to the 'Catalog' tab, the protection wizard is faster way to view all categories, groups and rules. This allows you to create rules for on installed applications.
- Previously excluded rules for a particular category can also be imported here and added to the global exclude list.

Open the protection wizard to add excluded rules back into your configuration. See the 'Catalog' section for help configure the rule.

Catalog	Protection Wizard Categories count: 9 Active categories: 7 Changes count: 1
Please	Filter by [Item ID]:
Add ru choice	les you excluded before to current ?
	Yes Cancel

- Click 'Yes' to confirm the reinstatement
- Click 'Cancel' to review the full list and select the rules you want to enable

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Main Configuration Security Engine Userdata Feedback Catalog Protection Wizard							
Welcome to COMODO Protection Wizard							
Please check categories you like to protect.							
PHP protection							
Enable PHP protection on your server. Please check this checkbox if you like to protect PHP-based software on your server.							
- SQL protection							
Enable SQL protection on your server. Please check to enable SQL protection on your server.							
Enable Ruby on Rails protection on your server. Please check this if you like to enable Ruby on Rails protection.							
Cold Fusion protection							
Enable Cold Fusion protection on your server. Please check this checkbox to protect Cold Fusion on your server.							
WordPress protection							
Enable WordPress protection on your server. Please check this to enable WordPress protection.							
Joomla! protection							
Enable Joomlal protection on your server. Please check this checkbox to protect Joomlal							
Drupal protection							
Enable Drupal protection on your server. Please check this if you like to enable Drupal protection.							
Cacti protection							
Enable Cacti protection on your server. Please check if you like to turn on Cacti protection.							
ZeroCMS protection							
Enable ZeroCMS protection on your server. Please check this checkbox to enable ZeroCMS protection on your server.							
phpMyAdmin protection							
Enable phpMyAdmin protection on your server. Please check to enable phpMyAdmin protection.							
Block leakages of soft info							
Prevent revealing of info about your server software. Please check this checkbox to prevent revealing of sensitive information about installed software.							
LDAP protection							
Enable LDAP protection on your server. Please check this to enable LDAP protection.							
Do not allow scanners/crawlers							
Do not allow scanning of your web server. Please check this checkbox to prevent scanning of your server by various scanners/crawlers.							
Next >							

By default, all categories are enabled.

- You can enable/disable categories as required.
- Click the 'Next' button to open 'Categories', 'Groups' and 'Rules' in a tree structure.

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Mair	n Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard					
Pro	Protection Tree										
Pleas	se check Categori	ies/Groups/Rules	you like to	protect.							
+	SQL Protection										
+	Web Applications										
+	Cross Site Scriptin	g									
+	PHP Protection										
+	HTTP-Related Prot	tection									
+	Preventing Informa	tion Reveal									
+	Ruby On Rails prot	tection									
+	+ Bruteforce Protection										
+	Global Protection										

Click the expand/collapse button > beside a category/group/rule to enable or disable

Ma	in	Configuration	Security Engine	Userdata	Feedback	Catalog	Protection Wizard				
Pro Plea	Protection Tree Please check Categories/Groups/Rules you like to protect.										
+	₿s	QL Protection									
-	ΞV	Veb Applications									
	+ (In WordPress prote	ection								
	+ (WordPress Plug	ins protection								
	+ (Joomla! compor	nents protection								
	+ (WHMCS protect	tion								
	+ (Other apps prote	ection								
	+ (Joomla! protecti	ion								
	+ 6	Drupal protection	n								
+		ross Site Scriptin	g								
+	ØР	HP Protection									
+	■H	ITTP-Related Prot	ection								
+	₽P	reventing Informa	tion Reveal								
+	R	uby On Rails prot	ection								
+	B	ruteforce Protecti	on								
+	≡ G	Blobal Protection									
		< Back	Apply change	s							

Excluded rules are deselected in the list if you chose 'Yes' when opening the protection wizard.

• Enable or disable items as required then click 'Apply changes'.

A confirmation dialog appears:



×				
Apply your changes to global exclude list?				
Cancel	/			
	lobal exclude list? Cancel			

· Click' Apply' in the confirmation box to implement your choices to the global exclude list.

2.5. Use the Agent for Firewall Configuration

The agent allows Linux admins to manually download and deploy the latest version of the Firewall Rule Sets.

Update the rule set to the latest version

• Run the CWAF console tool (assuming Agent was installed to /opt/cwaf):

/opt/cwaf/scripts/updater.pl

You can view the update logs for the details on updates at:

/var/log/CWAF/utils.log

To check agent version, installed and available rules version and web platform run:

/opt/cwaf/scripts/updater.pl -v

To update agent to the latest version, run CWAF console tool (if Agent was installed at /opt/cwaf):

/opt/cwaf/scripts/update-client.pl

To check agent version, last available agent version and web platform run:

/opt/cwaf/scripts/update-client.pl -v

The administrator can assign these scripts to be run periodically as Cron jobs. To get more information see "How to set up a Cron job" section in your operation system manual.

The command line tool for protection rules management is supported for client agent version 2.3 and above. See the next section 'Command Line Utility' for more details.

2.6. Command Line Utility

New command-line utilities from Client version 2.3 and above is now supported for protection rule management that includes the following:

- Turn on/off all protection rules (mod_security) for domain.
- Enable/disable rules by ID for domain.

Usage:

./cwaf-cli.pl [arguments]

Arguments:

-h, --help - this help message

-g, --loglevel - set loglevel (1 - 10)

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- -v, --version show client version
- -I, --domain_list show list of domains
- -f, --force_domain apply domain even if it not found

Exclude rules:

-d, --domain - set domain for exclude operation (global exclude list if not specified)

-xa, --exclude_add [rule_ID1 rule_ID2...] - add rules to exclude list

- -xac, --exclude_add_cat [cat1 cat2...] add categories to exclude list
- -xag, --exclude_add_grp [grp1 grp2...] add groups to exclude list
- -xd, --exclude_del [rule_ID1 rule_ID2...] remove rules from exclude list
- -xdc, --exclude_del_cat [cat1 cat2...] remove categories from exclude list
- -xdg, --exclude_del_grp [grp1 grp2...] remove groups from exclude list
- -xl, --exclude_list show list of excluded rules
- -lc, --list_categories show list of categories
- -lg, --list_groups show list of groups

Disable/enable mod_security for domains:

- -dd, --disable_domain [domain1 domain2...] disable mod_security for domains
- -de, --enable_domain [domain1 domain2...] enable mod_security for domains
- -dl, --disabled_list show list of disabled domains

Examples:

Global disable of the rules by IDs: 230000, 230010 ./cwaf-cli.pl -ea 230000 230010

Enable rule ID 210700 for domain "mydomain.com:8080"

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./cwaf-cli.pl -ed 210700 -d mydomain.com:8080

Notes:

- · Command-line utilities located in script directory inside of CWAF install tree
- Domain name should be specified as it looks in plugin or result of "--domain_list" command
- · Use --force_domain to perform operations with domains not listed in --domain_list

2.7. Uninstall CWAF

Comodo Web Application Firewall is installed at the following default locations:

- /var/cpanel/cwaf for cPanel plug-in
- /usr/local/cwaf for Plesk, DirectAdmin, Webmin plug-in.

The uninstall path for standalone agent was defined by the administrator during installation of the agent.

Uninstall CWAF for cPanel

 Run the script 'bash /var/cpanel/cwaf/scripts/uninstall_cwaf.sh' You will be asked:

Do you want to remove Comodo WAF application from cPanel? Enter answer [y/n] y

Uninstall CWAF for DirectAdmin

• Run the script 'bash /usr/local/cwaf/scripts/uninstall_cwaf.sh'

You will be asked:

Do you want to remove Comodo WAF application from DirectAdmin? Enter answer [y/n] y

Uninstall CWAF for Plesk

• Run the script 'bash /usr/local/cwaf/scripts/uninstall_cwaf.sh'

You will be asked:

Do you want to remove Comodo WAF application from Plesk? Enter answer [y/n] y

Uninstall CWAF for Webmin

• Run the script 'bash /usr/local/cwaf/scripts/uninstall_cwaf.sh'

You will be asked:

Do you want to remove Comodo WAF application from Webmin?

Enter answer [y/n] y

Uninstall CWAF Agent (standalone mode)

Run the script 'bash <CWAF_INSTALL_PATH>/scripts/uninstall_cwaf.sh'

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You will be asked:

Do you want to remove Comodo WAF application?

Enter answer [y/n] y

Please don't forget to remove string "Include /opt/cwaf/etc/cwaf.conf" from file /etc/apache2/conf.d/modsec2.conf

and reload Apache. To do this:

- Remove the string 'include /opt/cwaf/etc/cwaf.conf' from the file '/etc/apache2/conf/modsec2.conf'
- Reload 'Apache'

The agent will be removed from the server.

2.8. Download and Install Rule Set Packages

Download the Rule Set

- Log-in to the web admin console at https://waf.comodo.com
- Ensure that the 'Rule set version' tab is opened
- · Click the 'Download latest rules set' shortcut link at the top-right to download the latest version directly

Web Application Fit	ewall	Welcome: cmail1@yopmail.com Logout
Ruleset version	CV License info	'E info
Version Mar	agement	Latest release: 1.202 <u>Download the latest rules</u> Client agent: 2.24.3 <u>Download the latest installer</u> Manuals <u>Quick start</u> <u>Admin guide</u>
Source: Release: Apache ~ 1.x	Version: 1.202 Downloa full rulese	d Download Report a problem Submit Ticket to support to support
List of rule files		Short description: CVE-2018-17377, CVE-2019-9576, CVE-2019-7327, CVE-2019-7328, CVE-2019-7330, CVE-2019-7332, CVE-2019-7336, CVE-2019-7337, CVE-2019-7344, CVE-2019-9107, CVE-2019-9109, CVE-2018-18712, CVE-2019-7344, CVE-2019-9107, CVE-2019-9109, CVE-2018-18712,

- If you want to download a selected version of the rule set
 - Select the source from the 'Source' drop-down
 - Select the version from the 'Select version' drop-down
 - Select the release number from the 'Select release' drop-down

The rule sets contained in the selected source version of the package will be listed under 'List of rule files' along with its release date and time.

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- If you are installing the rule set for the first time, click 'Download full rules set' to download the full set of the selected version.
- If you have already installed the previous version of the rule set and want to update it to the latest version, click 'Download only updates'

Your download will start.

Implement the firewall rule sets on to the server

- Extract the rule set package files and transfer them to a local server folder E.g. /opt/comodo/waf
- Modify Apache Web Server configuration to enable 'mod_security' module and include CWAF Rules.

E.g. for CentOs system edit the file /etc/httpd/conf.d/mod_security.conf:, to include the following configuration key:

Include /opt/comodo/waf/etc/cwaf.conf

• Restart the Apache service.

The rule sets in the package will be implemented immediately.

If you want to view or download the CWAF help guide, click the 'Manual' shortcut link at the top right.

2.9. Report Problems to Comodo

- Customer feedback plays a key role in developing and improving Comodo Web Application Firewall.
- The 'Report a problem' feature enables admins to post feedback and report problems on the currently loaded rule set and to notify us of any false positives.

Submit feedback

· Click the 'Report a problem' button at the upper-right:

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Ruleset version	CVE info				
Version Man	agement	Latest release: 1.202 <u>Download the latest rules</u> Client agent: 2.24.3 <u>Download the latest installer</u> Manuals <u>Quick start</u> <u>Admin guide</u>			
Source: Release: Apache · 1.x	Version: 2 1.202 Download tull ruleset Download crily updates	Report a problem with this version			
Error feedback Reason	Description				
rule gives false positive Describe system configuration, the problem details, logs Rule ID (optional) Describe system configuration, the problem details, logs Rule ID (optional) Image: State St					
Number only		e Send report			

- **Reason** Choose a subject for your feedback from the drop down menu.
- **Rule ID** You can enter the ID number of the specific rule upon which feedback is provided. This field is optional.
- Description Provide a brief information of the problem. If possible, please also provide system configuration details and event logs along with details of the problem.
- Click 'Send report' to submit to Comodo.

2.10. Submit Tickets to Comodo

Submit a support ticket

- Click the 'Submit a Ticket' button at the top-right
- Select 'WAF Support' then click 'Next'
- Select a priority, create a subject for your ticket and describe your problem
- Click 'Submit'.

3. Manage CWAF License

- 'License Info' tab lets you view license information at the Comodo Account Management (CAM)
- The interface also provides a shortcut to login to your CAM account should you need to renew or upgrade your license



COMODO Creating Trust Online*

Web Application Fir POWERED BY COMODO	ewall		Welcome: cwaf@comodo.com <u>Logout</u>	
Ruleset version	License info	C T CVE info		
Active licens	e			
License info				
License: License type: free Product name: COMODO Web Application Firewall License expired at: 2020-05-19 14:53 UTC				
Manage your CAM acco	unt			
Comodo Group, Inc. 2017. All rights reserved. All trademarks displayed on this web site are the exclusive property of the respective holders.				

- License The account authorization key.
- License type: The category of license free or paid.
- Product name The label of the product for which you have a license.
- License expired at The expiration date of the license.
- Manage your CAM account Navigates you to your account pages at https://accounts.comodo.com. The CAM interface allows you to renew or upgrade your license and to subscribe to other Comodo products and services.

For more guidance on renewing your license and subscribing for other products, please see the Comodo Accounts Manager online help guide at http://help.comodo.com/topic-211-1-513-5907—Introduction-To-Comodo-Accounts-Manager.html.

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Web Applica POWERED BY	tion Fire	vall					Welcome: cwaf@comodo.com <u>Logout</u>
Ruleset v	ersion	0	License info	CVE	CVE info		
Active lie	cense						
License inf	fo						
License: License type: fre Product name: (License expired Manage your CA	ee COMODO V at: 2020-0 AM accoun	Veb A 5-19	pplication Fire 14:53 UTC	wall			
COMO Creating Trust	DO t Online*	7					Welcome: CIVAE Text
Comodo Membership Comodo Web Application Firewall My Account Help Contacts Logout							
Your password is expired, please change it now							
Change Pa	ssword						
Please enter	New Pas	swor	ď				User Details
		sword	1*	•	•••••		Change Password Change Lock Out Time
Ne	New Pa:	sswo	rd *	Č A			Change Email/Billing email Addresses
Reente		New	Password *	-	All fields are case-sensitive		Credit Cards Management Subscription History
Submit							
							Request parent user

4. CVE Coverage Information

You can view without concealment information of a potential security vulnerabilities and exposure names to enhance capacity to remediate the problem.

The 'CVE info' interface consisting of two parts:

- 1. CVE information: CVE ID, CVE Creation and Update Date, CVE Description, CVE Related Links
- 2. CWAF information: whether or not CVE is covered by CWAF rules, CWAF rules that covered CVE and CWAF rules version that covers CVE

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Web Application Firewall POWERED BY COMODO	Welcome: cwaf@comodo.com <u>Logout</u>
Ruleset version 😭 License info	
Search for CVE	
Search ID cve-2013-0235 Search for CVE	Search
CVE ID CVE-2013-0235 Creation Date 12/06/2012 Update Date: 06/11/2015 Description The XMLRPC API in WordPress before 3.5.1 allows re conduct port-scanning attacks, by specifying a crafte (SSRF) issue. Link http://core.trac.wordpress.org/changeset/23330 http://codex.wordpress.org/Version_3.5.1 http://www.acunetix.com/blog/web-security-zone/wordpress.org/news/2013/01/wordpress-3-5-1 http://bugzilla.redhat.com/show_bug.cgi?id=904120	mote attackers to send HTTP requests to intranet servers, and d source URL for a pingback, related to a Server-Side Request Forgery <u>/</u> rdpress-pingback-vulnerability/
Rules Rule ID: 219000 Covered in version: 1.45	\checkmark
Rule ID: 240330 Covered in version: 1.45	\checkmark
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Access the CVE info

- Log-in to the web administration console at https://waf.comodo.com/
- Open 'CVE Info'
- Select the CVE ID from the 'Search for CVE' drop-down then click 'Search'

The description for each vulnerability or exposure and dedicated CWAF rules will be displayed.

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Appendix 1 - Identify Rule IDs for Exclusion

The administrator may wish to exclude some rules from the currently loaded rule set for various reasons, including:

- · The administrator does not need the protection offered by a specific rule for their web application
- · The rule is working incorrectly for their web sites

The rules to be excluded can be added to an exclusion list through the CWAF plug-in by specifying their rule IDs.

Please refer to the section Use the Web Host Control Panel Plugin for Firewall Configuration > 'Manage Catalog' for more details.

This section explains how to identify the Rule IDs of rules you want to exclude:

Step 1 - Identify the rule ID

Exclude a rule that is not needed (cPanel)

- Navigate to the directory /var/cpanel/cwaf/rules/ where rulefiles are stored and identify the rule(s) to be excluded.
- Open the rule file.

Example:

The rule file '/var/cpanel/cwaf/rules/cwaf_05.conf' is shown below:

SecRule REQUEST_HEADERS:Cookie "@rx (^|;)=(;|\$)" \

"id:220020,\ msg:'COMODO WAF: found CVE-2012-0021 attack',\ phase:1,\ deny,\ status:403,\ log"

Get the rule ID from the string.

In the example above, the rule ID is '220020'

Exclude a rule that is not needed (Plesk)

- Navigate to the directory /usr/local/cwaf/rules/ where rulefiles are stored and identify the rule(s) to be excluded.
- Open the rule file.

Example:

The rule file '/usr/local/cwaf/rules/cwaf_05.conf' is shown below:

SecRule REQUEST_HEADERS:Cookie "@rx (^|;)=(;|\$)" \ "id:220020,\ msg:'COMODO WAF: found CVE-2012-0021 attack',\ phase:1,\

deny,\

status:403,\



log"

• Get the rule ID from the string.

In the example above, the rule ID is '220020'

Exclude a rule that is not needed (standalone mode)

- Navigate to the directory '/opt/cwaf/etc/cwaf/' where rulefiles are stored and identify the rule(s) to be excluded.
- Open the rule file.

Example:

The rule file *"opt/cwaf/etc/cwaf/cwaf_05.conf"* is shown below:

SecRule REQUEST_HEADERS:Cookie "@rx (^|;)=(;|\$)" \

"id:220020,\

msg:'COMODO WAF: found CVE-2012-0021 attack',\

phase:1,\

deny,\

status:403,\

log"

- Get the rule ID from the string.
 - In the example above, the rule ID is '220020'

Alternatively, if you find a rule is behaving incorrectly for your web site, such as blocking certain web pages, you can identify the rule and extract the ID from the Mod_Security audit log available at /etc/httpd/logs/modsec_audit.log.

Example:

Message: Access denied with code 403 (phase 2). Pattern match "(?:< ?script [id "80148"] ... [severity "CRITICAL"]

In the example above the rule ID is "80148"

Step 2 - Exclude the rule

Use this ID to add the rule to the exclusion list, as explained in the section **Use the Web Host Control Panel Plugin** for Firewall Configuration > 'Manage Catalog.

Administrators can specify a single rule, a list of rules or a range of rules to be excluded.

About Comodo Security Solutions

Comodo Security Solutions is a global innovator of cybersecurity solutions, protecting critical information across the digital landscape. Comodo provides complete, end-to-end security solutions across the boundary, internal network and endpoint with innovative technologies solving the most advanced malware threats. With over 80 million installations of its threat prevention products, Comodo provides an extensive suite of endpoint, website and network security products for MSPs, enterprises and consumers.

Continual innovation and a commitment to reversing the growth of zero-day malware, ransomware, data-breaches and internet-crime distinguish Comodo Security Solutions as a vital player in today's enterprise and home security markets.

About Comodo Cybersecurity

In a world where preventing all cyberattacks is impossible, Comodo Cybersecurity delivers an innovative cybersecurity platform that renders threats useless, across the LAN, web and cloud. The Comodo Cybersecurity platform enables customers to protect their systems and data against even military-grade threats, including zero-day attacks. Based in Clifton, New Jersey, Comodo Cybersecurity has a 20-year history of protecting the most sensitive data for both businesses and consumers globally. For more information, visit comodo.com or our **blog**. You can also follow us on **Twitter** (@ComodoDesktop) or **LinkedIn**.

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