

# Web Application Firewall Operation Guide Product Documentation





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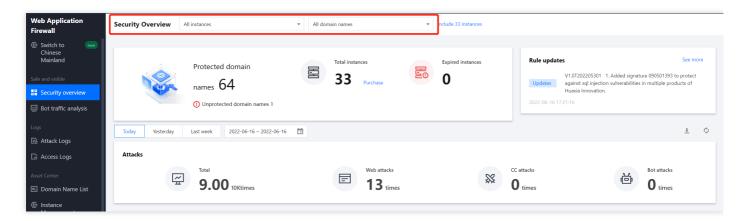
# Operation Guide Overview

Last updated : 2022-06-24 10:42:43

The Overview page allows you to get an overall picture of the security status of your domain name.

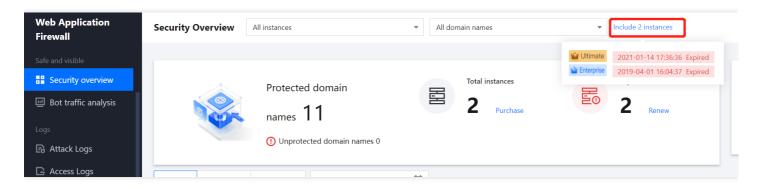
### Security Overview

- 1. Log in to the WAF console and select Overview on the left sidebar. Then open the Security Overview tab.
- 2. Select a domain name to view data that measures the security status of the domain name.



### Instance Overview

To view expired instances under your account, select a domain name and click Include x instances.





### **Rule Updates**

By clicking **See more** in the rule updates section, you can view WAF supported rules in detail.

Security Overview	All instances	All domain names	Include 33 instances		
	Protected domain names 64 O Unprotected domain names 1	Total instances 33 Purchase	Expired instances		See more 301 1. Added signature 090501393 to protect jection vulnerabilities in multiple products of ation.
Today Yesterday	Last week 2022-06-16 ~ 2022-06-16	â			<u>+</u> Ø
Attacks	9.03 10Ktimes	Web attacks 13 tim	25	CC attacks <b>0</b> times	Bot attacks <b>0</b> times

### Attacks Overview

#### All domain names

1. When "All domain names" is selected, all attack data are displayed. You can also set a time range to display data you want to see.

Web Application Firewall	Security Overview All instances  All domain names	
Switch to Chinese Mainland     Safe and visible     Security overview     Bot traffic analysis	Protected domain names 64 0 Unprotected domain names 1 Total instances 33 Purchase Total instances 33 Purchase Total instances 0 Purchase Parcel Purchase P	
Logs	Today         Yesterday         Last week         2022-06-16 ~ 2022-06-16         Image: Comparison of the comparis	¢
<ul> <li>Access Logs</li> <li>Asset Center</li> <li>M Domain Name List</li> </ul>	Attacks Total 9.03 10Ktimes Web attacks 0 times 0 times 0 times	

2. At the lower part of the page, you can view the following information including top 5 domain names by web attacks, top 5 attacker IPs, and top 5 domain names by CC attacks.



Top 5 domain names by web attacks	Top 5 domain names by CC attacks
ev	
· · · · · · · · · · · · · · · · · · ·	
2	No data yet
Top 5 attacker IPs	Types of attacks (%)
5	
206 2	
194 1	
94 - 1	
1. 1	<ul> <li>XSS Attack count: 5, percentage: 38.46%</li> <li>Web Application count: 4, percentage: 30.77%</li> <li>Invalid access count: 3, percentage: 23.08%</li> <li>Command Injecti count: 1, percentage: 7.69%</li> </ul>

#### **Field description:**

- Top 5 domain names by web attacks: It displays five domain names that suffer web attacks most frequently.
- Top 5 attacker IPs: It displays five IPs that initiate attacks most frequently.
- Top 5 domain names by CC attacks: It displays five domain names that suffer CC attacks most frequently.
- Top 5 requester IPs: It displays five IPs that send access requests most frequently.
- Distribution of attacker IPs: It displays how the attacker IPs distribute across regions.
- Types of attacks (%): It displays the distribution of the attack types.
- Types of browsers (%): It displays the distribution of the browser types.

#### Single domain name

1. When a specific domain name is selected, the corresponding attack data is displayed. You can also set a time range to display data you want to see.



Web Application Firewall	Security Overview	All instances	▼ All do	main names	٣	nclude 33 instances				
Switch to Chinese Mainland     Safe and visible     Security overview     Bot traffic analysis		Protected domain names 64 O Unprotected domain names 1	IEU	Total instances 33 Purchase	HS	Expired instances	Rule update Updates 2022-06-16 17	V1.0T202205301 1. Added signature 0905013: against sql injection vulnerabilities in multiple p Huaxia Innovation.	3 to prote	
Logs	Today Yesterday	Last week 2022-06-16 ~ 2022-06-16	ii -						Ŧ	¢
Access Logs	Attacks									
Asset Center 💌 Domain Name List 🕀 Instance	Ę	9.00 10Ktimes		Web attacks 13 times		**	CC attacks <b>0</b> times	of time		

2. At the lower part of the page, you can view the following information including top 5 attacker IPs, top 5 requester IPs and distribution of attacker IPs.



#### Field description:

- Top 5 attacker IPs: It displays five IPs that initiate attacks most frequently.
- Top 5 requester IPs: It displays five IPs that send access requests most frequently.
- Distribution of attacker IPs: It displays how the attacker IPs distribute across regions.
- Types of attacks (%): It displays the distribution of the attack types.
- Types of browsers (%): It displays the distribution of the browser types.

### **Overview of Security Analysis**



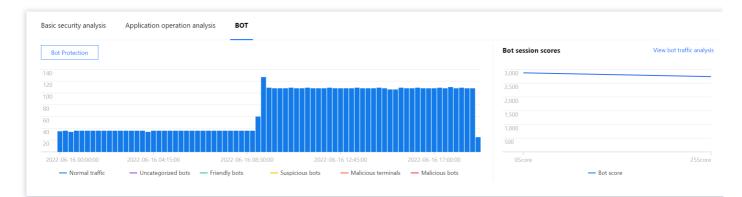
 Basic security analysis: It displays the number of web attacks on the selected domain name during the specified period.

	9		1
.8	2022-06-16 05:51:00		
.6	- Web attacks 1		
	CC attacks 0		
.4			
.2			

• Application operation analysis: It displays the QPS and bandwidth of the selected domain name on the left, and top 5 slowest pages and top 5 most visited pages on the right.

QPS Bandwidth				Peak QPS:3QPS	Page views	Top 5 slowest pages	Top 5 most visited page
3					/vul	-	322
2					/vas_cs	-	321
1.5			L BERE SIN DE LA DELLA DE LA SUBBLICE DE LA EST				
I I I I I I I I I I I I I I I I I I I	UNA JELANA MALINA INA JUATA MANAMALANA ANA ANA	ALLINNA HURUMAN ILAVAHLANAKAN KUNA	LA DE LE MENT METRI METRI DE LE LE LEURENNE DE LE LE		/ghost	-	320

• Application security analysis: It displays the bot information of the selected domain name during the specified period. To view more details, you can click View bot traffic analysis.



# SaaS WAF Connection Step 1. Add a Domain Name

Last updated : 2023-12-29 14:22:37

This document describes how to connect a domain name to SaaS WAF. Before using WAF to protect your web business, you need to connect the website to WAF; otherwise, WAF protection cannot take effect.

### Directions

- 1. Log in to the WAF console and select Asset Center > Domain Name List on the left sidebar.
- 2. Click Add domain name.
- 3. On the page that appears, configure the basic parameters.



Add domain name		>
Instance	SaaS CLB	
Domain name *	Please enter the domain name	
Server configuration	✓ HTTP 80 ▼	
	HTTPS	
Use proxy 🛈	● No     Yes Choose Yes if you are using proxies (Dayu, CDN or any other acceleration service)	
Origin address 🛈	O IP O Domain name	
	Enter up to 50 IPv4/IPv6 origin addresses separated by carriage returns	
Load balancing policy	O RR ○ IP hash	
Advanced settings▲		
Origin-pull connection	Short connection O Long connection Persistent connection is used for the origin server by default. You can change the connection method as needed	
Enable HTTP2.0 🕄	No Yes Please ensure that your origin server supports and enables HTTP2.0, or the configuration will downgrade to 1.1 even if HTTP2.0 is enabled	
	No Yes	

#### **Field description**

**Instance:** Select **SaaS** and the target instance on the right.

**Domain name**: Enter the domain name to be protected, such as saas.technicalsupport.cn .

Server configuration: Select a protocol and port as needed. For more port options, see Port Access.

Select the **HTTP** protocol and enter a port.

Select the **HTTPS** protocol and enter a port. Then, you need to configure the associated certificate, forced HTTPS redirection, and HTTPS forwarding method.

Associate certificate: Click **Associate certificate** and select a Tencent Cloud-managed or external certificate as needed.



Force HTTP redirect: To enable forced HTTPS redirect, you need to select both HTTP and HTTPS access protocols. HTTPS origin-pull method: Select an origin-pull method as needed: HTTP or HTTPS.

#### Note

For HTTP as an origin-pull method, you can specify a port for origin-pull. For HTTPS, the open port is also used for origin-pull.

**Proxy:** Select whether proxy services including Anti-DDoS and CDN are used based on the actual conditions. **Note** 

If you select Yes, WAF will get real client IPs, which may be forged, from the XFF field as the source IPs.

Origin address: Enter the IP or domain name as needed.

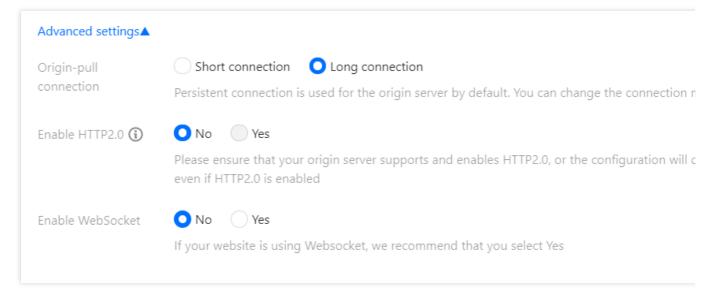
**IP:** Enter up to 20 IPv4 or IPv6 addresses and separate them with line breaks.

**Domain name:** Enter the origin domain name. Note that it must be different from the protected domain name.

Weighted round robin: Use this method when you set multiple origin server IPs for forwarding.

Load balancing policy: Select RR (default option) or IP hash as needed

4. After configuring the basic parameters, you can configure advanced parameters as needed. Click **OK** to save the settings.



#### **Field description**

Connection method: Persistent connection is used for forwarding by default. Make sure that the origin server

supports persistent connection; otherwise, even if persistent connection is selected, non-persistent connection will still be used.

**Enable HTTP 2.0**: Make sure that your origin server supports HTTP 2.0 and enable it; otherwise, even if HTTP 2.0 is enabled, it will be downgraded to 1.1.

Enable WebSocket: If your website uses WebSocket, we recommend you select Yes.

**Enable Health check**: The enterprise version and the above versions support the opening of the four-layer health check mechanism based on the return IP.

5. After the configuration, you can see the newly added domain name in the domain name list. The current page prompts that you haven't configured a CNAME record. You need to perform local testing and then modify DNS resolution.

8. Connection to SaaS WAF	Add domain name	Local test	Modify D	NS
E) Connection to CLB WAF	Configure a domain name, protocol (certificate), port, and an origin-pull algorithm and address How to add a domain name	Modify the local hosts file to route traffic from the accessed origin server to WAF so as to test WAF protection capabilities How to perform local tests	Modify the origin se all access traffic to V How to modify DNS	VAF
Add domain name glces	ni(waf_2kw49rmo00ggo ▼ Select an instance type ▼			
Domain name/Access st	atus <b>T</b> Instance information (i) Instance ID/name	Mode <b>T</b>	Protected origin-pull address 🛈	Bot

#### Note

WAF assigns a unique CNAME to each domain name added to WAF regardless of whether it is top-level or secondlevel.

### Subsequent Operations

After adding a domain name, you can proceed to the following steps:

- Step 2. Perform Local Testing
- Step 3. Modify DNS Resolution
- Step 4. Set a Security Group

# Step 2. Perform Local Testing

Last updated : 2023-12-29 14:23:09

This document describes how to perform local testing before modifying DNS records to ensure the service availability.

### Directions

DNS resolution is required when a local server accesses a website. Before DNS resolution, the IP address of the destination domain name will be obtained from the local hosts file. Therefore, you can modify the hosts file to direct local access traffic to WAF to test the connectivity between the website and WAF. This avoids direct modification of DNS records that may affect Internet users' access to the website.

1. Log in to the WAF console, select **Asset Center** > **Domain Name List** on the left sidebar. You can check the CNAME address of saas.technicalsupport.cn .

No CNAME records added 🗘	Rule engine: Block mode		Q
--------------------------	-------------------------	--	---

If you need to get the VIP address of the corresponding domain name, you can get it by pinging the CNAME address. i. In Windows, open Command Prompt.

ii. Run the command: ping <WAF CNAME address> .

C:\Use	ping
Pingin	
Reply Trom III	204. Dytes=32 time=oms litess
Reply from 111	254: bytes=32 time=6ms TTL=53
Reply from 111	254: bytes=32 time=7ms TTL=53
Reply from 111	254: bytes=32 time=7ms TTL=53
Ping	or 111 :
Fuckets, sent	= 4, $= 4$ , Lost $= 0$ (0% loss),
Approximate round	trip times in milli-seconds:
Minimum = 6ms	, Maximum = 7ms, Average = 6ms

iii. The ping command output will record the WAF IP address of the domain name, which is required for subsequent



operations.

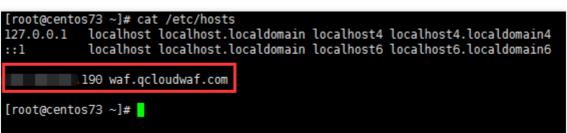
2. Modify hosts file.
In Windows, modify C:\\Windows\\System32\\drivers\\etc\\hosts by adding the following entry.
Format: VIP address + Domain name added to WAF
Note:

Here, 1.1.1.1 is a test address, and it should be the VIP address in actual use.

<ul> <li># be placed in the first column followed by the corresponding host name.</li> <li># The IP address and the host name should be separated by at least one</li> <li># space.</li> <li>#</li> </ul>
# Additionally, comments (such as these) may be inserted on individual # lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#
#
#
# localhost name resolution is handled within DNS itself.
# 127.0.0.1 localhost
# ::1 localhost
1.1.1.1 saas.technicalsupport.cn

In Linux, modify /etc/hosts by adding the following entry.

Format: VIP address + Domain name added to WAF

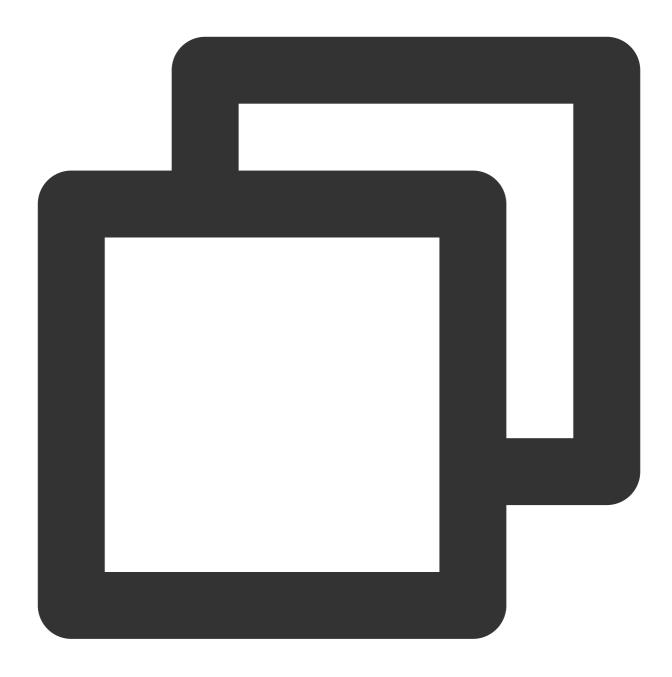


3. Test access.

Access the website from your local computer. If the website can be opened properly, the connectivity between the origin server and WAF is normal.

i. Enter the following URL in your browser to access:





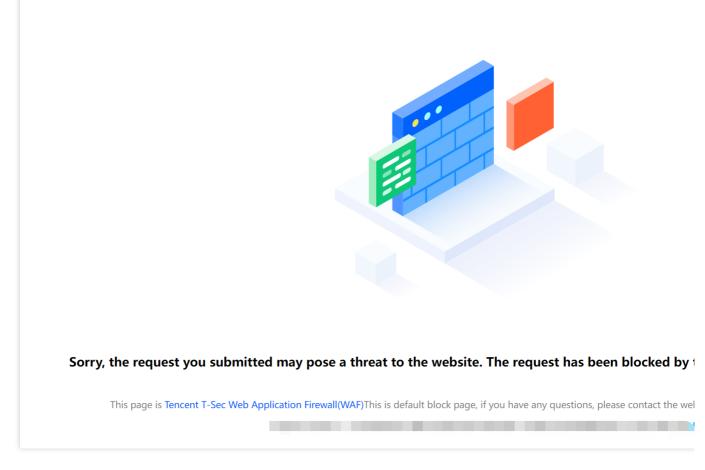
http:// saas.technicalsupport.cn/?test=alert(123)

ii. If the browser returns a block page, the WAF is working properly.

#### Note:

To view the block page, you can access the default WAF prompt.





### Subsequent Operations

After performing the local test, you can proceed as follows: Step 3. Modify DNS Resolution Step 4. Set a Security Group

# Step 3. Modify DNS Resolution

Last updated : 2023-12-29 14:23:24

This document will guide you how to modify the DNS resolution record, so that WAF can protect the traffic generated when public network users access your website.

### Directions

To protect the public network traffic to websites with WAF, you need to modify the DNS resolution record. The following uses waf.qcloudwaf.com as an example to describe how to modify its DNS resolution record on Tencent Cloud DNSPod.

1. Log in to the DNSPod console, click **My Domain** on the left sidebar, and then click **Resolve** on the right of the domain name .technicalsupport.cn to be accessed to WAF.

#### 2. Click Add Record.

3. Enter the information required on the configuration page.

Enter the host record of the website in the "Host Record". In this example, saas.technicalsupport.cn is added to WAF, so the host record is saas.

Select "CNAME" as the record type.

Enter the CNAME domain name assigned by WAF for the record value. In this example, the CNAME domain name format is xxxx.qcloudcjgj.com .

Click **Save** after filling in all the information.

4. When the modification is complete, DNS records will take effect and WAF will protect traffic accessing the website. Meanwhile, WAF will display **Normal Protection** on the console after detecting that the resolution of the protected domain name is normal.

#### Note:

DNS records will take effect in about 10 minutes.

### Subsequent Operations

After modifying your DNS resolution records, you can proceed to Step 4. Configure a Security Group.

# Step 4. Configure a Security Group

Last updated : 2023-12-29 14:23:51

This document will guide you to set a security group and allow only traffic from WAF to access websites.

### Directions

Security group is an instance-level firewall service provided by Tencent Cloud to control inbound and outbound traffic of CVM instances. You can configure a security group to allow only traffic from WAF to access your website,

preventing attackers from bypassing WAF and directly attacking your origin server.

The following uses allowing the WAF intermediate IP 111.230.27.90 in the security group as an example to describe how to configure the security group.

#### Note:

The intermediate IP can be viewed at Domain Name List in the WAF console.

1. Log in to the CVM console and click Security Group on the left sidebar.

2. Click **Create**. On the pop-page, select **Custom** for the template, enter the security group name (such as mysecurity-group) and remarks, and click **OK**.

<b>New secu</b> Template	rity group
Name	Enter the security group name
Project	DEFAULT PROJECT
Notes	
▼ Advance	d
Display tem	plate rule
	OK Cancel

3. In the security group list, find the newly created security group, and click its ID to enter its details page.

4. On the inbound rule page, click Add rule.

Security Group Rules	Associated Ins	stances
	Inbound rule	Outbound rule
	Add Rule	Import Rule Sort Delete
	Source (i)	Y Protocol Port (i)

5. In the pop-up window, select "HTTP (80)" as the type, enter the intermediate IP that needs to be allowed for the source, and enter the port and policy as required. After completing the settings, click **OK**.

Add inbound rule			
Туре	Source (j)	Protocol Port	Policy
HTTP (80)	▼ all	TCP:80	Allow
		+New Line	
		Complete Cancel	

6. Click the **Associate Instance** tab and click **Add Instance** on the CVM page.

Security Group Rules	Associated Instances	
	Products Cloud Virtual Machine (1) ENI (0) Tencer	וtDB (נ
	Add Instance Remove Selected	
	Instance ID/Name	

7. In the pop-up window, select the CVM instance to be bound to and click **OK**.

Add In	stance						
<b>i</b>			iple security groups, the oup is bound to the prin				tomatic
Project:	1.5	•					
	the name/ID/IP	the security group.	sg-kiisv i ol	Q		Instance ID/N	Netw
<b>-</b> 1	nstance ID/Na	Network	Primary IP	*e)			
<b>_</b>							
					$\Leftrightarrow$		
				-			
				•			
				ОК		Cancel	

Alternatively, you can go to the CVM instance list page to view or modify the security group bound to a CVM instance. On the list page, select the ID of the CVM instance whose security group you want to adjust and click **More** > **Security Groups** > **Configure Security Groups** in the **Operation** column on the right for configuration.

de 🔻	Project <b>Y</b>	Tag (key:value)	Operation	
	Default Project	$\bigcirc$	Log Ir More 🔻	
			Purchase similar	
			Instance Status	►
	Default Project	$\bigtriangledown$	Instance Settings	►
			Reinstall the System	
			Password/Key	►
	Default Project		Resource Adjustment	►
	Denduit Project	~	Create Image	
		Configure Security Groups	IP/ENI	►
		Port Verification	Security Groups	•
	Default Project	$\bigcirc$	OPS and Check	►

# Step 5. Verify the Configuration

Last updated : 2023-12-29 14:25:24

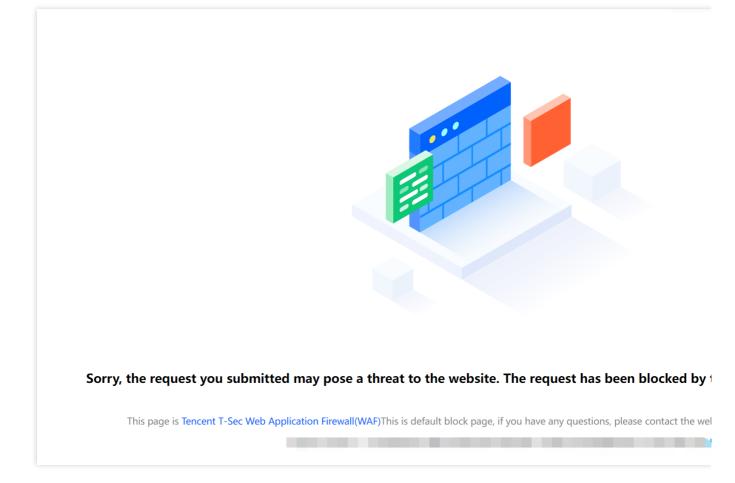
This document describes how to check whether the SaaS WAF is running.

### Directions

Bind a WAF instance via a domain name and origin server to protect traffic. To verify whether the SaaS WAF is effective, make sure that your local computer can normally access to the domain names on your SaaS WAF instances.
 Open <a href="http://saas.technicalsupport.cn/?test=alert(123">http://saas.technicalsupport.cn/?test=alert(123</a>) in a browser. If a block page is displayed, WAF protection works properly.

#### Note:

Please replace saas.technicalsupport.cn with your actual domain name.



# CLB WAF Connection Step 1. Confirm CLB Configuration

Last updated : 2023-12-29 14:25:46

This document describes how to confirm your CLB configuration prior to accessing CLB WAF.

### Directions

By associating domain names with a CLB listener, CLB WAF checks and blocks HTTP or HTTPS traffic passing through the listener. Before accessing CLB WAF, make sure that your website business has been deployed on Tencent Cloud and used Tencent Cloud CLB (previously Application Load Balancer) over the public network. **Note:** 

We recommend using SaaS WAF for website business not deployed on Tencent Cloud.

To ensure traffic forwarding, it is necessary to configure your CLB instance and associating your domain name with a listener. For more details, see Configuring an HTTP Listener and Configuring an HTTPS Listener.

Perform the following steps to view the CLB listener configuration. clb.technicalsupport.cn is used as an example.

1. Log in to the CLB console, and click Instance Management on the left sidebar.

2. Select a region and CLB instance. Click **Configure listener** on the right.

Billing Mode	Тад	Operation
Pay-as-you-go— traffic Created at 2022-05- 07 16:28	-	Configure Listener More 💌
Pay-as-you-go— traffic Created at 2021-07- 30 14:20	-	Configure Listener More 🔻

3. On the page displayed, click **Listener Management** to view the listener configuration details. In this example, the listener name is waftest , and the domain name is clb.technicalsupport.cn and is in "Not Enabled" status.

HTTP/HTTPS Listener		
Create		
— clbs(HTTP:80)	Domain Name Details	
+ Default Access	Domain Name	upport.cn
	Default Domain Name	Yes
	Domain Name Protection Status(j)	Not Enabled Go to Web Application Firewall (WAF)Learn More

### Subsequent Operations

After confirming your CLB configuration, you can proceed to the following steps:

Step 2. Bind Domain Name to CLB Instance

Step 3. Verify the Configuration

# Step 2. Bind Domain Name to CLB Instance

Last updated : 2023-12-29 14:26:03

This document describes how to bind a domain name to a CLB instance in the WAF console.

### Directions

1. Log in to the WAF console and select Asset Center > Domain Name List on the left sidebar.

2. On the domain name list page, click Add domain name, configure relevant parameters, and click OK.

nstance	SaaS	CLB			
omain name *	Please enter th	e domain name			
lse proxy 🛈	O No Ves	5			
	Choose Yes if you	u are using proxies (Dayu, C	DN or any other accelerat	tion service)	
hina	Chengdu	Guangzhou			
		5			
		-			
elect the correspo			Selected (0)		
	onding CLB listener to	o bind. If you need to	Selected (0)		
		o bind. If you need to tener on the right	Selected (0)	CLB ID/Name	Protocol port
	onding CLB listener to	o bind. If you need to		CLB ID/Name	Protocol port
	onding CLB listener t	o bind. If you need to tener on the right Q		CLB ID/Name	Protocol port
ancel the binding	onding CLB listener t	o bind. If you need to tener on the right Q		CLB ID/Name	Protocol port
ancel the binding	onding CLB listener t	o bind. If you need to tener on the right Q		CLB ID/Name	Protocol port
ancel the binding	onding CLB listener t	o bind. If you need to tener on the right Q		CLB ID/Name	Protocol port
ancel the binding	onding CLB listener t	o bind. If you need to tener on the right Q		CLB ID/Name	Protocol port

#### **Field description**

**Instance**: Select the CLB type and an instance name.

**Domain name**: Enter the domain name to be protected, such as clb.technicalsupport.cn .

**Proxy**: Select whether proxy services including Anti-DDoS and CDN are used based on the actual conditions. **Note:** 

If you select **Yes**, WAF will get real client IPs, which may be forged, from the XFF field as the source IPs.

Chinese Mainland regions: Select as needed.

Global regions: Select as needed.

CLB listener: Select as needed.

3. Click **OK** to return to the domain name list, where you can view the protected domain name

clb.technicalsupport.cn and the ID, name, VIP, and listener information of the CLB instance.

Add d	omain name All instances	▼ CLB	Ŧ							Q, ¢
	Domain name/Access status T	Instance information $(\hat{\mathbf{i}})$	Instance ID/name	Mode T	Protected origin-pull address ①	Bot	IPv6	WAF T	Access T	Operation
		CLB		Traffic mirroring mode						Edit Delete Basic protection BOT More 🔻
	-	CLB		Traffic mirroring mode						Edit Delete Basic protection BOT More 🔻

### Subsequent Operations

After the domain name is bound to a CLB instance, you can proceed to Step 3. Verify the Configuration.

# Step 3: Verify the configuration

Last updated : 2023-12-29 14:26:17

This document describes how to check whether the CLB WAF is running.

### Directions

1. By binding domain names to a CLB listener, WAF can protect traffic to the domain names passing through the CLB listener. To check whether the CLB WAF is running, ensure that your local computer can access the domain names added to different CLB instances.

#### Note:

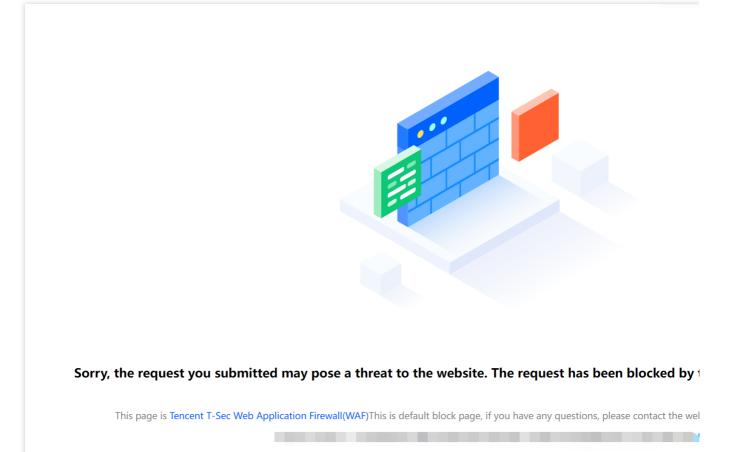
To check whether the access to domain names added in CLB is normal for IPv4 domain name requests, see Getting Started with CLB. For IPv6 domain name requests, see Getting Started with IPv6 CLB.

2. Open http://wow.qcloudwaf.com/?test=alert(123) in a browser.

#### Note:

wow.qcloudwaf.com is a sample domain name. Please replace it with the actual domain name that has been added.





# Asset Center Instance Management

Last updated : 2023-12-29 14:26:32

### Scenarios

This document describes how to view instances, and purchase and renew instances and extra packs in the WAF console.

### Directions

### Creating and viewing instances

1. Log in to the WAF console and select Asset Center > Instance Management on the left sidebar.

2. On the page displayed, click **Create instance** to switch to the purchase page where you can purchase instances as needed. For more details, see Purchase Guide.

Create instance All types	▼ Select a region ▼			Q Ø
Instance ID Instance name Region	Billing mode Instance type Explation time	Domain quota QPS quota	1/20 0/2500	Renew Upgrade Manage domain name More 🔻

3. On the instant management page, select an instance you want to view and click its instance ID.

All types	▼ Select a region ▼			Q
Instance ID Instance name Region	Billing mode Instance type Expiration time	Domain quota 📃 🧧 QPS quota	1/20 0/2500	Renew Upgrade Manage domain name More ▼

4. The details about the instance and the plan you purchase will be displayed. If you do not want to renew the plan, toggle off the switch



Instance details				×
Basic information				
Instance ID	Instance name		Region	
Status	Renew			
Pack information				
Plan		Expiration		
Instance		time		
type SaaS		Tag	None	
Domain pack	Domain quota			
0	1/20			
Purchase domain pack	-			
Extra QPS pack	Peak QPS		QPS quota	
0	0 qps		0/2500 qps	
Upgrade				
Bot protection				

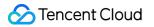
### Searching existing instances

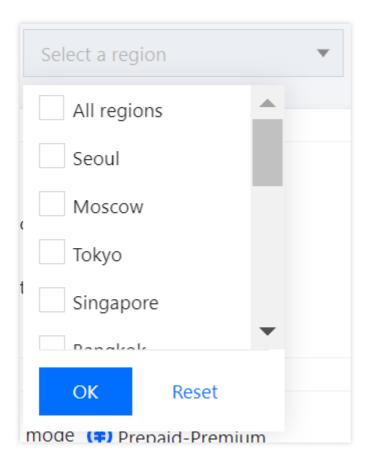
Searching WAF instances by region and instance type or keywords is supported.

1. Log in to the WAF console and select Asset Center > Instance Management on the left sidebar.

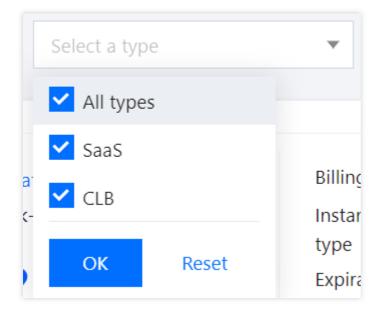
2. On the page displayed, you can search your WAF instances by region and instance type or keywords.

To filter WAF instances by instance type, you can click the drop-down list in the top left corner and select an instance type.





To filter WAF instances by region, you can click the drop-down list in the top left corner and select a region.



To search WAF instances by keywords, you can enter keywords in an instance ID, instance name or billing method.

Click to select a filter		ίQ	φ
Select a filter			
Instance ID			
Instance name	1/20	Renew	
Billing mode	0/2500	Upgrade Manage domain name	

#### Managing domain names

After you find the instance you want to view, you need to configure domain names for the instance.

1. On the Instance management page, click **Manage domain name** to switch to the domain name list page.

Instance ID Instance hk-Default e* name Region	Billing mode Instance Saas type Expiration time	Domain quota 📃 QPS quota	1/20 0/2500	Renew Upgrade Manage domain name More 💌
---	---	--------------------------	----------------	--

2. On the domain name list page, you can create, edit and delete a domain name. For more details, see Domain Name List.

### Renewing instances and purchasing extra packs

After you find the instance you want to view, you can check its plan expiration date and extra pack usage on the domain name list page.



Billing mode	😮 Prepaid-Ultimate	
Instance type	SaaS	
Expiration time	2022-06-12 11:42:53	Expire soo
Billing mode	😛 Prepaid-Ultimate	
Instance type	SaaS	
	2022-06-12 11:41:27	Expire soo

1. If the plan is about to expire, you can click **Renew** to renew it as needed. On the pop-up renewal page, select a validity period before clicking **Renew now**.

Instance ID	Billing mode	Domain quota 📃 QPS quota	1/20
Instance	Instance SaaS		0/2500
name	type		Manage domain name
Region	Expiration		More ▼
	time		

2. If your domain packs or QPS quota is about to run out, you can click **More** to display all billable items, and purchase a domain pack, an extra QPS pack, or the bot and application security service as needed. **Note:** 

If the instance or domain pack already expires, please renew it first before you purchase another one.

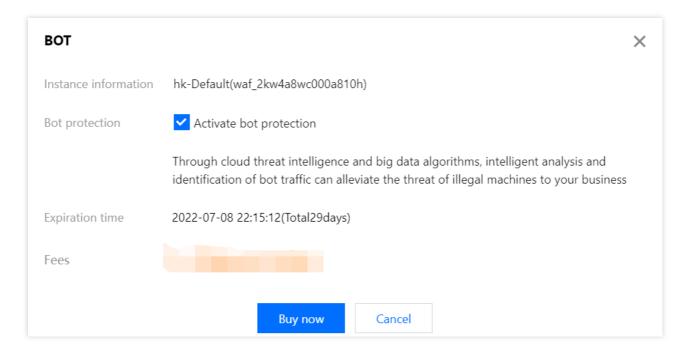
Purchase domain pack: Up to 500 packs can be purchased. After you specify the number of domain packs to purchase, click **Buy now**.

Extra domain pack	<
Quantity – 1 +	
Expiration time 2022-07-08 22:15:12(Total29days)	
Descripti Each extra domain pack contains 10 protected domain names, including 1 domain name on and 9 subdomain names. You can purchase up to 500 packs at a time.	
Fees Fees	
Buy now Cancel	

Purchase extra QPS pack: Up to 500 packs can be purchased. After you specify the number of extra QPS packs to purchase, click **Buy now**.

Extra QP	pack – 1 +
Extra QPS p	Dack — 1 +
Expiration 1	time 2022-07-08 22:15:12(Total29days)
Descripti on	or enable elastic QPS. Total QPS = Default QPS + Number of extra QPS packs * 1000 + Maximum elastic QPS. Each extra QPS pack provides 1,000 QPS, and 25 Mbps/10 Mbps of bandwidth for
Fees	
	Buy now Cancel

Bot and application security: Select the protection services as needed, and then click **Buy now**.



# Domain Name List

Last updated : 2023-12-29 14:26:48

# Scenarios

This document instructs you to manage your domain names in the WAF console.

## Directions

### Adding and viewing a domain name

- 1. Log in to the WAF console and select Asset Center > Domain Name List on the left sidebar.
- 2. On the page displayed, click Add domain name.
- 3. On the pop-up page, configure the required parameters and click **OK**.



Add domain name	
Instance	SaaS CLB
Domain name *	Please enter the domain name
Server configuration	HTTP 80 T
Use proxy 🛈	O No ○ Yes
	Choose Yes if you are using proxies (Dayu, CDN or any other acceleration service)
Origin address	IP Domain name  Enter up to 50 IPv4/IPv6 origin addresses separated by carriage returns
Load balancing policy	O RR ○ IP hash
Advanced settings▼	
OK Back	

4. On the domain name list page, click a domain name you want to view. The basic details of the domain name will be displayed.



Basic informati	ion	
Domain name		
Instance ID		
Instance name		
CNAME		
Domain name	content	
Access protocol		Protocol port
Use proxy		Load balancing policy
HTTPS forced jump		Enable WebSocket
Enable HTTP2.0		HTTPS origin-pull method
Origin IP		

### Toggling on protection switch

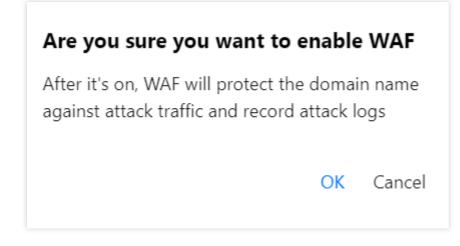
1. On the domain name list page, click the WAF switch



. A window will pop up to ask you to confirm your operation.

Domain name/Acces <b>T</b>	Instance information (i)	Instance ID/name	Mode T	Protected origin-pull address ③	Bot	IPv6	WAF T	Access <b>T</b>	Operation
	CLB c(HTTP:80)								Edit Delete Basic protection BOT More ▼

2. In the pop-up window, click **OK**. After the switch is on, WAF protection will take effect based on your custom policies and defense settings.



3. On the domain name list page, click the access logging switch



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. A window will pop up to ask you to confirm your operation.

Domain name/Acces <b>T</b>	Instance information ③	Instance ID/name	Mode T	Protected origin-pull address (j)	Bot	IPv6	WAF T	Access <b>T</b>	Operation
-									Edit Delete Basic protection BOT More ▼

4. In the pop-up window, click **OK**. When the switch is on, access traffic of the domain name will be recorded.

### Editing a domain name

1. On the domain name list page, select the target domain name and click Edit.

Doma	in name/Acces 🔻	Instance information (	Instance ID/name	Mode T	Protected origin-pull address ③	Bot	IPv6	WAF T	Access <b>T</b>	Operation
	-									Edit Delete Basic protection BOT More ▼
Total itome 1								20 👻 / n	ano 14 4	1 /1 name b bi



2. On the page displayed, modify the server configuration, proxy, and origin address, and click **OK** to save your changes.

Add domain name	
Instance	SaaS CLB
Domain name *	Please enter the domain name
Server configuration	HTTP 80 T
Use proxy 🚯	○ No ○ Yes Choose Yes if you are using proxies (Dayu, CDN or any other acceleration service)
Origin address 🕄	● IP ● Domain name
Load balancing policy	O RR ○ IP hash
Advanced settings▼	
OK Back	

### Deleting a domain name

1. On the domain name list page, select a domain name to delete and click **Delete** on the right.



	Domain name/Acces 🔻	Instance information ③	Instance ID/name	Mode T	Protected origin-pull address 🕄	Bot	IPv6	WAF ¥	Access <b>T</b>	Operation
										Edit Delete Basic protection BOT More 🔻
Total iter	ems: 1							20 💌 / p	age 🛛 🖌 🖣	1 / 1 page 🕨 🕷

2. In the pop-up window, click **OK** to delete the domain name.

Delete domain name		
Are you sure you want to delete t	he domain nan	ne?
OK	Cancel	

# **Advanced Connection Feature**

Last updated : 2023-12-29 14:27:04

This document instructs you to configure advanced features for domain names, such as traffic tagging, remote client address transfer and access logging, to meet your compliance requirements.

### Note:

Only WAF Enterprise, Ultimate, and Exclusive editions support advanced features.

# **Enabling Traffic Tagging**

Traffic tagging is used to tag a client request forwarded to the origin server by adding a custom field in the request header.

1. Log in to the WAF console and select Asset Center > Domain Name List on the left sidebar.

2. On the page that appears, select a domain name and click **More** > **Traffic tagging**.

Bot traffic analysis	Add domain name Select an instance V Select an instance	tance type							Q	¢
β	Domain name/Access status T Instance information ①	Instance ID/name	Mode T	Protected origin-pull address ①	Bot	IPv6	WAF T	Access ¥	Operation	
Attack Logs Access Logs				111.230.122.0/24 129.204.26.0/24 and so on 17 View					Edit Delete Basic protection BOT More T	
Domain Name List		100	Traffic mirroring mode	162.62.220.50					Edit Request source c BOT More	

3. In the pop-up window, click the checkbox

to enable traffic tagging, enter the required parameters, and then click  $\ensuremath{\textbf{Save}}$  .

### Field description:

Traffic tag name: Name of the traffic tag.

Traffic tag value: Value of the traffic tag.

4. After the configuration is complete, click **Back** to return to the Domain Name List page.

## Enabling Remote Client Address Transfer

Remote client address transfer is used to pass the IP address and source port of the previous hop to the backend when WAF forwards client requests to the origin server.



1. On the Domain Name List page, select a domain name. Click **More** > **Request configuration** on the right.

Bot traffic analysis	Add domain name Select an instance 💌 Select an instance	e type 🔻							Q	¢
ogs	Domain name/Access status T Instance information (i)	Instance ID/name	Mode T	Protected origin-pull address 🛈	Bot	IPv6	WAF T	Access T	Operation	
<ul> <li>Attack Logs</li> <li>Access Logs</li> </ul>				111.230.122.0/24 129.204.26.0/24 and so on 17 View					Edit Delete Basic protection BOT More T	
Asset Center		100	Traffic mirroring mode	162.62.220.50					Edit Request source c	

2. In the pop-up window, click the checkbox



to enable remote client address transfer. The real client IP and related information will then be recorded.

### **Enabling Log Service**

On the Domain Name List page, select a domain name and toggle on the access logging switch



. Access logs will then be recorded automatically, and used for quick retrieval and source-tracking analysis.

Add domain name         Select an instance            Select an instance					elect a filter		Q,	] (
Domain name/Access status <b>T</b> Instance information (1) Instance ID/name	Mode T	Protected origin-pull address 🛈	Bot	IPv6	WAF ¥	Access Y	Operation	
	Rule engine: Block mode						Edit Delete Basic protection BOT More ▼	

# **API Asset Management**

Last updated : 2023-12-29 14:27:23

# **API Asset Management**

API analytics helps find and manage open APIs and gather data for analysis and reporting on security events and traffic. Users are provided with risk mitigation recommendations and API lifecycle data to secure APIs.

# Prerequisite

You have activated a monthly subscribed WAF instance for the Chinese mainland and the API security service.

### Note

API analytics only supports 3 domain names in beta.

# **Enabling API Analytics**

1. Log in to the WAF console and enable API analytics in the following ways.

On the domain name list page, view domain names that have API analytics activated and toggle on the API analytics switch

. After a second confirmation is made, the switch will be turned on.

Add	domain name Select an instan	ce 🔹 Select the se	curity group statu: 💌				
	Domain name/Access stat $\mathbf{T}$	Access information (i) $\mathbf{T}$	Instance ID/name	Mode <b>T</b>	Intermediate address (j)	Bot	API secur

On the API assets page, select a domain name and click the switch ![](https:// qcloudimg.tencentcloud.cn/image/document/93d29184a41913b44f475e254684bc7d.png) in the API protection overview. 2. After the API analytics switch is toggled on for the domain name, you can analyze the API traffic.

# Viewing API Assets

When API analytics is on, API security will discover and capture traffic data, analyze and sort out business items, and display them on the API assets page.

The **API overview** section displays total APIs, active/inactive APIs in the past 7 days and sensitive APIs under the current domain name, as well as WoW changes, so that you can keep track of your APIs.

API status					API processin
Total APIs	Discovered APIs	Active APIs in th	7-day inactive A	Scenes	Confirmed
57	53		57	11	1

Field description

Total APIs: The total number of API assets identified.

7-day active APIs: The number of APIs with active traffic in the past 7 days.

**7-day inactive APIs**: The number of APIs with no active traffic in the past 7 days, which may potentially become zombie APIs.

Sensitive APIs: The number of APIs that contain sensitive fields.

**WoW**: Compares the API count 7-day period to the previous 7-day period.

The **API security** section displays the number of use cases covered by the domain name, recommended actions and the API analysis content.

Total APIsDiscovered APIsActive APIs in th7-day inactive AScenesConfirme575357111	API status					API processin
57 53 57 11 1	Total APIs	Discovered APIs	Active APIs in th	7-day inactive A	Scenes	Confirmed
	57	53		57	11	1

Field description

Use cases: The number of use cases covered by the current API.

**Recommended actions**: The actions recommended for API protection.

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In the API list, you can view information related to the API, including the request method, domain name, use case, sensitive fields, status in the last 7 days, recommended action, and the time when the API was discovered, and the time when the API parameters were last updated. To learn more details about the API, click **View details**.

API status					API processin
Total APIs	Discovered APIs	Active APIs in th	7-day inactive A	Scenes	Confirmed
57	53		57	11	1

Field description

**API**: The API content identified after normalization.

Request method: HTTP request method.

Domain name: The domain name of the current API.

**Use case**: The usage scenario identified by API control, such as verification codes and callbacks. If the result is inaccurate, corrections can be made in API details.

**Sensitive fields**: The sensitive content detected by API control during parameter transmission, such as bank card number and ID. If the result is inaccurate, corrections can be made in API details.

Active in the past 7 days: Whether the traffic was active in the past 7 days.

Latest update: The time that the fields of the API were last updated.

Detection time: The time when the API was first discovered by the API analytics module.

View details: The details of the corresponding API.

## **API** Details

To view details of the API, click **View details** in the **Operation column**. On the page that appears, you can view the following information:

**API information**: Displays the domain name, request method, tag, sensitive fields, whether the API is active, and the API content after normalization.

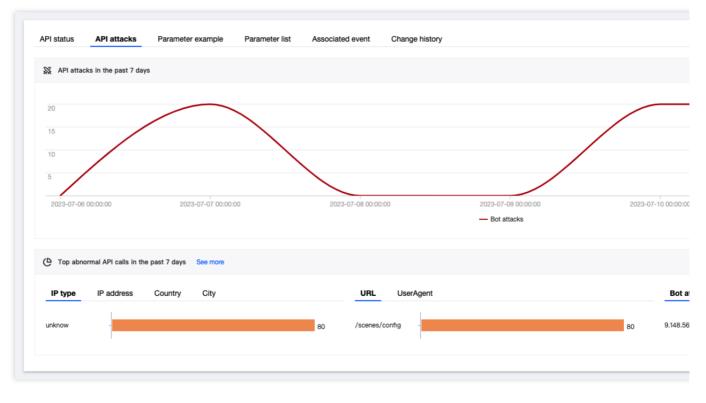
POST /sensitive/many	<b>/7</b> ൹			
Safe • Detected Taiwan EEP IME	HK/Macao SAR ID			
Domain name     hysni0419.testwaf.com	Security events	Number of requests	Sensitive Fields	Sensitive data traffi

**API overview**: Displays the total requests and request trend of the corresponding API, distribution of access sources, and the most visited URLs and UA types in the last 7 days.

20					
10					
5		2023-07-07 00:00:00			
2023-07-06 00:00:00	2023-07-07 0	- Access requests 20		023-07-09 00:00:00	2023-07-10
				Access requests	
Distribution of ADI a	alls in the past 7 days				
2 Distribution of API c	alls in the past 7 days See m	ore			
<ul> <li>Distribution of API c</li> <li>Access IPs 1</li> </ul>	alls in the past 7 days See m Most access types	ore The number of visited regions <b>1</b>	Most visited regions		
1		1		Country	
Access IPs 1		The number of visited regions <b>1</b> IP address	Most visited regions		
Access IPs 1 IP type		The number of visited regions 1		Country	
Access IPs 1 IP type		The number of visited regions <b>1</b> IP address	Most visited regions	Country	
Access IPs 1 IP type		The number of visited regions <b>1</b> IP address	Most visited regions	Country	

**API attacks**: Displays the attack trend and attack distribution of the API in the last 7 days, including the IP type and source, URL, UA, and attack type.





Request parameter sample: Displays the abstracted data of the API.

Pl status	API attacks	Parameter example	Parameter list	Associated event	Change history
Request g	generalization			IJ JSON view	罡 Response generalization
leader info	rmation				
accept		*/*			
connection	(	close			
content-len	gth (	0			
waf–custom Ibid	ize-	b-8x7ujgli			
Request inf	ormation				
protocol	,	HTTP/1.1			
status	(	615			
url	,	/scenes/config			

**Parameter list**: Displays the content and location of each parameter transmitted by the API. You can add marks to the information manually.

API status	API attacks	Parameter example	Parameter list	Associated event	Change history	
Parameter nam	е	Parameter ty <b>T</b>	Parameter Io <b>T</b>	Tag <b>T</b>		Source
content-length		int	headers			Request
connection		string	headers			Request
waf-customize-l	bid	string	headers			Request
accept		string	headers			Request
共4项						

# Basic Security Configurations Rule Engine

Last updated : 2023-12-29 14:27:43

This document describes how to configure protection rules in Web Application Firewall (WAF) to defend against web attacks.

## Overview

WAF uses a regex-based rule protection engine and a machine learning-based AI protection engine to defend against web vulnerabilities and unknown threats.

WAF's rule protection engine provides expert rule sets based on Tencent Security's accumulated web threat intelligence to automatically prevent OWASP top 10 attacks. Currently, it can defend against 17 categories of common web attacks, such as SQL injections, XSS attacks, malicious scanning, command injection attacks, web application vulnerabilities, WebShell uploads, non-compliant protocols, and trojans.

WAF's rule protection engine supports rule level configuration. You can set the rule protection level according to your actual business needs and enable or disable rule sets, individual rules, and preset rules. You can also use the allowlist of specified URLs and rule IDs to process false positives.

### Directions

### Viewing the rule category

1. Log in to the WAF console and select Service Management > Web Rule Library on the left sidebar.

2. On the **Protection rules** tab, you can view the descriptions and rule updates of the attack categories that WAF currently can defend against.

### Web Rule Library

No.	Attack type name	Number of rules	Web Rule Library
01000000	XSS Attack	245	Cross-Site Scripting (XSS) attacks are a type of injection, in which malicious scrip attacks occur when an attacker uses a web application to send malicious code, g Flaws that allow these attacks to succeed are quite widespread and occur anywh generates without validating or encoding it. An attacker can use XSS to send a m no way to know that the script should not be trusted, and will execute the script malicious script can access any cookies, session tokens, or other sensitive inform can even rewrite the content of the HTML page.
02000000	XSS Attack (Extended)	230	Compared with the standard rule set, the extended rule set of cross-site scripting stronger detection capabilities, but it needs to tolerate certain rule false positives
03000000	SQL Injection Attack	233	A SQL injection attack consists of insertion or "injection" of a SQL query via the in injection exploit can read sensitive data from the database, modify database data database (such as shutdown the DBMS), recover the content of a given file prese the operating system. SQL injection attacks are a type of injection attack, in whic affect the execution of predefined SQL commands.
04000000	SQL Injection Attack (E	219	Compared with the standard rule set, the extended rule set of SQL injection attac stronger detection capabilities, but it needs to tolerate certain rule false positive
05000000	Generic Attacks	226	Generic Attacks contains OS Command Injection Attacks, Coldfusion Injection, LD,
06000000	Generic Attacks(Exten	210	Compared with the standard rule set, the extended rule set of generic attacks ha detection capabilities, but it needs to tolerate certain rule false positives.
09000000	Known Exploits	1214	Known Exploits are mainly used to detect remote arbitrary code execution vulner traversal vulnerabilities, open redirect vulnerabilities, unauthorized access vulnera
	Bad Robot	55	Bad Robot detection is mainly used to detect malicious tools such as web scanne

### Attack categories that WAF currently can defend against include:

Attack Category	Attack Description
SQL injection attack	In the implementation of websites, the input parameters are not strictly filtered, resulting in the unauthorized acquisition of SQL database content.
XSS attack	XSS vulnerabilities occur when the application's new webpage contains untrusted data or data that is not properly validated or escaped, or when an existing webpage is updated using a browser API that can create HTML or JavaScript. XSS enables attackers to execute scripts in victims' browsers, hijack user sessions, destroy websites, or redirect users to malicious sites.



Malicious scanning	WAF can detect whether the website has been maliciously scanned.
Unauthorized access to core files	WAF can detect whether certain configuration files, database files, and parameter data are downloadable at will.
Open-source component vulnerability exploiting	Attacks caused by vulnerabilities in common open-source web components.
Command injection attack	This is a type of injection attacks, such as shell command injections, PHP code injections, and Java code injections, which can cause websites to execute the injected code if successfully exploited by attackers.
Web application vulnerability exploiting	Web application security (security of Java, ActiveX, PHP, and ASP code running on the web server).
XXE attack	If the XML processor has external entity references in the XML file, attackers can use external entities to steal internal files and shared files that use the URI file processor, monitor internal scanning ports, execute remote code, and implement denial of service attacks.
Trojan horse attack	WAF can detect the communication with the control terminal during or after trojan upload.
File upload attack	After a malicious script disguised as a file with a normal extension is uploaded, attackers can execute it through the local file inclusion vulnerability.
Other vulnerability exploiting	Attacks caused by the security configuration or vulnerabilities of the web server itself and other software.
Non-compliant protocol	Exceptions with HTTP protocol and header parameters.

3. You can view the rule updates on the right of the **Protection rules** tab. For more security notifications, please see Security Advisory.

### **Rule management**

1. Log in to the WAF console and select **Configuration Center** > **Basic Security** on the left sidebar.

2. On the page that appears, click **Web security**. On the **Rule engine** tab, you can enable individual rules based on domain names. All rules are enabled by default.

/eb sec	curity(440)	Access control(1) CC prot	ection Web tamper p	protection Data leakage prevent	ion	
Rule en	gine	Defense mode: Obser	ve mode 🛛 🔘 Block mode	Defense level: Strict <b>v</b> M	alicious file detection: ON	o 🔾 Yes
Ba	atch enable	Batch disable Select a rule le	rel 😢			Click to select a f
	Rule ID 🗘	Attack type	Rule level	Rule description	CVE number	Last modified 🗘
	17 🖸	Open-Source compon	Open-Source component vulnerability	Prevents the remote code exe	cution (RCE	2022-06-07 14:19:19
	19 🗖	SQL injection attack pr	SQL injection attack preve	ntion Blocks the attributes of the att	acks throu	2022-06-07 14:19:19
	20 🖻	SQL injection attack pr	SQL injection attack preve	ntion Blocks the attributes of the att	acks throu	2022-06-07 14:19:19
	73 🗖	SQL injection attack pr	SQL injection attack preve	ntion Detects certain sensitive functi	ion invocati	2022-06-07 14:19:19
	87 🖻	SQL injection attack pr	SQL injection attack preve	ntion Detects the attributes of using	the IF func	2022-06-07 14:19:19
	93 🖻	SQL injection attack pr	SQL injection attack preve	ntion Detects the attributes of using	the CASE	2022-06-07 14:19:19
	106526 🗖	File upload attack prev	File upload attack preventi	on Prevents file upload attacks by	v blocking s	2022-06-07 14:19:19
	256526 🛅	Open-Source compon	Open-Source component vulnerability	Prevents CVE-2014-6271 Bash	Shellshock CVE-2014-62	2022-06-07 14:19:19
	273591 🛅	Open-Source compon	Open-Source component vulnerability	Prevents CVE-2014-7169 Bash	Shellshock CVE-2014-71	2022-06-07 14:19:19
	2421701 <b>屆</b>	Common CMS vulnera	Common CMS vulnerabilit	y Prevents the local file inclusion	n vulnerabil	2022-06-07 14:19:19

3. You can search in the rule set by specifying the rule level, defense level, rule ID, attack category, or CVE number to view specific rules and perform operations.

#### Note:

The level "Strict" covers rules of the level "Normal" and "Loose", and "Normal" covers "Loose".

Web security(440)	Access control(1)	CC protection	Web tamper	protection	Data leakage pre	evention	
Rule engine	Defense mod	le: Observe mode	O Block mode	Defense level	Strict 🔻	Malicious file detection: ONO O Yes	
Batch enable	Batch disable	Select a rule level	▼				Click to select a filter

### Rule allowlist and false positive processing

1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.

2. On the basic security page, click **Web security**. On the "Rule engine" tab, you can add domain name URLs and rule IDs to the allowlist and process false positives.

3. On the **Rule engine** tab, select the target rule, click **Add to allowlist**, and the custom rule adding window will pop up.



	17	Б	Open-Source compon	Open-Source component vulnerability	Prevents the remote code execution (RCE	 2022-06-07 14:19:19
	19	Б	SQL injection attack pr	SQL injection attack prevention	Blocks the attributes of the attacks throu	 2022-06-07 14:19:19

4. In the pop-up window, configure relevant parameters and click  $\ensuremath{\text{OK}}$  .

Add to allowlis	t	
Allowed rule ID	17	
Match method	Exact match	~
URL	Exact match	
	Prefix match	o to 128 characters (case insensitive)
Enable allowlist	Suffix match	
		ОК Васк

### **Field description**

Rule ID: ID of the rule that needs to be allowed. You can add one rule ID for each policy.

Match method: Match method of the URL to be allowed. You can select "Exact match" (default value), "Prefix match", or "Suffix match".

URL: URL path to be allowed. The URL must be unique under one domain name.

Enable allowlist: It controls whether to enable allowlist, which is disabled by default.

5. After the allowlist is configured, click **View allowlist** to view the allowed rules and perform relevant operations.

Allowed rule ID     Match method     Match URL     On/Off       17     Evad match     /E     On/Off	Add rule Delete Each dom	ain name supports up to 500 rules			
17 Evert metch /E	Allowed rule ID	Match method	Match URL	On/Off	Las
	17	Exact match	/1		202

### Field description:

Rule ID: ID of the rule added to the allowlist, which can be obtained through attack logs or rule management.



**Match method:** Match method of the URL to be allowed. You can select "Exact match" (default value), "Prefix match", or "Suffix match".

**URL:** URL path to be allowed. The URL must be unique under one domain name.

Enable allowlist: It controls whether to enable allowlist.

Last modified: The last time the rule was added or modified.

**Operation:** It allows you to edit or delete a rule.

Click Edit, modify relevant parameters, and click OK.

Click **Delete** and confirm the deletion.

# **IP Blocking Penalty**

Last updated : 2023-12-29 14:30:37

This document describes Web Application Firewall (WAF) attacker IP penalty, which can quickly block malicious attacker IPs and defeat attacks and threats from malicious scanners, proxies and webs to improve defense efficiency.

### Overview

Attacker IP penalty can automatically block repeated web attacks the client IP suffered in a short period of time. You can view attack logs for attack details.

## Prerequisites

You have purchased a WAF plan.

You have added a protected domain name, and ensured the domain name is in normal protection. For detailed directions, see Getting Started.

Currently, IPs can be blocked by domain name. Domain names can have different blocking durations, which are calculated separately.

## Directions

1. Log in to the WAF console and select **Configuration Center** > **Basic Security** > **Web Security** on the left sidebar.

2. On the web security page, select the target domain name in the top-left corner and click



next to IP blocking to enable IP blocking.



Rules SaaS	Access control	CC protection	Web tamper protection	Data leakage prevention API protection	Block page	
					O Default O Select a block page	<ul> <li>Apply Add Delete</li> </ul>

#### 3. On the web security page, click

ά

next to IP blocking to modify default parameters and click OK.

IP blocking settin	g
Web attacks <b>*</b>	- 2 <b>+</b>
	Web attacks include all types of attacks in the rule engine. Range: 2-100 times
Detection duration *	<b>-</b> 60 <b>+</b>
	Enter a detection duration in minutes (1-60)
Blocking duration *	- 5 <b>+</b>
	Value range: 5-360 minutes

#### **Field description:**

**Web attacks**: It records the number of web attacks from a malicious IP in a specified period. The attacks will trigger the rule engines against web attacks excluding AI engine, custom policies and CC protection.

**Detection duration**: It specifies the duration to detect the attacker IP.

Blocking duration: It specifies the duration to block the attacker IP.

# Access Control

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# Overview

Access control rules allow you to control access from public network users by matching HTTP message sections such as request path, GET parameters, POST parameters, Referer, and User-Agent. This feature enables Tencent Cloud users to respond flexibly with a combination of rules to easily block various cyber attacks.

### Note:

Each rule can contain up to 5 conditions.

Conditions in each rule are evaluated using a logical AND, that is, the rule does not take effect unless all the conditions are matched.

Each rule supports four actions: Block, CAPTCHA, Observe, and Redirect.

Block: Enables WAF to block access requests that hit the specified rule.

CAPTCHA: Enables WAF to verify access requests that hit the specified rule.

Observe: Enables WAF to observe access requests that hit the specified rule.

Redirect: Enables WAF to redirect access requests that hit the specified rule.

Priority: The value range is 1-100. A smaller number represents higher priority.

### Example

### Example 1: Banning specific IP addresses from access to a designated site

To ban specific IP addresses from access to a designated site, the webmaster can perform configuration with the following steps:

1. Log in to the WAF console and click Configuration Center > Basic Security on the left sidebar.

2. On the basic security page, select the target domain name in the top-left corner and click Access control.

Web Application Firewall	Basic Security		¥	
Switch to Chinese new Mainland	Rules SaaS			
Safe and visible	Web security rules	Access control	CC protection	Web tamp
Security overview				
Bot traffic analysis				
Logs	Web security(447)	Access control CC protection	Web tamper protection	Data leakage prevention
R Attack Logs	Perious I blashing			
Access Logs	Regional blocking	Select No selections		
Asset Center				
🚾 Domain Name List				
Instance Management	Add rule Cop	Each domain name supports up to 50	rules	
Configuration Center	Rule ID 🕈	Rule name	Match condition	Action <b>T</b>
Basic security				

3. On the access control page, click **Add rule**, and the rule adding window will pop up.

4. Enter the name of the rule (e.g. "001"), select an option (such as "source IP") for **Field**, select "Match" for **Logical operator**, and enter the source IP (e.g. 192.168.1.1) banned from access for **Content**. Then select an action (e.g. "Block"), and click **OK** to save the rule.

ile name *	001				
atch method *	Match field	Matched parameter	Condition	Match content	Operation
	Source IP 🔹	No available select	Match 💌	192.168.1.1	Delete
				Add Add up to 5. 4 more allowed	
tion *	Block 💌				
d time *	Permanent 🔻				
ority *	- 50 +				

#### Note:

WAF access control rules allow you to use masks to control access requests from source IPs within a range. We can enter a specific IP address range (e.g. 10.10.10.10/24) in **Content**.

5. Now, the rule will take effect immediately, and block all HTTP access requests from specific source IPs.

Rule ID 🕈	Rule name	Match condition	Action <b>T</b>	Creation time 🗘	Priority \$	Expiration time 🗘	On/Off ▼	Operation
1100136075 1	001	Source IP,Match,192.168.1.1	Block	2022-06-08 18:25:31	50	Permanent		Edit Delete

### Example 2: Banning public network users from access to specified Web resources

If the webmaster does not want a public network user to access specified web resources, such as administration backend /admin.html, he or she can configure as follows: select "Request Path" for **Field**, select "Equal to" for **Condition**, enter /admin.html in **Content**, select "Block" for **Action**, and click **OK**.

ule name *	002			
∕latch method ∗	Match field Matched para	meter Condition	Match content	Operation
	Request path   No available	e select Equal to 💌	/admin.html	Delete
			Add Add up to 5. 4 more allowed	
ction *	Block •			
id time *	Permanent 💌			
riority *	- 50 +			

### Example 3: Banning an external site from hot-linking certain resources

To block hotlink attacks by external sites, such as www.test.com, the webmaster can use access control rules to capture and block the Referer in a hotlink request. The configuration is as follows: select "Referer" for **Field**, select "Include" for **Condition**, enter www.test.com in **Content**, select "Block" for **Action**, and click **OK**.



Rule name *	003				
Match method <b>*</b>	Match field	Matched parameter	Condition	Match content	Operation
	Referer 💌	No available select	Equal to 🛛 🔻	www.test.com	Delete
				Add Add up to 5. 4 more allowed	
Action *	Block 💌				
End time *	Permanent 🔻				
Priority *	- 50 +				

### Example 4: Copying rules to target domain names

You can copy the rule you configured to other domain names by using the copy operation.

- 1. Log in to the WAF console and click **Configuration Center** > **Basic Security** on the left sidebar.
- 2. On the basic security page, select the target domain name in the top-left corner and click Access control.

Web Application Firewall	Basic Security		Ŧ	
Switch to Chinese Mainland	Rules SaaS			
Safe and visible	Web security rules	Access control	CC protection	Web tamp
Security overview				
Bot traffic analysis				
Logs	Web security(447)	cC protection	Web tamper protection	Data leakage prevention
R Attack Logs	Device of blocking			
Access Logs	Regional blocking Regional blocking () Se	elect No selections		
Asset Center				
📧 Domain Name List				
Instance Management	Add rule Copy	Each domain name supports up to 50	rules	
	Rule ID 🕈	Rule name	Match condition	Action <b>T</b>
Configuration Center				
Basic security				

3. On the access control page, select the required policy, click **Copy**, and the custom policy copy window will pop up.



Add rule Copy	Each domain name sup	ports up to 50 rules				Select a filter		Q ¢
✓ Rule ID \$	Rule name	Match condition	Action <b>T</b>	Creation time 🕈	Priority <b>\$</b>	Expiration time 🗘	On/Off ▼	Operation
<ul> <li>T</li> </ul>	003	Referer,Equal to,www.test.com	Block	2022-06-08 18:29:23	50	Permanent		Edit Delete
-	001	Source IP,Match,192.168.1.1	Block	2022-06-08 18:25:31	50	Permanent		Edit Delete

4. In the pop-up window, select a domain name and click **OK** to copy the rules to the target domain name.

overwritten and updated forcibly.			
Please select a domain		Selected (1)	
	Q	Domain name	
- Domain name			
✓ pst(		ps.	e
	-		
com			
		$\leftrightarrow$	
, dos.com			
	-		

# **Region Blocking**

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# Overview

You can add regions to the blocklist to block all access sources from the specific regions.

## Directions

1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.

2. On the basic security page, select the target domain name in the top-left corner and click **Access control**.

3. On the access control page, click **Edit** next to the region being blocked.

Web security(542)	Access control(1)	CC protection	Web tamper protection	Data leakage prevention	API security(3)
Regional blocking		selections			
	Select	selections			

4. In the pop-up window, select the target region and click **OK**.

Select reg	gion	
China	O All	Select a province (an autonomous region) and a city
Overseas		Select a country/region
		OK Cancel

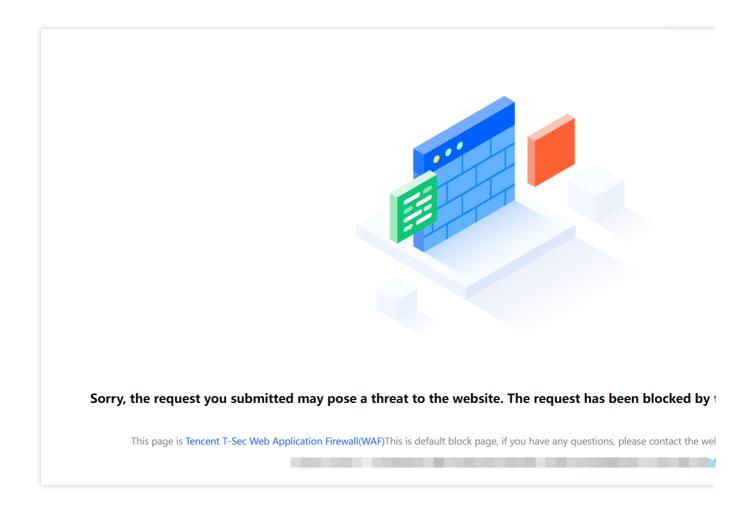
#### 5. After saving the change, click





Web security(542)	Access control(1)	CC protection	Web tamper protection	Data leakage prevention	API security(3)	
Regional blocking						
Regional blocking 🗊	Edit Chi	na Overseas				

6. Now you will be unable to visit your website from any of the blocked regions. For example, if you block all foreign regions, and visit a WAF-protected website with an overseas IP address, WAF will notify you that you have been blocked with an error page as shown below:



### **Supported Regions**

The following regions are supported:

China

Region

Province/City/Autonomous Region



East China	Shandong, Jiangsu, Anhui, Zhejiang, Fujian, Jiangxi, Shanghai
South China	Guangdong, Guangxi, Hainan
Central China	Hubei, Hunan and Henan
North China	Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia
Northwest China	Ningxia, Xinjiang, Qinghai, Shaanxi, Gansu
Southwest China	Sichuan, Yunnan, Guizhou, Tibet, Chongqing
Northeast China	Liaoning, Jilin, Heilongjiang
Hong Kong, Macao and Taiwan	Hong Kong, Macao and Taiwan

### Other countries and regions

Continent	Country/Region
Asia	Azerbaijan, Armenia, Afghanistan, Bangladesh, Bahrain, Brunei, Bhutan, Cyprus, Cambodia, Timor-Leste, Georgia, Guernsey, India, Indonesia, Iran, Israel, Iraq, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Laos, Morocco, Mongolia, Myanmar, Maldives, Oman, Nepal, Palestine, Pakistan, Philippines, South Korea, Qatar, Sri Lanka, Syria, Saudi Arabia, Singapore, Thailand, Türkiye, Tajikistan, Turkmenistan, United Arab Emirates, Uzbekistan, Vietnam, Yemen, North Korea
Europe	Austria, Albania, Andorra, Belgium, Bulgaria, Belarus, Bosnia and Herzegovina, Czech Republic, Croatia, Denmark, Estonia, France, Finland, Faroe Islands, Germany, Greece, Gibraltar, Hungary, Italy, Ireland, Iceland, Isle of Man, Jersey, Lithuania, Latvia, Luxembourg, Liechtenstein, Moldova, Macedonia, the Republic of Malta, Montenegro, Monaco, Netherlands, Norway, Portugal, Poland, Switzerland, Sweden, Spain, Romania, Russia, Serbia, Slovenia, Slovakia, San Marino, United Kingdom, Ukraine, Vatican City
Africa	Algeria, Angola, Burkina Faso, Benin, Botswana, Burundi, Côte d'Ivoire, Cameroon, Democratic Republic of the Congo, Republic of the Congo, Cape Verde, Chad, Central Africa, Comoros, Djibouti, Egypt, Ecuador, Ethiopia, Equatorial Guinea, Ghana, Gabon, Gambia, Guinea, Guinea-Bissau, Kenya, Libya, Lesotho, Liberia, Morocco, Mauritius, Malawi, Mozambique, Madagascar, Mali, Mauritania, Niger, Namibia, Nigeria, South Africa, Rwanda, Reunion, Sudan, Seychelles, Somalia, Swaziland, Sierra Leone, Senegal, Sao Tome and Principe, South Sudan, Tunisia, Tanzania, Togo, Uganda, Zambia, Zimbabwe
Oceania	Australia, American Samoa, Cook Islands, Fiji Islands, French Polynesia, Guam, Federated States of Micronesia, New Zealand, Nauru, Mariana Islands, New Caledonia, Papua New Guinea, Palau, Saint Lucia, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu
North America	Antigua and Barbuda, Anguilla, Barbados, Belize, Bahamas, Bermuda, Canada, Costa Rica,

	Cuba, Cayman Islands, Caribbean Netherlands, Dominica, El Salvador, Guatemala,
	Greenland, Guadero Puerto Rico, Grenada, Honduras, Haiti, Jamaica, Mexico, Martinique,
	Nicaragua, Puerto Rico, Panama, Saint Martin, Saint Vincent and the Grenadines, Saint
	Martin, Saint Kitts and Nevis, Trini Da and Tobago, Tajikistan, English Virgin Islands,
	Dominica, Turks and Caicos Islands, United States, United States Virgin Islands
South America	Argentina, Aruba, Brazil, Bolivia, Colombia, Chile, Curacao, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

# **CC** Protection Rule Settings

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## Overview

CC protection can safeguard the access to specified URLs. CC protection settings 2.0 is upgraded with emergency CC protection and custom CC rules. Emergency CC protection can perform big data analysis on websites' access history and their real servers' exceptional response such as timeout and response delay, to generate protection policies for emergencies, blocking frequent access requests in real time. Custom CC rules support customizing protection rules based on user access source IPs or SESSION frequency to handle access by blocking, setting alarms, or verifying identity with CAPTCHA.

#### Note:

Emergency CC protection and custom CC rules cannot be enabled at the same time.

SESSION must be set before using the session-based CC protection policy.

Slow Attack Protection: When forwarding traffic, web application firewalls aggregate and clean slow requests, providing a certain level of slow attack protection capabilities.

## **Slow Attack Protection**

Slowloris, RUDY, and other slow attacks are techniques that slow down server response times, typically by sending a large number of slow or incomplete requests to consume server resources, preventing normal users from accessing web applications.

When forwarding traffic, web application firewalls aggregate and clean slow requests by default, providing slow attack protection capabilities and the ability to clean slow attacks similar to Slowloris.

When a web application firewall cleans slow requests, HTTP protocol type requests will return a status code of 400, while TCP protocol type requests will return a TCP RST.

## Directions

#### **Example 1: Emergency CC protection settings**

Emergency CC protection is disabled by default. Before enabling it, please make sure that the custom CC rule feature is disabled.

1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.

2. On the basic security page, select the target domain name in the top-left corner and click **CC Protection**.

Web Application Firewall	Basic Security		
Chinese Mainland			
Mainianu	Rules SaaS		
Safe and visible	Web security rules	Access contro	ol CC
Security overview	web security rules	Access contro	
Bot traffic analysis			
Logs	Web security(542)	Access control(1)	CC protection
Attack Logs			

3. Click

in the emergency CC protection module and confirm the operation to configure emergency CC protection.

Emergency CC pro	otection③
Status	Support auto decisions and protection policies based on exceptional responses (time and delay) of the origin server and website access history, real-time blocking of high- frequency access requests, and banning attackers for 1 hour

**Configuration item description:Status switch:** After emergency CC protection is enabled, if a website is under massive CC attacks (with a website QPS of 1000 or above), the protection will be automatically triggered. If there are no specific protection paths, we recommend enabling emergency CC protection. As there may be some false alarms, you can click IP Query on the left sidebar to view the information of blocked IPs and handle them in time. **Note:** 

If there are specific protection paths, we recommend using custom CC rules.

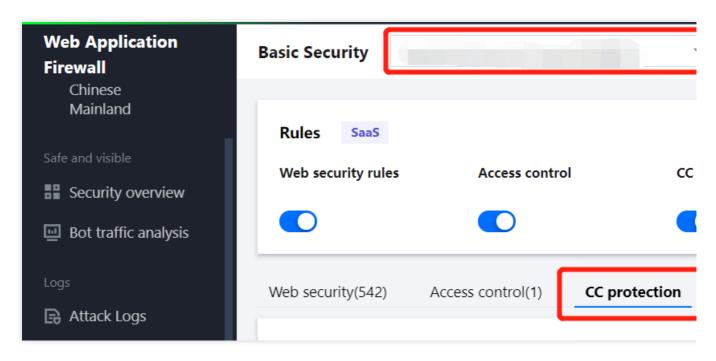
CLB WAF does not support emergency protection. We recommend using custom CC protection.

### Example 2: Access source IP-based CC protection settings

An IP-based CC protection policy can be directly configured without setting SESSION.

1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.

2. On the basic security page, select the target domain name in the top-left corner and click **CC Protection**.



3. On the CC protection page, click **Add rule**, and the rule adding window will pop up.

Web security(542)	Access control(1)	CC protection	Web tamper protection
Emergency CC protection			
Status	Support auto decisions and protection policies based on exceptional responses (tir and delay) of the origin server and website access history, real-time blocking of hic frequency access requests, and banning attackers for 1 hour		
Add rule Each domain name supports up to 50 rules			
Rule ID 🗘	Rule name	Match condition	on Request path

4. In the pop-up window, configure relevant parameters and click OK.



Rule name *	Enter a name (u	ip to 50 ch	ars)			
Identification method *		ION				
Match method <b>*</b>	Match field		Matched parameter	Condition		Match content
	URL	•		Equal to	•	Must start with
			Ado	d Up to 10. You can	add 9 mo	re methods
Access frequency *	<b>C</b> 0		() ()			
Access frequency <b>*</b>	60	times	60seco ▼ (i)			
Access frequency * Action *	60 Block		60seco ▼ (i)			
			3			

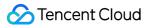
### Field description:

Rule name: Name of the CC protection rule. It can contain up to 50 characters.

**Recognition mode**: It supports two modes: IP recognition (default) and SESSION recognition. To use SESSION recognition, you need to set the SESSION position first.

**Match method**: It specifies the match parameter, logical operator and match content to control access frequency. The match parameter defaults to URL. For the same rule, you can set up to 10 conditions with the logical AND operator, which should contain at least one URL condition. The fields are described as follows:

Match Field	Match Parameter	Logical Operators	Match Content Description
URL	N/A	Equal to Include Prefix match	Required. The URL prefixed with "/" can contain up to 128 characters, which can



			be a directory or specific path.
Method	N/A	Equal to Include Not equal to	Values: `HEAD`, `GET`, `POST`, `PUT`, `OPTIONS`, `TRACE`, `DELETE`, `PATCH` and `CONNECT`. You can specify a method as needed.
Query	Key value in the `Query` parameter	Equal to	Required. The key value can contain up to 512 characters, which can be set multiple times.
Referer	N/A	Equal to Include Prefix match	The value can contain up to 512 characters.
Cookie	Key value in the `Cookie` parameter	Equal to Include Not equal to	Required. The key value can contain up to 512 characters.
User-Agent	N/A	Equal to Include Not equal to	The value can contain up to 512 characters.
Custom request header	Request header key value, such as Accept, Accept-Language, Accept-Encoding, and Connection.	Equal to Include Not equal to Blank Not exist	The key value can contain up to 512 characters, which can be set multiple times. If the matching content is blank or does not exist, you can directly enter the matching parameter.

Access frequency: sets the access frequency based on actual business requirements. We recommend setting a value 3 to 10 times the normal access frequency. For example, if your website is accessed 20 times per minute per visitor, you can set the access frequency to 60 to 200 times per minute, which can be further adjusted based on the attack severity.

Action: Defaults to "Block". You can set this field as needed. The detailed field description is as follows:

Action Type	Description	
Observe	Session requests that meet the specified conditions will be monitored and logged. You	

	can check the records in Attack Logs.
САРТСНА	This is applicable only to the access through browsers. Session requests that match the specified conditions will be verified through CAPTCHA. If they fail, they will be blocked. Otherwise, they can normally access within the penalty period. CAPTCHA logs will be observed.
Precise block	Access requests that match the specified frequency control rules will be blocked precisely, indicating that the specific IP, instead of the domain name, will be blocked from accessing the protected URL within the penalty period ranging from 5 minutes to 10,080 minutes (7 days). You can view the blocking results in Attack Logs.
Block	Access requests that match the set frequency control rules will be blocked, indicating that the specific IP will be blocked from accessing all URLs within the penalty period ranging from 5 minutes to 10,080 minutes (7 days). You can view the blocking results in Attack Logs and check the blocked IPs in real time in IP Query.

Penalty duration: It ranges from 1 minute to 1 week. Default: 10 minutes.

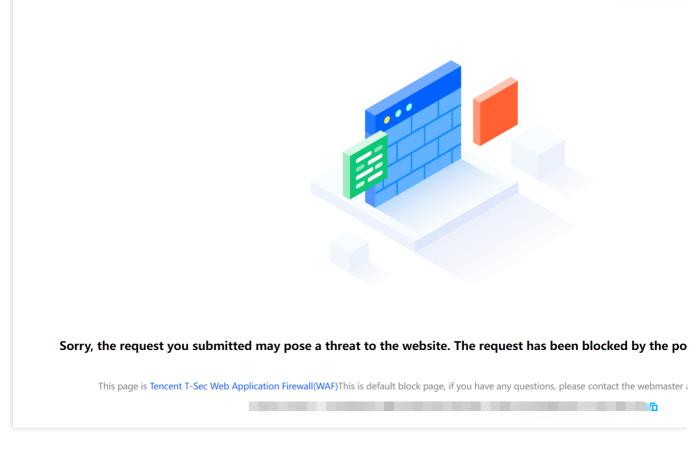
**Priority:** Enter an integer from 1 to 100 (default: 50). The smaller the value, the higher the priority of this rule. For rules with the same priority, the last created one will be used.

5. You can select a created rule to disable, modify, or delete it.

Emergency CC pro	otection					Session setting		
Status	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		on exceptional responses (tim tory, real-time blocking of hig			Session location: -	Match mode: Sessi	ion ID: -
Status		ts, and banning attackers for		-		Session setting: Ses	sion start: ; Session end:	: Configu
Add rule Eac	h domain name supports up	to 50 rules						
Add rule Eac	h domain name supports up <b>Rule name</b>	to 50 rules Match condition	Request path	Access frequency	Action <b>T</b>	Enable session <b>T</b>	Penalty duration	Priority

6. Conduct test CC attacks based on the rule settings.





7. You can add IPs to the blocklist/allowlist on the blocklist/allowlist page and view the blocking information on the IP query page.

### **Example 3: Session-based CC protection settings**

CC protection based on session access frequency effectively resolves false positive problems that may occur when the same IP egress is used by multiple users in office buildings, stores, supermarkets, and other public Wi-Fi networks.

1. Log in to the WAF console and select **Configuration Center** > **Basic Security** on the left sidebar.

2. On the basic security page, select the target domain name in the top-left corner and click **CC protection**.

Web Application Firewall	Basic Security		
Chinese Mainland			
Safe and visible	Rules SaaS Web security rules	Access contro	ol cc
<ul><li>Security overview</li><li>Bot traffic analysis</li></ul>			
Logs	Web security(542)	Access control(1)	CC protection
Attack Logs			

3. Click **Settings** in SESSION settings and the SESSION settings window will pop up.

Session setting	
Session location: - Match mode: Ses	sion ID: -
Session setting: Session start: ; Session end	: Configuration time: -

4. In the pop-up window, enter the required information. In this example, a cookie is used as the test object, whose ID is security, start position is 0, and end position is 9. After completing the settings, click **OK**.

Session setting				
Session location *	COOKIE	•		
Match mode *	O String match	O Posistion mate	ch	
Session ID *	security			



Session start	0
Session end	9

## GET/POST example:

If the complete parameter of a request is key\_a=124&key\_b=456&key\_c=789 In string match mode, the session ID is key\_b=and in String Match mode, SESSION ID is "key character is "&", then 456 will be matched; or

In location match mode, the session ID is key\_b, session start is "0", and session end is "2", the matched

## Cookie example:

If the complete cookie of a request is cookie\_1=123;cookie\_2=456;cookie\_3=789 In string match mode, the session ID is cookie\_2=, end character is ";", then 456 will be matc In location match mode, the session ID is cookie\_2, session start is "0", and session end is "2 will be matched

### Header example

If the complete HEADER of a request is X-UUID: b65781026ca5678765

In location match mode, the session ID is X-UUID, session start is "0", and session end is "2", will be matched

OK Back

### Field description:

**Session position:** "COOKIE", "GET", or "POST". GET and POST are HTTP request content parameters rather than HTTP header information.

Match mode: It supports two modes: position match and string match.

Session ID: ID of the session.

Start position: Position where string or position match starts.

End position: Position where string or position match ends.

## GET/POST example:

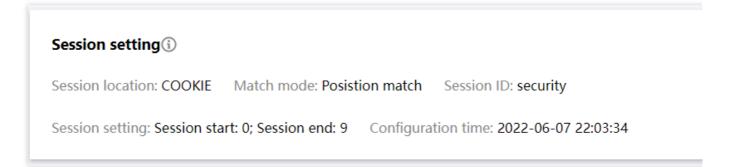
Assume that the complete parameter content in a request is key\_a = 124&key\_b = 456&key\_c = 789 , then:



In string match mode, if the session ID is key\_b = , and the end character is & , then the matched content will be 456 . In position match mode, if the session ID is key\_b , the start position is 0 , and the end position is 2 , then the matched content will be 456 . **COOKIE example:** Assume that the complete cookie content in a request is cookie\_1 = 123; cookie\_2 = 456; cookie\_3 = 789 , then: In string match mode, if the session ID is cookie\_2 = , and the end character is ; , then the matched content will be 456 . In position match mode, if the session ID is cookie\_2 , the start position is 0 , and the end position is 2 , then the matched content will be 456 . **HEADER example:** Assume that the complete header content in a request is X-UUID: b65781026ca5678765 , then: In position match mode, if the session ID is X-UUID , the start position is 0 , and the end position is 2 , then the matched content in a request is X-UUID: b65781026ca5678765 , then:

matched content will be b65.

5. Click **Test**, enter relevant content, and click **OK** to test the session information.



6. Go to the SESSION settings page and set the content to security = 0123456789. Then, WAF will use the 10 characters following security as the session ID. You can also delete or reconfigure the session information.

Session test	
Text to extract *	security=0123456789qwe
	Matched location:COOKIE;
	Match method: Posistion match; Match setting:Session ID: security; Session start: 0; Session end: 9
Test results	0123456789
	OK Back

7. Set a session-based CC protection policy as instructed in Example 1, but select "SESSION" as the recognition mode.

Rule name *	Enter a name (	up to 50 char	rs)			
Identification method *		SION				
Match method <b>*</b>	Match field		Matched parameter	Condition	Match	content
	URL	•		Equal to	▼ Must	start wit
			Add	Up to 10. You can ac	dd 9 more method	S
Access frequency *	60	times	60seco 🔻 🛈			
Action *	Block	v (j	)			
Penalty duration *	10	minutes	(i)			

8. After the configuration is completed, the session-based CC protection policy will take effect.

Note:

If you use session-based CC protection, you cannot view IP blocking information in the IP blocking status section.

# Web Tamper Protection

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This document describes the tamper protection feature of WAF. It is used to protect core static webpages. By caching pages and locking access requests, it protects your website from being affected by malicious tampering with your real server pages. In addition, you can also configure tamper protection rules as needed.

## Overview

With the tamper protection feature, you can add protection rules to protect core webpages from being tampered with as needed. You can refresh the protected pages, during which WAF will update them to ensure that they are the same as those on the real server. Moreover, you can also choose whether to retain rule hit logs to analyze hit conditions. **Note:** 

CLB WAF doesn't support the tamper protection feature. For more information on detailed specifications, see Billing Overview.

## Prerequisites

You have added a protected domain name to SaaS WAF, and ensured the domain name is in normal protection.

## Adding Rules

- 1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.
- 2. On the basic security page, select the target domain name in the top-left corner and click Web tamper protection.
- 3. On the tamper protection page, click Add rule, and the rule adding window will pop up.

Web Application Firewall	Basic Security	•				
Switch to Chinese new Mainland	Rules SaaS					
	Web security rules	Access control	CC protection	Web tamper prote	ection Data leakag	e prevention Block page
Security overview						O Default
Bot traffic analysis						
	Web security(440) Acces	s control CC protection	eb tamper protection Data le	akage prevention		
Attack Logs						
Access Logs	Add rule Batch disab	Batch enable Each domain	name supports up to 50 rules			
	Rule ID	Rule name	Protect	ed path	On/Off ▼	Enable logs 🝸
🛯 Domain Name List						
Instance Management						
				0		
Basic security						

4. In the pop-up window, configure relevant fields and click **OK**.

	amper protection rule	
Rule name	Enter a name (up to 50 chars)	
Page URL	Must start with "/" and include the static file name (up to 128 chars)	

### Field description:

Rule name: Tamper protection rule name of up to 50 characters. You can search for rules by name in attack logs. Page path: Path of the page to be protected from tampering. You need to enter a specific URL rather than a path. **Note:** 

The specified page is limited to static resources such as .html, .shtml, .txt, .js, .css, .jpg, and .png.

After the rule is added, when a user accesses this page for the first time, WAF will cache the page, and subsequent access requests will be directed to the WAF-cached page.

5. After the tamper protection rule is added, it will be enabled by default.

## Searching Rules

1. On the basic security page, select the target domain name in the top-left corner and click **Tamper Protection**.



2. On the tamper protection page, click the search box to filter rules by keywords such as rule ID, rule name, and protection path.

	Select a filter		Q	¢
	Select a filter			
Enable logs	Rule ID	Operation		
	Rule name			
	Protected path			

## **Editing Rules**

On the basic security page, select the target domain name in the top-left corner and click Web tamper protection.
 On the tamper protection page, select the target rule, click Edit in the Operation column, and the rule editing window will pop up.

Veb security(440) Access control	CC protection Web tamper	Data leakage prevention			Add to precise allo	wlist Precise allo
Add rule Batch disable B	atch enable Each domain name suppor	is up to 50 rules				Q Ø
Rule ID	Rule name	Protected path	On/Off ▼	Enable logs 🝸	Operation	
3200101009	123	/@			Refresh Edit Delete	
Total items: 1					10 🔻 / page 🛛 🖌 🚽 1 👘 / '	page 🕨 🗏

3. In the pop-up window, modify relevant parameters and click **Save**.



Edit web ta	mper protection rule	×
Rule name	123	]
Page URL	1	]
	Save Cancel	

4. After the protected page is updated, click **Refresh** to cache the updated page to WAF.

## **Deleting Rules**

On the basic security page, select the target domain name in the top-left corner and click Web tamper protection.
 On the tamper protection page, select the target rule, click Delete in the Operation column, and the deletion confirmation window will pop up.

at Precise allo	Add to precise all			Data leakage prevention	CC protection Web tamper protection	Access control	eb security(440)
Q Ø				ules	Each domain name supports up to	Batch disable Batc	Add rule Bat
	Operation	Enable logs 🔻	On/Off ₹	Protected path	Rule name		Rule ID
	Refresh Edit Delete			/6	123	09 15	3200101009
ge 🕨 🖻	10 💌 / page 🔣 📧 1 /						Total items: 1

3. In the pop-up window, click **Delete**.

### Note:

Once deleted, it cannot be restored and takes effect only after being added again.

# **Data Leakage Protection**

Last updated : 2023-12-29 14:41:57

This document describes the information leakage protection feature of WAF. It can filter and then replace, mask, and block sensitive information (e.g., identity card/mobile/bank card numbers), keywords, and response codes returned by websites. This helps meet the requirements of data security protection and cybersecurity classified protection by setting leakage protection rules as needed.

## Overview

With the leakage protection feature, you can add protection rules to filter the content returned by websites as needed, such as identity card/mobile/bank card numbers. You can also customize keywords (regex is supported) to filter order numbers and addresses and completely or partially replace them. Moreover, you can block or trigger alarms for status codes other than 200 returned by websites to meet compliance requirements.

### Note:

CLB WAF doesn't support the data leakage protection feature. For more information on detailed specifications, see Billing Overview.

## Prerequisites

You have added a protected domain name to SaaS WAF, and ensured the domain name is in normal protection.

## Adding a Rule

1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.

2. On the basic security page, select the target domain name in the top-left corner and click **Data leakage prevention**.

3. On the page displayed, click Add rule, and the rule adding window will pop up.

Web Application Firewall	Basic Security		•
Ge Switch to Chinese new Mainland	Rules SaaS		
Safe and visible	Web security rules	Access control	CC protec
Security overview			
Bot traffic analysis			
Logs	Web security(440)	Access control CC protection	Web tamper protection
Attack Logs			
Access Logs	Add rule Each	domain name supports up to 20 rules	
Asset Center	Rule ID 🕈	Rule name	Protected pa
🖭 Domain Name List			
<ul> <li>Instance</li> <li>Management</li> </ul>			
Configuration Center			
Basic security			

4. In the pop-up window, configure relevant fields and click  $\ensuremath{\textbf{OK}}$  .

Add data leakag	e prevention rule
Rule name *	Enter a name; up to 50 characters
Match condition *	Sensitive information 🔹
Match content *	ID card Phone number Bank card
Protected path *	Enter a directory or specific path starting with "/" (up to 128 chars)
Action *	Alert 💌
	OK Back

### Field description:

**Rule name**: Leakage protection rule name of up to 50 characters. You can search for rules by name in attack logs. **Condition**: Match condition for leakage protection. You can select sensitive information, keyword, or response code, and the match content and action type vary by the condition as follows:

Condition	Content	Action
Sensitive information	Identity card/mobile/bank card numbers	Alert, Replace all, Show the last 4 digits, Show the first 4 digits, and Block
Keyword	Keyword and regex	Alert, Replace all, and Blcok
Response code	400, 403, 404, other 4XX codes, 500, 501, 502, 504, and other 5XX codes	Alert and Block

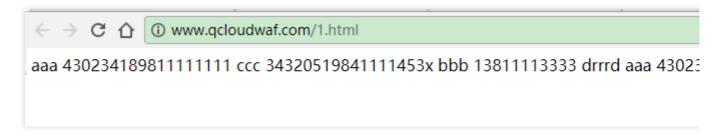
Content: The match content varies by match condition.

**Protected path**: Specific path where the information needs to be protected from leakage. You can enter a directory or specific path as needed.

Action: Action to be executed after the match condition is hit. You can view the relevant hit information in attack logs.

5. Once the rule takes effect, it will begin protecting the sensitive information returned in your web pages as shown in the following example that performs the Replace action (demo content):

### Before protection is enabled:



### After protection is enabled:

$\in \ \ni \ \textbf{C} \ \textbf{\dot{\nabla}}$	www.qcloudwaf.com/1.html
aaa *********	******* ccc ********************* bbb 13811113333 drrrd aaa ********************

## Search rules

1. On the basic security page, select the target domain name in the top-left corner and click Data leakage

### prevention.

2. On the page displayed, click the search box to filter rules by keywords in a rule ID, rule name, and protected path.

Click to select a filter	Q,
Select a filter	
Rule ID	Operation
Rule name	



## Editing a Rule

1. On the basic security page, select the target domain name in the top-left corner and click Data leakage

### prevention.

2. On the page displayed, select the target rule, click **Edit** in the **Operation** column, and the rule editing window will pop up.

/eb security(440)	Access control	CC protection	Web tamper protection	Data leakage prevention(1)		
Add rule Each	domain name supports	up to 20 rules				
Rule ID 🕈		Rule name	Protected path	Match condition	Action <b>T</b>	Last modified
3100102028	Б	1	/@	Sensitive information Phone number	Alert	2022-06-13 10:3

3. In the pop-up window, modify relevant parameters and click OK.

Edit data leakag	ge prevention rule	
Rule name *	1	
Match condition *	Sensitive information	•
Match content *	O ID card O Phone number	Bank card
Protected path *	/	
Action *	Alert	▼
		OK Back



## Deleting a Rule

1. On the basic security page, select the target domain name in the top-left corner and click **Data leakage** 

## prevention.

2. On the page displayed, select the target rule, click **Delete** in the **Operation** column, and the deletion confirmation window will pop up.

Web security(440)	Access control	CC protection	Web tamper protection	Data leakage prevention(1)		
Add rule Each	domain name supports	s up to 20 rules				
Rule ID 🗘		Rule name	Protected path	Match condition	Action <b>T</b>	Last modified
3100102028	Б	1	/Г	Sensitive information Phone number	Alert	2022-06-13 10:3
Total items: 1						

3. In the pop-up window, click **OK**.

# **API** Security

Last updated : 2023-12-29 14:42:13

This document describes how to add APIs or API rule files using the API security feature to protect your APIs.

## Overview

Using API security, you can add APIs or API rule files, so that WAF will run security checks on the API requests and allow the APIs that meet specified requirements. This module provides protection for APIs by cooperating with the AI engine and bot traffic management modules.

## Directions

- 1. Log in to the WAF console and select Configuration Center > Basic Security on the left sidebar.
- 2. On the page displayed, select a target domain name in the upper-left corner, and click **API security**.

3. On the API security page, you can add API security rules by either importing APIs or adding APIs.

## Note:

Import API (recommended): You need to import an API file that meet the specified requirements. Add API: You need to add the API path of a website manually.

## Importing APIs (recommended)

1. Select **Basic Security > API security**. On the page that appears, click **Import API**.

2. In the pop-up window, select a file to upload, and click Upload.

### Note:

WAF provides support for parsing swagger2.0 files in YML and JSON formats. The file to import should satisfy the following requirements:

Format: The API description file must be suffixed with .yml or .json. The file size cannot exceed 100 KB.

Count: Up to 20 APIs can be imported at a time. APIs that already exist will not be imported again.

The imported APIs can be reviewed and edited.

File type *	json	T	
		Upload	
Note		Click to select a file.	
2. You can imp	port up to 20 APIs a	l 100 KB and must be suffixed with ".y at a time. APIs that already exist will n nformation on APIs imported success	ot be imported

3. After the upload, the API security module will parse the API policies in the swagger2.0 file. Then click **OK** when the parsing is complete.

Upload Note 1. The file to import can't exceed 100 KB and must be suffixed with ".yml" or ".			▼	yml	le type <b>*</b>
			Upload		
2. You can import up to 20 APIs at a time. APIs that already exist will not be im 3. You can edit and confirm the information on APIs imported successfully.	2	t will not be imp	ime. APIs that alread	nport up to 20 APIs at a	The file to i You can im

4. You can check the API rules after they are successfully imported.

## Adding APIs

- 1. Select **Basic Security** > **API security**. On the page that appears, click **Add rule**.
- 2. In the pop-up window, create an API security rule that suits your website needs, and click Add.

Add API		
API name *	Enter the API path starting with "/"; up to 128 characters	
Enter a description (optional)	(Optional) Enter up to 128 characters	
Enable API *		
Request method <b>*</b>	GET 💌	
Match method *	Parameter name Parameter location Type Re	eq
	Enter the paramete path	
Action *	Observe 🔻	
	OK Back	

### Field description:

**API name**: Enter an API path that starts with "/", which cannot be the same as "API name + Request method" in the setting (eg., /guanjia/waf/config).

Description: Enter a description of the API rule. This field is optional.

**Enable API**: The switch controls whether to enable an API rule. The switch is off by default. When it is on, the API rule will be parsed and the action (Observe/Block) configured will be performed.

Request method: Only the following request methods are supported: GET, POST, PUT, and DELETE.

Condition: You need to specify the following parameters: Parameter name, Parameter location (Only body ,

query , and path values are supported), Parameter type, Required (If it is ticked, WAF will check whether the

parameter is contained in the request and block the parameter when it exists), and Remarks (optional field).

Action: Select the Observe or Block action as needed.

### Note:

You are encouraged to set the Observe action, which allows the AI security module to check whether false positives occur in attack logs. If no false positives are caused, then change to the Block action.

3. After the rule is added, the API is added to the API security configuration list.

Add rule Import API	Batch enable	isable Batch delete				
Rule ID	API name (description)	Source Y	Request method <b>T</b>	API parameter	Action <b>Y</b>	On/Of
n n						
otal items: 3						

### Field description:

**Rule ID**: It is a unique identifier for an API rule and is created automatically after the rule is added. You can search logs of the rule by its ID in Attack Logs.

**API name (description)**: It displays the configured API name and description. Note that the API name must be the actual path of the API.

Source: It displays whether an API is parsed from file or added manually.

**Request method**: The following request methods are supported: GET, POST, PUT, and DELETE.

API parameter: List of API parameters configured, which cannot exceed 30.

Action: It can be set to Observe or Block.

**On/Off**: The switch controls whether to enable an API rule. To enable or disable multiple switches at the same time, select multiple API rules and click **Batch enable** or **Batch disable**.

Last modified: The last time an API rule is modified.

**Operation**: It allows you to edit or delete an API rule. If you want to delete API rules in batches, you can select more than one rule and click **Batch delete**.

# Bot and Application Security Bot Settings Bot Management Overview

Last updated : 2023-12-29 14:42:30

With bot and application security, you can enable and configure modules in bot management, observe and analyze traffic through bot traffic analysis and access logs. Then, you can set refined policies based on the session status to protect core website APIs and businesses from bot attacks.

Bot management supports configuration of bot scenario types, client risk identification (browser bot defense module), threat intelligence module, AI evaluation module, bot flow statistics module, action score, custom rules, token configuration, and legitimate bots. You can configure these modules for refined bot management.

## Scenario-based bot configuration

Leveraging Tencent Cloud's years of expertise in bot governance, this feature offers client risk identification (browser bot defense module), threat intelligence module, AI policy module, bot analytics module, action score, session management, legitimate bots, and custom rules specifically for flash sales, price/content crawling, and login scenarios. It simplifies configuration and makes everything easy to use.

## Client Risk Identification (Browser Bot Defense Module)

This feature uses the dynamic identity verification technology and generates a unique ID for each client's business request to detect possible bots and malicious crawlers in the access to websites or HTML5 pages.

### **Threat Intelligence Module**

This feature is built on Tencent's nearly 20 years of experience in cybersecurity and big data intelligence. It determines the status of an IP in real time and uses a scoring mechanism to quantify a risk. It precisely identifies the access from a malicious dynamic IP and IDC. In addition, it intelligently identifies the features of a malicious crawler to cope with risky access requests from malicious crawlers, distributed crawlers, proxies, credential stuffing, and bargain hunting.

## AI Evaluation Module

This feature builds AI evaluation models from AI technologies and Tencent's experiences in controlling risks and fighting cybercrimes. Through big data analysis and AI modeling of access traffic, it quickly identifies malicious requesters and defends against risky access requests from APT and hidden threat bots.

## **Bot Flow Statistics Module**

Based on big data analysis, this feature automatically classifies customer traffic by characteristic and identifies abnormal and malicious traffic. It automatically adjusts the malicious traffic threshold and handles risky access requests from general and high-frequency bots. With auto-adjustment modeling, it resolves most of the bot behavior bypasses.

## **Action Setting**

This feature leverages the threat intelligence module, AI evaluation module, and bot flow statistics module to provide a comprehensive score ranging from 0 to 100 for the risk level of an access request to a website. The higher the score, the more likely it is from a bot, and the higher the risk level. With the score provided by bot analytics, the risk level of an access request is intelligently identified, and you can precisely block a risky access request based on actions configured for different score ranges.

In addition, it supports configuring a scope so that request data covered by the scope can be handled precisely.

## **Session Management**

This feature allows you to configure the token location of a session to differentiate between access behaviors of different users through the same IP. Therefore, you can precisely handle a user with abnormal access behavior without affecting other users.

### **Legitimate Bots**

This feature allows legitimate bots (such as search engines and feed bots) to get website data so that the website can be normally indexed.

### **Custom Rules**

This feature allows you to precisely handle compliant crawlers and access requests with different characteristics. In addition, it supports configuring a scope so that request data covered by the scope can be handled precisely.

### **Bot allowlist**

This feature allows you to add the access requests from specified public network users to the allowlist based on the combination of different features, such as HTTP packet session feature, request feature, cookie, HTTP header, scope, IP feature, User-Agent, Referer, and session settings.

Priority from high to low: Bot allowlist > Scenario 1 (priority 1) > Scenario 2 (priority 2) > ... > Scenario n (priority m).



Last updated : 2023-12-29 14:42:42

## Prerequisites

To connect to bot traffic management, you need to purchase a WAF value-added service.

## Directions

1. Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.

2. On the **Bot and application security** page, select the target domain name in the top-left corner and click



### in Bot management rules.

Rules	SaaS			
尊	Bot management rules View traffic	Enabled modules	Custom rules <b>0</b> rules	Application security

### **Field description**

Enable bot rule management: It is disabled by default and can be enabled as needed.

### Note:

The bot traffic analysis feature takes effect only when the WAF switch of the domain name is enabled.

**Effective scenario**: Displays the number of bot analysis scenario modules enabled currently. They include the browser bot defense module, threat intelligence module, AI evaluation module, and bot flow statistics module. **Total scenarios**: Displays the number of bot analysis scenario modules existing under the current domain name. **Current global scenario**: Displays the name of the effective global scenario under the current domain name.



Total custom rules: Displays the number of custom bot rules enabled currently.

# Advanced

Last updated : 2023-12-29 14:44:01

## Prerequisites

Purchase a Web Application Firewall (WAF) plan with package for bot traffic management, and enabled bot analytics features for your domain name.

## Bot allowlist

Log in to the WAF console and select Configuration Center > Bot and Application Security on the left sidebar.
 On the Bot and Application Security page, select the target domain name in the top-left corner and choose Bot management > Bot allowlist.

BOT Bot management	T			
Bot overview SaaS			Current global policy:-	Anti-bot workflow
Bot management View traffic	Enabled scene	Total scenes <b>1</b> rules	Total custom rules <b>1</b> rules	Bot traffic 2 Bot allowlis Real user

3. On the bot allowlist settings page, click **Add rule**, configure parameters, and click **OK**.



L

Rule name *	Enter a rule name with up to 50 charact	ters		
Rule description	(Optional) Enter up to 256 characters			
		0 / 256		
On/Off				
Condition *	Match field	Matched parameter	Logical operator	Cont
	Percentage of repeated URLs 🔻		> •	0.7
	Average session speed		> •	50
		Add Up to 10.	You can add 8 more methods	
Action *	Block			
Priority	- 100 +			
	Enter an integer between 1-100. A smalle	r value indicates a higher execution pr	iority. When the priority is the	e same, i
	recently added			

### Field description

Rule name:: The rule name.

Rule description: The rule description.

On/Off: Indicates whether the rule is enabled. A rule is enabled by default.

Condition: Conditions for matching bot policies. Up to 10 match conditions can be set, which are connected by the

"AND" relationship. When you hover the cursor over a match condition, you can view its description.

**Priority:** Enter an integer between 1 to 100. A smaller integer indicates a higher priority. If the priority values are the same, the latest rule prevails.

#### Custom tag: You can set the tag to Friendly bot or Normal traffic.

4. Now you can view the created rule in the policy list. Click Edit or Delete to edit or delete it.



Bot Protection	Bot allowlist				
Bot Frotection	Bot allowist				
Add rule					
Rule ID	Rule name/Description	Condition	Action	Priority \$	Tag
3000001018	test	Average session speed > 11	🞯 Trust	100	
Total items: 1					

5. Priority from high to low: Bot allowlist > Scenario 1 (priority 1) > Scenario 2 (priority 2) > ... > Scenario n (priority m).

## **Session Management**

This feature is similar to session setting in CC protection. With different token IDs, you can differentiate between access requests from different requesters through the same IP and record their behavior features.

You can also use token IDs to continuously track the access behaviors of different requesters. This helps identify bot access behaviors through residential or public egress IPs and record session features when proxy IPs are frequently changed.

Log in to the WAF console and select Configuration Center > Bot and Application Security on the left sidebar.
 On the Bot and Application Security page, select the target domain name in the top-left corner and choose Bot management > Bot Protection.

3. On the **Bot Protection** page, click **Configure now** in the **Session management** area.

\$ Browser bot defense module (1)	Threat intelligence module (1) 16 rules	Al policies (1)	E Bot flow statistics mod 7 rules	ule 🛈
Configure now	Configure now	Configure now	Configure now	

4. On the **Session management** page, click **Add a configuration**, configure parameters, and click **OK**. **Note:** 

A token ID should be a continuous tracking ID, such as the value of set-cookies after login.

Add Token	
Token name	Up to 128 characters
Token description	Up to 128 characters
Token location •	GET
Token ID •	Up to 32 characters
On/Off	

### Field description

**Token location:** HEADER, COOKIE, GET, or POST. Here, GET and POST are HTTP request parameters rather than HTTP headers.

Token ID: Token ID.

5. The configuration will take effect immediately upon completion. Then, bot traffic analysis will analyze traffic according to the field of the session feature.

## Setting a custom rule

Log in to the WAF console and select Configuration Center > Bot and Application Security on the left sidebar.
 On the Bot and Application Security page, select the target domain name in the top-left corner and choose Bot management > Bot Protection.

3. In the Scene management area, select the target scene, and click View configuration.

Create scene	All scene types	ed scenes Only the default scene (i)	
iority: 1			
	Scene ID: 300000798	Request path Prefix match \shopping	Action
()	scapling	O 2023-02-27 10:10:21	policies
$\overline{}$	Flash sales Browser/H5	王는 Browser bot defense 🟮 Threat intelligence 🥑 Al pol 📀	Bot anal 🥑 🛛 🚽

4. On the scene details page, click **Add rule** in the **Custom Rules** area.

Browser bot defense module	First line of defense () It's recommend	ed for sensitive directories	
protects your website applications	against possible bots and malicious crawle	rs in access to websites or H5 pages.	
Dn/Off Defense mod	Monitor Redirect OCAPT		
Delense mod		DIOCK	
Custom Rules Second line of d	fense		

5. In the Add custom session feature pop-up window, configure relevant parameters and click OK.



Rule name •	Please enter a rule name within 50 ch	aracters		
Rule description	(Optional) Enter up to 256 characters			
		0 / 256		
On/Off				
Condition *	Field	Matched parameter	Logical operator	
	Average session speed v		> *	
		Add Up to 1	0. You can add 9 more methods	5
Action •	Monitor 👻			
Priority	100 + Enter an integer between 1-100. A smal	ler value indicates a higher executio	n priority. When the priority is the	e sa
	recently added	U		
	Friendly bot 🔹			

### **Field description**

Rule name:: The rule name.

Rule description: the rule description.

Rule Switch: enabled by default.

**Condition:** Conditions to manage detected bots. You can set up to 10 conditions, which are combined with AND. Mouse over a condition to see the details.

Action: Action to be executed.

Action	Description
Trust	Allow hit requests without logging.
Monitor	Allow and log hit requests. You can check details in the <b>Custom type</b> of the <b>Bot</b> details.

САРТСНА	This action is applicable only to the access through browsers. Session requests that match the specified conditions will be verified through CAPTCHA. If they fail, they will be blocked. Otherwise, the access is allowed.
Redirect	Session requests that match the specified conditions will be redirected to a specific URL of the current domain name.
Block	Block and log the hit requests. You can check the logs in Attack Logs. To check the blocked IPs, go to IP blocking status.

**Priority:** Enter an integer between 1 to 100. A smaller integer indicates a higher priority. If the priority values are the same, the latest rule prevails.

Custom tag: You can set the tag to Friendly bot, Malicious bot, Normal traffic, or Suspicious bot.

6. Now you can see the created rule in the policy list.

Custom Rules	Second line of defense				
Ising this feature	, you can accurately handle bots yo	u want to detect and their access requests.			
Add rule					
Add fule					
Rule ID	Rule name/Description	Condition	Action <b>T</b>	Priority \$	Tag
Nule ID	nule name/bescription	Condition	Action	Phonty +	Tay
		Percentage of repeated URLs > 0.95	_		Suspic
300000804	价格状态监控	Session duration > 100	Monitor	100	bot
					Suspi
3000000803	异常客户端	UA type belong to Gaming or TV Terminal Pr	riva 🛄 Monitor	100	ouopi

## Legitimate Bots

1. Log in to the WAF console and select Configuration Center > Bot and Application Security on the left sidebar.

2. On the **Bot and Application Security** page, select the target domain name in the top-left corner and choose **Bot management** > **Bot Protection**.

3. On the **Bot Protection** page, click **Configure now** in the **Legitimate bots** area.

Global s	settings					
D.C	Browser bot defense module (i)	Threat intelligence module (i)		Al policies (i)		Bot flow statistics module $(\hat{i})$
*	<b>O</b> rules	16 rules	<b>FI</b>	<b>O</b> rules	F	<b>7</b> rules
	Configure now	Configure now		Configure now		Configure now

4. On the **Legitimate bots** page, toggle on the switch to allow bots useful to the website data, such as search engines and external cooperative crawlers.

egitimate bots			
This is a global po name.	licy. Your changes to the legitimate bots	settings will take effect	t on all scenes under th
Bot type	Rule description	Action	On/Off
Search engine bot	The bot crawls the content	Irust	
Feed bot	The bot crawls the Internet I	🗑 Trust	

# **Client Risk Identification**

Last updated : 2023-12-29 14:42:55

This document describes the browser bot defense module in client risk identification. With the dynamic identity verification technology, it will generate a unique ID for each client's business request to detect possible malicious bots and crawlers in access to websites or HTML5 pages.

# Background

Compatibility description: The browser bot defense module is applicable to the protection for websites or HTML5 pages. It will dynamically generate client IDs and tokens and identify malicious and crawler requests by detecting the IDs and tokens. In some cases, it may have compatibility issues with POST requests (the content of the content-type response body is not text/html, and the <html> tag is not included). This may cause an exception in the detection. As a countermeasure, you can add the request path or response request to the allowlist. Perceptible bot defense: The system pops up a CAPTCHA (slider, puzzle, or character comparison) for client requests that meet the conditions to differentiate between access requests from a real person and a bot. Multiple verification failures will lead to blocking. This is applicable to protecting core website APIs (such as shopping cart, payment, and SMS). This capability has been integrated into the actions (observe, CAPTCHA, redirect, and block) of each WAF module for you to use.

Imperceptible bot defense: Client behavior detection is imperceptible to users, applicable to use cases with high requirements for the user experience. This feature leverages the dynamic security technology to generate a unique ID for each client and detect possible click farming and malicious crawling in the access to websites or HTML5 pages. You can perform an action on malicious behaviors as needed.

### Note:

The browser bot defense module is applicable to websites and HTML5 pages but not mobile terminals or mini programs.

### Prerequisites

You have purchased a WAF instance and bot traffic management extra pack.

You have added a protected domain name, the domain name is in normal protection, and bot management rules are on. For more information, see Getting Started.

### Note:

The browser bot defense module is not supported for domain names added to CLB WAF instances. The browser bot defense module is not supported for wildcard domain names added to SaaS WAF instances.

# Protection Configuration

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner and click Bot management.

Rules SaaS Anti-E	ot workflow

- 3. In Global settings, click Configure now in the Browser bot defense module section.
- 4. Set the automated identification, page anti-debugging, and allowlist policy.

Client risk identif	fication
	Browser bot defense module It protects your website applications against possible bots and malicious crawlers in access to websites or H5 pages. It is only applicable to website scenarios. Cross-region API scheduling, mini programs and apps are not supported. View details Configure now

5. On the **Browser bot defense module** page, configure page anti-debugging and automated identification.

Protected path / Edit

 Click the configuration page of a certain scenario, click Browser bot defense module, toggle on or off the On/Off switch of the Browser bot defense module, and select the Defense mode.
 Field description **On/Off**: It is off by default. When it is on, WAF will protect the page specified by the domain name through the browser bot defense module to identify possible crawlers in the client request and take different actions after identification. It is not applicable to applications or mini programs.

Automated identification: It is enabled by default to assist with dynamic threat detection.

**Page anti-debugging**: It is enabled by default to prevent users from tracking the page logic when they call the developer tool page of the browser.

#### Note:

We recommend you enable this feature for the sensitive directory to be protected.

**Defense mode**: It is **Monitor** by default and can be configured to perform an action on the crawlers detected by the browser bot defense module, such as monitor, CAPTCHA, redirect, or block.

### Configuring Allowlist Policy

### Adding rule

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner. In Global settings, click Configure now in the Browser bot defense module section.

BOT	Hands-on tutoria
Rules     Saas       Bot management rules     View traffic       Enabled modules     Custom rules       3     4 rules	Anti-bot workflow         (i)       (i)         (i)       (i) </th
Bot management	

3. On the **Browser bot defense module** page, click **Add rule**.



Browser bot defense module	×
On/Off	Protected path / Edit
Automated identification	
Page anti-debugging	
Defense mode OMonitor Redirect CAPTCHA OBlock	
Allowlist policy	
Add rule	Enter the rule ID Q

4. In the Add allowlist rule pop-up window, configure parameters and click OK.

Туре	O Request allowlist Response allowlist
	Add the request paths or URLs (under the protected path) that do not need dynamic security checks to the allowlist
Match condition	Path suffix match 💌
Match content	Enter file extensions separated by "," (up to 128 chars)
	ico,gif,bmp,htc,jpg,jpeg,png,tiff,swf,js,css,rm,rmvb,wmv,avi,mkv,mp3,mp4,ogg,wma,zip,exe,rar,eot,woff,woff 2,ttf,svg 🗗
Rule description (optional)	Enter a rule (up to 256 chars)
On/Off	

#### **Field description**

Туре

**Request allowlist**: Dynamic security detection is not required for allowed website URLs.

**Response allowlist**: By default, WAF will insert JavaScript code into a responding page according to the business conditions. It can be configured not to insert JavaScript code into a specified website so as to improve the website compatibility.

Match condition: Suffix match (default), Prefix match, Equal to, and Include are supported.

**Match content**: The current match condition is **Suffix match**. By default, the suffixes of files to be allowed are offered, including ico, gif, bmp, htc, jpg, jpeg, png, tiff, swf, js, css, rm, rmvb, wmv, avi, mkv, mp3, mp4, ogg, wma, zip, exe, rar, eot, woff, woff2, ttf, and svg. You can modify the suffix as needed. If another match condition is selected, enter the allowlist path according to the actual business conditions.

Rule description (optional): Enter the rule description.

**On/Off:** It is off by default and can be changed as needed.

### Editing rule

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner. In Global settings, click Configure now in the Browser bot defense module section.

вот		Hands-on tutori
Rules Saa5	Custom rules <b>4</b> rules	Anti-bot workflow
Bot management		

3. On the **Browser bot defense module** page, select the target rule and click **Edit**.

Add rule					Enter the rul		Q	φ
Rule ID Ru	ule description	Туре	Match condition	Match co	ntent	On/Off	Operation	
		Request allowlist	Path suffix match	.CSS			Edit Delete	

4. In the Edit allowlist rule pop-up window, configure parameters and click OK.

Add allowlist rule	
Туре	Request allowlist O Response allowlist
	The response page of the protected path is inserted with JavaScript by default, and you can cancel it for specified pages to improve the website compatibility
Match condition	Path suffix match 🔹
Match content	Enter file extensions separated by "," (up to 128 chars)
	ico,gif,bmp,htc.jpg,jpeg,png,tiff,swf,js,css,rm,rmvb,wmv,avi,mkv,mp3,mp4,ogg,wma,zip,exe,rar,eot,woff,woff 2,ttf,svg <b>f</b>
Rule description (optional)	Enter a rule (up to 256 chars)
On/Off	
	OK Back

### **Deleting a rule**

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner. In Global settings, click Configure now in the Browser bot defense module section.

6	Hands-on tutorial
Al evaluation	plication traffic
	Casomitor Boo anayoo

3. On the **Browser bot defense module** page, select the target rule and click **Delete**.

llowlist policy						
Add rule				Enter th	e rule ID	Q
Rule ID	Rule description	Туре	Match condition	Match content	On/Off	Operation
		Request allowlist	Path suffix match	.CSS		Edit Delete

4. In the pop-up window, click **OK**.

# Bot Analytics AI Policies

Last updated : 2023-12-29 14:43:09

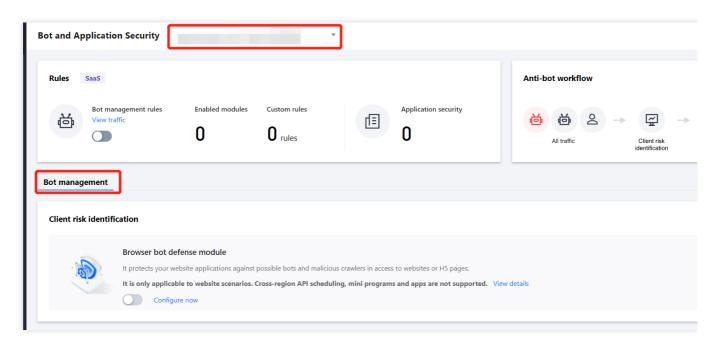
This document describes the AI policy module in bot traffic management. This feature is built on Tencent's nearly 20 years of experience in cybersecurity and bot defense. It applies AI models, built based on AI technology and Tencent's experiences in controlling risks and fighting illegal activities, to quickly identify malicious requests and fight against previous, APT, and distributed bots.

### Prerequisites

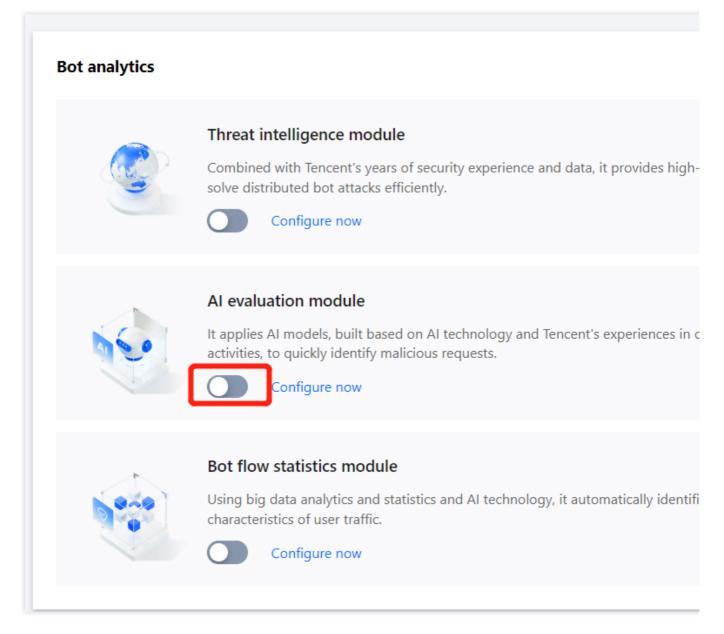
You have purchased a WAF instance and bot traffic management extra pack and enabled bot rule management for WAF-connected domain names.

# **Protection Configuration**

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner and click Bot management.



3. In global settings, click **Configure now** in the **Browser bot defense module** section.



4. Click Add to allowlist to add certain URLs to the allowlist to reduce false positives detected by AI.

Bot analytics			
Threat intelligence module	Al evaluation module	Bot flow statistics module	Action s
Add to allowlist		•	Please e

5. On the AI policy page, you can add URLs to the allowlist, so that core business will not be blocked due to frequent access to core business/callback business. You can also add certain URLs to the allowlist so that they will not be



blocked by mistake.

#### Note:

Here, the allowlist applies only to the AI policy module but not other modules.

#### Parameter description:

Policy name: Policy name.

Rule description: Policy description.

Allowed URL: URL allowed by the AI policy module, which affects the score of the AI policy module.

**On/Off**: You can enable/disable an allowlist in the AI policy module. When this option is on, the AI policy module will not add the score of the URL that hits the allowlist. The score will be provided by the threat intelligence module and bot flow statistics module.

6. After configuring the AI policy module, click the configuration page of a certain scenario and click



### **Best practices**

The AI policy module leverages the bot defense experience and the accumulation of the bot attack/defense lab to quickly identify general and APT bots. Therefore, we recommend you enable it and add the business callback API to the allowlist under any circumstances.

# **Threat Intelligence Module**

Last updated : 2023-12-29 14:43:24

This document describes how to set the threat intelligence module in the bot analytics section of bot traffic management. This feature is built on Tencent's nearly 20 years of experience in cybersecurity and big data intelligence. It determines the status of an IP in real time and uses a scoring mechanism to quantify a risk. It precisely identifies the access from a malicious dynamic IP and IDC. In addition, it intelligently identifies the characteristics of a malicious crawler to cope with risky access requests from malicious crawlers, distributed crawlers, proxies, credential stuffing, and bargain hunting.

# Prerequisites

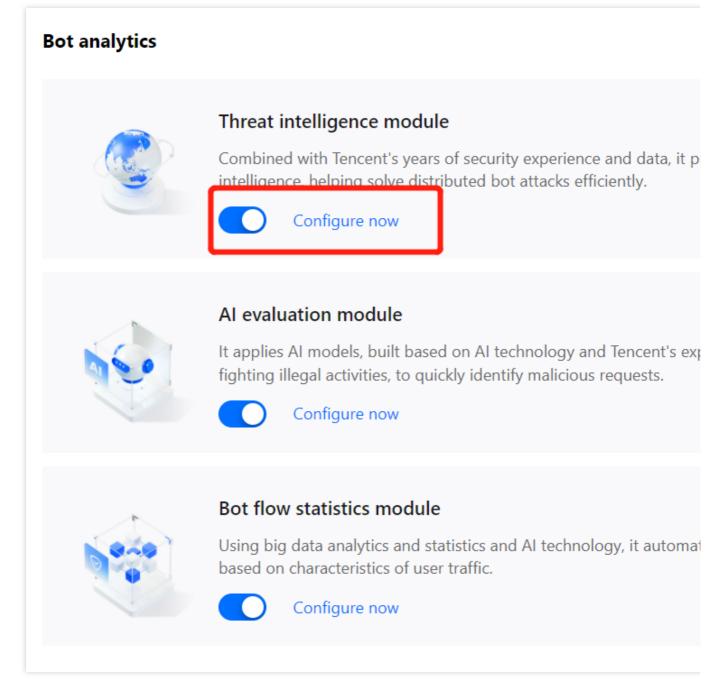
You have purchased a WAF instance and bot traffic management extra pack and enabled bot analysis for WAFconnected domain names.

# **Protection Configuration**

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner and click Bot management.

вот	Ţ		
Rules SaaS			Anti-bot workflow
Bot management rules View traffic	Enabled modules	Custom rules	(Lient risk identification
Bot management			

3. In Global settings, click Configure now in the Threat intelligence module section.



4. On the configuration page, enable or disable an identification item or enable or disable all the items.

ot analytics		
Threat intelligence modul	e AI evaluation module	Bot flow statistics module A
DC network		
Enable all Disable all		
IDC network type IDC network	etwork description	
Aws The IP	s belong to the AWS (IDC IP) IP libra	ry, and are often exploited by attackers to de
Azure The IP	s belong to the Microsoft Azure (IDC	CIP) IP library, and are often exploited by atta
Google The IP	s belong to the GCP (IDC IP) IP librar	y, and are often used by attackers to deploy
UCloud The IP	s belong to the UCloud (IDC IP) IP lik	orary, and are often exploited by attackers to
Alibaba Cloud The IP	s belong to the Alibaba Cloud (IDC II	P) IP library, and are often exploited by attac
Baidu Cloud The IP	s belong to the Baidu Cloud (IDC IP)	IP library, and are often exploited by attacke
Huawei Cloud The IP	s belong to the Huawei Cloud (IDC II	P) IP library, and are often exploited by attac
Kingsoft Cloud The IP	s belong to the Jinshan Cloud (IDC II	P) IP library, and are often exploited by attac
pubyun The IP	s belong to the Baidu Cloud (IDC IP)	IP library, and are often exploited by attacke
Qing Cloud The IP	s belong to the Qing Cloud (IDC IP) I	IP library, and are often exploited by attacker

### Parameter description:

Enable/Disable all: Enable/Disable all the rules of the current type.

**IDC type**: IPs belong to IP libraries of the corresponding type. These IP ranges are often exploited by attackers to deploy bots or proxies rather than normal users. When this item is enabled, the threat intelligence module will identify

the access source from this IDC.

### Threat intelligence library:

Bot: The IPs tagged by this intelligence provided by Tencent Security Threat Intelligence and the bot IPs detected by WAF in real time will not be exploited by normal users. After this item is enabled, the threat intelligence module will identify the access sources of bots in Tencent Security Threat Intelligence.

Web attacks: The IPs tagged by this inbound threat intelligence provided by Tencent Security Threat Intelligence launch a large number of attacks containing malicious scans within the intelligence validity. Such IPs will not be exploited by normal users. After this item is enabled, the threat intelligence module will identify the access sources of web attacks in Tencent Security Threat Intelligence.

Web proxy: The IPs tagged by this intelligence provided by Tencent Security Threat Intelligence are exploited by attackers rather than normal users. After this item is enabled, the threat intelligence module will identify the access sources of bots in Tencent Security Threat Intelligence.

Scanner: The IPs tagged by this intelligence provided by Tencent Security Threat Intelligence launch malicious scans on the entire network. After this item is enabled, the threat intelligence module will identify the access sources of scanners in Tencent Security Threat Intelligence.

Account takeover: The IPs tagged by this intelligence launched online identity theft, account blasting, credential stuffing, and other attacks in the past period of time. After this item is enabled, the threat intelligence module will identify the access sources of account takeover attacks in Tencent Security Threat Intelligence.

5. After the configuration, click the configuration page of a certain scenario, and click

in the **Threat intelligence module** section. When the module is enabled for the first time, all the identification items will be enabled. If you enable certain items, you can identify the access sources at different risk levels from the threat intelligence module and IDC.

# Best Practices in Configuring Threat Intelligence Module for B2C Website

### Overview

B2C feature: B2C faces a large number of users, and user businesses are mainly launched from residential/base station IPs.

### Note:

Some businesses have callback APIs that initiate access requests from the IDC side. The number of callback APIs is the collection of multiple users.

Business scheduling APIs may initiate access requests from specific IPs/IDCs.

Users at some of the enterprise egresses will initiate access requests from the IDC.

### Configuration process

- 1. Enable the threat intelligence module.
- 2. Configure a session policy to identify proxy/IDC access requests through a CAPTCHA.

3. Configure a session policy and set callback API address/business IDC address to **Trust**. This is to avoid blocking business APIs by mistake and thus affecting the business while ensuring the website security.

4. Enable CAPTCHA for applications or sites as needed.

# Best Practices in Configuring Threat Intelligence Module for B2B Website

B2B feature: B2B faces a large number of businesses, and customer businesses are mainly launched from the IDC/enterprise egress. A few access sources are from residential/base station IPs.

### Note:

Some businesses have callback APIs that initiate access requests from the IDC side. The number of callback APIs is the collection of multiple users.

Business scheduling APIs initiate access requests from specific IPs/IDCs.

Users at some of the enterprise egresses will launch access requests from residential IPs.

### Configuration process

1. Enable the threat intelligence module and disable the expected IDC.

2. Configure a session policy to identify residential IP access requests through a CAPTCHA.

3. Configure a session policy and set callback API address/business IDC address to **Trust**. This is to avoid blocking

business APIs by mistake and thus affecting the business while ensuring the website security.

4. Enable CAPTCHA for applications or sites as needed.

# **Bot Flow Statistics Module**

Last updated : 2023-12-29 14:43:37

This document describes how to configure the bot flow statistics module in the bot analytics section of bot traffic management. Using big data analytics and statistics and AI technology, it automatically identifies malicious users based on characteristics of user traffic.

# Prerequisites

You have purchased a WAF instance and bot traffic management extra pack and enabled bot analysis for WAFconnected domain names.

# **Protection Configuration**

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner and click Bot management.

вот	•		🖪 Hands-on tutorial
Rules SaaS Bot management rules View traffic En	nabled modules Custom rules 3 4 rules	Anti-bot workflow	Application traffic

3. In Global settings, click Configure now in the Bot flow statistics module section.

Bot analytics	
	Threat intelligence module Combined with Tencent's years of security experience and data, it provides high-reliability 24/7 threat intelligence, helping solve distributed bot attacks efficiently. Configure now
	Al evaluation module It applies Al models, built based on AI technology and Tencent's experiences in controlling risks and fighting illegal activities, to quickly identify malicious requests. Configure now
	Bot flow statistics module Using big data analytics and statistics and AI technology, it automatically identifies malicious users based on characteristics of user traffic.

4. On the **Bot flow statistics module** page, you can configure the detection level of different features.

Threat intelligence module	AI evaluation module	Bot flow statistics modul	e Action setting		
() A higher detection level ind	dicates a higher detection rate with	low detection accuracy		Don't show again	×
Name/Description	Mode		Last modified 🗘	On/Off	
werage speed werage number of sessions per	Intelligent recommendation     Medium     Strict	Loose	-		
ession duration ession duration	<ul> <li>Intelligent recommendation</li> <li>Medium</li> <li>Strict</li> </ul>	Loose	-		
otal URL types Number of deduped URLs in a s	Intelligent recommendation     Medium     Strict	CLoose	-		
Jser-Agent type Jumber of deduped UserAgent	Intelligent recommendation     Medium     Strict	Loose	-		
Cookie type Number of deduped Cookies in	Intelligent recommendation     Medium     Strict	Loose	-		
leferer type Jumber of deduped Referers in	Intelligent recommendation     Medium     Strict	CLoose	-		
otal sessions otal number of sessions	Intelligent recommendation     Medium     Strict	CLoose	-		

### Parameter description:

Name/Description:

Referer type: The number of deduped Referers in a session request is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

Total URL types: The number of deduped URLs in a session request is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

User-Agent type: The number of deduped User-Agents in a session request is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

Cookie type: The number of deduped cookies in a session request is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

Total sessions: The total number of sessions is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

Average speed: The average number of sessions per minute is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

Session duration: The session duration is detected, with different thresholds for detecting an access request with a higher value than the corresponding threshold.

Mode: Different detection levels correspond to different thresholds, which fluctuate with the number of website access requests.

A higher detection level indicates a higher detection rate with a lower detection accuracy.

A lower detection level indicates a lower detection rate with a higher detection accuracy.

Intelligent recommendation automatically learns the historical traffic of your website to generate a recommended detection level in Tencent Security bot traffic management. The detection level is either loose or medium according to the current bot situation at your website.

On/Off: You can enable or disable the detection type of the current option. After this option is disabled, the detection item will not contribute to the bot score.

5. After the configuration, click the configuration page of a certain scenario, and click



of the Bot flow statistics module.

## Best Practices of Bot Flow Statistics Module

The bot flow statistics module leverages the bot defense experience and accumulation of the bot attack/defense lab to quickly identify abnormal access behaviors. Therefore, we recommend you enable it and set **Rule level** to **Intelligent recommendation** under any circumstances.

# **Action Settings**

Last updated : 2023-12-29 14:43:49

Log in to the WAF console and select Configuration center > Bot and application security on the left sidebar.
 On the Bot and application security page, select the target domain name in the top-left corner and click Bot management.

вот	•		
Rules SaaS			Anti-bot workflow
Bot management rules View traffic	Enabled modules	Custom rules	<mark>ĕ</mark> ĕ≥→ ∰→
	U	<ul> <li>Tues</li> </ul>	All traffic Client risk identification

3. In the Action setting section on the Bot management tab, click Action score.

4. On the **Action setting** tab, you can configure different action policies, the scope of each action policy, and actions in different score ranges to precisely block risky access requests.

Threat intelligence module	Al evaluation module B	ot flow statistics mo	dule Action setti
et scopes			
ope All scopes			
et actions			
🕑 Loose mode	🔗 Moderate mode	e	Strict mode
Action distribution (i)			
Action distribution ④	Trust Monit	or <mark>–</mark> Redirect <b>–</b> C	APTCHA 📕 Block
Action distribution (j)	Trust Monit	or <mark>–</mark> Redirect <b>–</b> C	APTCHA 📕 Block
Action distribution (i)	Trust Monit	or <mark>–</mark> Redirect <b>–</b> C	APTCHA <b>B</b> lock Tag
		or <b>R</b> edirect <b>C</b>	Tag
Score (0-100)	Action		

### **Use instructions**

Action policy: Currently, you can select multiple action policies for one bot scenario.

**Scope**: It can be **All scopes** or **Custom scope**. Traffic hitting the scope will be precisely blocked based on the actions in different score ranges.

**Mode**: By default, there are loose, moderate, strict, and custom modes. The first three modes are preset, representing different recommended categories and handling policies for bots at different risk levels in bot behavior management. Once modified, they become the custom mode.

**Score range**: A score ranges from 0 to 100. Ten score entries can be added to each range, which is left-closed and right-open and cannot be overlapped. You can set a range to null, and then no action will be processed in it.

Action: You can set an action to Trust, Monitor, Redirect (to a certain website URL), CAPTCHA, or Block.

Tag: You can set a tag of Friendly bots, Malicious bots, Normal traffic, or Suspicious bots.

Friendly bots: The bot is friendly and legal for the website by default.

**Suspicious bots**: The system finds the access source traffic suspicious but cannot determine if it is malicious to the website.

Normal traffic: The access traffic is regarded as from a real user.

Malicious bots: The bot has malicious traffic and is unfriendly to the website.

5. After completing the configuration, click **Publish** in the bottom-left corner of the page.

# Bot Traffic Analysis

Last updated : 2023-12-29 14:44:17

# Background

The bot traffic management feature can differentiate between friendly and malicious bots and crawlers and implement corresponding management policies such as letting through the traffic of search engine bots, blocking the traffic of malicious item information crawlers, delaying responses, or adopting different response time periods. This feature reduces resource consumption, information leakage, and failed marketing caused by malicious bots and crawlers on the one hand and ensures normal operations of friendly ones (such as search engine bots and advertising programs) on the other hand.

With bot traffic analysis, you can collect data from bot traffic management and quickly understand how a selected domain name with bot traffic analysis enabled is affected by bots. You can also view the bot classification trend, action trend, bot score distribution, top statistics by request count, and list of URLs vulnerable to attacks.

### Directions

1. Log in to the WAF console and select Bot traffic analysis on the left sidebar.

2. On the **Bot traffic analysis** page, click the **All domain names** drop-down list in the top-left corner and select the target domain name.

3. Select **Not all domain names** and click **View configuration** in the top-left corner to enter the **Bot and application security** page for the corresponding domain name.

Bot Traffic Analysis				•	
Bot Traffic Analysis	Bot traffic	c details			
View configuration	Today	Yesterday	Last 7 days	Last 15 days	2022-10-21 00:00:00 ~ 2022-10-21 10:24:24
Filter (click the input box to	show and ad	d filters)			

4. On the **Bot traffic analysis** page, search for the protection data of a domain name by **Time** or **Filter**.

You can search for the bot protection effect data of a domain name in the specified time period.

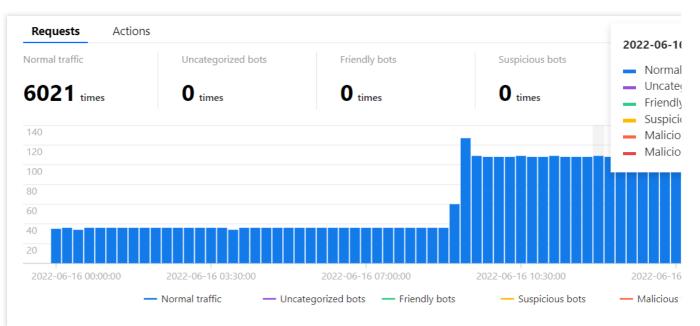
Bot Traffic Analysis				•	
Bot Traffic Analysis	Bot traffi	c details			
View configuration	Today	Yesterday	Last 7 days	Last 15 days	2022-10-21 00:00:00 ~ 2022-10-
Filter (click the input box to	abow and ad	ld filtoro)			

Click Filter to display the bot traffic analysis filter.

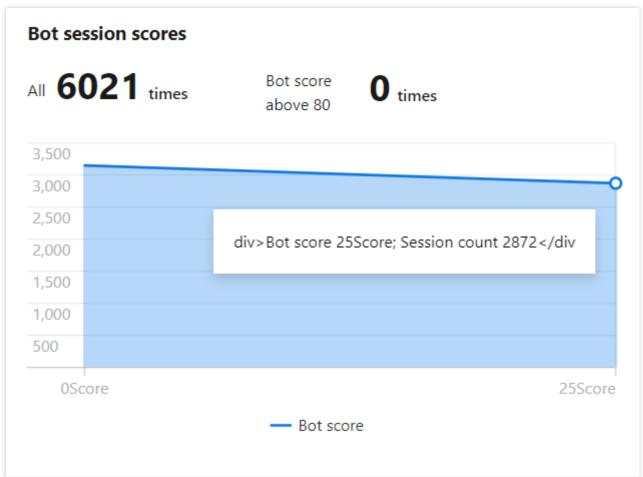
			•	
Bot traffic	details			
Today	Yesterday	Last 7 days	Last 15 days	2022-10
show and add	d filters)			
	Today	Bot traffic details	Today       Yesterday       Last 7 days	Bot traffic details         Today       Yesterday       Last 7 days       Last 15 days

5. In the **Requests** section, you can view the bot requests and bot session scores of the current domain name (you can select a global domain name).

Bot requests chart: Group different bot scores into different ranges according to the configured action and tag, score and tag each traffic request accessing the website, and display the result on the chart.



Bot session scores: It's a chart displaying the bot traffic risk distribution in a domain name of the current user, including the access traffic trend. You can set bot scores accordingly. The higher the scores, the larger the impact of the bots.



6. Click **Actions** to view the actions on traffic of the current domain name (or a global domain name) by bot traffic management and its percentage to the actions on all the request traffic.



Trust	Observe	Monitor	Redirect	CAPTCHA	Block
2876 times	3153 times	<b>O</b> times	<b>O</b> times	<b>O</b> times	<b>O</b> times
100			Δ		
80					
60					
40	~				
20					
2022-06-16 00:00:00	2022-06-16 03:15:00	2022-06-16 06:30:00	2022-06-16 09:45:00	2022-06-16 13:00:00	2022-06-16 16:15:00 2022-0

7. The Top 5 exceptional requests section displays the top 5 key-value pairs and quantity of abnormal bot features in a certain time period. The statistical chart is subject to the filter and the time of the traffic trend comparison chart.Click Bar chart to view the key-value pair information. Click Filter or Exclude to quickly add a filter.

reat intelligence module	Al evaluation	module		Bot
Advanced threat intelligence User-Agent type	IP address	Session ID	URL	4
24	874			
			No data yet	

8. The **Top 5 by request count** section displays the top 5 key-value pairs and number of bot features in a certain time period. The statistical chart is subject to the filter and the time of the traffic trend comparison chart. Click **Bar chart** to view the key-value pair information. Click **Filter** or **Exclude** to quickly add a filter.

Top 5 by request count								
Domain name Rule ID		URL	Reque	st method	User-Agen	t		Co
	3149	/		_			599	90 Sir
	2872	/de		- 20				Fra.
		/.well-		- 11				

9. The affected asset statistical list displays the URLs most affected by bots and the actions performed by bot traffic management. The entries are aggregated once every five minutes.

Add	to blocklist Or	nly the latest bot o	details can be view	ed								
		Session ID	Region	Domain na	Request path	Action <b>Y</b>	Number 🕈	Detecte <b>T</b>	Bot score 🗘	Bot tag 🝸	Threat i 🔻	I
	1 '		1	wa	/	🗑 Trust	10	Bot analytic	25	Normal traffic	Tencent Clo	
	. 7			wa	/	🗑 Trust	12	Bot analytic	25	Normal traffic	Tencent Clo	
	7	-		/a	/	🗑 Trust	12	Bot analytic	25	Normal traffic	Tencent Clo	

**Field description** 

Access source: Source of the access request.

Session: A single connection establishment session.

Region: Geographical location of the access request.

Domain name: Access domain name.

**Request path**: URI of the access request.

Action: Action performed by bot traffic management.

Access count: Number of sessions.

Detected module: Hit modules.

Bot score: Bot score of the current access request in the aggregated dimension.

Bot tag: Bot tag hit by the current access request in the aggregated dimension.

Threat intelligence module: Match tag hit by the current bot in the threat intelligence module.

**Analysis of hits**: Displays the exceptions in the current access request that hit the bot analytics module in the aggregated dimension.

**Type of exceptions**: Displays the exceptions discovered by the bot flow statistics module in the aggregated dimension.

Logging time: Time when bot access is discovered.

Operation:

View logs: Click View logs to view the access log of a bot.

Note:

To view access logs, you need to subscribe to the access logging service.



Add to blocklist Only the latest bot details can be viewed											
	Access sour	Session ID	Region	Domain na	Request path	Action <b>T</b>	Number \$	Detecte <b>Y</b>	Bot score 🗘	Bot tag 🔻	Threat i 🔻
				c0′ f.c	1	闭 Trust	10	Bot analytic	25	Normal traffic	Tencent Clo.
				¢	/	🗑 Trust	12	Bot analytic	25	Normal traffic	Tencent Clo.
			Si. j ure	twa	/	🗑 Trust	12	Bot analytic	25	Normal traffic	Tencent Clo.

View details: Click **View details** to view the feature details of a bot.

Add to blocklist: Click Add to blocklist, configure parameters, and click OK.

Add to IP blo	cklist
	t's added to the blocklist, you can go to <u>Blocklist/Allowlist &gt; IP</u> i <u>st</u> View
Scope	O Global
IP address	
End time	Permanent 🔻
Remarks	(Optional) Enter up to 200 charact
	OK Cancel

# **Bot Traffic Details**

Last updated : 2023-12-29 14:44:34

# Overview

With data provided by the bot traffic management module, bot traffic analysis quickly analyzes the bot impacts on domain names in terms of bot feature metrics, including the types of bots, proportion of actions, bot score distribution, top data by request count and URLs that may be affected. You can click **View details** to view the bot details of an access source, and its access characteristics and exceptions detected.

The bot traffic details section displays the bot traffic details of top 10 access sources. You can also view their session access information and logs if session settings are configured, and the information of these access sources/IPs by retrieval.

# Prerequisites

You have subscribed to the bot traffic management service and enabled bot traffic analysis.

### Directions

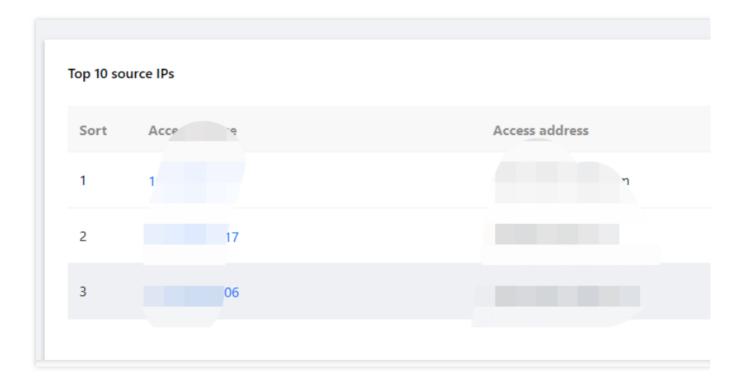
- 1. Log in to the WAF console and select Bot Traffic Analysis on the left sidebar. Open the Bot traffic details tab.
- 2. On the page displayed, click the drop-down list in the upper-left corner and select a domain name.
- 3. Specify a date or use the filter to search top 10 access sources of all domain names or a specific domain name.

Then click View logs of the access source you want to view.

Bot Traffi	c Analysis			•		
Bot Traffic	Analysis	Bot traffic details	_			
Today	Yesterday	Last 7 days	Last 15 days	2022-10-21 00:0	00:00 ~ 2022-10-21 10	:27:28 📋

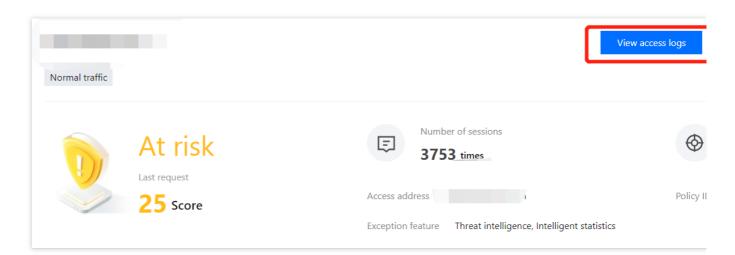
4. To view traffic details of an access source, click View details on the right.





### Viewing access overview

The bot traffic details page shows you the estimated risk value of the access source and the information of the hit policy, and allows you to take measures such as adding the access source to the allowlist/blocklist and creating custom rules targeting the access source.



### Field description:

IP address and tag: It displays the IP address of an access source and the hit tag that identifies the bot category.

Last request: It displays the score of the last access request from the access source and the risk level.

Session count: It displays the number of continuous sessions on the website accessed occurred in the last access request.

Access address: It displays the domain name of the access source.

Exception feature: It displays modules that detect exceptional features of the access source.

Hit modules: It displays modules that take actions to combat bots.

Policy ID: It is the ID of a hit policy.

View access logs: It redirects you to the access logs page where you can view the access details of the access source.

Add to allowlist: It allows you to add the access source to the allowlist.

Add to blocklist: It allows you to add the access source to the blocklist.

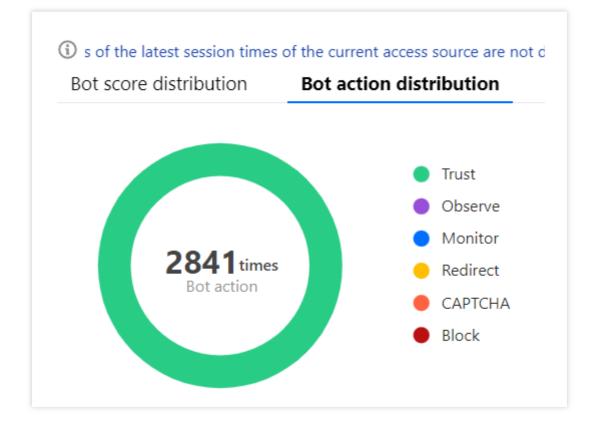
Add custom rules: It allows you to add custom rules targeting the access source.

### Viewing bot scores

In the bot score distribution and bot action distribution sections, you can view the distribution of bot scores and bot actions within the selected period, helping you determine the risk level of the access source.

### Viewing bot information

The bot traffic details page also displays information of the automated access source including the features of the bot and access request, threat intelligence and AI evaluation information, bot flow statistics and sessions. Using this data, you can quickly identify exceptions in the access request and take measures against the bot.



### **Basic session information**

On the basic session information tab, you can view the information of the access source IP and session separately.



Basic session info	Request feature info	Threat intelligence module	AI evaluation module	Bot flow statistics module	
위 덱					
Visitor IP			City		Regic
IP type	EIDC		IP owner		
📮 Session					
Average speed	2.33times/min		Total sessions	3761	Whet
Session duration	1613.33minutes	;			

### Field description:

#### IP information

Access source IP: IP address of an access source.

City: City where the access source is located.

Region: Country where the access source is located.

IP type: IP type of the access source.

IP owner: IP owner of the access source.

Session information

Session average speed: The average session speed of the access source in the latest session, which is calculated by the total number of session requests/session duration. Unit: times/minute.

Total sessions: The total number of sessions of the access source in the latest session.

Whether Robots.txt exists: Whether the access source has accessed the Robots.txt file, which is often accessed by bot sessions.

Session duration: Amount of time the latest session initiated by the access source.

#### **Request feature information**

On the request feature information tab, you can view the information of the request features, Cookie, User-Agent, Referer, and Query in the session request.



Basic session info	est feature info	Threat intelligence module	AI evaluation module B	ot flow statistics module	
Request feature info					
Percentage of repeated URLs	<ol> <li>1Reference v</li> </ol>	alue: 0-1	Total URL types 🕥	1	Mi
Maximum URL depth 🛈	1		Average URL depth 🚯	1	То
匠 Cookie					
Cookie abuses 🕥	No		Cookie exist 🛈	No	Cc
Cookie validity 🚯	0		Most used Cookie 🚯		Pe
└ User-Agent information	1				
User-Agent type 🛈			User-Agent existence 🕥	Yes	Us
User-Agent type 🚯	1		User-Agent existence rate	(i) 1	M
Percentage of the most used	User-Agents (	1	User-Agent similarity rate	<ol> <li>0</li> </ol>	
🖻 Referer					

### Field description:

Туре	Metric	Description		
	Percentage of repeated URLs	Percentage of the repeated URLs in a session request. The value range is 0-1. Set this parameter based on your actual business needs. A value that is too high or too low suggests an exception (which must be determined based on the actual business conditions).		
	Total URL types	Number of deduplicated URLs in a session request.		
Request feature information	Minimum URL depth	Minimum directory levels of URLs in a session request.		
	Maximum URL depth	Maximum directory levels of URLs in a session request.		
	Average URL depth	Average directory levels of URLs in a session request.		
	Total URLs	Total number of URLs visited in a session request (including duplicates).		
Cookie information	Whether Cookie is	Different types of UAs use the same Cookie.		



	abused			
	Cookie exist	Whether the Cookie exists in all session requests.		
	Percentage of repeated Cookies	Percentage of the repeated Cookies in a session request. The value ranges from 0-1.		
	Cookie validity	Percentage of the Cookies that can be parsed in a session request.		
	Most used Cookie	Most used Cookies in a session request.		
	Percentage of the most used Cookies	Percentage of the most used Cookies in a session request.		
	User-Agent type	User-Agent type of the request user in a session request.		
	User-Agent exist	Whether User-Agent exists in a session request.		
	User-Agent randomness index	Random distribution of User-Agents in a session request. When the reference value threshold exceeds 0.6, an exception is suspected; when it exceeds 0.92, an exception is basically confirmed.		
User-Agent information	User-Agent type	Number of deduplicated User-Agents in a session request, which is valid only for non-proxy IPs. A value that is too high suggests an exception (which must be determined based on the actual business conditions).		
	User-Agent existence rate	Existence rate of UAs in a session request, which ranges from 0 to 1. A value too small may be suspected as an exception (which must be determined based on the actual business conditions).		
	Most used User-Agent	Most used value of the HTTP User-Agent in a session request.		
	Percentage of the most used User-Agents	Percentage of the most used HTTP User-Agent values in a session request.		
	User-Agent similarity rate	Similarity between the most used value and the rest in a session request.		
Referer information	Percentage of repeated Referers	Percentage of repeated Referers in a session request, which is valid only for access through		



		browsers and ranges from 0 to 1. A value that is too high suggests an exception (which must be determined based on the actual business conditions).
	Referer exist	Existence rate of Referers in a session request, which ranges from 0 to 1. A value too small may be suspected as an exception. It's available for browser access.
	Referer existence rate	Existence rate of Referers in a session request, which ranges from 0 to 1. A value too small may be suspected as an exception. It's available for browser access.
	Whether Referer is abused	Different types of UAs use the same Referer.
	Most used Referer	Most used value of the HTTP Referer in a session request.
	Percentage of the most used Referers	Percentage of the most used HTTP Referer values in a session request.
Query information	Percentage of repeated Query parameters	Percentage of repeated GET request parameters (`Query` content) or POST request parameters (`Body` content) in a session request, which ranges from 0 to 1. Set this parameter based on your actual business needs. A value that is too high or too low suggests an exception (which must be determined based on the actual business conditions).
	Total query parameter types	Most used parameters in a session request, which may be GET request parameters (`Query` content) or POST request parameters (`Body` content).

### **Threat intelligence**

The threat intelligence tab displays the known information that matches the current access source IP/session ID, such as the IDC details of the access source.

IDC details: If the information of the access source includes the IDC, the IDC information will be displayed.

Threat Intelligence: If the IP information of the access source is matched, the matched tag and its definition will be displayed.

### Al evaluation

The AI evaluation tab displays the following feature metrics detected exceptionally and the corresponding probability values, including information of Cookie, User-Agent, Referer, and Query. If a metric's value larger than 0, this metric is considered exceptional.

Basic session info Re	quest feature info	Threat intelligence module	AI evaluation module	Bot flow statistics module	
The AI evaluation module calc	ulates a probability val	ue of exceptions. "0" indicates no except	tions, whereas a bigger number indicat	tes a higher probability.	
Request feature					
URL duplication rate 🛈	0 (Probabilit	y value1)	Total URL types 🛈	<b>0</b> (Probability value1)	Max
Minimum URL depth 🕥	0 (Minimum	probability value1)	Average speed 🕥	<b>0</b> (Probability value1)	Que
Session duration 🛈	0 (Probabilit	y value1613.33)			
🗗 Cookie					
Cookie duplication rate 🤅	) 0 (Probabilit	y value0)	Percentage of most repea	ated Cookies ④ 0 (Probability value0)	Tota
⊻ User-Agent					
User-Agent duplication ra	te 🕤 0 (Probab	ility value0)	Total User-Agent types 🥃	<b>0</b> (Probability value1)	Perc
User-Agent randomness i	ndex 🕤 🛛 (Prob	ability value0)	Percentage of the most u	sed User-Agents 🕕 0 (Probability value1)	
Referer					
Referer duplication rate 🤅	0 (Probabilit	y value0)	Total Referer types 🛈	0 (Probability value1)	Refe
Q Query					
Query duplication rate 🛈	0 (Probabilit	y value1)	Total Query types 🚯	<b>0</b> (Probability value1)	Que

#### Bot flow statistics

The bot flow statistics tab displays the feature metrics detected exceptionally, and the corresponding values estimated, as well as the reference values.

Basic session info	Request feature info	Threat intelligence module	Al evaluation module	Bot flow statistics module	
The reference value is the	average of normal values. Th	ne probability value is marked with a r	ed arrow.		
Statistical metrics	5				
Session average speed	3 2.33 A Reference	ce value: 1.89	User-Agent type 🛈	1Reference value: 1	U
Session duration 🛈	1613.33 🕇 Refe	erence value: 1	Total session count 🤅	) 3761 <sup>↑</sup> Reference value: 1	0

#### Field description:

Metric	Description
Session average speed	This metric indicates that the session average speed is considered exceptional, and gives a probability threshold to confirm the exception.
User-Agent type	This metric indicates that the User-Agent type is considered exceptional, and gives a probability threshold to confirm the exception.
URL type	This metric indicates that the URL type is considered exceptional, and gives a probability threshold to confirm the exception.
Session duration	This metric indicates that the session duration is considered exceptional, and gives a probability threshold to confirm the exception.
Total session count	This metric indicates that the total session count is considered exceptional, and gives a probability threshold to confirm the exception.

#### Session management

The session management tab displays the IP addresses accessed by the current session, the number of accesses by each IP address, and the access logs of the current session ID.

### Note:

When session settings are configured, the session management tab will be displayed.

Basic session info	Request feature info	Threat intelligence module	Al evaluation module	Bot flow statistics module	Session management
Number of IP addresses u	nder this session ID				
IP address		Number of access	ses	Detection t	ime
34.5.6.9		34times		2022-06-23	15:23:23
ŧ1项					

# Blocklist/Allowlist Protection Settings Features

Last updated : 2023-12-29 14:45:14

The blocklist/allowlist feature of WAF allows you to add access source IPs that pass WAF-protected domains to the blocklist or allowlist and add multiple HTTP sections to the precise allowlist. Key features include IP blocklist/allowlist settings and precise allowlist settings.

IP blocklist/allowlist setting: You can set domain name-specific, IP range-specific, or global IP blocklist/allowlist rules. Precise allowlist setting: You can add the access requests from specified public network users to the allowlist by combining and matching HTTP message sections such as request path, GET parameters, POST parameters,

Referer , and User-Agent .

Meanwhile, you can add a domain name-specific or global blocklist/allowlist which will take effect in the following priority order:

The priority of the blocklist/allowlist is only lower than that of the custom precise allowlist, but higher than that of other detection logic.

The priority of blocklist/allowlist settings is in descending order: precise allowlist > global allowlist > domain namespecific allowlist > domain name-specific blocklist > global blocklist > other WAF module logic.

# **IP Blocklist**

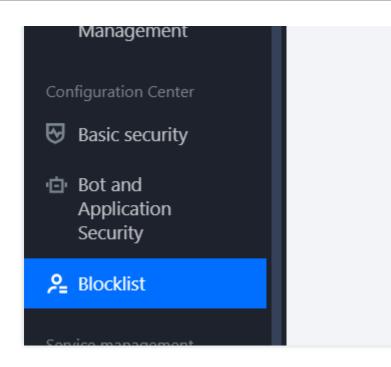
Last updated : 2023-12-29 14:45:25

# Adding IPs to Blocklist

### Adding IPs manually

- 1. Log in to the WAF console and select Configuration Center > Blocklist/Allowlist on the left sidebar.
- 2. On the blocklist/allowlist page, select a target domain name in the top-left corner and click IP blocklist.
- 3. On the IP blocklist page, click Add address.

Web Application Firewall	Blocklist/Allowlist
Switch to new Outside the Chinese Mainland	IP blocklist IP allowlist Precise allowlist           IP allowlist         Precise allowlist           Add address         Delete address
Safe and visible	IP address
Security overview	
Bot traffic analysis	1.1.1.1
Logs	Total items: 1
🕞 Attack Logs	
Access Logs	
Asset Center	
🐱 Domain Name List	
Genstance	



4. On the page that appears, configure relevant parameters and click **OK**.

Add to blocklist				
ID a dalaren e	Lip to 20 arbitrary ID addresses (agy 10.0.0.10 or EE05yB5) or CIDB ID			
IP address *	Up to 20 arbitrary IP addresses (eg: 10.0.0.10 or FF05::B5) or CIDR IP addresses (eg: 10.0.0.0/16 or FF05::B5::/60). Add one per line			
		0		
E. L.				
End time *	Permanent O Limited			
Limited *	2022-06-15 17:55:42			
Remarks	Enter up to 50 characters			

### Field description:

IP address: IP address such as 10.0.0.10 or FF05::B5 . CIDR blocks are supported, such as

10.0.0/16 or FF05:B5::/60 . You can enter up to 20 items and separate them with line breaks.

#### Note:

If you select All for the domain name, the added IP address or range will be blocked/allowed globally.

The domain name quotas in each edition are as follows: Premium Edition: 1,000 entries/domain name; Enterprise

Edition: 5,000 entries/domain name; Ultimate Edition: 20,000 entries/domain. Each IP address or range occupies one entry in the quota.

Expiration time:Never expire or a specified date.

Remarks: Custom remarks, which can contain up to 50 characters.

### **Importing IPs**

- 1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click **IP blocklist**.
- 2. On the IP blocklist page, click **Import data** > **Import**. After the data is parsed successfully, click **OK**.

Import IP list		>
	Import	
Parsing su	cceeded. Please click "OK" to import 1 entries of d	ata.
Description:		
2	upported. You can only upload one file at a time.	
	rted each time. If you import a large number of IP	s, please import them
by multiple times. Existing IPs	will be skipped during import.	
<ol><li>It must include three column excel data.</li></ol>	ns: category, IP address and end time. For more de	tails, see the exported
4. The end time must be early	than 2033/12/31 00:00:00 in the format of YYYY/W	IM/DD HH:MM:SS.
5. The content format must be	the same as the exported file. For more details, se	e IP Blocklist and IP
Allowlist		
	OK Reset	
	OK Nebel	

# **Editing IP Blocklist**

1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click **IP blocklist**.

2. On the IP blocklist page, select a target IP address, click **Edit** in the **Operation** column, modify the expiration time and remarks, and click **OK**.

Add address Delete addre	Delete all Import data	Export all Each domain name supports up to 20	000 rules	
IP address	Source <b>T</b>	End time	Update time 🏼 🏶	Ren
1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	Nor

## **Deleting IPs from IP Blocklist**

1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click IP blocklist.

2. You can delete one, multiple, or all IP addresses on the IP blocklist page as follows:

One: Select an IP address and click **Delete address** or **Delete** in the **Operation** column. A window will pop up to ask you to confirm the deletion operation.

#### Note:

Once deleted, it cannot be restored and can take effect only after being added again.

Add address Delete addre	ss Delete all Import data E	xport all Each domain name supports up	to 20000 rules
IP address	Source <b>T</b>	End time	Update time 💲
1.1.1.1	Custom	Permanent	2022-06-08 17:05:53

Multiple: Select multiple IP addresses and click **Delete address**. A window will pop up to ask you to confirm the deletion operation.

### Note:

Once deleted, it cannot be restored and can take effect only after being added again.

✓     IP address     Source ▼     End time     Update time ◆	
	Rei
✓         1.1.1.1         Custom         Permanent         2022-06-08 17:05:53	No

Total items: 1

All: Click **Delete all**. A window will pop up to ask you to confirm the deletion operation.

#### Note:

This operation will clear all IP blocklist/allowlist information under the current domain name. Therefore, proceed with caution. Once deleted, the addresses cannot be restored and can take effect only after being added again. 3. In the pop-up window, click **OK**.

# **Exporting All Filtered Results**

- 1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click **IP blocklist**.
- 2. On the IP blocklist page, click the search box to filter IPs by **IP address** or click **Source** to filter IPs by source type.

✓ IP address	Source <b>Y</b>	End time	Update time 🏼 🗘	
✓ 1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	

3. After filtering required IPs, click Export all.

Add address Delete addr	ess Delete all Import data Ex	port all Each domain name supports up to	20000 rules	
✓ IP address	Source <b>T</b>	End time	Update time 💲	Ren
1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	Non
Total items: 1				

# **IP Allowlist**

Last updated : 2023-12-29 14:45:40

# Adding IPs to Allowlist

### Adding IPs manually

- 1. Log in to the WAF console and select Configuration Center > Blocklist/Allowlist on the left sidebar.
- 2. On the blocklist/allowlist page, select a target domain name in the top-left corner and click IP allowlist.
- 3. On the IP allowlist page, click Add address.

Web Application	Blocklist/Allowlist	
Firewall Switch to new Outside the Chinese	IP blocklist IP allowlist	Precise allowlist Rule allowl
Mainland Safe and visible	Add address De	elete address Delete all
Security overview	IP address	Sou
Bot traffic analysis		
Logs		
🕞 Attack Logs		
Access Logs		
Asset Center		
🐷 Domain Name List		
Instance Management	Total items: 0	
Configuration Center		
Basic security		
回 Bot and Application Security		
<b>₽</b> Blocklist		
Service management		
🖾 Web rule library		

4. On the allowlist IP adding page, configure relevant parameters and click **OK**.

Add to allo	owlist	
IP address *	Up to 20 arbitrary IP addresses (eg: 10.0.0.10 or FF05::B5) or CIDR IP addresses (eg: 10.0.0.0/16 or FF05:B5::/60). Add one per line	
End time *	Permanent O Limited	0
Limited <b>*</b>	2022-06-15 16:49:29	
Remarks	Enter up to 50 characters	

### **Field description**

**IP address:** IP address such as 10.0.0.10 or FF05::B5 . CIDR blocks are supported, such as

10.0.0/16 or FF05:B5::/60 . You can enter up to 20 items and separate them with line breaks.

#### Note:

If you select **All** for the domain name, the added IP address or range will be allowed globally.

The domain name quotas in each edition are as follows: Premium Edition: 1,000 entries/domain name; Enterprise Edition: 5,000 entries/domain name; Ultimate Edition: 20,000 entries/domain. Each IP address or range occupies one entry in the quota.

Expiration time:Never expire or a specified date.

Remarks: Custom remarks, which can contain up to 50 characters.

### Importing IPs

- 1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click IP allowlist.
- 2. On the IP allowlist page, click Import data > Import. After the data is parsed successfully, click OK.

		Import		
	Parsing succeeded. Pleas	e click "OK" to in	port 1 entries of dat	a.
Description :				
	files are supported. You o	an only upload	one file at a time.	
-	an be imported each time.			please import them
	xisting IPs will be skipped			
	ree columns: category, IP	address and end	time. For more deta	ils, see the exporte
excel data. 1. The end time mu	rt ha aarly than 2022/12/2	21.00.00.00 ; +	format of VVV/MA	
	st be early than 2033/12/3 at must be the same as th			
	as more on our sume us u	ne exposited mer	or more actums, see	in proceeds and in
Allowlist				

# **Editing IP Allowlist**

1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click IP allowlist.

2. On the IP allowlist page, select a target IP address, click **Edit** in the **Operation** column, modify the expiration time and remarks, and click **OK**.

Add address Delete add	Iress Delete all Import data	Export all Each domain name supports up to	o 20000 rules	
IP address	Source <b>T</b>	End time	Update time 🕈	Rema
1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	None
Total items: 1				

# Deleting IPs from IP Allowlist

1. On the blocklist/allowlist page, select a target domain name in the top-left corner and click IP allowlist.

2. You can delete one, multiple, or all IP addresses on the IP allowlist page as follows:

One: Select an IP address, and click **Delete address** or **Delete** in the **Operation** column. A window will pop up to ask you to confirm the deletion operation.

### Note:

Once deleted, it cannot be restored and can take effect only after being added again.

Add address Delete addres	SS Delete all Import data E	Each domain name supports up	to 20000 rules
IP address	Source <b>T</b>	End time	Update time 🏼 🏶
1.1.1.1	Custom	Permanent	2022-06-08 17:05:53

Multiple: Select multiple IP addresses and click **Delete address**. A window will pop up to ask you to confirm the deletion operation.

### Note:

Once deleted, it cannot be restored and can take effect only after being added again.

Add address Delete address	Delete all Import data E	xport all Each domain name supports up to	o 20000 rules	
✓ IP address	Source T	End time	Update time 💲	Ren
1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	Nor
tal items: 1				

All: Click Delete all. A window will pop up to ask you to confirm the deletion operation.

### Note:

This operation will clear all IP blocklist/allowlist information under the current domain name. Therefore, proceed with caution. Once deleted, the addresses cannot be restored and can take effect only after being added again. 3. In the pop-up window, click **OK**.

### **Exporting All Filtered Results**

1. On the blocklist/allowlist page, select the target domain name in the top-left corner and click IP Allowlist.

2. On the IP allowlist page, click the search box to filter IPs by IP address or click Source to filter IPs by source type.

Add address Delete address	Delete all Import data	Export all Each domain name supports up to	2000 1003	
✓ IP address	Source <b>Y</b>	End time	Update time 🕈	
✓ 1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	

3. After filtering required IPs, click **Export all**.

Add address Delete address	Delete all Import data Ex	port all Each domain name supports up to	20000 rules	
✓ IP address	Source <b>Y</b>	End time	Update time 💲	Re
✓ 1.1.1.1	Custom	Permanent	2022-06-08 17:05:53	N

# **Precise Allowlist Management**

Last updated : 2023-12-29 14:45:58

You can add IPs to the precise allowlist to allow access requests of specific public network users to the specified sites.

# Adding to Precise Allowlist

1. Log in to the WAF console and select **Configuration Center** > **IP Blocklist/Allowlist** on the left sidebar to enter the IP blocklist/allowlist page.

2. On the blocklist/allowlist page, select the target domain name in the top-left corner and click Precise allowlist.

3. On the precise allowlist page, click Add address, and the IP adding window will pop up.

Blocklist IP allowlist Pred	cise allowlist Rule allowlist				
Add rule Copy	Each domain name supports up to 40	rules			
Rule ID 🏶	Rule name	Match condition	Allowed module <b>T</b>	Creation time 🗘	End time
					2019-04-30 00:0
Total items: 1					

4. In the pop-up window, configure relevant parameters and click **OK**.

### Note:

WAF precise allowlist enables you to use masks to allow access requests from source IPs within a range. We can enter a specific IP range (e.g. 10.10.0/24) in **Content**.

5. Now the rule will take effect immediately, and allow all HTTP access requests from specific source IPs.

### **Editing Precise Allowlist**

1. On the blocklist/allowlist page, select the target domain name in the top-left corner and click Precise allowlist.

2. On the precise allowlist page, select the target rule, click Edit, and the editing window will pop up.

Add rule Copy Ea	ch domain name supports up to 40 rul	les			
Rule ID 🗘	Rule name	Match condition	Allowed module <b>T</b>	Creation time 🗘	End t
			Web rule angine		

3. In the pop-up window, modify relevant parameters and click OK.

### **Removing from Precise Allowlist**

1. On the blocklist/allowlist page, select the target domain name in the top-left corner and click **Precise allowlist**.

2. On the precise allowlist page, select the target rule, click **Delete**, and the deletion confirmation window will pop up.

Rule ID 🗘	Rule name	Match condition	Allowed module $\mathbf{T}$	Creation time 🗘	End tir
			Web rule enaine		

3. In the pop-up window, click **OK**.

### Note:

Once deleted, it cannot be restored and takes effect only after being added again.

# **Rule Allowlist**

Last updated : 2023-12-29 14:46:11

# Scenarios

If normal access traffic is blocked by the WAF rule engine, you can create rules to allow the access traffic using the blocklist/allowlist feature.

# Directions

1. Log in to the WAF console and select **Configuration Center** > **IP Blocklist/Allowlist** on the left sidebar to enter the IP blocklist/allowlist page.

2. On the blocklist/allowlist page, select the target domain name in the top-left corner and click **Rule allowlist**.

3. On the page that appears, click **Add rule**.

Blocklist/Allowlist	•					Manage allowlist/blocklist ⊉
IP blocklist IP allowlist Precise allow	list Rule allowlist					manage anownay brocknar E
Add rule Delete Each dom	nain name supports up to 500 rules					Q Ø
Allowed rule ID	Match method	Match URL	On/Off	Last modified 🏼 🍣	Operation	
20	Suffix match	123 💼		2022-05-09 19:54:15	Edit Delete	
Total items: 1					10 🔻 / page 🛛 🖌 🔺	1 / 1 page 🕨 🕨

4. In the pop-up window, configure the required parameters and click OK.

Allowed rule ID	Up to 10 rule IDs separated by commas	
Match method	Exact match 💌	
URL	Start with "/"; omit domain name; up to 128 characters (case insensitive)	
Enable allowlist		



### Field description:

Rule ID: ID of the rule to be allowed. You can add up to 10 rule IDs for each policy.

Match method: Match method of the URL to be allowed. You can select "Exact match" (default value), "Prefix match", or "Suffix match".

URL: URI path to be allowed. The URI must be unique under one domain name.

Enable allowlist: It specifies whether to enable allowlist. The switch is enabled by default.

# **Traffic Inspection**

Last updated : 2024-06-18 14:42:15

# Overview

The traffic inspection feature enables an analysis of the traffic risks associated with the currently protected services. It assists you in efficiently summarizing the connected assets, detecting risks in business traffic, reviewing the WAF configurations, and generating a detailed Traffic Inspection report. This aids in enhancing website protection effectiveness and ensuring the stable operation of your business.

### Traffic Inspection Introduction:

Free trial: Traffic inspection is currently a beta feature, and it is available for use after WAF is purchased. Log recording: Once the traffic inspection starts, it will check for web risk, bot risk, and API asset risk for the check domain. If any risk is detected, attack logs and access logs will be recorded with actions of observation (monitoring without interception). It ensures there is no impact or interception of business access. Data source: The traffic inspection display data comes from the WAF product you are currently using. If some valueadded features are not enabled, the statistics may slightly deviate from the actual access situation. It is recommended that you purchase and enable these features before conducting another check.

### Directions

1. Log in to the WAF console, and choose **Traffic Inspection** in the left sidebar.

2. On the traffic Inspection page, you can initiate a check, view the top 5 key issues of concern, and download historical check reports.

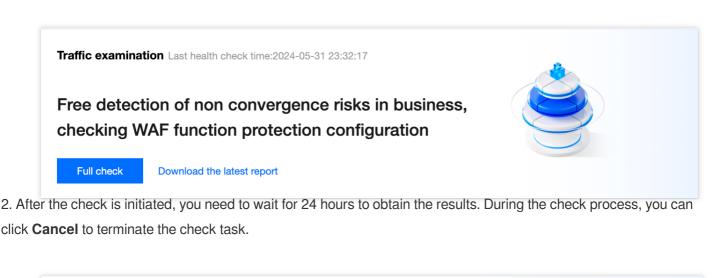
### **Initiating a Traffic Inspection**

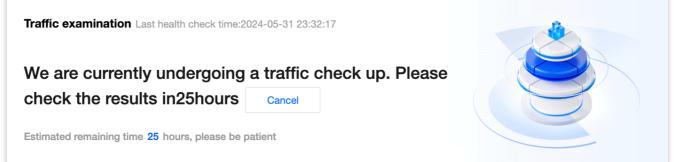
1. On the traffic Inspection card, click **Full check** to initiate the check task.

Check scope: Supports the check of up to 100 domain names within 20,000 QPS. Exceeding this limit will result in a random selection of some domain names for check.

Check cycle: Supports check once every 7 days.

Check duration: Each check cycle is expected to span approximately 24 hours. Once it is initiated, the check will only analyze abnormal traffic data from the most recent 24-hour period. The check ends with the generation of a check report and key issues.





3. After the check is completed, you can download the check report and view the key issues in this check.

### Viewing Key Issues

After the check is completed, you can view the top 5 key issues at the bottom of the page, and handle key risks accordingly.

Priority: The priority of risk disposal, divided into high, medium, and low levels, is evaluated based on the degree of risk and impact scope.

Statistics data: Collects risk data within the check cycle, and displays the increase/decrease changes in risk compared to the results of the last check.

Priority: High         Excessive abnormal BOT tra         1 %Web crawlers         • 2%	Excessive abnormal BOT traffic Traffic risk analysis The current proportion of BOT attacks exceeds54%. It is recommended to enable/try out the BOT traffic management function, conduct in-depth analysis of BOT traf	ffic, and add targeted prote
Priority: High	BOT type traffic trend	TOP 5 BOT Types
There are many risk API assets <b>3</b> Individual sensitive APIs <b>3</b> <b>Priority: Medium</b> BOT management switch not <b>90</b> Domain names not enabled <b>9</b> <b>Priority: Medium</b>	2 1.5 1 0.5 2024-05-31 05:00:00 2024-05-31 10:30:00 2024-05-31 16:00:00 2024-05-31 21:30:00 - Crawler — Malicious scanning type	Web crawler BOT - Malicious scanni
API security analysis switch 102 Domain names not enabled  12	There are many risk API assets Traffic risk analysis 3 sensitive API assets, involving categories, totaling 0 sensitive data;There are 3 API assets with risk events, involving categories with a total of 0 risk event business, conduct comprehensive asset discovery and sorting, and mitigate API security risks.	s.It is recommended to ena

### **Downloading Reports**

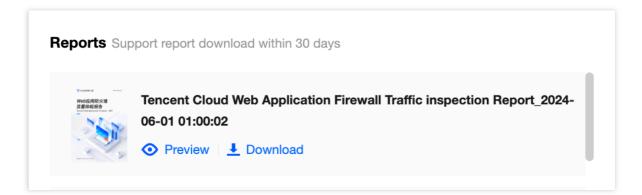
After the check is completed, you can download a detailed traffic Inspection report. The report **is only saved for 30** days.

### Note:

Due to the limited length of the report, only the top 5 items are displayed for each check item detail list. For complete details, see the report guide and view on the corresponding page in the console.

On the report download card, click **Preview** to view the content of the check report online.

On the report download card, click **Download** to download the physical check report in PDF format.



### Introduction of Check Items of Traffic Inspection

Check Module	Check Item	Check Content
Connected Asset Summary	Domain asset summary	Summarizes the total number of domains, the total number of domains connected to the WAF, and the total number of domains with WAF protection enabled.



		Displays the list of domains not yet protected by the WAF.
	API asset summary	Summarizes the total number of API assets found in the connected domains and the business scenarios involved. Displays the top 5 API QPS peak values from the day before and the list of domains with a high number of active APIs.
	Trend of business access	Analyzes business access trends and identifies any risks of excessive traffic volume.
	Trend of attack traffic	Analyzes the distribution of attack types within the access business check cycle.
Traffic Risk Summary	Bot attack risk	Determines if there is bot risk in the access traffic; if so, further analyzes the types/purposes, maliciousness, and access trend of the relevant bots.
	API risk summary	Analyzes if there are risks associated with API assets found in the access traffic; if so, further analyzes the sensitivity involvement, risk events, and the total number of accesses, QPS, and the business scenarios of the related assets.
WAF Configuration Summary	WAF configuration summary	Checks the configuration of key product features, including statuses of asset connectivity, protection switch status, protection configuration, and log storage configuration.

# Statistics and Logs Attack Logs

Last updated : 2023-12-29 14:46:24

This guide describes how to search and analyze attack logs.

# Background

WAF collects attack logs that record information about the attack time, attacker IP and attack type, and allows you to query and download logs for up to 30 days in the past by full-text search, fuzzy search and filter search (which support downloading million of logs).

# Searching Attack Logs

- 1. Log in to the WAF console. Select Attack Logs on the left sidebar and then the Log service tab.
- 2. Select the instance, domain name, attack type, action and attack time to search attack logs.

of logs <b>79rules</b> (j)	 	
of logs 79rules (i)		
of logs 79rules (i)		

Field Name	Description
Instance	Select instances. By default, all instances are selected.
Domain name	Select domain names. By default, all domain names are selected.
Attack type	Select attack types observed/blocked by security modules. By default, all attack types are selected.

Action	Select <b>Observe</b> or <b>Block</b> . By default, all actions are selected.
Risk level	Select High risk, Medium risk or Low risk. By default, all risk levels are selected.
Time period	Select a time period for the logs you want to search. If this field is not specified, <b>Last 1 hour</b> is selected by default.
Auto- refresh	Automatically refresh the page at the specified frequency. This feature is disabled by default.

3. Specify the search filters prior to clicking **Search**.

1 host:"\	m''	2023-04-28	15:20		
Number of attacks 144	4times Number of logs 80	rules (i) — Total log	gs 1 on interval 1 minute		
2					
2023-04-28 15:05	2023-04-28 15:13	2023-04-28 15:21	2023-04-28 15:29	2023-04-28 15:37	2023-04-28 1

# Analyzing Attack Logs

1. On the top right of the log list, click

to select fields, and then click **OK**. To know more about the log fields, refer to Log field description.



lease select	Selected(11)	
Q	Field	
Field	Logging time	6
Logging time		
Log data	attack_ip	6
attack_area	status	¢
✓ attack_ip	↔ method	¢
✓ status	uri	¢
v method	domain	¢
n and a state of the state of t	attack_type	6
	rule_id	¢

2. On the left of the **Raw data** section, select the field you want to view its percentage. Then select the value to filter the log results.

aw data						
Search Q	Ξ	Logging time ↓	attack_ip	status	method	
<ul> <li>host</li> <li>w om 100,00%</li> </ul>	Þ	2023-04-28 16:05:26	101.32.242.117	Block	GET	
<ul> <li>uri</li> <li>attack_ip</li> </ul>	Þ	2023-04-28 16:05:26	101.32.242.117	Block	GET	
attack_type     rule_id	•	2023-04-28 16:04:35	101.32.242.117	Block	GET	
<ul> <li>method</li> <li>user_agent</li> </ul>	Þ	2023-04-28 16:04:35	101.32.242.117	Block	GET	
risk_level		2023-04-28 16:03:45	101.32.242.117	Block	GET	

### 3. Click

to expand log details, where you can select the field value to find the log results. To view logs in JSON format, click **JSON**.

attack_ip status method   6:05:26 101.32.242.117 Block GET     ON     ipinfo_province   instance   ipinfo_state   attack_type   ipinfo_city   attack_category   edition   ipinfo_dimensionality   attack_ip
ON ipinfo_province instance ipinfo_state attack_type attack_category edition ipinfo_dimensionality attack_ip
ipinfo_province   instance   ipinfo_state   attack_type   ipinfo_city   attack_category   edition   ipinfo_dimensionality   attack_ip
instance   ipinfo_state   attack_type   ipinfo_city   attack_category   edition   ipinfo_dimensionality   attack_ip
ipinfo_state         attack_type         ipinfo_city         attack_category         edition         ipinfo_dimensionality         attack_ip
attack_type ipinfo_city attack_category edition ipinfo_dimensionality attack_ip
ipinfo_city attack_category edition ipinfo_dimensionality attack_ip
attack_category edition ipinfo_dimensionality attack_ip
edition ipinfo_dimensionality attack_ip
ipinfo_dimensionality attack_ip
attack_ip
uuid
domain_name
attack_content
host
action
http_log
ipinfo_nation
pan

# **Downloading Attack Logs**

1. On the top right of the log list, click

# to view your download tasks.

### Note

By default, your log results are downloaded.

Only one download task can be created at a time.

One download task can contain up to 1 million logs. If you need to download more, it is recommended to create multiple tasks one by one, or contact us for support.



If you select a wildcard domain name (for example, \*.abc.com), logs of all its associated subdomain names such as

 $\label{eq:com} \mbox{those suffixed with } \mbox{.abc.com} \mbox{ will also be downloaded.}$ 

2. On the **Download task** page, click **Create task**.

Download t	ask				
Create tas	k				Enter the ta
No	Tas	k name Total lo	ogs Downlo	ade Download .	Creation ti Exp tim
775	003 1	80	0	-	2023-04-28 202 16:0
Total items: 1					10 💌 / pa

### 3. Enter a task name and click **Create**.

Create do	wnload task X
Task name	Enter a task name within 50 characters
Note	<ol> <li>You can only create one download task at a time</li> <li>Up to 1 million logs can be downloaded at a time. If you need to download more than the limit, we recommend that you create multiple download tasks</li> </ol>
	Create Cancel

4. After the task is created, you can view the total number of logs, download progress, download status, creation time, and expiration time. Click **Download** to export the logs in CSV format.

### Note

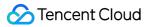
Logs downloaded are retained for 3 days.

# See Also

### Log field description

### **Basic Information**

Field Name	Description
host	The domain name accessed by the client.
uri	The request URI, which is a character string for identifying resources.
attack_ip	The source IP of the attack.
attack_type	The attack type.
rule_id	ID of the protection rule applied. Note that ID of the AI engine rule is 0.
method	The request method used in the attack request.
user_agent	User-Agent that records information about the browser type and operating system used by the attacker IP.
risk_level	Risk level of the attack.
status	The action taken on the attack request. Valid values are 0 (Observe) and 1 (Block).
count	Number of attacks from the same attacker IP every 10 seconds.
domain	The domain name attacked by the client.
pan	The domain name accessed by the client.
domain_name	The domain name accessed by the client.
attack_time	The time that the attack is launched.
attack_place	The attack location in the HTTP request.
action	The action to take on the attack request. Valid values are 0 (Observe) and 1 (Block).
ipinfo_nation	Country of the attacker IP.
ipinfo_province	Province/State of the attacker IP.
ipinfo_city	City of the attacker IP.



ipinfo_state	Country of the attacker IP.
ipinfo_dimensionality	Latitude of the attacker IP.
instance	Name of the WAF instance accessed by the domain name.
attack_category	The attack category (unavailable currently).
edition	Edition of the WAF instance. Valid values are sparta-waf (SaaS WAF) and clb-waf (CLB WAF).
uuid	Unique ID of the log.
attack_content	The content that was attacked.
http_log	The log files recording HTTP requests and responses.
headers	The protocol headers, including custom headers.
rule_name	The rule name (unavailable currently).
count	Number of attacks of the same type from the same attacker IP every 10 seconds.
args_name	Parameters in the HTTP request.
ipinfo_isp	ISP of the attacker IP.
appid	APPID of the Tencent Cloud account.
ipinfo_longitude	Longitude of the attacker IP.

# Access Logs

Last updated : 2023-12-29 14:46:39

# Overview

Access logging is used to record access logs of domain names protected by WAF. It allows you to query and download access logs generated in the last 30 days and retain them for up to 180 days. After enabling this feature, you can query and download access logs as needed to meet your security compliance and OPS requirements.

To use access logging, you need to purchase an extra log services pack and enable access logging as instructed in Directions. Only after this feature is enabled for a domain name can its access requests be logged by WAF. To disable access logging: You can delete the corresponding billable item in Renewal Management. Note that access logging will be stopped within 2 hours and the history will be cleared within 24 hours once the billable item is removed. To expand logging capacity: When the required log storage exceeds the purchased log pack's capacity, new access logs will not be stored, and the historical access logs will be deleted when the retention period reaches. To avoid loss of access logs from insufficient capacity, we recommend checking your log usage and expanding the capacity in advance.

### Directions

### **Enabling access logging**

Log in to the WAF console and select **Domain Name List** on the left sidebar. Then toggle on the access logging switch for the domain name you choose.

Add domain name	Select an instance 🔻	Select an instance type	•		
Domain name//	Acces <b>T</b> Instance information	(i) Instance ID/name	Mode <b>T</b>	Protected origin-pull address (i)	Bot
	d In	5v	Rule engine: Block mode	and so on 6	

### Viewing logs

1. Log in to the WAF console and select Access Logs on the left sidebar. Then open the Log service tab.

2. Click the drop-down list in the top left corner of the page to select domain names, and click OK.

Access Logs	All domain names	
Log Service	Search by domain name	Q
Today Yes	5	
Filter search 🔻 🛛		-
Total results: 72		-
2500	OK Reset	

3. The usage capacity is displayed in top right corner. For more details about WAF billing, click Learn more.

Access Log	All dom	ain names	V			Γ
Log Servio	e					
Today	Yesterday	Last 7 days	Last 30 days	2022-06-16 00:00:00 ~ 2022-06-16 18:40:34	ö	

4. To view usage capacity and set the retention period at the same time, click Storage configuration, and then click

Save to save your setting.

Note:

The retention period ranges from 1 to 30 days.

Configure log storage					
Used(0G/2048G)					
Log retention (in days) 🛈	_	30	+		
		Save		Cancel	

### **Querying logs**

1. Log in to the WAF console and select Access Logs on the left sidebar. Then open the Log service tab.

2. Search logs by using quick search, filters, or statements.

Quick search: It allows you to search logs quickly be specifying a period.

Log Service           Today         Yesterday         Last 7 days         Last 30 days         2022-06-16 00:00:00 ~ 2022-06-16 18:42:34         1
Today         Yesterday         Last 7 days         Last 30 days         2022-06-16 00:00:00 ~ 2022-06-16 18:42:34

Search by filter: Select fields and operators, enter the filed values, and click **OK**. You can select multiple fields.

Filter search	Please select		
Total results: 7	Select a field	▼ Select an operate	or <ul> <li>Enter the field value</li> </ul>
2500	Select a field	▼ Select an operate	or <ul> <li>Enter the field value</li> </ul>
2000	Select a field	▼ Select an operate	or   Enter the field value
000	Select a field	▼ Select an operate	or   Enter the field value

Search by statement: It supports professional searches by statement and enables you to run more complex log queries. Enter the required information, and then click

Today	Yesterday	Last 7 days	Last 30 days	2022-06-16 00:00:00 ~ 2022-06-16 18:42:34
	E +		57. J. J. J.	l a status code larger than 400, enter method:GET AND status:>400
Statement se	▼ Eg: To sea	irch logs where a G	ET request returned	i a status code larger than 400, enter method:3E1 AND status:>400
Total result	Field nar	ne (key)		
iotal result	method		referer	
2500	schema		domain	
2500	host		cookie	
2000	url		body	
1500	client		uuid	
1000	status		query	
500	upstrean	n_status		
,000	user_age	ent		
00:	00 x forwar	ded for		

### Search statement

Reserved Character	Description
AND	"AND" logical operator, such as level:ERROR AND pid:1234
OR	"OR" logical operator, such as level:ERROR OR level:WARNING
NOT	"NOT" logical operator, such as level:ERROR NOT pid:1234

ТО	"TO" logical operator, such as request_time:[0.1 TO 1.0]
	Double quotation mark, which quotes a phrase, such as name:"john Smith"
:	Colon, which is used for key-value search, such as level:ERROR
*	Wildcard, which is used to replace zero, one, or more characters, such as host:www.test*.com
?	Wildcard, which is used to replace one character, such as host:www.te? t.com
()	Parentheses, which is used to group clauses to form sub queries and control the logic operations, such as (ERROR OR WARNING) AND pid:1234
>	Range operator, which indicates the left operand is greater than the right operand, such as status:>400
>=	Range operator, which indicates the left operand is greater than or equal to the right operand, such as status:>=400
<	Range operator, which indicates the left operand is less than the right operand, such as status:<400
<=	Range operator, which indicates the left operand is less than or equal to the right operand, such as status:<=400
[]	Range operator, which includes the upper and lower boundary values, such as age:[20 TO 30]
{}	Range operator, which excludes the upper and lower boundary values, such as age:{20 TO 30}
11	Escape character. An escaped character represents the literal meaning of the character, such as url:\\/images\\/favicon.ico. You can also use "" to wrap special characters as a whole, e.g., url:"/images/favicon.ico". For details about the difference between these two search methods, see Configuring Indexes.
+	Logical operator (similar to AND). The term +A indicates A must exist, such as +level:ERROR +pid:1234.
-	Logical operator (similar to NOT). The term -A indicates A does not exist, such as +level:ERROR -pid:1234.
&&	Logical operator (similar to AND), such as level:ERROR && pid:1234

!	Logical operator (similar to NOT), such as level:ERROR !pid:1234
1	Regular expression identifier in the format of /\${regExp}/, e.g., /[mb]oat/ returns results containing moat or boat.
_exists_	_exists_:key returns results where the `key` value is not empty, e.g., _exists_:userAgent returns results where the userAgent value is not empty.
~	Fuzzy search, e.g., level:errro~ returns results where level contains error.

#### Note:

The operators are case-sensitive. For example, AND and OR represent logical search operators, while and and or are regarded as common words.

When multiple search statements are connected with spaces, they are regarded as in the OR logic. For example,

warning error indicates to return results containing the warning keyword or error keyword.

The following special characters must be escaped: +, -, &&,  $||, !, (), {}, [], ^, ", ~, *, ?, :, N$ 

Before performing a key:value search, make sure the key is configured in the index configuration of the log topic. Use () to group search conditions and clarify the precedency when using the "AND" and "OR" operators, such as (ERROR OR WARNING) AND pid:1234.

### **Displaying logs**

1. Log in to the WAF console and select Access Logs on the left sidebar. Then open the Log service tab.

2. Click **Filed name** to display the top five logs that match the filed.

Show fields			
_source	host		
Hide fields	host		Log count
Text method			18411
Text schema			
Text host			2695
Text url	hy	m	2695
Text client			
Numeric value status	c060		2694
Numeric value upstream_status	c0608.1、		2694
Text user_agent			2001
Text x_forwarded_for			
Text referer			
Text_domain			

### 3. Click

on the left of the date that the log is generated to view filed details. If you want to view details in JSON format, click **JSON**.

Time 🕈		_source
		schem
2022-06-16 18:42:02		tream
2022-00-10 18.42.02		6.0; '
		x_1
Field details JSC	DN	
Basic information		
Basic information Domain name	twaf.com	
Basic information Domain name Access duration	:waf.com	
Basic information Domain name Access duration		
Basic information	:waf.com	
<b>Basic information</b> Domain name Access duration Visitor IP	:waf.com	
Basic information Domain name Access duration Visitor IP Request UUID	:waf.com	

### **JSON field description**

Field	Description
domain	Wildcard domain name
request_time	Time that the client takes to send a request to WAF and receive a response
uuid	Unique identifier of an HTTP request
schema	Request protocol: HTTP or HTTPS
method	Client request method
url	Request URI, which resides between "/" and "?" in the client's request path
host	Client domain name
http_user_agent	Request UA
headers	HTTP request header
upstream_status	Response code returned to WAF from the origin server
status	Response code returned to the client from WAF For CLB WAF, the response code 624 indicates the request is blocked and 600 indicates the request is allowed.

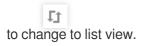


	For SAAS WAF, the response code 403 indicates the request is blocked and 200 indicates the request is allowed.
body_bytes_sent	Response body size
upstream_response_time	Time that WAF takes to receive the client request from the real server
ip_info.country	Country/Region
ip_info.city	City
ip_info.province	Province
ip_info.operator	ISP
ip_info.ip_type	IP type
ip_info.idc	IDC data center
ip_info.longtitude	Longitude
ip_info.dimensionality	Latitude

4. Display the filtered log content in the list mode or field mode.

Field mode: This is the default display mode. You can change to the other mode by clicking the icon in the top right corner.

Show fields	Time <b>\$</b>	
_source	Time 👻	_source
Hide fields	<ul><li>2022-06-16 18:42:02</li></ul>	All and the second second
Text method		x_forwarded_for: domain: c06091.testwat.com
Text schema		
Text host		schema: http
Text url	<ul> <li>2022-06-16 18:42:02</li> </ul>	tr 6
Text client		x_to
Numeric value status List mode: Click		



Show fields		
_source	Time ‡	_source
Hide fields	2022-06-16 18:42:02	t.
Text method		61
Text schema		
Text host		sch
Text url	2022-06-16 18:42:02	tre 6.0;
Text client		x_1

### Field description

Field	Description
msec	Timestamp of when the request is sent
schema	Request protocol: HTTP or HTTPS
method	Client request method
host	Client domain name
url	Request URI, which resides between "/" and "?" in the client's request path
query	HTTP Query String. The maximum length is 1 KB.
body	Request body data
http_referer	Page source
http_user_agent	Request UA
http_x_forwarded_for	All the proxies that pass the request
cookie	Request cookie. The maximum length is 1 KB.
upstream_status	Response code returned to WAF from the origin server
upstream_response_time	Time that WAF takes to receive the client request from the origin server
upstream_addr	Upstream server IP
status	Response code returned to the client from WAF
upstream_status	Response code returned to WAF from the origin server
upstream_response_length	Response length returned from the upstream server
edition	WAF versions: `sparta-waf`, `clb-waf`, `cdn-waf`



#### **Downloading access logs**

1. Log in to the WAF console and select Access Logs on the left sidebar. Then open the Log service tab.

2. Click

to enter the download page. Click **OK** to create a download task.

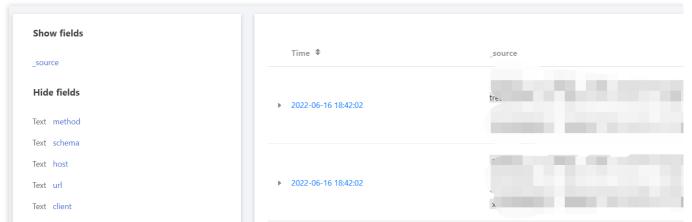
#### Note:

You cannot create more than one download task simultaneously.

Up to 1 million logs can be downloaded at a time. To download more logs, it is recommended that you create multiple tasks to download them in batches.

If you select a wildcard domain name (for example, \*.abc.com), logs of all associated subdomain names such as those suffixed with .abc.com will also be downloaded.

Up to five download tasks can be created.



3. On the download page, click **View Task** to view the download details, such as the task number, creation time, and total number of logs.

Download task			
Create task			
No.	Task Created	Total logs	
e>	2022-	73917	
Total items: 1			10 🔻 /

### Log field description

Field	Description
domain	Wildcard domain name
bytes_sent	Response size, including response headers (in bytes) and downstream bandwidth
method	Client request method
request_time	Time that the client takes to send a request to WAF and receive a response
http_connection	HTTP request header Connection
upstream_connect_time	Time that WAF takes to send the client request to the real server
uuid	Unique identifier of an HTTP request
upstream_addr	Upstream server IP
host	Client domain name
upstream_response_length	Response length returned from the upstream server
schema	Request protocol: HTTP or HTTPS
http_user_agent	Request UA
headers	HTTP request header
url	Request URI, which resides between "/" and "?" in the client's request path
http_x_forwarded_for	All the proxies that pass the request

http_referer	Page source
body	Request body data
remote_addr	Requester IP
cookie	Request cookie. The maximum length is 1 KB.
bot_client_ip	Client IP, which is typically the same as `remote_addr`
request_length	Request length
http_accept	HTTP request header Accept
status	Status code returned to the client from WAF
protocol	HTTP protocol, such as $1.1$ , $1.0$ and $2.0$
msec	Timestamp of when the request is sent
pipe	Nginx built-in variable
content_type	HTTP request header Content-Type
time_local	Nginx readable local time string
upstream_response_time	Time that WAF takes to receive the client request from the real server
server_addr	WAF private IP
edition	WAF versions: `sparta-waf`, `clb-waf`, `cdn-waf`
upstream_status	Status code returned to WAF from the real server
body_bytes_sent	Response body size
query	HTTP Query String. The maximum length is 1 KB.

# Log Shipping

Last updated : 2023-12-29 14:51:09

# Log Shipping

Log shipping allows you to send logs to CLS and CKafka, helping you gain more out of logs and meet user needs for operation and maintenance. To ship custom fields for your access logs, submit a ticket.

#### Note

For any exception with log shipping, contact us.

To ship attack logs/access logs, activate the paid you need.

After the shipping destination is configured, enable log shipping as instructed.

Log shipping can be used with log service. Enable these features as needed.

## Shipping Logs to CLS

To ship logs to CLS, you need to activate CLS and grant WAF required permissions.

#### Note

If CLS is already activated, skip to Step 3.

- 1. Log in to the WAF console. Select Access Logs/Attack Logs on the left sidebar and the Log shipping tab.
- 2. If you have not activated CLS, click **Activate now**. For details, see Cloud Log Service.
- 3. Authorize WAF to ship data to CLS.
- 3.1 In the Shipping to CLS section, click Configure.



uthorize your accour hanges. For billing de			ship attack logs to CLS I	ogsets. Us	ing this serv	vice will incur
ianges. For binning de		90				
<ul> <li>Shipping authorizatio</li> </ul>	'n	> 🤇	Automatically ob storage objects	tain	>	
$\sim$			0101290 02,0010			
<ol> <li>Real-time lo shipping</li> </ol>	g					

3.2 In the pop-up window, click Authorize now.

Service Author	ization	
		ud services will be used when you perform operations related to this service. The Role for Log shipping and authorize it to call the APIs of other Tencent Cloud service
Role Name	WAF_QCS	LinkedRoleInCKafka (Service-Linked Role)
Description		t role is the WAF service linked role, which will access your other service resources within the permissions of the associated policy.
(Preset) Permis	sions Policy	QcloudAccessForWAFLinkedRoleInCKafka
		Grant Cancel

3.3 On the CAM authorization page, click **Authorize** to allow WAF to ship logs to CLS. If you encounter problems during the process, see Cloud Access Management.

3.4 Return to the log shipping page and click **Configure now**. Select the shipping region and log topic and then click **OK**. Alternatively, click **Create** to automatically create a WAF logset waf\_post\_logset. See the CLS console for details.

hipping destination						
nipping destination						
Shipping to CLS	Authorized			•	Shipping to Ckaf	ka • Authorized
Authorize your account to billing.	o access CLS, so you can sh	hip attack logs to CLS logse	ets. Using this service will	incur changes. For billing details, see CLS	Authorize your accoul log shipping.	unt to access Ckafka, so you can ship WAF att
Logset name	Log topic ID	Regio	on		Message queue	instance Supported environment
Go to CLS log search 🗹					Go to Ckafka 🖄	
Go to CLS log search 🛂					Go to Ckafka 🖸	
Go to CLS log search 🗹					Go to Ckafka 🗹	
		lelaved for about 20 minu	tes and used for referer			
sage statistics Note th	hat the monitoring data is d	ielayed for about 20 minu	tes and used for referer	ce only. To check accurate billing data, y		
	hat the monitoring data is d	ielayed for about 20 minu	tes and used for referer			
sage statistics Note th	hat the monitoring data is d	ielayed for about 20 minu	tes and used for referen			
sage statistics Note th Last 24 hours 7 da	hat the monitoring data is d	ielayed for about 20 minu	tes and used for referen			
sage statistics Note th Last 24 hours 7 da 00,000	hat the monitoring data is d	ielayed for about 20 minu	tes and used for referen			
sage statistics         Note the           Last 24 hours         7 de           00,000         50,000	hat the monitoring data is d	lelayed for about 20 minu	tes and used for referen			
sage statistics         Note the           Last 24 hours         7 da           00,000         00,000           00,000         00,000	hat the monitoring data is d	lelayed for about 20 minu	tes and used for referen			
sage statistics         Note the           Last 24 hours         7 da           00,000         00,000           50,000         00,000           50,000         00,000	hat the monitoring data is d	lelayed for about 20 minu	tes and used for referen			
sage statistics         Note the           Last 24 hours         7 da           00,000         00,000           50,000         00,000           50,000         00,000           50,000         00,000	hat the monitoring data is d	lelayed for about 20 minu 19.00:00	tes and used for referen		ou can go to Billing Center [2	05:00:00 07:00:00

3.5 After logs are sent to CLS, you can enable log shipping for the desired domain names. For details, see Enabling Log Shipping.

#### Note

For any exception with authorization, submit a ticket.

## Shipping Logs to CKafka

#### **Prerequisites**

You have purchased CKafka instances, and set the instance bandwidth based on actual log usage.

A ticket is required for connecting your supported environment to CKafka.

#### Directions

- 1. Log in to the WAF console. Navigate to Access Logs>Log shipping.
- 2. Authorize WAF to ship logs to the specified CKafka instance.
- 2.1 On the log shipping page, click **Configure now** to open an authorization pop-up window.

nem automatically, enable atta		you can ship WAF attack logs g.	to the log topics. If you	u wani www.ri
Shipping authorization	>	2 Storage configuration	>	
3 Real-time log shipping				

2.2 In the pop-up window, click **Authorize now**.

	her Tencent Cloud services will be used when you perform operations related to this service. e a Service-Linked Role for Log shipping and authorize it to call the APIs of other Tencent Cloud servi				
	s a cervice Linked hole for Log shipping and addicine it to can all Aris of caller forcent orded service				
Role Name	WAF_QCSLinkedRoleInCKafka (Service-Linked Role)				
Description The current role is the WAF service linked role, which will access your other service resources will scope of the permissions of the associated policy.					
(Preset) Permis	ssions Policy QcloudAccessForWAFLinkedRoleInCKafka				
(Preset) Permis	ssions Policy QcloudAccessForWAFLinkedRoleInCKafka (i)				

2.3 On the CAM authorization page, click **Authorize** to allow CKafka to send data to WAF. If you encounter problems during the process, see Cloud Access Management.

						hipping to Ckafka
AF to sh	you want V	the log topics. If yo	ship WAF attack logs to	o you can	ess Ckafka, so	thorize your account to acc shipping.
I-time I ping	$\smile$	> (	Storage configuration	2	>	Shipping authorization
	$\bigcirc$	> (3	-	2	>	

2.4 After the authorization is complete, go back to the log shipping page and click **Configure now**.

3. In the pop-up window, set the required parameters and click  $\ensuremath{\text{OK}}$  .

**Supportive environment**: Select Tencent Cloud products that you purchased and can be used with CKafka, and then select a CKafka instance and IP port.

Network access	<ul> <li>Supported environme</li> <li>Public domain name</li> </ul>	ent (recommended)	
Region	Please select	*	
Message queue instance	Please select	- ¢	
Topic ID/name	Please select	•	
Supported environment	Please select	•	

Parameter	Description	Remarks
Region	For more information about CKafka supported regions, see Regions and	To connect your supportive environment to CKafka, submit a ticket.



	AZs.
Instance	The CKafka instance running in the current region.
Topic ID/name	The topic ID and name.
Supportive environment	The route specified to connect the supportive environment.

**Public domain name**: Select a CKafka instance and public domain name and enter the username and password of the instance.

Network access	<ul> <li>Supported environment (</li> <li>Public domain name</li> </ul>	recomm	ende
Region	Please select	*	]
Message queue instance	Please select	*	Φ
Topic ID/name	Please select	*	]
Public domain name	Please select	*	]
Username *	Enter the username		]
Password •	Enter the password		]

Parameter	Description
Region	For more information about CKafka supported regions, see Regions and AZs.
Instance	The CKafka instance running in the current region.
Topic ID/name	The topic ID and name.

### S Tencent Cloud

Supportive environment	The route specified to connect the supportive environment.
Username	The SASL username.
Password	The SASL password.

4. After logs are sent to CKafka, you can enable log shipping for the desired domain names.

## Enabling Log Shipping

After shipping logs to CLS or shipping logs to Ckafka, you need to enable log delivery for the specified domain name/instance.

#### Note

Shipping attack logs is enabled at the instance level. This feature is only available for instances of Enterprise and above editions.

Shipping access logs is enabled at the domain level. This feature is available for all instances, regardless of the edition.

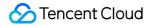
#### **Enabling attack log shipping**

- 1. Log in to the WAF console and select Instance Management on the left sidebar.
- 2. On the instance management page, click **Instance name** to bring up the sidebar.

	Billing Center when your billable items will not be renewed upon expi	
Instance ID wa 21 1	Billing mode 🛞 Prepaid-Premium	Domain quota
Instance sg-Default  P name	Instance CLB type	QPS quota
harne	Expiration 2023-08-01 21:14:46 time	Bandwidth quota
	Auto-	

3. In the instance details, click

to enable attack log shipping for the current instance.



Basic information		
Plan information		
Domain extension pack	Domains	Domain quota
0	2/2	10/20
Purchase domain extension pac	ck	
Extra capacity package	Peak QPS	QPS quota
0	0 <sub>qps</sub>	0/2500 gps
Upgrade		
Bot traffic management		
(j)		
Attack log shipping		
API security		

### Enabling access log shipping

- 1. Log in to the WAF console and navigate to Connection Management > Domain names.
- 2. On the page displayed, select a target domain name and click More > Log shipping.

Add	domain name	Select	an instance 🔻	Select an instance type	▼ Select the security	/ group statu: 🔻		
	Domain name/Ac	т	Instance information (j)	Instance ID/name	Mode <b>T</b>	Intermediate address	Bot	API security
				waf_2kw48r4s0009b7lx sg-Default1	RuleObserve mode Al engineDisabled mode			
				waf_2kw48r4s0009cj0v hk-oldbot l	Rule engine: Block mode			

3. In the advanced settings window, select logs to ship and click  $\ensuremath{\textbf{Save}}$  .

Advanced se	ttings		×				
All acc compl	ess log information recorded helps ensure iance	Don't show again	×				
Domain name							
Instance	Total connected instances 1instance(s) a name	ssociated with this doma	iin				
Log shipping	Activate now						
Traffic tagging (i) Upgrade Remote client address transfer							
The original clier	nt IP address and port will be recorded in remote	_addr and remote_port					

# **IP** Query

Last updated : 2023-12-29 14:52:09

This document describes how to view the IP information and blocking status using the IP query feature.

## **IP** Query

1. Log in to the WAF console and click IP Query on the left sidebar.

2. On the page that appears, click a target domain name and enter an IP to search. Then click Search.

IP Query
IP Query IP blocking status
(i) You can query whether an IP is blocked or added to the blocklist/allowlist, and whether it triggers CC protection or custom CAPTCHA
1.1.1.1 Search

3. In the query results, you can view the specific IP details, and click **Add to blocklist/allowlist** to manually add the IP to the blocklist/allowlist.

1.1.1.1	Search
Search results	
IP	1.1.1.1 Block
Domain name	
Valid at	2022-06-08 17:05:53
End time	Permanent
Category	Blocklist
Triggered policy name	custom
Add to blocklist/allowlis	t

## **IP Blocking Status**

1. Log in to the WAF console and select IP Query on the left sidebar. Open the IP blocking status tab.

2. On the IP blocking status page, specify the IP type, triggering policy, IP address, creation time or expiration time, and click **Search**.

IP Query			Y				
IP Query IP blo	ocking status						
<ol> <li>You can vi</li> </ol>	ew IPs being blocked h	ere, or real-time IP bloc	cking records related to	CC, bot, and custom CAPTC	HA blocking policies		
Туре	ALL	▼ Trig	ger policy Policy na	ame	IP address	Enter the IP	
Creation time	Last 5 minutes	Last 10 minutes	Last 30 minutes	2022-06-08 17:09:05 ~ 20	022-06-08 23:59:59		
Search	✓ Deadline: 2(	)22-06-08 17:39:03 ~ 20	022-06-16 17:39:03	-			

3. Click **Export all**. In the pop-up window, click **Export record** to export the query results.

#### Note:

A large export may take longer time to process.

Up to 10,000 entries can be exported.

4. In the list of query results, select an IP that you want to add to the blocklist/allowlist, and click **Add to blocklist** or **Add to allowlist**.

Export all							
No.	Category	IP address	Policy name	Action	Creation time \$	Deadline \$	Operation
NaN	Custom CAPTCHA	3.23.4.7	Custom CAPTCHA	CAPTCHA	1970-01-20 11:59:29	2022-06-23 15:23:23	Add to blocklist Add to allowlist
共1项						10 👻 / page	H 4 1 / 1 page > H