Web Application Firewall

Troubleshooting

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Contents

1 Troubleshooting Website Connection Exceptions

1.1 Why Is My Domain Name or IP Address Inaccessible?

Symptoms

If **Access Progress** for a website you have added to WAF is **Accessible**, the connection between WAF and the website domain name or IP address has been established.

Troubleshooting and Solutions for Cloud WAF Instances

Refer to **Figure 1-1** and **Table 1-1** to fix connection failures for websites protected in cloud mode.

Figure 1-1 Troubleshooting for Cloud WAF

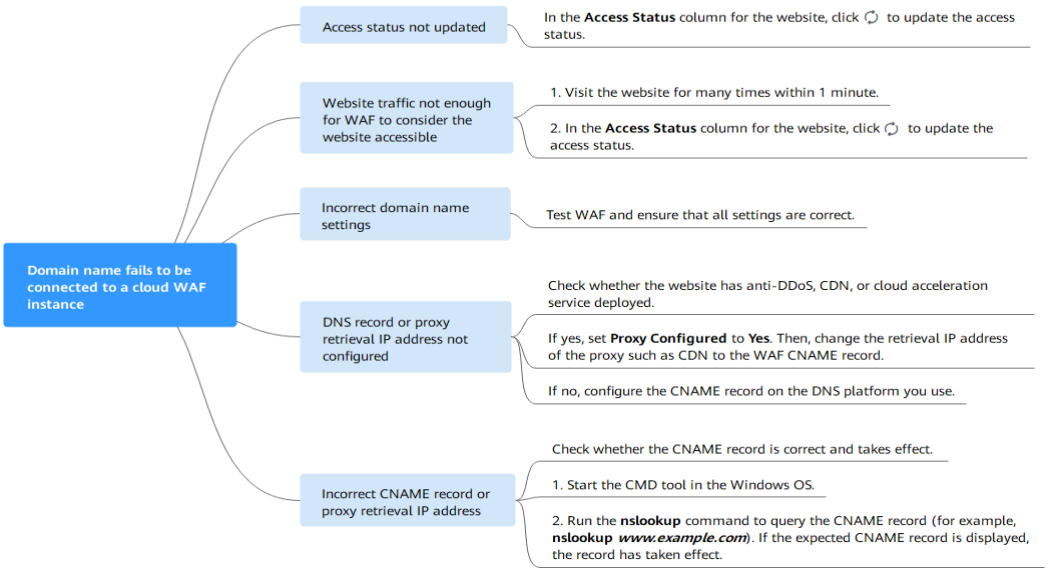


Table 1-1 Solutions for failures of WAF instances

Possible Cause	Solution
Cause 1: **Access Status** of **Protected Website** not updated	In the **Access Status** column for the protected website, click to update the status.
Cause 2: Website access traffic not enough for WAF to consider the website accessible **NOTICE** After you connect a website to WAF, the website is considered accessible only when WAF detects at least 20 requests to the website within 5 minutes.	1. Access the protected website for many times within 1 minute. 2. In the **Access Status** column for the website, click  to update the status.

Possible Cause	Solution
Cause 3: Incorrect domain name settings	**NOTICE** WAF can protect the website using the following types of domain names: • Top-level domain names, for example, example.com • Single domain names/Second-level domains, for example, www.example.com • Wildcard domain names, for example, *.example.com Domain names example.com and www.example.com are different. Ensure that correct domain names are added to WAF. Perform the following steps to ensure that the domain name settings are correct. 1. In Windows OSs, choose **Start** > **Run**. Then enter **cmd** and press **Enter**. 2. Ping the CNAME record of the domain name to obtain the WAF IP address. 3. Use a text editor to open the **hosts** file. Generally, the **hosts** file is stored in the **C:\Windows\System32\drivers\etc** directory. 4. Add a record into the **hosts** file in the format of ***DomainName WAF IP address***. 5. Save the **hosts** file after the record is added. In the CLI, run the **ping** *Domain name added to WAF* command, for example, ping www.example.com. If the WAF IP address in **2** is displayed in the command output, the domain name settings are correct. If there are incorrect domain name settings, remove the domain name from WAF and add it to WAF again.

Possible Cause	Solution
Cause 4: DNS record or the back-to-source IP addresses of proxies not configured	Check whether the website connected to WAF uses proxies such as advanced anti-DDoS, CDN, and cloud acceleration service. • **Yes** – Change the back-to-source IP address of the proxy such as CDN to the CNAME record of WAF. – (Optional) Add a WAF subdomain name and TXT record at your DNS provider. • If no, contact your DNS service provider to configure a CNAME record for the domain name. For details, see **Adding a Domain Name to WAF**.
Cause 5: Incorrect DNS record or proxy back-to-source address	Perform the following steps to check whether the domain name CNAME record takes effect: 1. In Windows OSs, choose **Start** > **Run**. Then enter **cmd** and press **Enter**. 2. Run a **nslookup** command to query the CNAME record. If the command output displays the CNAME record of WAF, the record takes effect. Using www.example.com as an example, the output is as follows: **nslookup** www.example.com If the CNAME record fails to work, modify the DNS record or the back-to-source address of the in-use proxy. For details, see **Adding a Domain Name to WAF**.

1.2 Why Does the Requested Page Respond Slowly After My Website Is Connected to WAF?

Symptom

After a website is connected to WAF, the website becomes slow.

Possible Causes

You may have configured forcible redirection from HTTP to HTTPS at the backend of the server but enabled only forwarding from HTTPS (client protocol) to HTTP (origin server protocol) on WAF. This makes WAF redirects requests, which leads to an infinite loop.

Solution

To address this issue, add HTTP-to-HTTP and HTTPS-to-HTTPS forwarding rules. The procedure is as follows:

Step 1 Log in to the WAF console.

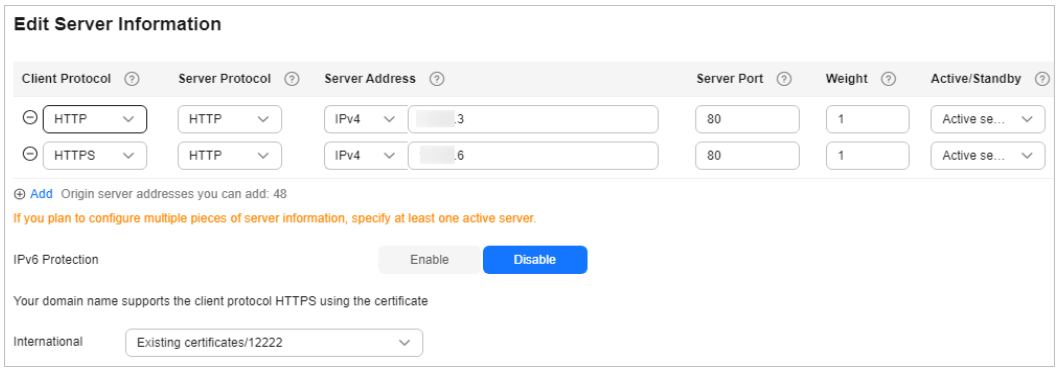
Step 2 In the navigation pane on the left, choose **Website Settings**.

Step 3 In the domain name list, click the target domain name.

Step 4 In the **Origin Servers** area, click **Edit**.

Step 5 In the **Edit Server Information** dialog box, add two forwarding rules, one for HTTP to HTTP and the other for HTTPS to HTTPS.

Figure 1-2 Example configuration



----End

For details about how to configure a forwarding rule, see **Why Was My Website Redirected So Many Times?**

1.3 What Can I Do If Files Cannot Be Uploaded After a Website Is Connected to WAF?

After your website is connected to WAF, the size of the file each time you can upload to the website is limited as follows:

- Cloud mode - CNAME access: 1 GB
- Cloud mode - load balancer access or dedicated mode: 10 GB

To upload a file larger than what is allowed, upload the file through any of the following:

- IP address
- Separate web server that is not protected by WAF
- FTP server

2 Troubleshooting Certificate and Cipher Suite Issues

2.1 How Do I Fix an Incomplete Certificate Chain?

If the certificate provided by the certificate authority is not found in the built-in trust store on your platform and the certificate chain does not have a certificate authority, the certificate is incomplete. If you use the incomplete certificate to access the website corresponding to the protected domain name, the access will fail.

Use either of the following methods to fix it:

- Make a complete certificate chain manually and upload the certificate.
- Upload the correct certificate.

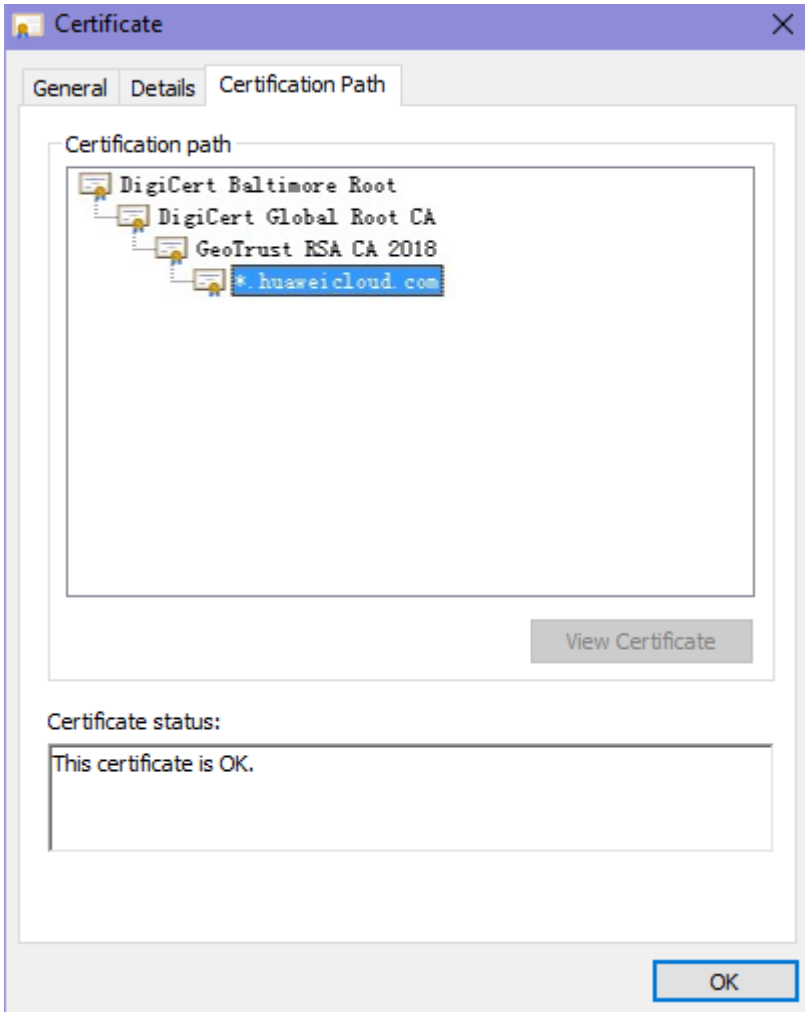
The latest Google Chrome version supports automatic verification of the trust chain. The following describes how to manually create a complete certificate chain (using a Huawei Cloud certificate as an example):

Step 1 View and export the certificate.

1. Click the padlock in the address bar to view the certificate status.
2. Locate the row that shows **Secure Connection**, click ›, and click **Valid Certificate** in address bar.
3. Click the **Details** tab. In the lower right corner of the page, click **Copy to File...** to export the certificate to the local PC.

Step 2 Check the certificate chain. Open the certificate you export. Select the **Certificate Path** tab and then click the certificate name to view the certificate status.

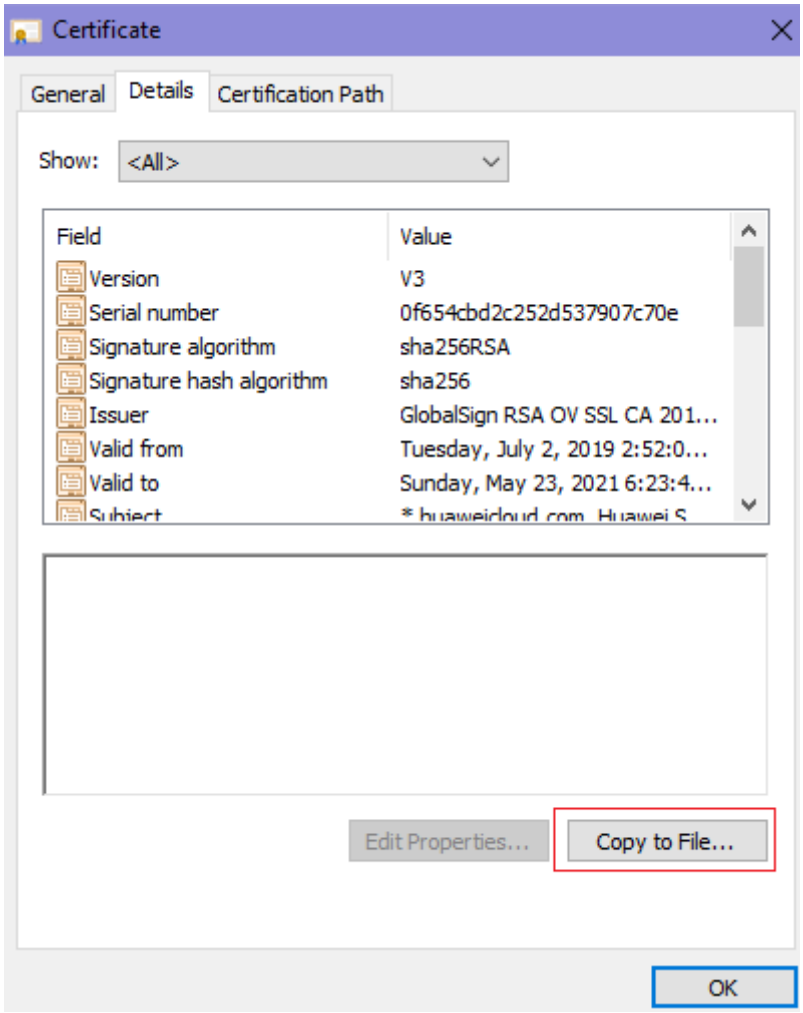
Figure 2-1 Viewing the certificate chain



Step 3 Save the certificates to the local PC one by one.

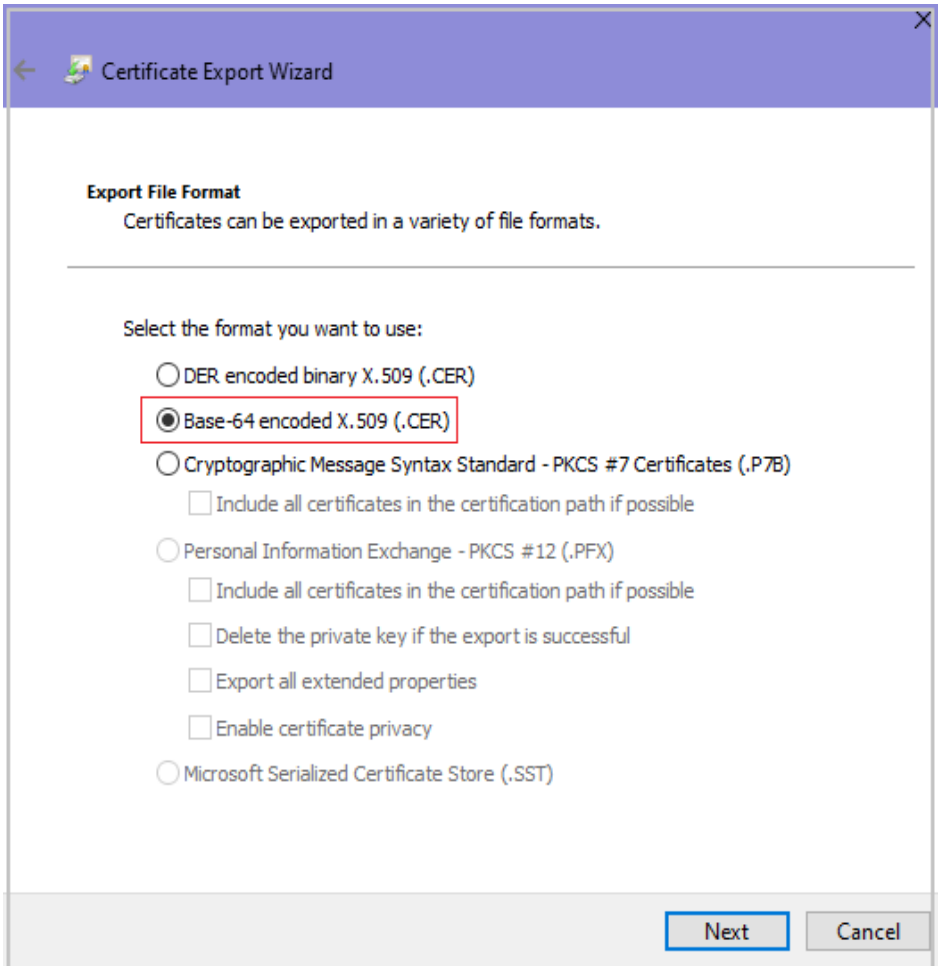
1. Select the certificate name and click the **Details** tab.

Figure 2-2 Details



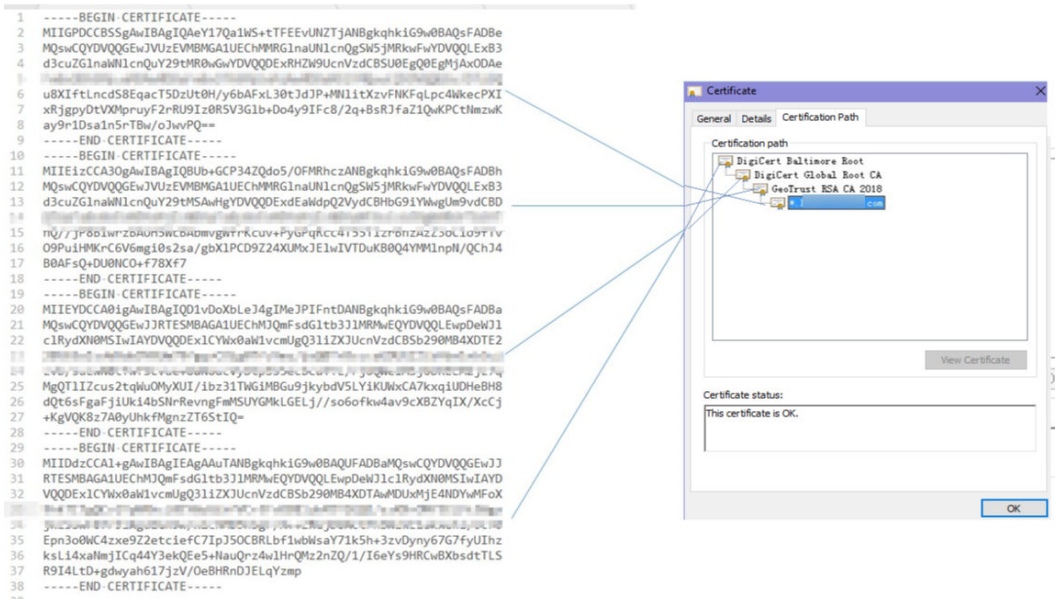
2. Click **Copy to File**, and then click **Next** as prompted.
3. Select **Base-64 encoded X.509 (.CER)** and click **Next**. Figure 2-3 shows an example.

Figure 2-3 Certificate Export Wizard



Step 4 Rebuild the certificate. After all certificates are exported to the local PC, open the certificate file in Notepad and rebuild the certificate according to the sequence shown in **Figure 2-4**.

Figure 2-4 Certificate rebuilding



Step 5 Upload the certificate again.

----End

2.2 Why Does My Certificate Not Match the Key?

After an HTTPS certificate is uploaded to the AAD or WAF console, a message is displayed indicating that the certificate and key do not match.

Solution

Possible Cause	How to Fix
The uploaded certificate does not match the uploaded private key.	1. Run the following commands to check the MD5 hash values of the certificate and private key file: **openssl x509 -noout -modulus -in** *<certificate file>*|**openssl md5** **openssl rsa -noout -modulus -in** *<private key file>*|**openssl md5** 2. Check whether the MD5 values of the certificate and private key file are the same. If they are different, the certificate file and private key file are associated with different domain names, and the content of the certificate does not match that of the private key file. 3. If the certificate does not match the private key file, upload the correct certificate and private key file.
Incorrect RSA private key format	1. Run the following command to generate a new private key: **openssl rsa -in** <*private key file*> **-out** <*New private key file*> 2. Upload the private key again.

Related Operations

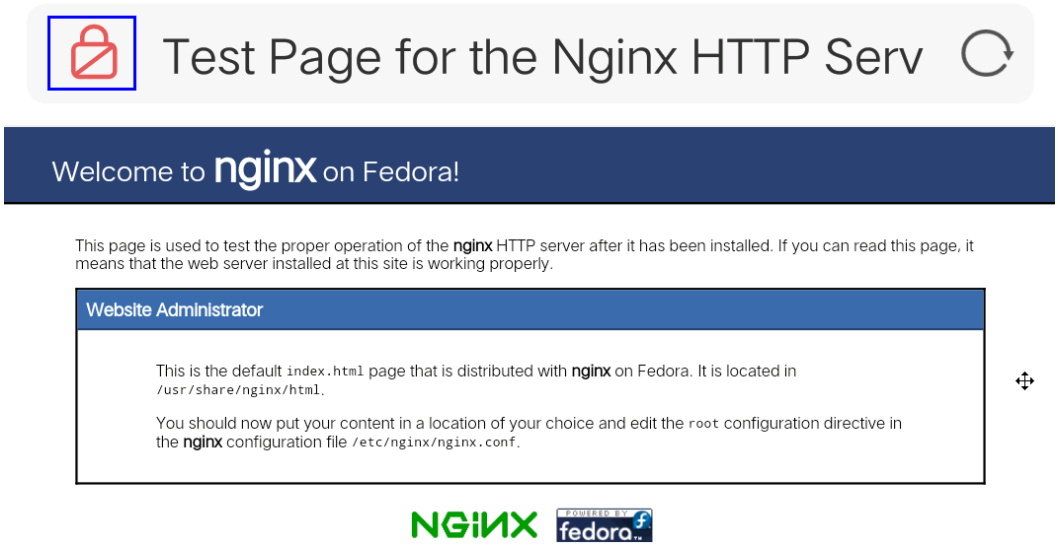
- How Do I Fix an Incomplete Certificate Chain?
- Why Are HTTPS Requests Denied on Some Mobile Phones?

2.3 Why Are HTTPS Requests Denied on Some Mobile Phones?

Symptom

Open the browser on the mobile phone and access the protected domain name. If a page similar to Figure 2-5 is displayed, the HTTPS request on the mobile phone is abnormal.

Figure 2-5 Access failed



Causes

The uploaded certificate chain is incomplete.

Solution

Fix the issue by referring to How Do I Fix an Incomplete Certificate Chain?

2.4 What Do I Do If the Protocol Is Not Supported and the Client and Server Do Not Support Common SSL Protocol Versions or Cipher Suites?

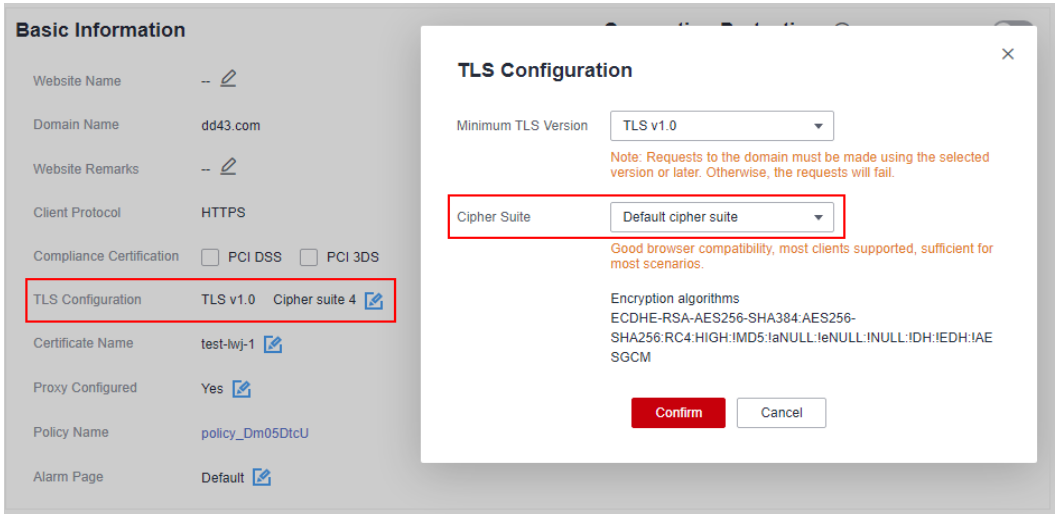
Symptom

After a domain name is connected to WAF, the website cannot be accessed. A message is displayed, indicating that the protocol is not supported. The client and server do not support common SSL protocol versions or cipher suites.

Solution

Select the default cipher suite for **Cipher Suite** in the **TLS Configuration** dialog box. For details, see **Configuring PCI DSS/3DS Certification Check and TLS Version**.

Figure 2-6 TLS Configuration



2.5 Why Is the Bar Mitzvah Attack on SSL/TLS Detected?

The bar mitzvah attack is an attack on SSL/TLS protocols that exploits a vulnerability in the RC4 cryptographic algorithm. This vulnerability can disclose ciphertext in SSL/TLS encrypted traffic in some cases, such as passwords, credit card data, or other privacy data, to hackers.

Solution

To solve this problem, you can set the minimum TLS version to TLS v1.2 and cipher suite to cipher suite 2.

3 Troubleshooting Traffic Forwarding Exceptions

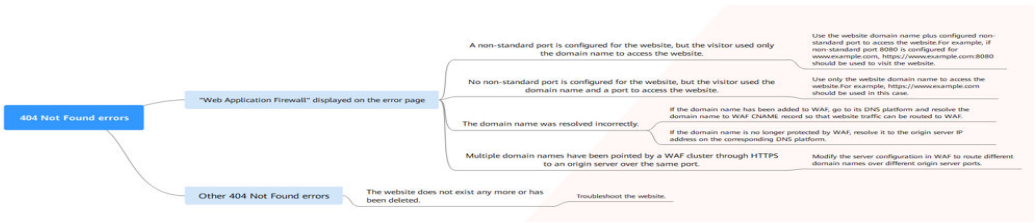
3.1 How Do I Troubleshoot 404/502/504 Errors?

If an error, such as 404 Not Found, 502 Bad Gateway, or 504 Gateway Timeout, occurs after a website is connected to WAF, use the following methods to locate the cause and remove the error:

404 Not Found Troubleshooting Process and Suggestions

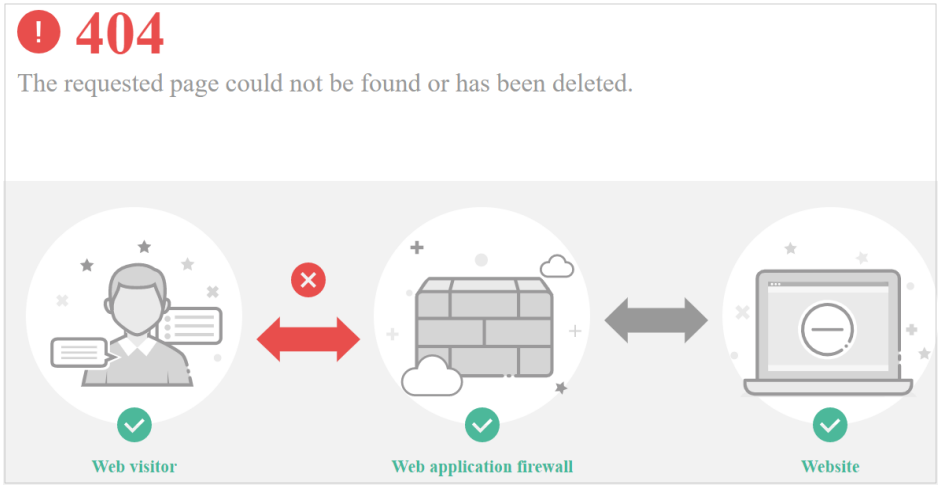
Refer to **Figure 3-1** to fix the 404 Not Found error occurred after your website is connected to WAF.

Figure 3-1 Troubleshooting for 404 Not Found error



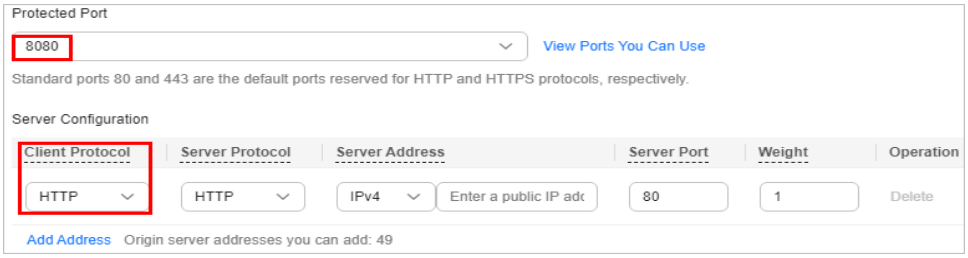
- If the page shown in **Figure 3-2** is displayed, the possible causes and solutions are as follows:

Figure 3-2 404 page



Cause 1: A non-standard port is configured when you add the domain name to WAF, but the visitors use the domain name and standard port or use only the domain name to access the website. For example, a non-standard port is configured as shown in **Figure 3-3**. A visitor uses https://www.example.com or https://www.example.com:80 to access the website. As a result, 404 error page is displayed.

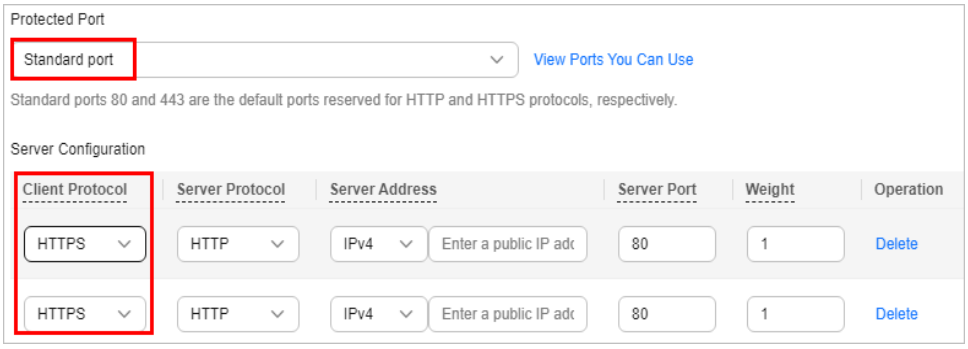
Figure 3-3 Configuration of a non-standard port



Solution: Add the non-standard port to the URL and access the origin server again, for example, **https://www.example.com:8080**.

Cause 2: No non-standard port is configured when the domain name is added to WAF. The visitors use the domain name and a non-standard port or the non-standard port configured for origin server port to access the website. For example, access **http://www.example.com:8080** when the protection service shown in **Figure 3-4** is configured.

Figure 3-4 Non-standard port not configured



NOTE

If no non-standard port is configured, WAF protects services on port 80/443 by default. To protect services on other ports, re-configure domain settings.

Solution: Use only the domain name to access the website. For example, **https://www.example.com**.

Cause 3: The domain name is incorrectly resolved.

Solution:

- If the domain name has been added to WAF, resolve the domain name to WAF by referring to **Routing Website Traffic to WAF**.
- If the domain name is no longer protected by WAF, resolve it to the origin server IP address on the DNS hosting platform.

Cause 4: If a WAF cluster pointed multiple domain names through HTTPS to an origin server over the same port, origin servers cannot tell which domain name a request originated from. This is because WAF uses persistent connections to forward requests to origin servers and Nginx identifies domain names based on Host and SNI. So, there might be a probability that requests destined for domain name A was mistakenly forwarded to domain name B, which causes 404 not found errors.

Solution: Modify the server configuration in WAF to route different domain names over different origin server ports.

- If the response page is not similar the one shown in **Figure 3-2**, the possible causes and solutions are as follows:

  Cause: The website does not exist or has been deleted.

  Solution: Check the website.

502 Bad Gateway Troubleshooting Process and Solutions

Your website can be accessed normally after it is connected to WAF. However, after a period of time, the error code 502 is reported frequently. Refer to **Figure 3-5** to fix the issue.

Figure 3-5 Troubleshooting process for 502 Bad Gateway error

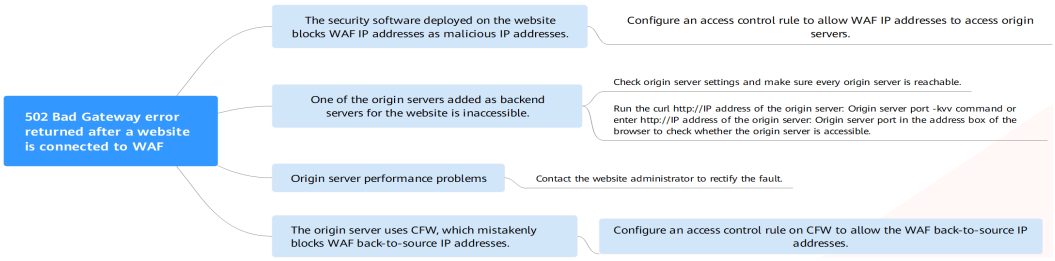


Table 3-1 Troubleshooting 502 Bad Gateway error

Possible Cause	Solution
Cause 1: Your website is using another security protection software. Such software considers WAF back-to-source IP addresses as malicious and blocks the requests forwarded by WAF.	Configure an access control policy on the origin server to whitelist the WAF back-to-source IP addresses. • Cloud mode: For details, see **How Do I Whitelist Back-to-Source IP Addresses of Cloud WAF?** • Dedicated mode: See **Whitelisting Back-to-Source IP Addresses of Dedicated WAF Instances**.
Cause 2: Multiple backend servers are configured for the website. However, one backend server is inaccessible.	Repeat **Step 1** to **Step 8** to ensure that all origin servers can be accessed.
Cause 3: Your website server may have performance issues.	Contact your website administrator to rectify the fault.
Cause 4: The origin server uses CFW, which blocks WAF back-to-source IP addresses.	Troubleshooting methods: • If the origin server uses CFW, view the block logs on the CFW console to check whether related events are generated. • View the access control policy in CFW and check whether the back-to-source IP address of WAF is blocked. On the CFW console, allow WAF back-to-source IP addresses. For details, see **Configuring an Access Control Policy**.

If one of your backend website servers is unreachable, perform the following steps to ensure that the website server configuration is correct.

NOTICE

It takes about two minutes for server information modification to take effect.

Step 1 Log in to the management console.

Step 2 Click in the upper left corner of the management console and select a region or project.

Step 3 Click in the upper left corner and choose **Web Application Firewall** under **Security**.

Step 4 In the navigation pane on the left, choose **Website Settings**.

Step 5 In the **Protected Website** column, click the target domain name to go to the **Basic Information** page.

Step 6 In the **Server Information** area, click . On the displayed **Edit Server Information** page, check whether the client protocol, server protocol, origin server address, and port used by the origin server are correct.

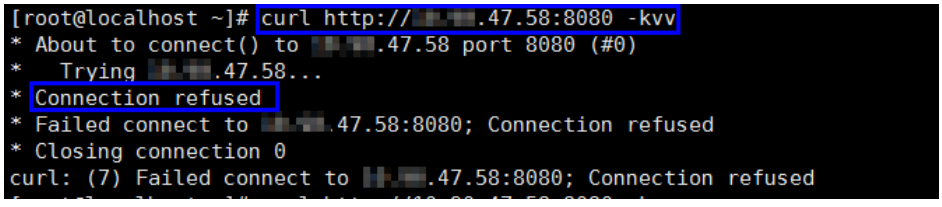
Step 7 Check whether each origin server can be accessed properly.

- Run the following command on the server:
  ```
  curl http://xx.xx.xx.xx:yy -kvv
  ```

  NOTE

  - *xx.xx.xx.xx* indicates the IP address of the origin server. *yy* indicates the port of the origin server. *xx.xx.xx.xx* and *yy* must belong to the same origin server.
  - The host where the **curl** command can be run must meet the following requirements:
    - The network communication is normal.
    - The **curl** command has been installed. **curl** must be manually installed on the host running a Windows operating system. **curl** is installed along with other operating systems.

  Figure 3-6 Command output for checking origin server

  - If the command output indicates that the connection is normal, the website can be accessed.
  - If the command output returns **connection refused**, the origin server is unreachable and website cannot be accessed. Go to **Step 8**.

- Enter **http://***origin server address: origin server port* in the address box of the browser and press **Enter**.
  - If the website can be accessed, the website access is normal.
  - If the website cannot be accessed, the origin server is unreachable and the website cannot be accessed. Go to **Step 8**.

Step 8 Check whether the origin server runs properly.

If not, restart it.

----End

504 Gateway Timeout Troubleshooting Process and Solutions

After you connect your website to WAF, the possibility of 504 gateway timeout errors rises as your website traffic increases. In some other cases, there might be a possibility of 504 gateway timeout error if the visitors access your website through origin server IP addresses. Refer to **Figure 3-7** to fix 504 gateway timeout errors.

Figure 3-7 Troubleshooting process for 504 Gateway Timeout errors

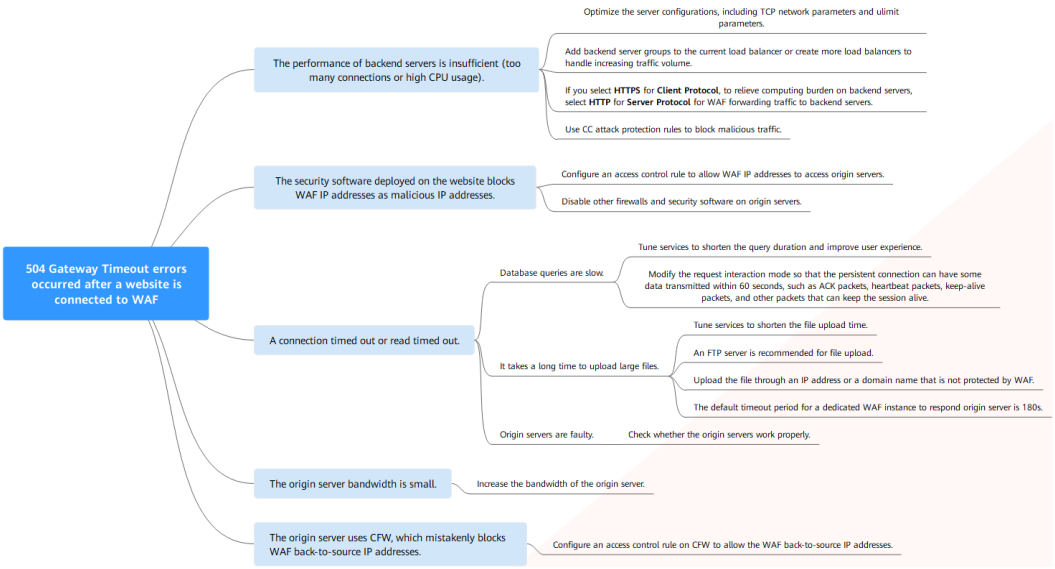


Table 3-2 Troubleshooting 504 Gateway Timeout errors

Possible Cause	Troubleshooting	Solution
Cause 1: Backend server performance issues (such as too many connections or high CPU usage)	If the origin server performance is insufficient, check the origin server access logs and access traffic to analyze issues.	• Optimize the server configurations, including TCP network parameters and ulimit parameters. • If your website is connected to WAF through ELB load balancers, you are advised to create more backend server groups or create new load balancers to support increasing service workloads. • If you configure **Client Protocol** to **HTTPS**, to relieve burden on backend servers, configure **HTTP** for **Server Protocol** for WAF forwarding traffic to backend servers. If there are redirection errors, rectify the fault by referring to **Why Is My Website Redirected Too Many Times?** For details, see **Editing Server Information**. • Use CC attack protection rules to block malicious traffic.

Possible Cause	Troubleshooting	Solution
Cause 2 • The WAF back-to-source IP addresses are not whitelisted or service port is not enabled in the security group. • WAF back-to-source IP addresses are blocked by the firewall on the origin server.	Follow the solutions below for troubleshooting: • Check whether your origin server has security groups, firewalls, and security software deployed. • Capture packets on the client and WAF, respectively, at the same time to check whether the origin server firewall proactively discards packets of the persistent connection to WAF.	• Configure an access control policy that allows only WAF back-to-source IP addresses on origin servers. For details, see **How Do I Whitelist Back-to-Source IP Addresses of Cloud WAF?** • Disable other firewalls and security software on origin servers.

Possible Cause	Troubleshooting	Solution
Cause 3: Connection timeout and read timeout **NOTE** • A 504 error occurs if the origin server is too slow to respond, for example, a slow response to database queries, a long upload time for a large file, or a faulty origin server. • The timeout for WAF to forward traffic to an origin server is 60s or 180s. A 504 error occurs if WAF fails to forward traffic within the configured timeout.	Troubleshooting methods: • Bypass WAF and directly access the origin server and then check the response time. • View the origin server response time in access logs stored in Log Tank Service (LTS). • Bypass WAF, test the file upload function, and check the file size.	• Database queries are slow. – Tune services to shorten the query duration and improve user experience. – Modify the request interaction mode so that the persistent connection can have some data transmitted within 60 seconds, such as ACK packets, heartbeat packets, keep-alive packets, and other packets that can keep the session alive. • It takes a long time to upload large files. – Tune services to shorten the file upload time. – An FTP server is recommended for file upload. – Upload the file through an IP address or a domain name that is not protected by WAF. • The origin server is faulty. Check whether the origin server works properly.

Possible Cause	Troubleshooting	Solution
Cause 4: The bandwidth of the origin server is insufficient. When the access traffic is heavy, the origin server cannot handle all the traffic with its current bandwidth.	Troubleshooting methods: • If you have a layer-7 load balancer deployed in the rear of WAF, you can query 504 logs on the load balancer. • If you have a layer-4 load balancer deployed in the rear of WAF, you can query logs in the **Traffic exceeded the bandwidth threshold** field on the load balancer. • If you have an EIP bound to the backend WAF instances, check the EIP traffic monitoring when 504 errors rise to the peak volume.	Increase the bandwidth of the origin server.
Cause 5: **WAF back-to-source IP addresses are blocked by CFW used by origin servers.**	Troubleshooting methods: • If the origin server uses CFW, view the block logs on the CFW console to check whether related events are generated. • View the access control policy in CFW and check whether the back-to-source IP address of WAF is blocked.	On the CFW console, allow WAF back-to-source IP addresses. For details, see **Configuring an Access Control Policy**.

Create a load balancer. Use the EIP of the load balancer as the IP address of the origin server and connect the EIP to WAF.

NOTICE

It takes about two minutes for server information modification to take effect.

Step 1 Create a shared load balancer.

Step 2 Log in to the management console.

Step 3 Click ☰ in the upper left corner and choose **Web Application Firewall** under **Security**.

Step 4 In the navigation pane on the left, choose **Website Settings**.

Step 5 In the **Domain Name** column, click the domain name. Its information is displayed.

Step 6 In the **Server Information** area, click . On the **Edit Server Information** page displayed, click **Add** to add a backend server.

Step 7 Set the **Server Address** to the EIP bound to the load balancer.

Step 8 Click **OK**.

----End

3.2 Why Am I Seeing Error Code 418?

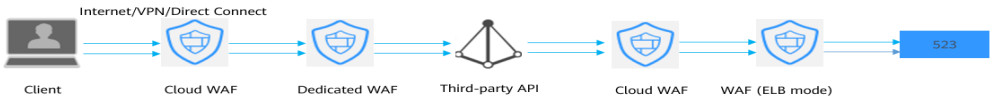
If the request contains malicious load and is intercepted by WAF, error 418 is reported when you access the domain name protected by WAF. You can view WAF protection logs to view the cause. For details about event logs, see **Viewing Protection Event Logs**.

- If you confirm that the request is a normal service request, you can handle the false alarm to prevent the recurrence of the protection event.

  For details, see **Handling False Alarms**.
- If you confirm that the protection event is not a false alarm, your website is attacked and the malicious request is blocked by WAF.

3.3 Why Am I Seeing Error Code 523?

If a request goes through WAF over four times, WAF will block the request and return error code 523 to avoid endless loops. If error code 523 is returned for your website requests, check how many WAF instances you are using.



Cause 1: A website is connected to more than four WAF instances.

Error code 523 will return if a website has been connected to different types of WAF instances more than four times.

Solution

Route website traffic to bypass redundant WAF instances.

Step 1 Log in to the WAF management console.

Step 2 In the navigation pane on the left, choose **Website Settings**.

Step 3 Locate the website for which error code 523 is returned, retain one configuration, and delete the website from redundant WAF instances. For details, see **Deleting a Website from WAF**.

To prevent service interruptions due to such deletions, perform the following operations before removing a website from WAF:

Cloud mode: Go to your DNS provider and resolve your domain name to the IP address of the origin server. Otherwise, the traffic to your domain name cannot be routed to the origin server.

Dedicated mode: Remove redundant WAF instances from the backend server group of the load balancer so that no requests are forwarding to those WAF instances.

----End

Cause 2: A Third-party Interface That Uses Huawei Cloud WAF Was Called

When a request is forwarded to the third-party API, header and cookie are forwarded without being changed. Only the host is modified. This makes WAF count the requests without clearing historical records.

Solution

Modify the header field in the reverse proxy request. The operations are as follows:

NOTICE

This method can be used only when Nginx is deployed after WAF on the user traffic link.

Step 1 Use **proxy_set_header** to redefine the request header sent to the proxy server. Run the following command to open the Nginx configuration file:

(The following command is used when Nginx is installed in the **/opt/nginx/** directory. Change the directory based on your situation.)

vi /opt/nginx/conf/nginx.conf

Step 2 Add **proxy_set_header X-CloudWAF-Traffic-Tag 0** to the Nginx configuration file. The following is an example:

```
location  ^~/test/ {
    ......
    proxy_set_header Host       $proxy_host;
    proxy_set_header X-CloudWAF-Traffic-Tag 0;
    ......
```



```
    proxy_pass http://x.x.x.x;
}
```

----End

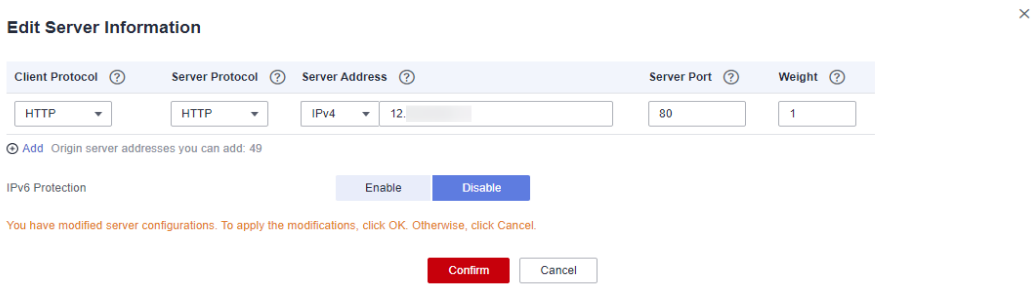
Cause 3: Origin Server IP address Was Mistakenly Set to an IP Address of WAF or A Proxy in Front of WAF

If the origin server address is mistakenly set to the back-to-source IP address of WAF or an IP address of the proxy in front of WAF, the website requests go to an endless loop and error code 523 is returned.

Solution

Check the origin server configurations and enter a correct origin server address. For details, see **Editing Server Information**.

Figure 3-8 Changing the origin server address

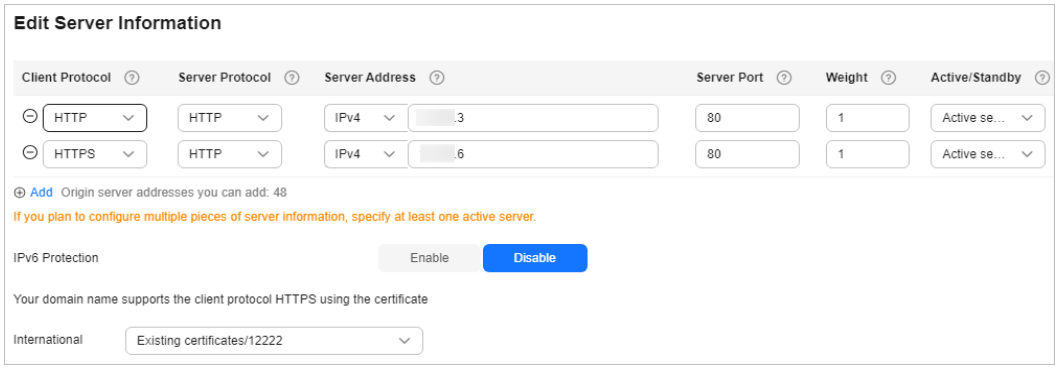


3.4 Why Was My Website Redirected So Many Times?

If you configure your web server to redirect HTTP requests to HTTPS, but configure only one piece of server information with client protocol set to HTTPS and server protocol set to HTTP in WAF, there will be an infinite loop.

You can configure two pieces of server information, one from HTTP (client protocol) to HTTP (server protocol), and the other from HTTPS (client protocol) to HTTPS (server protocol). For details, see **Editing Server Information**. **Figure 3-9** shows the finished server settings.

Figure 3-9 Example configuration



3.5 Why Am I Seeing Error Code 414 Request-URI Too Large?

Symptoms

After a protected website is connected to WAF, the website is inaccessible and the error message "414 Request-URI Too Large" is displayed, as shown in **Figure 3-10**.

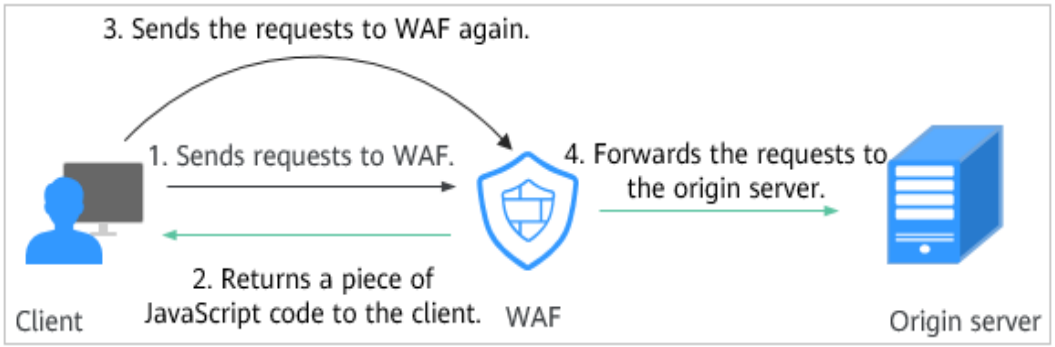
Figure 3-10 Error Code 414 Request-URI Too Large

Possible Causes

The client browser cannot parse JavaScript. In this situation, the client browser caches the page that contains the JavaScript code returned by WAF. Each time the protected website is requested, the cached page is accessed. WAF then verifies that the access request is from an invalid browser or crawler. The access request verification fails. As a result, an infinite loop occurs, the URI length exceeds the browser limit, and the website becomes inaccessible.

After JavaScript anti-crawler is enabled, WAF returns a piece of JavaScript code to the client when the client sends a request. If the client sends a normal request to the website, triggered by the received JavaScript code, the client will automatically send the request to WAF again. WAF then forwards the request to the origin server. This process is called JavaScript verification. **Figure 3-11** shows how JavaScript verification works.

Figure 3-11 JavaScript anti-crawler detection process



- If the client is a crawler, it cannot be triggered by the received JavaScript code and will not send a request to WAF again. The client fails JavaScript authentication.

- If a client crawler fabricates a WAF authentication request and sends the request to WAF, the WAF will block the request. The client fails JavaScript authentication.

Handling Suggestions

Disable the JavaScript anti-crawler protection by performing the following steps:

Step 1 Log in to the management console.

Step 2 Click in the upper left corner of the management console and select a region or project.

Step 3 Click in the upper left corner and choose **Web Application Firewall** under **Security**.

Step 4 In the navigation pane on the left, choose **Policies**.

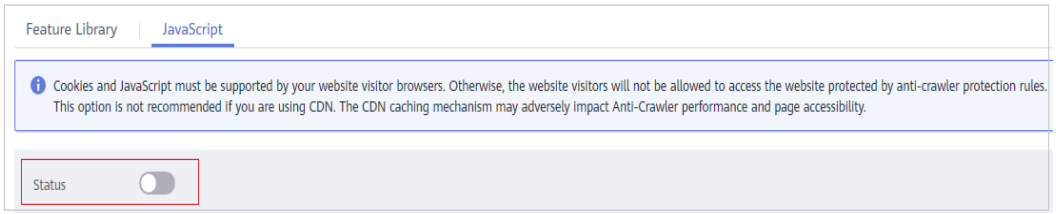
Step 5 Click the name of the target policy to go to the protection configuration page.

Step 6 Click the **Anti-Crawler** configuration area and toggle it on or off if needed.

- : enabled.
- : disabled.

Step 7 Click the **JavaScript** tab and disable the JavaScript anti-crawler protection. Its status changes to .

Figure 3-12 Disabling JavaScript anti-crawler protection



----End

3.6 What Is the Connection Timeout Duration of WAF? Can I Manually Set the Timeout Duration?

- The default timeout for connections from a browser to WAF is 120 seconds. The value varies depending on your browser settings and cannot be changed on the WAF console.
- The default timeout duration for connections between WAF and your origin server is 30 seconds. You can customize a timeout duration on the WAF console.

On the **Basic Information** page, enable **Timeout Settings** and click . Then, specify **WAF-to-Server connection timeout (s)**, **Read timeout (s)**, and **Write timeout (s)** and click to save settings.

4 Checking Whether Normal Requests Are Blocked Mistakenly

4.1 How Do I Handle False Alarms as WAF Blocks Normal Requests to My Website?

Once an attack hits a WAF rule, WAF will respond to the attack immediately according to the protective action (**Log only** or **Block**) you configured for the rule and display an event on the **Events** page.

NOTICE

If you have enabled enterprise projects, ensure that you have all operation permissions for the project where your WAF instance locates. Then, you can select the project from the **Enterprise Project** drop-down list and handle false alarms in the project.

In the row containing the false alarm event, click **Details** in the **Operation** column and view the event details. If you are sure that the event is a false positive, handle it as a false alarm by referring to **Table 4-1**. After an event is handled as a false alarm, WAF stops blocking corresponding type of event. No such type of event will be displayed on the **Events** page and you will no longer receive alarm notifications accordingly.

Table 4-1 Handling false alarms

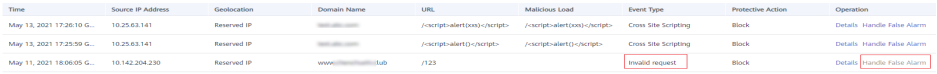
Type of Hit Rule	Hit Rule	Handling Method
WAF built-in protection rules	• Basic web protection rules Basic web protection defends against common web attacks, such as SQL injection, XSS attacks, remote buffer overflow attacks, file inclusion, Bash vulnerability exploits, remote command execution, directory traversal, sensitive file access, and command and code injections. Basic web protection also detects web shells and evasion attacks. • Feature-based anti-crawler protection Feature-based anti-crawler identifies and blocks crawler behavior from search engines, scanners, script tools, and other crawlers.	In the row containing the attack event, click **Handle as False Alarm** in the **Operation** column. For details, see **Handling False Alarms**.
Custom protection rules	• CC attack protection rules • Precise protection rules • Blacklist and whitelist rules • Geolocation access control rules • Web tamper protection rules • JavaScript anti-crawler protection • Information leakage prevention rules • Data masking rules	Go to the page displaying the hit rule and delete it.
Other	Invalid access requests **NOTE** If any of the following cases, WAF blocks the access request as an invalid request: • When **form-data** is used for POST or PUT requests, the number of parameters in a form exceeds 8,192. • The URL contains more than 2,048 parameters. • The number of headers exceeds 512.	Allow the blocked requests by referring to **Configuring a Precise Protection Rule**. The **Handle as False Alarm** button is grayed out for events that are generated against a precise protection rule.

4.2 Why Does WAF Block Normal Requests as Invalid Requests?

Symptom

After a website is connected to WAF, a normal access request is blocked by WAF. On the **Events** page, the corresponding **Event Type** reads **Invalid request**, and the **Handle False Alarm** button is grayed out, as shown in **Figure 4-1**.

Figure 4-1 Normal requests blocked by WAF as invalid requests



Possible Cause

If any of the following cases, WAF blocks the access request as an invalid request:

- When **form-data** is used for POST or PUT requests, the number of parameters in a form exceeds 8,192.
- The URL contains more than 2,048 parameters.
- The number of headers exceeds 512.

Solution

If you confirm that the blocked request is a normal request, allow it by **configuring a precise protection rule**.

4.3 Why Is the Handle False Alarm Button Grayed Out?

Verify that you have the permissions for WAF. For details, see **WAF Permissions Management**.

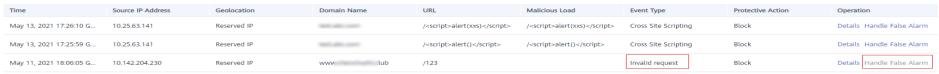
NOTICE

If you have enabled **Enterprise Project**, select an enterprise project and handle false alarms in the project.

- For events generated based on custom rules (such as a CC attack protection rule, precise protection rule, blacklist rule, whitelist rule, or geolocation access control rule), they cannot be handled as false alarms. To ignore such an event, delete or disable the custom rule hit by the event.
- If either of the following numbers in an access request exceeds 512, WAF will block the request as an invalid request and gray out the **Handle False Alarm** button.
  - When **form-data** is used for POST or PUT requests, the number of parameters in a form exceeds 8,192.

- The URL contains more than 2,048 parameters.
- The number of headers exceeds 512.

Figure 4-2 Normal requests blocked by WAF as invalid requests



To handle an invalid request, refer to **Why Does WAF Block Normal Requests as Invalid Requests?**

