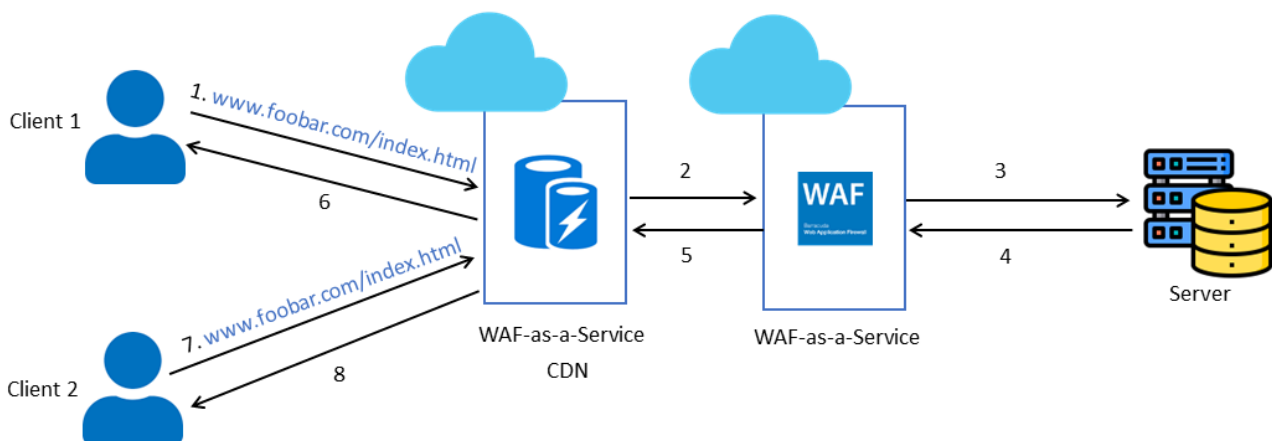


## CDN Rules

<https://campus.barracuda.com/doc/98224466/>

CDN rules are defined to provide fine-grained control over the cached resources on the CDN edge server. You can customize how the incoming requests are processed and how the CDN edge server manages the cache and redirection. A CDN rule is a combination of conditions and actions. The rule can include a single match condition or multiple match conditions. You can define a maximum of ten (10) conditions and five (5) actions in a single rule. If multiple conditions are defined, they are grouped together with the AND logic. An incoming request is matched with all the defined conditions and if all conditions are met, the CDN edge server performs the actions associated with the rule.



### Request Workflow when CDN is enabled:

1. A client sends a request to [www.foobar.com/index.html](http://www.foobar.com/index.html). WAF-as-a-Service CDN intercepts the request and checks if the requested content is available.
2. If the content is not available in the CDN server, the request is forwarded to WAF-as-a-Service, where the request is evaluated with all the security rules and policies.
3. After the successful evaluation, the request is forwarded to the back-end application server.
4. The back-end server sends the response to WAF-as-a-Service.
5. WAF-as-a-Service applies the rules and policies on the response, encrypts all sensitive data, and forwards the request to WAF-as-a-Service CDN.
6. WAF-as-a-Service CDN caches the content and forwards the request to the client.
7. A subsequent request to [www.foobar.com/index.html](http://www.foobar.com/index.html) is sent to WAF-as-a-Service CDN.
8. WAF-as-a-Service CDN responds to the request.

### Rule Conditions

You can filter requests using the following conditions:

- **Remote Address** – Filters the request(s) based on the IP address or the country code of the geo-location.
- **Request Method** – Filters the request(s) based on HTTP methods (GET, POST, PUT, DELETE, HEAD, OPTIONS, TRACE).
- **Query String** – Filters the request(s) based on query string(s).
- **POST Args** – Filters the request(s) based on the arguments provided within the POST request's body.
- **Request URL** – Filters the request(s) based on the URL. The URL is evaluated with the associated protocol and query string.
- **Request Header** – Filters the request(s) based on the header and the associated value.
- **Request Body** – Filters the request(s) based on the text that appears in the body of the request.
- **Request Protocol** – Filters the request(s) based on the protocol (HTTP or HTTPS).
- **Request Path** – Filters the request(s) based on the specified path in the request URL.
- **Request File Extension** – Filters the request(s) based on the extension of the file name in the request URL.
- **Request File Name** – Filters the request(s) based on the name of the file in the request URL.
- **HTTP Version** – Filters the request(s) based on HTTP versions (2.0, 1.1, 1.0, 0.9)
- **Request Cookies** – Filters the request(s) based on cookies in the request.
- **Device Type** – Filters the request(s) based on the type (Mobile or Desktop) of the device used to send the request.
- **Socket Address** – Filters the request(s) based on the IP address that is used to connect to the WAF-as-a-Service CDN.
- **Client Port** – Filters the request(s) based on the TCP port of the client that sent the request.
- **Server Port** – Filters the request(s) based on the TCP port of the Waf-as-a-Service CDN server that received the request.
- **Host Name** – Filters the request(s) based on the hostname in the request.
- **SSL Protocol** – Filters the request(s) based on the SSL protocol (1.0, 1.1, 1.2) that established the TLS connection between the client and the WAF-as-a-Service CDN.

The rules are evaluated from top to bottom. Move the rule up or down to change the evaluation order.

## Rule Actions

When a request matches all conditions, WAF-as-a-Service CDN performs the action(s) associated with the rule. Following are the action(s) that can be associated with the rule:

- **Modify Response Header** – Use this action when you want WAF-as-a-Service CDN to modify the header(s) in the response before sending it to the client.
- **Modify Request Header** – Use this action when you want WAF-as-a-Service CDN to modify the header(s) in the request before sending it to WAF-as-a-Service.
- **URL Redirect** – Use this action when you want to redirect client requests to a new URL.
- **URL Rewrite** – Use this action when you want to rewrite a request's path.
- **Route Configuration Override** – Use this action when you want to override the caching behavior of the WAF-as-a-Service CDN server.

## Examples

### To disable caching for a particular URL and a domain

Add a rule with the following condition(s) and action(s):

1. Select **Request URL** from the **Add a condition** list.
  1. Configure the Request URL condition:
    1. **Operator**: Select **Equal** from the drop-down list.
    2. **Value**: Enter */image1.jpeg* in the text field.
    3. **String Transform**: Select how you want the request string to be transformed/converted (Lowercase, Uppercase, RemoveNulls, Trim, UriDecode, UriEncode).
2. Select **Host name** from the **Add a condition** list.
  1. Configure the Host name condition:
    1. **Operator**: Select **Equal** from the drop-down list.
    2. **Host name**: Enter *domain1.com* in the text field.
    3. **String Transform**: Select how you want the request string to be transformed/converted (Lowercase, Uppercase, RemoveNulls, Trim, UriDecode, UriEncode).
3. Select **Route configuration override** from the **Add an action** list.
  1. Configure the Route configuration override action:
    1. **Caching**: Select **Disabled** from the drop-down list.
4. Click **Save**.

Based on the configuration in the example above, any request to *domain1.com/image.jpeg* will not be cached in the WAF-as-a-Service CDN server.

### To Redirect a URL

Add a rule with the following condition(s) and action(s):

1. Select **Request URL** from the **Add a condition** list.
  1. Configure the Request URL condition:
    1. **Operator**: Select **Equal** from the drop-down list.
    2. **Value**: Enter */image5.png* in the text field.

3. **String Transform:** Select how you want the request string to be transformed (Lowercase, Uppercase, REmoveNulls, Trim, UriDecode, UriEncode).
2. Select **URL Redirect** from the **Add an action** list.
  1. Configure the URL redirect action:
    1. **Redirect Type:** Select **Found (302)** from the drop-down list.
    2. **Redirect Protocol:** Select **HTTPS** from the drop-down list.
    3. **Destination Path:** Enter */images/image5.jpeg* in the text field.
    4. **Destination Host:** Enter *domain1.com* in the text field.
3. Click **Save**.

Based on the configuration in the example above, any request to *domain1.com/image5.png* will be redirected to *domain1.com/images/image5.jpeg*.

## Steps to Add a CDN Rule

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1. On the WAF-as-a-Service web interface, go to the **APPLICATIONS** page and click on the application to which you want to add CDN rules.
2. On your application page, click **CDN** in the left panel and then click **Rules**.
3. On the **CDN Rules** page:
  1. Click **Add Rule** and select **New Rule**.
  2. Specify a rule name in the **Rule Name** text field.
  3. Click **Add a condition** and select the parameters or elements of a request.
  4. Click **Add an action** and select the action to be performed when the request matches all conditions.
  5. Click **Save**.

## Figures

### 1. Overview\_CDN.png

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