

# Alibaba Cloud

Web应用防火墙

Pricing








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# Document conventions

Style	Description	Example
 <b>Danger</b>	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 <b>Danger:</b> Resetting will result in the loss of user configuration data.
 <b>Warning</b>	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 <b>Warning:</b> Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 <b>Notice</b>	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 <b>Notice:</b> If the weight is set to 0, the server no longer receives new requests.
 <b>Note</b>	A note indicates supplemental instructions, best practices, tips, and other content.	 <b>Note:</b> You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click <b>Settings</b> > <b>Network</b> > <b>Set network type</b> .
<b>Bold</b>	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click <b>OK</b> .
Courier font	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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# 1.Subscription

## 1.1. Purchase a WAF instance

This topic describes how to purchase a Web Application Firewall (WAF) instance.



### Background information




WAF supports the subscription billing method. To purchase a subscription WAF instance, you must select an edition based on your requirements. Different editions have different protection features and specifications. For more information, see [Editions and features](#).



### Procedure

1. Go to the [Web Application Firewall buy page](#) by using your Alibaba Cloud account.
2. On the **Web Application Firewall** buy page, configure the following parameters.


WAF buy page

Parameter	Description
Region	<p>Specify the region where the WAF cluster resides. Valid values:</p> <ul style="list-style-type: none"> <li>◦ <b>China Mainland</b>: regions in mainland China.</li> <li>◦ <b>International</b>: regions outside mainland China, including China (Hong Kong), Singapore (Singapore), Malaysia (Kuala Lumpur), US (Silicon Valley), Australia (Sydney), Germany (Frankfurt), India (Mumbai), Indonesia (Jakarta), UAE (Dubai), and Japan (Tokyo).</li> </ul>
Plan	<p>Specify the edition of WAF that you want to purchase. Valid values:</p> <ul style="list-style-type: none"> <li>◦ <b>Pro</b> <div data-bbox="638 1288 1385 1406" style="background-color: #e0f2f7; padding: 5px; margin: 5px 0;"> <p> <b>Note</b> This edition does not support <b>Access Log Service</b>.</p> </div> </li> <li>◦ <b>Business</b></li> <li>◦ <b>Enterprise</b> <div data-bbox="614 1512 1385 1662" style="background-color: #e0f2f7; padding: 5px; margin: 5px 0;"> <p> <b>Note</b> The <b>Exclusive</b> option is unavailable by default. <a href="#">ticket</a> if you need to use the <b>Exclusive</b> edition. For more information, see <a href="#">Best practices for exclusive clusters</a>.</p> </div> </li> </ul> <p>After you select an edition, the <b>Specification</b> section displays the details about the selected edition. For more information, see <a href="#">Editions and features</a>.</p>

Parameter	Description
Extra Domain	<p>Enter the number of extra domain name packages that you want to purchase.</p> <p>If you want to add multiple domain names or more than 10 subdomains to WAF, we recommend that you purchase extra domain name packages. For more information, see <a href="#">Extra domain name packages</a>.</p>
Exclusive IP	<p>Enter the number of exclusive IP addresses that you want to purchase for WAF.</p> <p>You can purchase an exclusive IP address and assign it to a specific domain name. For more information, see <a href="#">Exclusive IP addresses</a>.</p>
Extra Traffic	<p>Specify the extra bandwidth in Mbit/s.</p> <p>If the total bandwidth of your websites exceeds the service bandwidth of WAF, we recommend that you purchase extra bandwidth. For more information, see <a href="#">Extra bandwidth</a>.</p>
GSLB	<p>Determine whether to enable intelligent load balancing.</p> <p>You can enable intelligent load balancing for your services to meet the high availability and low latency requirements of automatic disaster recovery. For more information, see <a href="#">Intelligent load balancing</a>.</p>
Access Log Service	<p>Determine whether to activate Log Service for WAF.</p> <p>You can enable Log Service for WAF to store, view, and analyze WAF logs in real time. For more information, see <a href="#">Log Service for WAF</a>.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> <b>Note</b> The Pro edition does not support this option.</p> </div>
Log Storage Period	<p>Specify the period for which you want to store WAF logs. Valid values: <b>180 Days</b> and <b>360 Days</b>.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> <b>Note</b> The Pro edition does not support this option.</p> </div>
Log Storage Size	<p>Specify the maximum size of stored logs after you set Access Log Service to YES. Valid values: <b>3T</b>, <b>5T</b>, <b>10T</b>, <b>15T</b>, <b>20T</b>, <b>25T</b>, and <b>50T</b>.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> <b>Note</b> The Pro edition does not support this option.</p> </div>

Parameter	Description
<b>Bot Manager</b>	<p>Determine whether to enable the bot management feature.</p> <p>To mitigate security threats caused by bot traffic, you can enable this feature. For more information, see <a href="#">Set a bot threat intelligence rule</a> and <a href="#">Configure the allowed crawlers function</a>.</p> <div style="background-color: #e1f5fe; padding: 10px;"> <p> <b>Notice</b> The bot management feature is available for only the new protection engine of WAF. If you enable this feature by upgrading the existing WAF instance, make sure that you have upgraded to the new protection engine. For more information, see <a href="#">Protection engine upgrade</a>.</p> <p><a href="#">ticket</a> and apply to upgrade the protection engine if you enabled the bot management feature but did not upgrade your WAF instance to the new protection engine.</p> </div>
<b>Mobile App Protection</b>	<p>Determine whether to enable the app protection feature.</p> <p>If your website service is built on the native apps and you have security needs, such as the need for trusted communications and the prevention of bot script abuse, you can enable this feature. For more information, see <a href="#">Configure application protection</a>.</p> <div style="background-color: #e1f5fe; padding: 10px;"> <p> <b>Notice</b> This feature is available only for the new protection engine of WAF. If you enable this feature by upgrading the existing WAF instance, make sure that you have upgraded to the new protection engine. For more information, see <a href="#">Protection engine upgrade</a>.</p> <p><a href="#">ticket</a> and apply to upgrade the protection engine if you enabled the Mobile App Protection feature but did not upgrade your WAF instance to the new protection engine.</p> </div>
<b>Validity Period</b>	Specify a validity period for the WAF instance.

3. Click **Buy Now** and complete the payment.


 **Notice** WAF does not provide the 5-day money-back guarantee or partial refunds.

## 1.2. Extra bandwidth

Different subscription plans of Alibaba Cloud WAF are allocated a certain amount of bandwidth. If the allocated bandwidth of your WAF subscription does not suit your business requirements, you can purchase extra bandwidth.

### What is a bandwidth limit for WAF?

WAF bandwidth indicates the normal business flow capacity of a WAF instance, in Mbps. 100 Mbps of bandwidth corresponds to 4,000 QPS, and so forth. QPS (Query Per Second) indicates the quantity of requests in one second. For example, an HTTP GET request is a query.

 **Note** WAF bandwidth is calculated exclusively by WAF and has nothing to do with the bandwidth or traffic limit of other Alibaba Cloud products such as CDN, SLB, and ECS.


Each WAF subscription has a certain bandwidth limit, and the higher plan has the larger bandwidth. Besides, when used to access origin servers inside Alibaba Cloud (such as ECS or SLB instances), the WAF subscription offers more bandwidth than is used to access non-Alibaba Cloud servers. For example, the WAF Business edition has a bandwidth limit of 100 Mbps (when the origin server is inside Alibaba Cloud) and 30 Mbps (when the origin server is outside Alibaba Cloud).

### How to select bandwidth?

We recommend that you evaluate the normal business flow capacity of both the inbound and outbound traffic of all websites that you want to enable WAF protection before purchasing. Make sure that the bandwidth of your WAF subscription is larger than the total inbound flow capacity and total outbound flow capacity.


 **Note** Generally, outbound traffic is greater than inbound traffic.

You can evaluate your business traffic by using ECS traffic statistics or other monitoring tools on your origin server.

 **Note** The traffic here indicates your normal business traffic. For example, if you enable WAF protection for all your websites that provide external services, in the case of normal access (the websites are not attacked), WAF forwards traffic to the origin ECS. If the websites are attacked by HTTP flood attacks or DDoS attacks, WAF filters out corrupted traffic and passes valid traffic back to the origin ECS. Therefore, the inbound and outbound traffic you view on the ECS console is your normal business traffic. If the origin servers consist of multiple ECS instances, you must calculate the traffic sum of all corresponding ECS instances.

### Examples

Suppose you want to configure three websites with WAF protection. The normal traffic in the outbound direction of each website does not exceed 10 Mbps, and the total traffic does not exceed 30 Mbps. In this case, you can subscribe to the WAF Business Edition (with a bandwidth limit of 30 Mbps).

 **Note** You can also extend the default bandwidth by adding certain amount of extra bandwidth to your WAF subscription.



## What happens if the bandwidth is exceeded?

If your normal business flow capacity exceeds the bandwidth limit of your WAF subscription, you will receive an alarming message on the WAF console, informing that all your business traffic forwarding configured in WAF will be affected.

Your websites may be subject to traffic restrictions or random packet loss, and your normal business may be unavailable, slow, or delayed for a certain period of time.


In this case, you can upgrade your WAF, or purchase extra bandwidth.

## What is extra bandwidth?

If the business flow capacity of your website is high, you can purchase extra bandwidth to avoid exceeding the bandwidth limit.

For example, your current traffic requirement is 50 Mbps (non-Alibaba Cloud server), and you have purchased the WAF Business Edition (the bandwidth limit is 30 Mbps), you can purchase an additional 20 Mbps of extra bandwidth to meet your business needs.

You can [Upgrade WAF](#) to increase the extra bandwidth to meet higher business requirement.

 **Note** You can also add certain amount of extra bandwidth to your WAF subscription when purchasing WAF.

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# 1.3. Extra domain quota

## What is the default domain quota?

After you activate Alibaba Cloud WAF, you can deploy it for one domain name to provide protection. By default, a total of ten subdomains (including the root domain) of one domain name can be configured with a WAF instance. A subdomain can be a wildcard domain.

Taking `abc.com` for example, you can enable WAF protection for up to ten subdomains, such as `www.abc.com`, `*.abc.com`, `mail.abc.com`, `user.pay.abc.com`, and `x.y.z.abc.com`. The root domain `abc.com` is also regarded as one of the ten subdomains.

## What is an extra domain quota?

If you want to enable WAF protection for more than one domain names or more than 10 subdomains, you can buy an extra domain quota. Assume that you have already configured `abc.com` or its subdomains with your WAF instance. When you try to add `xyz.com` (another domain name) to the WAF protection list, you will receive a system prompt informing you that the domain quota is exceeded.

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In this case, you must upgrade the service to purchase an extra domain quota. For more information, see [Renewal and upgrade](#).


On the **Upgrade** page, select the number of extra domains you want and complete the payment.

# 1.4. Exclusive IP addresses

You can purchase exclusive IP addresses for Web Application Firewall (WAF) to protect important domain names. Each exclusive IP address protects one domain name. A domain name that is protected by an exclusive IP address can be accessed even if other domain names in the same WAF instance are under DDoS attacks. The other domain names use a shared IP address.

## Introduction to exclusive IP addresses


When you purchase a WAF instance, it has a default IP address, which can be used to protect multiple domain names in the instance. This default IP address is a shared IP address. If you want to use one IP address to exclusively protect a domain name, you must purchase an exclusive IP address. One exclusive IP address can be bound to only one domain name.

 **Note** Subscription WAF instances of the Pro edition or higher support exclusive IP addresses.

If a domain name is under DDoS attacks, the exclusive IP address that protects the domain name can also help prevent other domain names in the same WAF instance from access failures. By default, a WAF instance uses a shared IP address to protect all domain names. If traffic of this shared IP address is routed to a blackhole due to DDoS attacks on one of the domain names, the other domain names cannot be accessed. In the preceding situation, we recommend that you purchase exclusive IP addresses to protect important domain names from access failures.

## Purchase an exclusive IP address


You can purchase exclusive IP addresses when you purchase a subscription WAF instance.

 **Note** If you have purchased a WAF instance, you can upgrade the instance to purchase exclusive IP addresses. For more information, see [Renewal and upgrade](#).

## Assign and enable an exclusive IP address

Log on to the [WAF console](#). In the left-side navigation page, choose **Assets > Website Access**. On the page that appears, set **Protection Resource** to **Shared Cluster and Exclusive IP** in the **Quick Access** column.

After you enable an exclusive IP address for a domain name and the CNAME record is used for access, the domain name is automatically resolved to the exclusive IP address. You can ping the CNAME of the domain name to check whether the resolution directs to the required exclusive IP address.

 **Note** If the A record is used for access, the domain name cannot be automatically resolved to the exclusive IP address. You must ping the CNAME of the domain name to obtain the exclusive IP address and manually change the DNS record.

# 1.5. Intelligent load balancing

Web Application Firewall (WAF) provides intelligent load balancing. By leveraging the intelligent multi-node access technology, WAF ensures that access requests to your website are automatically scheduled among multiple nodes or lines to achieve disaster recovery. This ensures high service availability and low-latency access.

**Note** Only subscription WAF instances support intelligent load balancing. Instances deployed in mainland China must be of the Pro edition or higher. Instances deployed outside mainland China must be of the Business edition or higher.

Intelligent load balancing is best suited to the following services to achieve high availability and low-latency access:

- **Active geo-redundancy services:** Multiple nodes are deployed on the cloud or in on-premises data centers deployed across regions. These nodes provide services simultaneously and work as backups for each other to achieve disaster recovery.
- **Co-location multi-active services:** Multiple nodes are deployed on the cloud or in on-premises data centers deployed in the same region. These nodes provide services simultaneously and work as backups for each other to achieve disaster recovery.
- **Co-location single-active services:** A single node is deployed on the cloud or in an on-premises data center in the same region to provide services.

**Note** Co-location single-active services do not have automatic disaster recovery capabilities. However, you can enable intelligent load balancing to achieve high service availability, automatic disaster recovery, and low-latency access.

## How intelligent load balancing works

After intelligent load balancing is enabled, a WAF instance has a minimum of three protection nodes that are deployed in different regions to achieve automatic disaster recovery. In addition, the intelligent DNS resolution feature and the upgraded back-to-origin algorithm are used to achieve the lowest latency when traffic is forwarded to origin servers.

- Note**
- After intelligent load balancing is enabled in mainland China, a WAF instance has three protection nodes, with one node deployed in the China (Beijing) region, one in the China (Hangzhou) region, and one in the China (Shenzhen) region.
  - After intelligent load balancing is enabled outside mainland China, a WAF instance has eight protection nodes that are deployed in different regions, including India (Mumbai), China (Hong Kong), Germany (Frankfurt), UAE (Dubai), and Singapore (Singapore).

### How intelligent load balancing works

The following table lists the capabilities of your WAF instance after you enable intelligent load balancing.

Capability	Before this feature is enabled	After this feature is enabled
Disaster recovery	<ul style="list-style-type: none"> <li>• Access protection based on multiple single-active nodes</li> <li>• Unified failover for disaster recovery</li> </ul>	<ul style="list-style-type: none"> <li>• Access protection based on multi-node load balancing</li> <li>• Automatic failover based on intelligent DNS resolution</li> </ul>
Access acceleration	N/A	Shortest link due to the closest protection node and origin server

## Benefits

Intelligent load balancing brings you the following benefits:

- Active geo-redundancy services
  - Automatic disaster recovery among multiple lines to achieve fault recovery
  - Distributed health check to balance loads among multiple lines
  - Upgraded least-time back-to-origin algorithm to ensure low latency

Benefits of active geo-redundancy services

- Co-location multi-active services
  - Automatic disaster recovery among multiple lines to achieve fault recovery
  - Distributed health check to balance loads among multiple lines

Co-location multi-active services

- Co-location single-active service
  - Automatic disaster recovery among multiple lines to achieve fault recovery
  - Distributed health check to balance loads among multiple lines

Co-location single-active services

## Enable intelligent load balancing

To enable intelligent load balancing, set the **GSLB** parameter to Yes when you purchase a subscription WAF instance. You can also set the **GSLB** parameter to Yes when you upgrade a subscription WAF instance.

Intelligent load balancing is charged on a monthly basis during the service period of your WAF instance.

- WAF instances in mainland China: USD 180/month
- WAF instances outside mainland China: USD 800/month

## 2. Renewal and upgrade

To prevent your business from being affected when the Alibaba Cloud WAF subscription expires, you can manually renew your subscription or enable automatic renewal before expiration. If the specification of your current Alibaba Cloud WAF subscription does not meet your needs, you can upgrade the service.

### Renew Alibaba Cloud WAF

Before your Alibaba Cloud WAF subscription expires, you can renew it to extend the duration of the service.

#### Renewal reminder

The system sends a reminder SMS or email, seven days before your service expires. You can renew your subscription before it expires, to enjoy uninterrupted service. If the subscription is not renewed before its expiry, you are allowed seven additional days to renew your subscription. If the subscription is still not renewed within this extended period, the WAF instance is released and the website is no longer protected.

#### Procedure

You can manually renew your subscription on the Alibaba Cloud WAF console, or perform manual or automatic renewal on the **Renew** page of Billing Management.


Follow these steps to manually renew your subscription on the Alibaba Cloud WAF console:

1. Log on to the [Web Application Firewall console](#).
2. At the top of the page, select the region of your WAF instance (Mainland China or International).
3. In the upper-right corner, click **Renew**.
4. On the **Renew** page, select **Renewal Duration** and proceed with the payment.

Follow these steps to manage renewal for your subscription on the **Renew** page of Billing Management:

1. Log on to the [Web Application Firewall console](#).
2. On the top menu bar, click **Billing Management > Renew**.
3. In the left-side navigation pane, click **Web Application Firewall**.
4. On the **Web Application Firewall** page, select the web application firewall instance to be renewed and apply one of the following renewal methods.
  - If you want to extend the duration of the service to a certain time, you can click **Renew** on the **Manually Renew** page. On the Renew page, select the expected renewal duration and complete the payment.
  - If you want to enable a long-term subscription, you can click **Enable Auto-Renew** on the **Manually Renew** page. In the Enable Auto-Renew dialog box, select Auto-Renewal Cycle and click **Enable Auto-Renew**. When auto-renewal is enabled, Alibaba Cloud WAF will perform renewal on your behalf before the subscription expires. The renewal duration equals to the auto-renewal cycle, and renewal fees will be deducted from your account.

When auto-renewal is enabled for a WAF instance, you can edit its renewal cycle or disable auto-renewal for it on the **Auto-Renew** page.

 **Note**

- Auto-renewal fees will be incurred 3 days before the service expires. Make sure you have enough balance in the payment method specified for your account.
  - If you manually renew your instance before the billing day, auto-renewal is then performed based on the new expiration date calculated by your manual renewal plan.
  - If you enable auto-renewal today, it will be effective from tomorrow.
  - Auto-renewal payment supports coupons.
- If you decide not to use Alibaba Cloud WAF after the instance expires, click **Don't Renew**, and confirm **Don't Renew**. If you choose not to renew, you will be reminded only once before the instance expires. You can change your settings on the **Don't Renew** page anytime before the instance is stopped.

□

## Upgrade

If the specification of your current Alibaba Cloud WAF subscription does not suit your requirements, you can upgrade the subscription to a higher version before its expiry, to obtain more advanced protection. For more information, see [Subscription plans](#).

Follow these steps to upgrade your WAF subscription:

1. Log on to the [Web Application Firewall console](#).
  2. At the top of the page, select the region of your WAF instance (Mainland China or International).
  3. In the upper-right corner, click **Upgrade**.
- 
4. On the **Upgrade** page, select the expected configuration and proceed with the payment. For more information about the configuration, see [Activate Alibaba Cloud WAF](#).

 **Note** After the upgrade, the new WAF instance follows the original service cycle.