Alibaba Cloud Anti-DDoS Basic

Anti-DDoS Basic Service

Issue: 20190517

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Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus , page names, and other UI elements.	Click OK.
`Courier font`	It is used for commands.	Run the `cd / d C :/ windows` command to enter the Windows system folder.
Italics	It is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	It indicates that it is a optional value, and only one item can be selected.	`ipconfig` *[-all|-t]*

Style	Description	Example
{} or {a|b}	It indicates that it is a required value, and only one item can be selected.	`swich {stand | slave}`

Contents

1 Product Introduction

1.1 What is Anti-DDoS Basic

Anti-DDoS Basic is a free Distributed Denial of Service (DDoS) protection service that safeguards data and applications.

Anti-DDoS Basic prevents and mitigates DDoS attacks by routing traffic away from your infrastructure. This service guarantees availability and performance of your properties on Alibaba Cloud. It also provides enhanced visibility and control over your security. As a global service from Alibaba Cloud Security, Anti-DDoS Basic functions with 5Gbps capacity of DDoS mitigation against common DDoS attacks.

For more information, see the *Anti-DDoS Basic product details* page.

- Security credibility plan

  You can enjoy an extra DDoS mitigation capacity on top of the default offering based on your security credibility score.
- Extensive protection scenarios

  Anti-DDoS Basic defends against various DDoS attacks, including but not limited to ICMP flood, UDP flood, TCP flood, SYN flood, and ACK flood attacks.
- Scalable DDoS mitigation capacity

  By improving your credibility score, you can get more extra DDoS mitigation capacity.
- Shortened black hole duration

  With security credibility, the default black hole duration triggered by extreme attacks can be shortened, bringing your business back to life faster.
- Maintainable security credibility

  You can learn the scoring criteria of the security credibility score and take the initiative to improve it.

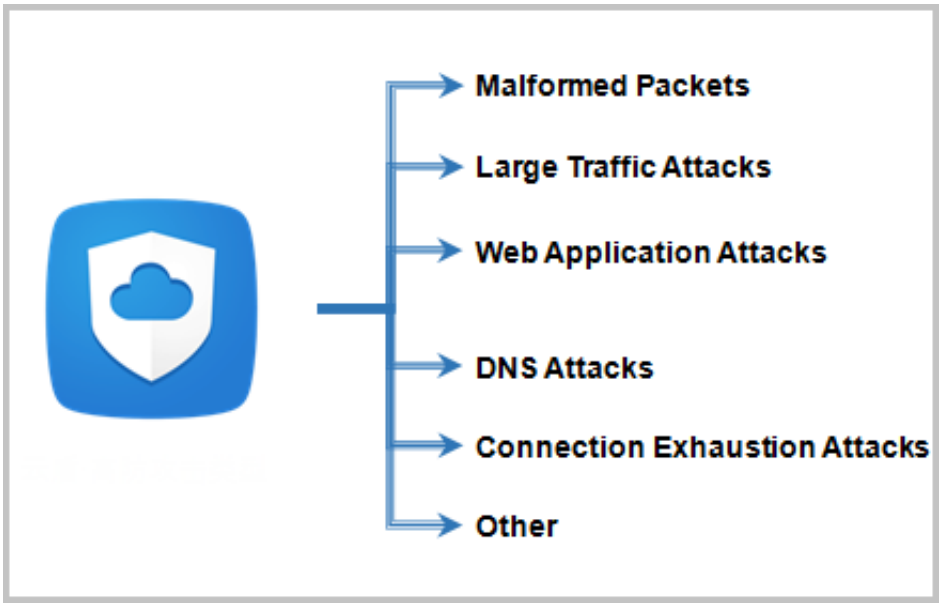
1.2 How Anti-DDoS Basic works

Anti-DDoS Basic currently supports BGP and DNS redirection technologies. Its dominant protection mode is passive cleansing, supplemented by active suppression. The service comprehensively manages DDoS attacks.

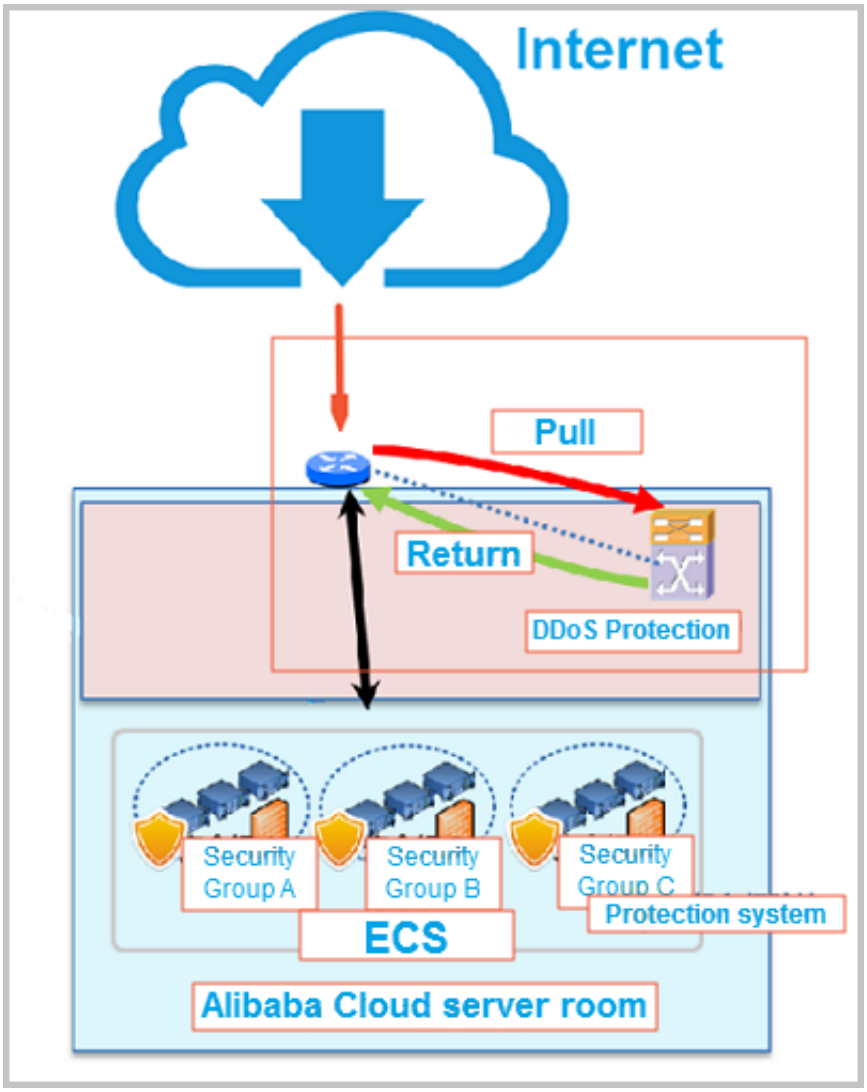
On the basis of conventional technologies, such as proxy, detection, rebound, authentication, black/white lists, and message compliance, Alibaba Cloud Anti-DDoS Basic also integrates web security and filtering, reputation analysis, Layer -7 application analysis, user behavior analysis, feature learning, defense and counter-work, and other technologies. This service can block and filter threats, and guarantees that the protected users are secured even during the attack.

The present Anti-DDoS system built by Alibaba Cloud offers T-level defense capacity. Meanwhile, Alibaba Cloud is also expanding its protection nodes in various regions.

Based on independently developed Alibaba Cloud Security, Alibaba Cloud offers anti-DDoS service to defend against Layer-3 to Layer-7 DDoS attacks such as SYN flood, UDP flood, ACK flood, ICMP flood, DNS Query flood, NTP Reply flood, and HTTP flood attacks. The attacks protected against by Anti-DDoS Basic service are listed in the following figure:



Anti-DDoS Basic builds DDoS attack detection and cleansing systems at the egress of Alibaba Cloud data centers and mainly adopts the bypass deployment architecture. The network topology of Anti-DDoS Basic service is illustrated as follows:



1.3 Features

Alibaba Cloud Security Anti-DDoS Basic service provides the following functions.

Type	Feature	Description
Attack protection	Malformed message filtering	Filters frag flood, smurf, stream flood, and land flood attacks.
Attack protection	Malformed message filtering	Filters malformed IP packets, TCP packets and UDP packets.
Attack protection	DDoS attack protection on transport layer	Filters syn flood, ack flood, udp flood, icmp flood, and rstflood attacks.
Management	Attack evidence collection	Captures abnormal traffic packets automatically.

Type	Feature	Description
Management	Attack event management	Supports management statistics about attack events and attack traffics.

1.4 Benefits

Alibaba Cloud Security Anti-DDoS Basic service provides you the following benefits.

Reliable network protection lines

- Stable access speed under DDoS attacks.
- Sufficient bandwidth guarantees no interference from other users.
- High quality bandwidth guarantees service availability and stability.

Precise protection

- Accurate identification of attacks and provides rapid protection.
- Cleaning equipment based on independent research and development algorithms guarantees a low false positive rate.
- No interaction between single point cleaning and multipoint cleaning.

Maintenance-free

- Eliminates the need to purchase expensive cleaning equipment.
- Enabled by default and set up automatically.
- Intelligent business learning and dynamic protection rules configuration.

Free of charge

- Anti-DDoS Basic is a free service.
- Offers more free protection bandwidth based on your security credibility in Alibaba Cloud.

1.5 Scenarios

Alibaba Cloud Anti-DDoS Basic applies to Internet DDoS attack protection.

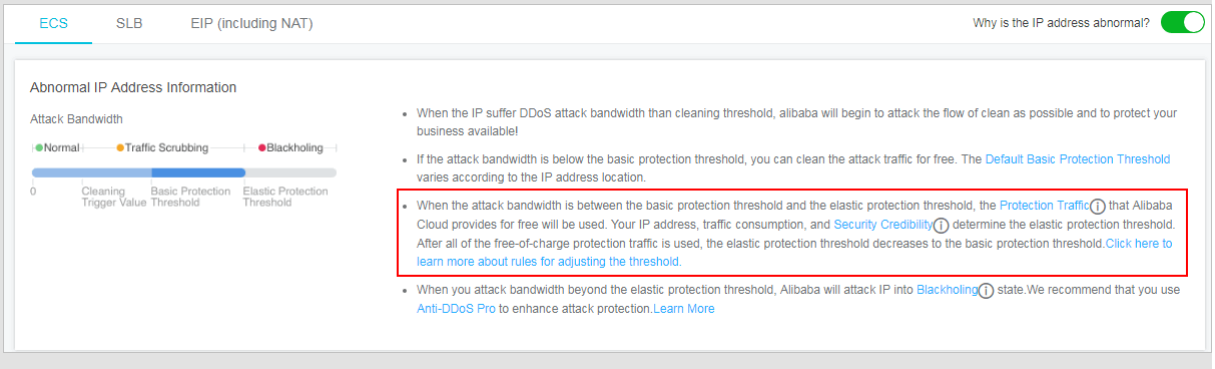
Scope: Free DDoS attack protection for ECS, SLB, EIP, NAT and WAF services on Alibaba Cloud.

Limit: Scenarios that require no more than 5 GB DDoS attack protection.

1.6 Security Credibility

Note:

All Alibaba Cloud users became members of the Security Credibility program by default on July 31, 2018. You can log on to the *Anti-DDoS Basic console* to view the details.



I. Program introduction

Security Credibility is a program that Alibaba Cloud has developed to improve your user experience during security protection and provide higher security capabilities. Alibaba Cloud provides users in this program with flexible anti-DDoS protection capabilities based on the security credibility of the user.

Currently, you can join Security Credibility for free.

II. Program benefits

- A higher black hole threshold. The black hole threshold is adjusted flexibly based on your credit score. For most users, the adjusted black hole threshold is no smaller than the default threshold. This lowers the probability that your servers fall into a black hole.
- Open credibility evaluation criteria. The members of this program can improve their credibility based on the credibility evaluation criteria to obtain more protection capabilities.

III. Security protection mechanism

- The anti-DDoS protection capability of a user is adjusted based on the security credit score of the user. Most users can obtain additional anti-DDoS protection capability for free.

- The security credit score is the basis for calculating the black hole threshold. If the attack traffic volume is below this threshold, Alibaba Cloud protects your ECS and SLB instances against the attacks at zero cost. If your servers fall into black holes frequently, the black hole threshold is lowered to the default value. If the attack traffic volume exceeds the current threshold, your servers fall into a black hole to block all IP addresses.
- Attacks affect the next credibility evaluation.
- The security protection capabilities that you can obtain from the program are provided by a resource pool shared by all members of the program. In standard cases, Alibaba Cloud provides you with security protection capabilities based on your credit score. However, if the members of the program encounter attacks or other malicious events together and the resources in the shared resource pool run out, your security protection capabilities may be reduced.
- For users with frequent black holing, Alibaba Cloud reserves the right to increase the black hole duration and lower the black hole threshold. You can go to the console to view the black hole threshold and duration.
- If the attack traffic volume exceeds the traffic covered by the additional protection capabilities provided by the program, you must purchase Anti-DDoS Pro to obtain higher protection capabilities. Otherwise, services running on your ECS and SLB instances may be interrupted due to DDoS attacks.
- Make sure to keep your security credit score and related information confidential.

IV. Terms of service

1 You understand and acknowledge that you shall not use the security protection capabilities that you obtain as a member of the Security Credibility program to perform any of the following activities:

1.1 Provide either paid or free security protection services to others.

1.2 Illegal activities or activities that do not comply with the service purposes or procedures according to the information published on www.alibabacloud.com or the assessment of Alibaba Cloud.

1.3 Upload, download, or disseminate any of the following information, or help others in such activities:

1.3.1 Political propaganda and/or news information in violation of China's regulation s;

1.3.2 Information related to China's state secrets and/or state security;

1.3.3 Information related to superstition, obscenity, or solicitation to commit a crime;

1.3.4 Information related to illegal Internet publishing activities, such as lottery prizes, gambling games, private servers, and plug-ins;

1.3.5 Information that violates China's national policies, or ethnic or religious policies .

1.3.6 Information that adversely impacts Internet security.

1.3.7 Information about activities that infringe on the legitimate interest of others and/or other activities that disrupt social order, threaten public security, or violate public morals.

1.3.8 Other content in violation of laws, regulations, departmental rules, or China's national policies.

1.4 You shall not modify, translate, edit, lease, sublicense, transmit, or transfer over networks any software or services provided by Alibaba Cloud, or obtain the source code of the software provided by Alibaba Cloud through reverse engineering, decompilation, or other methods;

1.5 You shall not conduct any behavior that undermines or attempts to undermine network security, including but not limited to phishing, hacking, network fraud, suspected involvement in the spreading of viruses/trojans/malicious code to websites or cyberspace, and suspected involvement in attacks on other websites and servers by using virtual servers, such as scanning, sniffing, ARP spoofing, and DDoS;

1.6 You shall not change or attempt to change the system configurations provided by Alibaba Cloud or undermine network security.

1.7 You shall not use the services provided by Alibaba Cloud to conduct any activities that impair the legitimate interests of Alibaba Cloud, Alibaba Cloud affiliated companies or any company or website within the Alibaba Group, including but not limited to Alibaba, Taobao, Alipay, Alimama and Ant Financial (hereinafter collectively referred to as Alibaba Group). The behaviors that impair the legitimate interests of Alibaba Group and websites include but are not limited to violations of any agreement or terms, management norms, trading rules, or other norms published by Alibaba Group, and behaviors that damage or attempt to damage the fair-trade environment or normal trade order of Alibaba Group.</cf>

1.8 You shall not conduct any other activities in violation of laws, regulations, or the terms of Security Credibility.

1.9 You understand that Alibaba Cloud agrees that you can join this program on the premise of your commitment to obey the preceding terms. If you violate any of the preceding terms, Alibaba Cloud reserves the right to stop providing you the services or capabilities related to this program and remove you from this program with prior notice.

2 You understand and agree that Alibaba Cloud has the right to terminate this program at any time based on Alibaba Cloud business plans, the program operations status, or other factors, without being liable to the related consequences. Alibaba Cloud will inform you of the program termination in advance. After the program is terminated, all services or capabilities that you obtain from this program will be disabled.

3 You understand and agree that you have read the security protection mechanism and the terms of Security Credibility and understand the results of joining this program. You have decided to join this program of your own free will, and shall be liable for the corresponding results.

4 Both Alibaba Cloud and you shall keep your decision about whether to join this program confidential, unless the information has become public, or Alibaba Cloud has to reveal the information as otherwise appointed with you, as required by laws and regulations, or as demanded, ordered, or executed by related authorities. You shall keep confidential your security credit score, the corresponding black hole threshold, and related credibility information. If this information is leaked, attackers may launch targeted attacks on your system.

5 Alibaba Cloud may optimize or change the security protection mechanism of this program periodically or at random times. Alibaba Cloud will inform you of the changes in advance, and then provide you with the latest versions of services or provide you with services or capabilities based on the latest mechanism. If you do not agree to use the latest mechanism, you can apply to exit the program and terminate the use of services provided by Alibaba Cloud.

6 You understand and agree that the security protection capabilities that you can obtain from the program are provided by a resource pool shared by all members of the program. In standard cases, Alibaba Cloud provides you with security protection

capabilities based on your credit score. However, if the members of the program encounter attacks or other malicious events together and the resources in the shared resource pool run out, your security protection capabilities may be reduced. The adjusted capabilities will not be lower than the default protection capabilities.

7 Disclaimers and limitation of liability: The security protection that Alibaba Cloud provides for you, a member of the program, is a technical measure. You understand and agree that this technical measure taken by Alibaba Cloud based on the program is regarded as flawless security protection. If Alibaba Cloud does not deliberately undermine your system security or make mistakes in the program, Alibaba Cloud shall not be liable for the protection results.

8 If your websites encounter viruses, intrusions, attacks (including but not limited to DDoS attacks), or other activities that threaten the network security, and these activities are not covered by this program, the websites or website services may become unavailable to users for a certain period of time. This situation will be hereinafter referred to as service unavailability. You understand and agree that the preceding service unavailability does not indicate breach of the contract by Alibaba Cloud. If the service unavailability undermines the interests of Alibaba Cloud or adversely impacts the communications between Alibaba Cloud and the Internet, between Alibaba Cloud and specific networks or servers, and between Alibaba Cloud servers, Alibaba Cloud has the right to pause or terminate providing security protection services to you based on the Security Credibility program mechanism, without being liable to the results. Alibaba Cloud will inform you of the suspension or termination of protection beforehand.

9 The related rules, norms, and procedures that have been published on www.aliyun .com constitute a part of the terms of services herein. Alibaba Cloud has the right to modify these rules, norms, or procedures at any time, and require you to comply with the latest rules, norms, and procedures.

2 Quick Start

2.1 Get started with Anti-DDoS Basic

Alibaba Cloud Anti-DDoS Basic is enabled and initialized by default with the creation of ECS, Server Load Balance, or EIP instances. This service provides a 5 Gbps mitigation capacity free of charge.

Context

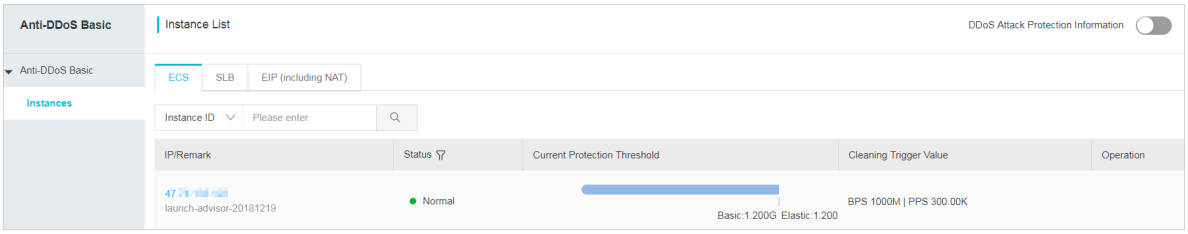
In Alibaba Cloud Security Anti-DDoS Basic console, you can take the following operations:

- Set Cleaning Trigger Value. When the IP suffers DDoS attack and the attack bandwidth exceeds the cleaning threshold, Alibaba starts to scrub the flow automatically to guarantee your business availability.
- Check Protection Threshold. The protection threshold consists of Basic protection threshold and Elastic protection threshold.
  - If the attack bandwidth is below the basic protection threshold, the attack traffic can be scrubbed for free. The *Default Basic Protection Threshold* varies according to the regions of your IP addresses.
  - When the attack bandwidth is between the basic protection threshold and the elastic protection threshold, the available protection traffic that Alibaba Cloud provides for free is consumed. The elastic protection threshold is determined by your IP address, traffic consumption, and security credibility. After all of the free-of-charge protection traffic is consumed, the protection threshold decreases to the basic protection threshold. *Learn more*.

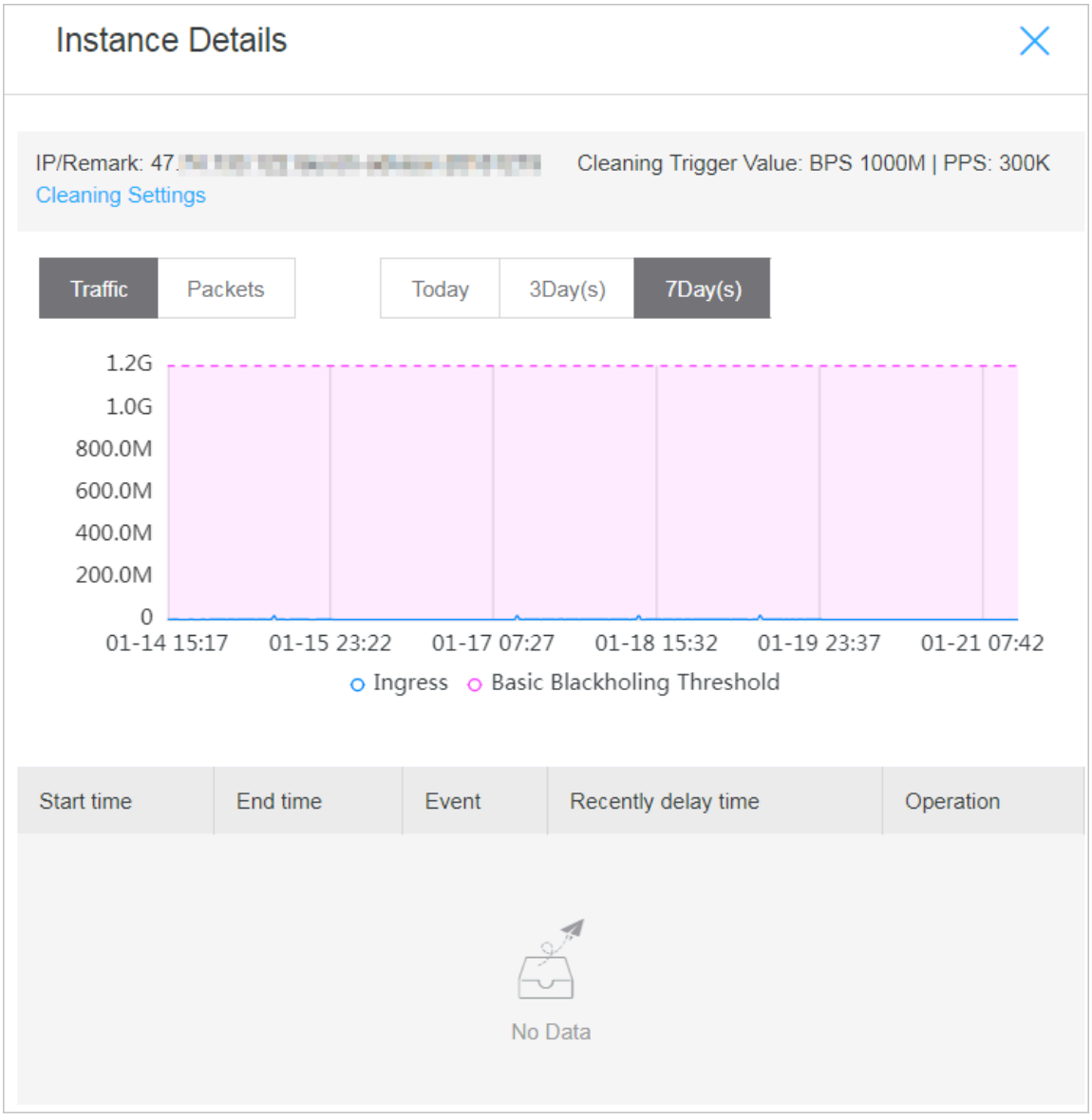
Procedure

1. Log on to the *Anti-DDoS Basic console*.
2. Select the region.
3. On the Anti-DDoS Basic > Instances page, select the ECS, SLB, or EIP(including NAT) instance type tab.

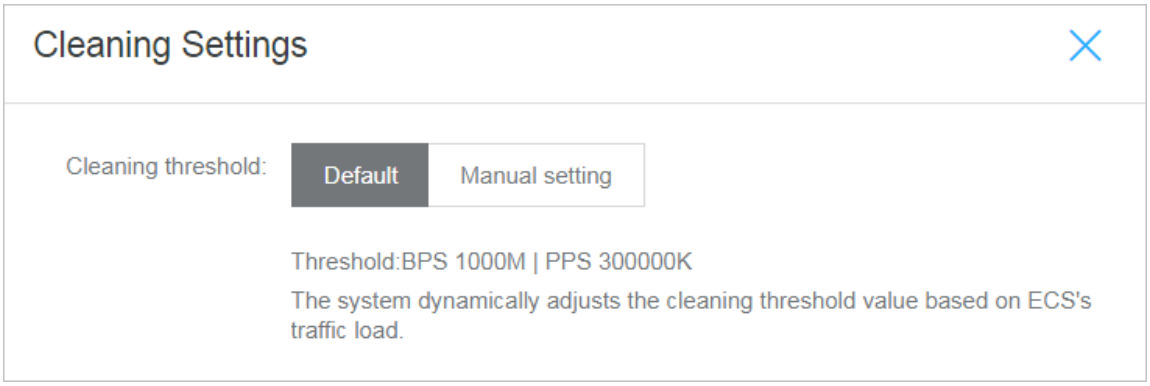
4. In the instances list, select the instance to be operated.



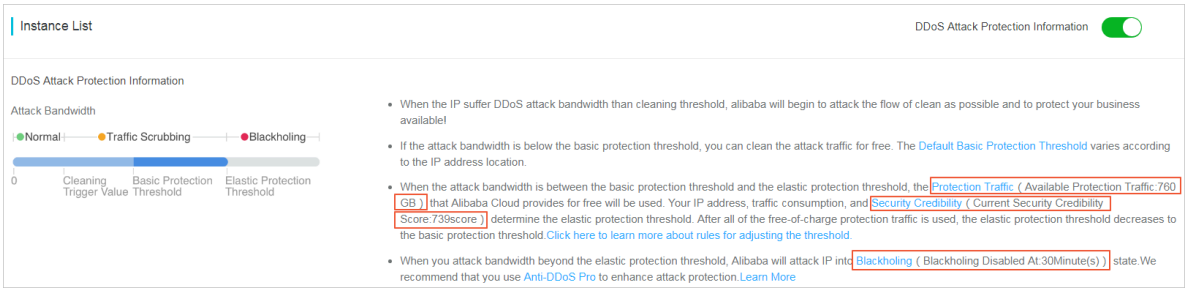
- Click the instance IP to view traffic and packet trends over the last 7 days, and DDoS attack events.



- In the Instance Details dialog box, click Cleaning Settings. Now, you can choose to manually set the cleaning threshold or use the system default cleaning threshold.



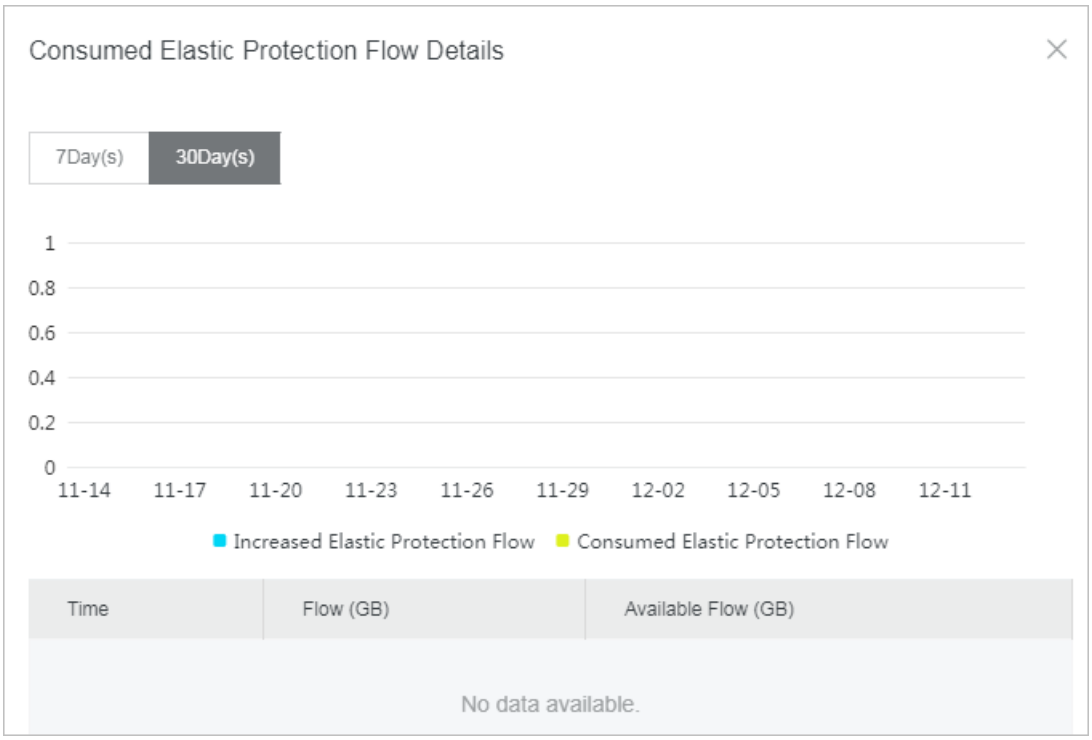
5. View the DDoS attack protection information. Turn on the DDoS Attack Protection Information switch on the upper-right corner, to view the following information:



- View the currently available protection traffic.

Note:

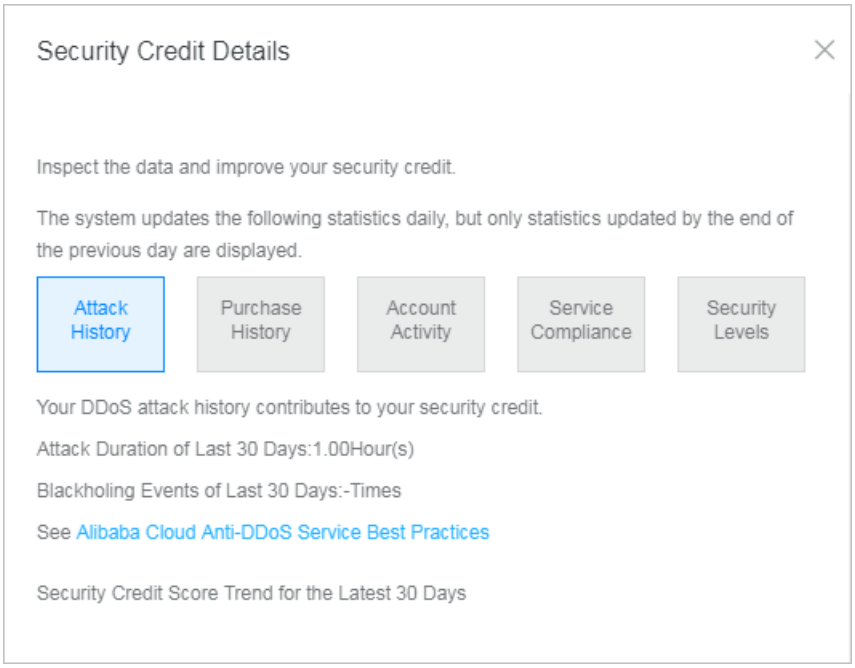
Click Protection Traffic to view the elastic protection traffic consumption details over the last 30 days.



- View the current security credibility score.

Note:

Click Security Credibility to see the security score details.



With a higher credibility score, you can get more extra DDoS mitigation capacity . We recommend that you learn the credibility score policy and maintain a better credibility score.

- View the current blackhole duration time.

Note:
Click Blackholing to view detailed information about the Alibaba Cloud blackhole strategy.

3 User Guide

3.1 Set the cleaning trigger value

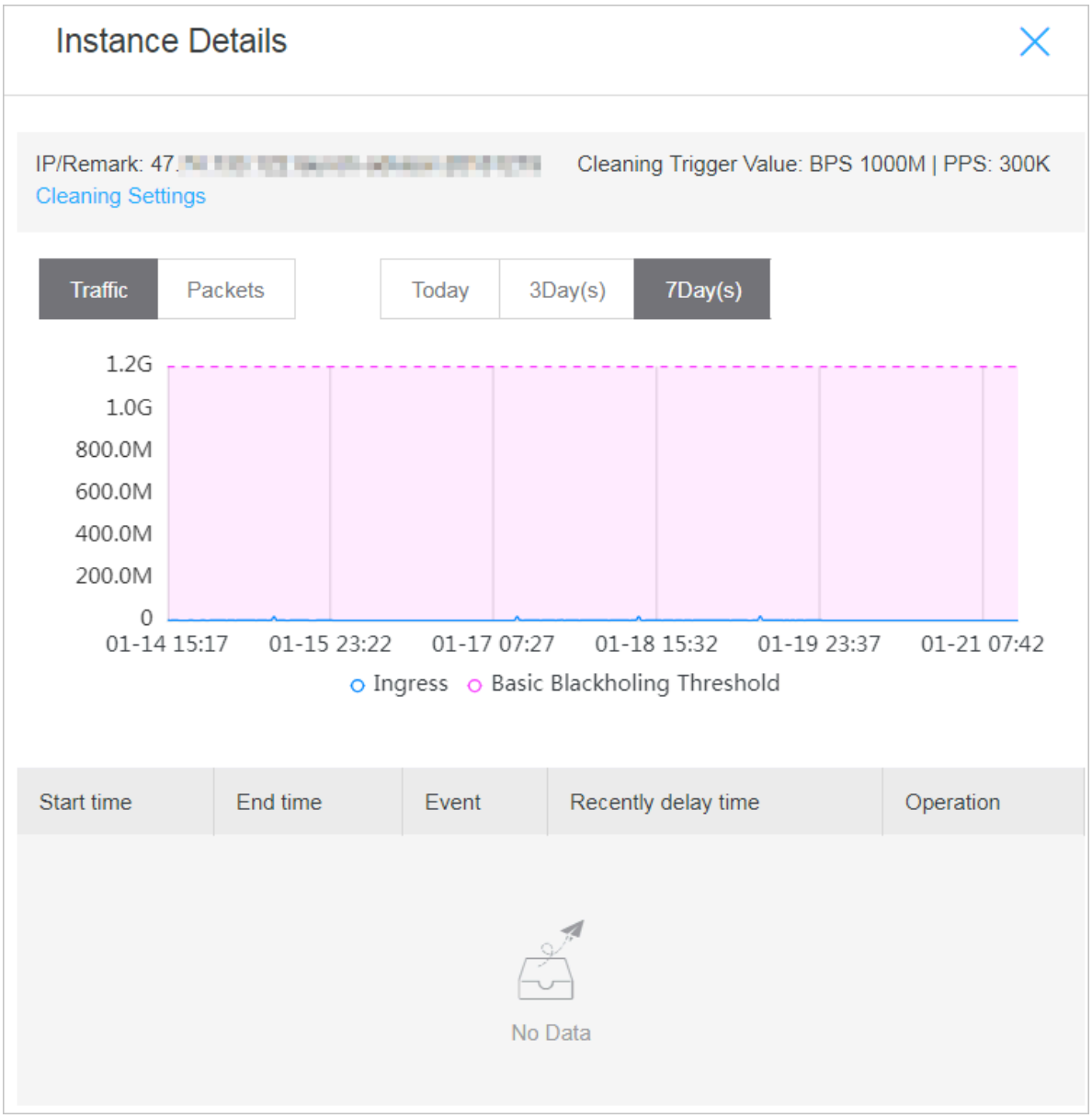
Alibaba Cloud Security Anti-DDoS Basic mitigates SYN flood, UDP flood, ACK flood, ICMP flood, and DNS flood DDoS attacks. To set the cleaning trigger value in Anti-DDoS Basic, follow these steps:

Procedure

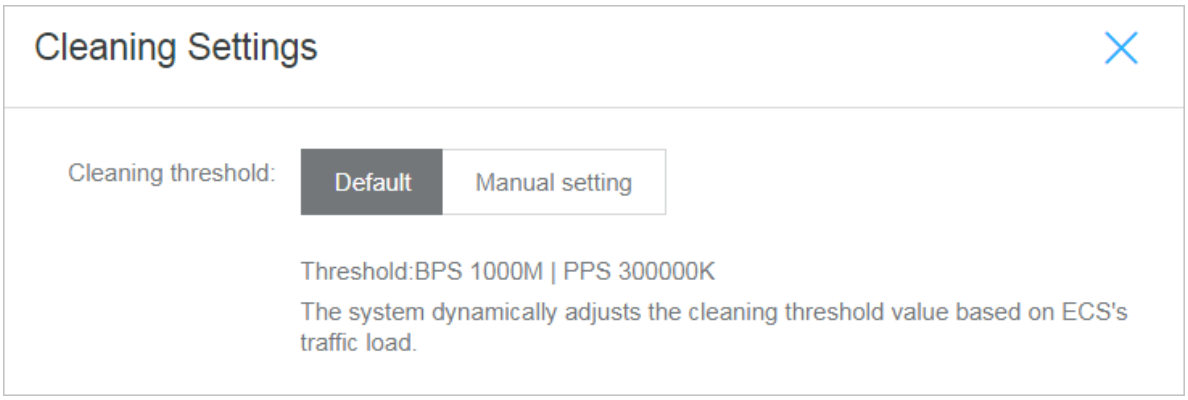
1. Log on to the *Anti-DDoS Basic console*.
2. Select the region.
3. On the Anti-DDoS Basic > Instances page, select the ECS, SLB, or EIP(including NAT) instance type tab.
4. Locate to the instance to be operated.

> **Note:**
> You can search for target instances by Instance ID, Instance Name, or Instance IP.

5. **Click the instance IP to open the Instance Details dialog box, and click Cleaning Settings.**



6. In the Cleaning Settings dialog box, select the cleaning threshold mode: Default or Manual setting.



- Default: Anti-DDoS Basic service dynamically adjusts the cleaning threshold value based on the traffic load status.
- Manual setting: You can select the traffic and packet threshold values manually. When traffic exceeds this threshold value, Anti-DDoS Basic traffic cleaning is triggered. (We recommend that you adjust the cleaning threshold value appropriately when your website has some promotion activities.)

> Note:
> The cleaning threshold value can be a bit bigger than the actual access traffic value. If the threshold value is too big, it is not effective on DDoS attacks defense; if the threshold value is too small, the normal access can be affected due to the unexpected traffic cleaning.
>
> When traffic to an IP reaches the cleaning threshold value, you can view the cleaning information in the Alibaba Cloud Security Anti-DDoS Basic console. If normal access requests are affected, you can cancel the traffic cleaning and adjust the cleaning threshold value appropriately.

3.2 Cancel traffic scrubbing

Alibaba Cloud servers enjoy a free DDoS mitigation capacity by default. When they are targeted by traffic attacks, the traffic scrubbing service is activated automatically. The traffic scrubbing service consists of three units: detecting center, cleaning center, and centralized management center.

Context

The detecting center monitors data traffic flowing into the cloud server, and identifies abnormal traffic in a timely manner, such as DDoS attack. When an abnormity is detected, the management center guides the scrubbing center to clean suspicious traffic based on the traffic diversion policy. Malicious traffic is removed, while legitimate traffic is returned to the original instance. This ensures only legitimate traffic can be forwarded to the target system.

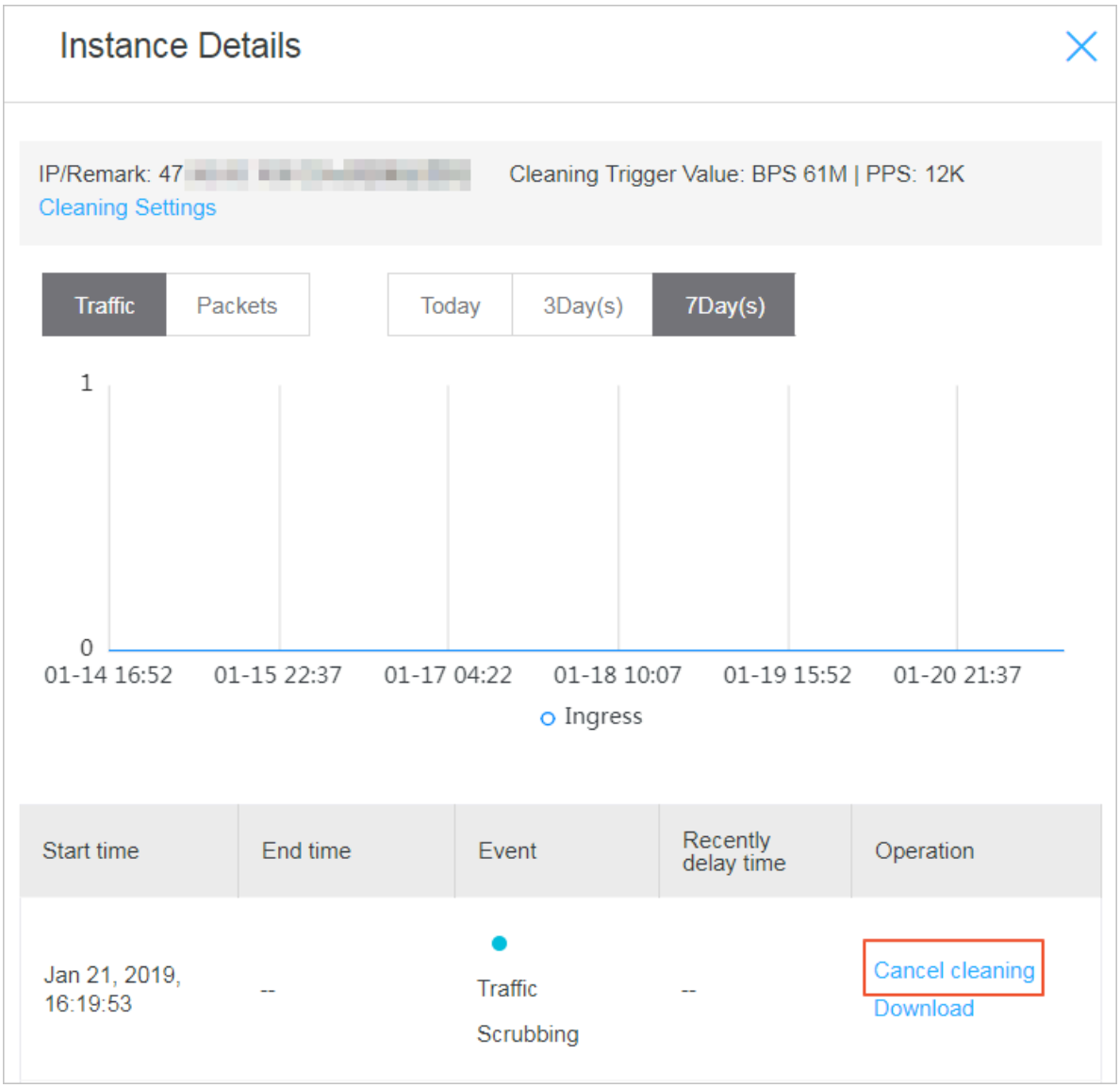
You can manually cancel traffic scrubbing for instance IP in the abnormal status.

 Note:
One account can manually disable traffic scrubbing for three times in one day.

Procedure

1. Log on to the *Anti-DDoS Basic console*.
2. Select the region.

3. Select the instance type tab, locate the instance IP that is in the scrubbing status, and then click the instance IP to open the Instance Details dialog box.



4. In the DDoS event list, select the event that is in the Scrubbing status, and click Cancel Cleaning.

Note:
Click Download to download the captured traffic data file as evidence for you to report this event to the network supervision department.

3.3 Check blackhole duration time

When your server suffers massive DDoS attacks and the blackhole mechanism is triggered, the public IP of the server is banned for a certain time period based on the security credibility of the server.

Context

The default blackhole duration time is 2.5 hours and the IP cannot be unbanned during this period. The actual blackhole duration time depends on the attack situation and may range from 30 minutes to 24 hours. The duration time of the blackhole status is mainly influenced by the following factors:

- Whether the attack persists. The blackhole duration time keeps extending, if the attack continues. The blackhole duration time is re-calculated from the time of extension.
- Whether the attack is frequent. If a user is attacked for the first time, the blackhole duration time will be automatically shortened. On the contrary, the blackhole duration time for a user under frequent attacks will be automatically extended as the user is more likely to be attacked again.

You can log on to the Anti-DDoS Basic console to view the specific blackhole threshold and duration time.

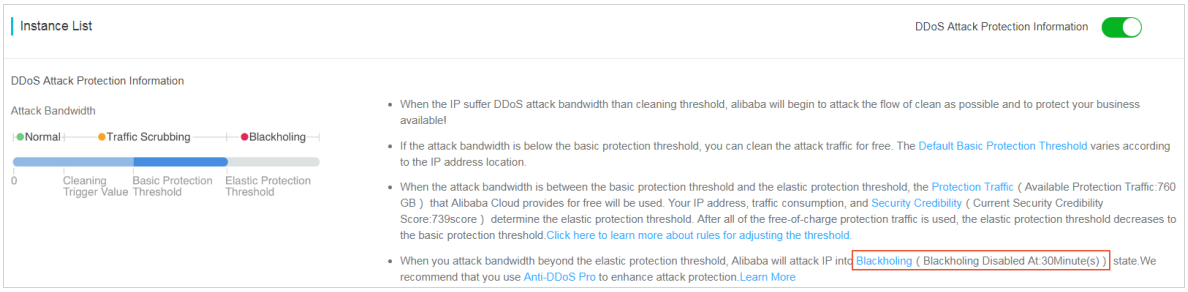
 Note:

- For users suffering overly frequent blackholes, Alibaba Cloud reserves the right to extend the blackhole duration time and reduce the blackhole threshold.
- Blackhole is a service provided by Internet service providers (ISPs) and ISPs have a clear time limit to the blackhole deactivation. Thus, in general, the blackhole duration time is no less than 30 minutes, and the specific blackhole duration time of your account is automatically adjusted according to the security credibility of your account.

Procedure

1. Log on to the *Anti-DDoS Basic console*.
2. On the Anti-DDoS Basic > Instance page, turn on the DDoS Attack Protection Information switch in the upper right corner.

3. View the current blackhole duration time.

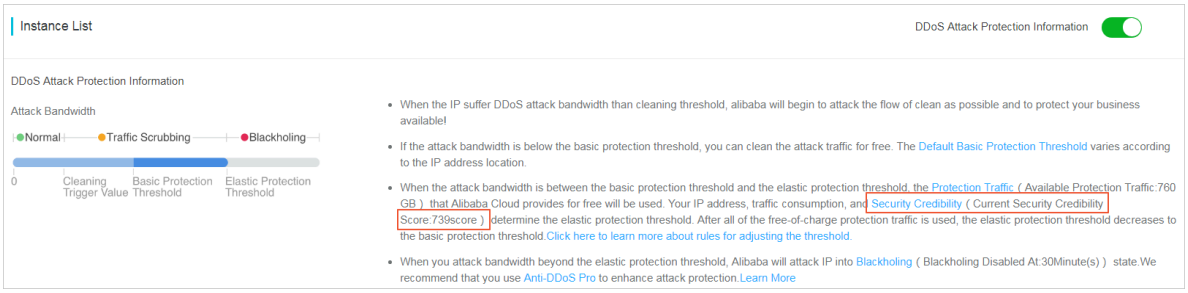


3.4 Check security credit details

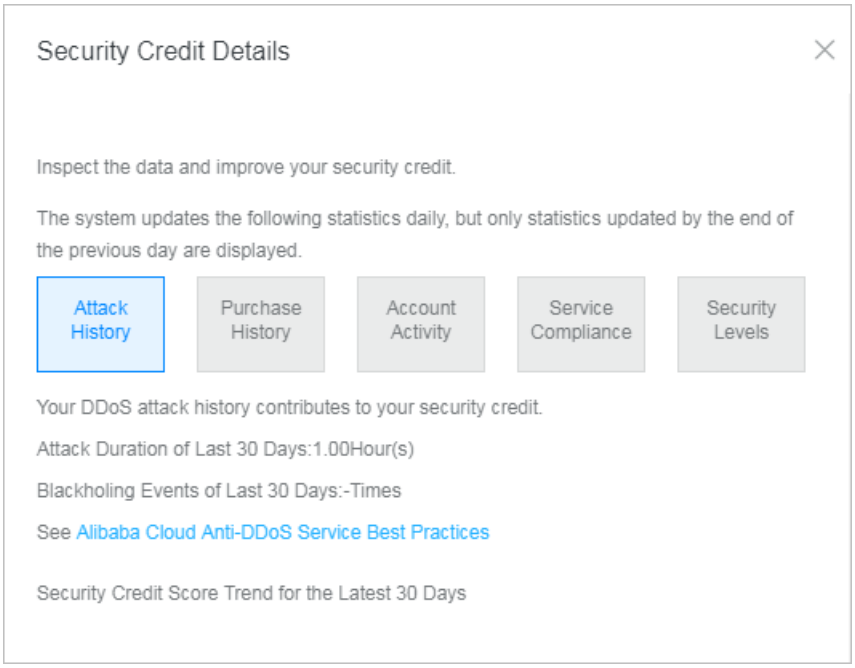
To check your current security credibility score and details in the Alibaba Cloud Anti-DDoS Basic console, follow these steps:

Procedure

1. Log on to the *Alibaba Cloud Anti-DDoS Basic console*.
2. On the Anti-DDoS Basic > Instance page, turn on the DDoS Attack Protection Information switch in the upper right corner.
3. View the current security credibility score.



4. Click Security Credibility to check the security score details.



We recommend that you maintain your security credibility score based on the security credit rating criteria to obtain more free elastic DDoS protection capacity.

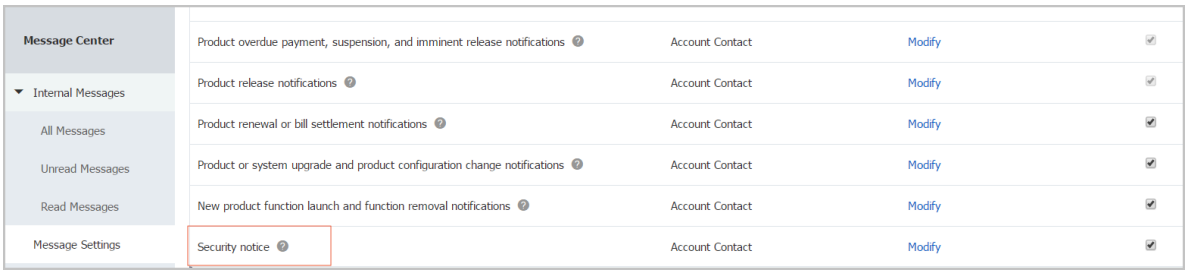
3.5 Configure DDoS Protection notification settings

Alibaba Cloud provides DDoS Protection notifications. When a server under your account suffers DDoS attacks, triggers traffic scrubbing or the blackhole mechanism, the system sends notifications by specified methods to specified receivers.

Manage message recipients

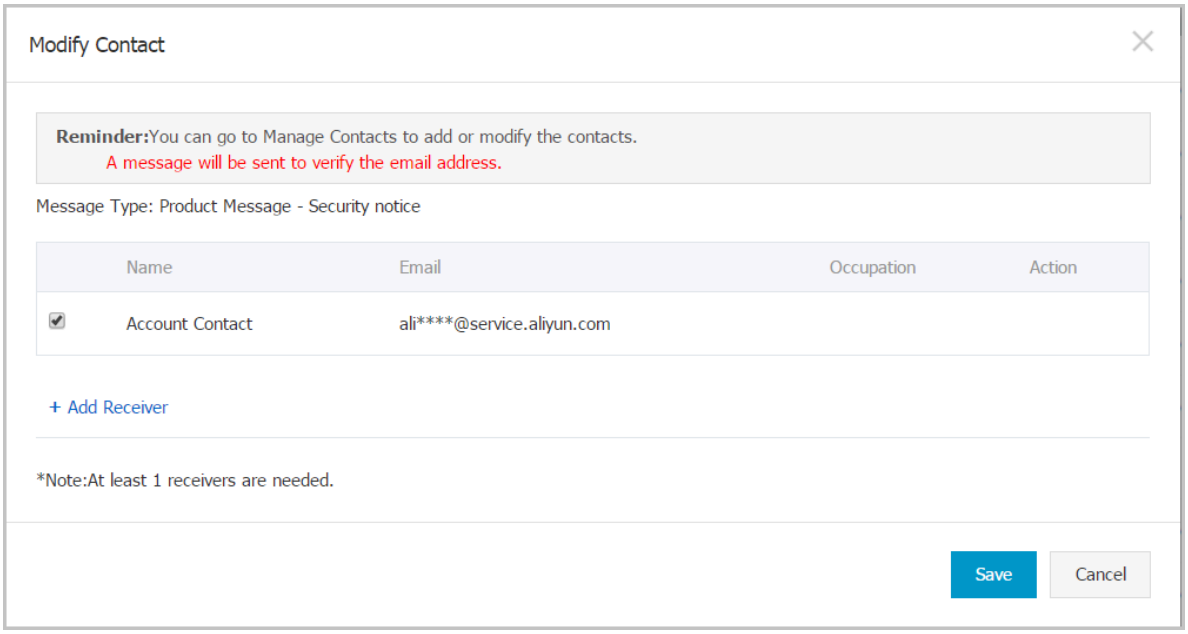
To configure the notification methods (Internal Messages, Email, and Text message) and recipients for Security Notice, follow these steps:

1. Log on to the *Message Center console*.
2. Click Message Settings and locate to Security Notice.



3. Click Modify and select the message recipient.

> **Note:**
> To add a new message recipient, click Add Receiver.



3.6 View details of DDoS events

When the public IP of an ECS or SLB instance is under a massive DDoS attack, and its traffic exceeds the corresponding blackhole threshold, the IP is then black-holed, which leads to server unavailability.

Context

> **Note:**
> The blackhole threshold values of instances may vary across regions. For more information, see *Alibaba Cloud blackhole policies*.

In this situation, you can view details of the DDoS event and know the reason as to why the IP was black-holed in the Alibaba Cloud Anti-DDoS Basic console.

Procedure

1. Log on to the *Anti-DDoS Basic console*.
2. Select the region.
3. On the Anti-DDoS Basic > Instances page, select the ECS, SLB, or EIP(including NAT) instance type tab.

4. In the instance list, locate the target instance, whose Status is Black hole activated.

   Note:
   You can search for target instances by Instance ID, Instance Name, or Instance IP.

5. Click the instance IP to view the time that the instance was black-holed and the traffic that it suffered during the attack.

3.7 Connect to a server whose IP address is thrown into the black hole

If your server suffers from a heavy traffic attack and its IP address is thrown into the black hole, then all external traffic to the server is discarded. However, you can still access this server from Alibaba Cloud services within the same region as that of this server.

Note:
During the black hole period, external access requests sent to this server are blocked.

You can use an Alibaba Cloud ECS instance to connect to your server, even when its IP address is thrown into the black hole.

1. Connect to an Alibaba Cloud ECS instance that can be normally accessed and is within the same region as this server.

   Note:
   This ECS instance must be connectable to the server under black hole status. They must belong to the same VPC environment, and the connection is not blocked by any security group access control rules.

2. Use a tool or command line to connect from the ECS instance to the server under black hole status.

After successfully connecting to the server from the ECS instance, you can transfer files from the server to the ECS instance and modify the configuration files on this server.

3.8 Anti-DDoS Basic black hole threshold

Anti-DDoS Basic may actively trigger a black hole to lock network access to the instance if the data transfer rate exceeds the default black hole threshold (unit: bps). Once in a black hole, the instance under attack cannot be unblocked. See the following table for the default threshold settings for different regions.

Note:

- The default threshold settings apply to ECS, SLB, and EIP.
- The actual black hole threshold of your ECS, SLB, or EIP instance also indicates the type and network bandwidth of the instance, and is subject to the threshold in the Alibaba Cloud console. For more information, see *How to check the black hole threshold of your instance?*

Region	Solo-Core CPU ECS	Duo-Core CPU ECS	Quad-Core or higher CPU ECS	SLB and EIP
East China 1	500 M	1 G	5 G	5 G
East China 2	500 M	1 G	2 G	2 G
North China 1	500 M	1 G	5 G	5 G
North China 2	500 M	1 G	2 G	2 G
North China 3	500 M	1 G	2 G	2 G
South China 1	500 M	1 G	2 G	2 G
Hong Kong	500 M	500 M	500 M	500 M
US East 1	500 M	1 G	2 G	2 G
US West 1	500 M	500 M	500 M	500 M
Tokyo	500 M	500 M	500 M	500 M
Singapore	500 M	500 M	500 M	500 M
Sydney	500 M	500 M	500 M	500 M
Kuala Lumpur	500 M	500 M	500 M	500 M
Mumbai	500 M	1 G	1 G	1 G
Frankfurt	500 M	500 M	500 M	500 M
Dubai	500 M	500 M	500 M	500 M

The black hole duration is the amount of time the triggered black hole lasts, 2.5 hours by default. The actual black hole duration varies from 30 minutes to 24 hours, depending on attack intensity. Additionally, the following factors are considered:

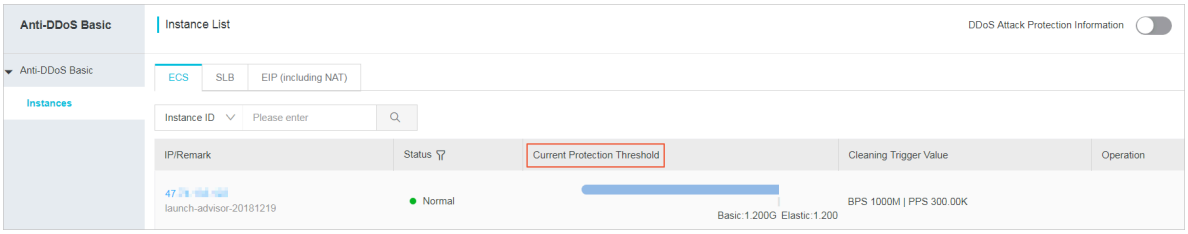
- Attack Continuity. The black hole duration is extended, if the attack continues.
- Attack Frequency. The black hole duration is shortened automatically when the ECS instance is attacked for the first time, but can be prolonged accordingly, if under frequent attacks.

> Note:
> If an ECS instance triggers too many black holes, Alibaba Cloud Security reserves the right to extend the black hole duration and lower its threshold. You can check the actual duration and threshold information in Alibaba Cloud Anti-DDoS Basic console.

How to check the black hole threshold of your instance?

To check the actual black hole threshold of your ECS, SLB, or EIP instance, follow these steps:

1. Log on to *Alibaba Cloud Anti-DDoS Basic console*.
2. Select the region.
3. On the Anti-DDoS Basic > Instances page, select the instance type tab: ECS, SLB, or EIP (including NAT).
4. Locate the instance, and check the actual black hole threshold of the instance in the Current Protection Threshold column.



3.9 Anti-DDoS Basic black hole threshold for web hosting

The default black hole threshold for web hosting is as follows (unit: bps).

> Note:
> For shared web hosting, the specific black hole threshold cannot be defined as multiple web hosting may share one IP address. Additionally, the actual threshold

must be lower than the default threshold value. When a shared web hosting server triggers the black hole, all the other servers that share IP address with this server becomes inaccessible. We strongly recommend that you buy ECS instance if you give utmost importance to the security.

Region	Web hosting threshold
China (Hangzhou)	5 G
China (Qingdao)	5 G
China (Shenzhen)	2 G
China (Beijing)	2 G
China (Shanghai)	2 G
Hong kong	500 M
US West	500 M
Singapore	500 M

The black hole duration is the amount of time the triggered back hole lasts, 2.5 hours by default. The actual black hole duration varies from 30 minutes to 24 hours, depending on attack intensity. Additionally, the following factors are considered:

- Attack Continuity. The black hole duration is extended, if the attack continues.
- Attack Frequency. The black hole duration is shortened automatically when the ECS instance is attacked for the first time, but can be prolonged accordingly, if under frequent attacks.

Note:
If an ECS instance triggers too many black holes, Alibaba Cloud Security reserves the right to extend the black hole duration and lower its threshold. You can check the actual duration and threshold information in Alibaba Cloud Anti-DDoS Basic console.

To get more powerful DDoS mitigation capacities, see *Alibaba Cloud Anti-DDoS Pro*.

3.10 Cloud service specification and cleaning trigger value

Alibaba Cloud provides basic DDoS protection capabilities to help mitigate DDoS attacks on cloud products open to the public network. When the network traffic of the public IP address of the cloud product exceeds the specified cleaning threshold, the

traffic to this IP is automatically scrubbed to protect your normal service from DDoS attacks.

For more information about traffic scrubbing, see *Traffic scrubbing, black hole, and threshold value*.

The maximum cleaning threshold supported for each Alibaba cloud service depends on the specifications of the instance. When you create or change an ECS or SLB instance, the system automatically adjusts the maximum cleaning threshold based on the current instance specification.

 Note:
The actual black hole threshold for each instance IP is calculated based on factors such as maximum cleaning threshold and security credibility score.

- For the specific calculation method of the maximum cleaning threshold of ECS instances, see *Basic DDoS Protection for ECS*.
- For the specific calculation method of the maximum cleaning threshold of SLB instances, see *Basic DDoS Protection for SLB*.

3.11 ECS stress test guide

Alibaba Cloud Security Anti-DDoS Basic provides defense against DDoS attacks. By default, when the public traffic exceeds 180 MB per second, 30,000 messages per second, or 480 HTTP requests per second on an ECS server, Anti-DDoS Basic automatially starts traffic scrubbing to protect the ECS server.

Therefore, before you start the stress testing on an ECS server, you have to adjust the cleaning trigger value to an appropriate value in the *Alibaba Cloud Anti-DDoS Basic console*. For more information, view *Set the cleaning trigger value*.

 Note:
We recommend that you do not set the increasing pace per minute to exceed 100 times during the stress test.

3.12 Avoid Anti-DDoS Basic false positives by using a whitelist

In some situations, you may find that some normal traffic is blocked by Anti-DDoS Basic (such as normal website service access).

Context

For example, in an NAT network environment (hosts in the LAN share an Internet IP address for Internet access), some hosts in the LAN infected by a virus or suffering intrusion may attack an ECS server. In this situation, once Alibaba Cloud Security acknowledges the attacks, it blocks the shared Internet IP address of the NAT, resulting to an access failure.

However, you can set a whitelist in the Alibaba Cloud Security Control platform to avoid such false positives.

Procedure

1. Log on to the *Alibaba Cloud Security Control console*.

   Note:
   You can also hover your mouse on the account icon in the upper-right corner of Alibaba Cloud console and click Security Control to open it.

2. Go to Whitelist > Access Whitelist, click Add.
3. Select the Object Type, and enter the Source IP (not the IP belongs to your current Alibaba Cloud account). Then, select object IPs of your current account from the list on the left side (for example, select a public IP of your ECS instance), click the right arrow button to add the selected IPs to the list on the right side, and click OK. Thus, the specified source IP is added to the access whitelist of the selected object IPs, and all accesses from the source IP to the object IPs are not restricted by Alibaba Cloud Security Control platform.

   Note:
   To allow accesses from all IPs to the object IP, enter 0.0.0.0 in the Source IP field.

   After setting the whitelist, all accesses to the target host asset from the source IP in the access whitelist are not restricted by any Alibaba Cloud security controls, even if the access may be risky. Therefore, set the access whitelist carefully.

   Note:

After the source IP is added to the access whitelist, it takes effect within 10 minutes.

4 FAQ

4.1 Apply for adding IP addresses to the global whitelist of Alibaba Cloud Security

Alibaba Cloud provides a secured cloud environment, where suspicious actions are monitored and blocked in real time. In cases where you use a third party CDN or security vendor’ s product to forward requests or perform security scan, Alibaba Cloud Security may regard these behaviors as suspicious. Consequently, access exceptions may result from attack behaviors that contain source IP address in the forwarded requests or unpermitted operations from security scan.

Considering the necessity of such products, Alibaba Cloud allows CDN and security vendors (applicant) to apply for permissions to add the IP addresses of their products to the global whitelist of Alibaba Cloud Security basic protection. The relevant procedure is as follows.

 Note:
If you only want to configure a whitelist for all of your ECS instances, see *Configure an access whitelist in Security Control*.

To make an application, the applicant must write an official letter that contains the following information:

- A list of the IP addresses to be added to the whitelist. In case of numerous IP addresses, an official link to these IP addresses can be provided and sent as an email attachment.
- Usage descriptions of these IP addresses.
- Commitment of adherence to relevant laws, regulations, and Alibaba Cloud’ s relevant regulations. The applicant must commit to not mounting any type of attack against Alibaba Cloud’ s users. If the added IP addresses are deemed as security threats to Alibaba Cloud’ s users or are allegedly used to commit law violations and patent infringements, the applicant is fully liable for the resulting impact. The applicant stands liable to compensate Alibaba Cloud for any losses.
- Contact information (telephone number is recommended).
- The applicant’ s corporate seal.

The applicant, on behalf of the vendor’s company, must send the electronic copy of the company’s business license and the official letter through email to the following addresses:

- To: dachao.xdc@alibaba-inc.com
- Cc: yemin.ym@alibaba-inc.com

Authorization

Upon receiving an application, Alibaba Cloud sends an initial, non-automatic reply to the applicant within two working days for review purposes. Alibaba Cloud has the right to request the applicant to clarify any doubts in regard to the application materials during the application review process. The review may take several working days. When the review is completed, Alibaba Cloud notifies the applicant of the result.

The applicant accepts that Alibaba Cloud can clean the whitelist periodically in accordance with the specified policy. The applicant is required to notify Alibaba Cloud of any adjustments or changes to the IP addresses of relevant products. If Alibaba Cloud determines that the added IP addresses cause security threats to Alibaba Cloud users, Alibaba Cloud will remove these IP addresses permanently and reserves the right to hold the applicant legally accountable.

4.2 Anti-DDoS Basic FAQ

Currently, every ECS instance has Anti-DDoS Basic enabled by default. When the web traffic of an ECS instance exceeds the specified DDoS threshold, the Anti-DDoS cleansing device starts to clean the traffic.

- *What is the role of Anti-DDoS Basic port whitelist?*
- *Does Anti-DDoS Basic defend against SYN flood attacks?*
- *Can I select a time period for viewing the Anti-DDoS protection results?*
- *Why did not Alibaba Cloud Security Anti-DDoS Basic defend against the 20 MB attack that my ECS server suffered?*
- *What is the AliVulfix process on the ECS server?*
- *Why can not a black hole be canceled immediately?*

What is the role of Anti-DDoS Basic port whitelist?

Anti-DDoS Basic helps you detect ports in service. If you authorize to activate a port , you can add the port to the port whitelist so that Anti-DDoS Basic service does not issue alarms for this port.

Does Anti-DDoS Basic defend against SYN flood attacks?

Yes, Anti-DDoS Basic can defend against SYN flood attacks.

Can I select a time period for viewing the Anti-DDoS protection results?

Yes. Alibaba Cloud Security Anti-DDoS Basic console supports queries of DDoS attack events in the last 24 hours.

Why did not Alibaba Cloud Security Anti-DDoS Basic defend against the 20 MB attack that my ECS server suffered?

Alibaba Cloud Security Anti-DDoS Basic is a public anti-DDoS service. It won’t block low-traffic attacks (lower than 100 MB). We recommend that you optimize your server performance or install Cloud Lock or other host firewalls to handle the attacks of the traffic lower than 100 MB.

What is the AliVulfix process on the ECS server?

The AliVulfix process is a program in Alibaba Cloud Security for detecting vulnerabilities on ECS.

Why can not a black hole be canceled immediately?

Black holes last for 30 minutes to 24 hours for a vast majority of users. If a user is under frequent attacks, Alibaba Cloud may impose penalties by increasing black hole frequency.

Black hole is a service that Alibaba Cloud purchases from operators who have explicit restrictions on black hole removal time. That is why black hole cannot typically be canceled immediately.