

Alibaba Cloud

Global Acceleration Product Introduction

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Document conventions









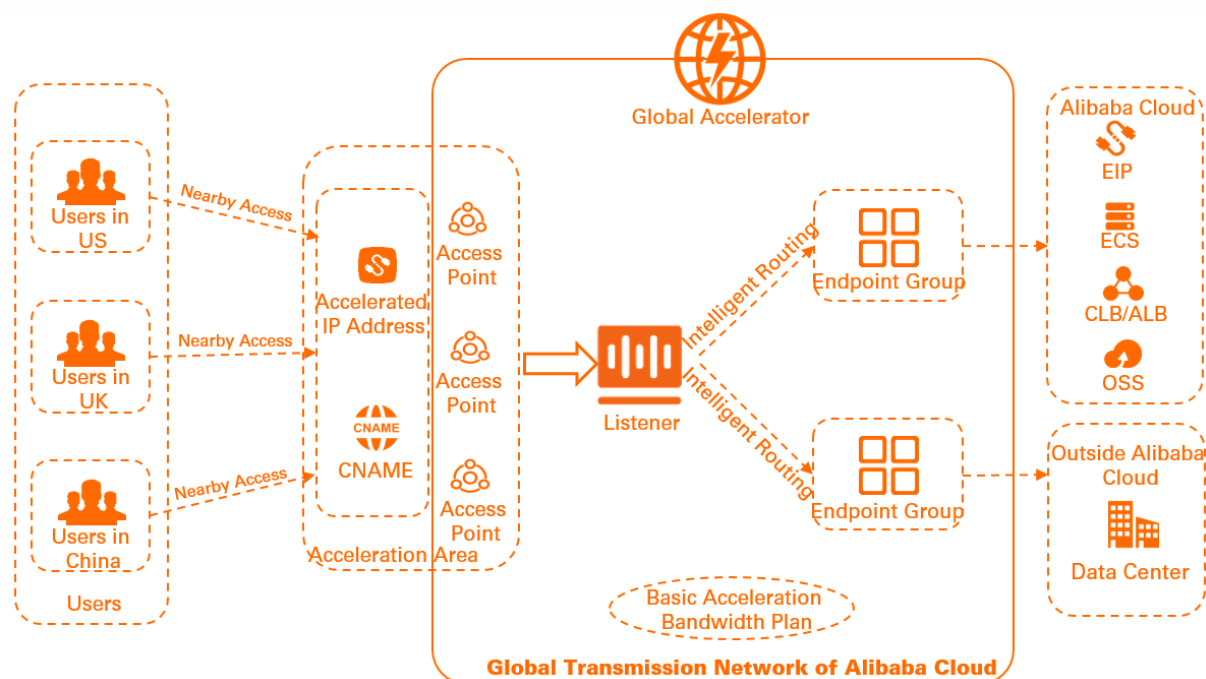
| Style | Description | Example |
|--|---|---|
|  Danger | A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results. |  Danger: Resetting will result in the loss of user configuration data. |
|  Warning | A warning notice indicates 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 restart an instance. |
|  Notice | A caution notice indicates warning information, supplementary instructions, and other content that the user must understand. |  Notice: If the weight is set to 0, the server no longer receives new requests. |
|  Note | A note indicates supplemental instructions, best practices, tips, and other content. |  Note: You can use Ctrl + A to select all files. |
| > | Closing angle brackets are used to indicate a multi-level menu cascade. | Click Settings> Network> Set network type . |
| Bold | Bold formatting is used for buttons, menus, page names, and other UI elements. | Click OK . |
| 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. What is Global Accelerator?



Global Accelerator (GA) uses stable Border Gateway Protocol (BGP) lines and the congestion-free global network of Alibaba Cloud to accelerate Internet-facing applications. GA can reduce network latency, network jitters, and packet loss when your business system is deployed across regions for global users. Users can access your business system by connecting to the nearest access points worldwide. GA ensures the high availability and high performance of web applications.





GA provides different types of accelerated IP addresses based on the access mode required by your business. The following types of accelerated IP addresses are supported: Elastic IP Address (EIP) and Anycast EIP. Clients can connect to the nearest access point of the Alibaba Cloud global transmission network by sending requests to the accelerated IP address. GA then automatically selects routes to distribute client requests to the optimal endpoints. This helps avoid network congestion and reduce network latency. You can specify Elastic Compute Service (ECS) instances, Classic Load Balancer (CLB) instances, Application Load Balancer (ALB) instances, Object Storage Service (OSS) buckets, Alibaba Cloud public IP addresses, custom IP addresses of origin servers, or custom domain names of origin servers as the endpoints of GA.

Components

| Component | Description |
|--------------------------|--|
| Acceleration area | The area where you want to accelerate content delivery. The following acceleration areas are supported: China North, China South, China East, China Southwest, Asia Pacific, Europe, North America, South America, and Middle East. You can also specify regions in each acceleration area. For more information about areas and regions, see Overview . |

| Component | Description |
|-------------------------------|--|
| Accelerated IP address | <p>Clients can connect to the nearest access point of the Alibaba Cloud global transmission network by sending requests to the accelerated IP address. GA provides the following types of accelerated IP addresses:</p> <ul style="list-style-type: none"> • EIP: If you select EIP, the custom access mode is used. You can select an access point based on your business requirements. Each access point provides a separate EIP. • Anycast EIP: If you select Anycast EIP, the automatic access mode is used. You do not need to specify an acceleration area. GA allocates an Anycast EIP to multiple regions across the globe. <div>  Note </div> <p>For more information, see Accelerated IP address.</p> |
| Access point | <p>An access point serves as an ingress through which network traffic is routed to Alibaba Cloud. Each access point is a point of presence (PoP) node or a region of Alibaba Cloud.</p> <p>Access points that are supported by Anycast EIPs are used to accelerate content delivery in regions outside the Chinese mainland. For more information, see Access point locations.</p> <div>  Note Access points that are supported by Anycast EIPs are only for reference. Alibaba Cloud may update the access point information without sending notifications to you. Alibaba Cloud may update the access point information when a specific event occurs. For example, Alibaba Cloud updates the information when an access device is under maintenance, an access device fails, a new access point is added, or an existing access point is removed. </div> |
| CNAME | <p>After a GA instance is created, the system assigns a canonical name (CNAME) to the GA instance. To use GA to accelerate multiple domain names, you must configure intelligent DNS resolution for the origin server and map the domain name that you want to accelerate to the CNAME allocated by GA.</p> |
| Listener | <p>A listener listens for connection requests and distributes the requests to endpoints based on the port and protocol that you specify. Each listener is associated with an endpoint group. You can associate an endpoint group with a listener by specifying the region to which you want to distribute network traffic. After you associate an endpoint group with a listener, network traffic is distributed to the optimal endpoints in the endpoint group.</p> |
| Endpoint group | <p>After you add a listener, you must create an endpoint group for the listener. This way, network traffic can be distributed to the endpoint group. Each endpoint group is associated with a specific region. An endpoint group contains one or more endpoints in the associated region.</p> |

| Component | Description |
|---------------------------|--|
| Endpoint | <p>Endpoints are destinations of client requests. You can specify Alibaba Cloud public IP addresses, OSS buckets, ECS instances, CLB instances, ALB instances, custom IP addresses of origin servers, or custom domain names of origin servers as endpoints.</p> <div>  Note <ul style="list-style-type: none"> You can specify ECS, CLB, and ALB instances as endpoints only if your Alibaba Cloud account is included in the whitelist. If you want to specify ECS, CLB, or ALB instances as endpoints for your GA instances, submit a ticket to upgrade the GA instances. If you want to specify ECS instances or CLB instances as endpoints, make sure that the instances are deployed in virtual private clouds (VPCs). </div> <p>You can specify a weight for each endpoint. The weight specifies the proportion of traffic that is forwarded to the endpoint.</p> |
| Endpoint group IP address | <p>After you add endpoints to an endpoint group, GA allocates at least four endpoint group IP addresses to each endpoint. You can view the actual number of endpoint group IP addresses allocated to each endpoint in the console. After GA receives a client request, GA converts the client IP address to an endpoint group IP address that is used to access the specific endpoint.</p> <div>  Note The IP addresses of endpoint groups associated with each GA instance are dedicated to the instance owner and are not shared with other GA users. </div> |
| Basic bandwidth plan | <p>A basic bandwidth plan provides bandwidth for data transfer over the Internet and within internal networks of Alibaba Cloud. However, basic bandwidth plans are not applicable to data transfer between the Chinese mainland and areas outside the Chinese mainland.</p> <p>The following types of basic bandwidth plans are supported: basic, enhanced, and premium. The resources, acceleration type, and acceleration scope vary based on the bandwidth type. For more information, see Overview.</p> |

Benefits

High performance

GA uses stable BGP lines, the global transmission network of Alibaba Cloud, and worldwide access points to reduce network latency, network jitters, and packet loss. This greatly improves user experience.

High availability

GA allows you to manage network traffic that is routed across regions and distributed to endpoints. This prevents service disruptions caused by failures of individual regions or connections and improves network stability. GA continuously monitors the health status of all endpoints and automatically schedules network traffic to ensure service continuity.

Security and reliability

GA allows you to set network access control lists (ACLs) and use Alibaba Cloud security services to protect applications and endpoints from attacks.

Ease of deployment

GA is easy to configure and can be deployed within a few minutes. Resources are monitored and maintained in a centralized manner. This mechanism simplifies the deployment process.

Free trials

Time-limited one-month free trial of GA

GA instances and basic bandwidth plans of specific specifications are free of charge for the first month. Free trials are available from 00:00:00 (UTC+8) on April 1, 2021 to 00:00:00 (UTC+8) on April 1, 2023.

- [Details of time-limited one-month free trial of GA](#)

Seven-day free trial of GA

To get started with the free trial, you need to only enter the business information. Then, the system automatically creates a trial GA instance. You can own at most five trial GA instances. Starting 00:00:00 (UTC+8) on June 13, 2022,... you can apply for a seven-day GA free trial.

- [Details of seven-day free trial of GA](#)

2. Select and purchase GA resources

Before you use Global Accelerator (GA), you must purchase a GA instance and a basic bandwidth plan. You can purchase a service bundle that is recommended by GA. You can also purchase GA resources based on your requirements.

Purchase a service bundle recommended by GA

We recommend that you purchase a service bundle that is recommended by GA. You can enter the information about the service that you want to accelerate on the GA introduction page. After you enter the information, the system generates a list of recommended services. You can purchase a GA service bundle that includes the recommended GA instance and basic bandwidth plan. For more information, see [Get started with GA](#).

Select and purchase GA resources based on your business requirements

You can refer to the following content if you want to purchase a GA instance and a basic bandwidth plan based on your business requirements:


- GA instance specifications
- Types of basic bandwidth plans

The following types of basic bandwidth plans are supported: basic, enhanced, and premium. The following table shows that the acceleration type, accelerated backend service, and acceleration scope of a basic bandwidth plan vary based on the bandwidth type.

| Bandwidth type | Acceleration type | Accelerated backend service | Acceleration scope |
|----------------|---|--|---|
| Basic | Applications that are deployed on Alibaba Cloud | <ul style="list-style-type: none">◦ Public IP addresses provided by Alibaba Cloud◦ Elastic Compute Service (ECS)◦ Classic Load Balancer (CLB) (formerly known as SLB)◦ Application Load Balancer (ALB)◦ Object Storage Service (OSS) | By default, the acceleration region and the region where the backend service is deployed are located in the Chinese mainland. |

| Bandwidth type | Acceleration type | Accelerated backend service | Acceleration scope |
|----------------|--|---|---|
| Enhanced | <ul style="list-style-type: none"> Applications that are deployed on Alibaba Cloud Applications that are not deployed on Alibaba Cloud | <ul style="list-style-type: none"> Public IP addresses provided by Alibaba Cloud ECS CLB (formerly known as SLB) ALB OSS Custom IP addresses Custom domain names | By default, the acceleration region and the region where the backend service is deployed are located in the Chinese mainland. |
| Premium | <ul style="list-style-type: none"> Applications that are deployed on Alibaba Cloud Applications that are not deployed on Alibaba Cloud | <ul style="list-style-type: none"> Public IP addresses provided by Alibaba Cloud ECS CLB (formerly known as SLB) ALB OSS Custom IP addresses Custom domain names | By default, the acceleration region and the region where the backend service is deployed are located in the areas outside the Chinese mainland. If you want to accelerate data transfer between the Chinese mainland and other areas, you must select China (Hong Kong) as the acceleration region. |

You can select different bandwidth types based on the deployment of your services and the region that requires acceleration.

 **Note** All websites must obtain an ICP number before they are permitted to provide services to users in the Chinese mainland. For more information, see [What is an ICP filing?](#).

| Acceleration area | Service region | Server area | ICP number for web service | Bandwidth type |
|-------------------|------------------|-----------------------|----------------------------|---|
| Chinese mainland | Chinese mainland | On Alibaba Cloud | Required | Basic bandwidth plans |
| | | Outside Alibaba Cloud | Required | Enhanced bandwidth plans |
| | | On Alibaba Cloud | No | Premium bandwidth plans You must specify China (Hong Kong) as the acceleration region. |
| | | | Required | Basic bandwidth plans and cross-border acceleration bandwidth plans |

| Acceleration area | Regions outside the Chinese mainland | Server area | ICP number for web service | Bandwidth type |
|--------------------------------------|--------------------------------------|---|----------------------------|---|
| | | Outside Alibaba Cloud | No | Premium bandwidth plans You must specify China (Hong Kong) as the acceleration region. |
| | | | Required | Enhanced bandwidth plans and cross-border acceleration bandwidth plans |
| Regions outside the Chinese mainland | Regions outside the Chinese mainland | On Alibaba Cloud or outside Alibaba Cloud | No | Premium bandwidth plans |
| | Chinese mainland | On Alibaba Cloud | Required | The following solutions are supported: <ul style="list-style-type: none"> Premium bandwidth plans You must specify China (Hong Kong) as the acceleration region. Basic bandwidth plans and cross-border acceleration bandwidth plans |
| | | Outside Alibaba Cloud | Required | The following solutions are supported: <ul style="list-style-type: none"> Premium bandwidth plans You must specify China (Hong Kong) as the acceleration region. Enhanced bandwidth plans and cross-border acceleration bandwidth plans |

3.Scenarios

Alibaba Cloud Global Accelerator (GA) can provide access points worldwide and accelerate transmission of network traffic. You can configure the GA service based on your requirements. This service can be used in various scenarios, such as online gaming acceleration and application acceleration for multinational companies.

Accelerate transmission of gaming traffic

Driven by constant innovation, online gaming companies strive to deliver an exceptional user experience in highly demanding scenarios such as multiplayer online games.

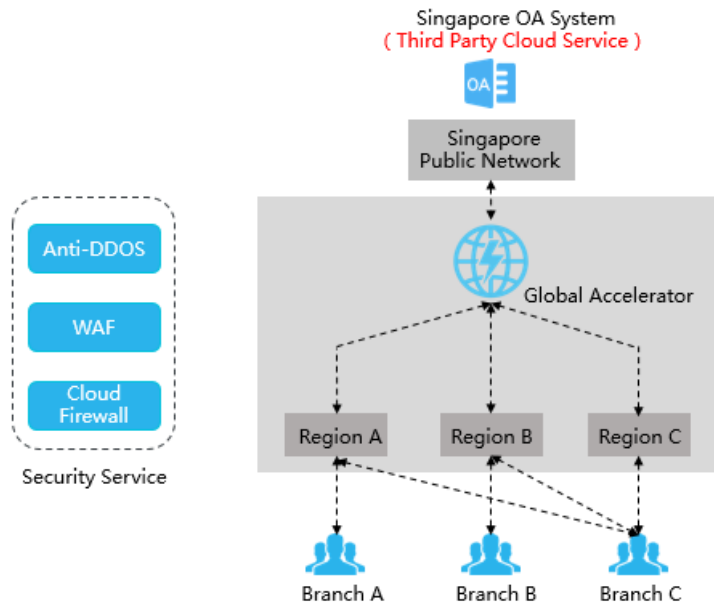
GA helps global gaming providers to drastically reduce end-to-end network transmission time and allow players to enjoy online games without any network jitters or latency. GA provides players with consistent and smooth gaming experience. The access points of Alibaba Cloud nearest to the players receive gaming requests and forward the requests to the target origin server through the internal network of Alibaba Cloud. Compared with transmission over the public network, GA shortens the transmission path, reduces latency, network jitters, and packet loss, and improves interaction experience among players.



Accelerate cross-border collaboration

For multinational corporations, their application services and enterprise data are deployed and stored in the countries where their headquarters are located. In such cases, it may be difficult for their branch staff and business partners around the world to access the applications and data due to high network latency and low transmission speed.

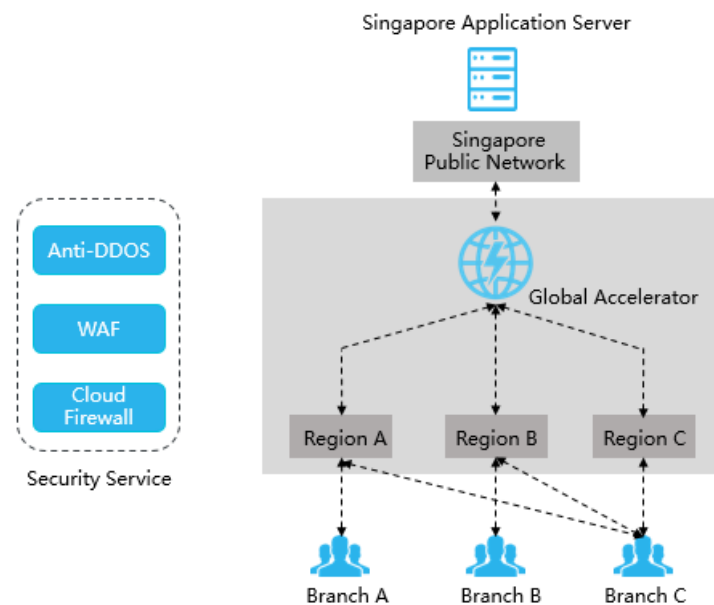
Alibaba Cloud GA helps to create a dynamic and secured network between a multinational corporation's head office and branch offices across multiple regions.



Accelerate connections to global Internet applications

Connections to applications over the Internet may have issues such as high latency and packet loss. These issues may affect the user experience.


You can use GA to accelerate connections to global applications over the Internet through the high-quality Border Gateway Protocol (BGP) bandwidth and global network of Alibaba Cloud.





4.Limits

This topic describes the limits of Global Accelerator (GA). Make sure that you have read and understand these limits before you get started.

Limits on instances

| Item | Limits | Adjustable |
|--|---|--|
| The maximum number of GA instances that can be created with each Alibaba Cloud account | 10 | You can go to the Quota Management page to increase the quota. For more information, see Manage quotas . |
| The types of backend servers that can be associated with a GA instance | <p>Elastic Compute Service (ECS) instances, Classic Load Balancer (CLB) instances, Application Load Balancer (ALB) instances, Object Storage Service (OSS) buckets, Alibaba Cloud public IP addresses, custom IP addresses of origin servers, and custom domain names of origin servers</p> <div><p> Note</p><ul style="list-style-type: none">You can specify ECS, CLB, and ALB instances as endpoints only if your Alibaba Cloud account is included in the whitelist. If you want to specify ECS, CLB, or ALB instances as endpoints for your GA instances, submit a ticket to upgrade the GA instances.If you want to specify ECS instances or CLB instances as endpoints, make sure that the instances are deployed in virtual private clouds (VPCs).</div> | N/A |
| Support for TCP and UDP segmentation | Not supported | N/A |

Limits on acceleration areas

| Item | Limits | Adjustable |
|--|--|------------|
| The acceleration areas that are supported by GA | China North, China South, China East, China Southwest, Asia Pacific, Europe, North America, South America, and Middle East  Note You can also specify regions in each acceleration area. For more information about areas and regions, see Overview . | N/A |
| The types of accelerated IP addresses that are supported by GA | EIPs and Anycast EIPs  Notice <ul style="list-style-type: none"> • • • Access points that are supported by Anycast EIPs are used to accelerate content delivery in regions outside the Chinese mainland. For more information, see Access point locations. | N/A |
| The minimum bandwidth that can be allocated to each region in an acceleration area | 2 Mbps | N/A |

Limits on listeners

| Item | Limits | Adjustable |
|--|--|--|
| The maximum number of listeners that can be created for each GA instance | 10 | Submit a ticket |
| The maximum number of listener ports that can be specified for each listener | <ul style="list-style-type: none"> • For each TCP or UDP listener: 30. • For each HTTP or HTTPS listener: 1. | You can go to the Quota Management page to increase the quota. For more information, see Manage quotas . |

| Item | Limits | Adjustable |
|------|--------|------------|
|------|--------|------------|

| | | |
|--|---------|-----|
| The range of ports that are supported by listeners | 1~65499 | N/A |
|--|---------|-----|

Limits on endpoint groups

| Item | Limits | Adjustable |
|---|--|--|
| The maximum number of endpoint groups that can be associated with each listener | <ul style="list-style-type: none">For each TCP or UDP listener: two default endpoint groups.For each HTTP or HTTPS listener: one default endpoint group and one virtual endpoint group. | You can go to the Quota Management page to increase the quota. For more information, see Manage quotas . |
| The maximum number of endpoints that can be added to each endpoint group | 4 | You can go to the Quota Management page to increase the quota. For more information, see Manage quotas . |