Alibaba Cloud

全站加速

Successful Cases

C−⫿ Alibaba Cloud

Legal disclaimer

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

1. You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloud-authorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.

2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company or individual in any form or by any means without the prior written consent of Alibaba Cloud.

3. The content of this document may be changed because of product version upgrade, adjustment, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and an updated version of this document will be released through Alibaba Cloud-authorized channels from time to time. You should pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.

4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides this document based on the "status quo", "being defective", and "existing functions" of its products and services. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity, applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not take legal responsibility for any errors or lost profits incurred by any organization, company, or individual arising from download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, take responsibility for any indirect, consequential, punitive, contingent, special, or punitive damages, including lost profits arising from the use or trust in this document (even if Alibaba Cloud has been notified of the possibility of such a loss).

5. By law, all the contents in Alibaba Cloud documents, including but not limited to pictures, architecture design, page layout, and text description, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade secrets. No part of this document shall be used, modified, reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates. The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates.

6. Please directly contact Alibaba Cloud for any errors of this document.

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 `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

Table of Contents

全站
加速

Successful Cases · **Sword and Expedition launched by Lilith Games: accelerates the delivery of dynamic content to enhance user experience**

1.Sword and Expedition launched by Lilith Games: accelerates the delivery of dynamic content to enhance user experience

The mobile game, Sword and Expedition, launched by Lilith Games uses Alibaba Cloud Dynamic Route for CDN (DCDN) to accelerate dynamic content delivery and optimize the user experience. DCDN is used to reduce the latency of dynamic instructions, improve operation stability, and enhance the compatibility and security of the gaming platform.

Customer profile

Shanghai Lilith Technology Corporation (Lilith Games) is devoted to developing the most engaging mobile games and creating an unprecedented gaming experience for players around the world. Lilith Games adheres to the core strategies of globalization and categorized development. Based on the in-depth analysis of the global market and categorized development prospects, Lilith Games is expanding its international market share. Lilith Games has launched several popular games, including *Sword and Expedition*, *Xiaobingbing Legend*, and *Awakening of All Nations*.

Lilith Games ranked among the list of 2019 LinkedIn Top Companies and was listed in the 50 leading Chinese cross-border brands released by KPMG in the same year. From January to April 2020, Lilith Games had topped the list that is released by App Annie to include Chinese game companies with leading overseas revenues.
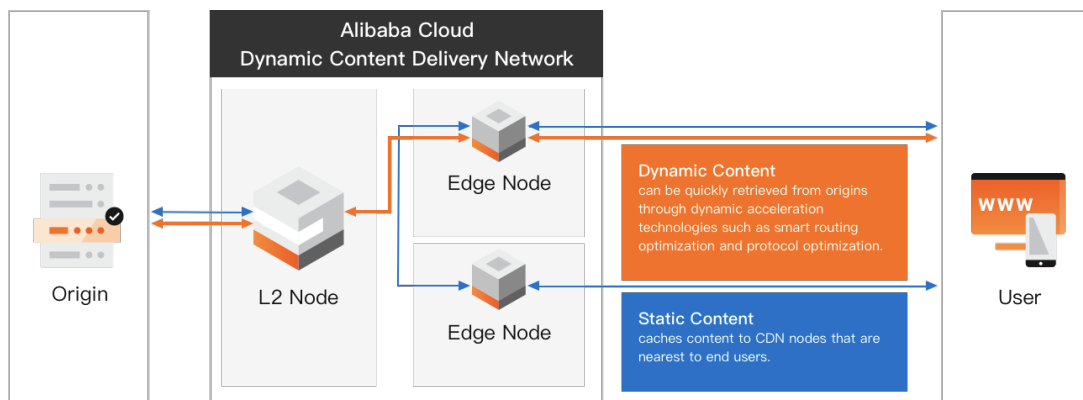
Challenges

The following list shows the challenges that Lilith Games faced before using DCDN:

- Player input latency: Players are distributed across different provinces, cities, and regions in mainland China. There may be issues when multiple Internet service providers (ISPs) are used to deliver game content. Networking conditions are complex during game acceleration. When data transmission occurs between different regions and different ISPs, latency and network quality fluctuations may increase. This causes delay to dynamic game instructions and downgrades user experience.

- Decreased smoothness of game content delivery: A rapid increase of online players within a short period of time may cause network congestion and increase network quality fluctuations. This may result in packet loss, and affect the content delivery and user experience.

- Complex and insecure third-party acceleration networks: To reduce player interactions latency when third-party acceleration networks are used, the quality of nodes and infrastructure must be improved. Customized routing, protocol optimization methods, terminal health checks, and intelligent routing policies are also required. Core links vulnerable to attacks: If attacks occur in core links, workloads may experience unstable network quality and interruptions and impact your business.

Solutions

DCDN can be used to solve the preceding challenges.

Successful Cases · Sword and Expedition launched by Lilith Games: accelerates the delivery of dynamic content to enhance user experience

全站
加速

Architecture of DCDN IP Application Accelerator (IPA)

- Proprietary protocols are used to control the transmission between edge nodes and L2 nodes. This ensures high availability, and stabilizes efficient transmission.
- The intelligent routing system is used to identify the optimal paths from users to an origin server within the network. This further improves the service availability and transmission rate.

Benefits

- Reduce the player input latency:
  - Optimized deployment of high-quality nodes: DCDN provides a large number of nodes that support ISPs from different provinces, cities, and regions in mainland China. Players can access the closest nodes to them and ensure stable connections with low latency. DCDN solves network bottlenecks issues caused by communication across regions and different ISPs.
  - Intelligent routing to minimize the latency: DCDN uses global detection to collect transmission latency data from nodes in real time. This allows DCDN to dynamically adjust the routing rules based on node conditions. You can use this feature to minimize the latency of player inputs and online interactions.
  - Protocol optimization: DCDN uses a proprietary transmission protocol that is developed by Alibaba Cloud. Compared with traditional TCP-based communication, the optimized protocol can solve the issues caused by the slow start mechanism, congestion control, and data retransmission. This allows you to make full use of bandwidth resources and further enhance data transmission efficiency.

- Improve the stability of game operations:
  - Intelligent routing to minimize the packet loss rate: DCDN uses global detection to obtain packet loss data between nodes in real time. This allows DCDN to dynamically adjust the routing rules based on node conditions. You can use this feature to ensure stable processing of dynamic game instructions and optimal packet transmission paths.
  - Multi-channel transmission: DCDN replicates the data of dynamic game instructions and interactions to multiple channels and concurrently transmit the data through these channels. Compared with single-channel transmission from a single data source, multi-channel transmission allows you to minimize network jitter.
  - Seamless failover: DCDN enables seamless failovers to ensure smooth user experience if a failover occurs. This allows game players to enjoy stable service performance.

- Enhance service compatibility and security:

全站
加速

Successful Cases · Sword and Expedition launched by Lilith Games: accelerates the delivery of dynamic content to enhance user experience

DCDN is developed based on the Alibaba Cloud CDN infrastructure, protocol optimization, and intelligent routing system. You can use DCDN to maximize the data transmission rate and service availability, especially in poor network conditions. IPA uses a proxy to forward client requests without any changes to the packets. This protects the privacy of clients. Simple configurations on the origin server can allow you to obtain client IP addresses. Distributed deployment of nodes can protect the service against attacks.

Customer values

- Optimized user experience: DCDN minimizes network latency and improves user experience.

- Cost reduction: DCDN allows you to deploy all Border Gateway Protocol (BGP) network resources of your origin server over a single acceleration network. This reduces the bandwidth costs of origin servers by more than 50%.

- Flexibility and security: You can use DCDN to accelerate your applications based on simple configurations. Client requests are forwarded to your origin severs without any changes to the packets. DCDN provides security protections against distributed denial-of-service (DDoS) attacks and web application attacks.

Related service

DCDN

DCDN is developed based on multiple technologies, including separated delivery acceleration between dynamic content and static content, edge caching, intelligent routing, and transmission compression. This service provides an all-purpose solution to resolve high latency issues, packet loss, and service instability. Different possible causes are included. For example, your website contains both static and dynamic content or the content is delivered across ISPs. The issues may arise if your network is unstable or a network congestion happens. The issues may also occur if only one origin server is used or network traffic spikes. You can use DCDN to improve the overall performance of your website and accelerate content delivery to improve user experience.

For more information, see Product page of DCDN.