

Tencent Cloud EdgeOne

Product Introduction

Product Documentation



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Overview

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EdgeOne Overview

Tencent Cloud EdgeOne provides an acceleration and security solution based on Tencent edge nodes to safeguard diverse industries such as ecommerce, retail, finance service, content and news, and gaming and improve their user experience.

Acceleration: Edge nodes are closer to users, which greatly reduce the data access latency, avoid data transfer jitters, and guarantee the stability and effectiveness during the transfer of massive amounts of data. In addition, EdgeOne has many acceleration features, including dynamic/static data acceleration, cross-border acceleration, and smart route optimization, to efficiently support latency-sensitive businesses.

Security: Security protection services such as WAF and Anti-DDoS are provided. Nodes identify and block various layer-3/4/7 attack requests, cleanse DDoS attack traffic, and use the smart AI engine and bot policy engine to analyze the behaviors of web, bot, and CC attacks and update attack blocking policies. This helps prevent malicious requests from reaching your origin servers and guarantee a smooth and stable access to your business.

Features

DNS

Domain management

It supports DNS resolution and unified management for domains of any type and can add DNS records.

Automatic DNS record import

After a domain name is added, all host records are automatically imported under the domain name.

Real-time synchronization

DNS record modifications can be synchronized to the DNS server within seconds.

Exception alarms

Alarming is provided to detect exceptional operations during DNS record modification, which helps ensure domain security.

Record type

The following record types are supported: A, AAAA, MX, CNAME, TXT, NS, SRV, URL, and Framed URL.

Cloud resource binding

Association with Tencent Cloud resources allows resolution to CVM and CLB.

Others

Features such as DNS statistics, domain lock, and CNAME acceleration are also offered.

DDoS mitigation

Tencent Cloud Anti-DDoS is a comprehensive, efficient, and professional service for DDoS attack prevention, providing enterprises and organizations with various solutions. Leveraging abundant, quality DDoS protection resources and with the aid of ever-improving cleansing algorithms, Tencent Cloud Anti-DDoS brings security and safety to user business.

Web protection

Based on Tencent's massive web attack samples, EdgeOne supports identifying good access requests from bad ones and protecting your origin server against web attacks including SQL injection, XSS attacks and local file inclusion in real time. With the self-developed AI engine incorporating Tencent's billion-level threat intelligence, a more accurate and effective identification and blocking mechanism can be implemented.

Bot protection

It integrates the Tencent Cloud bot program management feature and has a bot behavior library covering many crawler types such as ads, screencapturing tools, search engines, site monitoring, and link query. Its unique AI technology analyzes and builds models for all user request behaviors to intelligently identify abnormal traffic. In addition, it supports custom session protection policies.

Acceleration

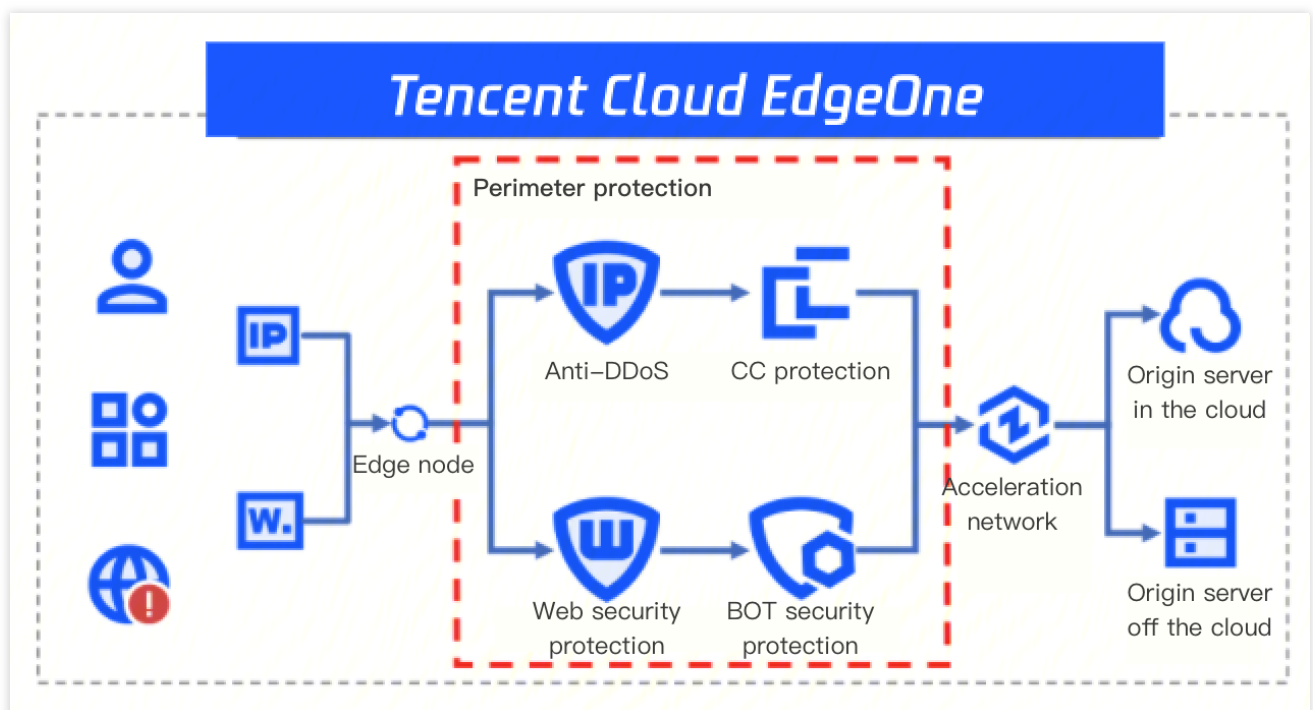
EdgeOne uses a combination of edge nodes and regional centers to enhance acceleration via intelligent cross-node routing and targeted path optimization. This service effectively resolves cross-border latency issues and delivers an improved global user experience.

Strengths

Last updated : 2024-07-30 15:25:56

Integrated Acceleration Security Capability Protection

Tencent Cloud EdgeOne offers an integrated solution combining content acceleration and security protection. While enhancing the speed of your business, it also establishes a 3D security protection system spanning layers 3 to 7.



3D Security Protection System

DDoS Protection: Leveraging an Anycast-based distributed defense architecture, Tencent Cloud EdgeOne has established over 25 cleansing centers in globally available zones. This system effectively counters all types of DDoS attacks originating from the network layer, transport layer, and application layer. It detects and cleanses DDoS attack traffic within 3 seconds, mitigating the impact of the attack.

WEB Attack Protection: With a comprehensive attack feature library that covers key security threats from the OWASP Top 10, it effectively blocks Web attacks, exploits of intrusion vulnerabilities, trojans, backdoors and other web service security issues. It also provides 0 day vulnerability defense. The system utilizes a syntax analysis + AI intelligent detection engine to enhance detection accuracy and effectively reduce false positives.

Intelligent CC Recognition: Drawing on Tencent Cloud's years of experience in CC protection and research on current CC protection trends, Tencent Cloud EdgeOne passively analyzes a large amount of network traffic. By combining multiple parameter characteristics such as TCP option, timestamp, TTL, it automatically identifies the

client's operating system, application category, and unique device ID, accurately locating and identifying the attack source, effectively solving industry challenges such as CC protection pass-through.

BOT Recognition and Protection: Based on protocol features, IP intelligence features, and custom session features, it accurately identifies and protects against BOTs. By using data and threat intelligence for comprehensive analysis and learning, it establishes a crawler recognition model, effectively resolving issues such as malicious crawler pass-through and benign crawler misidentification.

Precise Attack Tracing: By packet analysis of abnormal/attack events and extraction of attack sources and attack messages, it serves as an important basis for attack tracing. Tencent Cloud EdgeOne also provides a comprehensive monitoring page, displaying various types of attack information such as attack types, attack sources, attack ports, attack traffic, providing a basis for users to adjust their protection strategies.

24/7 Proactive Monitoring and Response: Tencent's security team monitors around the clock, proactively discovering and responding, effectively shortening the response cycle.

Intelligent Dynamic and Static Network Acceleration

Static Acceleration: With the support of rich network optimization and content caching strategies, and relying on the vast node and bandwidth resources of Tencent Cloud EdgeOne, we can effectively ameliorate the quality of access across regions and carriers. This results in an enhanced download speed, reduced response time, and a seamless user experience.

Dynamic Acceleration: Leveraging Tencent Cloud's proprietary network transmission optimization technology, we monitor the latency and quality of the back-to-source link in real-time, and intelligently optimize the HTTP business back-to-source routing, thereby enhancing the experience of dynamic request access.

Application Acceleration: Through widespread 4 layer proxy nodes of Tencent Cloud EdgeOne, unique DDoS protection module, and intelligent routing technology, we enable end-users to access nearby, edge traffic cleaning, and port forwarding. This provides high-availability, low-latency DDoS protection, and 4 layer acceleration services for 4 layer applications.

Vast Node and Bandwidth Resource Reserves

Tencent Cloud EdgeOne resources are dispersed across 70+ countries and regions, with a total network bandwidth exceeding 200 Tbps. It encompasses over 3200 acceleration nodes and 50+ small and medium-sized operator access points globally. Each node boasts a storage capacity ranging from 40 TB to 1.5 PB, and a bandwidth load that can reach from 40 Gbps to over 200 Gbps. This extensive network effectively ameliorates the quality of access across different regions and operators, and is well-equipped to handle scenarios of sudden traffic surges.

Nodes in Mainland China

Region	Distribution

East China	Shanghai, Jiangsu, Zhejiang, Anhui, Jiangxi, Shandong, Fujian
North China	Beijing, Tianjin, Shanxi, Hebei, Central Inner Mongolia Autonomous Region
Central China	Henan, Hubei, Hunan
Northwest China	Shaanxi, Gansu, Qinghai, Ningxia Hui Autonomous Region, Xinjiang Uygur Autonomous Region, Western Inner Mongolia Autonomous Region
South China	Guangdong, Hainan, Guangxi Zhuang Autonomous Region
Southwest China	Chongqing, Sichuan, Guizhou, Yunnan, Tibet Autonomous Region
Northeast China	Heilongjiang, Jilin, Liaoning, Eastern Inner Mongolia Autonomous Region

Nodes Outside Mainland China

Region	Distribution
North America	United States, Mexico, Canada
South America	Brazil, Colombia, Peru, Ecuador, Chile, Argentina
Asia	Hong Kong (China), Macao (China), Taiwan (China), Japan, South Korea, Mongolia, Vietnam, Laos, Singapore, Thailand, Philippines, Myanmar, Cambodia, Malaysia, Indonesia, India, Bangladesh, Nepal, Pakistan, Kuwait, Kyrgyzstan, Qatar, Israel, Turkey, Iraq, Saudi Arabia, Oman, United Arab Emirates, Bahrain, Lebanon, Jordan, Kazakhstan, Uzbekistan, Azerbaijan, Brunei
Africa	Djibouti, Kenya, Madagascar, Mauritius, Egypt, South Africa, Nigeria, Algeria
Oceania	Australia, New Zealand
Europe	Italy, Austria, Poland, Finland, Denmark, Belgium, Sweden, Spain, France, Netherlands, Germany, United Kingdom, Norway, Romania, Latvia, Bulgaria, Czech Republic, Switzerland, Hungary, Portugal, Greece

Versatile and Flexible Console Capabilities

Tencent Cloud EdgeOne provides an integrated management console within the console, offering a wealth of capabilities including domain name resolution, site acceleration, security protection, rule engine, layer-4 proxy, edge functions, log services, data analysis, and more. This comprehensive platform aids in providing one-stop security

protection and content acceleration at the edge. Through flexible rule configuration and edge functions, it can assist in tailoring business responses and back-to-source rules according to specific needs, thereby achieving flexible edge business processing.

Use Cases

Last updated : 2024-01-15 14:25:25

Gaming

Use Case	Challenge/Need	Solution/Applicable Feature
Login server	Low-latency access High reliability Layer-4/7 origin-pull	Anti-DDoS Web protection Network acceleration
Battle server	Low-latency access Protection of high numbers of IP addresses	Anti-DDoS Network acceleration BGP and IP broadcasting
Game update	DNS scheduling Cache acceleration	Smart DNS scheduling Static hosting Global cache

Video

Use Case	Challenge/Need	Solution/Applicable Feature
Video on demand	High-reliability access Smart prefetch Smooth playback and low-latency access	Anti-DDoS Web protection Network acceleration Nearby access URL prefetch
Video live streaming	Smooth playback Real-time interaction High-speed origin-pull and low-latency access	Anti-DDoS Web protection Network acceleration Nearby access
Video upload	Efficient upload Linkage origin-pull	Network acceleration Nearby access
Video download	High-reliability access Smart prefetch High-speed download	Network acceleration Nearby access URL prefetch

Ecommerce and Retail

Use Case	Challenge/Need	Solution/Applicable Feature
Ecommerce website	Smooth access High reliability Attack prevention Tampering prevention Anti-cheating	Nearby access Network acceleration Static acceleration Dynamic acceleration URL prefetch Anti-DDoS Web protection

Finance

Use Case	Challenge/Need	Solution/Applicable Feature
Bank website/securities trading	Smooth access High reliability Attack prevention Tampering prevention Leakage prevention	Nearby access Network acceleration Static acceleration Dynamic acceleration URL prefetch Anti-DDoS Web protection
Interbank clearing system	Fast data transfer High reliability Data origin-pull	Network acceleration Anti-DDoS Web protection

Logistics and Traditional Business

Use Case	Challenge/Need	Solution/Applicable Feature
Logistics/Traditional businesses	Smooth access High reliability Attack prevention Tampering prevention Leakage prevention	Nearby access Network acceleration Static acceleration Dynamic acceleration Anti-DDoS Web protection