IDC MarketScape

IDC MarketScape: Worldwide Commercial CDN 2019 Vendor Assessment
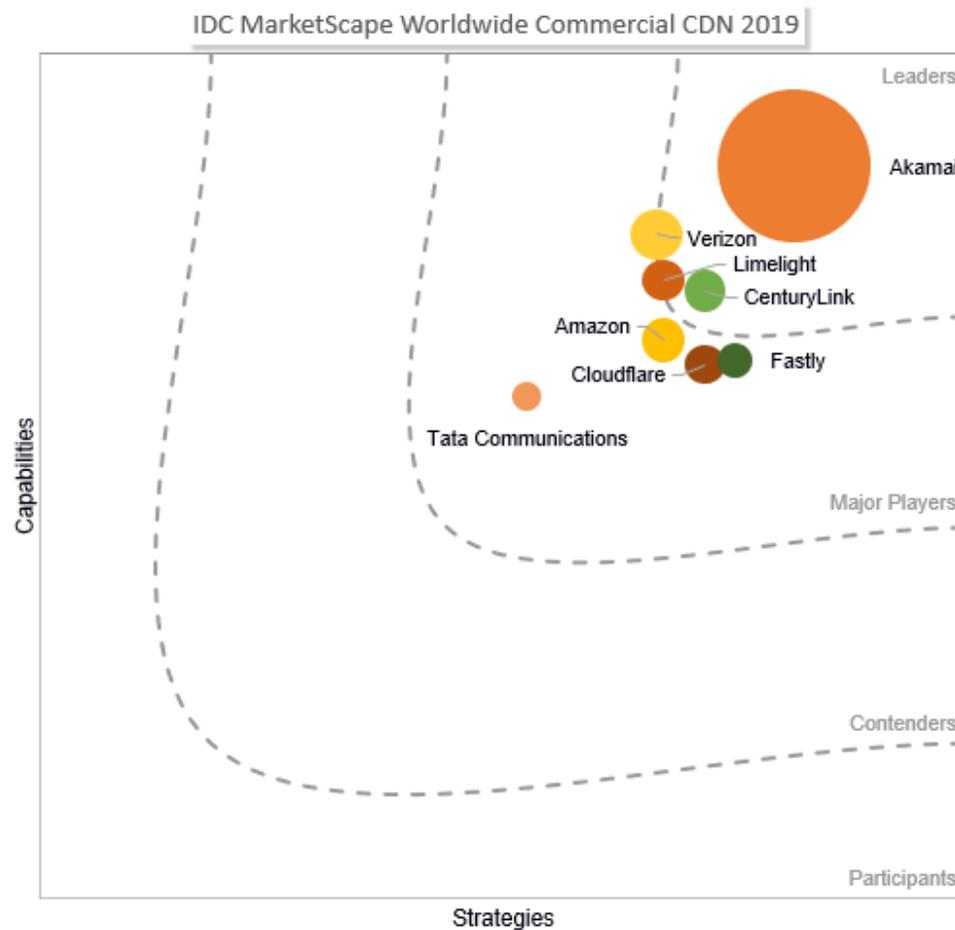
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THIS IDC MARKETSCAPE EXCERPT FEATURES CENTURYLINK

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Commercial CDN Vendor Assessment

Source: IDC, 2019

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

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IN THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide Commercial CDN 2019 Vendor Assessment (Doc #US44842119). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

IDC OPINION

This IDC study utilizes the IDC MarketScape methodology to evaluate commercial content delivery network (CDN) providers. IDC identified eight providers by scale and scope that provide CDN services across the globe. The intent of this study is to provide a comparative view of these CDN providers in terms of their capabilities to offer CDN services and strategies to grow and innovate in this evolving marketplace.

The commercial CDN market is a mature market that carries a substantial portion of the world's internet traffic. According to the 2018 Cisco VNI report, CDNs will carry 72% of internet traffic by 2022, up from 56% in 2017. In *Worldwide Content Delivery Network Services Forecast, 2019-2023* (IDC #US44057419, May 2019), IDC projects this market to reach $13 billion by 2023 at a five-year CAGR of 17.3%. CDNs have become an essential tool to handle the demands created by the massive amount of web content, live high-definition (HD) video, and large downloads on the internet today. Enterprises turn to commercial CDNs for handling content delivery pertaining to four broad segments:

- **OTT video:** This is the largest segment delivering on-demand and live video streams.
- **Web, email, and data:** This segment manages the delivery of static and dynamic web pages as well as email and data.
- **Online gaming:** The primary focus is on cloud-hosted multiplayer games.
- **File sharing:** This includes over-the-air updates and IoT content.

While CDN traffic is expected to grow at an estimate of 35% CAGR for next five years, revenue growth, however, is challenged with price erosion and move by major content providers to build private CDNs. Market developments such as continued growth of OTT/real-time video and IoT are driving higher demand for performance and low latency. The commercial CDN market is evolving with the advent of a new breed of competitors that capitalize on emerging technologies such as virtualization, DevOps, and peer to peer (P2P) along with simplified pricing models to compete against established legacy players. Virtualization is ushering in a new breed of software-dominant players.

Content providers especially hyperscalers are setting up their own private CDNs to lessen dependence on commercial CDN providers. This is happening against a backdrop of accelerated demand for CDNs to distribute real-time video, handle increasing number of static and dynamic web transactions, shift to online multiplayer gaming, and proliferation of Internet of Things (IoT) devices. CDN providers also face new challenges related to transformation of the edge as an emerging hub for distribution of content and control center for global ecommerce.

CDN security services are emerging as an important revenue driver for CDN providers. Akamai, for example, has seen significant growth in its security services, increasing more than 30% annually for the past three years. Other players are intensifying effort to add more security features in their offers.

This research helps uncover the ingredients that drive growth and differentiation in this marketplace. Enterprises will be better informed in their decision to deploy CDN services and selection of CDN providers. The key selection criteria to be explored in this research focus on current capabilities and future strategies.

This IDC MarketScape provides an overview of strengths and challenges of these eight providers in providing commercial CDN services. This study also captures some key takeaways that are beneficial to all ecosystem players, technology providers, service providers, and enterprises.

The key takeaways from this IDC MarketScape include:

- All global CDN providers are eyeing expansion in the Asia/Pacific region due to huge pent-up desire for video streaming and online gaming.
- China is a challenging market to serve due to regulatory issues. Partnership with local providers is key for ability to serve the market.
- The midmarket and small business are highly sensitive to price, especially per-gigabyte transfer costs.
- Customers are demanding more predictability in CDN services spend and price transparency.
- Customers value direct support by services and technical personnel as long as it is cost effective.
- The CDN services market can benefit from better and near-real-time analytics as well as more access to the data source.
- A common SLA parameter is 100% availability.
- For large media companies, a multi-CDN architecture is highly desired not only from price competitiveness but more from availability and performance perspectives.
- Innovation at the edge and incorporation of programmability, DevOps, open source, virtualization, and APIs are key to long-term differentiation.
- Security is critical to all segments, with particular importance to web delivery and an increasing importance to media content delivery.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

This IDC MarketScape included providers from all regions that met the following criteria:

- Commercial CDN providers with global presence in North America; Europe, the Middle East, and Africa (EMEA); and Asia/Pacific regions
- CDN providers with a minimum of $50 million of annual revenue

Providers that primarily resell CDN services have not been included in this document.

ADVICE FOR TECHNOLOGY BUYERS

Media companies and enterprises face several choices in their effort to select a CDN provider. These include the type of provider whether large incumbents or new emerging players and, in some cases, the choice to build a private CDN network. A single CDN or multi-CDN architecture is an additional consideration. Most enterprises are looking for a strategic partner than can adapt to their business needs. The following are some considerations in the choice of CDN providers:

- **Scale and footprint matching customer needs:** The scale, footprint, and ability to expand are key considerations for global enterprises that serve customers in multiple regions and are on a continued expansion path.

- **Innovation and programmability at the edge:** As the edge is transforming to be the new center for global ecommerce, a hub for rich media customer experience, and delivery of IoT content, enterprises should consider CDN providers that are the forefront of innovation at the edge. This includes programmability, open APIs, support for DevOps, virtualization, and a self-service portal to enable quick development on services.

- **Price visibility and reliability:** Enterprises are demanding better transparency to CDN pricing and predictability of monthly charges. They should look for CDN providers that support both aspects of CDN services pricing.

- **Rich analytics:** Analytics can provide key insights into customer behaviors, predict traffic demands, and ensure adherence to SLAs. Enterprises should consider CDN providers that provide rich and real-time analytics complemented by AI/ML tools to extract maximum benefits from the data.

- **Performance:** With the proliferation of real-time video streaming and demands of global ecommerce, enterprises choice of a CDN provider will include consideration of peak capacity, latency, and availability. Latency is particularly relevant to the delivery of live events to minimize delay between traditional TV distribution and streaming.

- **Multi-CDN:** Support of multi-CDN architecture is a key consideration of large media companies to manage peak traffic demands, improve overall availability, and expand geographic reach.

- **Security:** Security is a table stack for content delivery and critical to the choice of a CDN provider.

At IDC, we believe that enterprises that incorporate these considerations in their choice of a CDN services provider will drive better business outcomes.

VENDOR SUMMARY PROFILE

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each of the criteria outlined in the Appendix, the description here provides a summary of the vendor's strengths and challenges.

CenturyLink

CenturyLink is positioned in the Leaders category in the 2019 IDC MarketScape for worldwide commercial CDN vendors.

With the purchase of Level3 in November 2017, CenturyLink became a global provider of CDN services. Level3 had been operating a CDN network since 2007.

CenturyLink offers CDN services in 60+ countries with current peak capacity exceeding 120TBps, underpinned by deployment of 120 POPs worldwide. Video streaming represents around 65% of traffic capacity on its CDN with the rest dominated by digital downloads. CenturyLink serves mostly large enterprises especially large media companies across all regions. CenturyLink is ramping up capacity at face pace to meet new demands for CDN traffic and expand global footprint especially in growth regions such as APJ.

CenturyLink CDN services provide secure content delivery as follows:

- **Media delivery**: Media delivery service is focused on the needs of large OTT platforms and gaming companies, underpinned by global capacity and ability to scale in the face of peak demands. CenturyLink's aim is to provide reliable on-demand video and streaming of linear channels.

- **Web delivery service**: It is based on a native DevOps CDN interface that allows developers control over choice of open source reverse proxies, such as NGNX and Varnish. Customers can contribute scripts and plug-ins into reverse proxies and to construct unique HTTP pipelines for each property. The goal is to optimize site performance, boost speed, and reliability during peak loads.

- **Digital downloads**: It provides the secure delivery of files, updates, patches, and applications from anywhere, simultaneously and seamlessly.

CenturyLink's technical services management team supports customers around CDN strategy, implementation, monitoring, and management including onboarding to live event management support and proactive health checks. The self-service portal, CenturyLink Media Portal, provides reporting for network traffic, configuration management such as the ability to add and modify existing properties, and to get online help for on-the-spot assistance. Capabilities include opening trouble tickets, viewing and downloading invoices, and self-service configuration APIs to allow management of CDN configurations. The site is designed to support secure and private access to network and billing data.

CenturyLink CDN pricing is based on cloud consumption model for web delivery and capacity consumption for media delivery and CDN mesh delivery. Security is priced separately for web delivery.

CenturyLink GTM motion is mostly direct. Web delivery is supported on AWS, Azure, GCP, Packet, and DigitalOcean. CenturyLink just announced a partnership with IBM to host storage services on IBM Cloud Object Storage.

Strengths

CenturyLink differentiates its CDN offering based on the following:

- A web delivery platform based on developer native interfaces, portable to run on most public cloud platforms and bundled with a rich ecosystem of microservices
- Mesh delivery, a peer-assisted CDN to support delivery of live linear and on-demand video content to reach hard to access locations globally
- Development of a horizontal media delivery platform with horizontal appeal across all verticals
- A technology partnership ecosystem to deliver on the following:
- Object storage partnership with IBM to provide fast access, origin shield, and cache efficiency
- Mesh delivery partnership with Streamroot to improve quality and resiliency of peak video traffic especially during widely viewed live events
- Acceleration of application development at the edge in partnership with Section.io. Introduction of edge compute at all POPs to enhance application development based on containers and open DevOps environment
- A growth strategy based on:
- Gain new accounts in growth regions such as Asia/Pacific, the Middle East and Africa, and Latin America.

- Adopt cloud-native features and pricing, build microservices ecosystem, and expand footprint into very hard to reach places, such as Africa, and provide low-latency locations leveraging the global CenturyLink network.
- Support for customers in their multi-CDN strategy with monitoring and services management.

Challenges

CenturyLink faces competitive pressures from established large CDN providers as well as providers leading with edge compute innovation. CenturyLink needs to focus on the following to maintain its competitive edge:

- Improve communication and marketing message of its strategy and product plans. The intent here is to improve its perception as a technology innovator.
- Improve analytics especially relating to streaming performance and ability to share data with their set of open APIs. Continue to adopt an open API DevOps environment to help customers develop new applications and innovate at a faster pace.
- Accelerate the execution of its recently announced innovation partnership road map spanning object storage, peer-to-peer mesh delivery, and edge compute. Customers are looking for proof points and ability to demonstrate significant performance and commercial benefits with these partnerships.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market share of each individual vendor within the specific market segment being assessed.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to

provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Market Definition

The content delivery network (CDN) facilitates the secure and timely delivery of content to end users. Content typically includes time-sensitive streaming video, static and dynamic websites, large files such as over-the-air (OTA) updates, and medical imaging. CDN deploys a set of services to ensure the delivery of content on multiple display formats within well-established performance and quality-of-service metrics such as latency, jitter, and throughput.

A CDN is typically architected with geographically dispersed network of cache or proxy servers, deployed centrally and in edge servers. A cache server manages requests from end users and presents content initially coming from an origin server. CDNs may replicate or store multiple copies of internet content including web objects (text, graphics, and scripts), downloadable objects (media files, software, and documents), applications (ecommerce and portals), live streaming media, on-demand streaming media, and social networks. In summary, CDNs are the transparent backbone of the internet in charge of content delivery.

Related Research

- *Worldwide Content Delivery Network Market Shares, 2018: Market Leader Akamai Facing Nimbler Competitors* (IDC #US45276119, June 2019)
- *Worldwide Content Delivery Network Services Forecast, 2019-2023* (IDC #US44057419, May 2019)
- *Content Delivery Networks in a Transforming Media Industry* (IDC #EMEA44684718, January 2019)

Synopsis

This IDC study presents assessment of eight CDN vendors that provide commercial CDN services on a global basis. The assessment is based on their current capabilities and future strategies for delivering CDN services. This is the first comprehensive analysis by IDC on this mature but transforming market, and it provides insights to enterprises deciding on choices of CDN vendors.

"Enterprises' expectations of CDN providers are evolving as they undergo the journey to digital transformation. Traditional metrics in terms of performance and availability, while still important, are not enough for the choice of a CDN provider. On the technology front, enterprises are expecting an innovation agenda that incorporates virtualization, DevOps, open APIs, and programmability at the edge. On the commercial side, enterprises are demanding a commercial framework that is transparent, easy to understand, and embodies co-innovation to enable a richer customer experience. CDN providers that align their technological and commercial road maps with the digital transformation journey of the enterprise can become the future leaders." – Ghassan Abdo, research vice president, Worldwide Telecommunications

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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