

ISE CTA Cloud Computing™ Index (CPQ™) Thematic Revenue Overview

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CTA Background:

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CTA Research is comprised of a team of industry experts that develops forecasts, reports, sentiment studies, white papers, and standards for the consumer technology ecosystem. Since 2010, CTA has partnered with Nasdaq to develop thematic indexes across numerous technology segments, including Cybersecurity, AI, Robotics, Cloud Computing, and Digital Health.

CPQ Index Constituents & Insights:

The following section displays the constituent securities for the CPQ index and their connection to the cloud computing industry.

Alongside their respective ticker, the table shows the percentage of revenue that each company derives from their work in the field of cloud computing. CTA Research has also provided insights into what segment(s) of the cloud space they operate in, such as Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), and/or Software-as-a-Service (SaaS) for each individual security. Additionally, CTA has provided a brief description of each security’s role in the cloud computing industry, which includes their prominent products, their investments in the industry, etc.

Notably, only six of the 65 companies featured in the CPQ index derive less than 50% of their revenue from cloud computing. However, these securities are leaders in the industry with enabling cloud infrastructure and platform solutions.

Estimated Thematic Revenue	# of Constituents	% of Constituents
0 to <25%	2	3%
25 to <50%	4	6%
≤50%	59	91%
Total	65	100%

Security (Ticker)	Cloud Revenue	Cloud Classification(s)	Insights
Adobe Inc (ADBE)	98%	PaaS SaaS	Provides content creation, document management, and digital marketing and advertising software and services primarily through its Creative Cloud and Document Cloud offerings. Also, offers Adobe Commerce, which is a fully scalable web storefront PaaS product.

Akamai Technologies (AKAM)	54%	IaaS SaaS	Akamai operates a content delivery network, or CDN, which entails locating servers at the edges of networks so its customers can store content on Akamai servers. Beyond edge computing and IaaS offerings, Akamai is also a leader in cloud security SaaS.
Alphabet, Inc. (GOOGL)	11%	IaaS PaaS SaaS	Google Cloud is the third largest IaaS provider in the world. In addition to Google Cloud, Google maintains the App Engine, a full development and deployment PaaS product for companies. Google also maintains a fleet of cloud software offerings across various verticals.
Amazon.com Inc (AMZN)	16%	IaaS PaaS SaaS	AWS is the global market leader for IaaS, but it is also a full PaaS and SaaS product that allows development environments and warehouse storage services, among other offerings.
Appfolio (APPF)	98%	SaaS	AppFolio Inc. provides cloud-based software solutions for small and medium-sized businesses (SMBs) in the property management and legal industries. Its products include cloud-based property management software (AppFolio Property Manager), a cloud-based software solution for real estate investment managers that provides tools and services designed to manage investor relationships (AppFolio Investment Management).
Appian Corp. (APPN)	76%	PaaS	Appian Corp provides a low-code software development platform as a service, enabling organizations to rapidly develop powerful and unique applications.
AppLovin Corp. (APP)	100%	PaaS SaaS	AppLovin Corp is a mobile app technology company that focuses on growing the mobile app ecosystem by enabling the success of mobile app developers. The company's software solutions provide advanced tools for mobile app developers to grow their businesses by automating and optimizing the marketing and monetization of their apps.
Arista Networks, Inc.	86%	IaaS PaaS SaaS	Arista EOS CloudVision offers an IaaS workload orchestration and workflow automation tool. The Arista Cloud Networking Platform also

(ANET)			allows for PaaS development tools and SaaS security and data protection tools.
Asana, Inc. (ASAN)	100%	SaaS	The company provides a platform for work management that helps teams orchestrate work, from daily tasks to cross-functional strategic initiatives. Also, the company provides project management and workflow management solutions.
Atlassian Corporation PLC (TEAM)	83%	PaaS SaaS	Atlassian produces software that helps teams work more efficiently and effectively. The company also provides project planning and management software, collaboration tools, and IT help desk solutions.
Blackbaud, Inc. (BLKB)	100%	SaaS	Blackbaud provides a suite of software solutions targeted at the "social good" community, including nonprofits, foundations, corporations, education institutions, healthcare institutions, and individual activists.
Blackline, Inc. (BL)	94%	SaaS	BlackLine is a provider of financial and accounting software. The company's products, which help support and automate accounting and financial workflows, include financial close, account reconciliation, intercompany accounting, and control assurance.
Box, Inc. (BOX)	100%	SaaS	Box is a cloud-based content services platform that provides cloud-based storage and workflow collaboration services for enterprise customers.
Cisco Systems, Inc. (CSCO)	74%	IaaS SaaS	Cisco operates a full IaaS Cloud Operations Platform and Hybrid Cloud solution to manage complex business operations. Additionally, Cisco oversees other data and security SaaS offerings.
Cloudflare, Inc. (NET)	100%	IaaS SaaS	Cloudflare is a software company based in San Francisco, California, that offers security and web performance by utilizing a distributed, serverless content delivery network, or CDN.
Confluent, Inc. (CFLT)	94%	PaaS SaaS	Confluent Inc. is a new category of data infrastructure designed to connect a company's applications, systems, and data layers around a real-time central nervous system. Confluent Cloud provides Apache Kafka as a service to allow for serverless software development.

CrowdStrike Holdings (<i>CRWD</i>)	94%	SaaS	CrowdStrike Holdings provides cybersecurity products and services aimed at protecting organizations from cyberthreats. It offers cloud-delivered protection across endpoints, cloud workloads, identity and data, threat intelligence, managed security services, IT operations management, threat hunting, identity protection, and log management.
Datadog, Inc. (<i>DDOG</i>)	100%	SaaS	Datadog is a cloud-native company that focuses on analyzing machine data. The firm's product portfolio, delivered as software as a service, allows clients to monitor and analyze their entire IT infrastructure.
Dell Technologies Inc (<i>DELL</i>)	43%	PaaS SaaS	Dell Technologies is a broad information technology vendor, primarily supplying hardware to enterprises. It is focused on premium personal computers and enterprise on-premises data center hardware. Dell holds top-three shares in its core markets of personal computers, peripheral displays, mainstream servers, and external storage. Dell is vertically integrated but has a robust ecosystem of component and assembly partners and also relies heavily on channel partners to fulfill its sales.
DigitalOcean Holdings (<i>DOCN</i>)	100%	IaaS PaaS SaaS	DigitalOcean Holdings Inc. is a cloud computing platform offering on-demand infrastructure and platform tools for developers, start-ups, and small and medium-sized businesses. It also provides SaaS options for web and mobile applications, website hosting, e-commerce, media and gaming, personal web projects, and managed services, among many others.
DocuSign, Inc (<i>DOCU</i>)	97%	SaaS	DocuSign offers the Agreement Cloud, a broad cloud-based software suite that enables users to automate the agreement process and provide legally binding e-signatures from nearly any device.
Dropbox, Inc. (<i>DBX</i>)	100%	SaaS	Dropbox is a leading provider of cloud storage and content collaboration tools with an emphasis on individuals and SMBs. Utilizing inorganic and organic means, the firm has been working on diversifying its product mix and pivoting away from the cloud storage space.

Elastic NV (ESTC)	92%	SaaS	Elastic Cloud hosts a family of SaaS offerings, which most notably includes Elasticsearch. Its search engine allows it to process structured and unstructured data while glean insights from that data.
Eventbrite Inc. (EB)	100%	SaaS	Eventbrite is a self-service ticketing and experience technology platform that serves event creators. Its platform helps to plan, promote, and produce live events, thereby allowing creators to reduce friction and costs, increase reach, and drive ticket sales.
Fastly, Inc. (FSLY)	100%	IaaS	Fastly's edge cloud platform provides fully scalable infrastructure for all SaaS companies with clients such as Shopify, Spotify, Slack, and TikTok.
Five9, Inc. (FIVN)	100%	PaaS SaaS	Five9 is a cloud-based contact center platform with solutions in areas including voice, workflow automation, employee engagement, and customer engagement. The company's CX Platform enables businesses to communicate with customers via voice, video, email, mobile, social media, text, and online chat.
GitLab Inc (GTLB)	100%	PaaS SaaS	GitLab Inc. operates on an all-remote model. The technology company's primary offering is GitLab, a complete DevOps platform delivered as a single application. A wide range of organizations use GitLab. The company also provides related training and professional services. GitLab is offered on both self-managed and software-as-a-service (SaaS) models. The principal markets for GitLab are currently located in the United States, Europe, and Asia Pacific. The company is focused on accelerating innovation and broadening the distribution of its platform to companies across the world.
HashiCorp (HCP)	97%	PaaS SaaS	HashiCorp's cloud operating model provides consistent workflows and a standardized approach to automate the processes involved in delivering applications in the cloud: infrastructure provisioning, security, networking, and application deployment. Its main commercial products are Terraform, Vault, Consul, and Nomad.
Hewlett Packard Enterprises (HPE)	84%	IaaS	HPE operates the GreenLake edge-to-cloud IaaS platform, which sees over 100,000 partners globally, including Arrow Electronics and TD Synnex. The focus is data protection in addition to storage services.

HubSpot, Inc. (HUBS)	98%	PaaS SaaS	HubSpot provides a cloud-based marketing, sales, and customer service software platform referred to as the growth platform. The applications are available ala carte or packaged together.
International Business Machines (IBM)	66%	IaaS PaaS SaaS	IBM Cloud combines both IaaS and PaaS capabilities to support public, hybrid, multicloud and private cloud solutions globally. The Red Hat incorporation bolstered the PaaS offerings from IBM and complemented their SaaS product suite.
Intuit, Inc. (INTU)	96%	SaaS	Intuit is a SaaS provider of small-business accounting software (QuickBooks), personal tax solutions (TurboTax), and professional tax offerings (Lacerte).
Klaviyo, Inc. (KVYO)	100%	SaaS	Klaviyo is a cloud-based customer data platform and marketing automation product with capabilities including email, text, product reviews, etc., and positioned for industries including e-commerce, retail, restaurants, and wellness businesses.
Lumen Technologies, Inc. (LUMN)	25%	IaaS PaaS	Lumen provides a hybrid cloud IaaS solution that incorporates PaaS capabilities, allowing organizations to effectively manage different infrastructure environments.
Microsoft Corp (MSFT)	42%	IaaS PaaS SaaS	In addition to operating Azure, the second-largest IaaS product by market share, Microsoft operates Windows Server OS and SQL Server, which complement intelligent cloud PaaS offerings. Further, Office 365, SharePoint, Game Pass, Teams, and others combine to form a suite of enterprise and consumer SaaS offerings.
MongoDB, Inc. (MDB)	96%	IaaS PaaS	MongoDB provides both licenses and subscriptions as a service for its NoSQL document-oriented database. MongoDB's database is compatible with all major programming languages and can be deployed for various use cases.
NetApp, Inc. (NTAP)	100%	PaaS SaaS	Formerly a data center storage firm, NetApp has pivoted to a multicloud data management solutions provider, offering protection, storage, and analytics in PaaS and SaaS options.

Nutanix Inc. (<i>NTNX</i>)	95%	IaaS PaaS SaaS	Nutanix provides native, hybrid cloud capabilities for businesses. The company offers Enterprise Cloud Platform to businesses for various uses such as web-scale engineering and consumer-grade design, virtualization, and storage into a resilient and software-defined solution.
Open Text Corp (<i>OTEX</i>)	50%	SaaS	OpenText provides a cloud-based software that allows clients to archive, aggregate, retrieve, and search unstructured information such as documents, emails, and presentations.
Oracle Corporation (<i>ORCL</i>)	82%	IaaS PaaS SaaS	Oracle Cloud provides a compute, storage, database, networking, and platforming service for customers. Database represents its differentiator in the public sector with its IaaS, PaaS, and SaaS offerings in this segment, establishing a strong market presence.
Palo Alto Networks, Inc. (<i>PANW</i>)	71%	SaaS	Palo Alto Networks is a leading cloud security company that provides other security SaaS solutions such as virtual firewalls, endpoint protection, and cybersecurity analytics.
Paycom Software, Inc. (<i>PAYC</i>)	100%	SaaS	Paycom is a leading payroll and human capital management (HCM) SaaS provider, offering services in attendance, talent management, and benefits administration, among others.
Paylocity Holding Corp. (<i>PCTY</i>)	100%	SaaS	Like Paycom, Paylocity is a payroll and HCM SaaS provider but also offers workplace collaboration and communications tools to complement its suite of workforce products.
Pure Storage, Inc. (<i>PSTG</i>)	100%	IaaS PaaS SaaS	Pure Storage Inc. is a US-based company that provides an enterprise data storage platform with products such as Evergreen Storage subscriptions. This unified subscription includes Pure as-a-Service, Cloud Block Store, and Portworx.
Q2 Holdings, Inc. (<i>QTWO</i>)	76%	SaaS	Q2 provides a cloud-based virtual banking solution for regional financial institutions to provide mobile banking services and account holder activity tracking solutions.
Qualys, Inc. (<i>QLYS</i>)	100%	SaaS	The Qualys Cloud Platform provides security intelligence by allowing IT asset security, security assessment, and compliance management, leading Qualys to be a leading cloud security provider.

RingCentral, Inc. (RNG)	95%	PaaS SaaS	RingCentral's unified communications platform foremost replaces on-premises private branch exchange (PBX) phone systems, which support voice-only desktop phones, with its cloud phone system. The company's platform enables cloud-based integrated omnichannel communications, including voice, messaging, SMS, video meetings, conferencing, and contact center software solutions, among others.
Salesforce, Inc. (CRM)	93%	PaaS SaaS	Salesforce offers Service Cloud for customer support, Marketing Cloud for digital marketing campaigns, Commerce Cloud as an e-commerce engine, the Salesforce Platform, which allows enterprises to build applications, and other solutions, such as MuleSoft for data integration.
SAP SE (SAP)	44%	PaaS	The SAP Cloud Platform offers a full PaaS ecosystem for app development (primarily analytics) across multiple landscapes.
ServiceNow, Inc. (NOW)	97%	PaaS SaaS	ServiceNow Inc. provides software solutions to structure and automate various business processes via a SaaS delivery model. The company primarily focuses on the IT function for enterprise customers. ServiceNow also offers an application development platform as a service (PaaS).
Shopify, Inc. (SHOP)	100%	PaaS SaaS	The SaaS solution allows merchants to conduct e-commerce on various platforms, including the company's website, physical stores, pop-up stores, kiosks, social networks (Facebook), and Amazon. Shopify also offers a platform that facilitates e-commerce, including Shopify Payments, Shopify Shipping, and Shopify Capital.
Smartsheet, Inc. (SMAR)	93%	SaaS	Smartsheet Inc. provides a cloud-based platform for work execution that enables teams and organizations to plan, capture, manage, automate, and report on work at a scale.
Snowflake, Inc. (SNOW)	94%	SaaS	Snowflake's SaaS offering is a data lake product that stores unstructured and semi-structured data that can then be used in analytics to create insights stored in its data warehouse and shared.

Sprout Social, Inc. (SPT)	99%	SaaS	Sprout Social Inc. develops a cloud software that brings together social messaging, data, and workflows in a unified system of record, intelligence, and action.
Squarespace (SQSP)	70%	SaaS	Squarespace is a provider of subscription-based website-building software and hosting services primarily servicing entrepreneurs and micro businesses. The company offers a range of add-on and standalone tools, including scheduling functionality, email marketing, member areas for paid content, and design tools for social media and video content.
The Trade Desk (TTD)	100%	SaaS	Through its cloud-based platform, ad buyers can create, manage, and optimize data-driven digital advertising campaigns across ad formats and channels, including display, video, audio, in-app, native, and social, on many devices.
Toast, Inc. (TOST)	95%	SaaS	Toast provides cloud-based point-of-sale, payment processing, and other restaurant industry software solutions.
Twilio, Inc. (TWLO)	100%	PaaS SaaS	Twilio is a cloud-based communication PaaS and SaaS offering communication application programming interfaces, or APIs, and prebuilt solution applications aimed at improving customer engagement
Veeva Systems, Inc. (VEEV)	80%	SaaS	Veeva Systems provides a cloud-based platform to improve the efficiency and compliance of the life sciences industry, focusing on emerging biotechnology and pharmaceutical manufacturing.
Wix.com Ltd. (WIX)	100%	PaaS	Wix.com Ltd is a cloud-based development platform provider for millions of registered users worldwide. Its core products comprise three web editors: the Wix Editor, Wix ADI, and Corvid.
Workday, Inc. (WDAY)	91%	SaaS	Workday is a software company that offers human capital management, financial management, and business planning solutions.
Workiva, Inc. (WK)	89%	PaaS SaaS	Workiva's platform, Wdesk, was originally built to assist companies with filing reports to the SEC in a more simplified and timelier fashion. The company has expanded its use cases to cover other reporting areas including tax and compliance.

Zoom Video Communications, Inc. (ZM)	100%	SaaS	Zoom Video Communications provides a communications platform that connects people through video, voice, chat, and content sharing. The company's cloud-native platform enables face-to-face video and connects users across various devices and locations in a single meeting.
Zscaler, Inc. (ZS)	100%	SaaS	Zscaler is a security-as-a-service firm that offers its customers cloud-delivered solutions for protecting user devices and data. The firm leverages its position in 150 colocation data centers to deliver traditionally appliance-based security functionality, such as firewalls and sandboxes, as a completely cloud-native platform.
Zuora, Inc. (ZUO)	85%	SaaS	The firm offers Zuora Central platform that acts as an intelligent subscription management hub that automates the subscription order-to-cash process, including quoting, billing, collections, analytics, and revenue recognition. Its products include Zuora Billing, Zuora RevPro, Zuora CPQ, and Zuora Collect. Zuora caters to various industries, including software, hardware, media, transportation, construction, healthcare, education, retail, Internet of Things, and others worldwide.

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