

The Forrester Wave™: Full-Stack Public Cloud Development Platforms In China, Q3 2018

The 12 Providers That Matter Most And How They Stack Up

by Charlie Dai and Danny Mu
July 11, 2018

Why Read This Report

In our 33-criteria evaluation of full-stack public cloud development platform (PCDP) providers in China, we identified the 12 most significant ones — Alibaba Cloud, Amazon Web Services (AWS), Baidu Cloud, Huawei, JD Cloud, Kingsoft Cloud, Microsoft, NetEase, Ping An Technology, QingCloud, Tencent, and UCloud — and researched, analyzed, and scored them. This report shows how each provider measures up and helps CIOs in China make the right choice.

Key Takeaways

Alibaba, Microsoft, AWS, Tencent, And Huawei Lead The Pack

Forrester's research uncovered a market in which Alibaba Cloud, Microsoft, Amazon Web Services, Tencent Cloud, and Huawei lead the pack. Baidu Cloud, JD Cloud, Kingsoft Cloud, and QingCloud offer strong alternatives. UCloud, Ping An Technology, and Net Ease lag behind.

CIOs Are Looking For Feature Innovation, Platform Trust, And Support Expertise

The full-stack public cloud development platform market is growing as more CIOs see PCDPs as a way to address their top challenges. Market growth is in large part due to the fact that CIOs increasingly trust PCDP providers to act as strategic partners, advising them on top PCDP decisions.

Service Breadth, Depth, And Experience Are Key Differentiators

As older technology becomes outdated and less effective, improved service coverage will dictate which providers lead the pack. Vendors that can provide broad services with in-depth features and outstanding experience position themselves to successfully help customers accelerate digital transformation.

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by [Charlie Dai](#) and [Danny Mu](#)

with [Glenn O'Donnell](#), [Frederic Giron](#), [Dave Bartoletti](#), Han Bao, and Bill Nagel

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Full-Stack Cloud Development Platforms Are Key To Digital In China

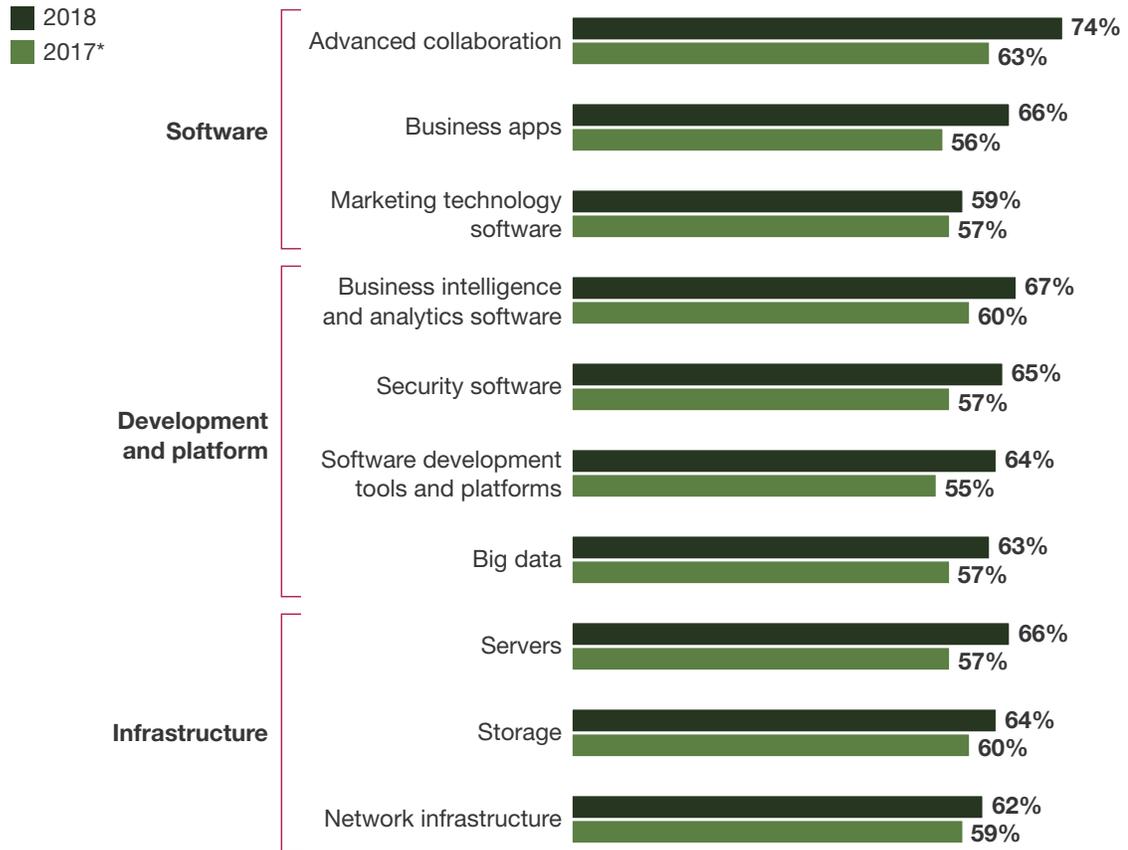
Public cloud is already an important asset to help CIOs in China respond to digital demand; they are increasingly turning to public cloud platforms in various scenarios. In terms of infrastructure, nearly two-thirds of purchase influencers in China plan to deploy network, storage, and server resources on public cloud platforms in 2018 (see Figure 1). In terms of development and platform, about two-thirds of those influencers will use public cloud for big data, software development tools and platforms, security, and business intelligence and analytics. In all areas, more of them plan to use public cloud as a service foundation in 2018 than in 2017.

As public cloud platforms become more feature-rich, secure, performant, and cost-effective, firms increasingly prefer them to build new software, modernize existing applications, and boost data center efficiency — all at once. As a result, Chinese companies are expanding their public cloud focus from infrastructure-only to a broader range of both development and infrastructure services (full-stack platforms). Leading companies seek these full-stack platforms to:

- › **Create compelling digital customer experiences using a range of cloud services.** Enterprises use container-as-a-service (CaaS) and function-as-a-service (FaaS) to create efficient, highly scalable technology foundations to support dynamic workloads in real time with consistent performance. They leverage mobile and internet-of-things (IoT) services to launch system-of-engagement applications and improve experiences for always-connected, technology-empowered customers. Machine learning (ML) and artificial intelligence (AI) services uncover customer insights and can help personalize the customer life cycle.¹ Continuous integration and delivery (CI/CD) tool chains help Chinese firms fulfill rapidly changing customer requirements effectively.
- › **Pursue digital operational excellence via speed and cost efficiency.** Chinese firms can streamline the development and operation of applications with public cloud services in the infrastructure and middleware layers. Development services GUIs allow developers to start implementing innovative ideas quickly; the configurability of infrastructure, development, and platform services streamlines provisioning processes to support changing demands. Flexible billing models and cost management features, such as pay-per-use and per-execution pricing, allow firms to cost-effectively validate ideas and accelerate go-to-market processes.

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FIGURE 1 Enterprises Are Increasingly Turning To Public Cloud Platforms For Different Usage Scenarios**“Which of the following will you deploy in the public cloud?”**

Base: 489 to 664 purchase influencers (past 12 months/next 12 months) in China who use virtual or hybrid deployments

*Base: 645 to 913 business and technology decision makers and influencers in China who use virtual or hybrid deployments

Source: Forrester Analytics Global Business Technographics® Priorities And Journey Survey, 2017 and 2018

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Cloud Service Providers Are Building Up Full-Stack Capabilities In The Chinese Market

We identified 15 vendors in the Chinese full-stack public cloud development platform market; this is the most important market segment aiming to maximize agility on both the infrastructure and platform layers.² These PCDP vendors are:

- › **Aligning go-to-market strategies to their competencies and histories.** US-based global leaders like Amazon Web Services and Microsoft have been working hard to localize the cloud services that they already offer in their own home markets to China. Local Chinese internet giants like Alibaba Cloud, Tencent Cloud, and Baidu Cloud are embracing emerging technologies to further expand their territories in the enterprise space. Vendors that previously focused mainly on the infrastructure layer, such as Kingsoft Cloud, QingCloud, and UCloud, are moving up the stack to build more capabilities on the development layer. Both JD Cloud and Ping An Technology are leveraging their competencies in eCommerce and finance to drive cloud business growth.
- › **Racing to use emerging tech to out-innovate each other.** Most full-stack vendors started their cloud enrichment journeys by offering new services based on emerging technologies. They are enhancing their existing cloud services by, for example, providing bare-metal and graphics processing unit (GPU) configurations for compute services and enhanced network services with IPv6 support. They're also launching services in new areas — AI, IoT, CaaS, FaaS, even blockchain — to help enterprise customers accelerate digital innovation.
- › **Building enterprise-focused services lacking in earlier cloud platforms.** Since 2016, many companies in the market have started to provide packaged integration and support for CI/CD tool chains on their public cloud platforms. These offerings vary in their maturity. Vendors are also enhancing their hybrid cloud management, application migration, and security certifications. These improvements are critical for enterprise customers to ensure agility and reliability in a hybrid world.

Full-Stack Public Cloud Development Platforms Evaluation Overview

To assess the state of the full-stack public cloud development platform market in China and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top full-stack PCDP vendors. After examining past research, user needs assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria. We evaluated vendors against 33 criteria, which we grouped into three high-level buckets:

- › **Current offering.** Each vendor's position on the vertical axis of the Forrester Wave graphic indicates the strength of its current offering. Key criteria for these solutions fall into six categories. Development experience includes the developer self-service experience, account management, CI/CD tool chains, languages and frameworks, and abstraction features. Development and application services include identity and access management (IAM), mobile, database, analytics, IoT, media, migration, CaaS, and FaaS (serverless) offerings. Platform operations include security programs

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and certifications, compliance, availability and reliability, and cost management. The other three groups are infrastructure services, including compute, network, and storage services; support services; and local availability.

- › **Strategy.** Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated each vendor's strategy using criteria in five areas. Pricing includes transparency, consistency, granularity, and flexibility. Partner ecosystem covers independent software vendors, tool providers, systems integrators, and managed service providers. Enterprise strategy includes eight key factors such as product, innovation, and marketing.³ Marketplace and community focus on commercial terms, availability, and resource richness. Hybrid cloud focuses on features and API consistency and maturity.
- › **Market presence.** Represented by the size of the bubbles on the graphic, our market presence scores reflect each vendor's global data center coverage, number of customers, product revenue, and revenue growth rate. Unless the vendor publicly reports revenue for its public cloud platform services, revenue and revenue growth rates are Forrester estimates.

Evaluated Vendors And Inclusion Criteria

Forrester included 12 vendors in the assessment: Alibaba Cloud, Amazon Web Services, Baidu Cloud, Huawei, JD Cloud, Kingsoft Cloud, Microsoft, NetEase, Ping An Technology, QingCloud, Tencent Cloud, and UCloud. Each of these vendors has (see Figure 2):

- › **A generally available public cloud platform.** Each vendor has a standardized software foundation on which to build and run complete applications that developers can freely access via a self-service interface; employs pay-per-use billing; and provides resources on demand.
- › **A wide range of generally available infrastructure and development platform services.** Each vendor offers native development platform services plus infrastructure services that developers abstract and/or configure. All of the services we evaluated were generally available as of May 1, 2018. We excluded vendors that only have very limited services on the infrastructure or development layers.⁴
- › **Proven enterprise customer adoption.** We included the vendors and products most important to enterprise customers as indicated by clients' questions and primary data sources reflecting usage and interest.
- › **A platform with a legal presence in Chinese market.** Each vendor offers development and infrastructure platform services in China. For global cloud players, we only considered vendors that have officially launched a commercial operation that complies with Chinese government regulations.

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FIGURE 2 Evaluated Vendors: Product Information And Inclusion Criteria

Vendor	Product evaluated
Alibaba Cloud	Alibaba Cloud
Amazon Web Services	Amazon Web Services
Baidu Cloud	Baidu Cloud
Huawei	Huawei Cloud
JD Cloud	JD Cloud
Kingsoft Cloud	Kingsoft Cloud
Microsoft	Microsoft Azure operated by 21Vianet
NetEase	NetEase Cloud
Ping An Technology	Ping An Cloud
QingCloud	QingCloud
Tencent Cloud	Tencent Cloud
UCloud	UCloud

Vendor inclusion criteria

A generally available public cloud platform. Each vendor has a standardized software foundation on which to build and run complete applications that developers can freely access via a self-service interface; employs pay-per-use billing; and provides resources on demand.

A wide range of generally available infrastructure and development platform services. Each vendor offers native development platform services plus infrastructure services that developers abstract and/or configure. All of the services we evaluated were generally available as of May 1, 2018. We excluded vendors that only have very limited services on the infrastructure or development layers.

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Vendor Profiles

This evaluation of the full-stack public cloud development platforms market in China is intended to be a starting point only. We encourage clients to view detailed product evaluations and adapt criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool (see Figure 3 and see Figure 4). Click the link at the beginning of this report on Forrester.com to download the tool.

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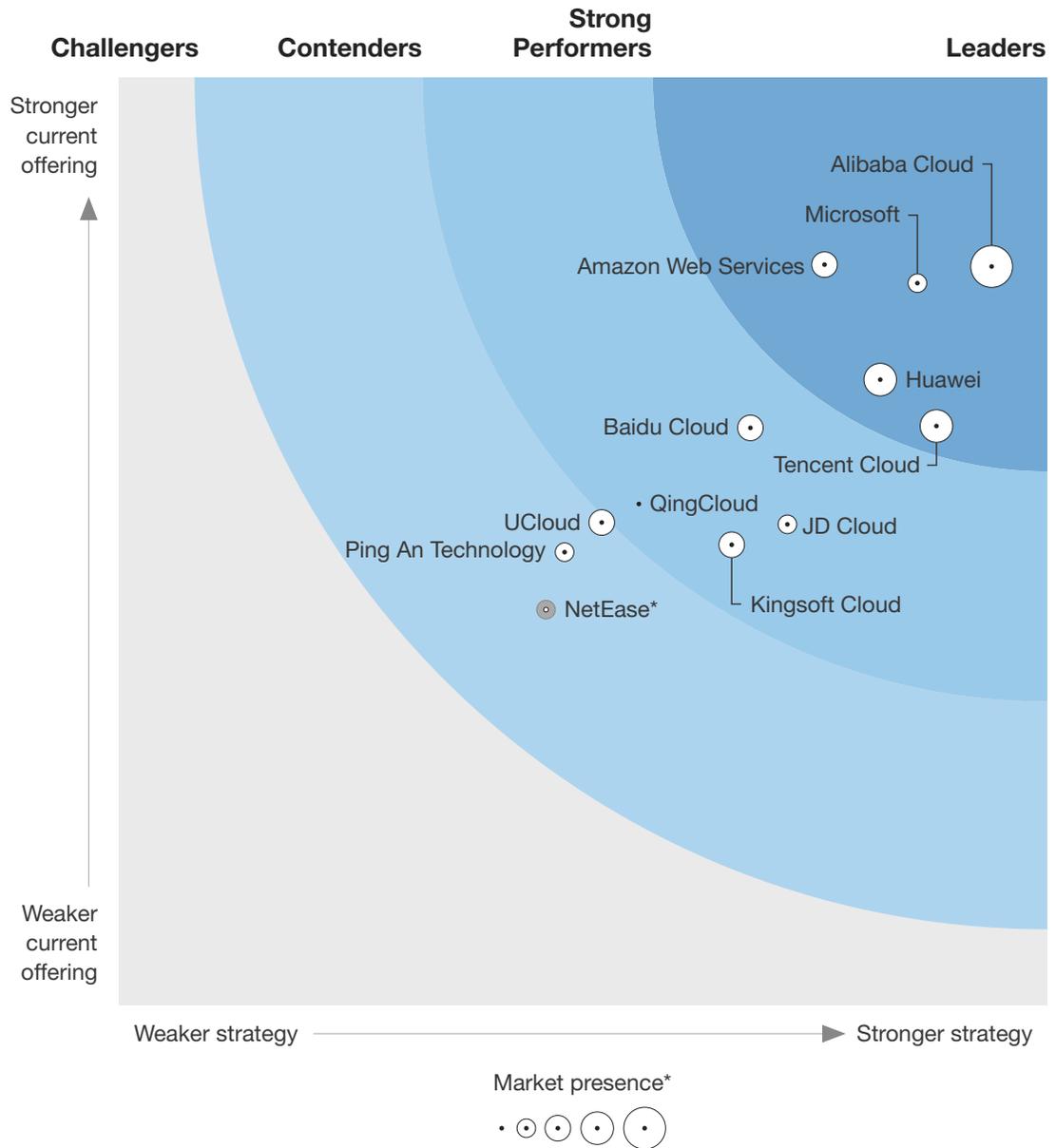
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FIGURE 3 Forrester Wave™: Full-Stack Public Cloud Development Platforms In China, Q3 2018

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Full-Stack Public Cloud Development Platforms In China

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*A gray marker indicates incomplete vendor participation.

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FIGURE 4 Forrester Wave™: Full-Stack Public Cloud Development Platforms In China Scorecard, Q3 2018

	Forrester's weighting	Alibaba Cloud	Amazon Web Services	Baidu Cloud	Huawei	JD Cloud	Kingsoft Cloud
Current Offering	50%	3.98	3.99	3.11	3.37	2.59	2.48
Development experience	10%	3.40	4.60	2.20	4.20	1.80	1.40
Development and application services	40%	4.00	4.70	2.30	2.20	1.50	1.80
Platform operations	10%	3.00	4.50	2.50	2.50	1.50	3.00
Infrastructure services	10%	4.40	5.00	2.20	3.20	1.60	2.20
Support services	10%	3.00	1.00	5.00	5.00	5.00	1.00
Local availability	20%	5.00	3.00	5.00	5.00	5.00	5.00
Strategy	50%	4.70	3.80	3.40	4.10	3.60	3.30
Pricing strategy	20%	5.00	5.00	5.00	5.00	3.00	3.00
Partner ecosystem	25%	5.00	3.00	3.00	5.00	3.00	5.00
Enterprise strategy	30%	5.00	5.00	3.00	3.00	5.00	3.00
Marketplace and community	10%	5.00	1.00	3.00	5.00	3.00	1.00
Hybrid cloud strategy	15%	3.00	3.00	3.00	3.00	3.00	3.00
Market Presence	0%	4.90	3.00	2.70	3.10	1.20	2.50
Global data center coverage	20%	5.00	3.00	1.00	3.00	1.00	1.00
Number of customers	15%	5.00	3.00	3.00	3.00	1.00	3.00
Product revenue	60%	5.00	3.00	3.00	3.00	1.00	3.00
Revenue growth	5%	3.00	3.00	5.00	5.00	5.00	1.00

All scores are based on a scale of 0 (weak) to 5 (strong).

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FIGURE 4 Forrester Wave™: Full-Stack Public Cloud Development Platforms In China Scorecard, Q3 2018 (Cont.)

	Forrester's weighting	Microsoft	NetEase*	Ping An Technology	QingCloud	Tencent Cloud	UCloud
Current Offering	50%	3.89	2.13	2.44	2.70	3.12	2.60
Development experience	10%	5.00	1.80	1.80	1.40	1.80	1.80
Development and application services	40%	4.50	1.50	1.00	1.40	2.40	1.30
Platform operations	10%	4.50	1.50	2.00	2.00	3.00	3.00
Infrastructure services	10%	4.40	1.00	1.60	3.00	3.80	3.00
Support services	10%	1.00	1.00	5.00	5.00	3.00	3.00
Local availability	20%	3.00	5.00	5.00	5.00	5.00	5.00
Strategy	50%	4.30	2.30	2.40	2.80	4.40	2.60
Pricing strategy	20%	5.00	3.00	5.00	3.00	5.00	3.00
Partner ecosystem	25%	3.00	1.00	1.00	1.00	5.00	1.00
Enterprise strategy	30%	5.00	3.00	3.00	3.00	3.00	3.00
Marketplace and community	10%	3.00	1.00	1.00	3.00	5.00	1.00
Hybrid cloud strategy	15%	5.00	3.00	1.00	5.00	5.00	5.00
Market Presence	0%	1.80	1.50	1.20	1.00	3.10	2.60
Global data center coverage	20%	3.00	1.00	1.00	1.00	3.00	3.00
Number of customers	15%	3.00	3.00	1.00	1.00	3.00	1.00
Product revenue	60%	1.00	1.00	1.00	1.00	3.00	3.00
Revenue growth	5%	3.00	5.00	5.00	1.00	5.00	1.00

All scores are based on a scale of 0 (weak) to 5 (strong).

*Indicates a nonparticipating vendor.

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Leaders

- › **Alibaba Cloud excels in all dimensions.** Alibaba Cloud's annual revenue nearly equals the combined revenue of the next four largest PCDP vendors in the Chinese market. Beyond its solid offerings in infrastructure services like compute and storage, Alibaba also has broad coverage in many development and application services, including AI, mobile, IAM, business reporting and analysis, and application migration. A rich marketplace, comprehensive pricing system, and extensive partner ecosystem boost its business growth in China and abroad.

Alibaba has been effective in executing a product strategy to fix the weaknesses Forrester identified in 2016 but still needs further improvement. Its CodePipeline service for continuous integration and delivery doesn't support custom workflow modeling, and its Apsara Stack private cloud offerings could include broader service capabilities to address a more diverse range of customer needs on-premises.

- › **Microsoft is one of the best in overall performance.** Microsoft's blend of infrastructure and application services with role-focused developer experiences and extensive administration and operational management features is strong, as are its development services for IAM, mobile, analytics, and IoT. The Azure Cosmos DB is uniquely suited to large, distributed applications. The Microsoft Office 365 software-as-a-service offering provides additional synergy in China through its deep integration with the Azure platform. Microsoft also offers Azure Stack for on-premises deployment.

Microsoft's key weakness is that it has only localized about half of its global services for the Chinese market. Microsoft's exclusive Chinese data center provider, 21Vianet, also needs to further improve its own operational capabilities to ensure consistent service quality. Forrester expects Microsoft to progressively extend more of its global services to China, such as its DevOps projects, bot services, ML studio, container services, and security center.

- › **Amazon Web Services is a top innovator.** The greatest strength of AWS has been its pace-setting service innovation; now, it has added service breadth, compliance certifications, and a huge community of partners and customers that apply the platform. AWS is continuously investing in the Chinese market by provisioning new regions and localizing more services. In particular, the significant investment in and ambitious planning of the Ningxia data center shows the vendor's commitment to the market. AWS takes a customer-centric mindset, and its professional services proactively help enterprises optimize their cloud architecture with new features. In 2018, AWS plans to enable a feature to help Chinese customers migrate their applications to global regions easily.

Globally, AWS still lacks an API-consistent on-premises platform to serve enterprises implementing hybrid cloud strategies. Although AWS is accelerating its localization process, many services are still currently unavailable in China. For example, of its extensive CI/CD tool chain offerings, only the CodeDeploy service is available. There are also gaps between global and Chinese offerings for analytics, ML, and media services.

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- › **Tencent Cloud has made substantial progress.** Tencent Cloud is new to the Leader group in 2018; it's done a lot of catching up since we included it as nonparticipating vendor in our 2016 Wave evaluation. The vendor now offers a number of AI and ML services, including image recognition, natural language processing, and ML platforms. Its media and content delivery network services support rich usage scenarios including content management and production, media transcoding, and live broadcasting. Tencent Cloud's year-over-year growth is above 200%, and its business revenue ranks second after Alibaba Cloud.

While Tencent has a unique advantage in the consumer market due to its ownership of WeChat, the world's largest social platform, it needs to further improve its strategy and capabilities to address enterprise customer needs. Some development services that are important for enterprise adoption — such as big data, IoT, application migration, and IAM — were still in beta testing during our evaluation process.

- › **Huawei is a visionary practitioner making a significant breakthrough.** Huawei has executed its visionary product strategy well enough to be the other vendor to move up into the Leader category in 2018. Huawei Cloud's rapid innovation is impressive: Its DevCloud platform provides a one-stop software development life cycle tool chain, and its Cloud Container Engine is the only offering from a local player that provides full-stack container services supporting Windows containers. Huawei has also established a broad partner ecosystem and become a key contributor in global open-source communities in areas such as containers, IoT, and blockchain.

While Huawei has broad coverage of development and application services, some of them — such as ML, deep learning, and most other AI services; IoT platform; graph database; database migration; and mobile testing — were still in beta testing during our evaluation.

Strong Performers

- › **Baidu Cloud is a profound AI and IoT service provider.** Baidu, the largest search engine in China, has opened its strong AI capabilities including speech, text, image, and video analytics to customers via cloud services. Baidu Cloud has also opened up its PaddlePaddle deep learning framework and its Apollo self-driving platform. The vendor also provides abundant IoT services and solutions and internet data analytics like a recommendation engine and digital marketing solutions.

Although Baidu Cloud has impressive AI and IoT capabilities, it needs to strengthen its infrastructure, development, and application services. Its bare-metal compute and cloud file system are not yet generally available; neither are the CI/CD environment and development platform abstractions. FaaS is still in beta testing.

- › **JD Cloud is an ambitious player that's growing rapidly.** In 2016, we ranked JD Cloud as a Challenger; two years later, it's a Strong Performer. JD Cloud has strengthened its general capabilities and provided some user-friendly features like machine learning workbench tools and high-availability groups to address local, zone, and geographic redundancy needs. The vendor has

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leveraged its partner resources in retail and rapidly enlarged its cloud ecosystem. As JD.com is the market leader in B2C eCommerce, JD Cloud packages the eCommerce, retail, and supply chain solutions into its public and private cloud services.

JD Cloud needs to strengthen its infrastructure services, lacks GPU and bare-metal servers, and has yet to provide an external file storage service. It's still weak in advanced capabilities like IoT services, FaaS, mobile development services, container orchestration, and integrated development environments. Most AI features are still in beta testing. JD Cloud also needs to enhance its developer and application services.

- › **Kingsoft Cloud is an ecosystem player gaining momentum.** Kingsoft is an established vendor with a diversified business portfolio; the ecosystem around its various segments is now a key driver to boost its cloud business. Kingsoft uses its rich experience and customer base in the gaming industry to provide comprehensive media and content services with a focus on gaming and video businesses. The value chain of Xiaomi, one of China's leading electronics and software firms, was also a good base for Kingsoft Cloud to build vertical solutions for enterprise customers.

Kingsoft Cloud has grown significantly in its business sweet spots but needs to accelerate its technical innovation to serve broader enterprise usage scenarios. For example, it currently lacks business reporting, analytics, IoT, and serverless services, and its services in areas like AI, mobile, and application migration are still very limited. Kingsoft Cloud should also improve the capabilities of its support team to better address customer needs.

- › **QingCloud targets enterprise IT solutions.** Most QingCloud customers come from internet finance and enterprise services. The vendor is strong at network services, NeonSAN, and consistent private cloud solutions; provides dedicated cloud platform solutions; and differentiates itself with its AppCenter. QingCloud enriched its service portfolio by providing a set of APIs for partners to improve collaboration with its infrastructure-as-a-service (IaaS) and platform-as-a-service (PaaS) capability.

QingCloud is a startup with a limited breadth of services compared with the internet giants. It does not provide continuous integration or developer abstraction features. QingCloud's software development kit only supports Python. It lacks mobile application development, IoT, and FaaS and has limited application migration services.

Contenders

- › **UCloud is a competitive infrastructure player moving up the stack.** UCloud, a leading startup in the Chinese IaaS market, has broad coverage in infrastructure services, such as compute, network, and storage, with recognized availability. UCloud has also started on a journey to provide more PaaS layer services, including a Kubernetes-powered container service and serverless computing. UCloud proactively works with partners to support its cloud, big data, and AI strategy, partnering with 4Paradigm to launch a predictive analytics and ML service. Its marketplace helps enterprise customers address various business needs.

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Despite the great success of its infrastructure services business, UCloud needs to accelerate the pace of innovation of its development and application services. Some AI services are still in beta testing, and its FaaS provides neither a local testing and development environment nor a microbilling mechanism. Aside from container services such as UDocker, UHub, and CaaS, it lacks standalone CI/CD features.

- › **Ping An Technology is a new disruptor with great potential.** Ping An Technology (Ping An Cloud) is a subsidiary of Ping An Group, a leader in China's financial services industry. Having started its cloud journey in 2013 with 10 data centers in four regions in China, Ping An Cloud is accelerating its market expansion by leveraging its business knowledge and financial technology expertise in segments such as finance, healthcare, and smart cities. The vendor provides very comprehensive solutions for insurance, banking, internet finance, and healthcare on its platform and is one of the few firms in our evaluation that received positive feedback in all three customer interviews.

Ping An Cloud has a clear strategy and great ambition in the enterprise space but still has a long way to go. Many services are still in beta testing or on its road map. These include compute services for GPU and bare metal servers, NoSQL databases, data migration services, Kubernetes-based orchestration capabilities for containers, IoT services, and AI services other than face recognition.

- › **NetEase is a scenario-based service provider.** NetEase has launched public cloud services in the past two years. Key differentiators are its specific scenario-based services including a gaming platform, IM service, and customer service cloud. NetEase also offers a hosted private cloud with dedicated services and capabilities similar to those of its public cloud, especially for gaming, education, financial services, and healthcare. NetEase is one of the few players that provides good container services.

As a new player in the market, NetEase is still developing its service portfolio, so it's no surprise that the portfolio does not yet compare favorably with that of other full-stack cloud service providers. NetEase provides basic infrastructure services and currently lacks advanced services like AI, ML, CI/CD, IoT, FaaS, and application migration. NetEase declined to participate in our research. Scores are based on Forrester estimates.

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Supplemental Material

Online Resource

The online version of Figure 3 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings. Click the link at the beginning of this report on Forrester.com to download the tool.

Data Sources Used In This Forrester Wave

Forrester used a combination of three data sources to assess the strengths and weaknesses of each solution. We evaluated the vendors participating in this Forrester Wave, in part, using materials that they provided to us by June 3, 2018.

- › **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.

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- › **Product demos.** We asked vendors to conduct demonstrations of their products' functionality. We used findings from these product demos to validate details of each vendor's product capabilities.
- › **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with three of each vendor's current customers.

The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria for evaluation in this market. From that initial pool of vendors, we narrow our final list. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation. Vendors marked as incomplete participants met our defined inclusion criteria but declined to participate or contributed only partially to the evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave evaluation — and then score the vendors based on a clearly defined scale. We intend these default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve. For more information on the methodology that every Forrester Wave follows, please visit [The Forrester Wave™ Methodology Guide](#) on our website.

Integrity Policy

We conduct all our research, including Forrester Wave evaluations, in accordance with the [Integrity Policy](#) posted on our website.

Survey Methodology

The Forrester Analytics Global Business Technographics® Priorities And Journey Survey, 2018 was fielded in January and February 2018. This online survey included 20,013 respondents in Australia, Canada, China, France, Germany, India, the UK, and the US from companies with two or more employees.

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The 12 Providers That Matter Most And How They Stack Up

The Forrester Analytics Global Business Technographics Priorities And Journey Survey, 2017 was fielded between January and March 2017. This online survey included 18,277 respondents in Australia, Brazil, Canada, China, France, Germany, India, New Zealand, the UK, and the US from companies with two or more employees.

Forrester Analytics Business Technographics ensures that the final survey population contains only those with significant involvement in the planning, funding, and purchasing of business and technology products and services. Research Now fielded this survey on behalf of Forrester. Survey respondent incentives include points redeemable for gift certificates.

Please note that the brand questions included in this survey should not be used to measure market share. The purpose of Forrester Analytics Business Technographics brand questions is to show usage of a brand by a specific target audience at one point in time.

Endnotes

¹ Cloud-based predictive analytics and machine learning solution providers are one key market segment in China. See the Forrester report "[Architect Your Predictive Analytics Capability, Part 1.](#)"

Computer vision technology can automate attribute-based customer segmentation and improve the precision and completeness of the profiles of large numbers of prospective customers. See the Forrester report "[New Tech: Computer Vision Software For AI In China, Q1 2018.](#)"

² All of the large vendors in the PCDP market are full-stack platform providers. The three vendors not evaluated in this report are Grand Cloud, Inspur, and China Telecom. See the Forrester report "[Now Tech: Public Cloud Development Platforms In China, Q2 2018.](#)"

³ The eight factors include product road map, innovations produced, innovation pace, go-to-market approaches, vision, success of strategy indicated by customer adoption, marketing approach, and ambition.

⁴ For example, some vendors only have limited development services, such as databases and cache services or video services. And some vendors only have limited infrastructure services, such as compute and network services only without storage. We will exclude these vendors.

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