

Alibaba Cloud

CHINA GATEWAY 2.0

Accelerate Success in China with Alibaba Cloud

China
Gateway
2.0

Alibaba Cloud

The Second Issue

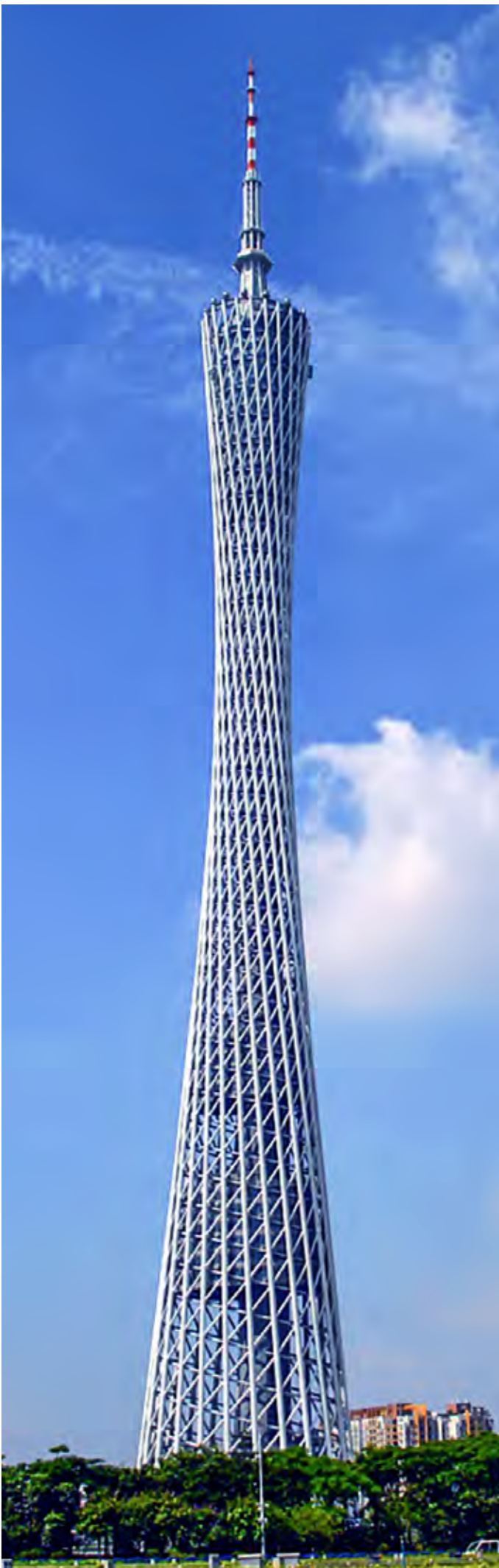
Alibaba Cloud

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Alibaba Cloud

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Globalization Restarts From China

Four months into the COVID-19 pandemic, I have resumed my business travel in China again. On my first trip to Shanghai, many businesses have gradually re-opened. The city is alive again as I noticed many international faces around.

In chaos theory, a butterfly flipping its wings in China can cause a hurricane in Texas. We are now living in a fully interconnected world, a fact that no one can deny. While some businesses, especially those in China, are gradually recovering from the disruption caused by the COVID-19 pandemic, we are working hard to help our customers adapt to the new normal and fasten their pace of digital transformation in the post pandemic world.



After several months of self-isolation and quarantine in cities that impose lockdown, the demand of consumption is now booming. More people start going out again for dinner and shopping; some are even buying luxury goods such as cars, which recorded better sales than prior to the pandemic. Looking deeper into the ever-changing economic behaviors, we found some noteworthy signs that has happened during the economic revival. Online education and communication have become more popular, many stores have changed their owners, and online businesses are more active. 3D technologies have been introduced to online businesses to create a vivid shopping experience, such as using 3D technology to help a home-furnishing company to showcase their furniture. More and more new technologies have been introduced to businesses to create many innovative models that have never seen before.

Logistics businesses have started to pick up. Now in China you can see many trucks back on the highway delivering diversified goods around the country. More and more customer demands can now be better satisfied.

I think there are many opportunities for multinational companies in China post the pandemic. For example, with cloud and intelligent technologies, a company can offer products and services that better meet their customers' requests, resume logistics capabilities, and provide tailored goods and services to meet clients' diverse demands.

People in China can benefit from the offerings from Alibaba's ecosystem. From Alipay for digital payment, Taobao and Tmall for e-commerce, Freshippo for grocery shopping, to A-map for ride hailing and Cainiao for logistics services: all of these business units are closely related with everyone's daily life. All these core platforms have been supported by Alibaba Cloud. With the Alibaba ecosystem resources and our leading technologies, we are committed to support more multinational companies to restart their business expansion in China.

Let's unite together to make a better future.

Selina Yuan
President of
Alibaba Cloud Intelligence
International Business

Accelerate Your Business Success In China With Alibaba Cloud

Are you looking at establishing a business presence in China, developing a go-to-market strategy there, or deciding how to deliver the best online experience for your customers?

Writer: Stephanie Gao, Elaine Ru

China is an increasingly hot destination for multinational corporations and SMEs alike. When they arrive, they find a highly digital and connected market boasting the world's largest and most sophisticated mobile payment infrastructure.

China is composed of huge, fragmented markets: geographically, socially, and economically. Whatever the size of your business, it is important that it not only has the capacity to cope with the demands that this creates, but also provides a cross-border network connection that seamlessly links your business in China to your headquarters, anywhere in the world.

As the innovation engine of Alibaba Group, Alibaba Cloud helps international businesses of all sizes and at different levels of commitment to adapt their operations for China. Whether companies are just dipping their toe into China by launching a lean operation with no office, or are partially committed with a few local staff – right through to companies launching a full operation, going all in, acting as

native players and thinking in a local way – Alibaba Cloud will be your best partner. Below are just a few reasons to Go Alibaba when you Go China.

Alibaba Cloud provides information technology (IT) infrastructure and Cloud computing products and services that power global businesses. It transforms the way brands engage with their customers in hundreds of countries/regions by supporting Alibaba Group's mission to make it easy to do business without boundaries.

In 2018, Alibaba Cloud was featured as a "visionary" services provider in Gartner's Magic Quadrant for Cloud Infrastructure. With an international network of 21 Alibaba Cloud regions, 63 availability zones, and 2800+ CDN nodes distributed across 70 countries and 6 continents, Alibaba Cloud serves more than 1 million customers worldwide. Its international operations are registered and headquartered in Singapore, with regional offices in Asia Pacific, Europe, the Middle East, and the U.S. These multiple locations help drive international

growth and make Alibaba Cloud a world-leading global Cloud services provider.

In mainland China, Alibaba Cloud is the largest public Cloud services provider with the most advanced Cloud network, including 10 availability zones and more than 2,300 CDN nodes throughout the country. It holds a 42.8% ¹ share of China's domestic market and provides international companies with seamless access to China through Alibaba Cloud's China Gateway solution.

Alibaba Cloud helps businesses build a stable foundation for Cloud-first strategy through a complete suite of cloud offerings. It offers a comprehensive suite of Cloud products and services, including Web hosting, data migration, storage, networking, and security, enabling innovation across several industries ranging from retail, to E-Commerce, health care, financial services, aviation, hospitality, tourism, and even manufacturing.

Enterprises are experiencing a radical transformation, implementing Big Data and Machine Learning





technologies in all aspects of their operations. But such transformation brings new types of challenges such as breaking down data silos, integrating disparate data sources, processing massive amounts of data, and building advanced analytical capabilities. All of these challenges need to be addressed.

While empowering Alibaba's own huge success in the retail sector, Alibaba Cloud has expanded these revolutionary data technologies in other industries, and has been working with many enterprises in China to accelerate their cloud adoption, fueling their transformation with data intelligence and security solutions. We enable businesses to transform the way they market, sell and operate, providing the fundamental technology to help merchants, brands and other businesses leverage

the power of the Internet to engage with their users and customers.

Even during the pandemic, China's market continues to grow. As of March 2020, there are 904 million cyber citizens in China and 710 million shopping online.² Online retail is contributing 21.4% in April, increasing 8.6% compared to March, which is a sign of recovery and possibly even new growth in consumption.³ As the economy recovers, business will begin to improve around the globe. This global economic revival will start from China, and the Chinese market represents a great business opportunity for businesses worldwide. For enterprises wishing to enter China, Alibaba Cloud is the No. 1 technology partner, enabling access and success in China's marketplace.

This issue of our E-magazine will introduce a number of case studies, showcasing the ways in which Alibaba Cloud technology helps multinationals to develop and expand in Asia. You will learn from the success stories of enterprises such as IHG, Unilever, Ford, and Schneider Electric, drawing inspiration from how they leverage Alibaba Cloud's best-in-class cloud technology and local insights to provide the best customer experience in a sustainable and global manner. Most importantly, learn how Alibaba Cloud helps them to survive and thrive on their journey to the East.

- **Technology Innovation:** Reorient your approach to doing business in ways you never thought possible. Alibaba Cloud's data intelligence solutions empower you to leverage data to gain insight into your business and drive innovation both offline and online.
- **Rich Ecosystem:** As an arm of Alibaba Group, Alibaba Cloud connects you into Alibaba's rich ecosystem in China, provides you with untapped business opportunities, and makes available a comprehensive portfolio of products and services. Alibaba Group has stood the test of time in China's complex marketplace and can help you set yourself up for success.
- **Local Expertise:** Alibaba was born and raised in China. Today, it is solidly positioned as the No. 1 cloud computing service provider in China. Alibaba knows what it takes to succeed: we are local experts in providing reliable, secure, and compliant cloud computing products and services.
- **Speed to Market:** Keeping up with rapidly changing customer demands is the key to capitalizing on emerging opportunities. Alibaba Cloud's solutions can be realized quickly, helping you turn your ideas into reality.

- 1 IDC China Public Cloud Service Tracker, 2019 Q4
https://www.idc.com/tracker/showproductinfo.jsp?prod_id=961
- 2 http://www.ce.cn/xwzx/gnsz/gdxw/202004/29/t20200429_34806998.shtml
- 3 <https://finance.sina.cn/2020-06-07/detail-ircuyvi7133711.d.html>
- 4 http://www.ce.cn/xwzx/gnsz/gdxw/202006/08/t20200608_35063461.shtml

Alibaba Cloud's Technological Capabilities

Writer: Yi Shen, Yitian Xu

Introduction:

The world is digitizing at a rapid pace as major macro, technology, and regulatory trends are mandating a shift in business to the digital edge. IDC predicts that by 2021, at least 50% of global GDP will be digitized, with growth in every industry driven by digitally enhanced offerings, operations, and relationships. During the COVID-19 outbreak, we can clearly observe this social paradigm shift: consumer activities are moving from the offline world to the online world. Especially in China, Alibaba Cloud is blazing the trail, helping businesses explore digitalization and reshape both life and work for millions of enterprises and billions of consumers.

Let's take a closer look at how Alibaba Cloud's core capabilities can help to accelerate your own Digital Transformation.

Global Connectivity

Global network connections can pose a challenge for businesses of different sizes, especially when you need to comply with strict cross-border data transfer and security regulations.

Alibaba Cloud provides cross border connectivity solutions to help enterprises face these challenges. Currently, Alibaba Cloud Global Accelerator (GA) and Cloud Enterprise Network (CEN) provide a hybrid and distributed global network ideal for enterprise users with high demands for reliable global network coverage. These products can be used to facilitate communication between different Alibaba Cloud regions or even between Alibaba Cloud and off-cloud IDCs.



IT Governance

A common headache for large multi-national enterprises is a lack of centralized governance, management, and security practices for their multiple IT teams around the world. This makes adopting the



cloud even harder for large organizations. Based on our rich experience implementing cloud solutions for large customers, Alibaba Cloud provides IT governance best practices for enterprise customers, allowing them to configure and provision a secure, scalable, automated multi-account Alibaba Cloud environment. Our system gives granular, centralized control over cloud workloads, with a consistent level of security and compliance for your enterprise cloud accounts. IT Governance is fast becoming a basic building block on Alibaba Cloud, and currently includes the following important components:

- Centralized Billing Management for Multiple Accounts
- Security Baseline
- Access Control Management with existing IdP Integration
- Multi-account monitoring and logging
- Multi-account Network Structure Standardization

Security and Compliance

Security and Compliance is becoming more critical than ever before. When choosing a cloud provider, it's important to look at their ability to provide a strong security and compliance baseline, whether your business is big or small.

Just recently Gartner released its "Solution Comparison for Native Security Capabilities" report, the first comprehensive assessment of the security capabilities of the world's several leading cloud vendors. Alibaba Cloud has recorded 11 security capabilities evaluated at the highest level (High). Among them, Alibaba Cloud received the highest score in the network security review.

Meanwhile, Alibaba Cloud is committed to the highest levels of compliance, including Germany's C5 standard, PCI DSS for payments, HIPAA for healthcare, and the EU GDPR for data protection and privacy. For enterprises looking for a soft landing in China, Alibaba Cloud offers advice and support for international companies spanning a range of industries. Our services cover everything from website hosting, online payments, and offline logistics, to ICP registration.



Cloud-native Architecture

Globally, more than 65% of enterprises have started building their Applications Strategy and Roadmap on Cloud platforms. This percentage is expected to double in 2020. Cloud platforms, such as Alibaba Cloud, are redefining the way enterprises scale their businesses. Tech-savvy enterprises are deploying game-changing technology solutions, and cloud-native applications are helping them stay ahead of the competition. The key benefits for developing cloud-native applications are:

- **Faster release cycle:** reduce go-to-market lead time; a modern cloud-native application supports DevOps processes, further enabling automation and collaboration, which was not possible in the era of local development and limited centralized server-based software delivery processes.
- **Superior customer experiences:** This gives enterprises the benefit of not having to abandon their decades of investment in legacy platforms, and instead breathe new life into those systems by extending their usage with mobile and web applications. Indeed, enterprises need to prioritize this in a world where their traditional business models are being threatened and disrupted by smaller more agile start-ups. Cloud-native applications allow you to improve customer experience for all your customers.
- **Ease of management:** Serverless computing platforms let you upload code in the form of functions, then the platform runs those functions for you so you don't have to worry about provisioning cloud instances, configuring networking, or allocating sufficient storage. Serverless takes care of it all.
- **Reduce cost:** Containers make it easy to manage and secure applications independently of the infrastructure that supports them. The industry is now consolidating around Kubernetes for management of these containers at scale.
- **Build more reliable systems:** Downtime used to be accepted as normal and achieving fault tolerance was really hard and expensive. With modern cloud-native approaches like microservices architecture and Kubernetes in the cloud, you can more easily build applications to be fault tolerant with resiliency and self-healing built in.
- **Avoid Vendor lock-in:** Gone are the days when legacy vendors issued three-year lock-in licenses for proprietary hardware and software. Today, with the proliferation of open source and cloud technologies, hybrid- and multi-cloud is becoming the norm. Enterprises typically use a combination of an on-premise data center and at least one public cloud platform. Even among cloud platforms, the conversation has graduated to enabling portability across clouds so you're

never locked into one single vendor anymore.

Alibaba Cloud-Native Applications Management Solution, powered by Alibaba Cloud Container Service for Kubernetes (ACK) and Alibaba Cloud Container Registry (ACR), helps enterprises accelerate and secure the development, deployment, and management of applications cost-effectively. It can leverage its services to achieve faster time to market, improved price-performance ratio, new innovative technology, and end-to-end security.

Middle-End Solution and Full Domain Middle-end

Middle-End Solution:

An Agile Business structure based on dual-ME (Data & Business Middle-End), and Alibaba Cloud and some of its customers abroad are starting to see the value for all companies undergoing a Digital Transformation. Like mini-programs in China mobile app space, Middle-End Solution is a product of China's fast-paced online world.

The origin of Middle Office/Middle End is rooted in the need for business agility. This is very similar to the middle office concept in investment banks. In Alibaba Group, the term middle office could refer to two different things:

- Inside Alibaba Group, there are thousands of engineers and scientists supporting the daily operations for its core E-commerce and other internet business operations. They have developed tools to help address internal data management and analysis issues. This part of Alibaba Group, which exists between the customer-facing teams and Alibaba's core technical teams, is often called the "middle office".
- Alibaba Cloud is packaging some of its internal tools and selling them on the cloud. Here the solution Alibaba Cloud provides is named "Digital Middle Office". Sometimes you may also hear this referred to as "Data Mid End", or "Data Middle End". They refer to the same underlying technology.





Alibaba's Middle-End Solution consists of a set of proven modelling, governance and application philosophies, methodologies, and intelligent toolkits that Alibaba Group has developed over the years. It is designed to help users create and manage intelligent and unified assets and empower innovation, serving as a comprehensive one-stop solution covering integration, warehousing, modelling, identity and profile distillation, asset management, and services. Alibaba's internal Middle-End Solution powers a majority of Alibaba Group business units with consistent and high-quality intelligence. Middle-End Solution based on Dataphin & Quick BI have been successfully adopted in China and overseas markets, helping enterprises leapfrog into the big data era with Alibaba best practices and tools.

Full Domain Middle-end:

Alibaba Group has released a consumer intelligence asset management center for brands, which enables brands to fully manage intelligence assets for consumer insight. It can analyze every online and offline interaction between brands and consumers. In this way, the center helps brands to continuously enhance market insights about consumer preference. Moreover, the center provides a platform for brands to independently operate, helping them optimize the consumption lifecycle management.

In essence, brands can leverage Alibaba Group resources and advertisement channels to re-activate customers, and quickly engage with their targeted audience when new products are launched.

Data Lake

In 2019, Alibaba saw the potential problems of implementing a logical data lake, which would make things very difficult for users, especially when working with large volumes of data. In addition, cloud customers have reported that they already have Hadoop systems with 200 servers and want to use Alibaba's data warehouse architecture and mid-end architecture to improve their business capabilities. That is, they want to achieve harmonious development along both lines.

Therefore, Alibaba Cloud is working on achieving "lake-warehouse integration", by fusing data warehouses and data lakes. In addition to the network connection between the data lake and the data warehouse, Alibaba also implements metadata interconnection. What this means is that, when you want to perform a JOIN on data from both sides, you do not need to create external tables, which gives huge benefits in performance, reducing the time needed to create analytics reports and manage different sources of data.

Alibaba Cloud's key mission is the same as that of Alibaba Group: to make it easy to do business around the world. Alibaba Cloud stands ready to be your partner on the journey towards Digital Transformation. Whether it's through logistics, payments, or international trade, particularly helping companies to gain a foothold in China, Alibaba Group and Alibaba Cloud are here to help.

Alibaba Cloud provides the vital technology infrastructure that powers the group's products and services. We are constantly innovating to improve both our internal and public-facing tools and discover new opportunities.

Global Application Acceleration

Definition

Alibaba Cloud Global Application Acceleration Solution is a network and application acceleration service that helps customers to improve and secure network and application access performance. Intelligent wide-area-network (WAN) infrastructure, deployed globally, enables centralized IT management to control network connectivity across large enterprises and accelerate applications over any network.

Challenge

- A poor cross-regional network experience can hinder effective collaboration and slow down internet application access.
- Enterprises need to continually secure their application endpoints while making them accessible worldwide
- Legacy network infrastructure is complex to deploy, manage, and scale for the rapid iteration of services demanded in the Internet era.

Solutions to Tackle Your Challenges

Alibaba Cloud Global Application Acceleration Solution can help you effectively solve the preceding challenges. Our solution provides superior network connectivity with global network coverage and smart traffic steering to ensure low latency transmission, optimal route selection, and congestion avoidance. Meanwhile, our comprehensive cybersecurity protection is able to protect your application against sophisticated DDoS attacks and malicious traffic. In addition, our centralized IT management platform simplifies initial network setup and ongoing management.

Problem-Oriented Features/Products



Global Accelerator



Anti-DDoS



Web Application Firewall



Domain Name Resolution



Global Traffic Manager

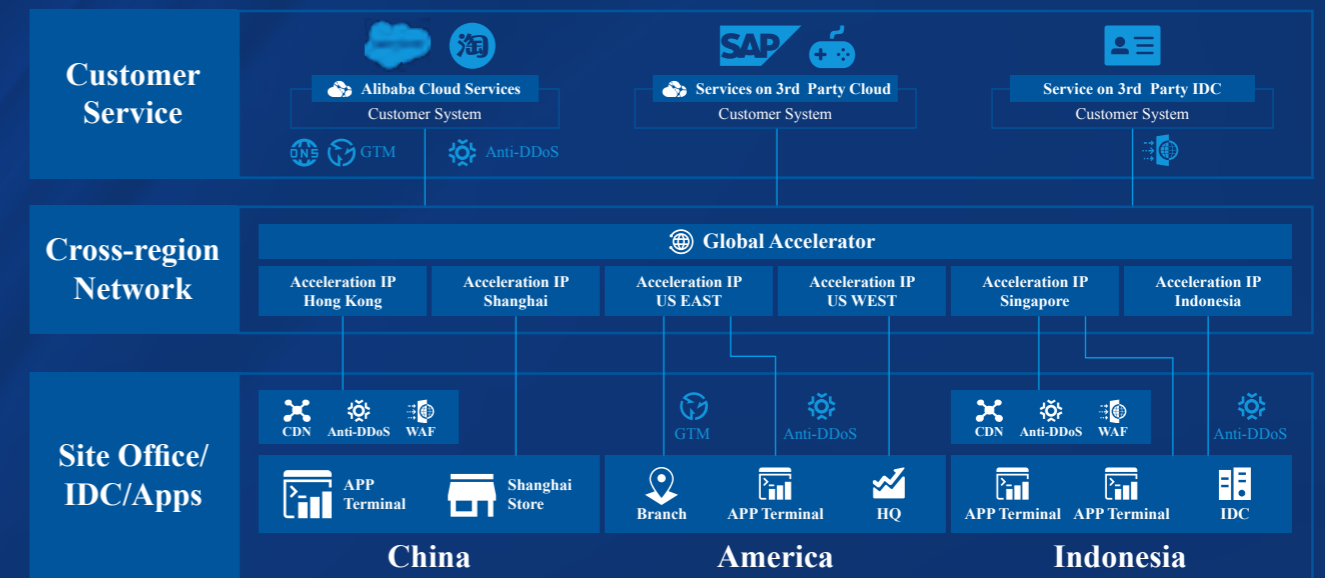


ICP Registration Support

Benefits

- Paving the Way for Latency Sensitive Applications
- Optimal Route Selection to Your Application
- Secure Your Network with Accelerated Cloud Access
- Minutes Level Deployment & Transparent Network Management
- Best Practice in Mainland China

Use Cases



Scenario 1: Accelerate Websites, Mobile Apps and Application Services

A smooth and friendly user experience for your website, mobile apps, and applications are key to customer satisfaction, especially for e-commerce, finance, aviation, hospitality, media and education industries. Delays can lead to a dramatic bounce rate increase. By adopting Global Application Acceleration, you can quickly and securely access multiple VPCs and regions. Alibaba Cloud can accelerate your global network by deploying acceleration nodes around the world regardless of domain name location.

Scenario 2: Enable Cross-region Enterprise Collaboration

For MNCs to realize cooperation between remote staff, video/audio conferences, office automation (OA), and telecommuting are adopted to improve work efficiency. Alibaba Cloud Global Application Acceleration Solution offers a network and application acceleration service for leading enterprise applications that include Microsoft Office 365, Salesforce, SAP, Workday, G-Suite, and Zoom with enterprise-grade reliability and high service availability.

At Your Service, As a Service

Thanks to Alibaba Cloud, IHG found the secret ingredient to scaling success in Greater China and beyond.

Writer: Elaine Ru, Kimmy Yip

In hospitality, what moves, motivates, and inspires customers matters. When you get it right your customers will stay loyal; if you fail to meet customer expectations, they will leave.

At the premium end of the industry, customer experience is the only thing that matters. It is the reason why global hospitality brands invest so much in creating the ultimate branded experience. The InterContinental Hotels Group understands this intimately.

Steven Zhong, vice president for hotel and owner solutions, IHG Greater China knows that what keeps the Group's over 6,000 hotels and nearly 900,000 rooms occupied is not just price and location alone. This matter, but with stiff competition from sharing

companies like Airbnb and budget hotels, they need to define a completely novel experience and make it theirs.

They have succeeded, which is how IHG has grown so quickly. By the end of 2017, the Group opened 328 hotels in China, which is now their fastest growing market. With 300 more in the pipeline, it makes the Greater China region the second largest market for IHG.

Part of the IHG promise lies in a clear understanding of what makes their loyal and paying customers return. That understanding comes from data, which is why "technology is very important for our business," says Zhong. It helps them to create their own "best-in-class service."



Service from the cloud

While IT proved to be a useful tool, IHG's growth created problems. The biggest of these was rising IT costs, which were eating into their operational budget. Next, the growing reliance on IT saw Zhong's team spend more time operating and maintaining their infrastructure.

"I first joined IHG in 2014. Back then I handled all our data and infrastructure needs on premise. We used to spend tons of time in IT infrastructure maintenance," he adds.

Zhong needed to find a smarter way. He got his chance when he took on the role of vice president. He turned to Alibaba Cloud to build an agile infrastructure that grew with the business, and didn't constrain it with high costs and high IT workloads. He hasn't looked back since.

The combination of Alibaba Cloud Elastic Compute Service and Cloud Enterprise Network offers an infrastructure that scales to meet business needs.

No more pre-planning, three-year capital expenditure forecasting or additional man hours spent on O&M tasks. Instead, Zhong and his team only needed to spin up the instances they needed and pay for them as needed on a Pay-As-You-Go model.

Privacy is a key concern in hospitality, which runs on trust. A single outage can break this trust and create customer churn. So, Zhong employed Alibaba Cloud's flagship security product Security Center. It identified, analyzed, and alerted IHG in real time of any potential

threats. Meanwhile, ApsaraDB RDS for MySQL kept response times consistent and as high as on-premises solutions.

Beyond China

The combination of innovative products and attentive professional service ensured that Alibaba Cloud's solution exceeded expectations. With hospitality options and rival offerings only a swipe away, Zhong knew that he needed to maintain the interest of his guests.

"With this partnership with Alibaba Cloud we are using their database and network security product along with their enterprise service to improve our IT operations efficiency and security. This will help us concentrate more on the customer service, which is the core value of our hospitality," he says.

But he is not just stopping within China. With CEN and Alibaba Cloud Smart Access Gateway (SmartAG), he is looking to replicate IHG's China success across the region.

Which is why Zhong does not see Alibaba Cloud as another vendor. "Choosing Alibaba Cloud is not only choosing a product. We really work together as a business partner because Alibaba Cloud is also a pioneer in the digital transformation," he says.

It is this pioneering spirit which will continue to cement IHG's success.



The Journey To Reinvent Car Buying Experience

How the Alibaba Cloud helped Ford create a unique buying experience in only six months.

Writer: Elaine Ru, Calvin Deng

The Chinese love to drive.

It has spurred an industry that fuels more than US\$1 trillion in revenue each year. Today, the Chinese automobile industry is equivalent to 10% of China's manufacturing output and employs more than 40 million in China, either directly or indirectly.

Ford wanted a piece of this action. Known for its appetite for reinventing industries, it single-handedly changed manufacturing by inventing assembly lines. The company wanted to make new inroads into the lucrative Mainland China market.

But the global automobile giant faced an immediate roadblock: the Chinese buy differently. Appealing to a digital-savvy population required a restructuring of their sales strategy.

“Chinese customers are younger and more digitally savvy. They want smarter technology inside the vehicle, and they want better digital experiences throughout the entire shopping journey to make their lives easier,” says Robert Hou, director of mobility platforms and products at Ford Asia.

Ford wanted to create a unique digital mall that made buying cars as simple as purchasing groceries online. To architect such a value proposition, it decided to team up with Alibaba Cloud.

Starting the engines

To bring the Ford Mall concept alive, Ford needed to turn the ignition on creating a brand new consumer channel.

Alibaba's own experience with Tmall served as the blueprint. Under the hood was the Alibaba Cloud Elastic Compute Service (ECS), which offered a scalable platform to create a unique buying experience. Meanwhile, the Server Load Balancer (SLB) balanced network traffic peaks to make the platform run smoothly. The China Gateway offered Ford a smooth ride into China's competitive consumer landscape.

Cloud-powered Ford Mall was also a two-way street. Moving in one direction are consumer requests for online bookings for test drives and specific questions on a model. In the opposite lane, Ford was using an interactive platform “China Gate” to pair customers with the most appropriate dealers.

The interactive mall concept took off fast. After only six months of creating the consumer channel from scratch, the site was experiencing huge traffic and booming sales. “Since it launched in September, we are seeing a significant increase in online traffic driving 7,000 units of vehicles in sales,” says Hou.



Reinventing the in-car experience

Ford was not done yet. It is now shifting gears by bringing the online experience into the car. By combining YunOS, the IoT operating system developed by Alibaba Group, and Transportation Mobility Cloud (TMC), the company is creating a unique branding experience through a smart in-vehicle infotainment system. TMC is an open cloud-based mobility platform that provides data and infrastructure for developers to build value-added software programs for connected cars.

The 2019 Ford Kuga is one example of what is possible where the offline and online experience are melded together. “The 2019 Ford Kuga features a brand-new smart in-vehicle infotainment system powered by YunOS. The system has many cool features such as natural language understanding and remote-control features,” says Hou.

Part of the effort also saw Ford-owned subsidiary Autonomic bringing TMC to China through a partnership with Alibaba Cloud. Developers used TMC to create China-specific applications that can, for example, help residents plan transit journeys, ride-hailing businesses to manage a large-scale fleet, and discover less congested routes for self-driving cars.

“We are very impressed by its technical capability, including flexibility and scalability. The Alibaba Cloud technology also allows us to integrate with the rest of the Alibaba Cloud ecosystem and helps us better connect with Chinese customers,” says Hou.

Switching lanes to future innovation

Ford is currently taking the fast lane to the China automobile market, thanks to Alibaba Cloud.

The automobile is also evolving fast. Changing tastes and shifting business landscapes after COVID-19 pose immense challenges for Ford.

“Our partnership with Alibaba Cloud will enable us to deliver for China, in China, and at China speed,” says Hou.



Powering Electric Dreams In The Cloud

How Schneider Electric switched on global power grid management.

Writer: Calvin Deng, Elaine Ru

In utilities, absolute reliability is a must. After all, when you switch on the light, you expect the bulb light up almost instantly.

It speaks to how far we have come in terms of dependable power grids. Part of this promise of reliability is made possible by companies like Schneider Electric. Their energy management solution, Remote Energy Management (REM), ensures that you get the power you need without creating brownouts and blackouts.

However, the electricity market is changing. According to a Deloitte article titled “2020 Power and Utilities Industry Outlook,” power infrastructure is in need of an upgrade. While renewables surpassed coal-fired plants’ share in the U.S., the same is not true across the Asia Pacific region.

Decarbonization is also becoming a rallying point for the industry while many players look towards a clean energy transition. Meanwhile, the development of smart cities and the use of electric



vehicles are taking an increasing toll on the power grid.

To survive, utility companies and their related vendors are looking to explore new business models. For Schneider Electric, this meant moving their flagship REM to the cloud.

Turning on cloud power

Moving to the cloud is a watershed moment in Schneider Electric’s digital transformation efforts.

The top 500 company has built its legacy on electricity distribution and automation management second to none. Disrupting the status quo with a cloud-based model was never going to be a simple decision.

But Schneider Electric had to, for two reasons: REM analyzed data to make electricity management decisions and energy models for forecasting. But in today’s grid, power companies are often interconnected and require near real-time data to decide lightning fast.

To achieve that, the company needed space — more space than what its data centers could ever provide. Naturally, cloud became the choice of destination.



Another reason is market penetration. Schneider Electric saw a potential in China’s rising prosperity and consumption. But it needed to be interconnected with a cloud player who understood the hurdles involved in entering and operating in the Chinese market.

Enter Alibaba Cloud.

Gridlocked

While Alibaba Cloud's Elastic Compute Service (ECS) provided the scalability, low latency and security Schneider Electric needed, it was its ease-of-use that won it over.

Schneider Electric's IT team could deploy massive clusters of ECS instances with a few clicks via an intuitive console. Multiple instances can process different datasets to speed up analysis.

Granular control helped the company to manage its compute resources more efficiently. So, when a certain part of its grid is facing peak usage, it can spin up new instances or allocate more resources where they are needed.

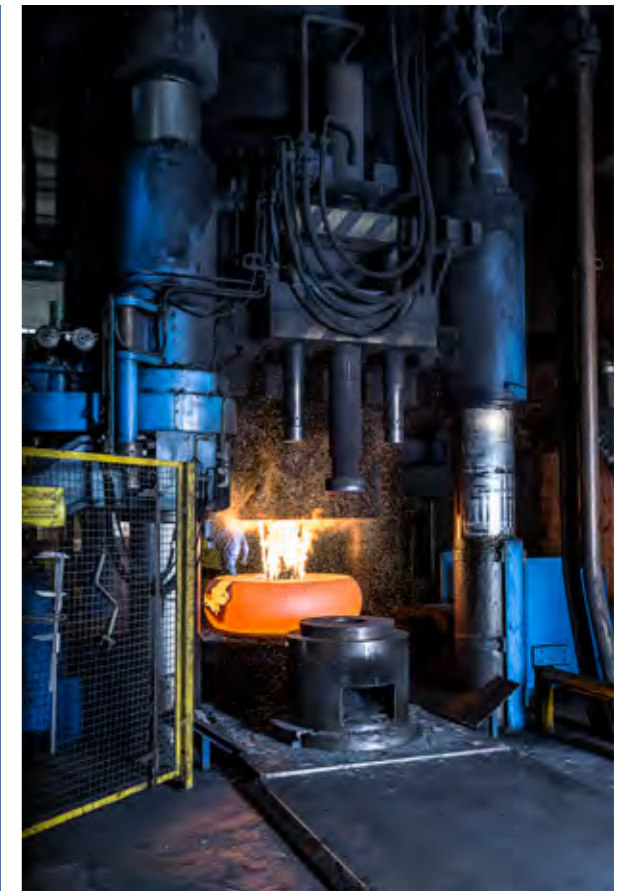
Besides an industry-leading SLA, Alibaba Cloud also offered a single location to process energy consumption data. This single source of truth was vital for REM to make accurate decisions in an instant. The unique K-V data method also ensures that data with a variety of unique structures can be queried together.

Alibaba Cloud's Server Load Balancer guarded REM's reliability promise. It monitored and directed traffic to the company's clusters and maintained an even distribution of load across each cluster. It also made sure that single points of failure (SPOFs) were a thing of the past.

Harnessing energy

Today, Schneider Electric is no longer the traditional equipment provider it once was. Rather, it is expanding its footprint as an innovative online service provider with Alibaba Cloud click and deploy infrastructure powering its ambitions.

Its REM runs on a stable global cloud network that interfaces with major markets. More importantly, Alibaba Cloud helped the company to enter the Chinese market and usher in a new era of cloud-based energy management.



Digital Transformation Best Practice From Traditional To Cloud

Writer: Jans Wei, Qiyang Duan

Over the last ten years, we have witnessed a dramatic shift in technology from traditional databases to diversified, single purpose, massive scale big data platforms. During this wave of big data technology, Hadoop technology (including MR, HDFS, SPARK, and HIVE) had quickly surged in almost all enterprise data centers but then given ways to those managed Hadoop services on the cloud. The database technologies are also reinvented with big data demands.

Alibaba has built advanced database technologies along the massive “de-IOE” (a-decade-of-evolution-of-alibabas-databases) movement [1]. Those internet giants in USA also had very similar process [2] to upgrade their stack for the ever-growing big data requirements.

One of the remarkable results of Alibaba’s digital intelligence journey is its Digital Middle Office.. Another equally unique concept in China are the Mini-Programs on the mobile domain.

In Sep 2019, Alibaba announced its middle office strategy in investor day meeting as three middle offices — Business, Data and AI. In this article I focus primarily on the digital middle office.

The origin of Middle office was in fact about business agility. This is very similar to the middle office concept [3,4] in investment banks. In Alibaba group, the term middle office could refer to two different things:



- Inside Alibaba group, there are thousands of data engineers and scientists supporting the daily data operations for its core e-commerce and other internet business operations. They have developed tools to solve their own problems. This organization named middle office.
- Alibaba cloud is packaging its internal tools and selling them on the cloud. Here the solution is named “Digital Middle Office”. Sometimes you also hear a term “Digital Mid End”, or “Digital Middle End”. They mean the same solution on the cloud.

So, what does middle office mean to the big data world? It includes two parts:

- First of all, it should be a comprehensive and powerful big data platform on the cloud to enable all the essential data analytics and machine learning functions.
- Secondly, it is a DataOps framework to assemble all those independent tools into one integrated environment.

Turning on cloud power

People have been dreaming about a single source of truth for a long time. However, it was never really accomplished from any large organization, due to both technical difficulties and the natural political struggle inside an organization.

Many companies can build a complete big data system when they have enough budget. Data may be collected into a single place. However, simply because the system is on-premise, it becomes a luxury to have the necessary agility to adapt to the variety and velocity of big data business. Common problems are how to get new APIs, new libraries, new server capacities, etc. Life is short, and we shouldn’t waste time on basic tedious things.

Alibaba offers mainstream intelligent tools to support all data usage scenarios. You can use those tools to build up your own solution:

- Large Scale Batch Processing: Alibaba has Maxcompute for PB-level database, Analytical DB for online queries which demands MPP databases and EMR for Hadoop ecosystem.
- Real Time processing: Alibaba acquired Flink and offers this framework as a managed service.
- Machine Learning: PAI Platform. Personally, I am more in favor of the notebook service DSX.
- Data Visualization: QuickBI, DataV.

Leveraging recent hardware advances (like the RDMA and SSD), Alibaba has built products with a state of art architecture[5]. As a result, recently released Alibaba AnalyticDB has set a new record for TPC-DS benchmark, beating its own previous record by Elastic Map Reduce (EMR).

Sponsor	System	Scale Factor	Performance (QphH)	Price/QphH	System Availability	Date Submitted	Withdrawn	DB Software Name
Alibaba Cloud	Alibaba Cloud AnalyticDB	30,000	5,057,263	1.46 CNY	5/20/2020	5/20/2020		Alibaba Cloud AnalyticDB for PostgreSQL 6.0
CISCO	Cisco UCS C480 M5 Server	30,000	1,278,277	0.94 USD	11/4/2019	11/1/2019		Microsoft SQL Server 2019 Enterprise Edition 64 bit
CISCO	Cisco UCS C480 M5 Server	10,000	1,651,614	0.71 USD	4/2/2019	4/2/2019		Microsoft SQL Server 2017 Enterprise Edition
CISCO	Cisco UCS C240 M5	3,000	1,029,593	0.47 USD	6/12/2018	6/12/2018		Microsoft SQL Server 2017 Enterprise Edition
DELL	Dell PowerEdge R6415	10,000	8,667,578	0.10 USD	7/9/2019	7/9/2019		EXASOL 6.2
DELL	Dell PowerEdge R6415	3,000	6,053,020	0.07 USD	7/9/2019	7/9/2019		EXASOL 6.2
DELL	Dell PowerEdge R6525	3,000	7,696,073	0.07 USD	10/22/2019	10/18/2019		EXASOL 6.2
HP	HPE DL325 Gen10	1,000	3,635,443	0.06 USD	8/26/2019	7/31/2019		EXASOL 6.2

Benchmark Stats	
Batch ID:	120052001
Batch:	Result In Review
Report Date:	05/20/20
FPCPI Max:	2.18.0
System Information	
Total System Cost:	7,343,841 CNY
Performance:	5,057,263 QphH@3000GB
FPCPI/Performance:	1.46 CNY per QphH@3000GB
FPCPI Energy Price:	Not reported
Availability Date:	05/20/20
Database Version:	Alibaba Cloud AnalyticDB for PostgreSQL: 6.0
Operating System:	Alibaba Group Enterprise Linux Server 7.2 (Paladin)
Server Specific Information	
CPU Type:	Alibaba ECU virtual CPU
Total # of Processors:	576
Total # of Cores:	3520
Total # of Threads:	3520
Cache:	Yes
Load Time (hours):	9.71
Total Storage (Diskless-Spec):	1.86

On Artificial Intelligence, Alibaba also set a new record on DAWN Deep Learning Benchmark (DAWNBench), on its own Cloud. Apart from this, PAI also offers a full set of tools covering drag-and-drop GUI, Notebook, traditional algorithms (RF, SVM, etc) and deep learning frameworks.

Flink and DataV are quite special breeds for dealing with their own specific problems like real time processing and large screen dashboard. (like the one from 11.11).

Though those technologies deliver better performances than other cloud vendors, functional wise, you may still find counterparts in most other cloud vendors. The overall technology stack does not yet look too different from the rest. What's the special ingredient to differentiate itself from other data processing platforms? The answer is data governance and DataOps.

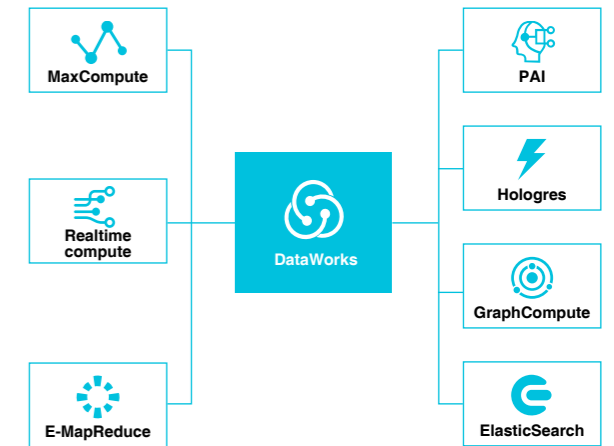
Data Governance and DataOps Framework

Data governance is a broad topic, including data quality, security, and lineage. You may find a list of vendors in Gartner Quadrant 2019. Normally data governance tools are provided from a third party, instead of the data platform vendors like Teradata, Oracle, or more recently those cloud vendors.

When you have your big data development team working in one environment and data governance team in another, it simply won't work. Under this governance setting, people tend to believe their systems look like this:



In fact, under the cover, it often looks like this:



DataWorks was born out of Alibaba's own data analytics daily development and operations. It is being used by those "Middle Office" organizations inside Alibaba group. On the cloud, DataWorks enables DataOps by integrating with different data engines on Alibaba cloud, including MaxCompute, and EMR.

With the DataOps framework and a full spectrum of intelligent tools, Alibaba cloud can help customers build a data intelligence platform to support business innovations through an agile development process. Through this framework, you are also copying Alibaba's internal development best practices, and avoiding lots of pitfalls Alibaba went through along the big data journey.

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5. <https://dbdb.io/db/polardb>

Do you see similarities between those cables and your complex data relationships?

Alibaba's answer to this problem is a fully integrated DataOps environment: DataWorks. It offers native tools to deal with typical problems in developing and operating an enterprise data platform. To name a few:

- How to manage the data asset to enable everyone to see what they see?
- How to orchestrate thousands if not millions of daily ETL jobs? And more importantly, who is responsible for which part when it goes wrong?
- How to ensure good Data Quality?

Alibaba Cloud and Fortinet Jointly Innovate to Secure Business' Journey to Cloud

Writer: Sean Hong, Lynette Lioe

The face of work is set to change as the world recovers from the COVID-19 pandemic. Remote work has become the new norm for near future as many organisations are allowing staff to work from home for an extended period. In the education sector, distance learning may even become mainstream. Such unexpected spikes in demand for teleworker/remote learning solutions overwhelmed organization's traditional on-premise network, especially for industries such as healthcare, government and education. However, it is important to enable remote access services in a way that does not introduce unjustified operational overhead, business risk or security threats.

Public cloud is an attractive solution to maintain business and operational continuity. Remote-learning and other remote productivity solutions can leverage hyper-scale resources of providers

such as Alibaba Cloud to ensure low latency that provides users with an optimal experience. With Alibaba Cloud, cost-effective cloud resources can be accessed on-demand with great flexibility for reliable performance across regions.

In adopting cloud for business, organizations also need to create a cloud security framework, so that digital innovations do not result in increased business risks. Verizon's 2020 Data Breach Investigation Report shows that 77% of cloud breaches involved breached credentials, so multifactor authentication is important to ensure verified access. As with agile development strategies, the allocation of security resources to inspect traffic or respond to a threat needs to be instantaneous. This can be a complicated process in the best of times, let alone when expediency is so critical.

These are mammoth tasks, but take heart. Alibaba Cloud and Fortinet have been working together to integrate more tightly to ensure that organizations' journey to the cloud is even more secure.

Now, Alibaba Cloud's customers can access a broader range of Fortinet security offerings such as the award-winning FortiGate Next-Generation Firewall (NGFW) that is natively integrated with Alibaba Cloud for seamless rollouts and end-to-end security. Alibaba Cloud's security functionalities can also be managed through the Fortinet's security management toolsets to streamline security operations. This will allow uniform policy enforcement, centralized event correlation and management, and coordinated threat response. This expanded partnership gives organizations stronger confidence to expedite their digital innovations on Alibaba Cloud.

This close collaboration between Alibaba Cloud and Fortinet was keenly felt during the COVID-19 pandemic. With air travel banned, international

students were unable to return to Australia and up to 100,000 undergraduates in China required access to online learning platforms such as intranet portals and live streaming to classrooms. A rapid response was vital to smoothly enable remote learning; there was a critical need to swiftly scale up network infrastructure to ensure low latency and high reliability streams.

Within just a couple of weeks, Alibaba Cloud and Fortinet successfully rolled out an innovative remote-learning solution to a dozen Australian universities, enabling thousands of students to connect securely to the campus network and access online learning content. The joint solution leveraged the power of the Alibaba Cloud infrastructure which has extensive coverage connecting China and Asia Pacific, as well as superior technologies of Fortinet's FortiGate firewalls with secure connectivity. This cloud-based solution was designed to scale up and out to instantly align with universities' dynamic demand. It also provided flexible options to support wide



range of Bring-Your-Own-Device (BYOD) scenarios, so the students could use their own personal computers, tablets or even mobile phones, with the same optimal user experience. In addition, Fortinet and Alibaba Cloud sales and support teams in the field also worked hand-in-hand with universities to ensure a fast and smooth service rollout in an unprecedented short timeframe.

Elsewhere, Sodexo and Fung Group also are among the global customers leveraging Fortinet's cloud native integration with Alibaba Cloud to secure their hybrid cloud environment. Sodexo is one of the world's largest MNCs handling food services and facilities management, with a presence in 80 countries. Sodexo is using



Fortinet's FortiGate-VM to deploy secure multiple Virtual Private Clouds (VPC) on Alibaba Cloud, effectively aggregating and securing its globally distributed infrastructure. Fung Group is a supply chain and logistics conglomerate that is also taking advantage of the tight integration with the deployment of the FortiGate-VM on Alibaba Cloud, which enables consistent visibility and security management across its cloud environments.

Organizations are looking to take advantage of the agility and scalability that cloud environments offer without compromising security. Alibaba Cloud's extended collaboration with Fortinet addresses this concern as it leverages Fortinet's breadth of cloud security offerings that are part of the Fortinet Security Fabric. These joint solutions are cost-effective, have the flexibility to be modified for future needs and can be rapidly deployed to ensure maximum uptime for the business. Fortinet has a dedicated team for integrating security solutions to Alibaba Cloud, so customers can always access the most updated security for their cloud deployments.

Fortinet is proud to be the first batch of security solution partners to clinch a global marketplace listing agreement with Alibaba Cloud to operate a pay-as-you-go (on-demand) model. Fortinet's cloud security solutions are available on Alibaba Cloud Marketplace or can be purchased from a Fortinet channel partner providing customers with the flexibility of purchasing only on demand or owning a license that is transferrable across platforms.

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