

Silver Lining in Cloud War

The govt's push for data localisation means growth for the already-profitable cloud business of global tech majors' local units. Here's how Amazon, Microsoft, Google, Oracle and others strategise as competition and fat margins happily coincide

Shelley Singh

We were born in the cloud." That's how Rakshit Daga, vice-president, engineering, BigBasket, sums up the Bengaluru-based grocery provider's technology backbone.

Ola, MakeMyTrip, Hotstar, L&T, Titan, PolicyBazaar, Delhivery, Yes Bank and thousands of others — the list of companies, both young and old, relying on cloud technology to scale is long and growing by the day. Cloud comprises different types — including infrastructure as a service and software as a service — which operate at different layers of IT systems (see table) that IBM, Amazon, Google, Oracle and others offer.

The concept of cloud is not new, but has come of age now, with cloud service adoption at a very fast pace. The potential of cloud business in India is clear — Gartner forecasts that the India public cloud revenue will grow at 37.5% in 2018 to \$2.5 billion, up from \$1.8 billion in 2017. At present, less than 10% of the technology infrastructure is on cloud, providing huge potential for growth.

Globally, the big boys of technology are already reaping the benefits. Last quarter, Microsoft's performance was turbocharged by cloud. Amazon reported 27% operating income from its cloud business Amazon Web Services (AWS), which accounts for less than 15% of the e-commerce giant's revenues.

Sunil Gupta, president and executive director, Netmagic, claims that earnings before interest, tax, depreciation and amortization (EBITDA) for the cloud layer can be as high as 35-40%. "Cloud adoption is increasing crazily," he adds.

Rama Ganesan, chief technology officer, Portea Medical, says, "AWS became profitable ahead of its parent Amazon.com thanks to cloud. The business is very profitable for vendors."

DATA HIGHWAY IN YOUR SKY

From startups to stodgy brick-and-mortar companies, India's cloud cover could expand once the Parliament gives its go-ahead to recommendations by a BN Srikrishna-led committee on data protection framework that insisted on data localisation. According to an analyst who wishes not to be named, the impact of the Srikrishna panel report is already visible — a local cloud provider has sold 100% capacity even before having launched services.

Also, the Reserve Bank of India's (RBI) diktat — that payment providers should host data locally — will ensure greater demand for cloud. Sensing an opportunity, the players are moving in.

Last month, One97 Communications, parent entity of Paytm, announced the launch of its artificial intelligence cloud computing platform, Paytm AI Cloud for India, for developers, startups and enterprises. Paytm explicitly men-

What's Expanding Cloud Cover

Govt push for data localisation
Better economies of scale; pay as you use models

Doubts on reliability, scalability, security put to rest

Startups born in the cloud; brick & mortar companies moving to cloud to focus on core and cut costs

Less than 10% workloads on cloud; plenty of headroom for growth

tioned that it will process and store all consumer data in servers located only in India while conforming to the highest security and privacy standards. "We have always ensured the highest standards of customer data privacy and security. Our customers' data is processed and stored locally in India with no access to any third party or investors," assured Sujit Kumar Mishra, vice president, Paytm.

Yes Bank is moving information on cloud in India in sync with regulatory requirements. Anup Purohit, chief information officer, Yes Bank, says, "We are availing cloud services from Azure in India and AWS as well. As per our revised strategy and regulatory guidelines, we are working towards moving all overseas cloud having customer information to India."

"Cloud is becoming the new normal," says Navdeep Manakata, head, business development, Amazon Internet Services. AIS is the Indian subsidiary of the Amazon Group, which sells AWS cloud services in India. AWS, which had a head start over rivals such as Microsoft and

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RAMA GANESAN Chief technology officer, Portea Medical

Google globally, begun offering cloud in India in 2016.

Shailender Kumar, regional managing director, Oracle India, adds, "The beauty of cloud is that it's a great equaliser. From mid-sized companies to startups, it can help change growth orbits using the same enterprise-grade solution that a large company is using." In India, Oracle works with 15,000 customers, including Taj Hotels, Adidas and SBI.

Leading smartphone maker Xiaomi has already initiated shifting local users' data to cloud infrastructure of AWS and Microsoft Azure located in India, from servers in Singapore and the US, becoming the first major smartphone maker to initiate such a migration amid the ongoing debate on information security. Fellow Chinese peers Oppo and Vivo plan to follow suit.

SEARCHING THE SKIES

There are broadly two types of companies going on the cloud. Internet-centric enterprises (ICE) such as BigBasket, Ola and Flipkart that were born in the cloud and non-ICE brick-and-mortar companies moving applications, including analytics, customer management, marketing, on to the cloud. So what's changed in the 18-year-old technology that has all types of users lining up?

Nitin Bawankule, director, Google Cloud India, says, "There were a lot of doubts earlier on reliability, scale, security. Those have been put to rest. There's clear growth."

Some of the logic for cloud is the same as for any IT outsourcing deci-

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SHAILENDER KUMAR Regional managing director, Oracle India

sion — if it's not core, ship it out. Besides, companies would rather strengthen core business than hire engineers to keep IT running, a task best left to specialists. That's what driving manufacturing, healthcare, retail and such companies to go for cloud.

Over the last 15 years, all Google products have been running on cloud, including mail, YouTube and search. Amazon took external what it built internally to run Amazon.com, the e-commerce platform, offering it as AWS since 2006 globally and from 2016 in India. Microsoft and Google started offering cloud after AWS though Big Blue IBM claims an even earlier start — setting up a cloud data centre in Mumbai in 2014. Cloud accounts for 23% of IBM's global revenue, up from 10% four years ago. Globally Oracle has 25,000+ cloud customers and processes 61 billion transactions every day, managing 1,025 petabytes of data — around as much content as 60 million movies. And Alibaba is the latest cloud entrant, starting in India in early 2018.

Bawankule believes only 5-10% of workloads in India have moved to cloud, leaving plenty of headroom for growth. He explains that if a large media company is to do everything inhouse, it might need 10,000 servers and 100 cloud engineers. Managing infrastructure, networking, cooling and overall maintenance to ensure 24x7 operations with zero downtime is a huge challenge. It can also distract the company from its core business.

Truecaller is relying on Google cloud to block spam messages. NoBroker.com, a Bengaluru-based realty search portal that connects flat owners and tenants, is using Google vision API to identify rooms and freeing up 12% staff for other tasks. Bajaj Electricals took just three weeks to build a digital assistant called Bajaj Paddy using Oracle Mobile Cloud. The chatbot allows users to report broken appliances, schedule appointments, request for demos and so on.

Ganesan of Portea — which uses AWS, NextGen and Netmagic — says, "Familiarity among companies,

ease of use and the ability to launch services fast is attracting users to cloud."

CLOUDS CAN HELP

Apart from shortening time to market and helping companies focus on the core, cloud services help customers balance workloads and pay only for resources they use. For example, there may not be an Ola cab or Swiggy food delivery between midnight and 4:00 am; they could be doing data analytics at the time and accordingly shift workloads from taking live orders to analysing data.

BigBasket needs 80-200 servers (orders spike on weekends) of various sizes and generates 100 terabyte of data every month. In 2017, it migrated from AWS Singapore to Mumbai — reducing latency and improving customer experience.

HungerBox, a B2B food-tech startup, offers digital cafeteria management solutions and works with 75 corporates across 10 cities, including Accenture, Mercedes, Boeing and signing up new ones like Cognizant in the coming weeks. HungerBox does an average of 225,000 orders a day. Kaustubh Fule, its chief product officer, says, "We work in diverse client environment and systems. Without external cloud, it wouldn't have been possible to be up and running across companies so fast and manage different workloads — for breakfast, lunch and dinner." That management of real time IT is done on cloud.

Billing by cloud vendors is also unique. Ballpark billing can be 40 paise per hour for 0.5 gb of cloud space and billing is done in seconds and even slices of milliseconds. For instance, 40 GB hard disk space, 1 GB memory one core processor and 1 TB of data transfer can be rented for as low as \$5 per month.

Apart from hardware access, cloud vendors like AWS offer more than 125 services, including AI, machine learning (ML), sentiment and data analytics, for which companies pay as per usage. Margins of providers improve with more sophisticated services, such as AI to tap new customers or markets.

Amit Kumar, cloud leader, IBM India/South Asia, says, "IBM offers both high value and high opportunity (services). You can test emerging technologies like Blockchain and even our quantum computer on our cloud (though

testing on quantum is free at present)."

Ola has partnered with Microsoft to build a new connected vehicle platform. "Microsoft will be a preferred cloud provider and will use Microsoft Azure to power Ola Play, the company's existing connected car platform," says Rajesh Rege, lead, cloud and solutions group, Microsoft India.

Microsoft estimates that move to digital is a \$100-billion opportunity in India — and that includes cloud.

DARKENING HORIZON

Vendors have to keep the lights on all the time to keep the cloud updated. For example, Netmagic, which was acquired by Japan's NTT in 2012, has built nine cloud data centres and consumes 150 MW every year, electricity that could run a small township.

Its Mumbai centre, with a 4,000-rack capacity, alone consumes power worth ₹50 crore a month and the company stores four lakh litres of diesel at any time to provide backup in case the grid fails. Netmagic's Gupta says, "Offering cloud is profitable, but running is easier said than done. Permission for the diesel tank itself took one year. There are hundreds of mission-critical client apps that have to run without a hitch."

Gupta feels the government too will emerge as a very large cloud user driven by Digital India. Today, goods and services tax, passports, land and property records are all going digital and being stored in clouds.

It's a pleasant change for technology companies that have, for long, claimed India not to be a great market to make money. With everyone — from startups to government departments — plugging into the cloud, it's raining money for global giants in India.



Cloud Types

Different Clouds Operate at Different Layers of IT Systems

India public cloud services revenue (\$m)			
Cloud	2017	2018	2019
Business Process as a Service (BPaaS) Example: Bill payment services	102	129	155
Platform as a Service (PaaS) Example: Enables mobile apps to work	143	191	243
Software as a Service (SaaS) Example: Frontend apps like Uber, YouTube	694	932	1179
Cloud management & security services Example: Security systems	157	201	249
Infrastructure as a Service (IaaS) Example: All servers/storage	693	1008	1364
Total Cloud Business	1789	2461	3190

Source: Gartner



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