The public cloud – perfect for 5G India

5G is written to a cloud-native standard, so all Telcos have the chance to instantly move to launch 5G services by using the public cloud

BY DANIELLE ROYSTON

India's 5G auction closed August 1, with four telcos spending a record-breaking INR 1,50,173 crore to get in on the game. Now, the race is on. Reliance Jio is out of the gate first, having spent INR 88,078 crore for 24,740 megahertz of airwaves—and then announcing it would launch 5G service in Delhi, Mumbai, Chennai, and Kolkata by Diwali in late October 2022, followed by a nationwide rollout of a 5G standalone (SA) network by the end of 2023.

That takes some bravado, and leaves everyone wondering what the other telcos in India are going to do to match them. Thankfully, 5G is written to a cloud-native standard, so now these Telcos have the chance to keep up by using the public cloud.

After all, elsewhere around the world, Telcos are already on the 5G highway. Just look at the biggest hyperscaler partnerships happening globally. Vodafone

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has signed a strategic partnership with Google to move all of its on-premise analytical workloads to Google Cloud. Last year, AT&T sold its network cloud business to Microsoft, which is refactoring it to run natively on Azure. And then the news that rocked the industry: the move by US company DISH to go all in on the public cloud, building its entirely new 5G network on Amazon Web Services (AWS).

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Scale & Price – benefits of Public cloud

The public cloud is perfect for India for two reasons: it can provide the scale required for the large Indian market at a low price – which is ideal to sustain the low average revenue per user (ARPU) recoveries.

In terms of scale, India is huge. Home to 1.4 billion people and a billion subscribers, it's the second-biggest market in the world after China. That means any software a Telco chooses has to be carrier-grade, able to handle the most scale and the hardest use cases, and provide the highest performance. Basically, rock-star software.

At the same time, India is a market with nearly the lowest average revenues per user or ARPU in the world— approximately $2 / month for India versus a low-side estimate of $20 for the US.

This combination presents a unique challenge for telco operators in India. They need tier-zero, carrier-grade software to handle the scale, so they look to the big vendors like Amdocs, Nokia, and Ericsson. But they also need the lowest price so they can make the numbers work business-wise, and these vendors' solutions typically cost tens of millions of dollars.

What do you do? You look to the public cloud. Finally, we have an enabling technology that solves this previously unsolvable equation.

The public cloud can handle the scale

Public cloud data centers are built to support the world's

biggest Internet companies like Amazon, Microsoft, and Google. Amazon built many aspects of AWS to support its own explosive growth and huge demands. AWS is also highly scalable:

- When Amazon's retail business outgrew its expensive Oracle databases, it made its own better and cheaper versions, which eventually became DynamoDB.

- Intel chips were expensive, so it created Graviton, which beat Intel's x86-based instances by 40% on price and 7x on performance with the Graviton2 in 2019.

- And then in 2021, it beat that by another 25% on speed, while using 60% less power with the Graviton3.

- AWS also provides variable data-storage pricing, so you can pay less to store data you need infrequently or not as fast.

Because of the public cloud and the hyperscalers' investments, telcos do not need to build their own data centers. They can use cutting-edge, high availability and fully scalable data centers of AWS, Azure or Google Cloud. Further the operational costs are minimized as it is a pay-by-use — based on daily, hourly or even minute by minute usage of the resources. It can be more one day and less on another. The hypescaler data centers are built on the best technology and supported by the world's best experts in the domain. The AWS region in Hyderabad, currently under construction is a world class data center. For Telcos to take advantage of all this they have to select tools that are truly cloud native.

What is cloud native?

Most vendors —be it Amdocs, Ericsson, Huawei, Nokia, or Oracle — talk about their new "cloud-native" versions of legacy products. Their products are projected as being ready to support 5G spectrum. But mostly this is "cloud washing" -- which is rebranding an old product by adding some "cloud" functions to it.

Cloud native software solutions are those that are built for the public cloud from scratch. When software and

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services are truly cloud native, they are live on a public cloud and 80% less expensive than their on-premise cohorts.

How can a product be tested whether it is truly "cloud native"? Here is a list I put together of the top five ways to tell if a vendor's "cloud native" application is truly cloud native (and a hilarious video I recorded with Ray Le Maistre at TelecomTV).

But taking all points together, it's pretty easy to tell. There's a simple test: the price. If it's not 80% cheaper than the on-premise version, it's not cloud native.

Real cloud versus fake cloud

Totogi, a public-cloud-based telco software company where I'm acting CEO, offers the fully cloud native Totogi Charging System on AWS Marketplace, with a starting price of one penny (between 80 paise - Rs 1/=) for the first 500-million transactions per month in a pay-as-you-grow model.

Amdocs is also on AWS Marketplace, selling its Digital Brands Suite at $400,000 USD for upto 100,000 users. The page says it is a Software as a Service (SaaS). So, If it is on AWS Marketplace, it seems like it should be cloud-native. But the price seems awfully high. Let's take a look.

If we take $400,000 and divide it by 100,000 subscribers, that's about $4 per subscriber. The fine print on the Amdocs AWS Marketplace page says, "All orders are custom," and also, "additional taxes or fees may apply."

What fees could that be? Services to implement, customize, or integrate to other systems of the Telcos. Recently, I was perusing the Amdocs 2021 annual report. Looking at the company's mix of revenues, about 40% is for products and the remainder 60% is for services.

So, using this ratio from the annual report, customers should expect that the product will be 40% and additional fees and services will be 60% of the total price. So, that's actually going to be about a million dollars for 100,000 subscribers, which works out to about $10 each.

That math holds up if we look at Amdocs' largest customer, AT&T. It famously spends about a billion dollars on its roughly 100-million subscribers, so it's spending about $10 a sub. So, what we're seeing here is that Amdocs has not updated its pricing model for the public cloud. Compare that to Totogi, where prices will work out to be about $1 per subscriber. With this price point, it's a no-brainer to adopt truly public cloud products. Especially for Telcos in India.

This is the dawn of a new era in telco software. The new technology is cloud-native. It can scale to meet your needs—easily. The telltale sign it's the real thing is massively cheaper pricing. For Telcos it makes eminent sense, especially as they upgrade to 5G.

The race is on. Not only are public cloud solutions infinitely scalable and cheaper, they're also faster to deploy. Jio has thrown down the gauntlet, putting a stake in the ground and planning to launch next year. The best advice to the other telcos — Bharti Airtel, Vodafone Idea, Adani Enterprises (and anyone else with 5G plans) — is to use the technology of the public cloud in order to get the benefits of scale, speed, and lower price. 🌐

Danielle Royston, CEO and Founder, TelcoDR
& Acting CEO, Totogi
feedbackvnd@cybermedia.co.in