



Case Study

Swift transactions
for 500M+
PhonePe users
with Tata
Communications'
network
infrastructure



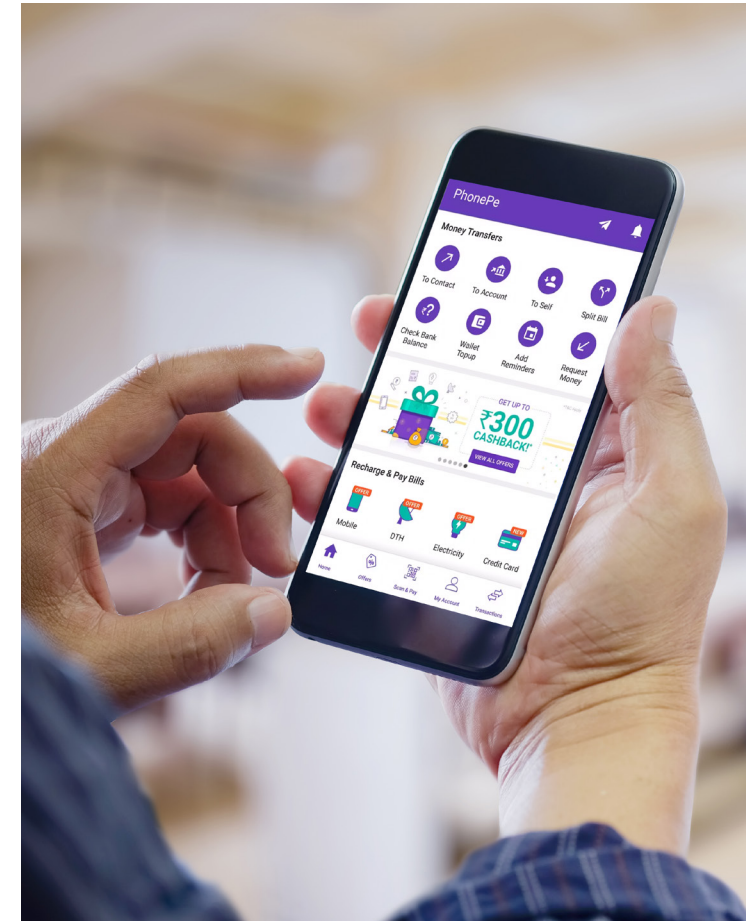
Envision this: You're enjoying your breakfast in the morning, and suddenly, a reminder notification pops up urging you to recharge your mobile and take care of pending payments, including electricity and internet bills, all of which are due today. On a hectic workday, time is of the essence.

Thankfully, with the convenience of Unified Payments Interface (UPI) technology, you can pay these bills in just a few seconds, seamlessly fitting into your schedule. This example illustrates the extent to which UPI has taken over our lives. The instant payment system today has made it easier to do payments on-the-go from anywhere and at any time through various digital payment apps. All this is possible because of a robust network backbone.

As digital payment services continue to gain popularity, it becomes imperative for businesses to ensure their payment apps provide an outstanding customer experience (CX), particularly when it comes to financial transactions. Speed and efficiency of transactions are crucial to achieve great CX and

build trust and credibility.

PhonePe is one of the largest fintech platforms in India that enables you to make UPI transactions including money transfer, utility bill payment, mobile recharge and insurance purchase, through its digital payment app. By partnering with Tata Communications, the company has built a strong network infrastructure setup that enables large volumes of transactions every day while optimising the app performance.



About PhonePe

PhonePe is an Indian digital payments and financial services company headquartered in Bengaluru, Karnataka, India. The PhonePe app, built on the Unified Payments Interface, went live in 2016.

Customer satisfaction impacted due to erstwhile network infrastructure

To support its rapid business growth, PhonePe invested in powerful data centres - two in Mumbai and one in Bengaluru. These data centres play a critical role in enabling secure and efficient payment transactions. So, it was necessary to seamlessly connect them for higher availability, improved data replication and optimal app performance. With 6.7 Bn transactions being processed every month, there was a need for high-capacity connectivity between these data centres that could scale quickly to handle the growing bandwidth demands. In the legacy setup, the data centres were connected together by combining multiple small capacity links (10Gig each) into a single link to allow for increased bandwidth and higher data transfer rates. However, this network setup posed several problems like:

Application performance: With unstable network and high latency, UPI transactions either failed or took long time to complete. This impacted the user experience leading to decrease in customer satisfaction. PhonePe strived to achieve low latency and high throughput.

Operational complexity due to multi-vendor setup: Having multiple service providers for network connectivity presented significant challenges related to contracts, operational complexity, security and system compatibility.

Different service level agreements (SLAs) and maintenance schedules from the service providers further complicated the network maintenance process.

Heavy investment: To increase its network capacity and facilitate additional bandwidth, PhonePe bundled multiple low bandwidth links using link aggregation. These low bandwidth links caused latency issues. Moreover, this setup involved expensive hardware investment especially on aggregation devices.

PhonePe wanted to build an ecosystem that enables best-in-class payment solution delivered in the most efficient, secure and reliable way. This meant creating a highly resilient network that guaranteed speed, high SLA compliance and could securely carry huge traffic between its data centres. Multiple network service providers added layers of complexity making the troubleshooting and management difficult. Therefore, the company decided to streamline its operations by minimising the number of network providers who could provide multiple 100Gig links between its data centres.



A highly resilient and reliable network to deliver the fastest transaction speed

Given the intricacy of the solution, PhonePe opted to collaborate with Tata Communications due to its extensive experience in designing the most complex networks worldwide. Tata Communications created a future-ready architecture that would support PhonePe's network infrastructure strategy. Tata Communications' resilient and reliable Private Line solution leveraging dense wavelength-division multiplexing (DWDM) network backbone ensures that the PhonePe data centres are always connected with the performance and network quality they needed. This high-performance network backbone between its data centres has three path protection to ensure high transaction success rates and services exceed customer's SLA expectations.

Here is a brief about the solution deployment:



A guaranteed 4x100G bandwidth over two extremely critical locations which faced frequent outages due to constructional activities, showing our unwavering commitment to ensure reliable performance.



High-capacity Private Line links (each 100Gig) to connect the three PhonePe data centres enabling the company to keep pace with growing capacity and performance demands.



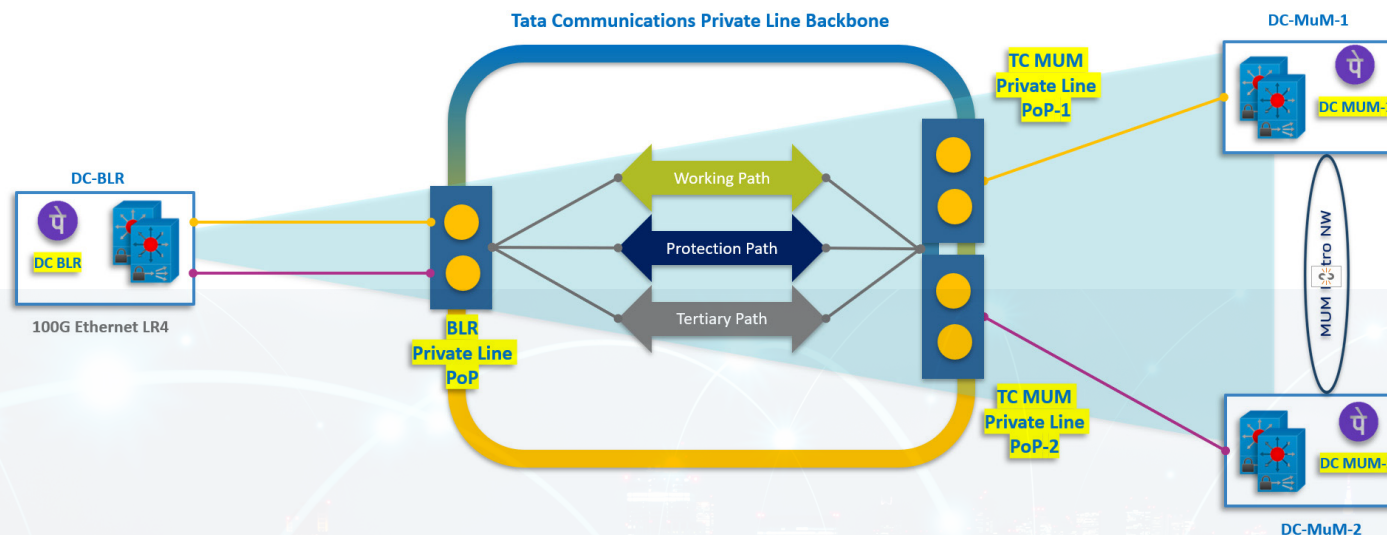
Leveraged our expertise to create a DWDM architecture which provided resilient network infrastructure, while increasing the network capacity and making efficient use of bandwidth to prevent application downtime and ensuring uninterrupted business operations.



Designed an optimal architecture solution in a complex setup to provide the least latency between Bengaluru and Mumbai.



Created Multiple transmission path using diverse routes to minimise single point of failure, eliminating the risk of downtime.



Improved app performance leading to enhanced user experience

Leveraging Tata Communications' solution, PhonePe is able to deliver the most seamless payment experience and the results speak for themselves.

Simplified network management: 60% reduction in vendor base, streamlining the complexity of network management.

Exceptional uptime: 99.99% uptime SLA ensured consistent and reliable service.

Improved user experience: Enhanced user experience due to smoother payment interactions.

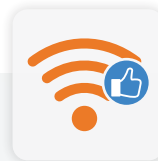
Cost savings: Significant cost savings due to reduced hardware expenses (aggregation device), lower maintenance spends.

High transaction success rate: Enabled a high transaction success rate through a low-latency network infrastructure with 1.2TB guaranteed bandwidth.

Optimised performance: Achieved faster app loading times and overall better performance with high bandwidth links

Robust connectivity: 20,000+ servers connected across all data centers via a secure point-to-point backbone

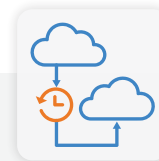
[Click here](#) to learn more about the Tata Communications' Private Line.



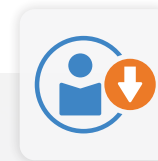
1.2 TB Guaranteed
Bandwidth



99.99% SLA
uptime



Fastest latency
route



60% Reduction
of vendors



20K+ Servers
Connected

Build your future through a digital customer experience

If you are a BFSI/Fintech enterprise looking to transform the way your customers experience your product, talk to your Tata Communications representative about your company's digital transformation.

- How you can reach your high value customers in the most convenient way?

Transform Now

About Tata Communications

A part of the Tata Group, Tata Communications (NSE: TATACOMM; BSE: 500483) is a leading global commtech (communications technology) player powering today's fast-growing digital economy in more than 190 countries and territories. Leading with trust, it enables digital transformation of enterprises globally with collaboration and connected solutions, core and next gen connectivity, cloud hosting and security solutions and media services. 300 of the Fortune 500 companies are its customers and the company connects businesses to 80% of the world's cloud giants. For more information, please visit www.tatacommunications.com

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