

TRANSFORM YOUR ENTERPRISE COMMUNICATIONS AND COLLABORATION

UNLOCK THE POWER OF MICROSOFT® SKYPE FOR BUSINESS™ WITH WORLD-CLASS UNIFIED COMMUNICATIONS AS A SERVICE

Empower your enterprise with Unified Communications as a Service (UCaaS) - a global platform and state-of-the-art infrastructure. It increases business agility, optimises the employee and customer experience, and maximises the productivity of Microsoft Skype for Business.

- Increase productive collaboration. Enable teams to focus on business priorities instead of technology issues by reducing the number of platforms and servers to host, manage and support. At the same time, provide seamless communications with unified conferencing, voice, video and messaging.
- Improve functionality. Leverage our carrier-grade platform that delivers maximum uptime and reliability – and provides visibility and manageability right down to the end device.
- Reduce complexity. Get the most from your existing Microsoft Skype for Business licence and consolidate spend thanks to a simple pay-as-you-grow approach - with no upfront expenses, a single point of accountability and a uniform SLA for all your UC services.

PARTNER WITH A GLOBAL LEADER

Tata Communications has the knowledge, experience, technology, global infrastructure and modular UC services you need to quickly and easily integrate Microsoft Skype for Business into your enterprise. Over 24% of the world's internet routes are on our network, which ranks in the top five on five continents by routes, It includes more than 700,000 kilometres of terrestrial and subsea fibre, 400+ PoPs across five continents and over 1 million square feet of data centre space in 44 strategic locations worldwide. We're also the leading international voice carrier, handling 1 in 10 global voice calls over our network.

Running through our global infrastructure are state-of-the-art UC services that your enterprise can access as needed virtually anywhere in the world. They include audio and web conferencing, online meetings, instant messaging, voice, video and more. Working with us means that you can roll out Microsoft Skype for Business locally or globally, complete with migration planning, modular UC building blocks, training, and reporting. What's more, we complement Microsoft Office 365.

Extend enterprise voice on Microsoft Skype for Business

As the largest international voice provider with **52** billion voice minutes each year, we are your optimum choice for UCaaS voice services. Choose from a wide range of services including international toll free (ITFS), Universal Freephone (UIFN), Local Number and Domestic Service. In addition, our global relationships with more than **1600** carriers ensure state-of-the-art communication and collaboration wherever in the world you conduct business.

Increase the value of existing UC technologies with jamvee™

Our UCaaS solution is also integrated with our innovative Global Meeting Exchange™ distributed jamvee™ UC Service. This lets you provide global access to a single, secure UCaaS Virtual Meeting Room with seamless connectivity between participants using Skype for Business – as well as other legacy and traditional conferencing endpoints. That includes immersive telepresence rooms, group video systems, personal video systems, voice-only and other desktop collaboration applications – all enjoying a consistent, unified collaboration experience.

Not only that, UCaaS with jamvee ensures seamless interoperability and extends connectivity beyond Skype for Business to any standards-based video end-point device, SIP desktop or mobile application, protecting your investment in collaboration solutions.

Enjoy a superior experience

With our single-pane of glass solution for management and monitoring, the UCaaS solution gives your teams access to intelligent software and monitoring, dashboards and reporting. This self-service portal lets you control users and services, with dynamic company reporting capabilities that allow you to view and manage services deployed worldwide. In turn, that enables your IT team to easily manage all aspects of network performance and resolve technical problems before they become business issues.

Our expertly managed services include knowledgeable help desk support for rooms, desktops and clients. Everything we do is focused on helping you streamline operations, reduce costs, increase agility and boost productivity. We are a leading global provider with Microsoft® Skype for Business nodes deployed across three continents and four regions

KEY FEATURES

- Hosted Skype for Business
- Enterprise Voice Services
- International toll free in 100+ countries and local numbers in 300+ cities, and PSTN replacement in 17 countries
- Centralised SIP Trunks to replace E1/T1
- Virtual Meeting Room with jamvee UC service
- Unified Conferencing audio, web and video
- Managed services
- 24/7/365 global phone support
- Intelligent monitoring and reporting
- Network assessment
- Multi-geo hosting
- Hosted contact centre
- MPLS and physical transport one solution with unified SLA and high availability (99.99%)

Start transforming your enterprise communication and collaboration today. For more information, visit us at www.tatacommunications.com.



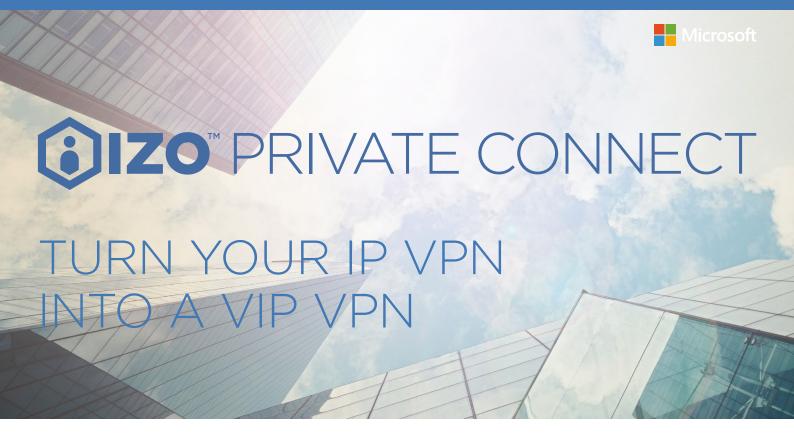












IZO™ Private Connect links businesses to Microsoft Azure and Office 365 over MPLS or Ethernet through one single provider globally, to ensure network performance.

Through global agreements with Microsoft, Tata Communications' IZO^{TM} Private Connect simplifies and provides faster on-boarding to ExpressRoute for Azure and Office 365.

PREDICTABLE: Get guaranteed throughput and availability, with Service Level Agreements (SLAs), consistent network performance.

SIMPLIFIED: Reduce the complexity of network management with a single global relationship that is fully managed, a single bill, and 24x7x365 customer service.

SEAMLESS: Connect to the top public clouds and data centres over our global Tier-1 network — one site to multiple hubs.

SECURE: Protect enterprise data while enjoying dedicated network capacity and high speeds.

A leader in global network solutions, Tata Communications is uniquely positioned as the only telecommunications company with presence across six continents, the largest, wholly-owned subsea cable network, and more than 1 million sq. ft. of data centre space in 44 locations worldwide.

MARKET TRENDS

97% of respondents say their organisation has adopted cloud computing to some extent.

THE REALITY OF CLOUD COMPUTING - HAS IT LIVED UP TO THE HYPE?—TATA COMMUNICATIONS 2015

More than 50% of enterprises rates enterprise-grade network services from their cloud providers as very important.

"ENTERPRISE NETWORKING FOR THE CLOUD AGE"— OVUM 2015



EVERYBODY'S NETWORK CLOUD

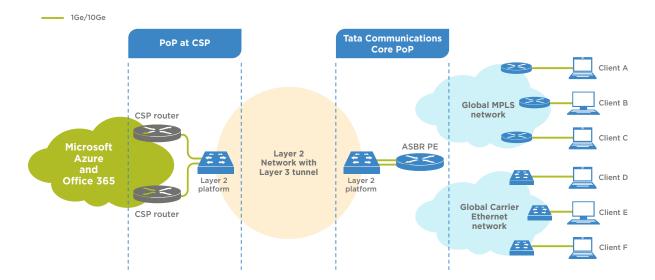
As part of a cloud enablement platform, companies tap into an entire global ecosystem that provides secure, high performance connections between enterprises, cloud providers and third party data centre partners — ultimately delivering a high quality end user experience.

IZO™ PRIVATE CONNECT SITE ACCESS TO MICROSOFT

IZO™ Private Connect sites	Azure Region	MPLS	Ethernet
Chennai	South India	Yes	
Mumbai	West India	Yes	
Hong Kong	East Asia	Yes	Yes
Singapore	Southeast Asia	Yes	Yes
Tokyo	Japan East		Yes
Amsterdam	West Europe	Yes	Yes
London	UK South	Yes	Yes
Ashburn	East US	Yes	Yes
Dallas	South Central US		Yes
San Jose	West US	Yes	Yes

"Tata Communications' IZO™ enterprise WAN and cloud enablement platform leverages its extensive global network and the reach of its partner ecosystem to enable global organisations to harness the cloud — be it private, hybrid or public."

-MELANIE POSEY, RESEARCH VICE PRESIDENT AT IDC



Our network solution architects will work with you to design your optimal IZO™ network cloud. For details and to contact us, visit www.tatacommunications.com/IZO/Azure

For more information, visit us at www.tatacommunications.com/IZO













"We chose Tata Communications and Microsoft Azure because the centralised solution perfectly balances network reliability, quality and cost."

KUMAR KV, VICE PRESIDENT FOR INFORMATION TECHNOLOGY, NARAYANA HEALTH

NARAYANA HEALTH ACHIEVES 99.999 PER CENT UPTIME AND SAVES MORE LIVES AS A CONSEQUENCE

IZO™ PRIVATE CONNECT, MICROSOFT AZURE, AND DYNAMIC PATH SELECTION TOGETHER MEAN DOCTORS TREAT PATIENTS MORE EFFECTIVELY AND AFFORDABLY

CASE STUDY | NARAYANA HEALTH CATEGORY | CLOUD





OVERVIEW AND RESULTS

Narayana Health is one of India's leading healthcare providers. But its legacy systems were letting it down. Networks were subject to aggravating outages. Medical teams had to wait to access vital patient data. Further, poor redundancy and security complicated matters. Lack of agility meant it couldn't easily scale to match growing demands.

To meet those challenges, Narayana Health turned to a unified Tata Communications and Microsoft Azure solution and achieved the following outcomes:

- Five-nines availability with Dynamic Path Selection
- Three-times faster response times for vital clinical applications
- 30 per cent reduction in total cost of ownership

Microsoft Azure meets compute and storage requirements while virtualisation maximises agility. Dual diversified last mile links and redundant active-active PoPs connect over 26 sites. A Global VPN and IZO™ Private Connect provide access to the Microsoft Azure cloud in Chennai and Pune. The intelligent Dynamic Path Selection load-sharing capability ensures automatic failover and uninterrupted data access.

About the customer

Narayana Health operates a system of 31 hospitals, seven heart centres, and a network of primary care facilities across India. The organisation provides advanced levels of care in over 30 specialities including cardiology and cardiac surgery, cancer care, neurology and neurosurgery, orthopaedics, nephrology and urology. The Narayana Health mission is of delivering high quality and affordable healthcare services to the broad population by leveraging economies of scale, skilled doctors, an efficient business model and best practice technologies. For more information go to www.narayanahealth.org



CHALLENGE

Previously, Narayana Health used a mass of servers in local data centres to run mission critical healthcare and business applications as well as store x-rays and scans. Local telco links supported connectivity, which presented drawbacks like:

- Unreliable network with recurring outages delaying medical teams from accessing critical patient care data.
- Disparate systems lacking centralised management led to inefficiencies and poor productivity.
- Lack of automation and platform services.
- Unmanaged localised routers increased the possibility of failure and security breaches, while the infrastructure couldn't scale quickly to meet continuing business growth.

Recognising an urgent need to replace its systems with a reliable, high-performing infrastructure, Narayana Health chose a unified solution running on Tata Communications and

Kumar KV, Vice President for Information Technology, says: "IT infrastructure is critically important to help us save lives. We chose Tata Communications and Microsoft Azure because the centralised solution perfectly balances network reliability, quality and cost."

HIGH PERFORMANCE SAVES MORE LIVES

The combination of Tata Communications and Microsoft Azure means Narayana Health clinicians are empowered to help patients more effectively. Today, medical teams can quickly access data because vital clinical applications respond three-times faster than was the case with the legacy systems.

Data is streamed over secure Tata Communications IZO™ Private Connect links from the Microsoft Azure cloud repositories. "Our old system left much to be desired," says Kumar. "It had many loopholes and definitely wasn't the best practice. Tata Communications and Microsoft Azure offer a commanding TCO. They provide us with 99.999 percent uptime, which wasn't possible in the past."

MASSIVE PACS FILES GET SPECIAL TREATMENT

Medical images like x-rays, which can be massive files, use a dedicated PACS/ teleradiology infrastructure hosted at the main hospital in Bangalore. Dynamic Path Selection allows this critical traffic to be prioritised over a dedicated image transfer network.

Back-end integration means clinicians get a unified patient-centric view of PACs images along with Microsoft Azure cloud data accessed via IZO™ Private Connect.

"Sometimes we are dealing with life and death situations," says Kumar. "Tata Communications and Microsoft Azure provide us with the highly available systems our medical teams require to access critical applications and data. Without such reliability, patients could be at risk."

DYNAMIC PATH SELECTION ASSURES BUSINESS CONTINUITY

In the network, Tata Communications Dynamic Path Selection technology automatically recognises application traffic and chooses the appropriate route. Not only maximising performance by balancing bandwidth between diverse links, Dynamic Path Selection also assures business continuity by routing traffic over the Internet in the event of a network fault.

Kumar confirms: "The business value of Dynamic Path Selection is that it obviates the need to provide back-up circuits, while assuring optimum network bandwidth utilisation. Taking the whole solution together I estimate overall total cost of ownership savings at 30 per cent." For additional redundancy, two routers are deployed in each hospital. In the event of a router failure, traffic is automatically transferred to the operating router.

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AZURE AGILITY MEANS QUICK TIME-TO-MARKET

With integrated Tata Communications and Microsoft Azure solutions, Narayana Health is armed with the agility to meet its present and future needs.

Nagendra Balasubramanyam, Account Executive, Public Sector South at Microsoft, says: "The Microsoft Azure cloud gives you hyper-scale access to virtually infinite computing resources at much lower cost. The Microsoft intelligent cloud platform allows increased efficiency through automation and platform services. Operating over Tata Communications IZO™ Private Connect links means mission-critical clinical applications run much faster, which helps improve patient healthcare."

Collaboration among medical teams is easily achieved. Authorised users even on the other side of the world can access patient data, enabling critical consultation. New data and images are quickly added to patient files. With low latency and seamlessly connected systems, medical teams have treatment data instantly at their fingertips at all times.

That quick scalability means Narayana Health can grow IT resources almost instantly to match its growing requirements. To do so, it only has to contact the Tata Communications management team, which immediately allocates and deploys more resources.



SOLUTION

Now a Tata Communications solution with multiple redundancy for no single-point-of failure achieves the desired high availability. A Tata Communications Global VPN ensures high performance. Tata Communications IZO™ Private Connect links every Narayana Health facility direct to the Microsoft Azure cloud for instant data access.

Key Narayana Health business and clinical applications, including electronic patient records, run in the Microsoft Azure cloud. Meanwhile, x-ray and scan files are stored on a picture and archiving communications system (PACS) in the main hospital.

"Deployment and migration was like a great Bollywood movie production," says Kumar. "Team members showed a great deal of passion. Tata Communications migrated all data to Microsoft Azure in only hours by bumping up bandwidth. Their know-how has brought stability to our critical systems."

In addition, Narayana Health uses Tata Communications audio conferencing services and other managed collaboration tools to improve efficiency and knowledge sharing

"The Microsoft Azure cloud gives you hyper-scale access to virtually infinite computing resources at much lower cost. Microsoft's intelligent cloud platform allows increased efficiency through automation and platform services.

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NAGENDRA BALASUBRAMANYAM, ACCOUNT EXECUTIVE, PUBLIC SECTOR SOUTH, MICROSOFT CORPORATION



MANAGED SERVICE INCREASES COST EFFICIENCY

Narayana Health no longer owns or manages its IT infrastructure. Instead, Tata Communications and Microsoft teams keep a 24/7 steady eye on all systems, right down to routers and firewalls, for reliability and performance. Narayana Health sees what's going on via a centralised management pane.

"We consume IT resources as a service and don't have to worry about management," Kumar explains. "The Tata Communications solutions offer exceptional value for money. They provide better functionality than we could afford if buying and managing them on our own. We no longer experience downtime and I've got the peace of mind of knowing we're using security best practice."

That means Narayana Health can focus its scarce IT people firmly on the needs of patients and let Tata Communications and Microsoft do the heavy lifting.

Kumar concludes: "We've forged a partnership with Tata Communications and Microsoft based on trust and capability. With them, we can do what we do best: provide affordable healthcare to the people of India and save more lives."

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TATA COMMUNICATIONS AND MICROSOFT AZURE

The combination of Tata Communications and Microsoft Azure helps Narayana Health achieve 99.999 per cent uptime. IZO™ Private Connect means cloud data is carried securely and at high speed over the Tata Communications Global VPN with only a short hop to a Microsoft Azure data centre. That means Narayana Health professional clinicians anywhere can quickly access vital patient data. Meanwhile, the absence of downtime and the fact that clinical applications respond three-times more quickly than before makes staff more efficient while elevating levels of patient care. Microsoft Azure helps maximise agility for Narayana Health through automation and platform services, while offering compute and storage scalability.



About Tata Communications

Tata Communications Limited (CIN no: L64200MH1986PLC039266) along with its subsidiaries (Tata Communications) is a leading global provider of A New World of Communications™. With a leadership position in emerging markets, Tata Communications leverages its advanced solutions capabilities and domain expertise across its global and pan-India network to deliver managed solutions to multinational enterprises, service providers and Indian consumers.

The Tata Communications global network includes one of the most advanced and largest submarine cable networks and a Tier-1 IP network, as well as nearly 1.5 million square feet of data centre and collocation space worldwide.

Tata Communications' depth and breadth of reach in emerging markets includes leadership in Indian enterprise data services and leadership in global international voice.

Tata Communications Limited is listed on the Bombay Stock Exchange and the National Stock Exchange of India.

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