"I was confident that Tata Communications cloud services would meet our needs, and it mobilised excellent service teams to create a great experience."

SEAN KIM, CTO, SKYLAB

SKYLAB DELIVERS HIGH PERFORMANCE INFRASTRUCTURE TO LARGEST SINGAPORE CLEAN ENERGY SOLUTIONS PROVIDER

IZO™ CLOUD STORAGE WITH SKYLAB INTERNET OF THINGS SOLUTION DRIVES COST-EFFECTIVE AND SECURE DATA HARVESTING AND ARCHIVING

CUSTOMER | SKYLAB GROUP
PRODUCT CATEGORY | CLOUD SERVICES

SKYLAB

OVERVIEW AND RESULTS

Singapore-based SkyLab Group is a leading provider of enterprise-level Internet of Things (IoT) solutions. Its dynamic growth has been fuelled by customer needs for flexibility with 100 per cent confidence in data availability and infrastructure performance and security.

To achieve this, SkyLab considered a number of options including the deployment of wholly-owned infrastructure. It chose to partner with Tata Communications for its unparalleled five-nines availability, with low latency and high security data archiving, which help SkyLab and its customers meet regulatory compliance requirements. In addition, the Tata Communications on-demand billing model offered a cost efficient solution.

For one SkyLab customer alone, Sunseap, results have seen:

- **99.96** per cent service level agreement exceeded to meet IoT data harvesting for energy regulatory reporting and standards compliance

- Right sourcing of deployment and maintenance services, saving ongoing internal manpower expense

- **15** to **25** per cent saved every year with accurate end-customer billing for all power produced and consumed or sold to other parties

The SkyLab partnership with Tata Communications is backed by fully managed services to ensure **24/7/365** high availability. This not only enables it to better serve existing customers but increases the company's competitive advantage.

About SkyLab

SkyLab Holding Pte Ltd is a Singapore registered private limited company. SkyLab advocates connectivity and sustainability by combining their expertise in solar energy, wireless networking and communications, internet of things and digital business to provide customers secure data gathering and delivery solutions over a scalable platform called the Data Logistics Cloud. For more information see http://www.skylabteam.com

About Sunseap

Sunseap is the largest and most established clean energy solutions provider in Singapore. With over 30 years' experience of building and developing clean energy solutions, it is responsible for the majority of grid-connected photovoltaic power plants in Singapore. Also with operations in south-east Asia Pacific, Sunseap offers a one-stop, integrated solution including project financing, design, installation and maintenance services. For more information see http://www.sunseap.com.

CHALLENGE

SkyLab was facing a conundrum. Its newest customer, Sunseap, the largest clean energy solutions provider in Singapore, wanted to transmit critical data from solar panels and inverters for reporting and long-term archiving. Sunseap has thousands of them fixed atop buildings, generating megawatts. Its customers include government departments and large commercial enterprises.

Data captured at each location monitors operating parameters of individual solar panels. Sunseap used to harvest that critical information expensively – employing thousands of SIMs linking to a variety of decentralised servers over 3G or 4G networks.

Frank Phuan, the Sunseap CEO, says: "We depend on the highest levels of networking and storage performance. If we lose even one minute of data at one location, it can cost thousands of dollars because we can't accurately bill the customer. Worse, if we can't meet regulatory standards our energy license could be revoked."

That's why Sunseap turned to SkyLab. In turn, SkyLab knew it had to gear up its network and cloud storage capabilities to meet needs that included:

- Over 4GB of data per month harvested from thousands of Sunseap solar panel sites right across Singapore.

- That information had to be transmitted for analysis, to drive billing applications, and to monitor solar panel energy production and performance.

- Reliability was of paramount importance, while all data had to be securely archived for compliance requirements.

SkyLab couldn't afford the implied capital investment so, to achieve its mission, the company turned to Tata Communications.

ASSURING THE HIGHEST AVAILABILITY LEVELS

To centralise Sunseap data harvesting, all solar panel data is now streamed via radio links to only 10 fibre points. These pass data onto a Tata Communications Colocation facility for re-distribution. There, high availability storage manages data for critical applications, while low-cost servers archive data for a minimum of nine years for compliance.

The data is used for a variety of purposes. Accurate consumption data is used to generate monthly bills. Electricity not consumed is shunted onto the public electricity grid for operators to resell. The performance of every solar panel must be monitored. If one becomes inoperative, Sunseap maintenance teams need to be alerted.

"With Tata Communications and SkyLab, we can be confident of exceeding 99.96 per cent service level agreements to fully meet our data harvesting requirements," says Frank Phuan.

FLEXIBILITY FOR GLOBAL ASPIRATIONS

SkyLab has not only met its immediate challenges but is poised for additional growth due to the inherent flexibility of the Tata Communications hybrid cloud solution.

Should SkyLab or any of its customers require additional infrastructure, all SkyLab has to do is contact the local Tata Communications team. And should its customers expand globally, Tata Communications worldwide networks can be leveraged to match such aspirations.

Gary Kwang, the SkyLab CEO, says: "This year we're anticipating huge growth rates and we must be able to accommodate further expansion as demand for our IoT solutions is accelerating fast. With Tata Communications global presence, we can scale faster and provide better services globally. The collegial culture and deep domain know-how of Tata professional teams also complement our speed of innovation. Together we are able to achieve a new breakthrough with speed, serving our customers' high SLA expectations."

Tata Communications **24/7/365** fully-managed services provide a solid foundation; with high levels of reliability and fast escalation should an unforeseen event occur.

Sean Kim, the SkyLab CTO, says: "Tata Communications has excellent service coverage. If we have an issue they work hard to solve it to preserve the low latency and high performance our customers require. No one complains about performance anymore, which says a lot about the Tata Communications service levels."

"With Tata Communications global presence, we can scale faster and provide better services globally. The collegial culture and deep domain know-how of Tata professional teams also complement our speed of innovation. Together we are able to achieve a new breakthrough with speed, serving our customers' high SLA expectations."

GARY KWANG, CEO, SKYLAB

DRIVING FINANCIAL BENEFITS AND MINIMISING CAPEX

Had SkyLab purchased a comparable infrastructure suite it would have spent a fortune, but this potential capital investment was replaced with a cost-effective, on-demand model that's delivered outstanding benefits.

"Had we implemented this ourselves it would have cost a significant sum, which we didn't have to incur," confirms Sean Kim. "Because it's fully managed, we've reduced admin costs as we need not hire engineers to deploy and maintain the systems. With Tata Communications, we've saved this ongoing expense."

SkyLab customer Sunseap has also reaped financial benefits from the integrated Tata Communications solution. "We've saved money and protected revenues in a number of ways," says Frank Phuan. "Because of the solution's high performance, we're confident that we can accurately bill our end customers for all power that is produced by us and consumed or sold-on to other parties."

In addition, Sunseap saves connectivity costs for every solar energy site. With thousands of sites, that's millions in savings per annum. "We've also avoided the significant capital cost of doing this ourselves. By using Tata Communications and SkyLab, Sunseap is able to save **15** to **25** per cent every year," adds Frank.

SOLUTION

Tata Communications brought its IZO™ Cloud Enablement Platform into play. This features a blend of services including IZO™ Private Cloud, IZO™ Cloud Storage, Internet Connectivity, Managed Security Services, and Colocation hosting.

By selecting the IZO™ Cloud Enablement Platform, SkyLab has leveraged a best-of-breed, fully-integrated service to serve its customers. The Tata Communications professional services team proactively delivered a roadmap for success. During solution deployment and migration, responsive consultancy personnel worked tirelessly to solve all issues and meet mission-critical requirements.

Sean Kim, the SkyLab CTO, says: "I was confident that Tata Communications cloud services would meet our needs, and it mobilised excellent service teams to create a great experience."

SkyLab integrated its IoT solutions into the centralised infrastructure. Many Sunseap legacy servers were retired, while others were redeployed into the Tata Communications data centre in Singapore. The result is a centralised, fully-managed service that delivers the stringent SLAs that Sunseap seeks.

Today, Tata Communications managed services teams support the solution 24/7/365 for top performance. "Offering knowledgeable people who deliver a professional experience, Tata Communications has easily met our technical and budgetary requirements," says Gary Kwang. "Its advanced cloud-based technologies provide us with true competitive advantage."

"We've also avoided the significant capital cost of doing this ourselves. By using Tata Communications and SkyLab, Sunseap is able to save 15 to 25 per cent every year."

FRANK PHUAN, CEO, SUNSEAP GROUP

A PARTNERSHIP FOR GROWTH

The choice of Tata Communications has not only provided SkyLab with a trusted cloud-enabled platform, it has also opened a partnership that can be nurtured for future growth and profitability. SkyLab and Tata Communications plan to work together to identify prospective customers who will benefit from integrated IoT and state-of-the-art cloud-enabled platforms and networking.

Gary Kwang concludes: "I've learned that Tata Communications treats its business partners and employees with a great deal of respect, and is thoughtful and considerate of our objectives. These are exceptional characteristics, and we soon realised that Tata Communications' aspirations match our own. By collaborating with Tata Communications we know anything is possible. We look forward to working with Tata towards our mutual success."

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IZO™ CLOUD ENABLEMENT PLATFORM

Tata Communications IZO™ is a flexible, one-stop cloud enablement platform that enables enterprises to deliver agile business performance. The IZO™ Cloud Enablement Platform takes the complexity out of cloud computing with products designed to give the enterprise greater predictability, productivity and agility. IZO™ is an open ecosystem which consolidates disparate elements of IT architecture, allowing enterprises to seamlessly scale IT resources without compromising security.

Find out more at:
http://tatacommunications.com/izo

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 multi-national 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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