



Cathay Pacific, SITA and Juniper

Maximizing network performance while reducing cost and enhancing customer service

Cathay Pacific is one of the first companies to take advantage of SITA's Integrated Traffic Management (ITM) service, built on Juniper technology, allowing the airline to dramatically increase network performance and better manage traffic carried on its networks while reducing costs and enhancing customer service.

Cathay Pacific – providing 'Service Straight from the Heart'

Cathay Pacific has gone from strength to strength since its foundation in 1946.

In 1964 the airline carried its millionth passenger. Today it carries over a million passengers every month. By the year 2006, Cathay Pacific will have a fleet of more than 100 wide-bodied aircraft serving Hong Kong day and night.

Cathay Pacific was named 'Airline of The Year' in 2003, distinguishing itself from other airlines with its unique 'Service Straight from the Heart'. The airline has one of the highest load factors among full-service carriers. Cathay Pacific is a founding member of the oneworld alliance. Together with its member airlines, oneworld offers passengers flights to more than 570 destinations worldwide.

The need for a more efficient network

In its constant pursuit of cost savings and service enhancements, Cathay Pacific faces a set of complex business and IT challenges, including:

- improving the quality of the passenger experience – from booking to check-in to in-flight services;
- the transition from proprietary to open systems using Internet Protocol (IP)-based applications and infrastructure; and
- the bandwidth limitations and constraints for rollout of new applications.

"We need to be able to maximize additional capacity out of existing network links to support new systems and applications," says Edward Nicol, Director of Information Management at Cathay Pacific. "We need control mechanisms to ensure that new services don't negatively impact the performance of existing mission-critical applications."

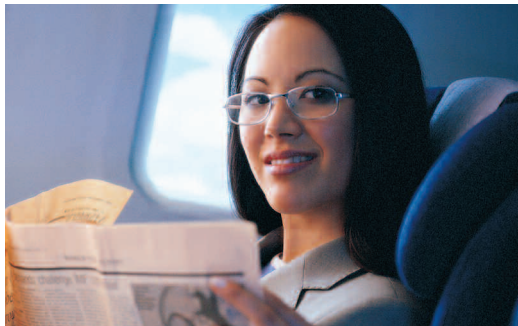


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SITA's solution – Integrated Traffic Management (ITM)

It was determined that an ITM system was the best possible solution for Cathay Pacific after an extensive three month assessment of existing infrastructure by SITA SC Professional Services. Details gathered during this assessment were then used to build a high-level technical design as well as a business case, allowing SITA SC to set the right expectations and demonstrate a solid return on investment.

“We were able to deliver a design ensuring predictability in service deliverables and results,” said Russell Robertson, Vice President, Asia Pacific, SITA SC. “Since the information gathered during the assessment was unique to Cathay’s particular communication infrastructure and business requirements.”

“During the assessment phase it became clear that SITA SC was the best provider capable of delivering the solution we needed,” says Cathay Pacific’s Nicol.

The solution was then developed in partnership with Juniper Networks, the technology leader in WAN application performance.

“By combining our Professional Services with Juniper’s advanced technology, we have been able to deliver a seamless ITM system to Cathay Pacific,” added Robertson. “It is a service which not only drives down Cathay’s costs, but also improves the service performance of the airline’s entire telecommunication infrastructure.”

The ITM system is built around Juniper’s Sequence Reducer™ (SR) product family, which combines next-generation compression with traffic control functions including bandwidth management into an easy-to-deploy appliance. This allows Cathay Pacific to recoup capacity on its network links, enabling traffic loads to grow without the need to buy additional network bandwidth. It also gives added visibility into the WAN, significantly improving network and application performance, and generating direct cost savings.

By designing, deploying and managing Juniper infrastructure from Cathay Pacific’s side of the network, SITA SC can ensure the airline benefits from the ITM system across its entire WAN infrastructure – regardless of whether it is provided by SITA and/or other service providers.



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After an initial rollout at 11 Cathay Pacific sites during March – April 2005, the ITM system will progressively come online across the business, so that by June 2005 some 58 sites will be using the service, delivered via 73 Juniper devices.

The technology behind the solution

The Juniper PeriSphere™ architecture is the industry's only integrated WAN optimization architecture enabling web-based application rollout, data centre consolidation, and improved disaster recovery/backup. It delivers next-generation compression, bandwidth management, path optimization, latency reduction and centralized network management.

- **Compression** – a dictionary-based compression algorithm, Molecular Sequence Reduction (MSR), provides a two- to four-fold increase in WAN capacity by recognizing repeated data patterns and replacing them with labels. With the 'reclaimed' bandwidth, new applications can be rolled out without the need to upgrade WAN links.
- **Bandwidth Management** – this includes Quality of Service (QoS) capabilities as well as bandwidth allocation, allowing latency-sensitive applications – such as VoIP to be prioritized, while ensuring that mission-critical traffic isn't crowded out.
- **Path Optimization** – Juniper's Policy-Based Multipath capability (PBM) monitors the performance of each network path and automatically diverts application traffic from one path to another if performance no longer meets acceptable levels.
- **Latency Reduction** – Juniper's Packet Flow Acceleration (PFA) reduces the impact of network latency (delay) and improves application performance over WAN links.
- **Centralized Management** – Juniper's PeriScope™ Central Management System (CMS) software, in conjunction with other network management tools, ensures high reliability and uptime for the ITM system, allowing SR devices to be easily configured and managed from a central location.



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Benefits of an ITM solution

Through next –generation compression and traffic-optimization techniques such as bandwidth management, path optimization, and latency reduction, the ITM system is increasing Cathay Pacific's WAN capacity by 68% with minimal disruption to the existing network. This capacity gain translates to significant cost savings by eliminating the need for higher-speed links and equipment upgrades, as well as making the existing network more efficient.

The ITM solution:

- facilitates application rollout without the need to expensively upgrade IP VPN bandwidth.
- reduces Cathay Pacific's total cost of ownership.
- offers peace of mind and a one-stop shop – with more than 50 years' technical expertise and a proven ability in managing third party suppliers, SITA SC ensures that network headaches never find their way back to Cathay Pacific.
- benefits from global support – SITA SC provide round-the-clock network monitoring and management, worldwide.
- delivers Juniper's leading-edge technology as a managed service.

Cathay Pacific

Cathay Pacific Airways is an international airline registered and based in Hong Kong, offering scheduled cargo and passenger services to over 90 destinations around the world. Its vision is to make the airline the most admired in the world, ensuring safety comes first; providing service straight from the heart; encouraging product leadership; delivering superior financial returns and providing rewarding career opportunities.

For more information on Cathay Pacific please visit www.cathaypacific.com.



Juniper

Juniper Networks improves customer business efficiencies by resolving the technical limitations of WANs, increasing available bandwidth, and accelerating applications. Recently named Silicon Valley's second fastest growing private company for the period of 2001 to 2003, Juniper Networks is funded by top-tier investors Accel Partners, Foundation Capital, and Mayfield. Headquartered in Santa Clara, California, Juniper has operations throughout North and South America, Europe, Middle East, Africa and Asia.

For more information, please visit the company's website at www.juniper.com.

SITA SC

As a non-profit, commercially managed company, SITA SC focuses exclusively on the travel and transportation industry. Its mandate is to provide clients with solutions that reduce the complexity of managing and integrating communication infrastructures, thus reducing clients' total cost of ownership and improving their return on investment.

For more information please refer to www.sita.aero/solutions/network or contact network@sita.aero.