



SingTel Accelerates Service Introduction and Simplifies Management of Its VPN Network

Background

The leading telecommunications company in Asia, SingTel offers a comprehensive portfolio of voice and data services delivered over fixed, wireless, and Internet platforms to corporate and residential customers. Over the last decade, SingTel has successfully transformed itself into one of the most modern and efficient operators in the world. The company spends about \$1 billion Singapore dollars annually to upgrade its telecommunications infrastructure, a major factor in its competitive advantage.

SingTel aims to be the first truly pan-Asian total communications carrier, with a reach unmatched by any other operator in the Asia Pacific region. A key enabler of this goal: scalable operations support system (OSS) solutions from Cisco Systems. "To deliver value-added services effectively, we needed good provisioning tools and the ability to manage the network cost-effectively," says Soh Keng Hock, Deputy Director at SingTel. "OSS solutions from Cisco and its Ecosystem Program partners had the requirements we needed."

Challenge: Provisioning New Services Cost-Effectively

Competition is burgeoning in the Asia telecommunications industry, a result of market liberalization laws passed in April 2000. To retain its leading market position,

SingTel sought to introduce differentiated, value-added services that offer more choices and greater value to its customers. For example, SingTel's business customers wanted virtual private networks (VPNs) that their employees and partners could use from any location to securely access corporate intranets. To address this need, SingTel introduced its Multiprotocol Label Switching (MPLS)-based Meg@POP and ConnectPlus IP VPN solutions, which provide domestic and regional reach. SingTel recognized that it could provide even more value by offering variants of its VPN service, including voice over IP (VoIP) and class-of-service (CoS) capabilities that optimize customer bandwidth.

Provisioning and managing these new services quickly and cost-effectively would be key to success. Specifically, SingTel needed an OSS solution that would leverage its technical staff's existing skills with minimal training. This would reduce costs and increase the business efficiency of SingTel's new, value-added voice and data services.

Superior Integration from Cisco
SingTel evaluated OSS solutions from Cisco and another leading vendor, choosing the Cisco Internet OSS for its superior integration with existing management platforms such as Cisco Info Center, CiscoWorks, and HP OpenView. The



complete OSS solution consists of CiscoWorks, Cisco Info Center, Cisco VPN Solution Center (VPNSC), InfoVista Service Level Management and Reporting System, and HP OpenView. InfoVista and HP are members of the Cisco Service Provider Ecosystem Partner Program.

The cornerstone of the SingTel OSS solution is the CiscoWorks network management software. SingTel takes advantage of the CiscoWorks Routed WAN Management Solution for monitoring, traffic management, and access control of its multiservice network. The service provider uses the CiscoWorks Service Management Solution to manage and monitor service-level agreements (SLAs), which it offers as yet another value-added service. And the CiscoWorks VPN/Security Management Solution optimizes VPN performance and security administration, helping SingTel deliver the service quality that attracts new customers and reduces turnover.

For end-to-end network management, SingTel relies on the Cisco Info Center, which is the fault management component of the Cisco Service Management infrastructure. A service-level alarm monitoring and diagnostics tool, Cisco Info Center provides network fault and performance monitoring, network trouble isolation, and real-time service-level management for SingTel's large networks. SingTel uses Cisco Info Center with other management tools within the Cisco Service Management product suite to provide service-level monitoring and network partitioning for its VPN services.

To quickly and effectively provision and operate its VPN-based services, SingTel uses Cisco VPNSC. Cisco VPNSC reduces the management burden for SingTel's complex carrier-class IP VPN services by automating service and network provisioning. As a result, network administrators can focus on other tasks, and SingTel can scale its services more easily. "Cisco VPNSC enables us to deploy new IP VPN services more efficiently," says Keng Hock. This rapid provisioning is a competitive advantage for SingTel. Using Cisco VPNSC, SingTel can deploy MPLS-based VPNs more effectively.

For reporting and service-level management, SingTel uses software from InfoVista, a Cisco Ecosystem Program partner. InfoVista's Service Level Management and Reporting system software integrates with Cisco NetFlow information so that SingTel can generate InfoVista reports from NetFlow-based accounting information.

To manage its network devices, SingTel uses HP OpenView, from Cisco Ecosystem Program partner HP. Because SingTel staff is familiar with HP OpenView, no additional training was required, which sped up service introduction.

Faster, Easier Provisioning

"The Cisco Internet OSS automates and simplifies management tasks associated with provisioning VPNs using a template which prevents misconfigurations," says Keng Hock. The Cisco VPNSC stores customer edge and provider edge configurations so that SingTel doesn't need to maintain separate databases for this information, reducing management burden.

For More Information

Cisco Internet OSS solutions help service providers rapidly deploy and operate new services and more efficiently manage and operate their networks. To find out more about Cisco Internet OSS solutions, visit:

<http://www.cisco.com/go/oss>.



Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 317 7777
Fax: +65 317 7799

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