



# Elevate Your Defence. Mitigate Cyber Threats Before They Happen.

Regardless of whether you are a growing business or a global multi-national with multiple branch offices, you face increasingly complex and evolving cyber-security challenges in a connected world. Why let your potential be limited by security threats when you can fortify your defence with an integrated and security solution? Whether you need to prevent unauthorised network access, re-direct spam emails or establish a security governance framework, we are your one-stop partner ready to address any of your security concerns, seeking to create value with you for the long-term.

# Cyber Security Services

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## Staying Secure in an Always-On World

We live in an always-on world where round-the-clock, people expect to stay connected at all times. Whether one is using the Web to book air tickets, doing e-banking via one's smartphone, collaborating on chat while rushing a customer proposal or simply keeping abreast with the latest news – we are using the web all the time for everything. The Internet of Things and the new way we live, work and play – from mobility, social networking, Bring Your Own Devices (BYOD) to cloud computing – have enhanced business productivity and effectiveness, yet drastically increased potential vulnerability to security threats.



## Two Faces of a Highly Connected World

Internet security, a critical component of IT networks today, can catastrophically cripple business operations. As IT infrastructure becomes more complex with virtualisation and cloud computing, applications become more susceptible to breaches and attacks. The explosion of data places gruelling demands on businesses to securely store and protect both business and customer data at every point of their infrastructure, process and application. The proliferation of personal mobile devices at the workplace requires businesses to securely manage these devices as well, beyond just PCs and network devices.

**That's not all. Over the years, threats have also become increasingly difficult to detect and mitigate as hackers constantly devise more ingenious ways to undermine business systems in the quest for fame, financial gains and political motivations.**

## How Well Are You Managing Security Today?

Security is a double-edged sword. When wielded skilfully, it can be a sharp enabler and differentiator to minimise your risk exposure and ensure regulatory compliance. When handled carelessly, it can pose critical business risks by exposing your vulnerabilities. How you cope in this fast-evolving landscape will determine your ability to create value, protect corporate credibility and data, maintain a trusted relationship with your customers and ensure business continuity.

Striking a balance between investing in the right security technology, while weighing the risk exposure that you can afford, is the way to go. How you view security as part of your overall business strategy, will determine how you go about implementing security solutions and services to support your specific security requirements. Where do you stand?



## Security Maturity Model

Aware	Defined	Managed	Optimised
<p>You are aware of the importance of guarding against security threats and see security as something desirable for your business. You have put in place all-inclusive solutions to perform multiple security functions such as network firewall, content filtering anti-virus and anti-spam protection.</p>	<p>You have defined security policy, controls and responsibilities to better manage and protect against security threats. Besides intrusion prevention, you have also identified point solutions like web and email gateways to guard against vicious attacks.</p>	<p>Security is integral to your business and IT operations. It is constantly evaluated and updated, with insights gained via security incidents and events monitoring to ensure proactive security enforcement and control.</p>	<p>Security is a critical component of your Corporate and IT Governance, where organisational structures, processes and enforcement monitoring are put in place to ensure the utmost confidentiality, integrity and availability of your critical information assets. Risks are monitored 24x7, with established service level agreements to mediate and counter all real and potential threats.</p>

## Different World. Different Security Landscape.

Why fight the battle alone? When everything is in a constant flux, what you need is a security solutions provider who will be there for you – both today and tomorrow. As your trusted partner with proven credibility, we work with you to devise a comprehensive, continuous and integrated security strategy and protect all assets and data that are crucial to your business.

Charting a clear security roadmap from operational, analytical to predictive security, we provide a comprehensive suite of Cyber Security Services designed to help you, regardless of your security maturity, to establish a proactive and integrated security system for your needs.

We take pride in our depth of experience to deliver round-the-clock security protection via our suite of security services, which ranges from design, integration, and change management to 24x7 monitoring of security and network systems. Businesses can count on our certified ICT professionals, industry-accredited processes, and state-of-the-art data centres and security operations facilities to effectively detect, deter and mitigate the damage of cyber-attacks and business interruptions.

# Operational Security: Taking an Integrated Approach

Users, data and assets are the three critical components of your day-to-day business that need to be protected. Operational security focuses on a set of solutions and capabilities to defend these three pillars effectively against known threats. An integrated approach that protects within and across individual elements so that your operations and teams can run smoothly.

## Operational Security

<b>Users</b>	<b>People &amp; Identity Security</b>	Identity Authentication & Access Management Web, Email, Data Content & Endpoint Security
<b>Data</b>	<b>Data &amp; Information Security</b>	Distributed Denial of Service Mitigation Security Information Event Management
<b>Assets</b>	<b>Application &amp; Process Security</b>	Application & Web Application Security Intrusion Detection & Prevention
	<b>Network &amp; System Security</b>	Network Security Firewall / SSL VPN Singtel / Optus Core Data Network

### Users

The users of your IT infrastructure include not just your staff but also customers, partners and suppliers. There is a need to protect your users' access to the Web, cloud mobile and your network assets, setting access rights and levels to ensure a safe and secure business environment. To secure users' remote access to business applications, employ **Two Factor Authentication** to enhance trust and protect end users' online transactions. Leverage **Mobile Device Management** to deploy and enforce BYOD policies, ensure compliance to company policies and protect your mobile devices against potential threats.

For a truly integrated, structured and robust security strategy, internal processes, organisational structure and employee awareness should also be aligned with security objectives to improve your security position against current and potential security challenges.

### Data

With the proliferation of the Internet, your business data is widely accessed via the email, web and mobile. Protect your corporate email and website by having **Email and Web**

**Gateways.** Safeguard your online servers from Internet-based attacks with **Distributed Denial of Service (DDoS)**. While **Endpoint Protection** secures your notebooks, desktops and servers with anti-virus, anti-spyware, firewall and intrusion prevention. Your business data can be classified as restricted, private and public data. To ensure secure access and sharing of your critical business data, first decide on the level of security needed to protect these various data types. Then, deploy **Data Loss Prevention** to detect the improper use of data and protect your digital assets against cyber threats.

### Assets

Your IT infrastructure forms the backbone of your business. Secure your infrastructure by deploying **Intrusion Prevention** against external attacks and unauthorised access, while **Application Firewall** for application and user-based control within your organisation, ensures the security of critical business functions and transactions. **Singtel Management Security Incident and Event Monitoring** services further extends the protection of your IT infrastructure, by effectively monitoring and correlating your security events, providing insights into your security health posture and logging security events for audit and compliance purposes.

## Protect, Detect, Respond, Recover

Many enterprises today do not have sufficient protection against advanced, unknown threats. To strengthen your security armour, you need to **complement your Operational Security strategy with Analytical and Predictive Strategy**, to ensure end-to-end security protection – from Protect, Detect, Respond to Recover.

## Analytical Security: See More with Analytics and 24x7 Vigilance

Analytical security is about moving beyond reacting to threats at the operational level, to understanding your enemy proactively and being ready to counter his attacks any time, any where. Singtel advocates 24x7 vigilance when it comes to the detection and analysis of advanced malware threats with consolidated real-time monitoring, backed by security analytics and intelligence for contextual intelligence.



**Advanced analytics of persistent threats:** Ensure continuous and real-time defence against both known and unknown threats. Revolutionary virtual machine-based detection model analyses advanced malware in real-time to thwart zero-day and APT attacks – via multiple vectors like email, web, content and mobile breach detection.



**Consolidated real-time visibility and monitoring:** With security solutions in place to protect assets, data and users, the next step is to ensure 24x7 monitoring of all touch points where threats enter the network. Our industry-accredited ISO27001 **Security Operations Centre (SOC)** offers 24x7 security events monitoring by a highly-skilled security expert team. Together with infrastructure monitoring by its **Network Operations Centre (NOC)**, it provides end-to-end visibility from your network infrastructure to your devices. We ensure fastest detection and containment of zero-threats with timely security incident management, backed by real-time correlated intelligence reports providing insights on emerging threats.



**Big data and intelligence:** We are in a unique position to provide another level of value to our security customers. We have the scale and capabilities to consolidate all traffic information, data and intelligence collected via the WAN, Internet, Wireless and Cellular networks into the SOC. Together with technology and research partners, big data and analytics will provide actionable insights and intelligence for security teams.

## Predictive Security: Staying Ahead of the Threat Curve

Our vision of security in the future is breaking away from an endless cat-and-mouse game; it is one where we are always two steps ahead of the threat curve. For this, it is about anticipating your enemy even before he makes his move.

We are working with partners to develop a Cyber Security Institute, a platform that convenes global technology providers, start-ups, research institutions, institutes of higher learning, partners, customers and service providers to invest in our next-generation of security capabilities.

## 24x7 Vigilance Against Security Threats



### Incubation lab

An innovation platform and receptacle to conduct Proof-of-Concept (PoC) test, validate, adapt, integrate, and commercialise global best-in-breed solutions with our partners specifically for the APAC market and customers. Together with other Singtel initiatives such as the L!feLabs and Innov8, our corporate venture investment arm, the Incubation Lab will also constantly sense and scan for emerging and disruptive cyber-security solutions around the world with potential to scale significantly in this region.

### Research & development centre of excellence

In close collaboration with world-class research and academic partners, we will embark on cutting-edge cyber-security R&D focusing on key strategic technology areas such as secure big data security analytics, predictive security intelligence, software-defined attacks mitigation and development of new threat scenarios and solutions among others.

### Cyber range

We have an advanced cyber range to complement the above initiatives; it will provide pseudo enterprise environments to conduct security resilience testing for new attack threat solutions and systems, and offer realistic threat simulation and cyber defence training for blue and red team exercises.

## Why Singtel



### Highly-experienced team of security experts

Our people make all the difference. Our team brings years of extensive experience with domain knowledge and skills in:

- IT security incident management, response handling and investigation
- Vulnerability assessment and penetration testing
- IT security governance, risk assessment and compliance



### Leading certification and accreditation

Our security management team has received a multitude of certification and accreditation including: CISSP, SABSA, CISA, CEH, ECSA, CHFI, Mile2, GCIA, CISM, GCIH and GCFA.



### Regulatory compliant processes

We believe in streamlining our processes against industry certified methodologies so you can be assured of fastest response times and delivery efficiencies. With more than 200 professionals with ITIL certification, we have the largest pool of Certified Project Managers (CITPM) and professionals specialised in System Management and professional services in Singapore. Other credentials include: ISO20000/ITIL certified IT Services Management methodologies, BS7799 / ISO27001 certification, ISO9001 certification, and IDA-ITSC Certified Business Continuity/Disaster Recovery service provider.



### Industry-leading and vendor-agnostic technology platform

Our strategic alliances with a rich ecosystem of industry-leading security solution providers ensure that we deliver only the best-in-class solutions available in the marketplace today.



### Regional coverage and deployment

With more than 2,000 security professionals in Asia Pacific and beyond, we are able to simplify security delivery with in-country operations around the world.



### Cost effective and flexible deployment

Choose from flexible deployment options including premise-based, cloud or hybrid security solutions that best meet your specific security requirements. Gain significant savings with no upfront capital expenditure, while enjoying the flexibility and predictability of monthly recurring subscription which lowers the total cost of ownership (TCO).



### Internationally acclaimed security operations centre

With 8 global federated Security Operations Centres (SOC) worldwide, our proven security operations provide round-the-clock monitoring and management service. Aligned with ISO27001 and audit-ready.



### World-class data centres

Our network of world-class data centres offer one of the most extensive regional points of presence in the Asia Pacific. The data centres provide 24x7 facilities management, direct interconnectivity access, and a range of Information Communications Technology (ICT) Managed Services.

# About Singtel

Singtel is Asia's leading communications group providing a portfolio of services including voice and data solutions over fixed, wireless and Internet platforms as well as infocomm technology and pay TV. The Group has presence in Asia, Australia and Africa with over 610 million mobile customers in 24 countries, including Bangladesh, India, Indonesia, the Philippines and Thailand. It also has a vast network of offices throughout Asia Pacific, Europe and the United States.

## Awards

Frost & Sullivan Singapore Excellence Awards 2016  
Managed Security Service Provider of the Year

Frost & Sullivan's Asia Pacific ICT Awards 2016  
Telco Cloud Service Provider of the Year

NetworkWorld Asia Info Mgmt Awards  
Security-as-a-Service (2012 - 2016)

NetworkWorld Asia Readers' Choice Awards  
Managed Infrastructure Services (2012 - 2015)  
Managed Security Services (2014 - 2015)

NetworkWorld Asia Info Mgmt Awards  
Disaster Recovery & Business Continuity (2014 - 2016)

Telco Cloud Forum Awards 2016  
Telco Cloud of the Year

