

MCom P3 Success Story



Singapore Central Provident Fund (CPF) Board Deploys SecureAge® MCom P3 To Enable Wireless Security For Their mPAL Service

SecureAge® MCom P3 Secures Mobile Employers' Submission Of CPF Contributions Using GPRS (General Packet Radio Service) Mobile Phone

Singapore CPF Board's innovative idea of providing a secure mPAL service to small business enterprises is now a reality with SecureAge® MCom P3. mPAL service is specially designed for employers with one to ten employees to securely submit their CPF contribution¹ details with just three quick clicks on their mobile phones. It is the first sophisticated wireless solution for public services provided by a government agency in Singapore. Small businesses like small retailers and other small businesses will find it easier, faster and more secure to file, transact and update monthly CPF information and payments from now on.

The Case And Requirements

mPAL service is initiated by CPF Board with the notion that it will potentially benefit around 80% of all businesses in Singapore. It provides them with greater convenience, time savings, cost savings and timely crediting. Employers of small businesses who are constantly on the move or overwhelmed by work can easily submit the CPF contribution details anytime and anywhere. Payment of their employees' CPF contributions can simply be made electronically through GIRO². With this service, employers who are too strapped for time no longer need to rush to post Payment Advice. It also helps to minimize any possible mistakes made during submission which in turn saves them from any penalty interest. Employers can be assured that payment of CPF contributions will be credited timely into their employees' CPF accounts one working day after GIRO deduction. They no longer need to rush back to the office from an important meeting just to meet the CPF contributions deadline.

But no matter how convenient and how much benefits mPAL service can offer, it comes with an inevitable risk – How can the employers be assured that the confidential CPF contribution and information that have been transmitted over the wireless network is not being eavesdropped and tampered with? An unprotected wireless environment with the lurking of potential hackers and

¹ CPF is a comprehensive social security savings system that provides workers with financial security in old age. CPF savings also help to meet the needs of families in healthcare, home-ownership, family protection and asset enhancement. CPF is jointly supported by the employees, employers and the Government in Singapore. CPF contributions must be paid monthly by the employers for all their employees based on the rate stipulated by CPF Act from the first day of their employment. Similarly, employees also need to contribute their share through deduction from their monthly wages. In another word, each employee will have their own contribution and their employer's contribution added to his / her CPF savings every month.

² GIRO system in Singapore allows individuals, who have savings or current accounts with any participating banks or finance companies linked to the Interbank GIRO Network, may use the Automatic GIRO Deduction Scheme to make payments.





unwanted interceptions will never cease to evoke fears, uncertainties and doubts to the users. That is why wireless security plays a vital role in securing wireless devices like mobile phone and networks from such parasitical interceptions. Therefore, to truly enjoy the greater benefits offer by mPAL service, CPF Board need to first address the security concerns of the employers over wireless CPF transactions. There is a crucial need to fully secure the wireless environment in order to give employers the confidence to transact CPF contributions without reservations.

The Solution

SecureAge[®] MCom P3 is being deployed to address such security concerns over wireless CPF transactions via mPAL service. It is the only wireless security solution that best satisfy Singapore regulatory requirements for end-to-end security. Most importantly, it is able to fulfill the wireless security requirements specified by the CPF Board for the mPAL service.

SecureAge[®] MCom P3 offers a full-strength wireless security solution to protect wireless CPF transactions via mPAL service using Java-enabled mobile phones. It is able to interoperate seamlessly with the existing security infrastructure used in the wired Internet service currently provided by the CPF Board. It also provides the flexibility of scaling the PKI (Public Key Infrastructure) based security to accommodate new mobile users.

Besides providing wireless network security via standard SSL (Secure Socket Layer), TLS (Transport Layer Security) and WTLS (Wireless Transport Layer Security), SecureAge[®] MCom P3 also provides powerful user authentication based on PKI technology, and end-to-end data encryption protection based on its state-of-the-art security algorithms and standards like 256-bit AES and RSA encryption.

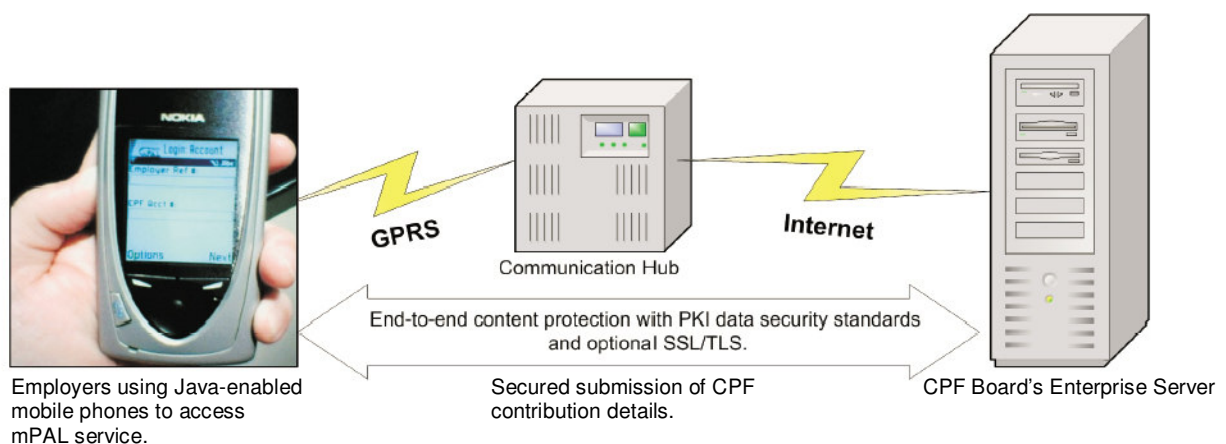
SecureAge[®] MCom P3 works with full compatibility not only with General Packet Radio Service (GPRS) as required by the CPF Board, but also Global Mobile System (GSM) network and 3G to fully protect mobile commerce transactions and enterprise communication between wireless devices and Internet based servers.

SecureAge[®] MCom P3 also provides a complete J2ME security solution on any Java mobile phone or PDA. J2ME security solution gives the flexibility of enabling one single executable for all devices, allows easy installation and downloading over the air (OTA) from a wired to a wireless environment and uses small foot print that consumes little memory that can be easily custom-fitted into various handheld devices. It also enables strongest end-to-end PKI security to ensure that CPF data will remain secure during its transmission from the mobile phone all the way until it reaches the CPF Board's Enterprise Server. Only this server has the access to the correct private key for encrypting and



decrypting the traffic. No entity in between the mobile phone and the Enterprise Server is able to compromise the confidentiality, integrity and authenticity of the wireless CPF transactions. Furthermore, the highly optimized MCom P3 security solution enables public key operation / encryption to be computed in sub-second on the mobile phones. That is to say that the entire encryption and decryption process can be performed so fast that it is hardly noticeable by the employers.

How Does It Work?



To use mPAL, all the employers need is a Java-enabled (GPRS) mobile phone like Nokia 3100, 3650, 6100, 6108, 6610, 6800, 7250, 7650, or Sony Ericsson P800³. They will then have to download a 64 KB application onto their mobile phone which takes about a minute. This application, which enables wireless transaction, was developed using the Java 2 platform, specifically the J2ME (Java 2 Platform Micro Edition). Since SecureAge[®] MCom P3 can be easily incorporated into J2ME platform, it is undoubtedly the perfect wireless security solution for mPAL service. SecureAge[®] MCom P3 with its J2ME security capability enables the entire encryption and decryption process to speed up significantly so that employers need to take only a minute to file each CPF transaction.

After registering the mPAL service with the CPF Board and installing the application, the employers can start submitting the CPF contribution details using mPAL service. They need to first login to the system by entering their identification information like employer's reference number, user's CPF account number and user's PAL PIN. Once their identities are verified, they can then proceed to use the mPAL service.

³ The mobile phone models may change over time. Please visit CPF website at <http://www.cpf.gov.sg> for updated models.



Each CPF transaction entered by the employers will be encrypted using 256-bit AES encryption and the powerful RSA algorithm. This confidential data will remain securely encrypted all the way until it reaches the Enterprise Server. Only dedicated servers that have the access to the correct key are able to decrypt the encrypted information submitted by the employers. An encrypted acknowledgement will be sent to the employers to confirm their submission to the CPF Board. The authorized employers can then decrypt and read the acknowledgement.

SecureAge[®] MCom P3 enables the encryption and decryption process to be performed so rapidly and seamlessly without requiring any user intervention. It gives the employers a peace of mind to securely submit their CPF contribution details without the fears of having this confidential information being compromised. With mPAL service now fully secured with SecureAge[®] MCom P3, employers can truly enjoy a paperless, hassle-free and more efficient way of submitting CPF contributions.

To find out how SecureAge[®] MCom P3 can enhance your organization's wireless security, please contact us or visit our website at www.secureage.com.

About SecureAge Technology

SecureAge Technology provides seamless and comprehensive security appliances, application security and data encryption solutions for government and corporations in the Asia Pacific region. We have developed two flagship products, SecureAge[®] Suite and SSL VPN to help companies secure their Internet access and remote access to their enterprise networks from numerous devices and applications worldwide. To meet the diverse business needs of various companies, SecureAge Technology also provides other security solutions to safeguard their critical business information. Our mission is to deliver unparalleled protection on access control, authentication, confidentiality, integrity and non-repudiation for our customers and likewise for their employees, customers and partners.

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