

mlog

mbox™

mfusion™



Case Study





Requirements & Challenges

- To empower secure Wi-Fi access for more than 55 million passengers a year
- To enable Changi apps download upon initial connection
- To offer differentiated services for users with and without apps (to encourage apps install)
- Maintains world's best airport reputation with best performance, reliability and security.

The Solutions

- mbox HotSpot Gateway (HSG)
- mfusion platform



Results

Extremely scalable, and secure passenger Wi-Fi solution that **maximises surfing experience** and **safeguards Changi reputation** as the world's best airport!

mbox HSG + mfusion

- Seamlessly integrated with existing WLC/AP, RADIUS and captive portal servers
- Supports multi-Gbps throughput with 10G interface bonding tagged with vlans
- Provides per device bandwidth up to 30Mbps, for up to 25,000 simultaneous devices
- Supports stateful failover between HA units
- Whitelist specific URLs for users to download Changi apps (unlike most other vendors whitelist by IPs only)

Exhibition



Requirements & Challenges

- Empower secure hotspot Wi-Fi access to support hundreds of events with millions of visitors per year
- Constant change/customize login portal designs to adapt to different events

The Solutions

- mbox HotSpot Gateway (HSG)
- mfusion platform

mbox HSG + mfusion

- Aggregate multiple Gbps ISP links to achieve huge backhaul capacity
- Support multi vlans mapped to different wireless SSID (free, premium, gold)
- Create premium access voucher and easily print via POS/thermal printer
- Allow gold users to self-purchase fastest Wi-Fi access using credit cards (via HSG back-end payment gateway integration)
- Customizable login portals easily (or landing pages) through web-based CMS.



Results

Flexible hotspot solution that allows venue owners to meet organizers primary needs of FREE-Wi-Fi with customizable event branding, and upsell premium Wi-Fi.

Hospitality | Hotels



Requirements & Challenges

- To empower hotel Wi-Fi access for hotel guests and visitors
- To have seamless Wi-Fi sign in for hotel guest
- To allow hotel to upsell premium Wi-Fi
- To allow free access with social media sign-in

The Solutions

- mbox HotSpot Gateway (HSG)

mbox HSG

- Easy portal customization with CMS to change message of the day
- PMS integration (Opera, ipay88) for seamless hotel guest sign-in
- Create and print vouchers for premium Wi-Fi
- Social media integration for visitor sign-in and collect user contacts for campaigns
- Differentiated bandwidth control for hotel guest, premium users and visitors



Results

Versatile hotel Wi-Fi solution that **meets primary needs for guests** while allowing hotels to **upsell premium Wi-Fi** and better **engage both guests & visitors**



Requirements & Challenges:

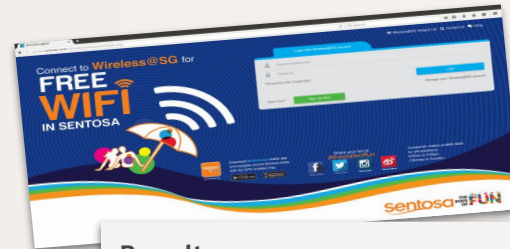
- To empower free Wi-Fi access for more than 20 million tourists per year
- To enable Sentosa apps download upon initial connection
- To enforce new user registration (with OTP) and authenticate user logins for added security
- To understand user patterns through data analytics (their preferred places of interests etc).

The Solution

- mbox HotSpot Gateway (HSG)
- LOG Event Management

mbox HSG + LOG Event Management

- Reliably provide customized portal access for thousands of tourists
- Whitelist specific URLs for users to download Sentosa apps
- Authenticates users with Wireless@SG accounts by proxying to upstream ISP
- Per user bandwidth control according to Wireless@SG standards
- Track user locations and dwell time by integrating with Aruba/Cisco WLC



Results

Secure hotspot solution that allows tourists to **keep in touch** with their friends & families, and **share their enjoyment & findings**, and positions Sentosa as a **tourist friendly attraction**.



Requirements & Challenges

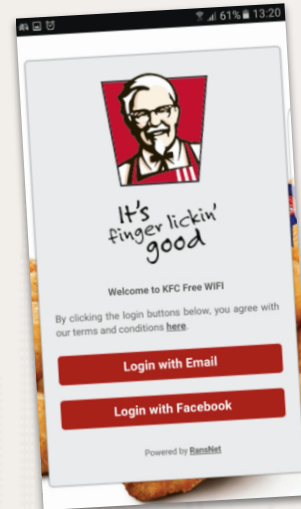
- To have a simple & reliable solution to provide free public Wi-Fi access in its restaurants
- To capture user profiles and contacts for future campaigns
- To limit bandwidth usage of each user to avoid competition for bandwidth required for its daily operations.

The Solutions

- mbox HotSpot Gateway (HSG)
- mbox HotSpot Access (HSA)
- LOG Event Management

mbox HSG + mbox HSA + LOG Event Management

- Centralized HSG redirects user traffic to KFC own custom branded portal.
- HSG QoS ensures sufficient bandwidth is allocated for daily operations, and fair usage among active users.
- Social media login captures user profiles and allows venue owners to engage and run campaigns easily with their customers



Results

Attracts customers, reduces perceived waiting time and enhances customer experience, while allowing venue owners to engage customers.

Retail



Requirements & Challenges

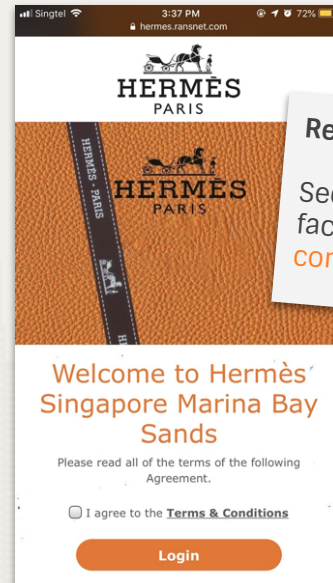
- Extensive network of over 500 stores. The largest chain of convenience stores island-wide and operates 24 hours a day, (except for some stores which have shorter operating hours)
- Require to provide greater customer value by delivering free internet access who has made purchases while the same solution can connect each site back to HQ for internal transactions securely.

The Solutions

- mbox VPN gateway (CMG)
- mbox HotSpot Access (HSA)

mbox CMG + mbox HSA

- Deployed HotSpot Access (HSA) at each outlet integrated with centralized captive portal in the HotSpot Gateway (HSG)
- Free Internet access only for its patrons that had made purchases with each access session having an expiry, limited bandwidth and without increasing staffs' workload through issuing passwords manually.
- The same HSA connects each remote site securely back to HQ/DC via encrypted VPN



Results

Secure & easy-to-manage free Wi-Fi facility which offers customer convenience.

Shopping Malls



Requirements & Challenges

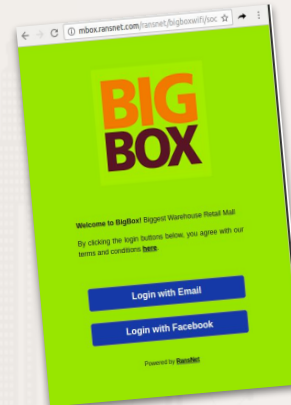
- To empower reliable Wi-Fi for shoppers
- Secure login via Wireless@SG or OTP or social media signon
- To capture user profiles for data analytics and marketing campaigns
- Constant change/customize captive portal designs for branding purposes

The Solutions

- mbox HotSpot Gateway (HSG)
- mbox multi-wan link balancer (CMG)
- mbox Access Point (MAP)

mbox HSG + mbox CMG + mbox MAP

- Balance and aggregate multiple ISP links for maximum backhaul capacity and resiliency
- Centrally manage user authentication and bandwidth control
- Integrate with 3rd-party legacy APs
- Integrate with facebook and google+ to allow users to login with social media accounts
- Pull user public profile details and store for data analytics and future campaigns
- Provide intuitive web-based CMS with ready templates for easy customization



Result

Attracts patrons and **enhances shoppers experience**, while allowing malls to **engage customers**.

Financial Services



Requirements & Challenges

- To empower WiFi access for up to 100 UOB bank branches
- Centrally authenticate user access using SMS OTP for security and traceability
- Differentiated access rights for privilege banking, wealth banking and general public
- Integrated Wi-Fi marketing, eg. profile-based landing page for different groups of users

The Solutions

- mbox HotSpot Gateway (HSG)
- SD-WAN (mbox HSA-500)
- LOG Event Management

mbox HSG + SD WAN + LOG Event Management

- Centralised internet breakout for all Wi-Fi users
- Centrally manage user OTP registration through cloud captive portal
- Redirect different landing pages based on user profiles for Wi-Fi marketing
- Support both bandwidth and time-based control based on user profiles
- Track user access logs for audit compliance

A screenshot of the UOB WiFi login page. The page has a blue header with the UOB logo. Below the header, it says "Welcome to WiFi@UOB". There is a section for "Login with your mobile number:" which includes a dropdown for "Country Code" and a text input field for "Enter Image Text (non-case-sensitive, no spaces):". Below the input field is a CAPTCHA image showing the numbers "387168". There is a checkbox for "I agree to the terms and conditions" and a blue "SUBMIT" button. At the bottom, it says "Powered by RansNet".

Results

Secure & easy-to-manage free Wi-Fi facility which offers customer convenience and reduces perceived waiting time, while delivering marketing campaigns.

Healthcare



Requirements & Challenges

- Empower secure Wireless@SG Wi-Fi access for all top 15/IHIS hospitals in Singapore
- Provide optimal internet access services for more than 10,000 concurrent users (both patients and hospital staff) per hospital
- Integrate with existing wireless infra which is also used for hospital other operations

The Solutions

- mbox HotSpot Gateway (HSG)

mbox HSG

- Seamlessly integrate with existing Cisco APs
- Authenticate users secure via Wireless@SG accounts by proxying to upstream ISP, for both captive portal logins and EAP-SIM
- Control bandwidth to limit per user speed according to WSG standards
- Support up to 15,000 concurrent users per gateway to empower up to 1/2 million logins per day



Results

Secure, easy-to-use public Wi-Fi services, which ensure **patient satisfaction** and **staff work efficiency**



Requirements & Challenges

- To empower WiFi access for thousands of tenants across 100 estates island wide
- To centrally authenticate user access using SMS OTP for security and traceability
- Time-based control for registered user account (valid for the day)
- To provide both captive portal login and WPA-EAP logins (integrate with 3rd-party AP)

The Solutions

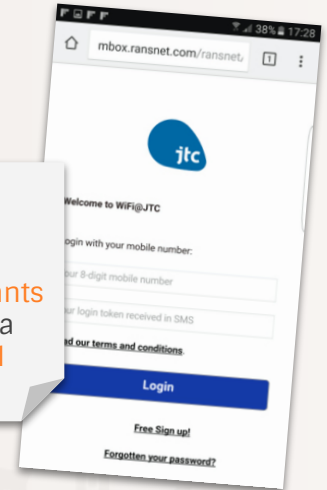
- mbox HotSpot Gateway (HSG)

mbox HSG

- Seamlessly integrate with existing Aruba APs
- Centrally manage user OTP registration through cloud captive portal
- Centrally authenticate users via cloud RADIUS for remote HSG gateways, for both portal and WPA-EAP logins (using valid certs)
- Support both bandwidth and time-based control for each registered user

Results

Secure & easy-to-manage free Wi-Fi facility that offers **convenience to tenants and visitors**, while maintaining JTC as a leading agency for **premium industrial workspace**.





Ministry of Education
SINGAPORE



Requirements & Challenges

- To keep track of all user/student Internet access logs for security investigations
- Reliably capture and store live logs from more than 15 devices with more than 2 million logs per hour
- Instantly generate events/incidents and alarm for abnormal activities
- Scheduled reports for audit compliance

The Solutions

- LOG Event Management

LOG Event Management

- Efficiently parse live security logs from 15 devices, eg. Checkpoint & Palo Alto firewalls, Juniper routers, Windows ADs, Alcatel-Lucent switches, F5 appliances, etc.
- Analyze log patterns and generate events and alarms in real-time based on pre-defined hundreds of events rules.
- Store parsed logs in SQL database with intuitive web GUI for flexible searching and filtering during investigation.
- Daily archive out logs to external NAS for long-term historical log retention
- Schedule weekly compliance reports

Result

Powerful log management solution that automates all log collection, **assists network operation**, and enables SUTD to **comply to security audit** requirements.

Other similar customers: UOB, KFC, Sentosa,...

Hostels & Dorms



Victoria School
Founded 1878



Requirements & Challenges

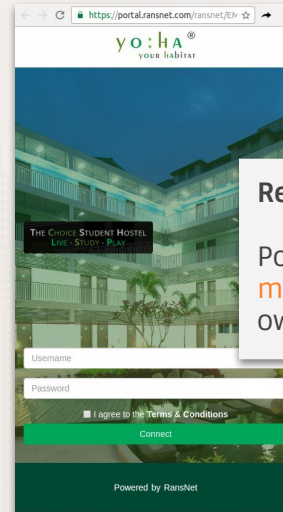
- To provide reliable and controlled free Wi-Fi to registered tenants with heavy usage
- To ensure fair use of Internet services
- To upsell premium Wi-Fi

The Solutions

- mbox HotSpot Gateway

mbox HSG

- Authenticate legitimate user access through customizable captive portal login
- Bandwidth control to ensure fair user speed even for high throughput usage
- Upsell premium Wi-Fi easily through POS printed access vouchers
- Allow admin to manage accounts at ease via intuitive guest management console



Result

Powerful Wi-Fi facility that satisfies the most demanding needs while allowing owners to upsell premium Wi-Fi.

Integrated Resort



Requirements & Challenges

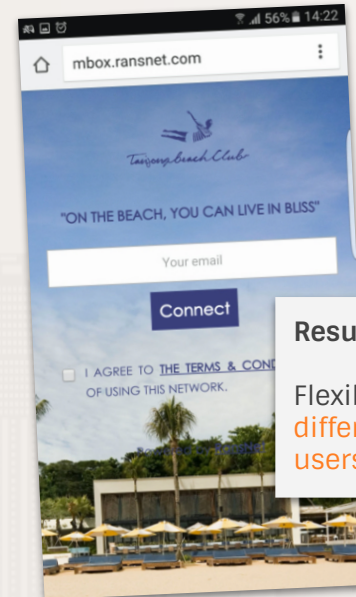
- To empower Wi-Fi access for both public guests and VIP members
- To offer differentiated services to public and VIP members
- To capture public guest profiles for data analytics and campaigns purposes

The Solutions

- mbox HotSpot Gateway (HSG)

mbox HSG

- Reliably provide customized portal access for thousands of members and guests
- Integrate with CRM database for VIP sign-in
- Auto assign user speed based on profiles
- Collect user contacts through social media sign-in



Result

Flexible hotspot solution that offers **differentiated services** and **engage public users** at ease.

“In Singapore, **RansNet** empowers more than **2 million** user logins per day, and over 100,000 concurrent users Internet accesses at any moment.”

Experience It Today!





Thank You!

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