MOBILITY SOLUTIONS
移動解決方案
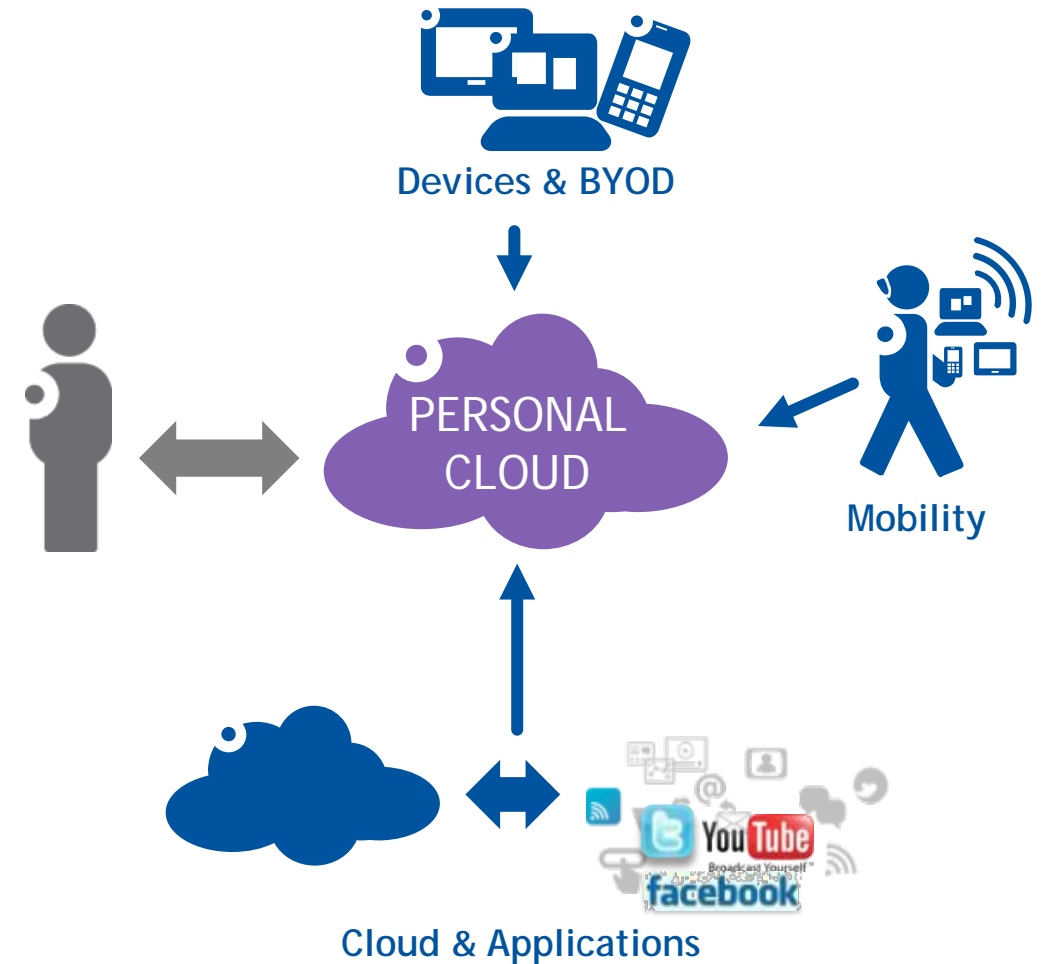
March 2014

Alcatel·Lucent
Enterprise

WHAT IT MEANS TO BE A **MOBILE** ENTERPRISE

Devices & BYOD

PERSONAL CLOUD
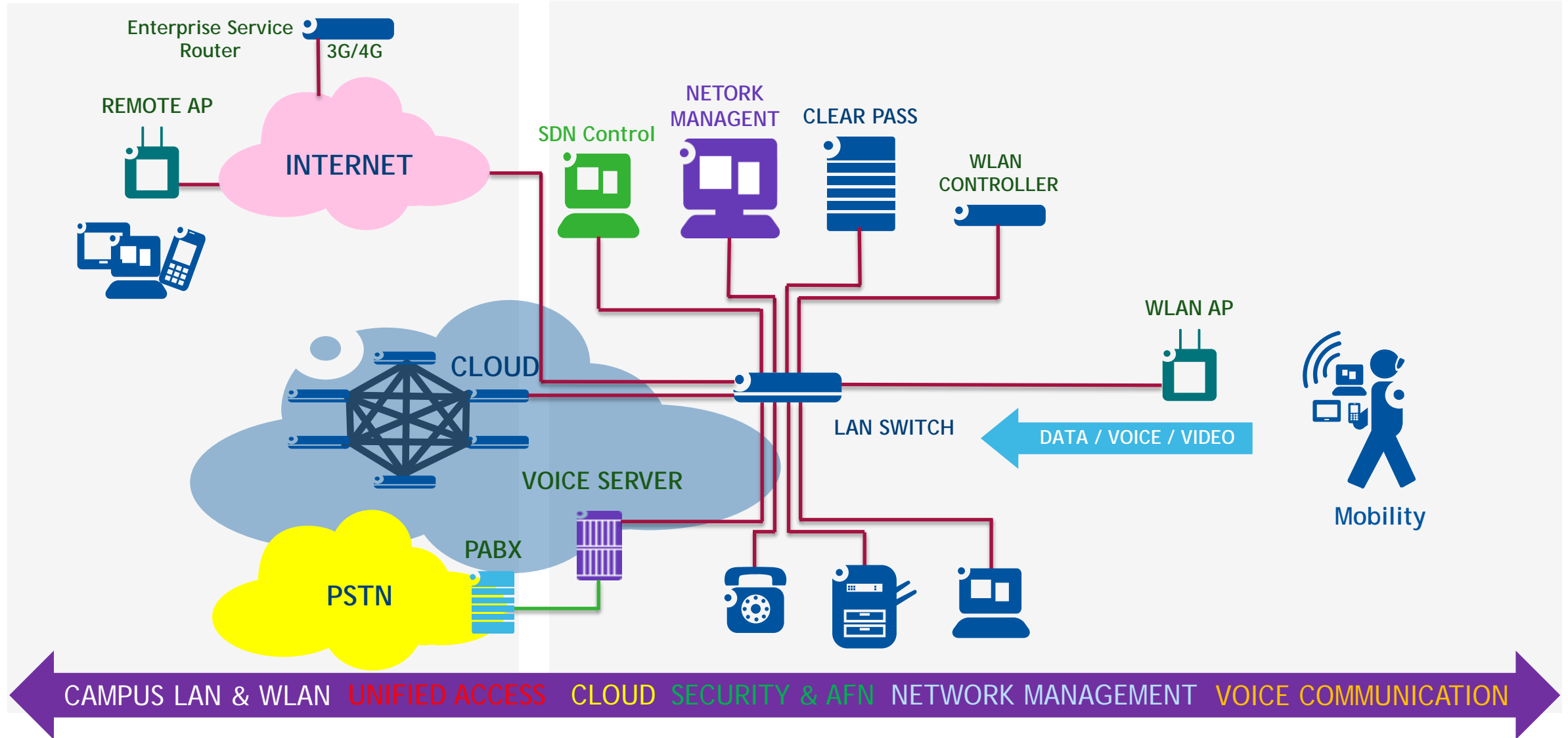
Mobility

Cloud & Applications

Mobility is #1

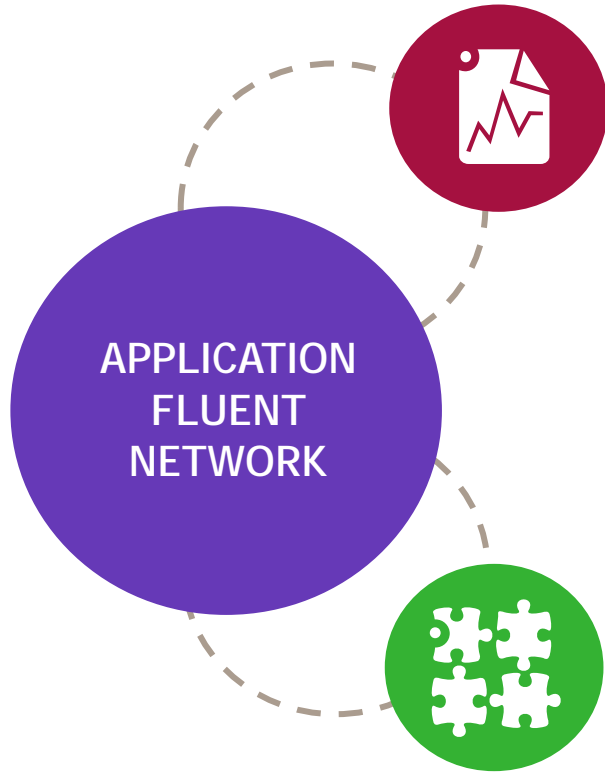STRATEGIC INITIATIVE FOR 71% OF IT DECISION MAKERS *

A MOBILE ENTERPRISE OFFERS: UBIQUITOUS CONNECTIVITY, WITH HIGH QUALITY ACCESS TO APPLYCATIONS, ANY TIME, ANYWHERE WITH ANY DEVICE

* Forrsights Networks and Telecommunications Survey – Q1 2013

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MOBILITY SOLUTIONS

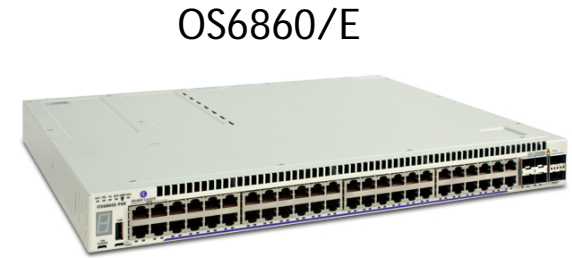# SECURITY HIGHLIGHTS

OS6860/E

APPLICATION FLUENT NETWORK

NETWORK ANALYTICS

- Wire-rate DPI
- Visibility & Control
- Dashboard
- SLA monitoring
- User/device/app visibility
- Traffic Anomaly Detection

AP-275

AP-103/204/205
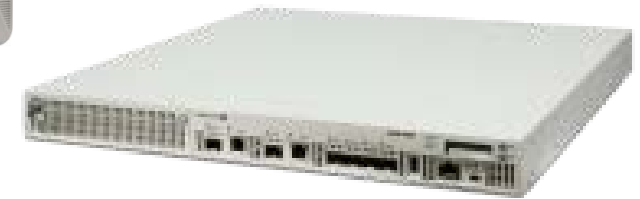IAP-114/115/224/225

OAW4X50

PROGRAMMABILITY

- SDN in the Campus
- OpenFlow/OpenStack
- Northbound/Southbound APIs

OV 2500

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OMNISWITCH 6860
THE INDUSTRY'S MOST ADVANCED ACCESS SWITCH

Wire-rate Application Match (up to 100 signatures)

Policy Enforcement

Application Fingerprinting *
Applications Discovery (up to 1,000 signatures)

ASIC

Co-Processor

✓SDN Inside

OmniSwitch 6860/E
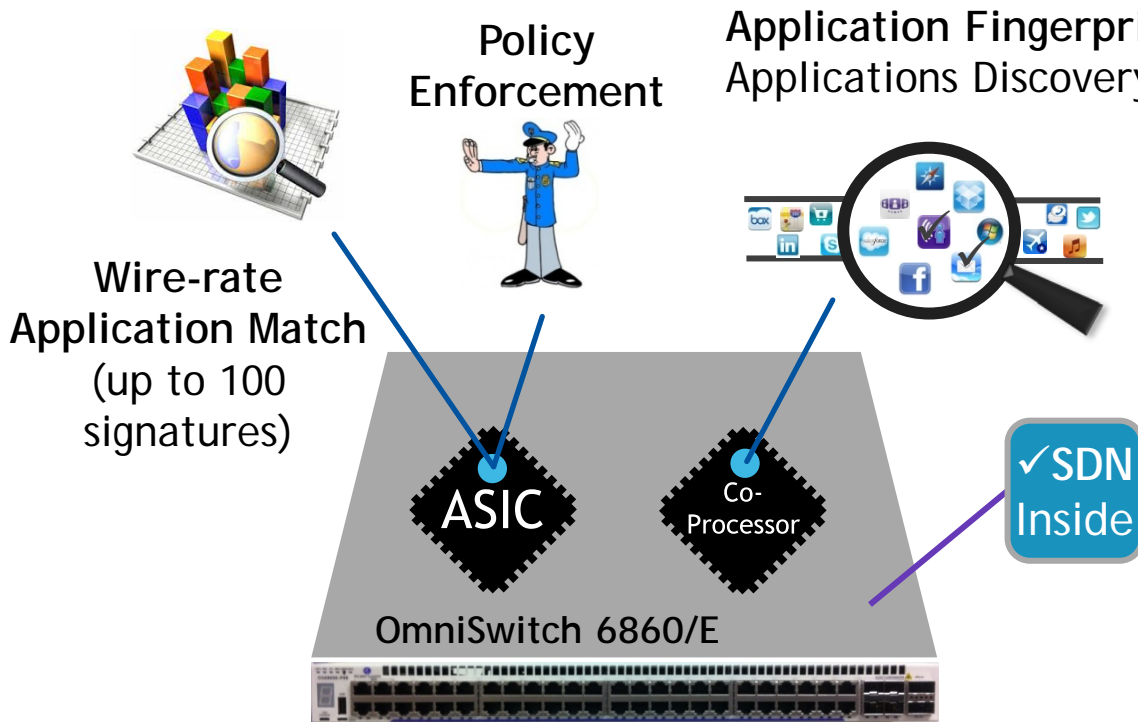
Innovative Architecture

- 256G wire rate engine
- Deep Packet Inspection and Application Monitoring
- Coprocessor for enhanced network services *
- Virtual Chassis support
- Wireless forwarding capability
- Comprehensive user and device authentication and access control
- Enables deployment of an advanced and secure BYOD services
- PoE+ on all ports; up to 60W of PoE
- Energy Efficient Ethernet (EEE)
- SDN ready
- Data center/IT friendly:
  - All ports, including stack in the front
  - Front to back cooling
  - BlueTooth management port

* OS6860E model only

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OMNISWITCH 6860 – BASE MODELS

- **OS6860-24**

  - 24 RJ-45 10/100/1000 BaseT ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - AC and DC power supply

- **OS6860-48**

  - 48 RJ-45 10/100/1000 BaseT ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - AC and DC power supply

- **OS6860-P24**

  - 24 RJ-45 10/100/1000 BaseT POE ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - 600W AC power supply

- **OS6860-P48**

  - 48 RJ-45 10/100/1000 BaseT POE ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - 920W AC power supply

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OMNISWITCH 6860E – ENHANCED MODELS

- ## OS6860E-24

  - 24 RJ-45 10/100/1000 BaseT ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - AC and DC power supply

- ## OS6860E-48

  - 48 RJ-45 10/100/1000 BaseT ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - AC and DC power supply

- ## OS6860E-P24

  - 24 RJ-45 10/100/1000 BaseT POE ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
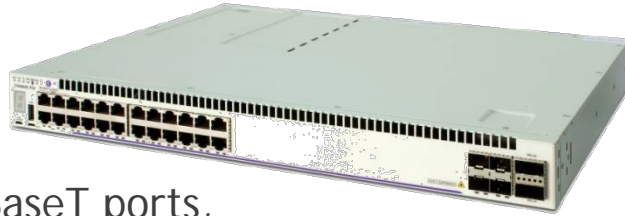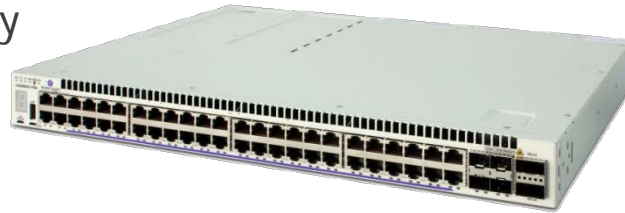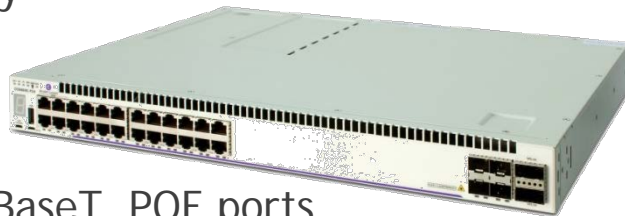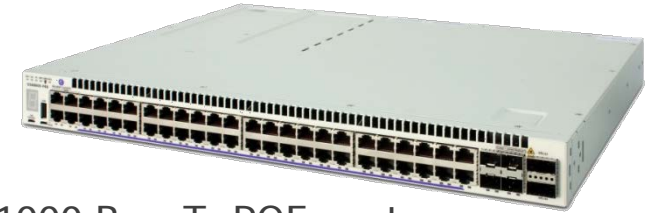 - 600W AC power supply

- ## OS6860E-P48

  - 48 RJ-45 10/100/1000 BaseT POE ports,
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - 920W AC power supply

- ## OS6860E-U28

  - 28 100/1000 Base-X SFP ports
  - 4 fixed SFP+ (1G/10G); 2 VFL QSFP+ ports (20G each)
  - AC and DC power supply

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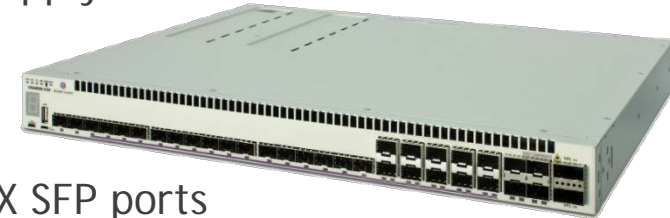
OMNISWITCH 6860E-P48 – HW OVERVIEW

OS6860E-P48

7 segment LED

USB port (disaster recovery, BlueTooth)
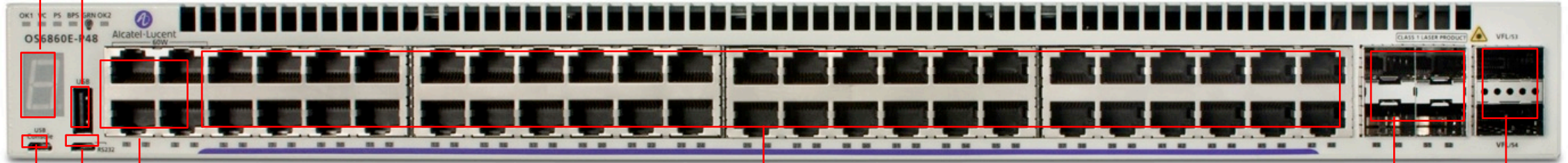
Micro USB
(console)

4 x 10/100/1000BaseT w/PoE++
(60W)

44 x 10/100/1000BaseT w/PoE+ (802.3at)

Dual 20Gbps
VFL/Stacking ports
(QSFP+)

Micro USB
RS232

4 x 10Gbps (SFP+)
LRM, MACSec support

EMP
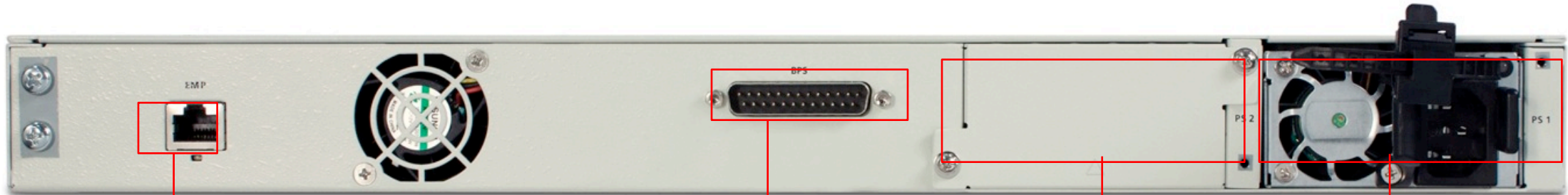
BPS connector
N+N redundancy
PoE load sharing

Backup Load Sharing PSU

Load Sharing PSU.

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OMNISWITCH 6860E-U28 – HW OVERVIEW

OS6860E-P48

7 segment LED

USB port (disaster recovery, BlueTooth)

Micro USB
(console)

Micro USB
RS232

28 x 100/1000 Base-X SFP ports

4 x 10Gbps (SFP+)
LRM, MACSec support

Dual 20Gbps
VFL/Stacking ports
(QSFP+)

EMP
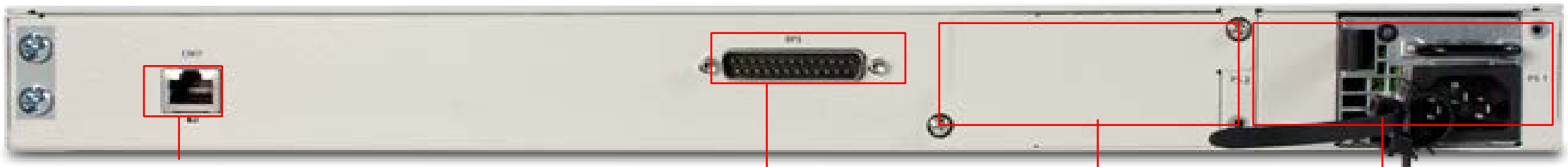
BPS connector
N+N redundancy

Backup Load Sharing PSU
or
Fan tray

Load Sharing PSU.

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5. ENTERPRISE SERVICE ROUTER

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KEY VALUE PROPOSITION OF THE ESR SOLUTION

AFFORDABLE INTEGRATED COMMUNICATIONS DEVICE FOR REMOTE LOCATIONS

Router   Switch   AP

Media Gateway & Survivability PBX

Applications Server
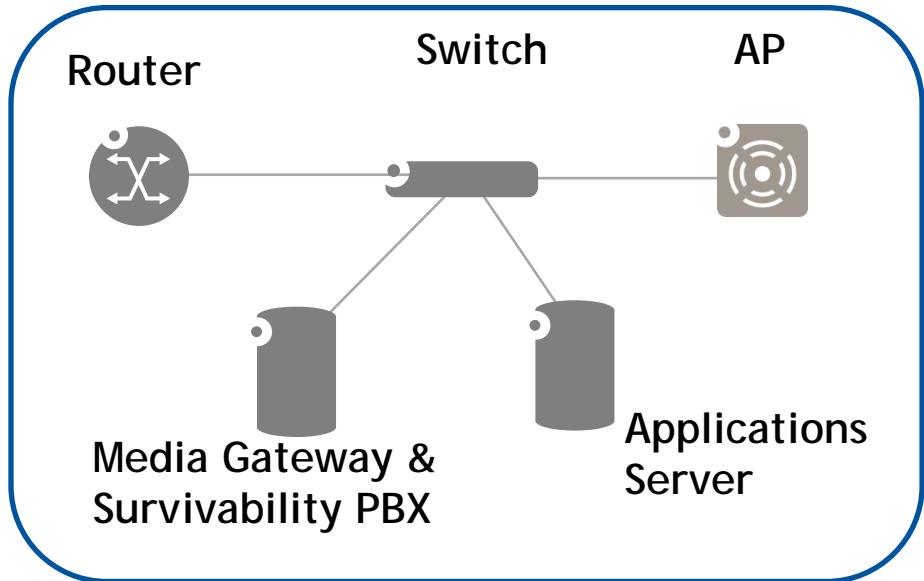
June

OA 5710

GA

OA 5720

GA

OA 5840

+ **Applications**

GA

OA 5850

GA

OA 5725A

Q3

OA 5725R

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OMNIACCESS ESR
FEATURES & SERVICES OVERVIEW

Advanced IP	**Security and VPNs**	**Remote Management**	**QoS**	**ToIP**	**Legacy**
• BGP, OSPF, RIP • Multi-VRF • BFD • Policy routing • VRRP • Traffic balancing • IGMP	• IPSec VPNs • DMVPN • L2TP • AAA • Stateful Firewall • Digital certificates	• CLI, SSH, FTP • SNMPv3 • Syslog • Traffic sniffer • AAA	• Diffserv • Congestion control (CB-WFQ, PQ, WFQ...) • Traffic shaping	• SIP • H.323 • NOE • Multi-codec • Call admission control • PBX features...	• SNA • X.25 / XOT • Frame Relay • SCADA (Modbus, IEC-101, IEC-102...) • HDLC, PPP, PPP-AT...

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OMNIACCESS ESR
CAPABILITIES OVERVIEW

Model	WAN Mbps with Services	Switch	WWAN (3G/4G)	Access Point	Data WAN interfaces	Voice media gateway interfaces	Rugged	Apps
5710	50	4 GE	Yes	Yes	GE, ADSL2+/VDSL2	-	-	-
5720	100	4 GE	Yes	Yes	GE, E1/T1, SFP, Serial	-	-	-
5725A	80	4 FE	Yes	Yes	-	-	Yes	-
5725R	50	6 FE	Yes	No	ADSL2+/VDSL2	-	Yes	-
5840	100	8 FE	Yes* Using Enabler	Yes	2 GE, VDSL2/ADSL2+, 2 Modem, Serial, 2 BRI, G.SHDSL, E1/T1, SFP	4 FXS/FXO, 2 E&M, 2 BRI	-	-
5850	200	8 FE	Yes* Using Enabler	Yes	2 GE, VDSL2/ADSL2+, 2 Modem, 3 Serial, 2 BRI, G.SHDSL, 4 E1/T1, 2 SFP	4 FXS/FXO, 2 E&M, 2 BRI, PRI	-	Opt

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OMNIACCESS 5840 & 5850 ESR
SMALL TO LARGE BRANCH OFFICES

Features/Model	OA 5840	OA 5850
DSL Slot	One	One
Multipurpose slots	One	Two
Integrated 8p switch	Yes	Yes
Wi-Fi option	Yes	Yes
LTE option	Yes	Yes
Applications	No	Yes
Hard disk option	No	Yes
WAN access speed (with services)	100MB	200MB
Data / voice daughter boards	•2 modem •1 Serial •2 data ISDN BRI •G.SHDSL (2p) •1 E1/T1 •1 SFP • 4 FXS/FXO •2 E&M •2 voice BRI	•All from 5840 •4 E1/T1 •3 serial •2 SFP •1 voice PRI

INTERNAL HARD DISK for OA5850

POWER SUPPLY AND SWITCH

MULTIPURPOSE VOICE/DATA SLOT

DSL SLOT

INTERNAL WI-FI SLOT

LED

CONSOLE

USB

2 x GE

SWITCH 8 x FE

2ND. MULTIPURPOSE VOICE /DATA

Alcatel·Lucent
Enterprise
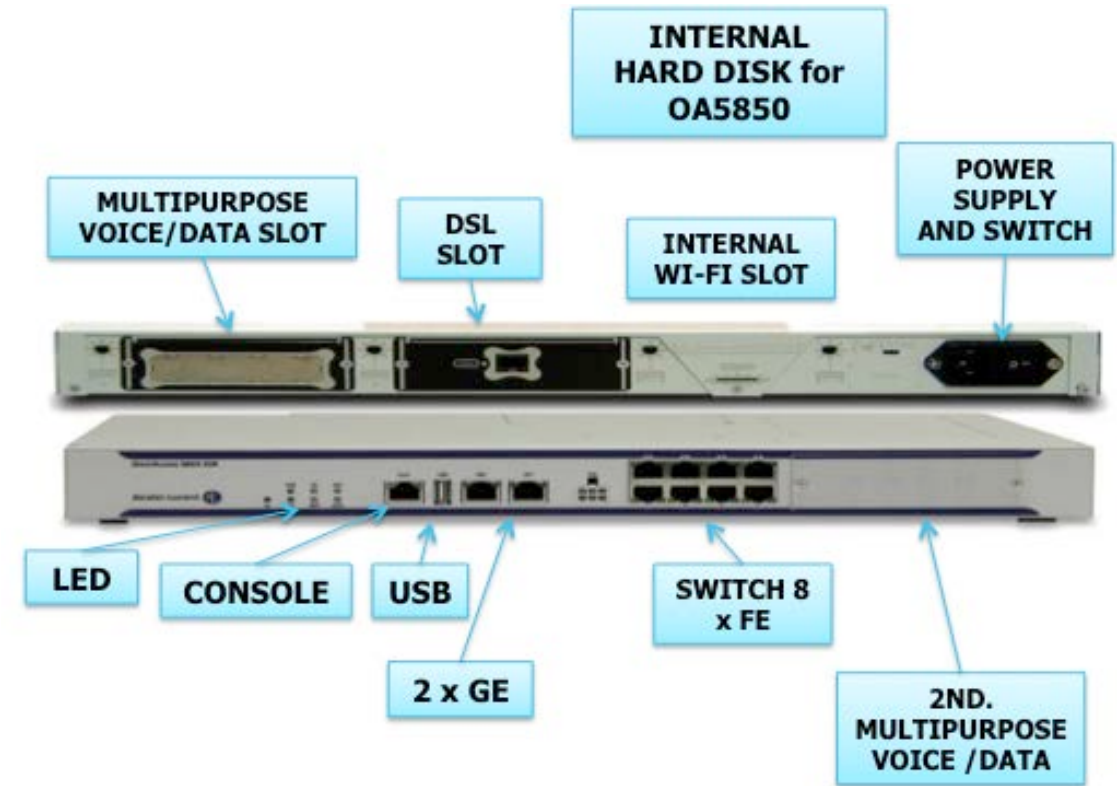
OMNIACCESS 5710 & 5720 ESR
SMALL BRANCH OFFICE

Name	Main WAN interface	Wi-Fi	Cellular option
OA5710	VDSL2/ADSL2+	802.11 a, b,g,n	Regional variations supported
OA5720	Metro Ethernet (Copper)		
OA5720 Sub-Module	Metro Ethernet (Fiber)		
OA5720 Sub-Module	Serial		
OA5720 Sub-Module	E1/T1		

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Enterprise
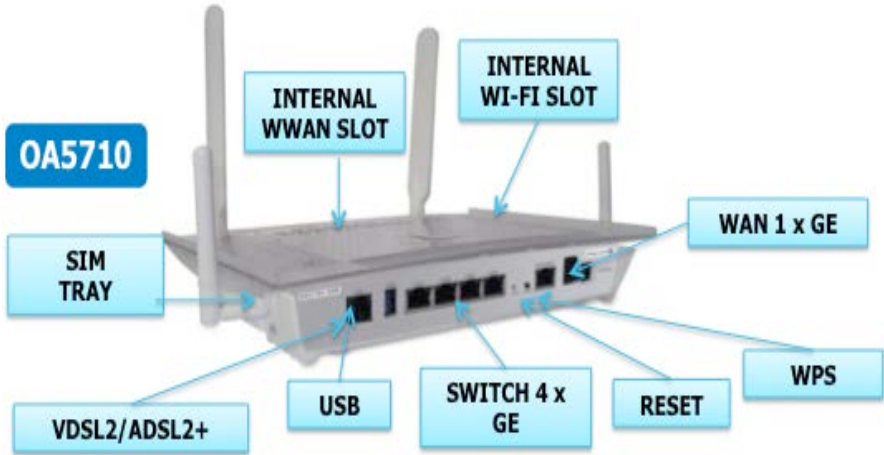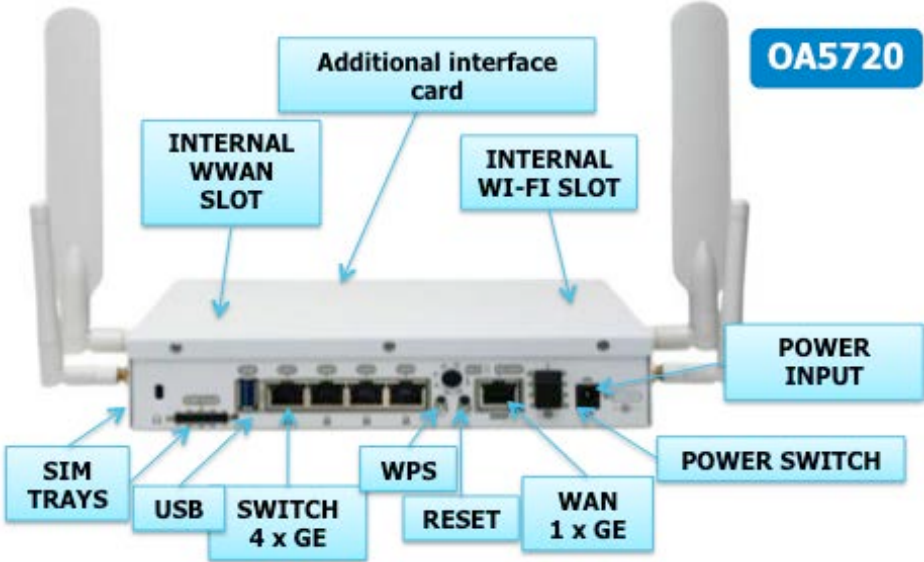
OmniAccess ESR
Comprehensive ToIP Features

Wi-Fi SIP Phone

Router + Media gateway

3G, 4G

Switched landline or cellular voice services (4)

Wi-Fi

Cellular LTE, HSPA, CDMA

PSTN

NOE/SIP phones

BRI, PRI, FXO

Survivability

(1) **IP Voice Terminals**

SIP Trunking

Unified Communications Softphones

BRI, PRI, FXS, E&M

xDSL, Fiber, T1/E1, LTE, etc.

IP

Call server or IP Centrex

Fax

PBX

Traditional Voice Terminals (2)

Corporate IP Telephony system or Cloud Based services (3)

Enterprise Branch Office

Any to Any real-time application across WAN

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Enterprise

KEY FEATURES – TOIP

Tested

- In **Survivability mode** with the OmniAccess ESR router, the IP Touch sets can benefit from the telephony services listed below (non exhaustive list):

  - Call by number (Dial Plan)
  - Local directory on the phone set
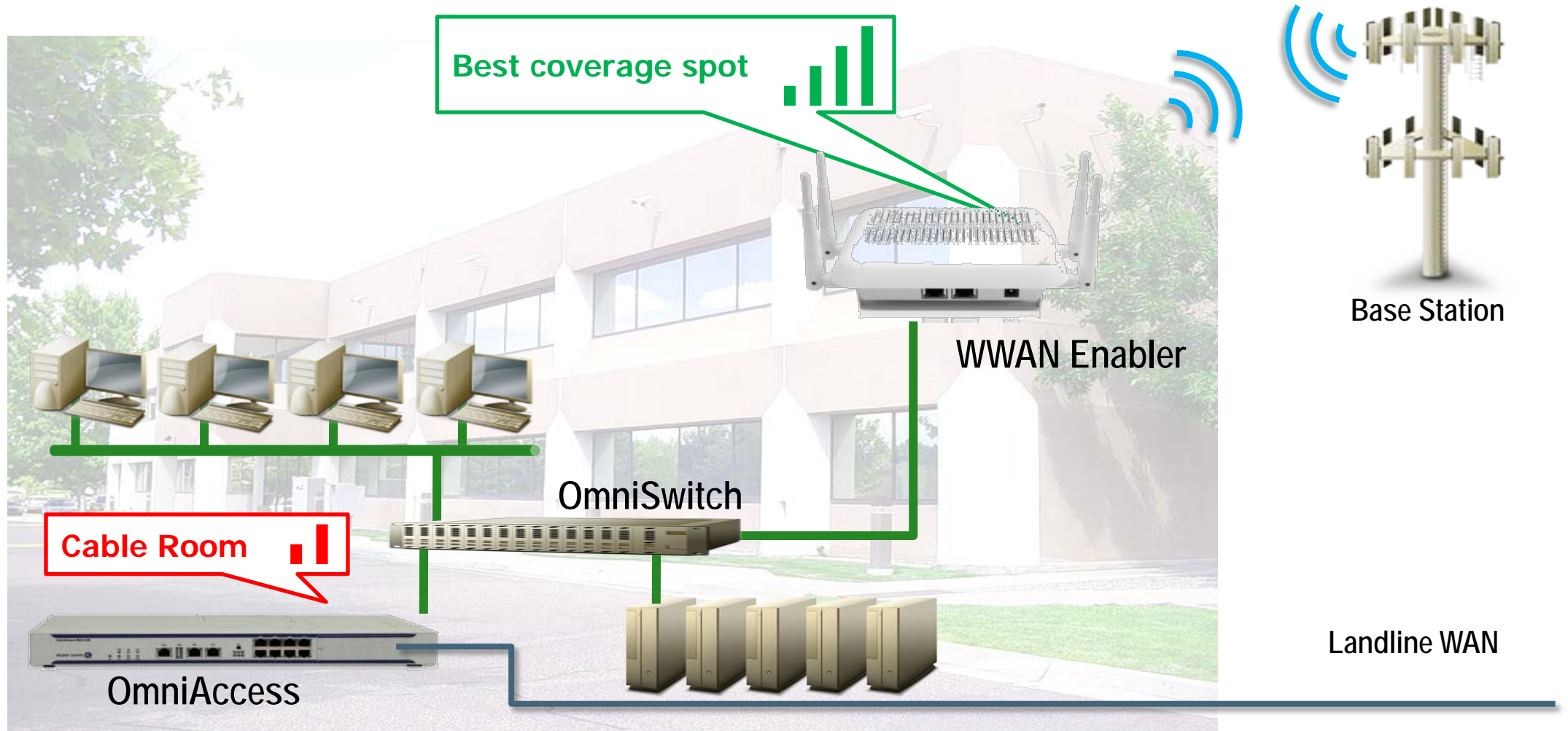 - Last call redial (IP Touch redial key)
  - Mute/unmute key
  - Break-in/out calls over ISDN/PSTN
  - Incoming call identification
  - Call on hold / Music while on hold
  - Second call
  - Call transfer
  - 3 party conference
  - Immediate forward
  - Ring groups (simultaneous ringing on different phone sets)
  - Association of public numbers to specific phones or group of phones
  - DTMF tone signaling
  - Call Data Register (CDR) for all calls (stored locally in flash memory)

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ESR WWAN Enabler

Best coverage spot

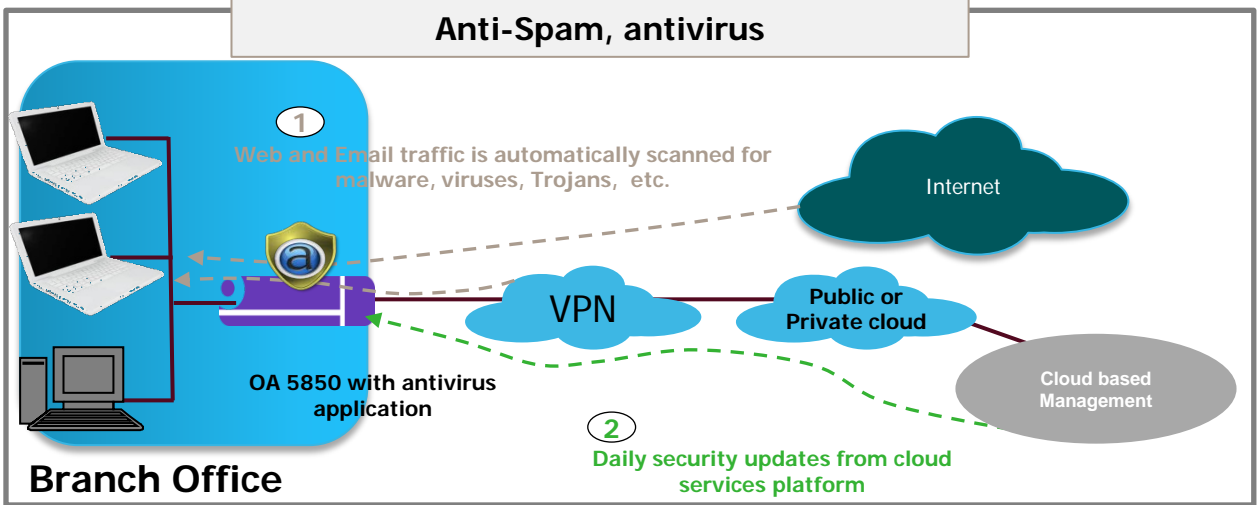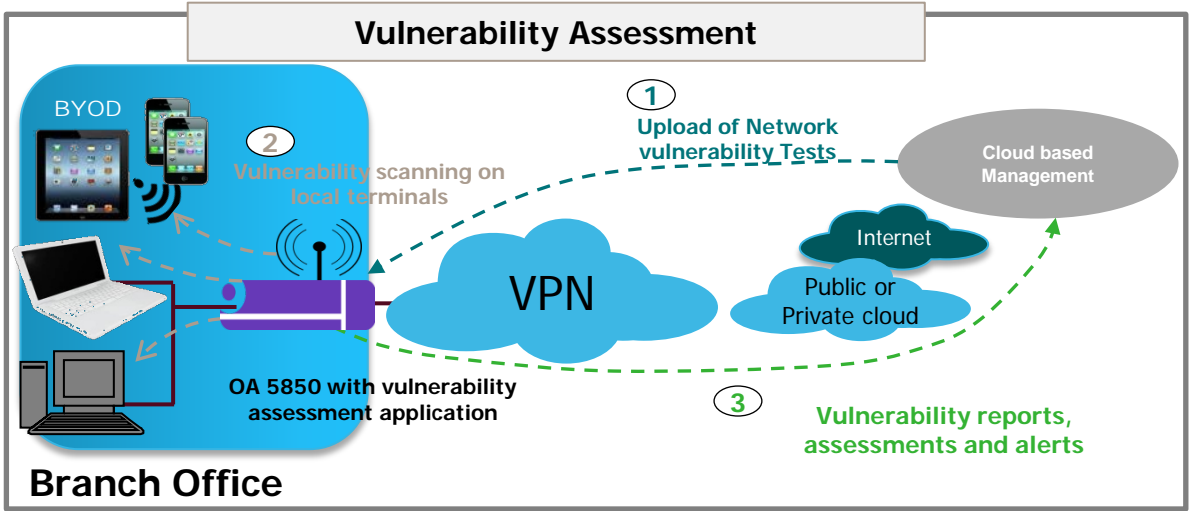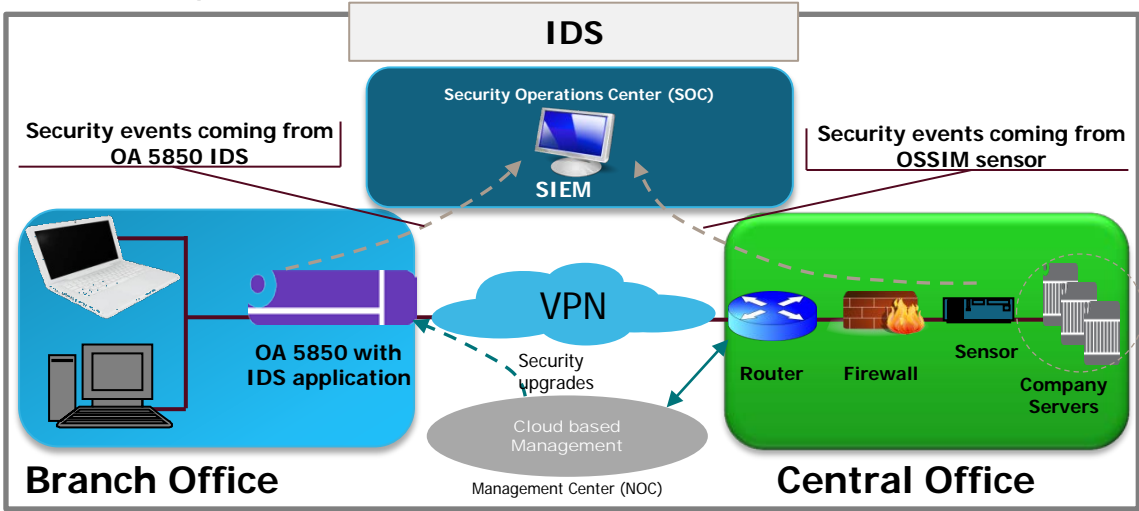WWAN Enabler

Base Station

OmniSwitch

Cable Room

OmniAccess

Landline WAN

- ✓ Easy installation, reception hassle free solution
- ✓ Wireless broadband (LTE, HSPA+, etc.) upgrade for the branch office
- ✓ Compatible with OmniAccess, OmniSwitch and leading enterprise branch routers
- ✓ Configuration-less: fully managed by the OmniAccess ESR
- ✓ Easy migration and unlimited scalability

OmniAccess ESR
Security Applications

IDS

Security Operations Center (SOC)

SIEM

Security events coming from OA 5850 IDS

Security events coming from OSSIM sensor

VPN

Security upgrades

OA 5850 with IDS application

Router   Firewall   Sensor   Company Servers

Cloud based Management

Management Center (NOC)

Branch Office

Central Office

Vulnerability Assessment

BYOD

② Vulnerability scanning on local terminals

① Upload of Network vulnerability Tests

Cloud based Management

Internet

VPN

Public or Private cloud

OA 5850 with vulnerability assessment application

③ Vulnerability reports, assessments and alerts

Branch Office

Anti-Spam, antivirus

① Web and Email traffic is automatically scanned for malware, viruses, Trojans, etc.

Internet

VPN

Public or Private cloud

OA 5850 with antivirus application

② Daily security updates from cloud services platform

Branch Office

OPEN DEVELOPMENT PLATFORM!

Java

Secure WAN/Cloud access

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OmniAccess ESR
Cloud and WAN applications

Video Proxy

OA 5850 with Video Proxy application

Branch Office

Adobe Flash Media Server

Central Office

WAN

Cloud Synchronized NAS

Synchronization with cloud based storage provider

Embedded local storage

OA 5850 with NAS Cloud application

Branch Office

Cloud Storage

Internet

VPN

Central Office

Web Cache

Web Server

Web Server

HTTP Traffic

Reduced HTTP Traffic

Internet

LAN

OA 5850 with Web Cache application

WAN

Reduced collaborative HTTP traffic (Optional)

Web Server

OPEN DEVELOPMENT PLATFORM!

Application fluent Public/Private/Hybrid Cloud

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DEPLOYMENT SCENARIO

THE CONNECTED BUS- IMPROVE SAFETY, EXTEND TEACHING APPLICATIONS VIA THE SCHOOL BUS.

District Network

High speed Low latency link

GPS Location

Localized Connected endpoints

Real time Connectivity of onboard **Cameras**

Public, Curriculum & admin networks

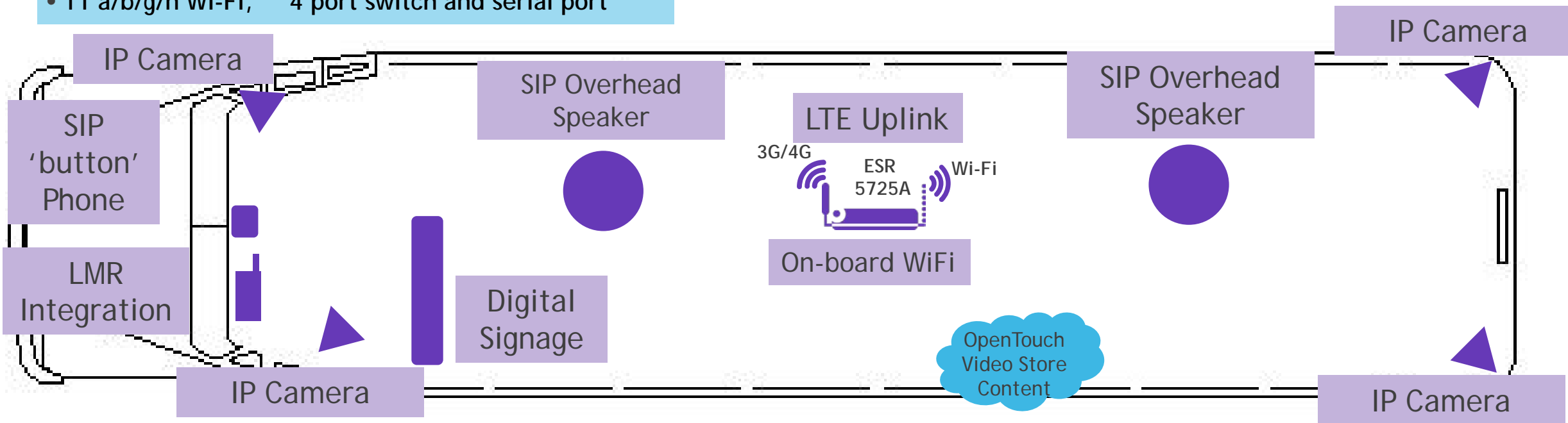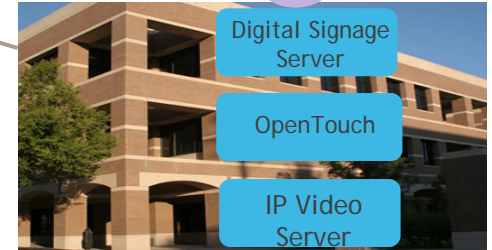Local WiFi network

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Enterprise
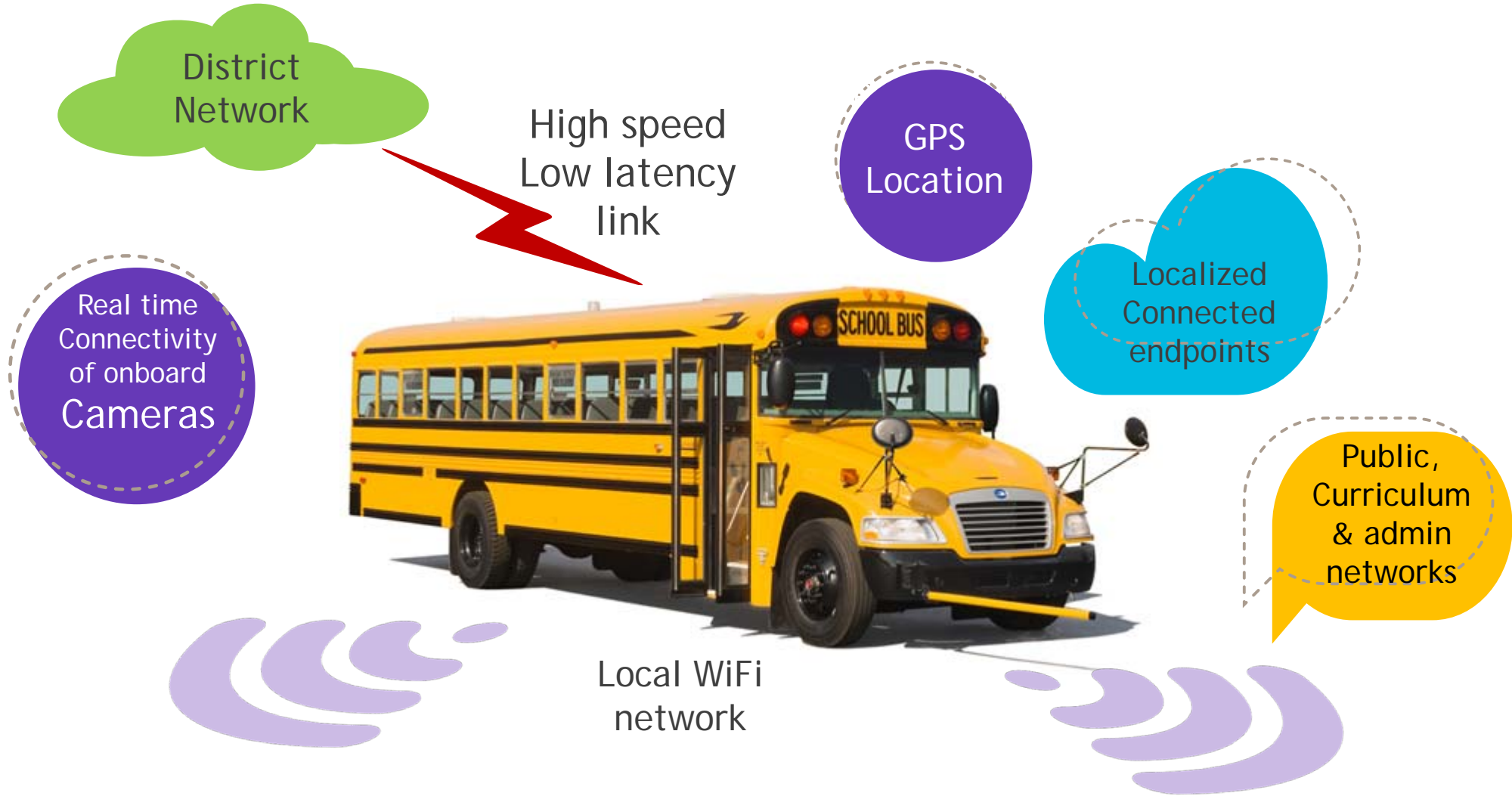
DEPLOYMENT SCENARIO
CONNECTED BUS WITH EVERYTHING

OA5725A

- Extended Climatic Range (fan less)
- Shock and vibe vehicular ruggedization
- Flexible WWAN support for transit and public safety
- Embedded standalone GPS & delayed turn-off
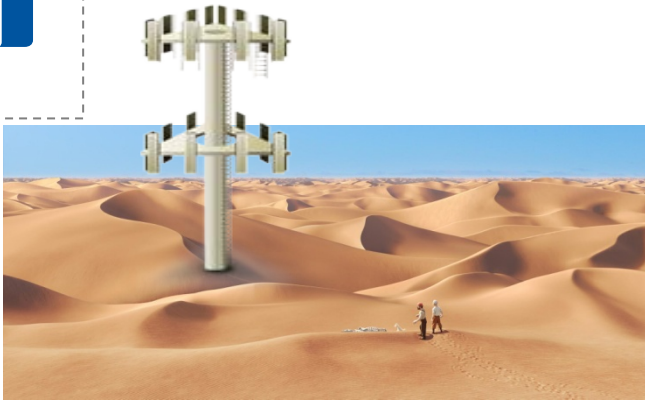- 11 a/b/g/n Wi-Fi, 4 port switch and serial port

LTE Network

OpenTouch Video Store

Digital Signage Server

OpenTouch

IP Video Server

Bus Fleet

IP Camera

IP Camera

SIP 'button' Phone

SIP Overhead Speaker

LTE Uplink

3G/4G   ESR 5725A   Wi-Fi

SIP Overhead Speaker

On-board WiFi

LMR Integration

Digital Signage

IP Camera

OpenTouch Video Store Content

IP Camera

IP Camera

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DEPLOYMENT SCENARIO
LTE CONNECTION FOR EMERGING COUNTRIES

Main Office

Branch Office 1

3G/4G ESR 5850 Wi-Fi
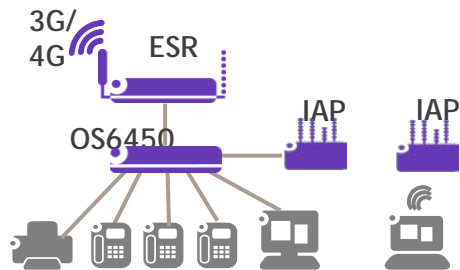
Branch Office 2

3G/4G ESR

OS6450 IAP IAP
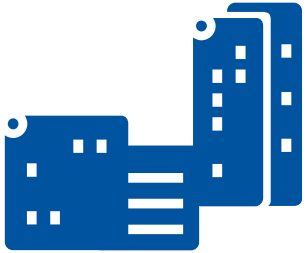
The issues:
- Limited options for data and more complex data communications needs today.
- Greater bandwidth needs than current infrastructure may allow.
- No landline data footprint.
- Small sites need a more complete data solution preferably within one Enterprise grade device.
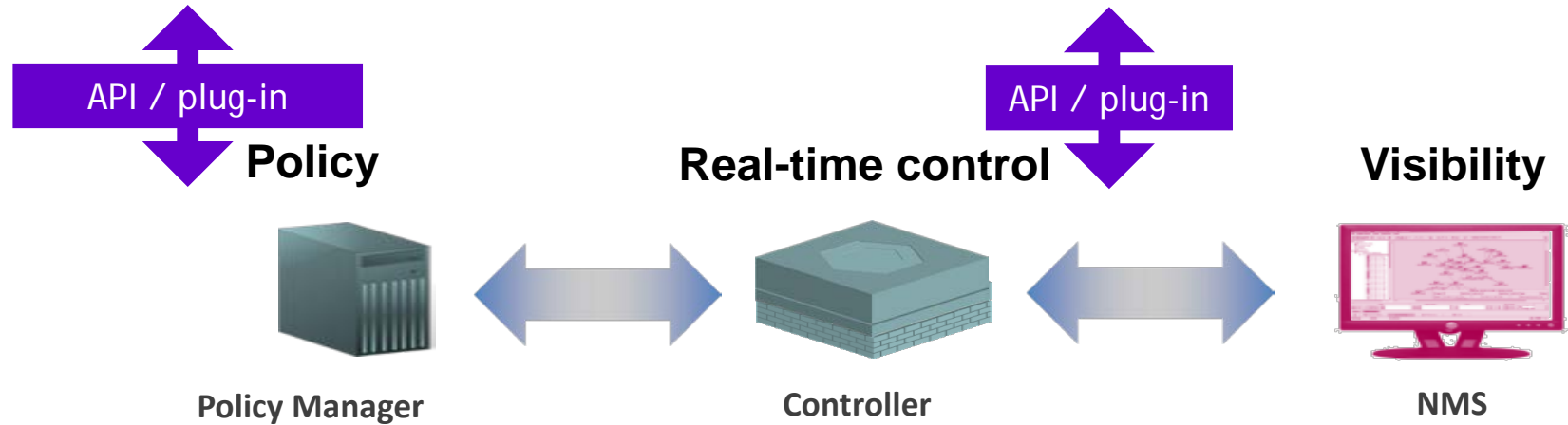
The solution:
- Provide a single device that supports DSL and LTE access.
- LTE access can be either primary or as a back-up to the wired data network access.
- Provides internal 802.11 access point for user WiFi access.
- Provides internal four-port gigabit switch.
- Includes a rich set of Advanced Networking and Security features.

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SDN (SOFTWARE DEFINED NETWORK) CONTROL

Application Layer

MDM | Business Apps | Storage | OpenTouch

API / plug-in | API / plug-in

Policy | **Real-time control** | **Visibility**

Control Layer

Policy Manager | Controller | NMS

OpenX

WLAN | **LAN** | **WAN**

Network Layer

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7. VOICE COMMUNICATION

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Outside the company

Inside the company

REMOTE A P

3rd SIP Device

Data 3G

Internet

iPhone

Android

PSTN
IMS

ISDN E1/T1

CO/SIP

Access Point

Bria Softphone

CERTIFIED

3rd SIP client

Data Wifi

LAN SWITCH

iPhone

Android

Alcatel-Lucent OXO/OXC

Alcatel·Lucent
Enterprise
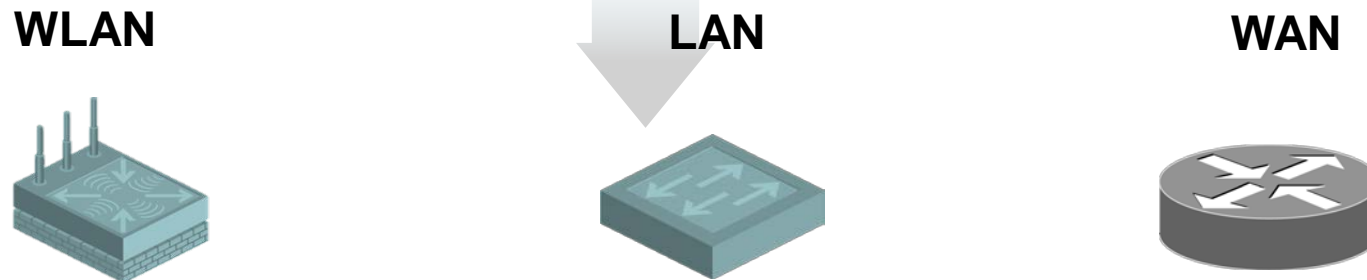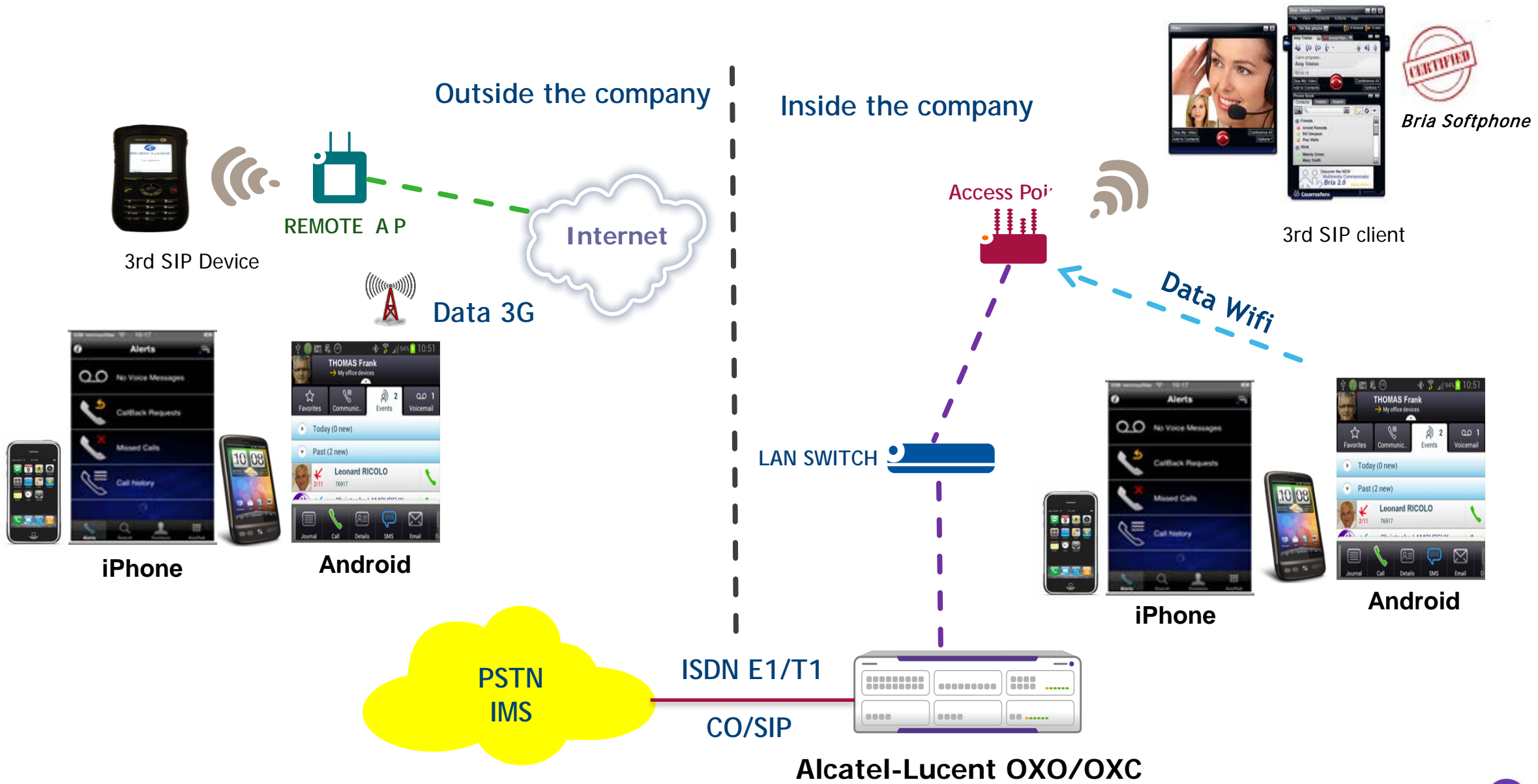
提升桌面工作效率
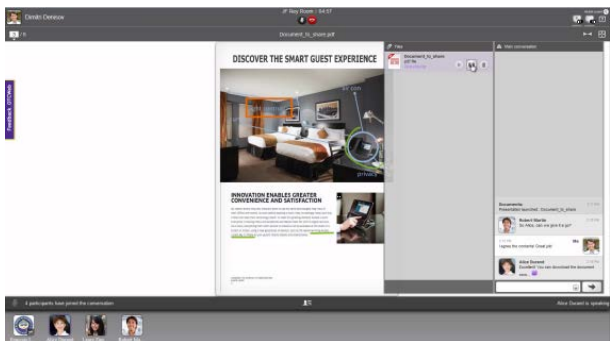
桌面應用軟體

使用者新介面整合桌面應用軟體,提供
CONVERSATION STYLE
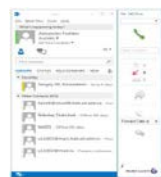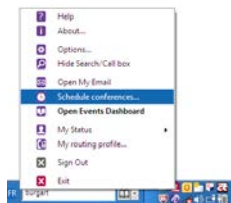
新系列桌機

增加高語音品質、新操作介面及耐用

Alcatel·Lucent Enterprise
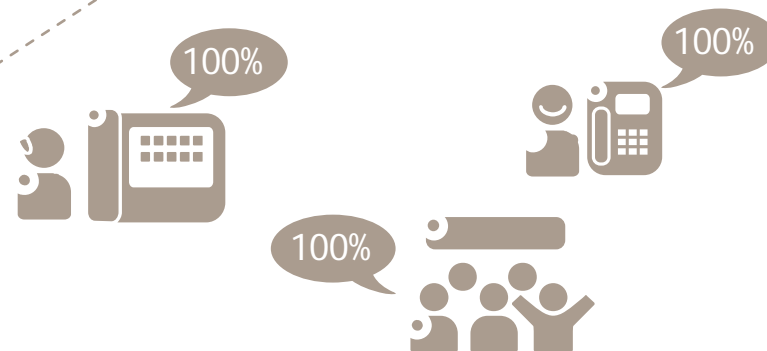
最佳化行動方案以節省成本

LEAST COST ROUTING
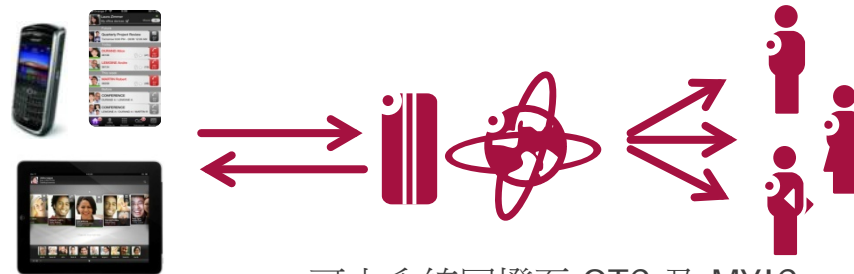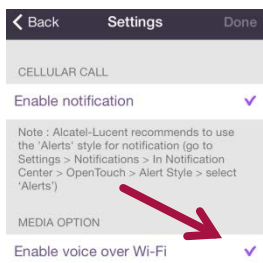
可由系統回撥至 OTC 及 MYIC MOBILE 終端

"FREE" CONNECTIVITY

可啟用 VOICE OVER WIFI 選項...

... 無縫隙的快速移轉，可轉至適當的通話設備
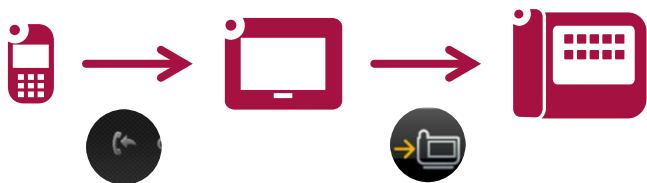
CAMPUS ROAMERS

IP/DECT 最佳化搭配
兼具年輕化及電信功能的電話體驗

Alcatel·Lucent Enterprise

視訊與行動協同

對話體驗:

My IC Phone   Android, iPhone, Blackberry   PC   iPad

OpenTouch
Multimedia Services

OpenTouch
Business
Edition

OmniPCX Enterprise
Communication Server

SIP

OPENTOUCH 的對話體驗
✓ 多方,多重設備,多媒體 SIP 互動體驗
✓ OpenTouch 具內建的軟體視訊交換

高畫質視訊會議
✓ 具適應運動控制,提供最佳的影像/頻寬比
✓ 互動式電子白板整合於 OpenTouch web 會議

會議能力:

SOHO   PC, iPad, iPhone   Executive

Video endpoints

LifeSize®
A division of Logitech

SIP

高畫質視訊系統架構
✓ MCU 可整合於 OpenTouch 會議系統
✓ 可完全整合 continuous presence

Small rooms   Medium rooms   Board rooms   Telepresence   Interactive whiteboard

SIP

ONE VENDOR FOR ALL CONVERSATION NEEDS

LifeSize®
A division of Logitech

Video rooms

SMART

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7. PORTFOLIO

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CONVERGED CAMPUS NETWORK SOLUTION

Management

| Network Infrastructure (OmniVista) |
| Access Policy & BYOD (ClearPass) |
| Service Level (VitalSuite) |
| IP address Management (VitalQIP) |

Wide Area Network

MPLS Service Router
7750 SR

Branch Routers
OA5800 ESR   OA5700 ESR

VPN Client
VIA

Local Area Network

Core
OS10K   OS6900   OS9000E   OA4x04, OA4x50

Unified Access

🏅 BYOD BUILT-IN

OS6860/6850E/ OS6855   OS6450   OS6250   IAP, AP, RAP

On The Road | Home Office | Branch Office | Corporate Office | Data Center

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OPENTOUCH SUITE FOR SMB OFFERING OVERVIEW

Customer Experience

IP Touch 8 Series

9 Series Digital

OmniTouch 4135

My IC Phone 8002/8012 DeskPhones

Wireline Phones

500(EX)DECT

8232DECT

8118/8128 WLAN

Wireless Phones

PIMphony

My IC Web for Office

CaIII Center Office
Smart Call Routing
My IC Social Networks

Efficient Desktop

One Number Service
My IC Mobile for iPhone & Android

Mobility

Teamwork & Collaboration

LifeSize Connection

Video with LifeSize

RCE Fax Server

Comm. Server

SIP
at the core

OmniPCX Office RCE Compact Unit

OmniPCX Office RCE Small

OmniPCX Office RCE Medium

OmniPCX Office RCE Large

Network Infra.

OmniSwitch 6250

OmniSwitch 6450

LAN Infrastructure

Remote Access Point 3, 108 & 109

OmniAccess 4306/G

WiFi Access Points

Voice-over-WLAN infrastructure

Network Managt.

OmniVista 8770 Network Management Center

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OMNIPCX ENTERPRISE OVERVIEW

應用軟體

通信軟體　　　　　　統合通訊　　　　　　　統合管理

PCs　Mobiles　Tablets　SmartDeskphone

OmniVista 8770

Linux

OmniPCX Enterprise

視訊協同與會議　　　　　　客服中心

Interactive Whiteboard　Video End-Points　Video collaborative portal

OmniTouch Contact center

通信伺服器

虛擬化　　　OmniPCX Enterprise　　　虛擬化　　通用媒體閘道器　Crystal媒體閘道器

Linux
vmware READY

Appliance

Linux
vmware READY

Rack 1 & Rack 3

任何終端

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各式電話終端

Windows PC　MAC　iPad　iPhone　Android　OTC　Web

IP　IP *or* Digital　IP *or* Digital　IP *or* Digital　IP

SIP　IP *or* Digital　IP *or* Digital　IP *or* Digital　IP　SIP

WLAN　DECT/ IP DECT

OPEN TO:

Any mobile　Fax,　Analog　SIP

軟體電話
● 與 IP 話機功能相同。
● 可支援 PC, MAC, iPAD, iPhone, Android, 等平台。

協同/統合應用軟體電話
● OpenTouch Conversation & Connection

桌機系列
● IP/SIP (40x8/80x8)/數位(40x9/80x9) 話機
● 4135 SIP 會議電話

On-Site 行動電話
● WLAN 話機
● DECT 話機

Off-Site 行動電話
● iPhone, Android (IP desktop) 軟體話機; SIP 軟體話機
● Remote Extension 支援任何品牌手機

開放支援
● 傳真機/類比話機
● SIP 話機

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