

JANUARY, 2012

MOTOROLA WLAN NX SERIES

(4500/6500/9500)

INTEGRATED SERVICES PLATFORM



A CULTURE OF INNOVATION



FIRST...

COMMERCIAL SPREAD SPECTRUM WLAN

WIRELESS LAN SWITCH

802.11n RF DESIGN TOOL

BAND-UNLOCKED RADIO FOR SECURITY,
TROUBLESHOOTING, ACCESS

VoIP WLAN SMARTPHONE

SCANNER + WIFI MOBILE COMPUTER

FIXED WiMAX OUTDOOR LINK

MIMO POINT-TO-POINT LINK

AND **2800** PATENTS!

CUSTOMER FOCUSED INNOVATION



FOCUSED ON CUSTOMER NEEDS

**RETAIL
EDUCATION
HOSPITALITY
HEALTHCARE
GOVERNMENT
MANUFACTURING
TRANSPORTATION
SERVICE PROVIDER**

**FOCUS ON SOLVING
CUSTOMER
PROBLEMS**

TRUSTED, PROVEN



RETAIL	TRANSPORTATION	MANUFACTURING	HEALTHCARE	HOSPITALITY	EDUCATION	GOVERNMENT	SERVICE PROVIDER

PLEASE CONTACT ACCT TEAM BEFORE USING ANY CUSTOMER AS A REFERENCE.

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WHAT OTHERS ARE SAYING



2010 WLAN MAGIC QUADRANT LEADER

Motorola has built on of the most complete product lines in the market.

Motorola is one of the few vendors that offers best-of-breed infrastructure planning, management, security and analytics software.

Motorola continues to deliver market-leading, vertical-market-based solutions



NEMERTES 2011 PILOTHOUSE AWARD WINNER

Received the highest overall rating in service, value, and technology among market leaders.

“Motorola Solutions won with solid strength in technology, customer service, and overall value, with the greatest margin being in customer service. We were impressed with the improvements in Motorola’s scores and see them poised to be an equally strong contender next year”



CRAIG MATHIAS REPORT

... perhaps the only company on this planet that can do everything wireless.

... that should put and keep them on top of wireless like Cisco is on top of networking.



RETAIL CONCERNS TODAY



STORE OPERATIONS

- Associate effectiveness and customer service

MARKETING OPERATIONS

- Driving trips, orchestrating desired behavior, and maximizing the sale through brand experience , shopper loyalty and advocacy online, in-store, and using mCommerce.

SUPPLY CHAIN

- Inventory visibility and efficiency

CIO & IT DEPARTMENT

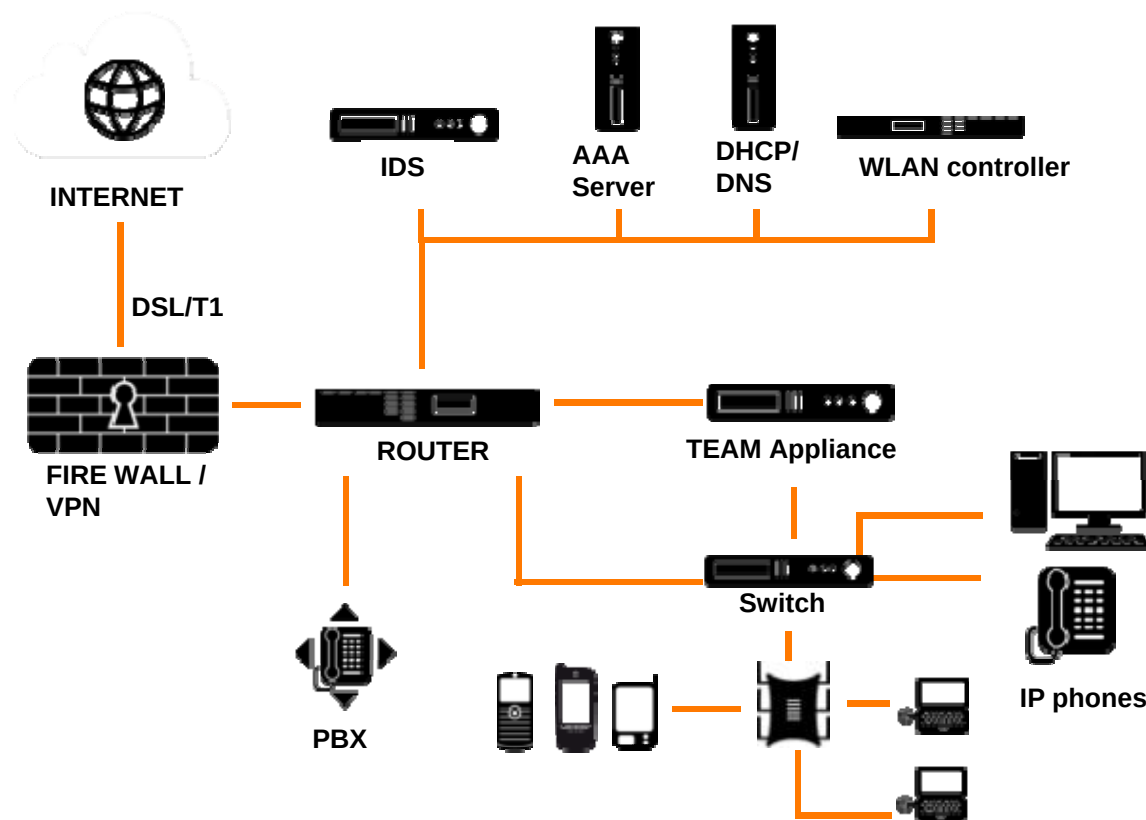
- Lean IT supporting business needs including evaluate, deploy, manage, and maintain a distributed enterprise:
 - Heterogeneous systems across multiple locations with no unified framework
 - Need for a virtualization and cloud strategy – services that can be virtualized, applications that can be delivered via cloud, and redundancy for cloud services
- Proliferation of WiFi capable devices (tablets/smartphones) in the workplace, both from employees and customers
- Increase in wireless applications and video

CUSTOMER PAIN POINTS



COMPLEX SET OF SERVERS AND APPLIANCES

Separate networking, communications, and service appliances with their own management interfaces required.



CHALLENGING to deploy enterprise mobility applications for customer loyalty and associate effectiveness

FIVE or more boxes in network closet with a unique management interface

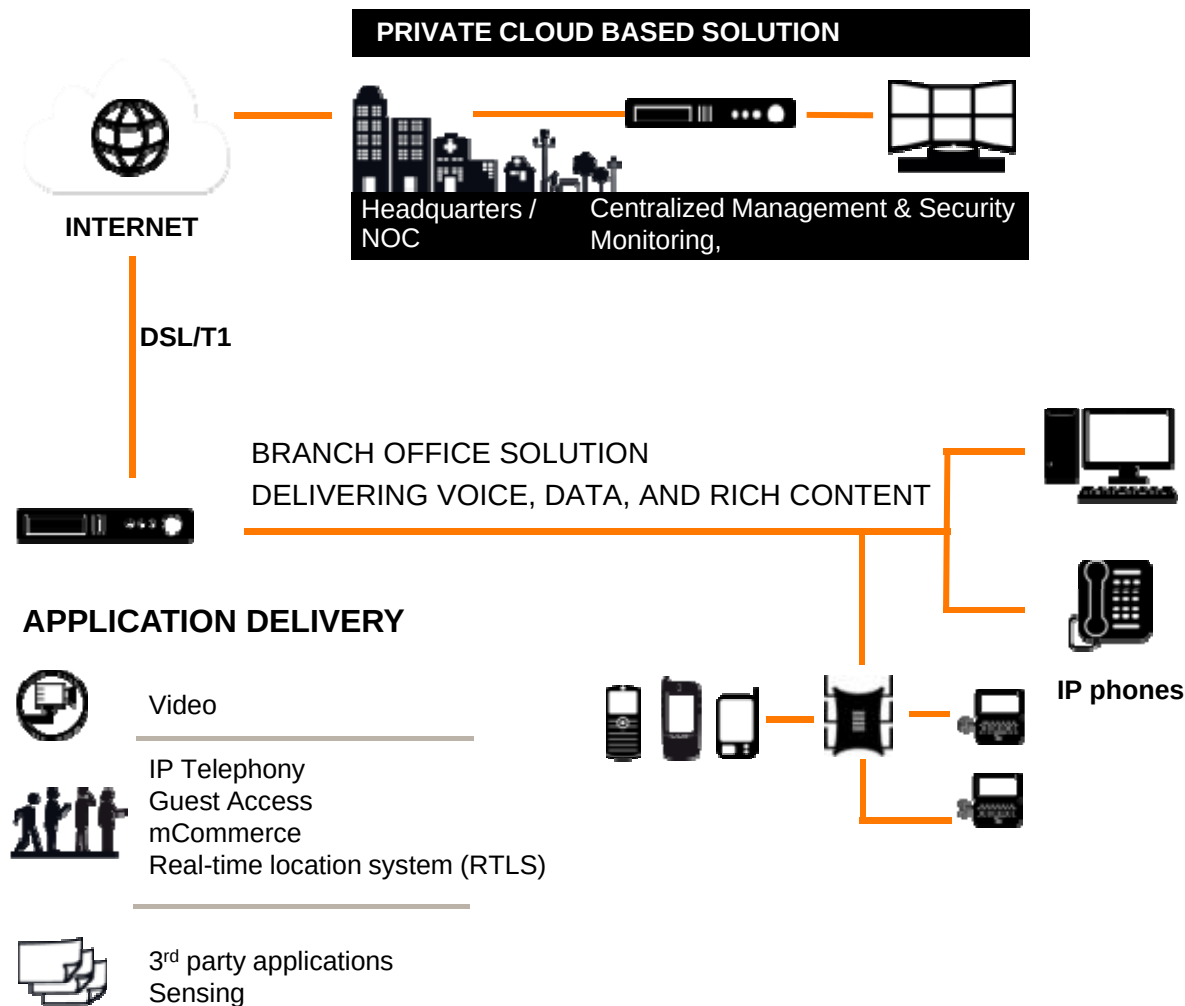
CLOSED architecture results in more hardware for new services – increased capital and operating expenses

LEAVES less time for key growth initiatives

WHAT CUSTOMERS WANT



CONVERGENCE OF NETWORKING AND APPLICATIONS



WHAT IF YOU COULD...

DELIVER enterprise mobility applications integrated with networking (mCommerce, guest access, telephony, and video)

SIMPLIFY management of your entire network

REDUCE cost, space, and power with energy efficient green platform

DEPLOY services from the Cloud and virtualized framework

DOING MORE WITH LESS



THE TRANSITION TO A CONVERGED COMMUNICATIONS PLATFORM

WING 5 PLATFORM, NEXT GEN CONTROLLERS, NEXT GEN ACCESS POINTS

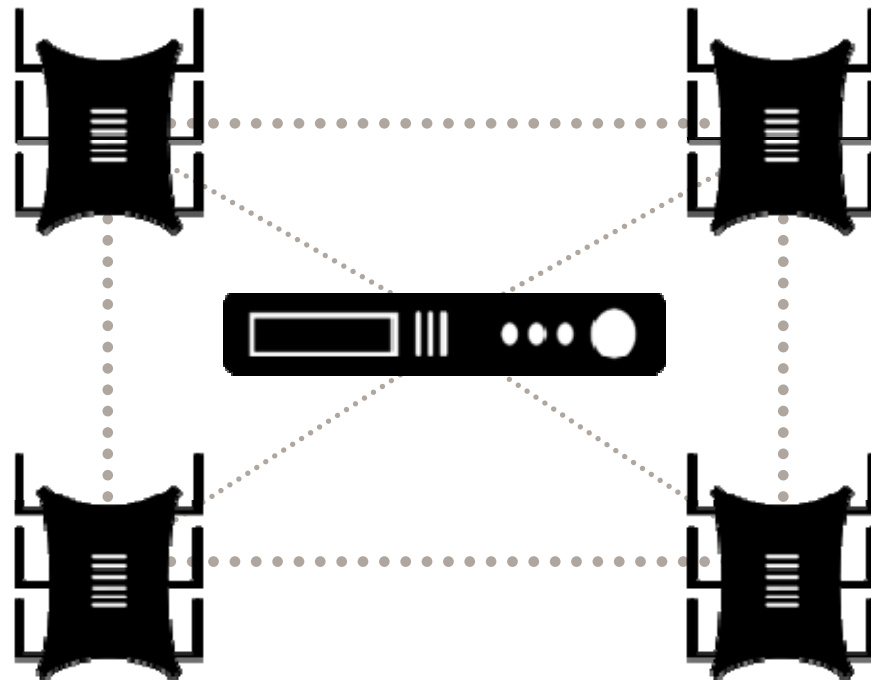
Distributing intelligence allows controllers to do more. In addition to WLAN controller function and management of other appliances, new services and applications can be delivered – from a private cloud.

CENTRALIZED CONTROL

INTELLIGENCE AT THE EDGE

MULTI-LEVEL RESILIENCY

ZERO TOUCH DEPLOYMENT

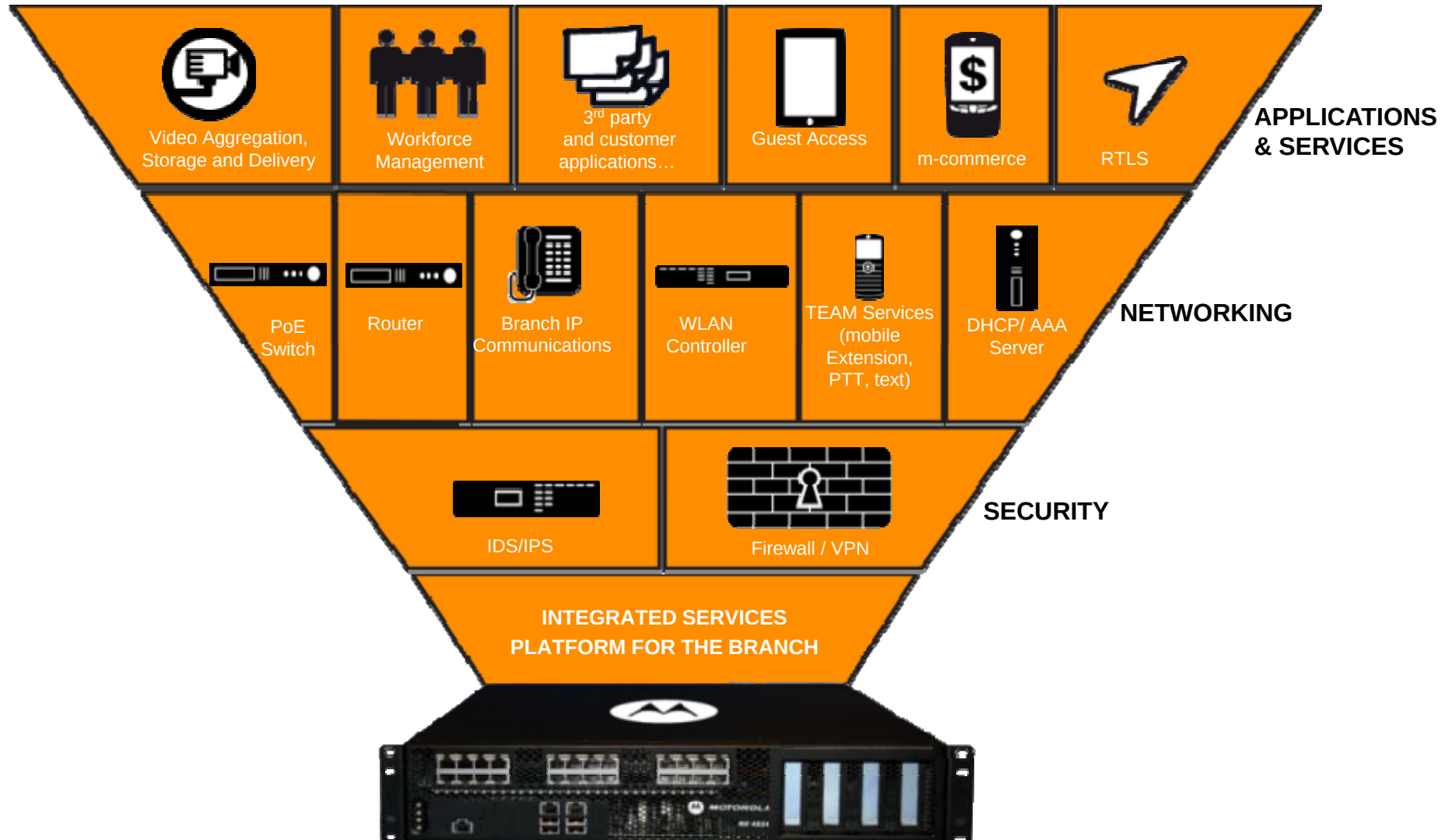


NX 4500/6500



INTEGRATED BRANCH SERVICES

SIMPLIFIED MANAGEMENT, SERVICE CONVERGENCE, AND APPLICATION DELIVERY



NX 4500/6500 FEATURES



WIRELESS CONTROLLER

- Adopting AP7131, AP7131N, AP6532, AP650, AP6521, AP621, AP6511, AP300, AP7161

TELEPHONY SOLUTIONS

- Integrated Telephony Module
- WSM (TEAM) enterprise mobility with FMC
- 2-way Interoperability with RLS

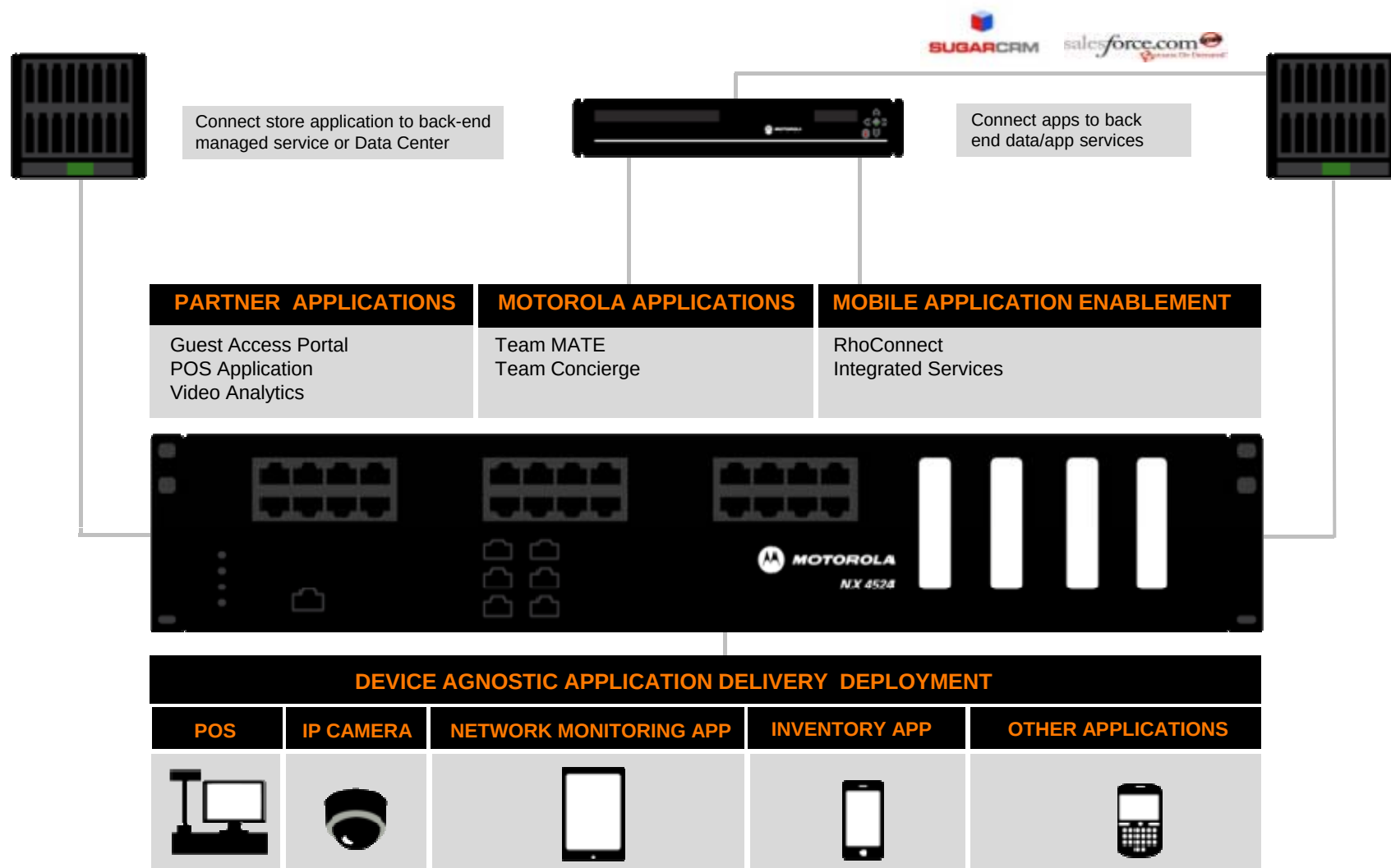
24-PORT POE WIRED SWITCH

AVAILABLE EXPANSION CARDS

- Voice, Analog Telephony, T1 w/EC, T1 Data WAN

NX SERIES

APPLICATION DELIVERY EXAMPLE



NX BRANCH APPLIANCES



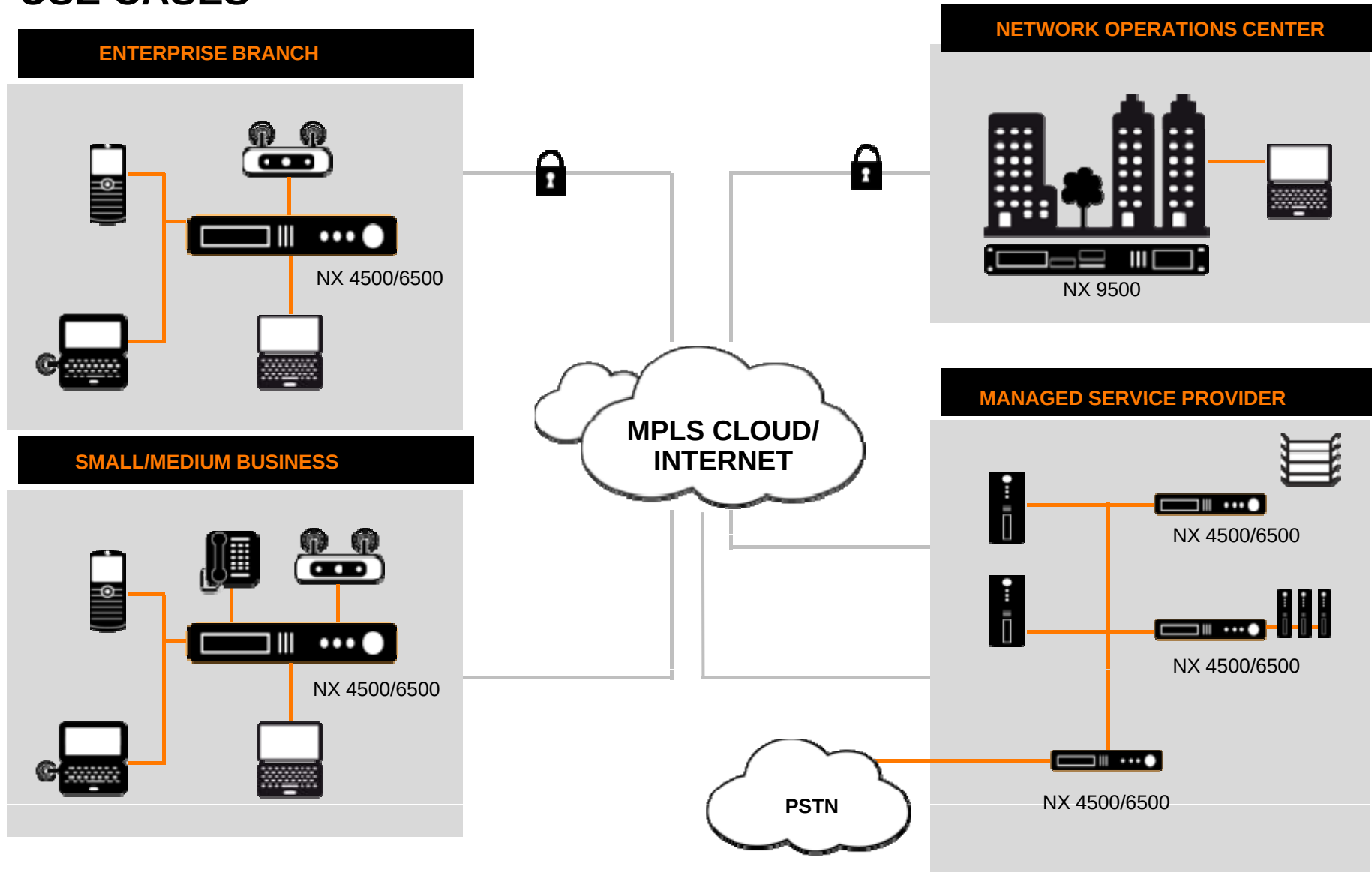
	NX 4500	NX 4524	NX 6500	NX 6524
PRODUCT CONFIGURATIONS				
Part Number	NX-4500-0000-00-WR	NX-4524-0000-00-WR	NX-6500-0000-00-WR	NX-6524-0000-00-WR
List Price	\$3,995	\$4,995	\$7,995	\$8,995
Wireless Controller	Yes	Yes	Yes	Yes
Ethernet Switching	No	Yes	No	Yes
10/100/1000 Mbps LAN	2	2	2	2
10/100/1000 Mbps PoE	-	24	-	24
Memory	4 GB	4 GB	16 GB	16 GB
Storage	160 GB	160 GB	250 GB	250 GB
USB	4	4	4	4
Expansion Slots	4	4	4	4
Access Point Capacity	36	36	256	256
CPU	Dual-Core	Dual-Core	Quad-Core	Quad-Core
3 rd party Applications	Limited	Limited	Yes*	Yes*

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NX 4500/6500/9500



USE CASES



NX 4500/6500 USE CASE



RETAIL STORE



IT MANAGER

- Simpler to deploy services
- Unified management view
- Less staff required to administer
- Lower capex and opex



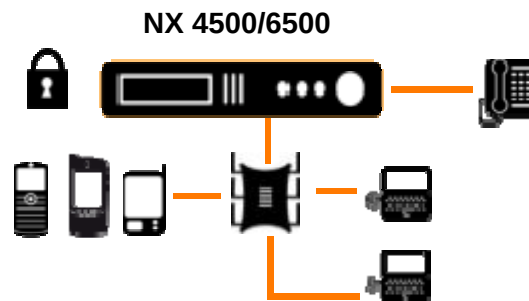
STORE ASSOCIATES

- Collaboration tools to improve efficiency
- Voice, video, and data at their finger tips for quicker customer response
- Workforce management apps



MARKETING OPERATIONS

- Digital programs to increase loyalty and driver behavior
 - Location based services
 - Analytics
 - mCommerce



CUSTOMER BENEFITS: Increased productivity, improved responsiveness... better customer service

MOTOROLA DIFFERENCE: Bridging communications; delivering enterprise mobility applications; simplifying IT

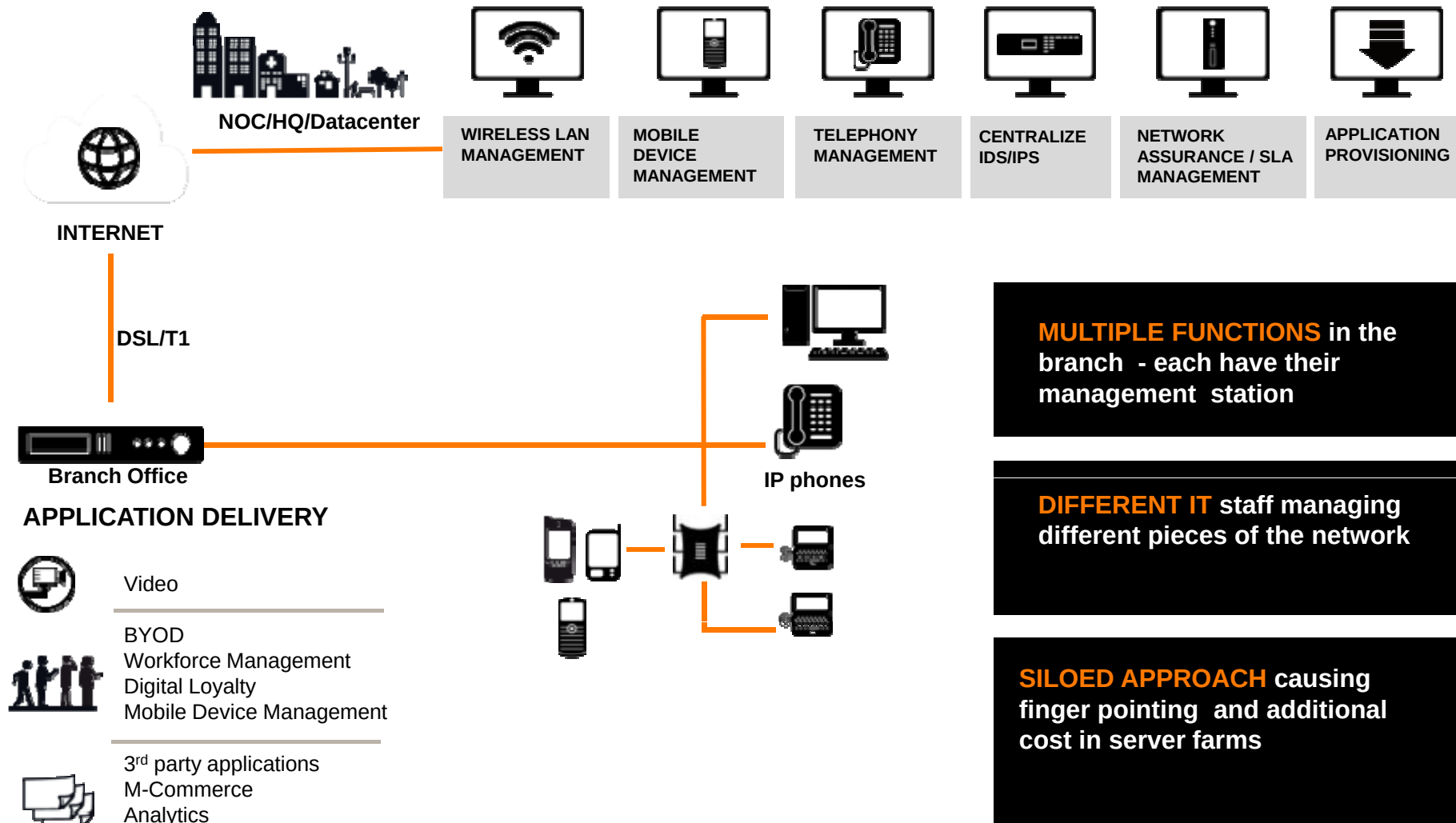
NX APPLICATION FRAMEWORK



WITH NXAPI

OPEN PLATFORM	SECURE HOSTING ENVIRONMENT	EASY PROVISIONING AND MANAGEMENT	RESILIENT	INTEGRATION WITH WiNG
• Open-source Xen-based virtualization platform • Any OS that can run on Xen can be hosted as a VM • Pre-canned linux VMs • Expansion card slot and USB access to VMs	• Applications run behind a powerful WiNG firewall and onboard WIPS engine • Application VMs are isolated with their own VCPU, RAM and disk space	• Hierarchical mgmt of branch office NXs with NX9500s • VM management including provisioning from a central location • Integrated App management from the WiNG UI	• WiNG clustering between NXs provides automatic redundancy • Redundant VMs operate using a single IP with VRRP • VM replication to standby NX	• Role-based dynamic access to all WiNG configuration and monitoring parameters • Single sign-on auth to the application UI • Unified dashboard, events and alarms console

WHAT ABOUT MANAGEMENT COMPLEXITY?



THE SOLUTION: NX 9500

CONVERGENCE AT THE NOC



**VIRTUALIZED
SOLUTION FOR :**

**WING5 WLAN HIERARCHICAL
MANAGEMENT**

**GUEST ACCESS
ANALYTICS**

**MOBILE DEVICE
MANAGEMENT**

**TELEPHONY
MANAGEMENT**

CLOUD SERVICES & MANAGEMENT

NX 9500 SERVICES PLATFORM FOR THE NOC

DISTRIBUTED ENTERPRISE WITH REMOTE BRANCHES

NX 4500 / NX 6500

AP 7131N network

RFS 4000 network

NX 4500 / NX 6500

NX 9500 NOC PLATFORM

SIMPLIFYING THE NOC



WLAN MANAGEMENT	TELEPHONY MANAGEMENT	NETWORK ASSURANCE	SECURITY	MOBILE DEVICE MANAGEMENT	APPLICATIONS
• Auto Provisioning • Hierarchical Management • Granular element management	• Voice over WLAN • FMC • Site Survivable Telephony	• RF Visualization • Spectrum Analysis • Remote Troubleshooting • Forensics • Customized Reporting	• Integrated AirDefense functionality	• Motorola device management • 3rd devices – iOS, Droid etc	• Advanced Guest Access • Locationing • 3rd Party Integration

**DEVICE
FINGERPRINTING**

**IDENTITY
MANAGEMENT**

BYOD

**APPLICATION
PROVISIONING**

VIRTUALIZED PLATFORM



NX 9500 - DETAILS



PRODUCT DETAILS		NX 9500
Part Number		NX-9500-100R0-WR
List Price (Does not include Licenses)		\$25,995
Access Point Capacity		10,240
Wireless Controller with WING		Yes
Virtualization Layer for Hosting applications		Yes
Network Assurance, Security, Multi-Vendor Mgmt.		Yes
GigE Ports		2
Memory		36 GB
Storage		2 TB
Hot Swap Power Supply		Yes
USB		5
IP SEC VPN		-
CPU		Intel12 core CPU

AVAILABILITY – 2012

Q1 2012

LAUNCH AT NRF – NX SERIES FOR BRANCH & THE NOC

Q1 2012

- NX 9500 with WiNG 5.x

Q2 2012

- BOB: NX 45XX/ NX 65XX(May)
- NX 9500 with Retail analytics for BYOD/Captive Portal

Q4 2012

- NX 9500/ NX 9510 with WiNG and ADSP modules converged
- VPN & Data Plane support on NX 9510
- Hierarchical Management for NX 45XX/ NX 65XX and RFS platforms

INTERNAL USE ONLY _ CONFIDENTIAL

MORE CHOICE

OUR BROAD PORTFOLIO EVOLUTION



A BROADER PORTFOLIO

MEANS YOU CAN DEPLOY THE
NETWORK THAT BEST FITS
YOUR SITUATION AND NEEDS.

INTEGRATED SERVICES & APPLICATIONS PLATFORMS

NX 9500 Series

Enterprise NOC Services Platform

- ☐ Network Assurance
- ☐ Security & Compliance
- ☐ Multi-Vendor Management
- ☐ Application Modules

NX 9000

Enterprise NOC Controller
10,000 adaptive APs

NX 65xx Series

Enterprise Branch Applications Platform
256 adaptive APs

NX 45xx Series

Enterprise Small Branch Applications Platform
36 adaptive APs

RF CONTROLLERS

RFS 7000

HQ / Large
1,024 adaptive APs

RFS 6000

Medium Enterprise
256 adaptive APs

RFS 4000

Branch Controller
36 adaptive APs

802.11n ACCESS POINTS

INDEPENDENT APs

AP 7181 Outdoor 11n, 2 radio
AP 7161 Outdoor 11n, 2/3 radio
AP 7131 11n, 1/2/3 radio, 3x3:2

AP 6532 11n, 2 radio, 2X3
AP 6521 11n, 1 radio, 2X2
AP 6511 Wall plate 11n, 1 radio

DEPENDENT APs

AP 650 11n, 2 radio
AP 622 11n 2 radio – 2X2
AP 621 11n, 1 radio



DEEP DOMAIN KNOWLEDGE



ADDRESSING CUSTOMER PAIN POINTS

COMPLETE END-TO-END SOLUTIONS FOR THE NEXT GENERATION RETAIL ENTERPRISE

Deliver advanced mobility applications to drive **customer behavior**, build loyalty and improve workforce efficiency

Simplify deployment and management of branch office networking and communications

Significantly reduce the TCO of delivering services at the branch – 50% lower capex and 75% less appliances to manage and maintain

From data collection over secure transport networks to advanced devices and applications – a **holistic approach**.

FOCUSED ON CUSTOMER NEEDS



LESS REQUIRED. MORE DELIVERED.

Innovating to provide a framework that meets today's needs with extensibility to meet tomorrow's challenges.

LESS **COMPLEXITY**

LESS **HARDWARE**

LESS **COST**

MORE **INTEGRATED**

MORE **VIRTUALIZED**

MORE **SERVICES**

LESS IS MORE
COMPLEXITY | HARDWARE | COSTS **INTEGRATED | VIRTUAL | SERVICES**

PROOF POINTS

MORE DELIVERED. LESS REQUIRED.



**LESS
COMPLEXITY**

Simplifies management of branch office services with single unified system-wide view.

**LESS
HARDWARE**

Converged platform delivers secure wired and wireless networking, telephony, and applications.

**LESS
COST**

Consolidation drives lower acquisition and upgrade cost, less staff to manage, less space and power requirements. Layered approach preserves past technology investment, resulting in lower TCO.

**MORE
INTEGRATED**

Single networking, communication, and application delivery platform right sized for the branch.

**MORE
VIRTUALIZED**

Cloud based virtual solution allows application delivery from central location, and provides resiliency.

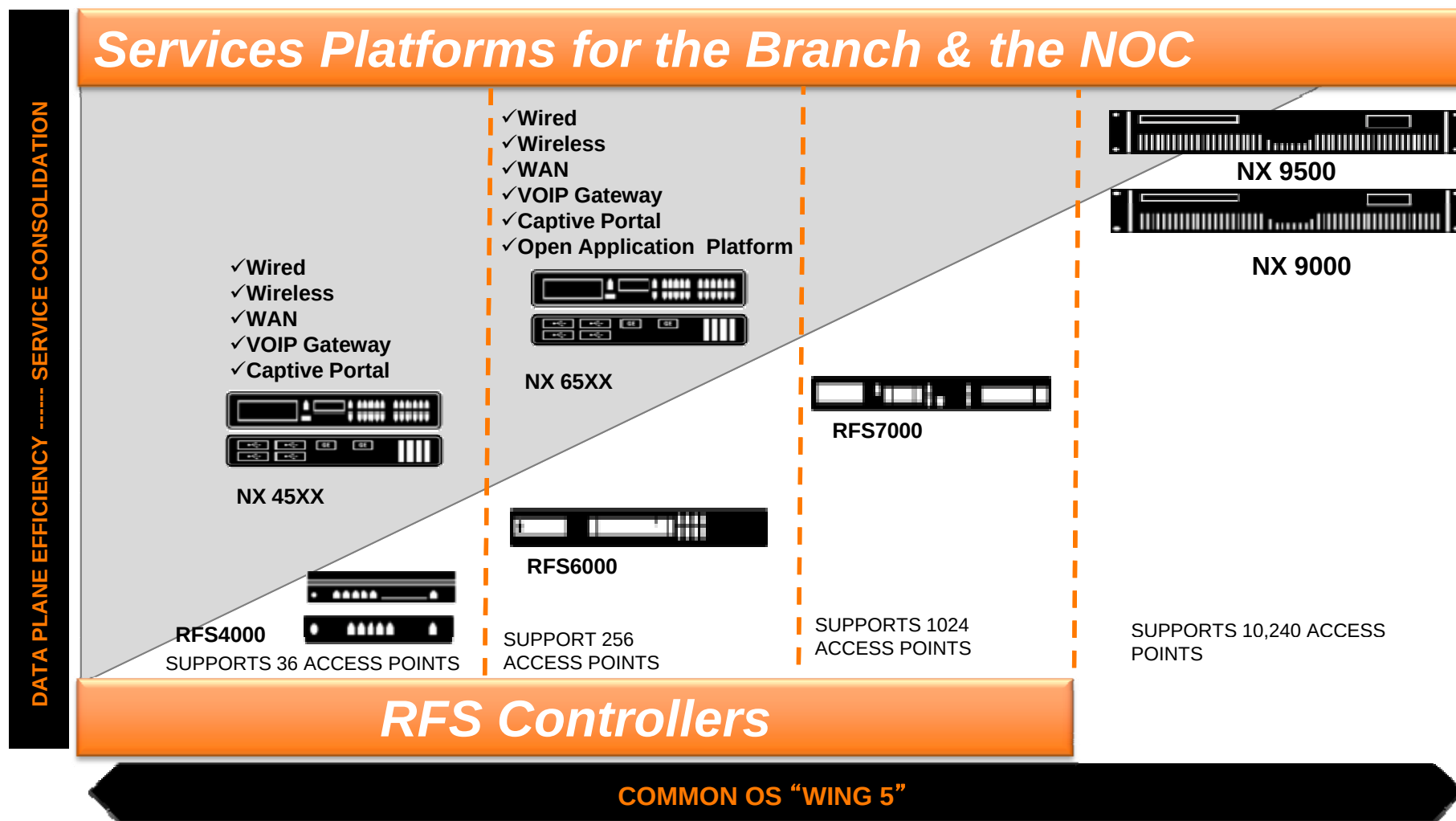
**MORE
SERVICES**

An extensible computing platform for quick deployment of Motorola (TEAM, guest access, location based services) and 3rd party applications to meet future needs.

CONTROLLER PORTFOLIO



EVOLVING RFS CONTROLLERS TO INTEGRATED SERVICES PLATFORMS



SERVICES VALUE PROPOSITION



FOR C-LEVEL RETAIL EXECUTIVES FOCUSED ON:

- Removing operational cost
- Supporting growth
- Optimizing infrastructure

MOTOROLA OFFERS:

- Services designed to reduce cost, manage risk, and enable new mobility-based initiatives that connect customers and drive top-line revenue.

BASED ON PEOPLE, PROCESS, AND TECHNOLOGY LEVERAGING:

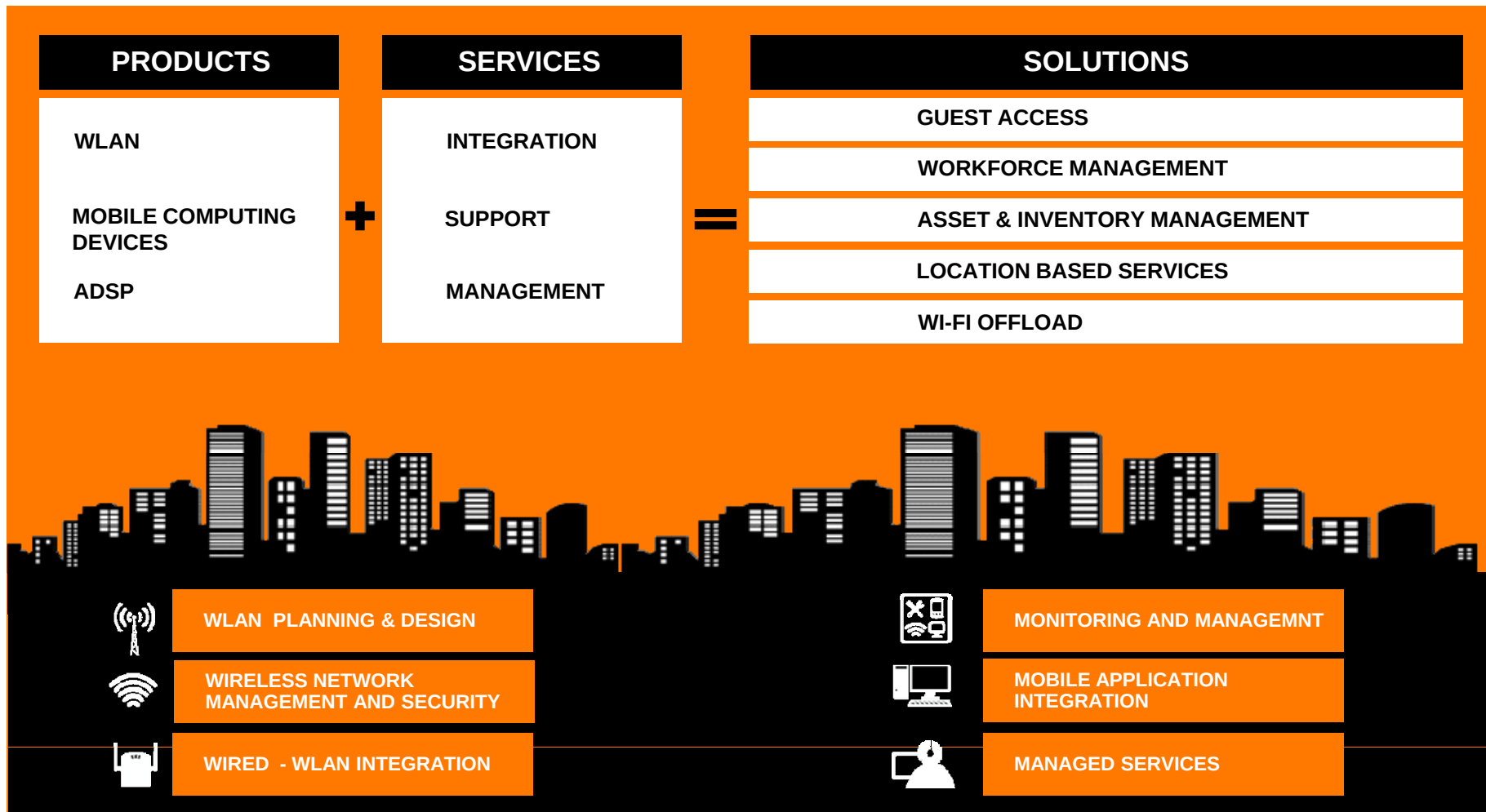
- Motorola's expert wireless/ mobility knowledge
- Optimized business rules and processes
- Robust datacenter infrastructure
- Tested wireless technologies



MOTOROLA WLAN SERVICE OFFERINGS



MAXIMIZING VALUE



SUMMARY

NX 4500/6500/9500: ENABLING RETAILERS TO...

Quickly roll out enterprise mobility applications

- Improve associate effectiveness and customer service
- Drive shopper loyalty across channels

Simplify IT Operations

- At the branch and the NOC

Deploy services from the cloud

- Access to WiNG 5 resources for enhanced capability

Reduce acquisition cost and operating expense

THANK YOU

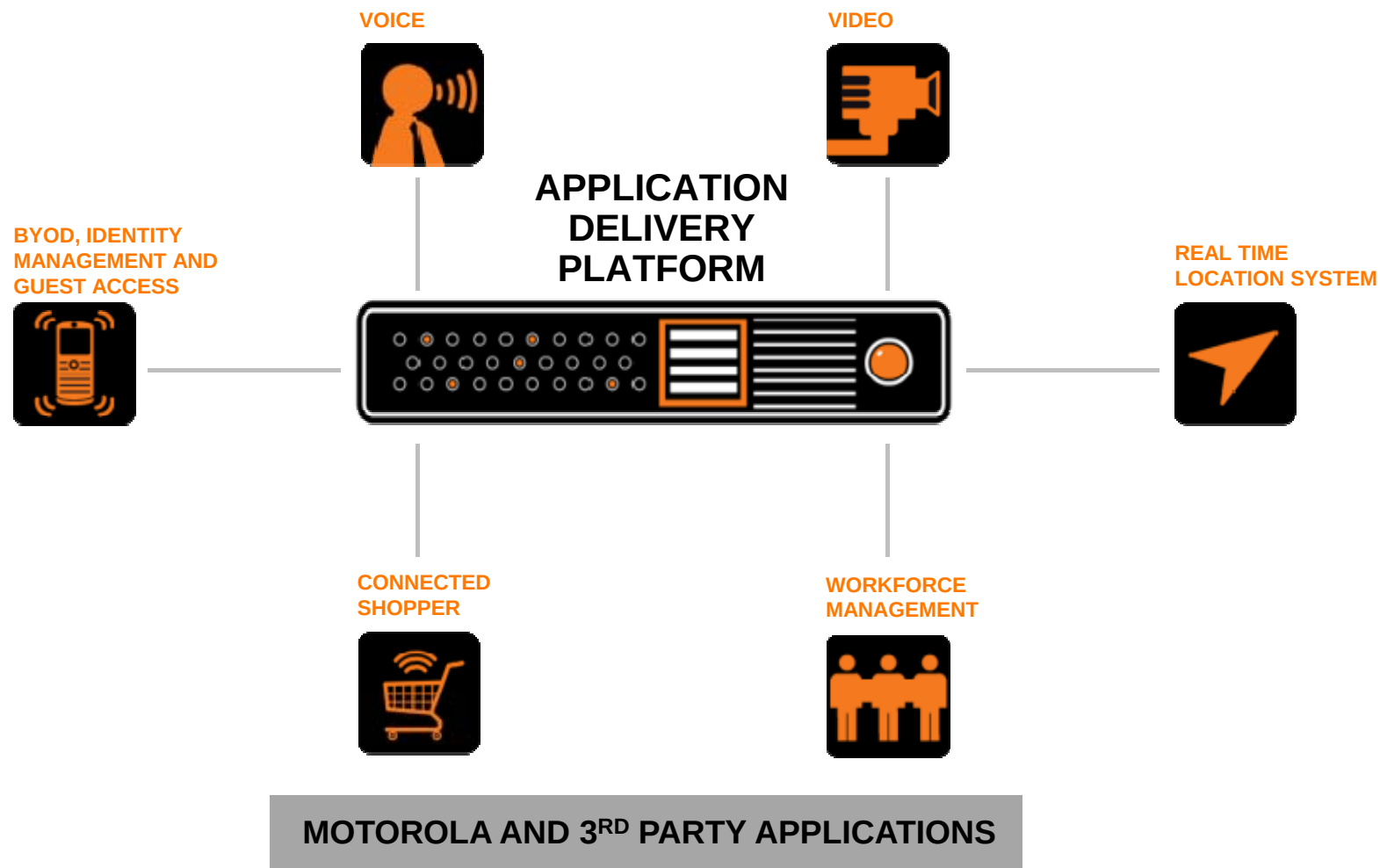


BACK UP



NX 4500/6500 SOLUTION

APPLICATION INTELLIGENCE AT THE EDGE



MOBILE COMMERCE PLATFORM



DISTRIBUTED ENTERPRISE

INFRASTRUCTURE CHALLENGES



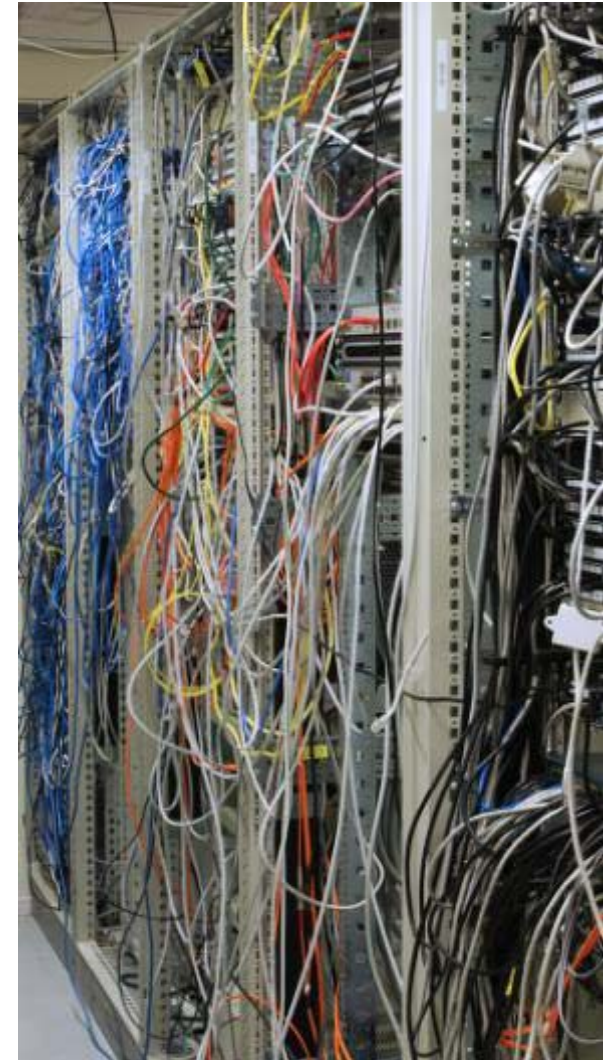
**MANY HETEROGENEOUS
SYSTEMS ACROSS
MULTIPLE LOCATIONS
LEADING TO**

- Lack of unified and system-wide manageability
- Lack of unified mobility framework
- Unpredictable application performance

**VIRTUALIZATION AND
CLOUD STRATEGY OFTEN
DOES NOT ADDRESS
BRANCH REQUIREMENTS**

- What services to virtualize?
- What applications can be delivered via cloud?
- How can we offer redundancy for cloud based services?

**MANY DIFFERENT SYSTEMS, PROCESSES AND RESULTING
OAM TAKES UP A LARGE PORTION OF IT BUDGET LEAVING
LITTLE FOR APPLICATIONS THAT PROVIDE A POSITIVE ROI**



KEY BENEFITS

CONNECTING RETAILERS WITH SHOPPERS



DELIVER ADVANCED MOBILITY APPLICATIONS TO DRIVE CUSTOMER BEHAVIOR, BUILD LOYALTY AND IMPROVE WORKFORCE EFFICIENCY

- Improved application performance enabled by integration of networking and mobility applications such as guest access and BYOD.
- Easily deploy Motorola retail applications including Telephony, Locationing, Device Management and real time Collaboration
- Enables quick roll-out of 3rd party applications with virtualized platform (Video analytics, sensing, and mcommerce)

SIMPLIFY DEPLOYMENT AND MANAGEMENT OF BRANCH OFFICE NETWORKING AND COMMUNICATIONS

- Single converged wired/wireless platform to deploy and administer
- Provides unified management view for all services deployed at the branch
- Centrally manage and control entire network from NOC or private cloud
- Deploy services directly from the private cloud

SIGNIFICANTLY REDUCE THE TCO OF DELIVERING SERVICES AT THE BRANCH

- 50% reduction in capex
- 75% less appliances resulting in lower opex from management and support
- Preserve existing investments, purchase feature sets needed
- Lesser space and power/cooling requirements – greener solution

ECONOMICS OF NX SERVICE CONSOLIDATION



PRODUCT APPROACH				SOLUTIONS APPROACH	
BRANCH SYSTEM COMPONENTS		TYPICAL ALA-CARTE HARDWARE LIST	CISCO 2921 ISR (BOLT-ON HW)	MOTOROLA BRANCH OFFICE SOLUTION	VALUE PROPOSITIONS
	12 – AP WIRELESS CTLR	\$2,500	\$4,795	 SUGGESTED LIST PRICE NX 4524 - \$4,995 NX 6524 - \$8,995	SERVICE CONVERGENCE
	24 PORT POE SWITCH	\$2,000	\$2,095		SIMPLIFIED MANAGEMENT
	WAN Router	\$1,000	\$6,995		APPLICATION DELIVERY
	SECURITY GATEWAY	\$1,000			
	IP PBX CONTROLLER	\$1,750			
	VOICE GATEWAY	\$1,750 NETWORKING & TELEPHONY \$10,000	NETWORKING & TELEPHONY \$13,885	NETWORKING & TELEPHONY \$4,995	ENABLING AN END-TO-END MOTOROLA RETAIL SOLUTION WITH UP TO 65% IN CAPEX SAVINGS COMPARED TO CISCO
	2U RACK SERVER	\$2,000 NETWORKING, TELEPHONY & APPLICATIONS \$12,000	\$3,900 NETWORKING, TELEPHONY & APPLICATIONS \$17,785	NETWORKING, TELEPHONY & APPLICATIONS \$8,995	