



Cisco Virtualization Experience Infrastructure (VXI) Smart Solution

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DC&V CSE

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How You Worked Used to Depend on This...



Now It Depends on This...



Wired

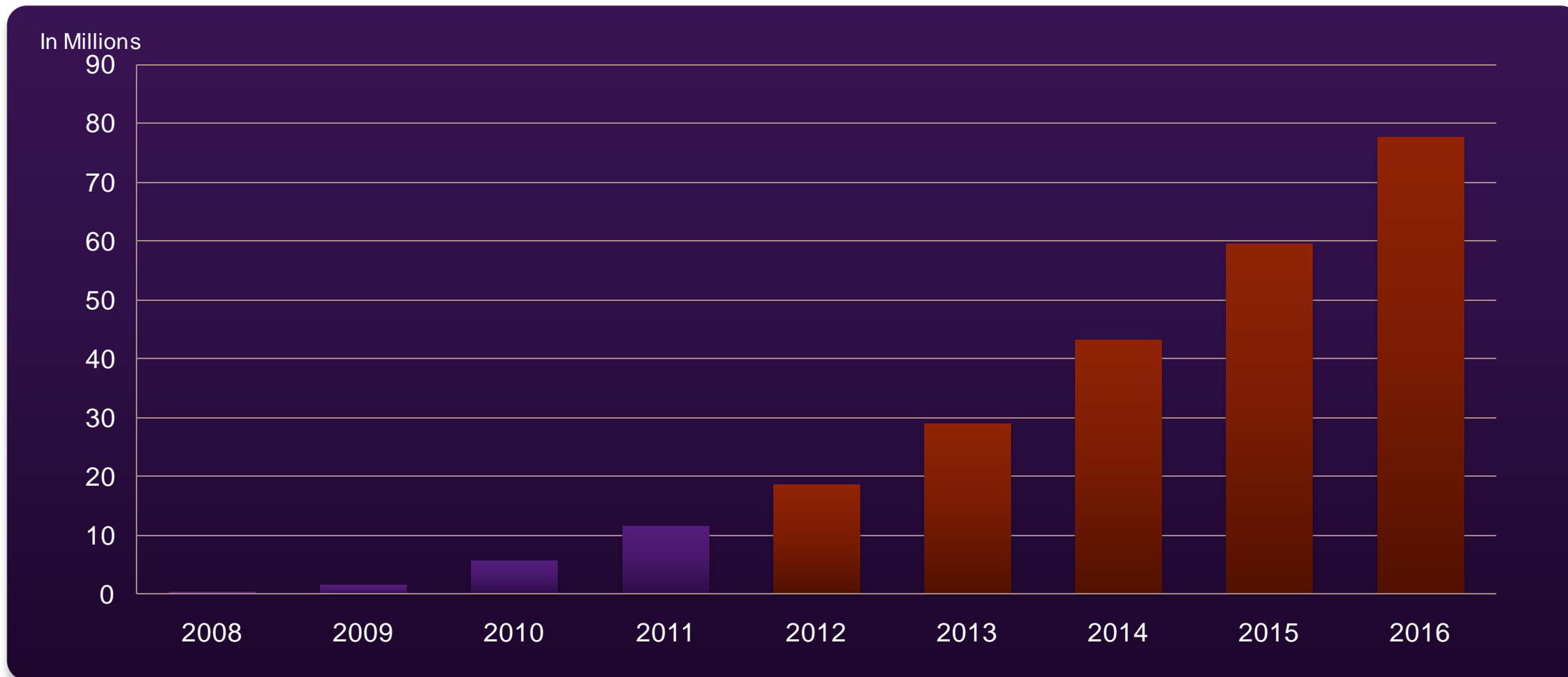
Wireless





The Virtualization Market is Growing

Gartner Hosted Virtual Desktop Installed Base Forecast



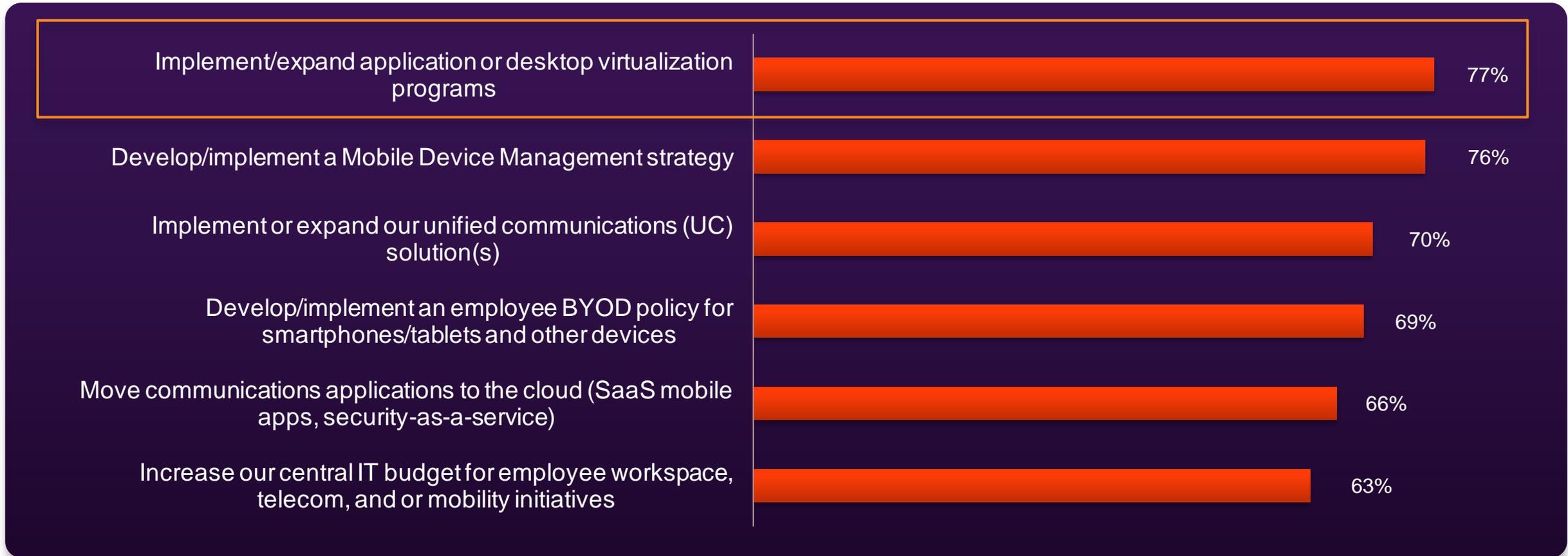
Graphic adaptation created by Cisco based on Gartner data. Source: Gartner, Inc., Forecast: Hosted Virtual Desktops, Worldwide, 2010-2014 (2012 Update)





VXI Smart Solution: Right Place, Right Time

Which of the following initiatives are likely to be your firm's top employee workspace/telecom/mobility priorities over the next 12 months?



Base: 325 Global Senior IT Decision-makers

Source: A commissioned study conducted by Forrester Consulting on behalf of Cisco, May 2012





Key Drivers for Desktop Virtualization

- Windows 7/8 Migration
- Remote and Branch Offices
- Contractors and Employee Owned
- Business Process Outsourcing
- BYOD/Mobile Users
- Business Continuity and Disaster Recovery





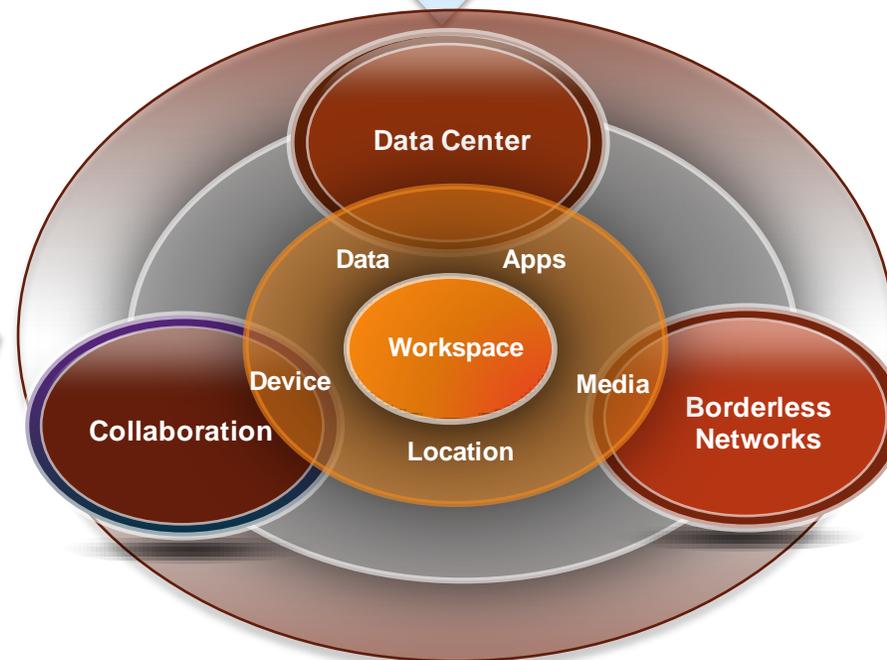
Cisco VXi Smart Solution

Virtual Desktops & Apps



Secure

Flexible



Video



Voice



Uncompromised



VXI is More than Desktop Virtualization

VXI is the ideal platform for



Virtual Desktops

- More scalable
- More secure
- Higher performance
- Simplified deployment
- Reduced costs



Unified Workspace

- Rich Media, Voice, Video
- Unified Communications
- Network Optimization
- End-to-End Security
- Fully integrated solution

▲ ...and delivers the virtual solution for

Cisco VXI Relevant to Spectrum of Industries



Healthcare

- Secure access to patient data
- Regulatory compliance
- Mobility for doctors



Finance

- Secure, flexible computing
- Regulatory compliance
- Disaster recovery



Education

- Sharing computing resources
- Collaborative classroom
- Simple and fast provisioning
- Control IT costs



Government

- Secure access to sensitive data
- User based authentication



Contact Center

- Reduced agent seat cost
- Quick on-boarding
- Global coverage



Retail

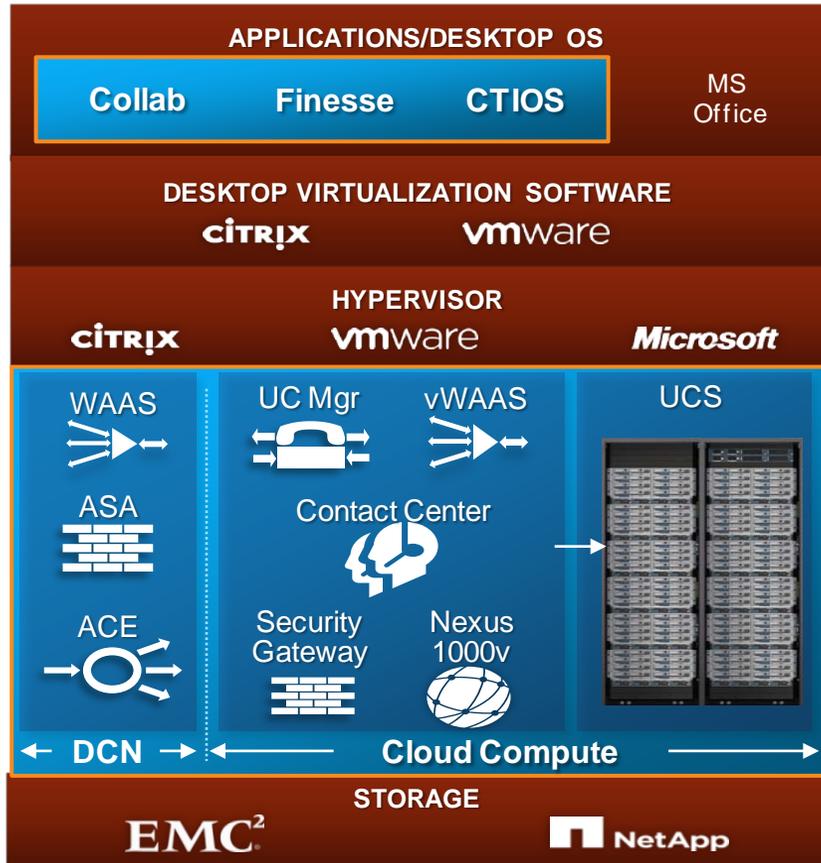
- Retail Kiosks and displays
- Easy Management



Cisco VXI Smart Solution Architecture

Cisco Products

Virtualized Data Center



Borderless Network



Collaborative Workspace



End to End Management , Optimization and Services





Cisco Unified Computing System

Optimized Infrastructure for Desktop Virtualization

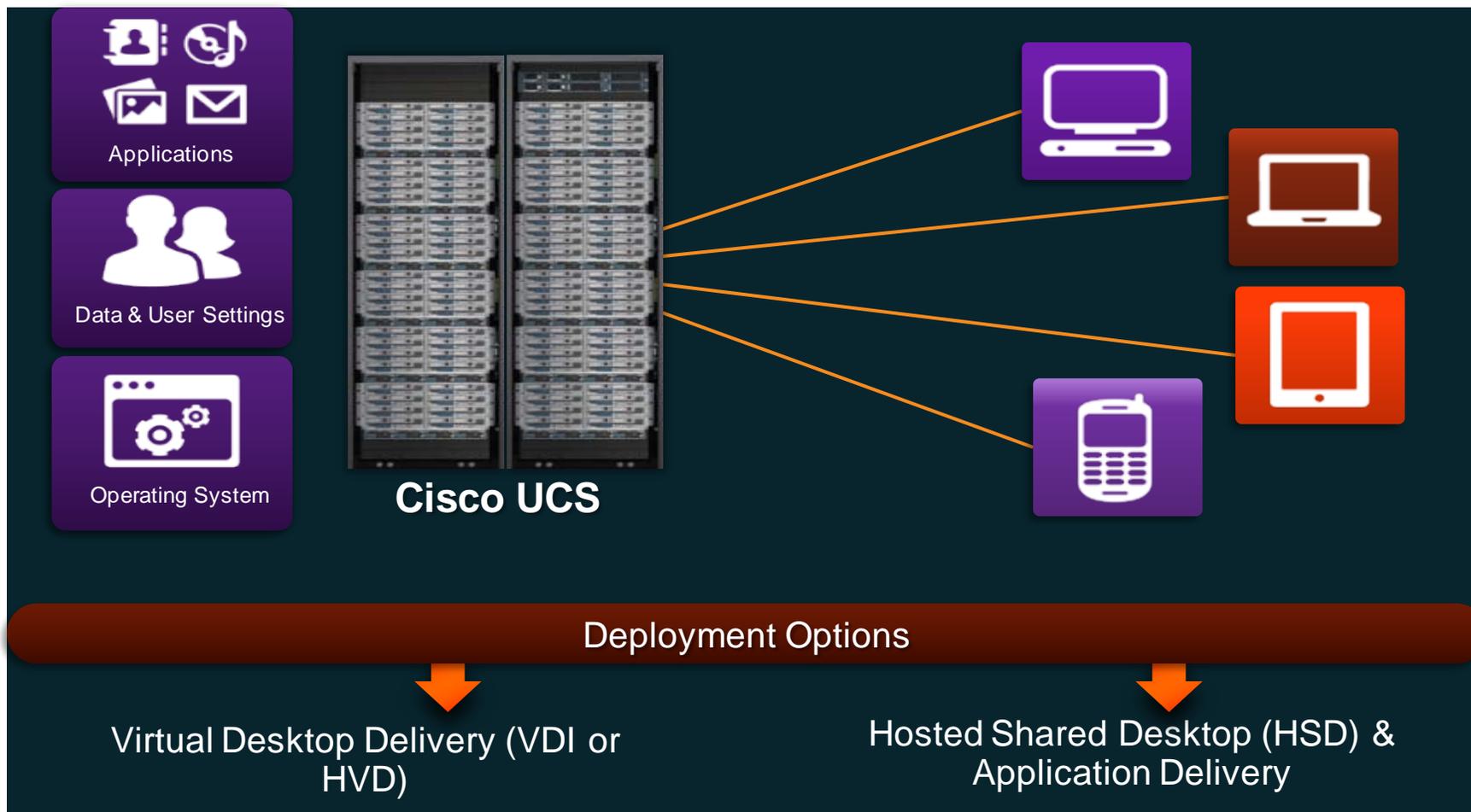


- Lower cost for compute + network infrastructure
- Greater virtual desktop density w/o performance impact
- Simple Operation—start in minutes, scale in seconds
- Massive Scalability—scales easily to 1000's of desktops per UCS system
- Extended memory and I/O to avoid desktop virtualization bottlenecks



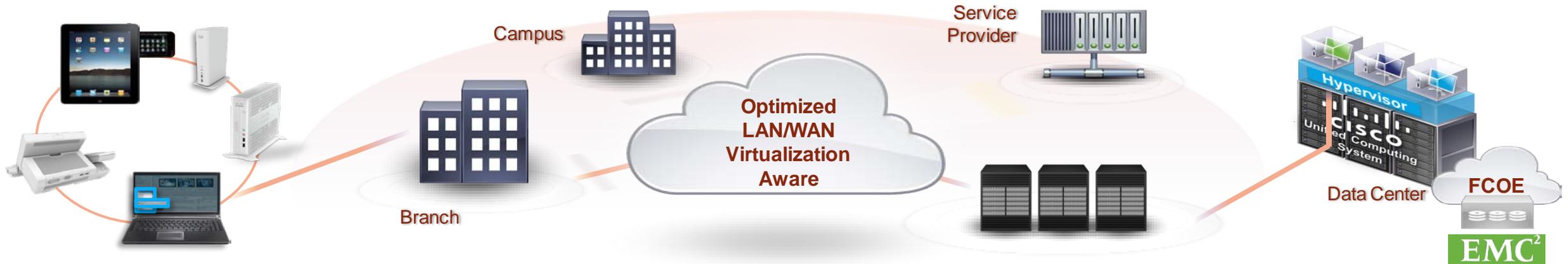


Cisco VXi and the Unified Data Center





Virtualization Aware Borderless Network



ACCESS

Endpoints delivering rich-media experience, UPOE, Plug and Play Auto Smartports



END-TO-END SECURITY

Single Point Policy, Mobile endpoints, Consistent physical and virtual security



OPTIMIZED WAN

WAAS-based Optimization, High availability



INFRASTRUCTURE

Scalable virtual Compute
Scalable, simple networking
Cloud-ready Virtual Switches

Uncompromised User Experience Enabled by the Workspace-Optimized Borderless Network



Cisco VXi Access and Security

Context Aware: Cisco Identity Service Engine (ISE)

- Consistent Security Policy Enforcement Network-wide
 - Physical desktops, virtual desktops, BYOD
- Supports Data Security, Access Control, and Compliance
 - Protects intellectual property
 - Ensures right level of access for device type

Flexible remote access authentication

- Single or dual VPN tunnel from VXC
- Cisco AnyConnect with split tunneling

Clientless Single Sign On (SSO)

- Citrix XenDesktop and Citrix XenApp

Smartcard Authentication on Cisco Zero Clients





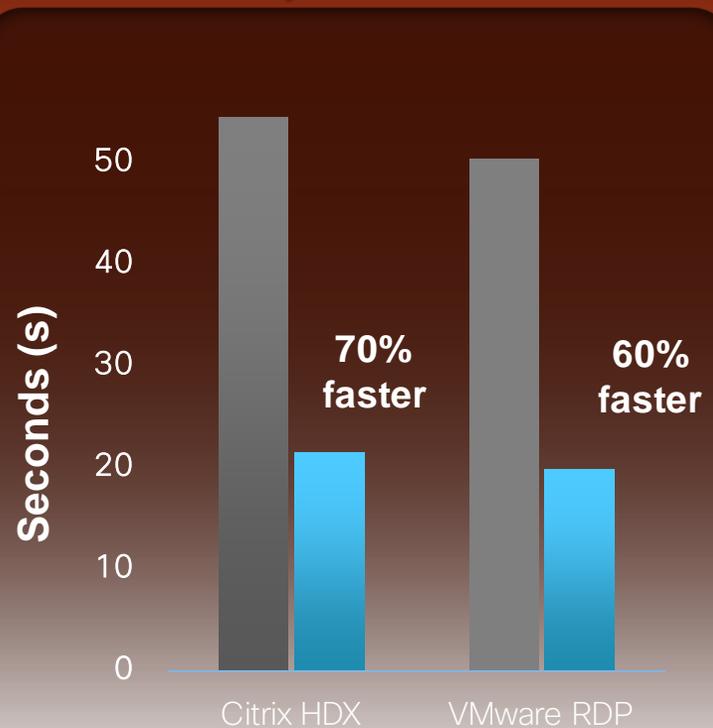
Experience the WAAS Difference

Enables Superior WAN Performance

Before Cisco WAAS
 After Cisco WAAS

80ms 1.5Mbps WAN

Response Time



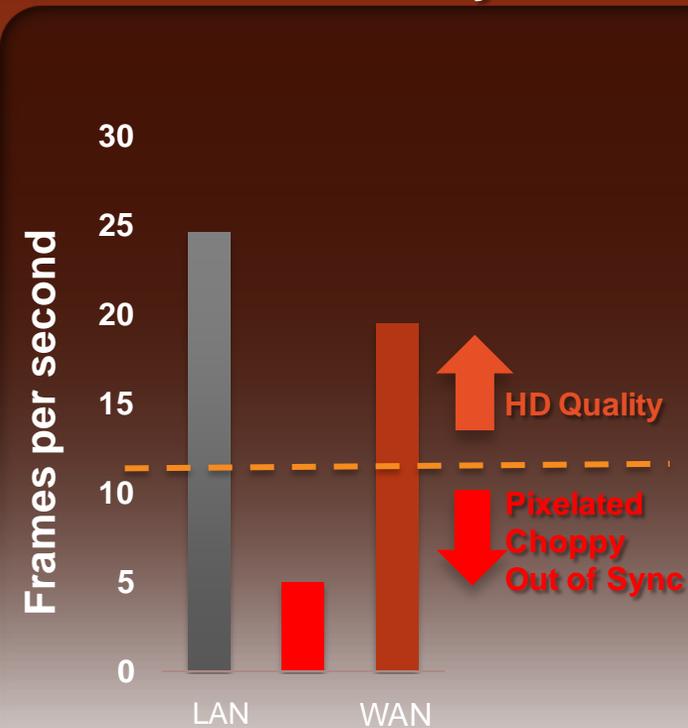
Up to 70% Faster

Bandwidth Consumption



Up to 3X More Users

Video Quality



HD Quality User Experience

NOTE: To optimize VMware virtual desktop streams over the WAN, the RDP protocol must be applied.





Cisco VXi Collaborative Workspace

Powered by Cisco Unified Communications

Any Device, Any OS

Virtual or Native

Mobile or Desktop-bound

BYOD or Company-issued

Pervasive Unified Communication

- Jabber for Windows in virtual desktops
- Jabber w/ application virtualization
- Citrix XenApp





Cisco Virtualization Experience Client (VXC) Portfolio



Zero Clients

VXC 2111/2112



Zero Clients

VXC 2211/2212



Thin Client

VXC 6215



Software Appliance

VXC 4000

Name	IPv4 MAC Address	Active IP Address	Platform	OS	Subnet
LVV100505010300	00505010300	10.2.101.17	VXC215	SUSE Linux	10.2.101.255
LVV164843191643	64843191643	10.2.205.103	VXC215	SUSE Linux	10.2.205.255
LVV164843191643	64843191643	10.2.100.50.5	VXC215	SUSE Linux	10.2.100.10.255
pcosp-port@4448ca7..	4443Ca-764C-0F	10.2.205.115	VXC211	FreeBSD	10.2.205.255
pcosp-port@4b7483..	E84748-2381C1	10.2.205.104	VXC211	FreeBSD	10.2.205.255
VXC48674823730	4b74823730	10.2.205.114	VXC212	Windows	10.2.205.255
VXC48674823730	4b74823730	10.2.205.113	VXC212	Windows	10.2.205.255

Management

VXC Manager





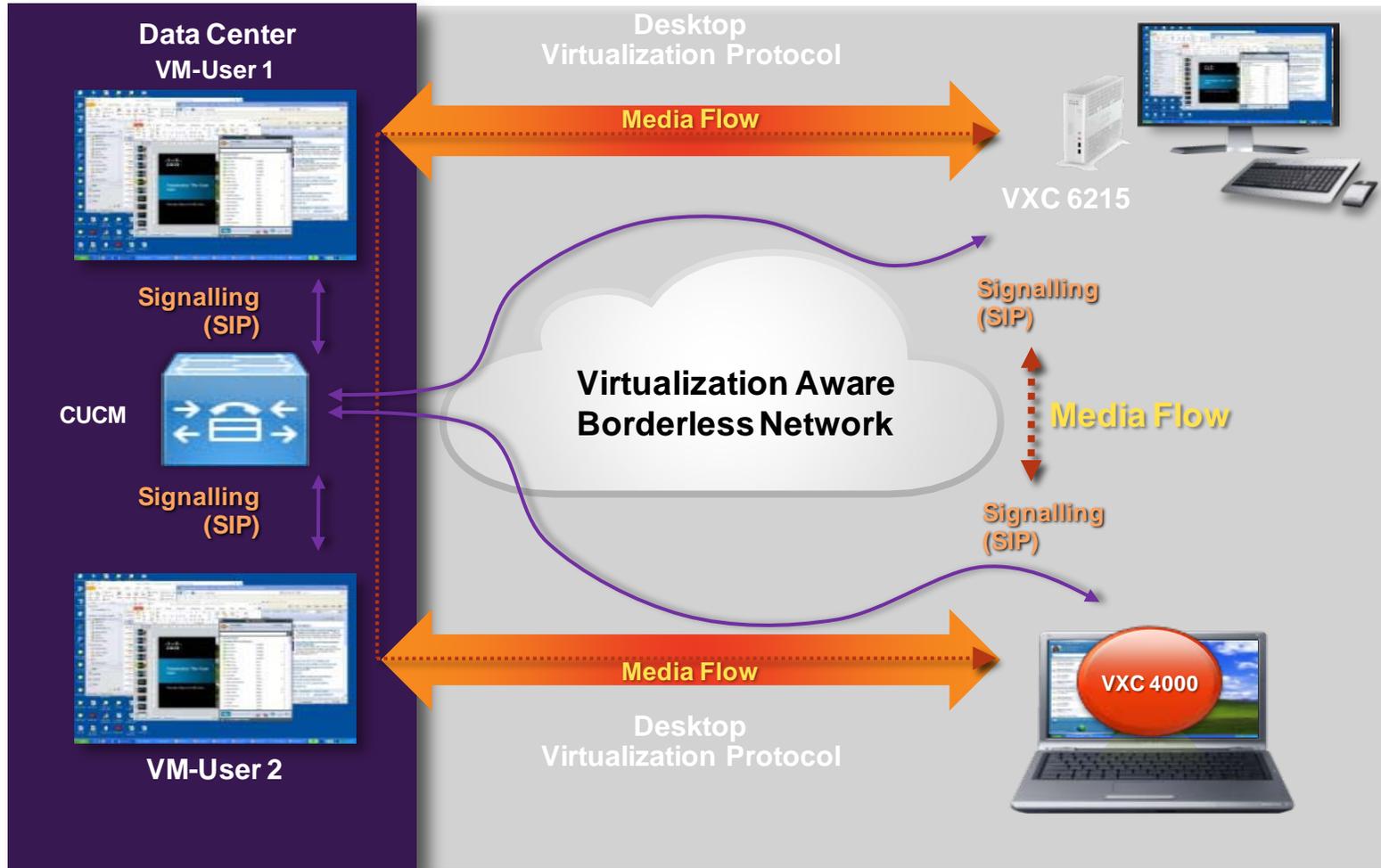
Cisco VXi Smart Solution in Action



Delivers uncompromised user experience



Voice, Video and Virtual Desktop



Uncompromised user experience

- Routes voice and video point-to-point

Optimized resources

- Bandwidth reduction from megabytes to kilobytes
- Reduced processing in data center

Enterprise-grade voice and video based on Cisco Unified Communications





South West Alliance of Rural Health



Challenge

- Deliver IT services to 13 public health agencies
- Support extremely mobile clinician staff

Solution

- Cisco VXi with Cisco VXC, UC and UCS

Results

- Create more efficient and collaborative patient care environments
- Optimize patient care experience
- Increase staff confidence in electronic health records





University of Tennessee



Challenge

- Transform computing environment into a flexible services to meets students' work styles
- Easily support new applications every semester
- Support increasing data & information

Solution

- Cisco VXi and Citrix XenDesktop with NetApp Unified Storage Architecture

Results

- Anytime access to virtual desktops, apps, personal files, network resources for over 27,000 students and staff on university-owned and personal devices
- Students' educational experience is improved so they can make better use of their time
- Reduced cost of software/hardware refreshes





Metro Health



Challenge

- Improve clinician workflow
- Support 1000's of point-of-care desktops with simplicity, efficiency
- Secure, reliable access to patient data

Solution

- Cisco VXi with Cisco VXC, UC and UCS

Results

- Streamlined workflows for referential image viewing, follow-me desktops and dictation
- Reduced capital expenses
- Simplified application management





VXI Smart Solution Validated Design

- Cisco Validated Designs (CVDs):

Citrix XenDesktop

Citrix XenApp

VMware View

- Risk reduction in customer deployment

System integration and validation

Multiple Hypervisors

Multiple storage solutions

The image shows a screenshot of the Cisco Interactive Design Zone for Data Centers. The main interface displays a 3D visualization of a data center floor plan with various server racks and network components. A navigation menu at the top includes 'Enterprise: Cisco Validated Designs (CVDs)', 'Start', 'Enterprise', 'Service Provider', 'Partner Ecosystem', and 'Resources'. Below the navigation, there are tabs for 'Products & Services', 'Support', 'How to Buy', 'Training & Events', and 'Partners'. The 'Support' section is active, showing the 'Cisco Virtualization Experience Infrastructure CVD for Citrix'. A 'Table of Contents' is visible, listing sections like 'Preface', 'Document Objectives', 'Questions and Answers', 'What's Changed', 'Revision History', 'Introduction', 'Virtualization: Safeguarding', 'Platform Independence', 'Qualifiers', 'What is Cisco VSD?', 'Desktop Virtualization', 'Overview', 'User Experience on Virtual User Image', 'Response Time', 'Desktop Security', 'Infrastructure Multitenancy', 'Desktop Authentication', 'Local Devices', 'USB Redirection', 'Printing', and 'Local Drives'. A feedback form is also present, asking users to rate the document from 'Excellent' to 'Poor'. At the bottom, there is a section for 'VMware View 4.5 on Cisco Unified Computing System and EMC Unified Storage Design Guide' with a 'Last Updated' date of May 12, 2011.



Services for VXI

Architectural Services Approach

Architectural Deployment

Incremental Architectural Change & Maintenance

Identify Business Value + Business Outcomes

Discovery Session

Strategy and Assessment

Planning and Design

Pre-Production Pilot

Desktop Virtualization Validation Service

Implementation

Optimization & Solution Support

Customer Outcomes, IT Priorities

- Enhanced security and compliance
- Lower operating costs - optimized infrastructure, simplified IT desktop operations
- Business agility – faster, simpler and secure provisioning of desktop for end users
- Superior work style experience - access to all applications, communications and collaboration services, anywhere on any device



Plan / Build



Manage



Solution Pak for VXI

COMPUTE

Dual B230 M2 Blades:

- Intel® Xeon® E7-2870 Processors (10-Core / 2.40 GHz)
- 256 GB of Memory
- Cisco Virtual Interface Network Adaptor

NETWORK

Dual 96-port 6296 Fabric Interconnects

Dual 8-port 2208 Fabric Extenders

ENDPOINTS

(60) Voice / Video-Enabled 6215 Endpoints

- VXC-Manager Licensing and 3-years of Software Upgrade Support

(90) PoE-Enabled 2212 Endpoints

- VXC-Manager Licensing and 3-years of Software Upgrade Support

VMWare PCoIP Version: **UCS-EZ-VXI-PCOIP1**

Citrix ICA Version: **UCS-EZ-VXI-ICA1**



Summary

- VXI Smart Solutions empowers people to work their way while enabling business agility
- VXI delivers an uncompromised Unified Workspace experience with virtual desktops, applications and collaboration
- Cisco Collaboration endpoints and applications unify virtual desktop, voice and video
- Cisco Data Center enhancements provide scaling and simplified virtual desktop deployment, lowering TCO
- Mobility, security, access and compliance enabled seamlessly with Cisco Borderless Network



Cisco VXI Smart Solutions

Talk to your Cisco Account Team and set up a time to see VXI in Action!

For more information, go to:

<http://www.cisco.com/go/vxi>

VXI Design Zone

http://www.cisco.com/en/US/solutions/ns340/ns414/ns742/ns1100/landing_vxi.html

