Cisco Virtualization Experience Infrastructure (VXI) Smart Solution

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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

In Millions

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

- Implement/expand application or desktop virtualization programs: 77%
- Develop/implement a Mobile Device Management strategy: 76%
- Implement or expand our unified communications (UC) solution(s): 70%
- Develop/implement an employee BYOD policy for smartphones/tablets and other devices: 69%
- Move communications applications to the cloud (SaaS mobile apps, security-as-a-service): 66%
- Increase our central IT budget for employee workspace, telecom, and/or mobility initiatives: 63%

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

Data Center
Data
Apps
Workspace
Location
Collaboration
Media
Borderless Networks

Virtual Desktops & Apps

Uncompromised

Video
Voice

Secure
Flexible

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

Virtualized Data Center

- Applications/Desktop OS
- Collaboration
- Identity Services Engine
- Hypervisor
- Security Gateway
- Contact Center
- Cloud Compute
- Storage

Borderless Network

- AnyConnect
- Identity Services Engine
- WAAS
- Routing (ISR)
- PoE
- Switching

Collaborative Workspace

- VXC 6215 Thin Client
- VXC 4000 Software Appliance
- VXC 22xx & 21xx Zero Clients
- Smart Cards
- Tablets
- Smartphones
- Laptops
- Ultrabooks

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

- Supports all clients, delivery options and applications
- Applications
- Data & User Settings
- Operating System
- Virtual Desktop Delivery (VDI or HVD)
- Hosted Shared Desktop (HSD) & Application Delivery
- Deployment Options
- Cisco UCS

- Cisco UCS

- Deployment Options
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

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

<table>
<thead>
<tr>
<th>Zero Clients</th>
<th>Zero Clients</th>
<th>Thin Client</th>
<th>Software Appliance</th>
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<tbody>
<tr>
<td>VXC 2111/2112</td>
<td>VXC 2211/2212</td>
<td>VXC 6215</td>
<td>VXC 4000</td>
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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
Big Orange, Big Ideas

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
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
Services for VXI

Architectural Services Approach

1. Discovery Session
2. Strategy and Assessment
3. Planning and Design
4. Pre-Production Pilot
5. Desktop Virtualization Validation Service
6. Implementation
7. Optimization & Solution Support

Architectural Deployment

Incremental Architectural Change & Maintenance

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