Cisco VXI: An End to End Architecture for Adaptive Workspaces

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Forces Driving Change in the Desktop Environment

- Data Security and Compliance
- Explosion of New Devices
- Rising Desktop Management Costs
- Users Want Access Anywhere, Anytime
- Success of Server Virtualization
- Windows 7 and PC Refresh
What We’ve Heard From Customers…

Desktop Virtualization Drivers
- Flexibility / Business Continuity
- Data Security
- Total Cost of Ownership

Desktop Virtualization Challenges
- Maintaining High Quality for Video, Voice Experience
- Fragmented Solution Set
- Return on Investment
Cisco’s Vision for Virtualization Experience Infrastructure (VXI)

Deliver a superior collaboration and media-rich user experience with best in class ROI in a fully integrated, open and validated desktop virtualization solution

- Data security and compliance
- Business continuity / agility
- Reduced TCO
- Standardized IT experience, customizable user experience
- Video and voice
- Interactivity
- Mobility
- Real time, high quality experience
- Range of devices
Cisco Virtualization Experience Infrastructure

Cisco VXI

- Collaboration
- Borderless Networks
- Virtual Workspace
- Data Center Virtualization

- Media Rich Experience
- Security
- TCO / ROI
- System Integration

Partner Eco-System

VCE, EMC, VMware, NetApp, Intel, Teradici™
Desktop Virtualization: Nomenclature

**Desktop Virtualization**
Suite of Technologies
- Desktop Streaming
- Application Virtualization
- Terminal Services

**VDI**
Virtual Desktop Infrastructure

Industry Terms for VDI:
- Gartner: “Hosted Virtual Desktop” (HVD)
- IDC: “Centralized Virtual Desktop”

**Cisco VXI**

- End-to-End Architecture & Validation
- Supporting Rich Media /UC
- Enhanced Security
- Application Acceleration
- POE / Energy Wise
Desktop Virtualization End-to-End - Cisco Play

Virtualized Data Center
- Software Applications (Productivity, Collaboration)
- Desktop Virtualization Software, OS
- Hypervisor, OS, Desktop Virtualization
- Compute
- Storage
- Data Center Network

Virtualization-Aware Borderless Network
- WAN, LAN
  - Wired and wireless
  - Power over Ethernet
  - Security
  - Application optimization
  - Load balancing

Virtualized Collaborative Workspace
- Mobile Clients
- Fixed Clients

Cisco
Partner
Cisco Innovation Solving VDI + Video + Voice

Avoiding the Hairpinning Problem

The Hairpinning Problem
- Media flow goes all the way to data center and back
- Heavy processing on virtual desktop in data center
- Latency, Jitter

Deskphone Solution
- User interacts with CUPC on virtual desktop in data center. (CUPC: Cisco Unified Personal Communicator)
- Signaling of CUPC back to CUCM outside the display protocol. (CUCM: Cisco Unified Communications Manager)
- Media Traffic flows directly between the deskphones without hairpinning

Benefits
- Bandwidth reduction
- Reduced processing in data center, increase in VM blade density
- High quality voice and video
  - Network handling real-time data (QOS, CAC)
  - Eliminates hairpinning of media through data center
Cisco Virtualization Experience Clients

- Integrated form factor for Cisco Unified IP Phone 8900/9900 Series
- Power via Phone – Leverages existing Power over Ethernet (PoE)
- Supports 2 monitors, USB keyboard & mouse, 4 USB ports, Audio Mic in / Speaker out
- VXC 2111 – Supports PCoIP; VXC 2112 – Supports ICA and RDP

- Standalone Form Factor
- Power over Ethernet (PoE)
- Supports 2 monitors, USB keyboard & mouse, 4 USB ports, Audio Mic in / Speaker out
- VXC 2211 – Supports PCoIP; VXC 2212 – Supports ICA and RDP

- Cisco Cius - Mobile endpoint for converged Voice, Video, UC Applications and VDI
  - Supports external BT/USB mouse & keyboard when docked
  - Supports external display in “mirror mode”
Cisco Data Center Desktop Virtualization Solution

Simplified Deployment
- UCS Service Profiles: Simplified Deployment and Scale
- Desktop Virtualization Services
- Cisco Validated Designs:
  - Offered with VMware View
  - Support for both EMC and NetApp Storage

Lower Cost
- Greater density of virtual desktops per server blade
- 1/3 cost of networking infrastructure
- Over 20% savings per seat* vs. competitors

Improved User Experience
- Bandwidth optimization and Rich Media acceleration

* Savings per seat include UCS and WSX cost compared to competitors.
Presentation includes general ROI slides to explain the value of VXI.

And customized slides showing the customer’s savings and metrics from implementing desktop virtualization.

- Presentation includes general ROI slides to explain the value of VXI.

- Financial Summary:
  5 Year TCO savings of 32%; payback less than 1 year.

- Key Financial Metrics:
  - Number of users: 3000
  - Total investment: $4.4M
  - Desktop TCO ($/seat/month): $118.92
  - Return on Investment (ROI): 141%
  - Operating Expense savings: $6.5M
  - Capital Expense savings: $0.32M
  - Total savings: $8.8M
  - Green Savings: 1359 Tons of CO2 equivalent to taking 93 cars off the road.
Cisco VXI Workshop Overview

**Preparation**
- **Understand Current State**
  - History and current VDI knowledge
  - Existing strategy and plans
  - Major objectives and pain points
- **Review Data**
  - Identify key discussion topics

**Workshop**
- **Business**
  - Review major objectives and pain points
  - Review existing strategy and plans
- **Architecture**
  - Approaches and architectures
  - Components
  - Current vs. target state
  - Cisco unique value
- **Operations**
  - VDI operational considerations

**Output**
- **Written Discussion Summary**
  - Initial considerations
  - Business
  - Architecture
  - Operations
  - VDI Transformation Roadmap
  - Follow-up items and next steps
Case Study: Metro Health, Grand Rapids MI

IT Initiative

- Accelerate clinician access to key medical applications
- Eliminate repetitive login cycles
- Deliver persistent, high-performance workspaces
- Enable the Private Healthcare Cloud

Business Value

- Improved Clinical Workflow and Physician/Nurse Productivity
- Improved ROI
- Increased Physicians/Nurse Productivity

Cisco VXI Solution:
- Cisco Unified Computing System
- VMware View
- NetApp Storage

Cisco VXI Desktop Virtualization

enabled by:
- Cisco VXI with VMware View
  - Clinical Imaging – Referential Viewing (Physicians)
  - Follow-me Desktops (Nurses)
  - Ubiquitous Dictation (Physicians)
Take the Risk Out of Getting Started
Cisco Virtualization Experience Infrastructure

- www.cisco.com/go/vxi
- Cisco® Validated Design Reference Architecture
- Proof of Concept
  Technical support
- Financial Analysis – VXI TCO Calculator
- Desktop Virtualization Professional Services
  Strategy > Plan/Design > Implement > Optimize

Cisco VXI TCO Advisor

Welcome to the Cisco VXI TCO Advisor. This tool allows you to quantify the cost benefits of migrating from traditional desktop virtualization solutions to Cisco Virtualization Experience Infrastructure, and more specifically the virtualized desktop virtualization deployments.


Financial Metrics
- Total savings with Cisco VXI
- TCO Savings vs. Current Environment
- Return on Investment (ROI)
- Internal Rate of Return (IRR)
- Net Present Value (NPV)
- Payback Period (Months)
- Operating Expense/Savings
- Capital Cost Avoidance
- Capital Return


Cisco VXI TCO Calculator

- Total number of desktops at analysis start date
- Annual growth in desktops
- Hourly rates of desktop PC
- Desktop PC depreciation rate
- Percentage of desktop PCs reupgradable to the client
- Hardness capital cost of a new thin client
- Client administrator hourly rate

Cisco VXI TCO Advisor Analysis

- Model Type
- Average hardware cost of PC (in dollars and percentage)
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Triple V Starter Kit: Voice, Video, Virtual Desktops

Limited Time Offer

Voice, Video, Virtual Desktop Endpoints with UC License
- VXC 2100
  - IP Phone 9971
  - CUWL Standard

OR

- VXC 2200
  - IP Phone 8941
  - CUWL Standard

OR

- Cius
  - CUWL Standard
  - HD Media Dock

Computing Platform for UC Servers
- UC on UCS
  - VMware vSphere

Computing Platform for Virtual Desktops
- UCS for VMware View
Don’t Miss…

Featured Sessions:

Monday
- #SPO3989 – Cisco VXI: Optimized Infrastructure for Scaling VMware View Desktops with Confidence, 11:30am
- #EUC1656 – Modernize the Desktop for Better Patient Care, 1:00pm

Tuesday
- #SUP1010 – Innovating Together: How Cisco and VMware Collaborate to Build the Cloud, Soni Jiandiani, SVP, Cisco SAVBU, 2:30pm
- #SPO3988 – Oaks Hills and NetApp Do the Math: Implementing a Practical VDI Solution Designed to Scale Beyond 50,000 Seats, 10:30am
- #SUP1016 – Transforming the Data Center with Vblock Infrastructure Platforms, 4:00pm
- #EUC2904 – Optimizing the Network for VMware View, 4:30pm (and Wed. 2:30pm)

Wednesday
- #SPO2526 – View in the Real World: Husky Energy and the Lessons We Learned from a 6,000 Seat Multi-Site Deployment, 8:30am
- #SPO3952 – Deploy Virtualized Desktops 4 Times Faster on Vblock Infrastructure Platforms, 10:00am

Thursday
- #EUC2436 – Redefining the Desktop: A New Vision for Workplace Productivity at CB Richard Ellis, 11:00am

Demos
- **Cisco**: VXI with VMware View (Booth #700)
- **NetApp**: Deploying VMware View on NetApp (Booth #401)
- **EMC**: Solutions for VMware View (Booth #1101)
- **VCE**: VMware View on Vblock (Booth #1121)
- **Teradici**: Cisco VXC Client: 3D, Aero, Google Earth (Booth #1013)
- **Atlantis**: ILIO Demonstration on Cisco UCS Servers (Booth #1161)
Thank You!