

End-Gerätevielfalt, und was bringt der virtuelle Desktop?

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Alle Folien sind ausgeliehen von Microsoft, Gartner, HIG, Ciscoet. al.

May, 2012

Der Mitarbeiter von Morgen ...

- Welche Wünsche hat der Mitarbeiter von morgen schon heute:
http://www.youtube.com/watch?v=7_zzPBbXjWs

Eksplasjon i mobile enheter

• **7.7 milliarder** nye Wi-Fi (a/b/g/n) enheter vil tas i bruk de neste fem årene.*

• Smarttelefon utbredelsen vil øke med 50% per år.**

• I dag går **16%** av mobildata trafikken over Wi-Fi. I 2015 vil dette øke til **48%**.*



Der Hardware der Mitarbeiter von Morgen ...

- Welche Wünsche hat der Mitarbeiter von morgen schon heute:
http://www.youtube.com/watch?v=7_zzPBbXjWs
- Die Devices der Post PC Area:

Media Tablet and Beyond: Say Hello to the Post-PC Era

- No platform, form factor or technology will dominate.
 - Windows' share of client devices steadily shrinks.
- Tablets have been driven by consumers.
 - BYOD will remain the norm.
 - Security and management challenges must be addressed.
- Tablets change how information is produced and consumed.
- Component prices continue downward trend.
 - Tablet prices under \$300 for entry-level 10" by 2013.
 - \$35 tablet in India emerges.



Die von morgen: Arbeitsweise “heute” der Mitarbeitenden

Die Arbeitsweise “heute” der Mitarbeitenden von morgen:

Beispiel:

Jennifer: 5. Schuljahr im Gymnasium:

I-Phone 4s und MacAir haben ein gutes Design. Mein Lifestyle erlaubt mir nicht andere Gerät zu nutzen.

Colaboration:

Hausaufgaben für die klasse gibt der Lehrer:

- Die Klasse löst diese colaborative auf FaceBook.
- Die FB Seiten des Vorjahres sind oft sehr hilfreich!

Schlussfolgerungen:

- Jeder hat seine eigene Devices, **Management und Sicherheit der Devices?**
- Die Devices werden 24h pro Tag „getragen“
- Arbeit und Freizeit trennen sich nicht mehr scharf



Transitioning to a Post-PC World

New choices at every layer of the Traditional Stack

PC World

Post-PC World

Applications



Google docs



Client OS



symbian OS



Server Architecture



Devices



Die Herausforderungen von BYOD

- Sicherheit (Zugang, Zugriff, “Data at Rest” und “in Motion”, weniger Processing)
- Management (Update, Synchronisation, Backup, Sicherheitsmanagement AV etc.)

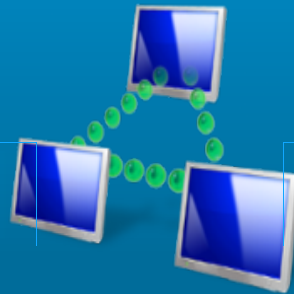
→ Diese Probleme hatten wir nicht in der während der Mainframe Zeit !!!

Empower Users



Empower people to be more productive from almost anywhere on almost any device.

Unify Infrastructure



Reduce costs by unifying IT management infrastructure.

Simplify Administration



Improve IT effectiveness and efficiency.

VDI Funktionsprinzip

Eine sichere Umgebung wird auf einem "unsicheren Gerät" installiert! (Basis: Identität)



Daten werden nur angezeigt
Speicherung und Verarbeitung
Wird zentral sein

Managing Virtual Desktop Environments



Microsoft®
System Center
Configuration Manager 2012

Microsoft®
Desktop Optimization Pack
for Software Assurance

Centralized management of virtual and physical desktops

- Management of all virtual desktop deployment scenarios
- Orchestration of application delivery across multiple desktop virtualization platforms

Simplified compliance management

- Automatic compliance remediation and continuous enforcement for personal desktops
- Visibility into noncompliant machines in pooled virtual scenarios

Combine Desktop Management and Security

MANAGEMENT + SECURITY

Lower Costs

- A single server infrastructure to maintain
- One mechanism that deploys software updates
- Central policy for security and management
- One set of materials for training administrators
- A single license to purchase (Core CAL)

Improved Protection

- Access to desktop configuration data for security personnel
- Single interface with consolidated reporting of health and protection status
- Better targeting for incident response (that is, identify, patch, remediate)

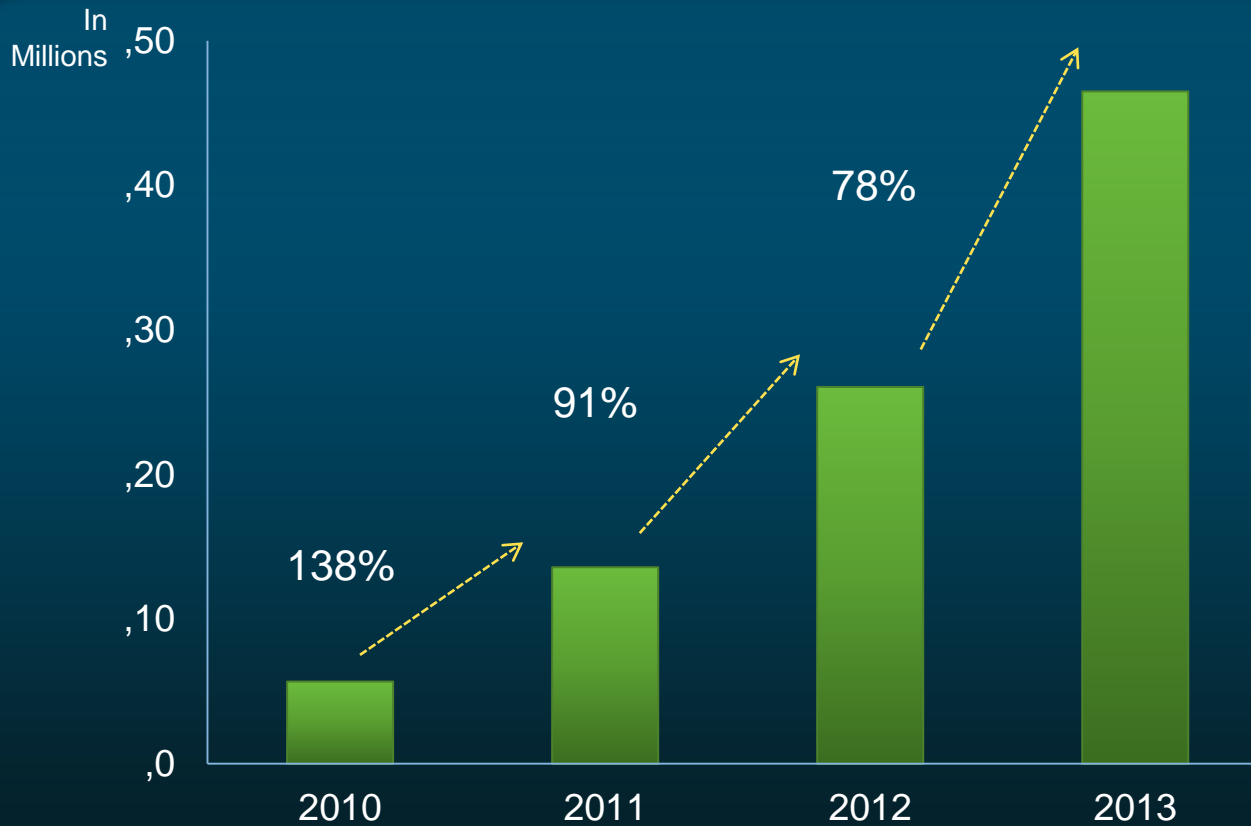
“The integration of management and security makes our IT organization more agile. We’re more efficient in the way that we use our personnel. We’ve increased the number of people available to respond to security incidents by 20 percent with no increase in headcount.”

Kristaps Cudars, Principal Information Systems Archetect, Riga Stradins University

Source: <http://blogs.technet.com/b/forefront/archive/2010/11/18/what-customers-are-saying-about-fep.aspx>

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 (2010 Update), 2010 – 2014 (2010 Update), Ranjit Atwal, December 1, 2010.

Workplace Drivers for Desktop Virtualization

Evolving Workplace Landscape

- Heterogeneous endpoint devices
- Mobile teleworkers
- Geographically Dispersed Resources
- Windows 7/8 Migration
- Data Leakage/ Loss Prevention



CIO

- Employee Productivity
- Global Competitiveness
- Strategic Value through TCO



IT - Server Manager

- Control / Manageability and Security
- Minimize New Deployments/ Datacenter Sprawl
- Up-front and lifecycle Costs



IT - Desktop Manager

- Control / Manageability and Security
- Deployment Speed and Versatility with reduced costs
- Offer Near-native Experience



End User

- Geographically dispersed users expect LAN performance
- Anywhere, Anytime, Any Device
- Alignment to Existing Desktop Experience

Desktop Virtualization Overview



- Personal Computer is disaggregated
- Compute, memory, and storage are moved to the data center
- Keyboard, Mouse, Display, and stay with user
- VXC Endpoint is connected to the Display, Keyboard, mouse
- VXC connects to the VM in the data center
- VXC supports Rich media and UC applications

What is VXI?

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”



- End-to-End System
- Support for Rich Media / Voice & Video
- Enhanced Security
- Application Acceleration
- Power over Ethernet (POE) & Energy Wise



Cisco VXI

Cisco VXI

Virtualized End-to-End Solution

 = Cisco Products

Virtualized Data Center

Applications/Desktop OS

Cisco Collaboration Applications

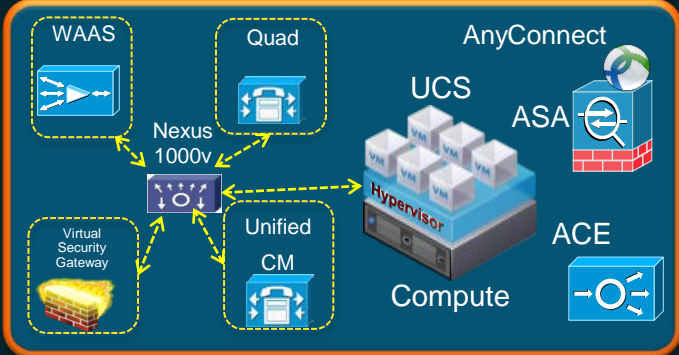
MS Office

Desktop Virtualization Software

CITRIX **VMWARE**

Hypervisor

CITRIX **VMWARE** **MICROSOFT**



Storage

EMC² **NetApp**

Virtualization-Aware Borderless Network

Cisco® Identity Services Engine



CDN



WAAS

PoE



Routing



Switching

Virtualized Collaborative Workspace

Cisco Virtualization Experience Clients

AnyConnect

Cisco VXC 6215 Thin Client



Cisco VXC 4000 PC Client



Cisco VXC 22xx & 21xx Zero Client



Cius Business Tablet

WYSE

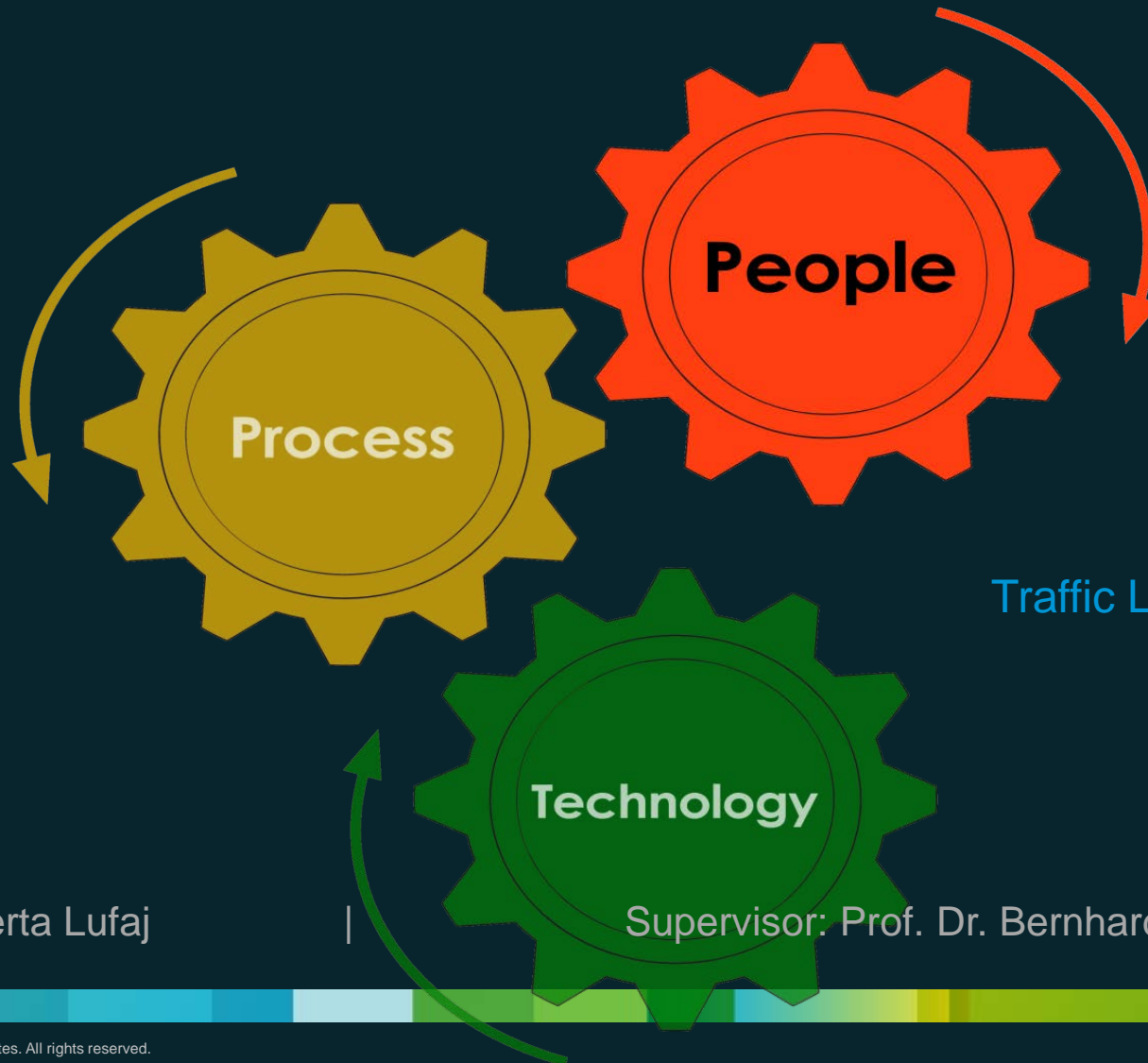
End-to-End Management and Optimization

AppSense

atlantis **Liquidware Labs**
COMPUTING Dedicated to the ART & Science of Virtualization™

unidesk
VDI, Uncompromised.

Virtual Desktop and Cloud Services: New and Changing Security !!!



Student: Blerta Lufaj

Supervisor: Prof. Dr. Bernhard M. Hämmerli

Zusammenfassung

Virtual Desk Top Infrastruktur unterstützt BYOD sehr gut!

1. VDI vereinfacht das Management der Endgeräte
2. VDI vereinfacht die Synchronisation der Nutzer-Daten
3. VDI sorgt für Sicherheit “at rest” und “in motion”
 - “in motion”: mit secure VPN
 - “at rest”: Daten sind nur noch zentral: Kein physikalisches Verlieren!
4. VDI übernimmt ein Maximum an technischer Verantwortung für Sicherheit
5. “The Human Aspect” wird zentral werden:
 - Mehr Verantwortung für die Mitarbeiter:
any where
any time
 - Mehr Loyalität
 - Mehr Wissen über Daten und deren Klassifikation



Thank You

