

National Association
of Independent Schools

Azure DR / Business Continuity & Windows 10 Overview

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Cloud Solutions Architect
rmcbrine@Microsoft.com

The Windows 10 Buzz



The image shows a screenshot of a web browser displaying a CNET TechAdvisor article. The browser's address bar shows the URL www.cnet.com/uk/products/microsoft-windows-10/#!. The page features a red CNET logo on the left and a navigation menu with links for NEWS, REVIEWS, HOW-TO, FORUMS, ADVISORS, VIDEOS, and DOWNLOADS. The main content area has a white background with a large headline and a sub-headline. A small market status indicator at the top left of the article reads '- U.S. Markets open in 2 hrs 10 mins'. The article is attributed to David Goldman and dated February 22, 2015. The introductory text asks if the reader is a Windows 8 user or still using Windows 7, suggesting they will love Windows 10.

www.cnet.com/uk/products/microsoft-windows-10/#!

Search CNET

Reviews

TechAdvisor Powered by PC ADVISOR

NEWS REVIEWS HOW-TO FORUMS ADVISORS VIDEOS DOWNLOADS

- U.S. Markets open in 2 hrs 10 mins

Upgrading from Windows 7 or 8? You'll love Windows 10

CNNMoney By **David Goldman**
February 22, 2015 12:59 PM

Are you a Windows 8 user? Still using Windows 7? Either way, you'll love Windows 10.

Windows 10 – Key Innovations

Key Windows 10 Changes

(~~esthetics~~) minimal – option of Start Menu / Tile Menu

- Resizable Live Tiles in-menu
- Modern apps introduced in Windows 8 open as classic windowed app
- New Snap operations
- Virtual Desktop experience – Task View button
- Centralized / Simplified Control Panel experience
- Centralized Notification experience
- Cortana for search / lifestyle updates
 - “Find PowerPoint slides about the charity auction”
 - “Show me photos from December”
- Spartan Web Browser
 - Reading Mode - strips ads and sidebars out of webpages - appears similar to a book



Recycle Bin



Microsoft IT
VPN



MS Pin Tool



Coliseum



Education
Deployme...



ITEasyInstaller



1:26 PM
1/15/2015



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Search the web and Windows



2:21 PM
1/15/2015

Windows 10 Enterprise Technical Preview
Evaluation copy. Build 9922

Recycle Bin



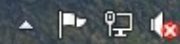
Rome



Education
Deployment

Windows

Preparing 2%



10:26 AM
1/16/2015



Recycle Bin



Education
Deployment



Rome



Search the web and Windows



12:02 PM
1/16/2015

Windows 10 Enterprise Technical Preview
Evaluation copy, Build 9924

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RECIPES MENUS SHOPPING LISTS GUIDES VIDEO COMMUNITY

BROWSE RECIPES SLOW-COOKERS QUICK MEALS CUISINE DIETARY SPECIAL OCCASION

PIZZA NIGHT



Step 1

Preheat oven to 425°. Spray pizza pans with cooking spray. Roll out pizza dough on each pan. Spread pizza sauce on dough evenly. Sprinkle mozzarella cheese liberally on each pan. Add peppers, Canadian bacon or any other desired ingredient.

Step 2

Cook pizza for 13 - 15 minutes, or until cheese is melted and crust is to desired crispness.

[Explore more recipes →](#)

Ingredients

- 1 bag Pizza dough
- 1 jar Pizza sauce
- 2 cups Fresh mozzarella cheese; shredded
- 2 whole Peppers; any variety
- 1 package Canadian bacon
- 1 can Cooking spray

Search



Cooking with Gianni & Elena

This week Gianni and Elena learn how to make homemade pasta →



What's for dinner?

Find a new answer for the age old question for the pickiest eaters →



Local Sourcing

Find out what is being produced locally in your own backyard for fresher ingredients and supporting your local producers →

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PIZZA NIGHT



love that they're posting recipes!

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Replace 1 cup of mozzarella with 1 cup of asiago

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Key Windows 10 Changes (behind the scenes)

- Security enhancements to combat real-time threats
- Windows Store improvements to support EDU
- Mobile Device Management built-in
- Universal Apps – one code base
 - Photos, Videos, Music, Maps, People & Messaging and Mail & Calendar (and more) look and feel the same across different devices and screen sizes
 - Universal App information syncs automatically via OneDrive
- Wipe and Load no longer required
 - Better configuration tools / manageability without full imaging

New Challenges **Require** a New Platform

Windows 7

Identity protection

Passwords theft is increasingly successful and today's multi-factor solutions have proven cumbersome and costly to deploy.

Data protection

Offers optionally configurable disk encryption, but lacks integrated DLP.

Threat resistance

Use of 3rd party solutions adds varying expense, time, and complexity to the threat.

Device security

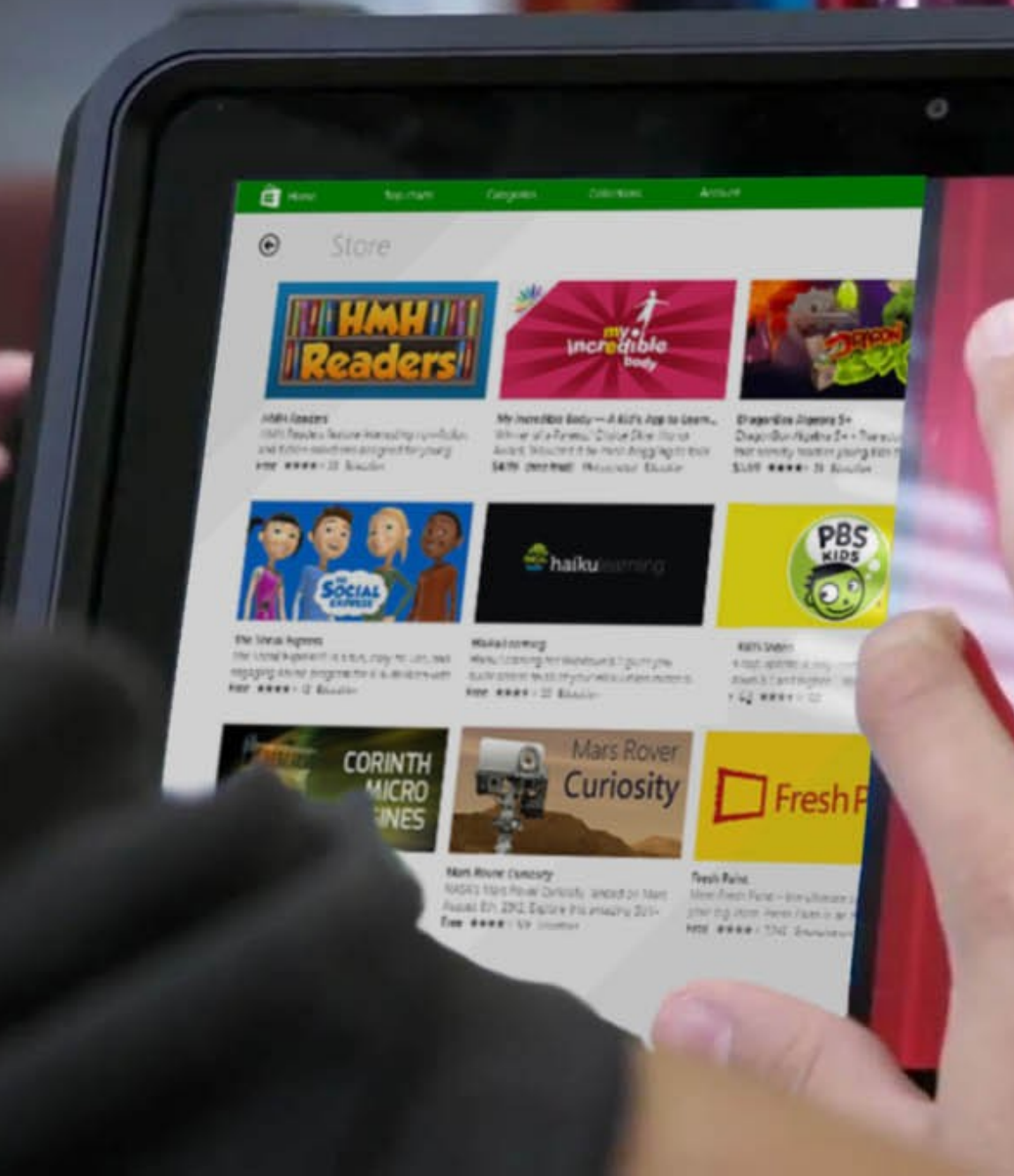
No realistic way to detect 300K's+ new threats/day. Frequent use of 3rd party. Platform security built on software alone creates opportunity for malware to hide from security solutions, embedding in the device itself.

Windows 10

Offers an easy to use and deploy multi-factor solution with anti-theft and anti-phishing. Comes with the convenience of a password, but the security of the best multi-factor solutions. Risk: encryption increasingly enabled OOB and is highly manageable.

Data loss prevention and data separation is fully integrated into the experience. Mobile level of lockdown possible for desktop machines.

Devices able to move trusted app model where untrusted apps are unable to run. Integrated platform and hardware security provides protection from power on to power off and eliminates opportunities to tamper with and hide from the



Windows Store: Ready for education

Volume licensing

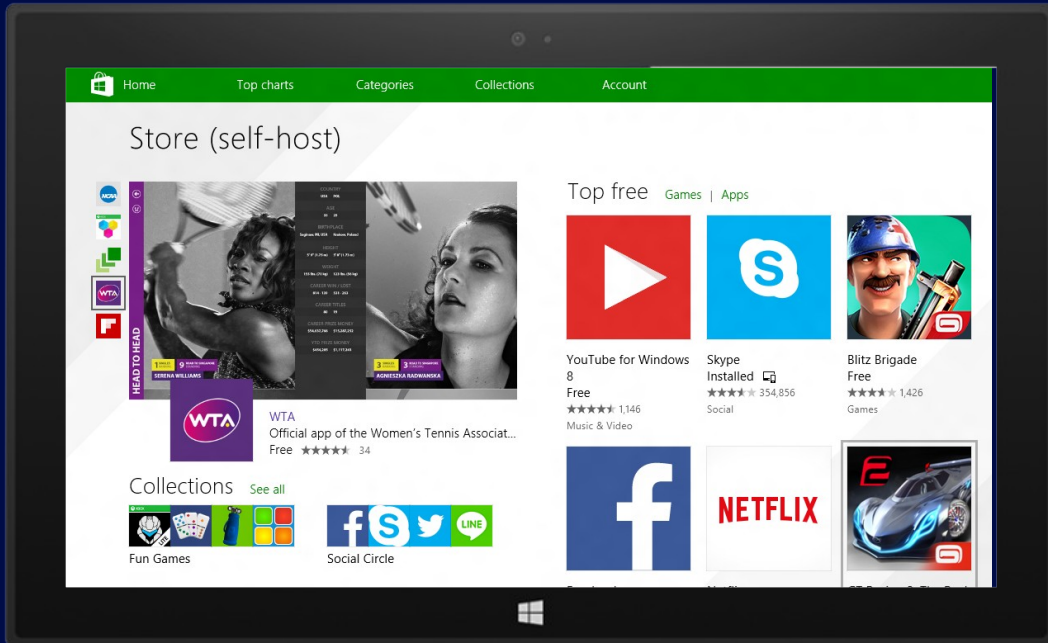
Flexible distribution

License reclaim/re-use

Curated education app store

Today

Windows Store



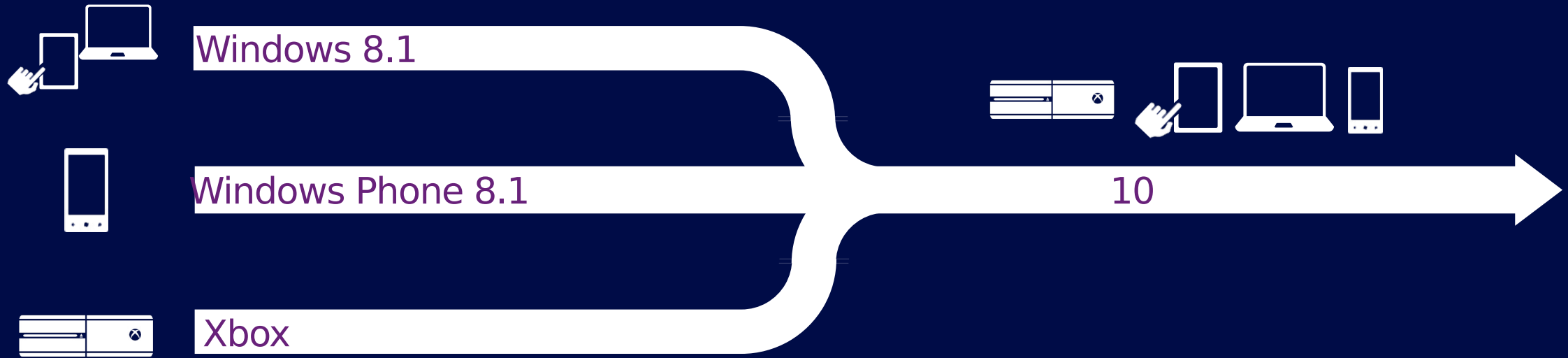
- Modern apps
- Sign in with MSA
- Pay with credit card, gift card, PayPal, Alipay, INICIS, mobile operators (Phone)

Enterprise App Store



- MDM-driven
- Sideload line-of-business modern apps
- Link to apps in the Windows Store

One Windows Store Evolution



Convergence

- Converged developer portal for Windows and Windows Phone
- Separate user and developer capabilities
- Fully converged experience
- Best features from each
- New capabilities

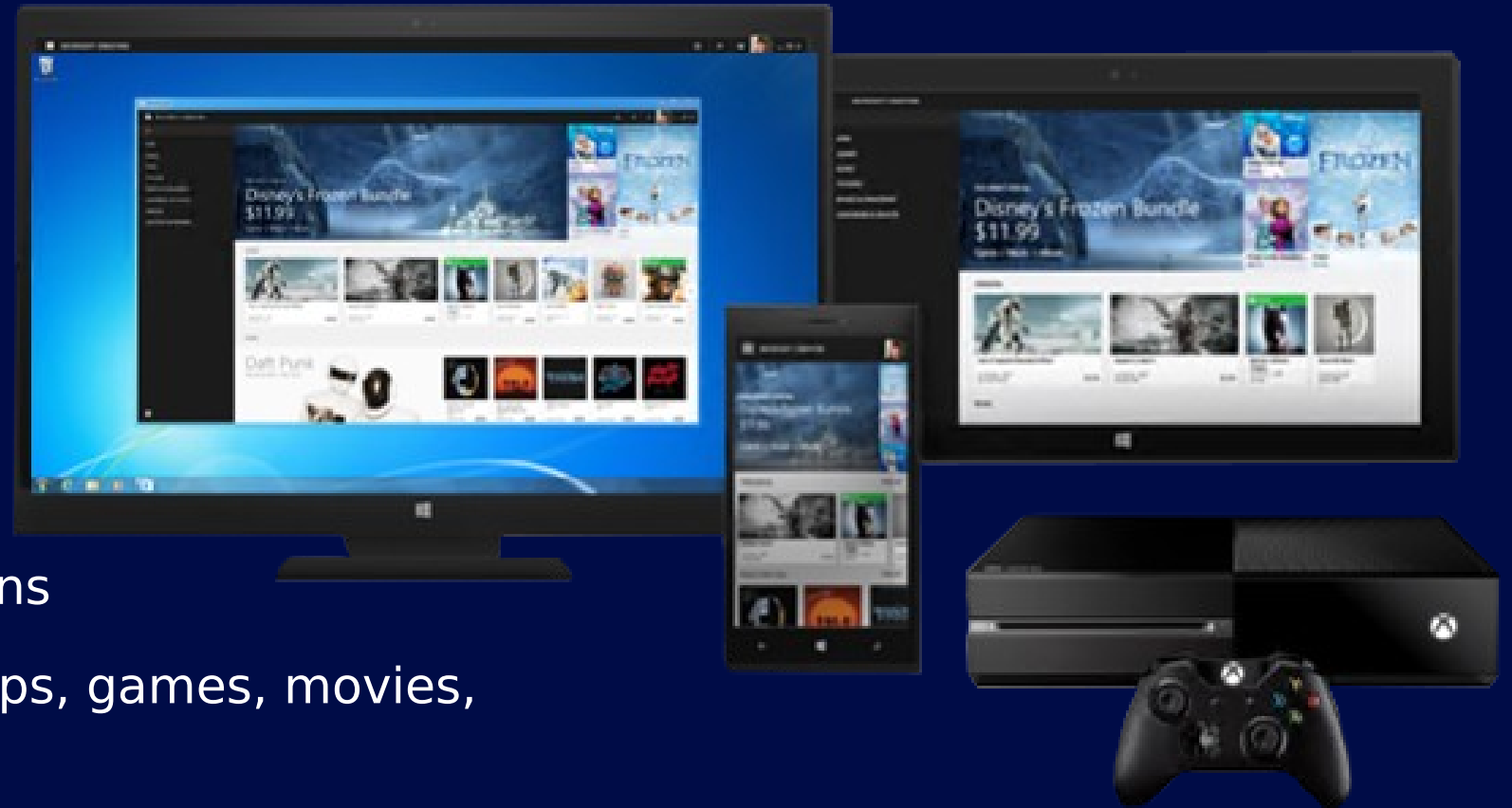
One Big Store with Everything

Curated 'enterprise store'

Tailored app recommendations

Support for digital goods (apps, games, movies, music, etc)

Common, safe and convenient ways to pay



Scenarios

Organization Store (Hosted)

NOTES

Cloud-based

No on-prem infrastructure requirements

No MDM service required

Apps automatically updated from the Windows Store

Can include LOB apps

IT Administrator

Sign in to Business Software Portal
Using AAD account

Apps acquired

- Free apps
- Purchased using a PO or invoice

ORGANIZATION STORE CREATED
Desired apps added

End User

Log into Windows
Using AD or AAD account

ACCESS WINDOWS STORE
Sees Organization Store and public categories

INSTALL APPS
Selected from the Private Store using AAD, or public categories using MSA

Screen Shot Walk Through: Institutional Software Portal



ThresholdStore.com

ThresholdStore.com/VPP

Microsoft

Search

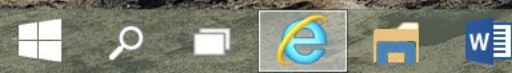
Volume Purchase Portal Inventory Portal Settings

Sign in

 Keep me signed in

Register for an account

Lorem ipsum dolor sit amet decurum allur ipsum coolenquier exactum qualet decurum ipsum dolor sit amet lorem.





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<p>Lorem Ipsum ★★★★★ One of our best rated apps Not interested</p>	<p>Lorem ipsum ★★★★★ The most popular game this month Not interested</p>	<p>Lorem ipsum ★★★★★ One of the top free apps Not interested</p>	<p>Lorem Ip ★★★★★ One of the t Not interest</p>
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Best in productivity

[View all](#)

- Adobe Reader Touch
- Share to Speech
- Evernote
- GDrive Pro

Line of business apps

[View all](#)



Refine

Productivity (2,142)

Type

Apps

Games

Artists

Albums

Songs

Movies

TV

Top rated

Apps (1,142)



Adobe Reader Touch ***** Free	Share to Speech ***** \$4.99	Evernote ***** \$1.99	GDrive Pro ***** \$3.99 (free trial)	OneNote ***** Free	Calculator ***** Free	Drawing Board ***** 18.99	Wunderlist ***** Free	GimmelPoint ***** Free	Blue-Beam ***** Free
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ThresholdStore.com

ThresholdStore.com/VPP

Microsoft

Search

Hi Doug!

Volume Purchase Portal Inventory Portal Settings

Evernote

Evernote
★★★★★
\$1.99 \$1.69 per seat for 20+

Evernote is an easy-to-use, free app that helps you remember everything across all of your devices. You can create a plaintext note on your Windows 8 tablet, and then open it on your smartphone or any other devices you use.

[Read more](#)

Related items

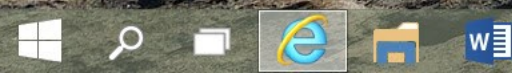
- OneNote
- Drawboard PDF
- Code Writer

Purchase options Qty Add to cart

Screenshots PC Phone

More from this developer

- Skitch Touch





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Purchase options ▾

52

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Screenshots PC Phone



Evernote PC \$1.69 Qty: 52

Subtotal: \$87.88

Check out

- OneNote
- Drawboard PDF
- Code Writer

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Skitch Touch

Scenarios

Mobile Device Management

Notes

Cloud-based or on-premises (depending on the MDM service used)

Apps automatically updated from the Windows Store

The Windows Store can be disabled if desired

IT Administrator

Sign in to Business Software Portal
Using AAD account

Apps acquired

- Free apps
- Purchased using a PO or invoice

Apps added to MDM service
Link to the app in the BSP

End User

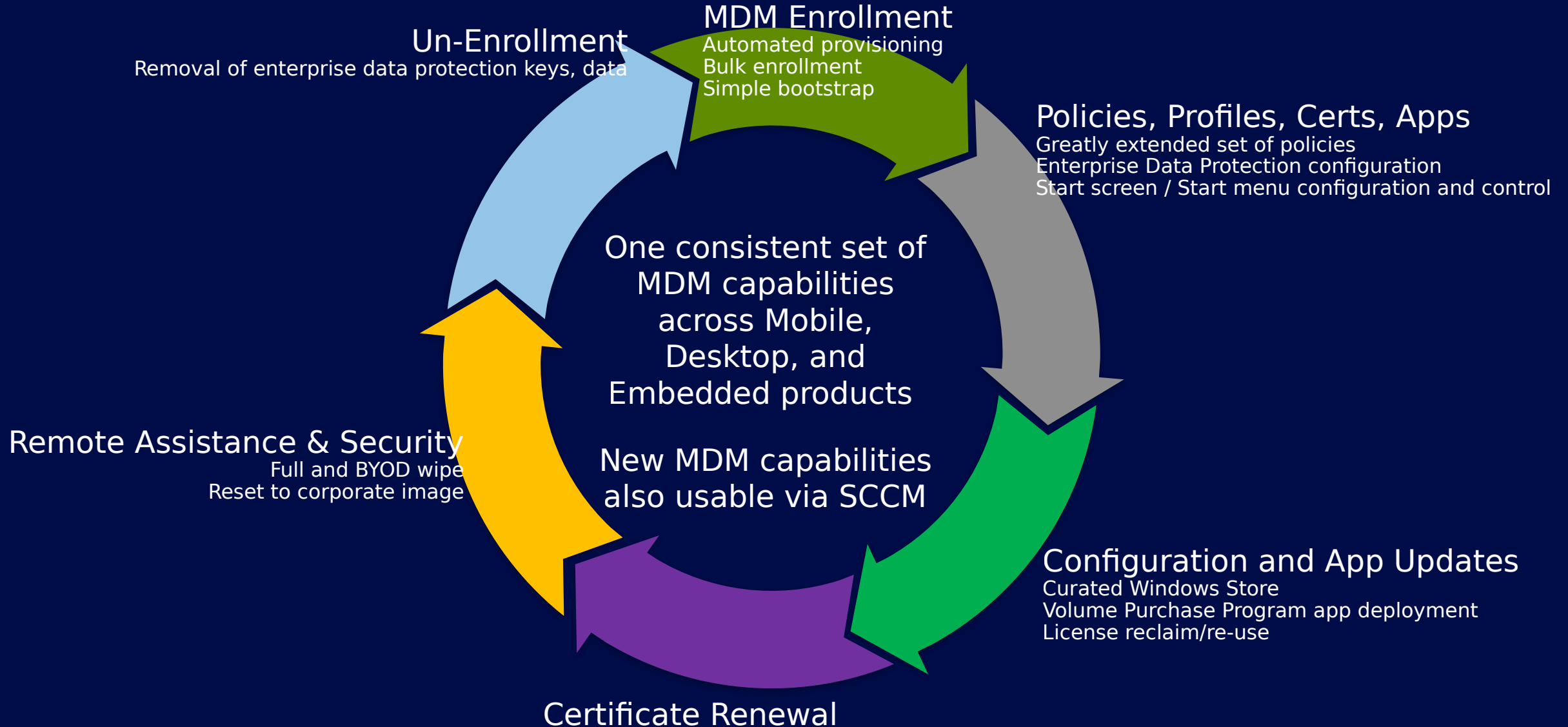
Log into Windows
Using AD or AAD account

Launch Enterprise App Store (MDM)
Sees available app

Install apps

- Selected from the MDM list
- Installed by the Windows Store, as directed by the MDM service

MDM in Windows 10



Azure DR & Business Continuity

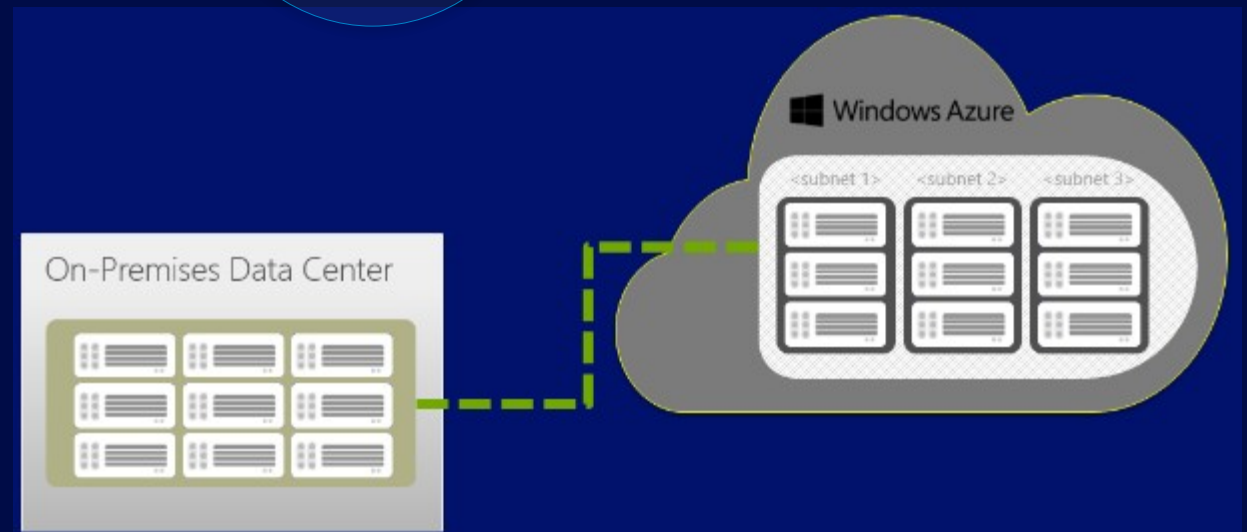
Microsoft Azure – Datacenter as a

• ~~Service~~ Network of Microsoft Data Centers

- Raw “horsepower” for computing needs
- Pay as you go / Use what you need
- Affinity keeps processing near you
- Locations: 35+ factors:
 - Proximity to Customers
 - Energy, Fiber Infrastructure
 - Skilled Workforce

• Complements on-premises resources

- MS maintains Azure, you maintain VMs



Inside an Azure Data Center – Massive Capacity



Today's Demo Environment

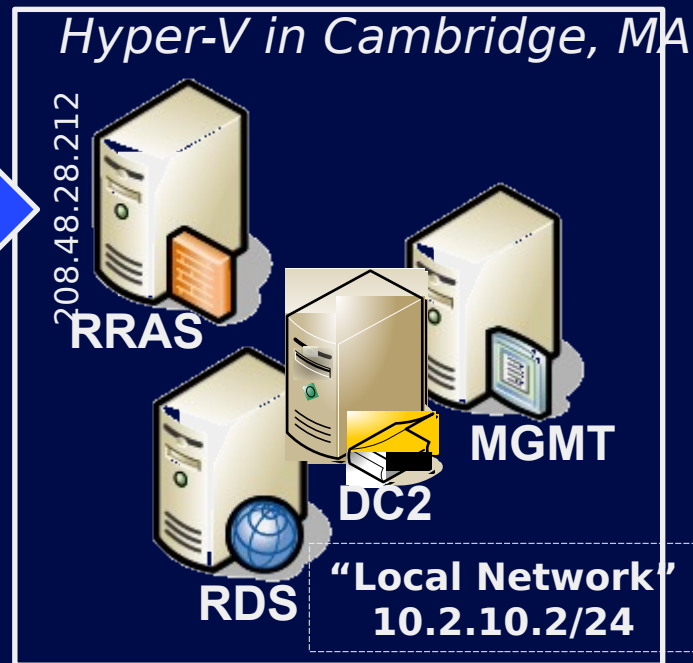
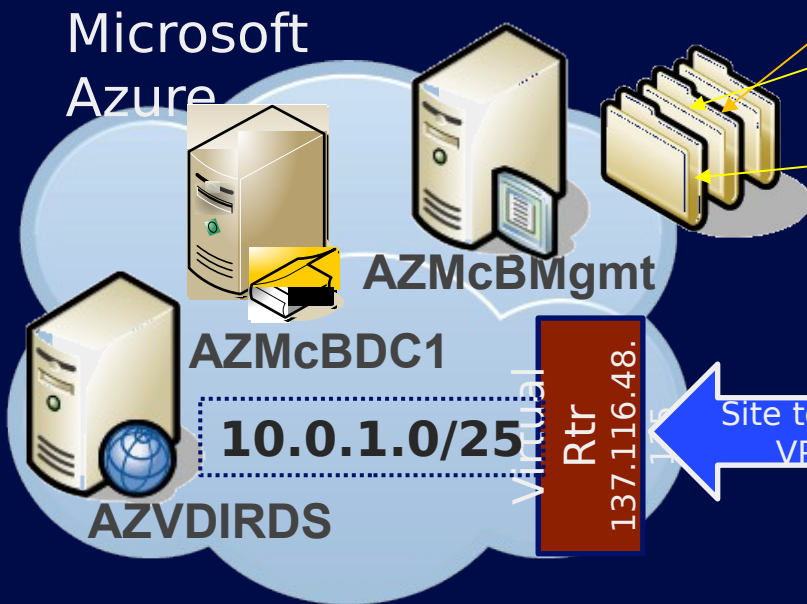
Hybrid - Cloud on your terms



onedrive.live.com

Travel Laptop:
Nightly Backup 2AM
Using Azure Backup

Unlimited Capacity vs. Limited Capacity



My Home Server:
Nightly Backup 1AM
Using Azure Backup

- No more hardware purchases to demo
- No increase in power consumption on-premises
- Data redundancy / resiliency

Azure Biz Continuity Solutions

- Azure IaaS – Highly-resilient Azure Fabric simplifies resiliency experience
- Azure RemoteApp – “My Apps are where I am, on the Device of my choice”
- OneDrive for Business – “My Data is Where I am, on the Device I own, & I have a ‘spare’ copy in the cloud”
- Azure Backup – Backup your PCs / Servers directly to Azure
- Azure Site Recovery (ASR) – Backup your datacenter to Azure, failover either direction / conduct tests

Case Study: Azure IaaS

Dowlin's IT staff
subscribed to Azure

computing
resources to run
Microsoft Active
Directory
Federation Services
(ADFS), which
allows faculty, staff
and students to use
one user name and
password to access
the institution's
new portfolio of
cloud-based
applications for
business
automation,
collaboration and
customer
relationship
management

Rutgers Business School Meets Its Fast-Growing IT Demands With Help From Cloud Services

When Hurricane Sandy struck the East Coast in 2012, Newark lost power for three days, forcing the school to shut down until the city recovered. "Based on that experience, we wanted to move critical components out of the data center to promote greater availability... Azure is based on a high-availability architecture, with redundancies throughout the environment."

- Kevin Dowlin, Executive Director, Rutgers School's Office of Technology and Inst



5
1
5

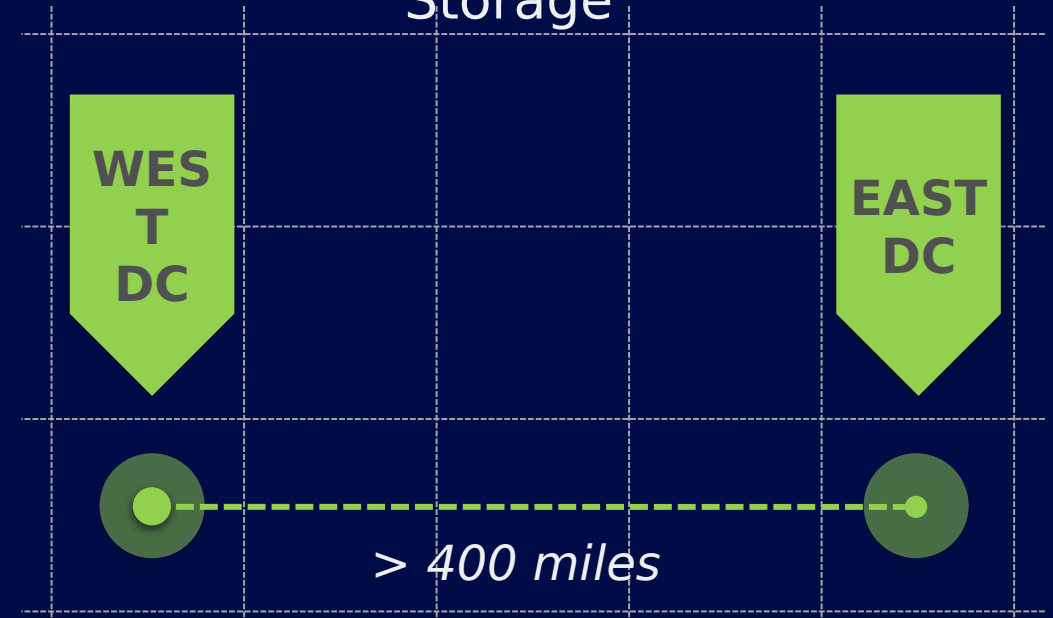
Azure - Resilient Storage

Uses:

- VM Disks
- Serving images or documents directly to a browser
- Storing files for distributed access
- Streaming video and audio
- Performing secure backup and disaster recovery
- Storing data for analysis by an on-premises or Azure-hosted service



Microsoft Azure Storage

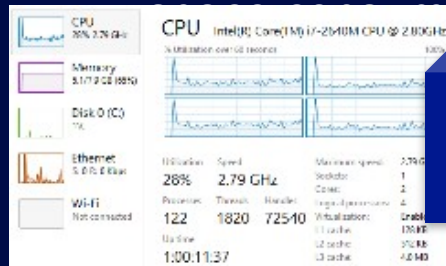


Windows Azure RemoteApp

Windows Azure

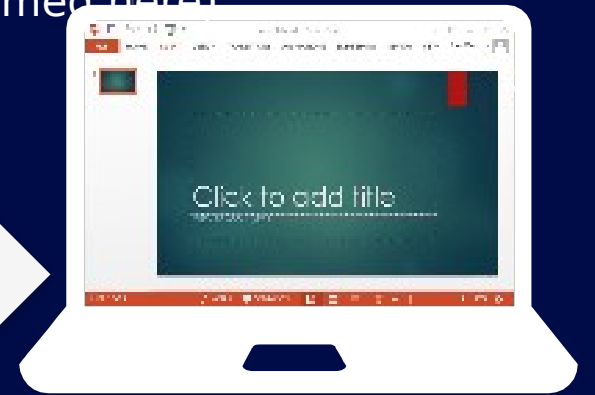
Remote App

1 Applications execute on Azure Platform (Memory/CPU/Disk space consumed here)



3

User running RemoteApp client sees application open in a standard App window (Memory/CPU/Disk space **NOT** consumed here)



2

Individual application user interface is sent over the network connection

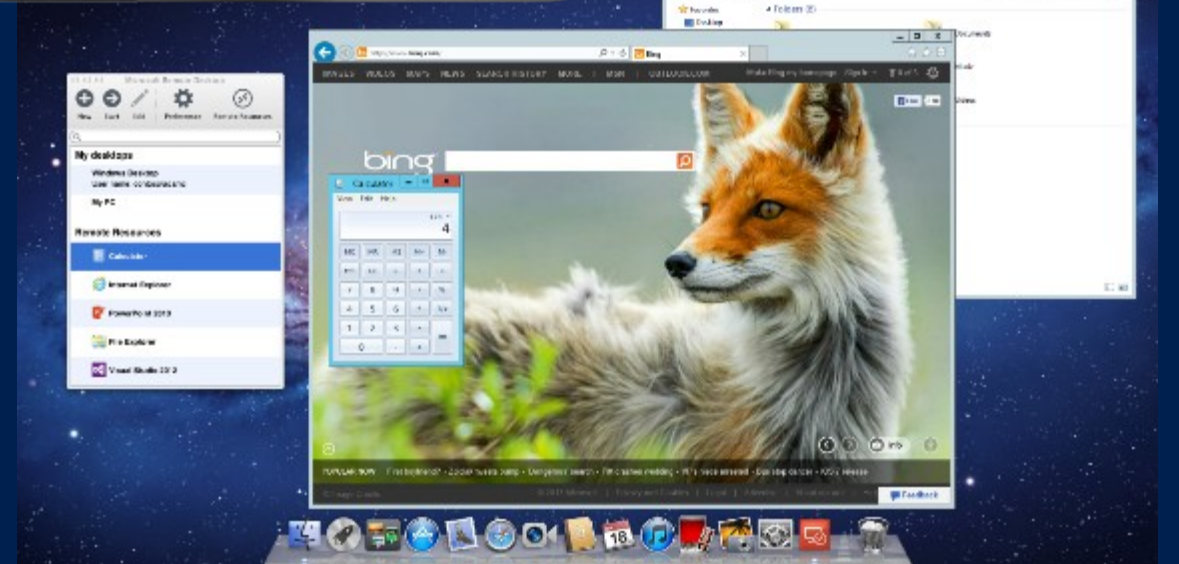
Applications Centrally Managed on Azure
Massive scale & elasticity (VMs spawn based on demand)

Applications *appear* to be running locally @ the client



RDP from BYO device

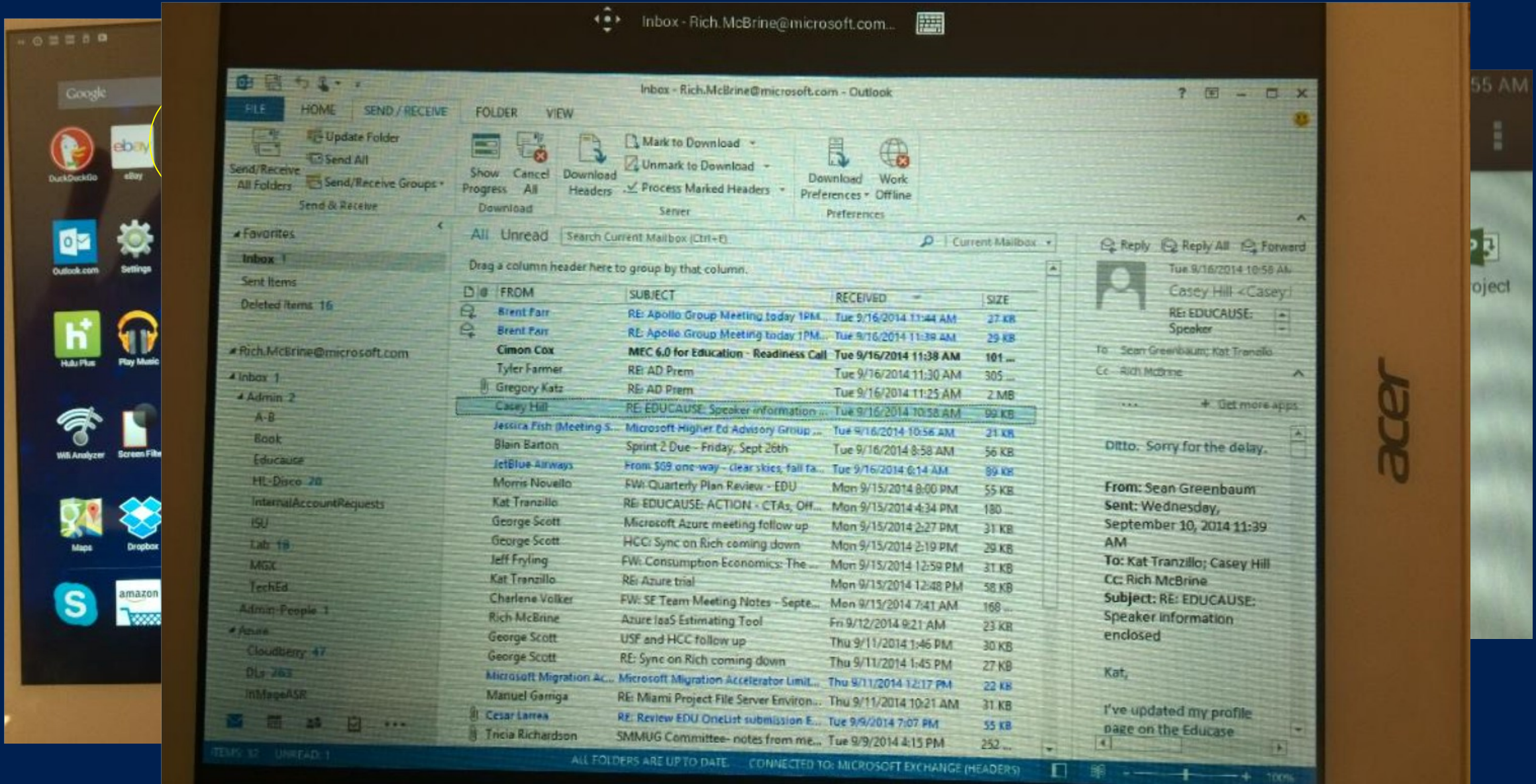
- Provides easy access to a variety of devices and platforms including Windows, Windows RT, iOS, Mac OS X and Android. (Available in application stores in 10/2013)
- Extends the rich Windows experience to BYO devices and help users be productive without compromising compliance
- Provides flexibility by providing access to:
 - PCs (through an RD Gateway)
 - Personal and pooled virtual (VM)-based desktops
 - Session based desktops and
 - **RemoteApp programs**
- Install and updates from respective



<https://itunes.apple.com/us/app/microsoft-remote-desktop/id71446092>

<https://play.google.com/store/apps/details?id=com.microsoft.rdc.android>

RemoteApp to Android Tablet



How Azure Backup Works – Azure

Lost backup tapes affect 4.9 million current, former military

Backup tapes containing the personal information of nearly five million current and former U.S. soldiers, who received treatment at military clinics and hospitals, has gone missing.

Data on the backup tapes belonged to Tricare, a health benefits provider for military personnel, retirees and their dependents (AIC), a high-tech

The Harvard Crimson

Law School Loses Backup Tape Containing Client Info

By GORDON Y. LIAO, CONTRIBUTING WRITER November 7, 2008

The *Boston Globe* reported this morning that an unencrypted backup tape containing personal information on some 21,000 clients of the school's legal clinic has been lost. According to the newspaper, the tape was lost by a technician who was transporting it on the subway.



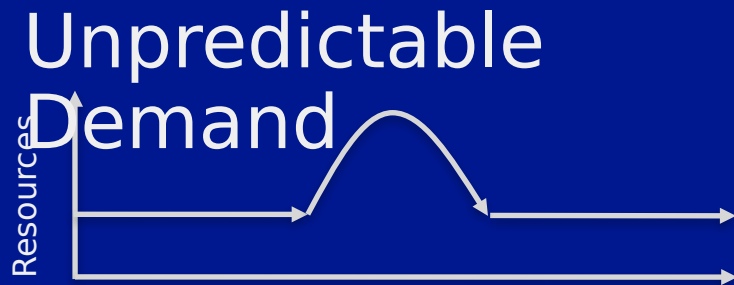
The Latest Innovation: Azure Site

Res

- Re
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- Fa
- Tr



Why is this latest Azure Innovation so Important?



- Long-term possibility to replace backup datacenter – reduce costs and simplify management
- *Azure can handle on-demand capacity requirements & manage failover process*
- Leverages investments in on-premises hardware yet simplifies IT workload to test, backup, failover, and recover data



Standalone
Hyper-V

No site-to-site VPN/ExpressRoute Required
VM OS agnostic



Q &

A