

Cloud client-computing
Desktop virtualization solutions

Dell VDI Deep Dive

Wyse vWorkspace

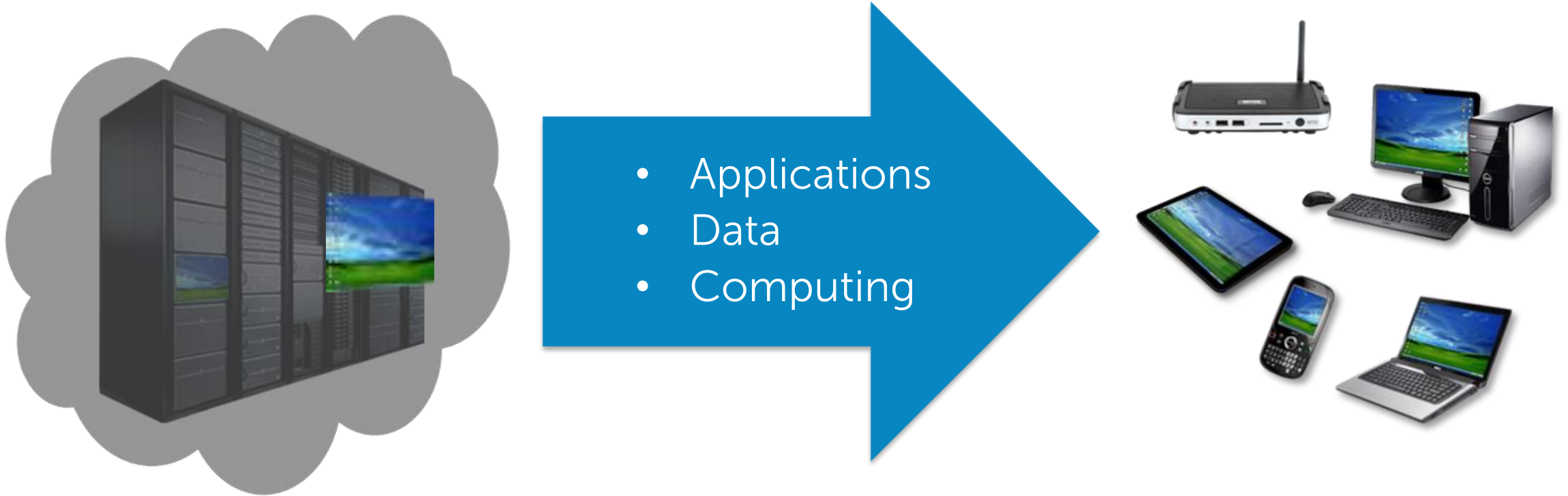
Massimo Salvini
Sales Engineer



Desktop virtualization: What is it?

Run desktops from a centralized location in the datacenter or cloud

Connect any user to any app on any device



Optimize desktop management, security and resources by centralizing data, applications and computing in a single location

CITRIX®



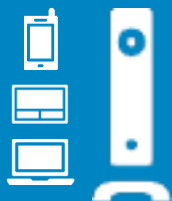


Wyse vWorkspace overview

Wyse vWorkspace is built on Dell IP to deliver a simple, flexible, high-performance and cost-effective desktop virtualization solution



**Secure anywhere
access to
applications and
data**



**Perfect
companion for
Dell endpoints**



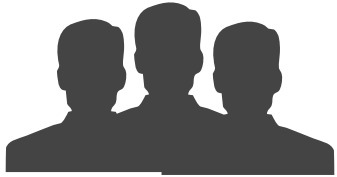
**Cloud and client-
hosted desktop
virtualization**



**Dell Wyse
Datacenter end-
to-end solutions**



How vWorkspace works



Users

- At the office or at school
- Working or learning from home
- On the road (plane, train, coffee shop)



Devices

- Dell Wyse thin and cloud clients
- vWorkspace connector software for Windows, Linux, iOS, Android & Mac
- HTML5 and Java enabled internet browsers



Policy Control

- Powered by vWorkspace connection broker
- Implemented by business needs
- Adapts to meet most complex requirements



Resources

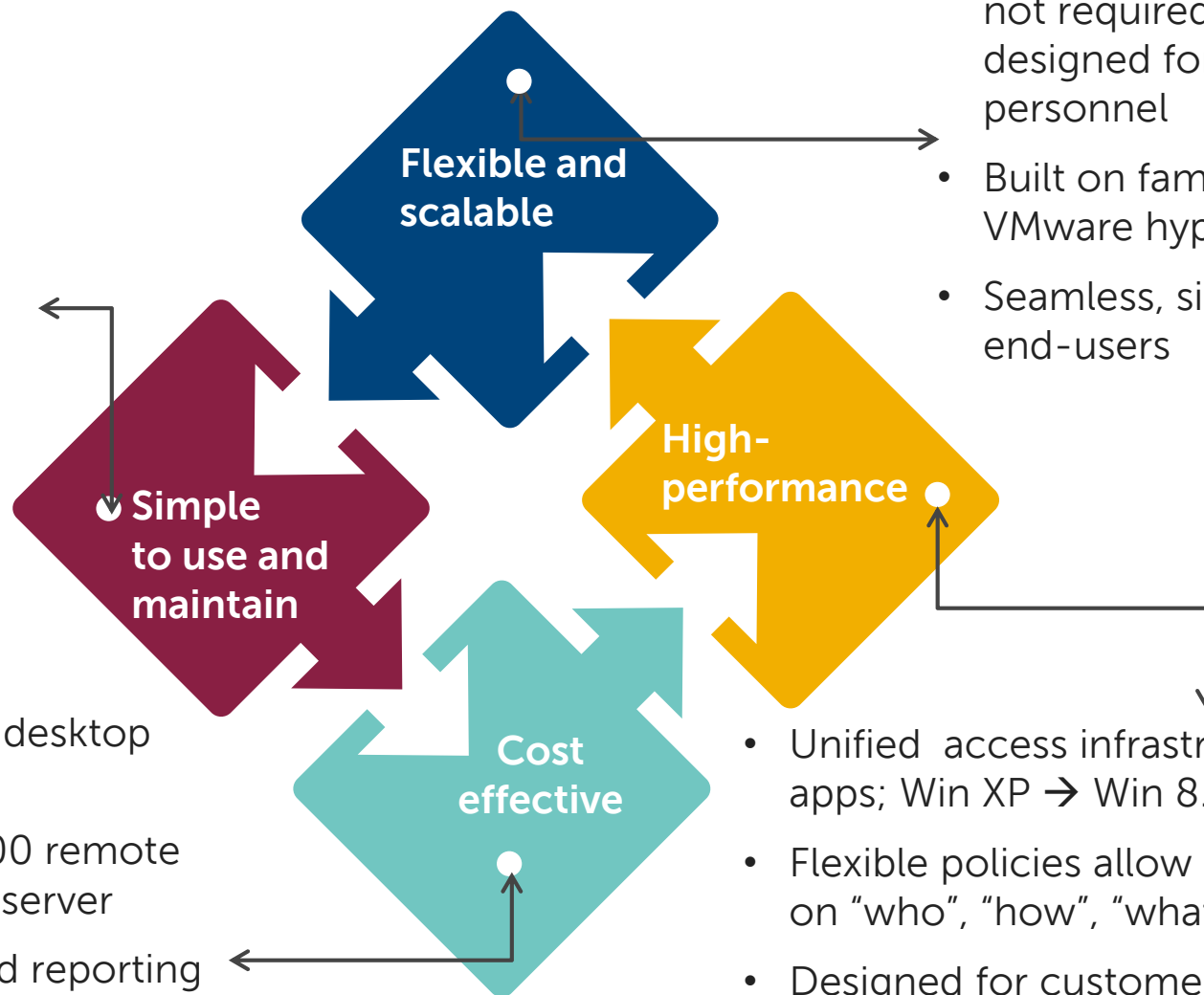
- Cloud- or client-hosted
- Windows or Linux desktops
- Modern or legacy Windows applications
- Delivered via Microsoft RemoteFX display protocol

vWorkspace Infrastructure

- Connection broker
- Monitoring & diagnostics
- Usage reporting
- Secure access
- Virtual machine provisioning
- User profile management

Dell Wyse vWorkspace positioning

- Capable of deploying 4,000 desktops in 40 minutes
- Install or upgrade all of your desktops to a new Windows version in 20 minutes
- Enjoy a rich user experience, powered by Microsoft RemoteFX and optimized on Dell infrastructure and endpoints



Wyse vWorkspace – Simple

- Built on familiar hypervisors Microsoft **Hyper-V**, VMware **vSphere** and Parallels **Virtuozzo**
- **Single management console**
- Can be installed and managed **without an IT specialist** or IT consulting
- First-time users can connect **automatically** and quickly without installing a local agent
- 94% customer satisfaction rating
- Part of a **unique, end-to-end** Wyse Datacenter certified desktop virtualization solution

Simple
to install
and use



Wyse vWorkspace – Flexible and scalable

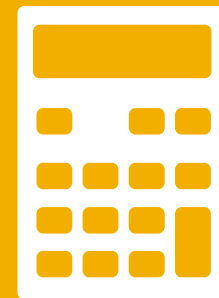
- Choice of **delivery options**: remote desktop sessions, VDI, application or OS delivery
- Scales from ten to **thousands of seats** or even more
- Support for multiple, co-existing **legacy OS and applications**
- Support for Windows and **Linux VMs**
- **Policy-based** configuration allows IT to grant or restrict access to users based on who, how, what and where
- Broadest endpoint support, including HTML5-enabled browsers (Chromebooks) – great for BYOD!

**Flexible
and
Scalable**



Wyse vWorkspace – High performance

- **Secure** anywhere access to applications and data
- **Very fast provisioning**, VM update and deployment with HyperCache and HyperDeploy
- Support for **multi-tenancy** without AD Trusts
- **Rich end user experience** with optimized RemoteFX
- Optimized for **WAN**, latent networks and low bandwidth
- Support for **unified communication** with Cisco, Lync, Avaya, Skype
- End-to-end **universal printing**
- Multi-media redirection, even to non-Windows endpoints



High Performance

Wyse vWorkspace – Cost effective

- Built-in integrated **diagnostics and monitoring**
- In-memory VM caching (HyperCache) technology brings significant storage savings
- **Highest user density** – install up to 345 VDI users or 500 remote desktop sessions per R730 server
- 24x7 mission critical support inclusive of software maintenance
- Complete, premium class solution with licensing costs **starting at under \$100 per seat**

Cost
effective



Wyse vWorkspace – key features and benefits

- **Single management console** designed for **IT generalists**
- **Policy-based access** for greater security (Advanced Targets)
- Integrated **diagnostics**, monitoring and reporting

Simple
to install and use



- Choice of hypervisors: Hyper-V, vSphere, Virtuozzo
- Scales to **tens of thousands of seats** or more
- **Built-in diagnostics, monitoring** and reporting functions
- Support for multiple **legacy applications and OS**, Windows and **Linux VMs**
- Broadest endpoint support, including HTML-5 – great for BYOD!
- Support for **multi-tenancy** without AD Trusts

**Flexible
and
scalable**



- Very fast provisioning, VM update and deployment
- **Rich end user experience** with optimized RemoteFX
- Optimized for **WAN**, latent networks and low bandwidth
- Support for voice application: Cisco, Lync, Avaya, Skype
- End-to-end universal printing

Performance



- In-memory VM caching (HyperCache) **reduces storage costs**
- **Highest user density** per R730 server
- Licensing costs with the **best value**

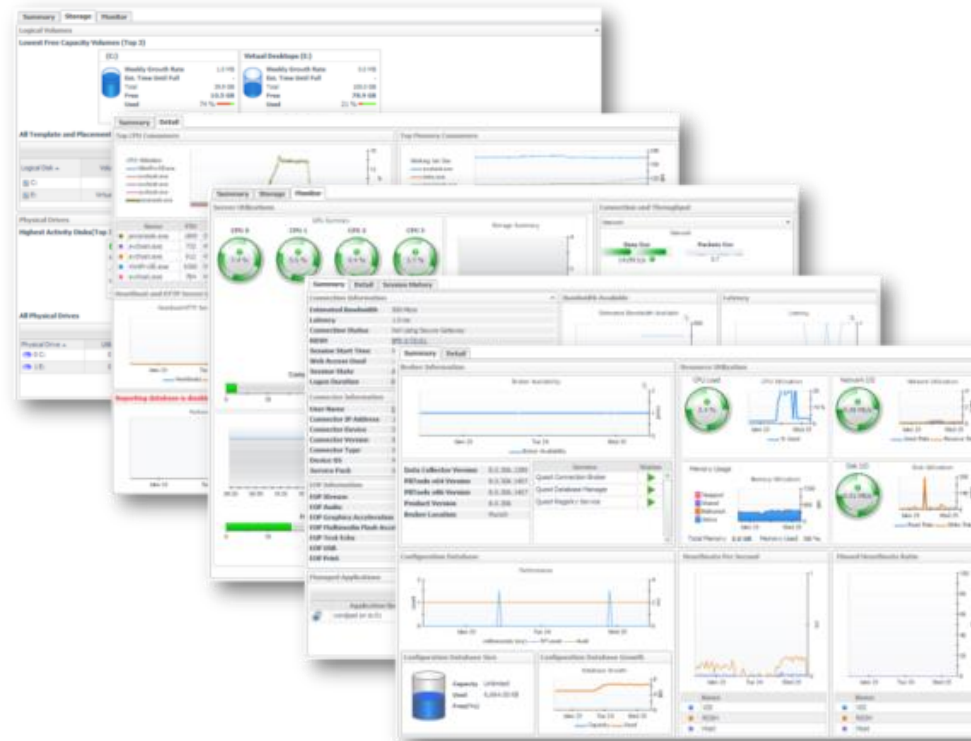
Cost effective



Single management console for IT management



- Simplicity
- Time savings
- Proactive vs. reactive



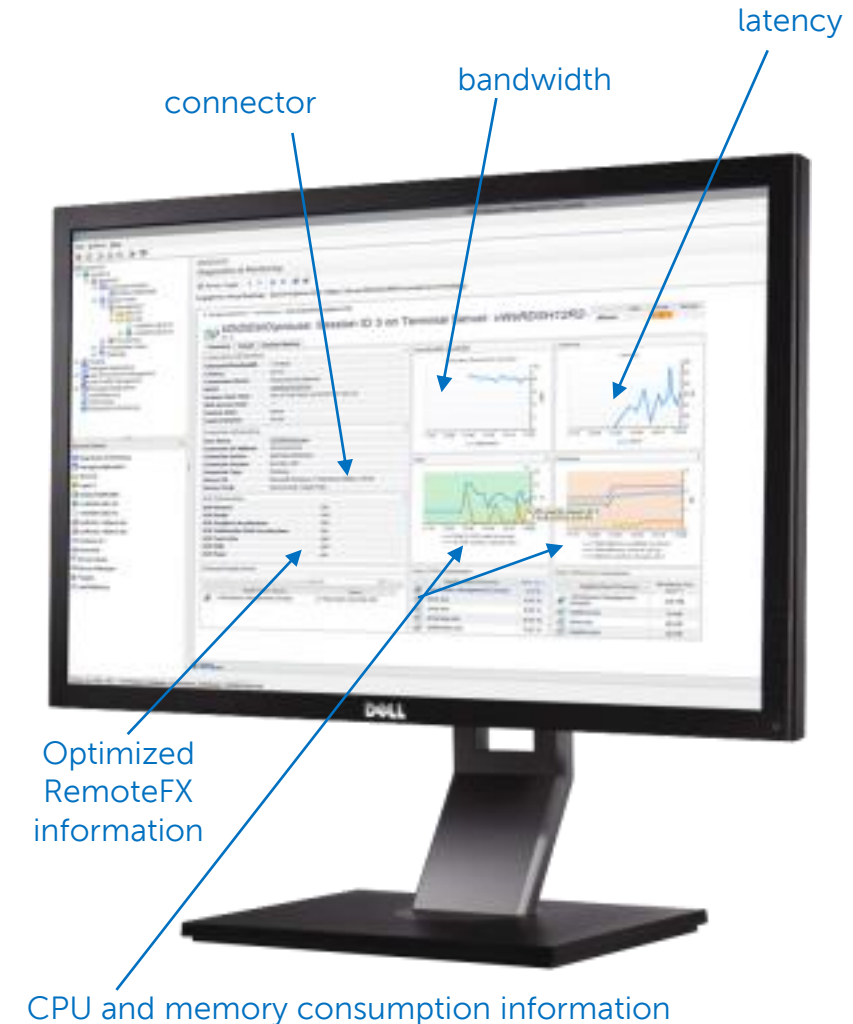
Diagnostics and monitoring built into Wyse vWorkspace

Keep end users happy by fixing problems before they impact users and keep desktop virtualization projects on track!

- Highly integrated monitoring and diagnostics SW tool for both VDI and RDSH
- Included in vWorkspace licensing and management console
- Single pane of glass provides clear visibility into:
 - ✓ User Experience Monitoring
 - ✓ Hypervisor performance
 - ✓ Terminal servers and applications
 - ✓ Virtual desktops
 - ✓ Connection brokers
 - ✓ Bandwidth and latency information
 - ✓ End point used
 - ✓ EOP configuration
 - ✓ Secure gateways
 - ✓ Profile and Print servers
 - ✓ Broker databases

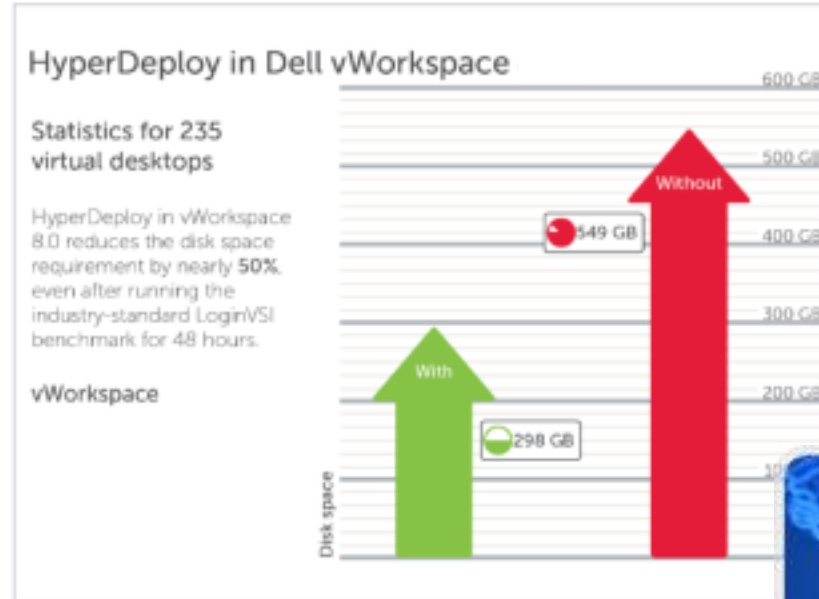
"The in-depth monitoring and diagnostic capabilities have helped me reduce my mean time-to-resolution by at least 75%, and ensure more than 99% uptime for my virtual desktops."

Dan Bolton, Kingston University



HyperCache and HyperDeploy components

- **HyperCache** provides in-memory caching of VMs, reducing storage costs
- **HyperDeploy** replicates template VMs instantly
- Automated Provisioning & Re-provisioning
- Eliminates need for SAN for non-persistent VDI & RD Session Hosts



**Lightning-fast
provisioning**

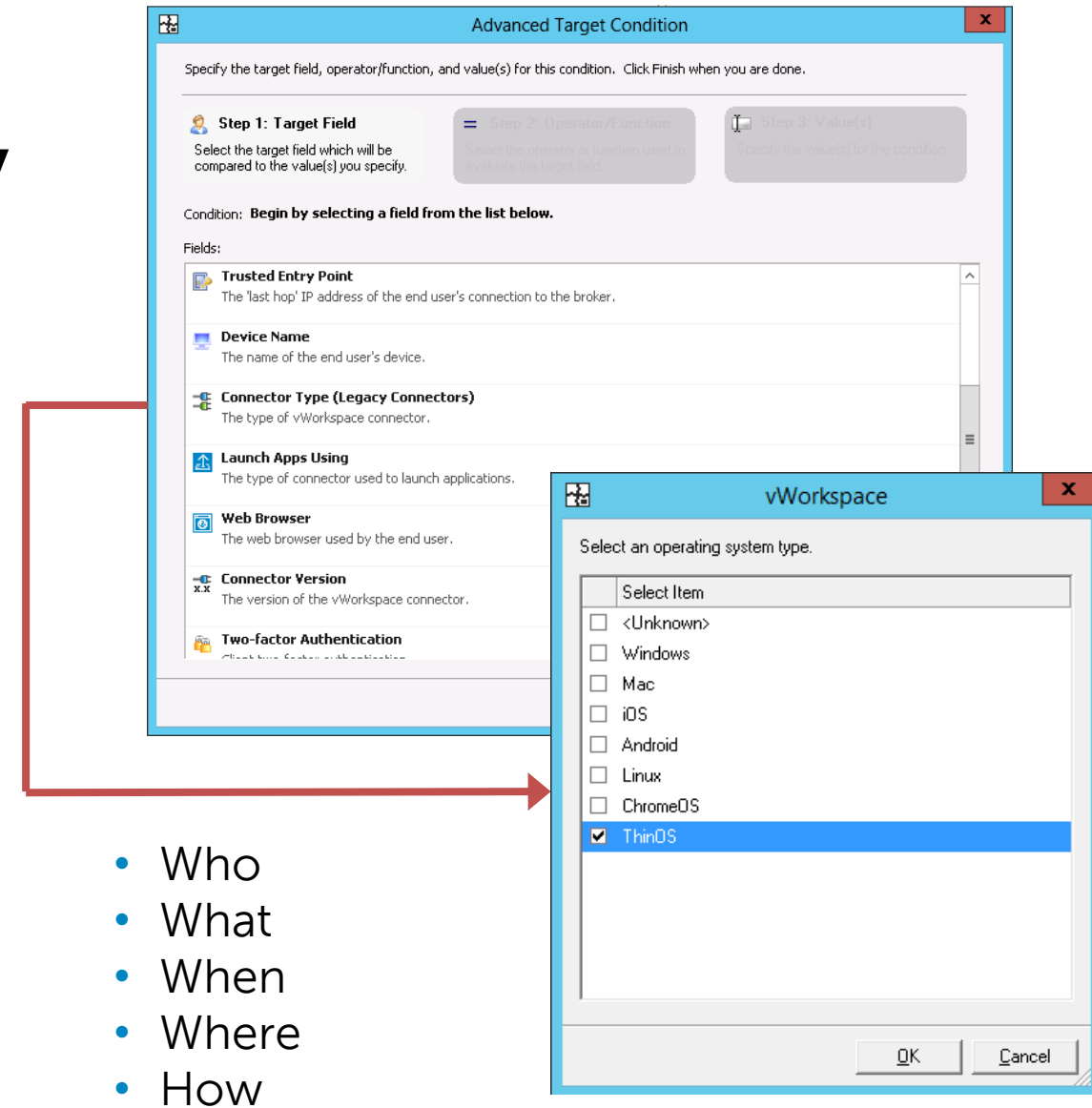
**IOPS
efficiencies**

**Use of lower-cost
local storage (DAS)**

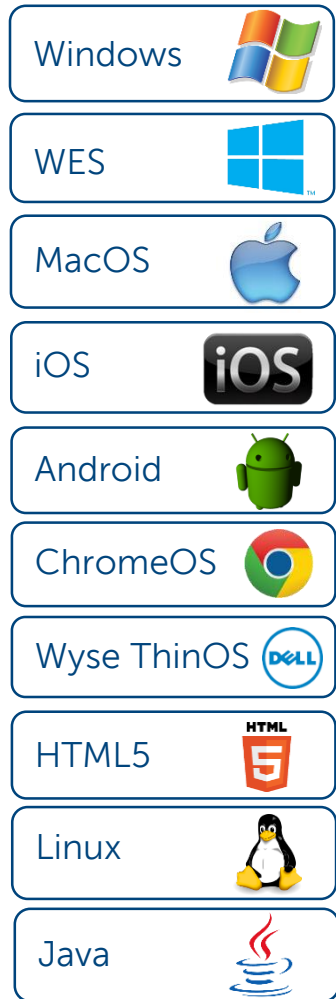
Advanced Targets

Granular control for increased security

- Flexible, policy-based access control model based on Identity + Device + Location + Connection Type
- Authorize access based on
 - Two-factor authentication (TFA)
 - Trusted Entry Point
 - Client Type or Version
 - User, Group, OU, Name
 - Logging on from a specific IP range
 - Day of Week/Time of Day
 - Web Access Site Name
 - Access: **Allow** | **Restrict** | **Deny**



Ideal for BYOD: connectors and browser access



Simplicity

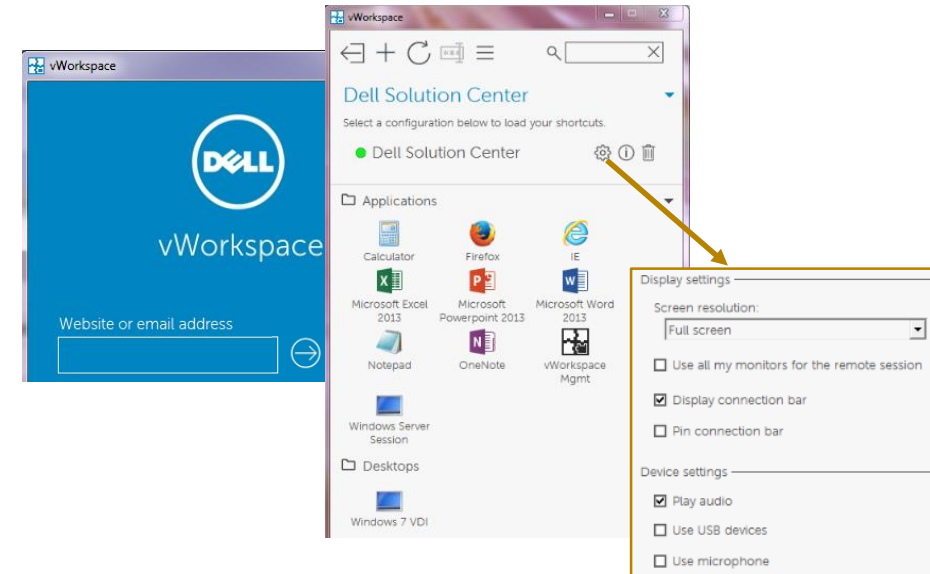
- Easy, secure access via native OS applications or via modern browsers
- Simple to install and zero-touch configuration
- Easy to manage with policy-based configuration & version control
- With HTML5, no endpoint software to deploy
- Available in Chinese, Korean and Japanese

Flexibility

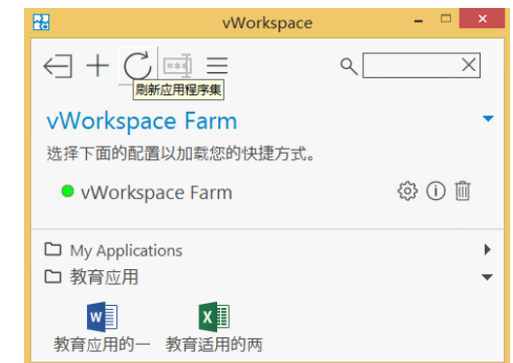
- Secure access to applications, Windows and Linux desktops
- Automatically adapts to environment changes
- Provides a high-level of compatibility for applications that don't work well with Microsoft RemoteApp

High-performance

- Rich user experience that's tuned for mobile usage
- Seamless peripheral support with enhanced printing and USB
- Enhanced audio that was purpose built for VOIP
- Supports session roaming, auto-session resize, rich graphics, multimedia, sound, clipboard



可在中国 韩国和日本

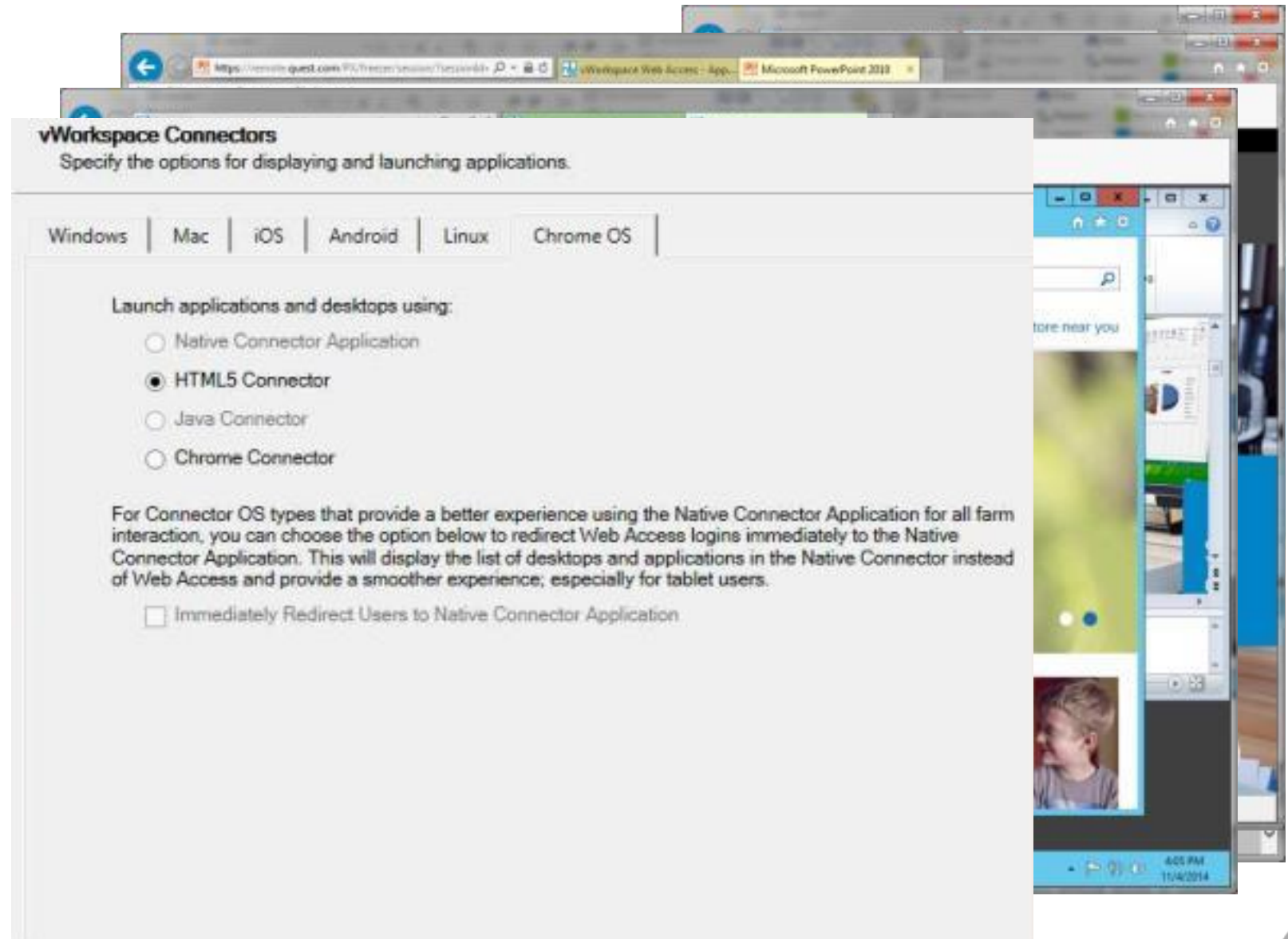


Web access and connector for HTML5

Web Access:
friendly for mobile users

Connector for HTML5:

- secure access to applications
- secure access to virtual desktops
- Simple management



Ideal for large-scale deployment on Hyper-V

- Microsoft Windows Server 2012 RDS allows customers to deploy basic application and desktop virtualization on Hyper-V
- Installing vWorkspace brings additional, enterprise-like benefits
- Customers can start on Microsoft RDS only, and later on move to vWorkspace without rip-and-replace (on Dell servers)

Microsoft Windows Server 2012 R2 RDS *Basic desktop virtualization*

Departmental scalable mgmt <500 users

Simple deployments, a few user types

Manual deployment (1-2 days)

Cloud-hosted desktop virtualization (VDI & RDSH)

Microsoft Desktop Optimization Pack for application virtualization

Simple access control model
(Allow | Deny) – based on Identity

Applications and desktops running on current Windows versions

OS endpoint: Windows, iOS, MacOS, Android

System Center Operations Manager for monitoring

Manual RD Session Host Provisioning (in ~ 1 hour)

Windows desktop virtualization

RD Gateway scalable to 3,450 sessions per VM

RD Broker scalable to 20 concurrent VM clone operations



Dell Wyse vWorkspace *Flexible and scalable desktop virtualization*

Enterprise / multi-tenant management

Complex deployments, many user types

Dell factory pre-installed with automated Quickstart configuration (1-2 hours)

Cloud and **client-hosted** desktop virtualization (VDI + RDSH + OS Streaming)

Built-in layering for simple application deployment and patching

Flexible access control model
(Allow | Restrict | Deny) – Based on Identity + Device + Location + Connection Type

Applications and desktops running on current and **legacy** Windows version

OS endpoint: adds **Google Chrome, HTML5 & Linux**

Built-in **monitoring and reporting**

Automated RD Session Host Provisioning (in ~ 1 minute)

Windows and **Linux** desktop virtualization

Secure Access scalable to 10,000 sessions per VM

vWorkspace broker scalable to 2,000 concurrent VM clone operations

Testdrive vWorkspace:
<https://software.dell.com/register/55322/>