



Why is Terminal Services now Remote Desktop Services?

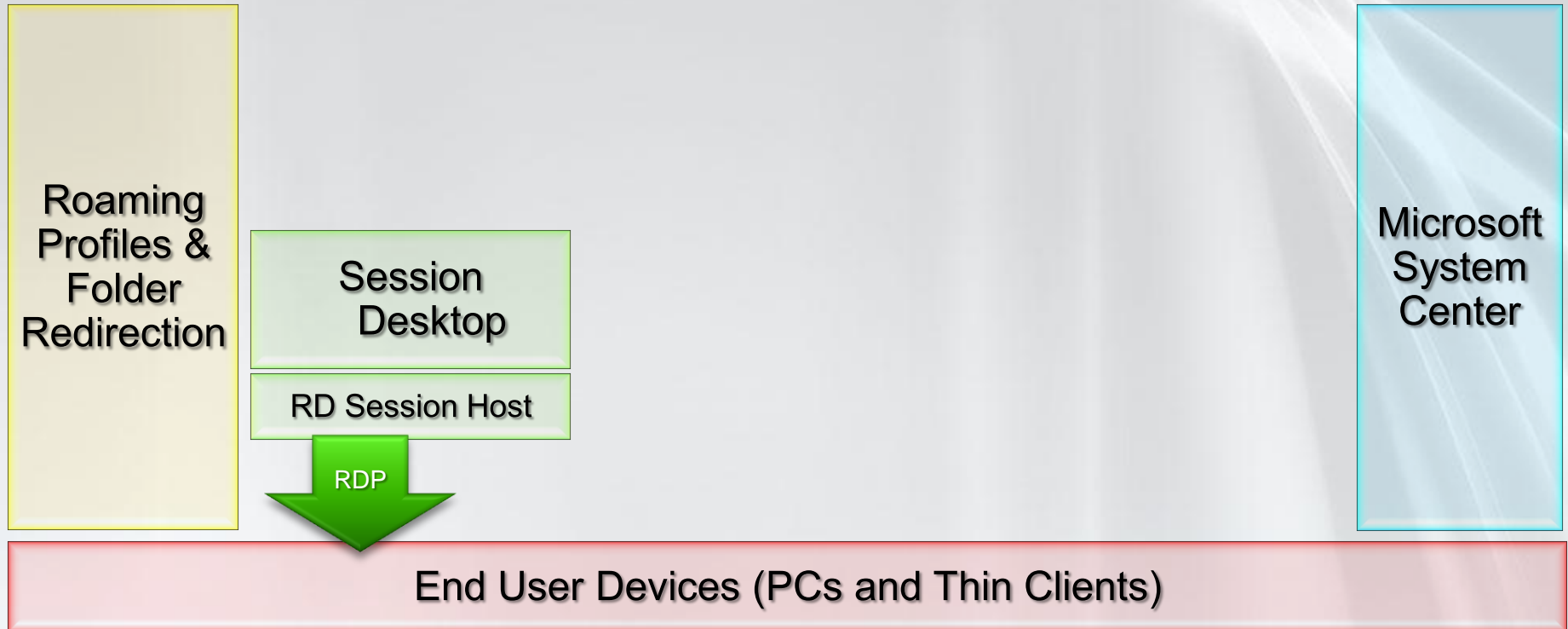
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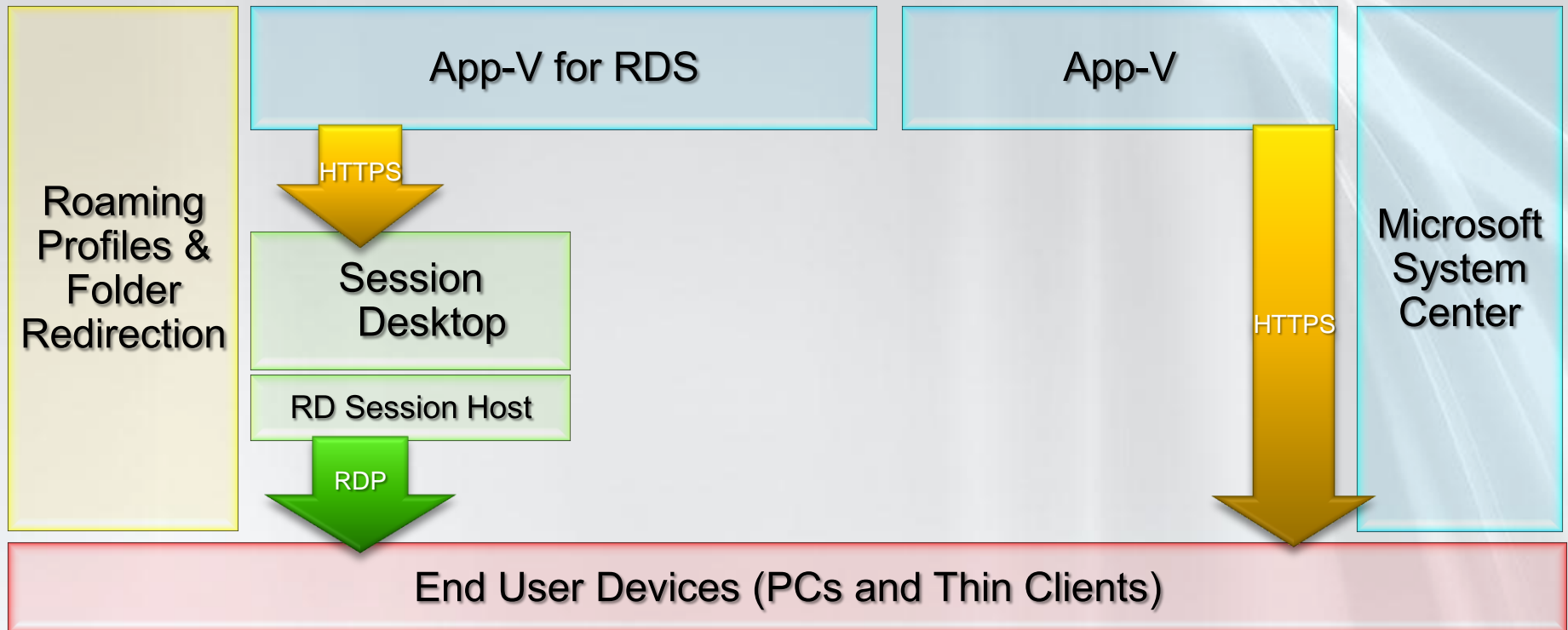
Agenda

- Introducing & Benefits of Remote Desktop Services
- Remote Desktop Architecture
- What's New for Windows Server® 2008 R2 RDS
- Key Features (& Demos)
 - New & Improved Manageability – Publishing etc
 - Enabling Centralized Virtual Desktops / VDI
 - Full Fidelity Experience
- App-V for RDS
- RDS - Better Together with Windows® 7 and Citrix
- Summary

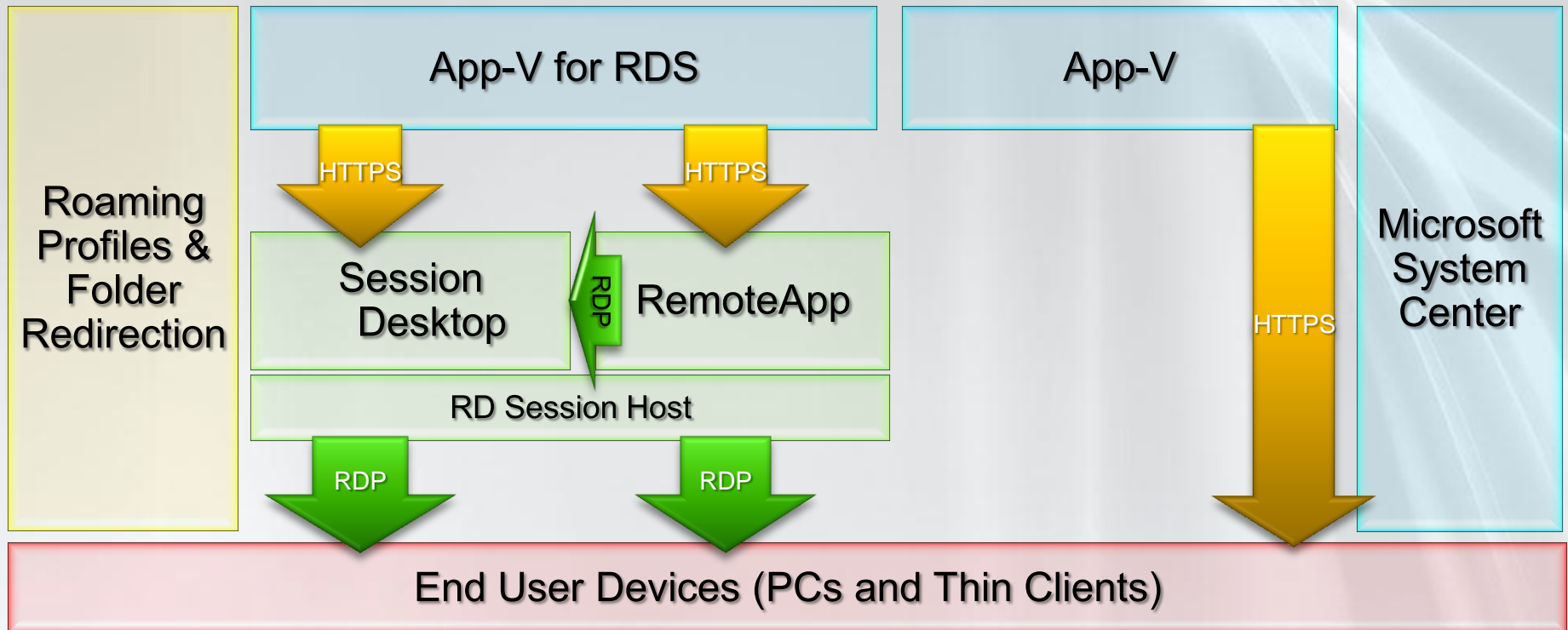
The Centralized Desktop – 1997 to 2006



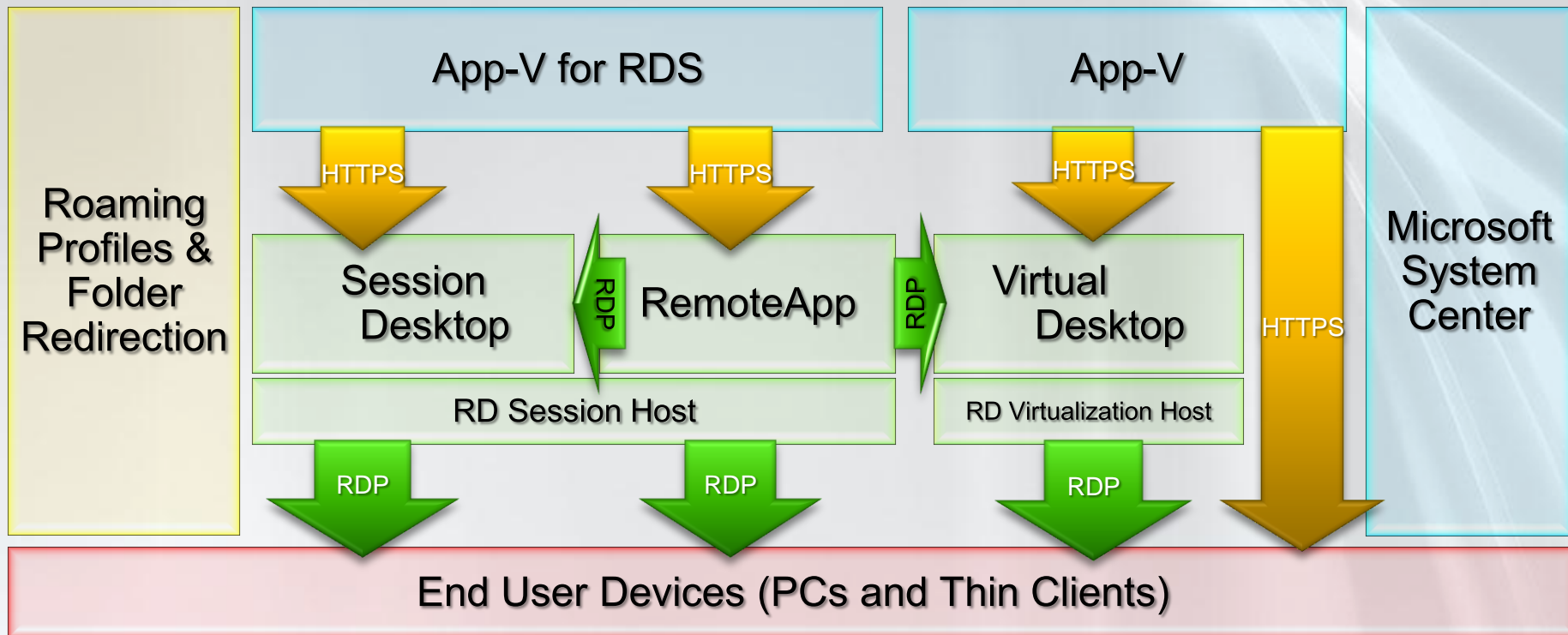
The Centralized Desktop – 2007



The Centralized Desktop – 2008



The Centralized Desktop – 2009



Introducing new name in R2



Windows Server® 2008
Terminal Services

TS RemoteApp™
TS Gateway
TS Session Broker
TS Web Access
TS Easy Print



Windows Server® 2008
Remote Desktop Services

RemoteApp™
RD Gateway
RD Connection Broker
RemoteApp and Desktop
Web Access / Connections
RD Easy Print



Windows Server® 2008 R2

Benefits - Remote Desktop Services

Accelerate Desktop and Application Deployment

- Install and maintain applications once in the datacenter, not on every desktop
- Enable flexible work scenarios such as hot-desking and work from home
- Deploy applications to devices that can't run them natively, or that require hardware upgrades to run them

Help Secure Data and Applications

- Keep data safe in the datacenter to help eliminate the risk of laptop data theft
- Help simplify the burden of regulatory compliance with centralized tracking

Increase Remote Worker Efficiency

- Quickly connect remote workers with the critical applications they need from a Web page
- Provide users with secure access to remote applications from outside the corporate network (without using VPN infrastructure)

Key New Features in RDS

NEW!

Improved

RDS & VDI – an integrated solution

Hyper-V support for virtual desktops

Single discovery, broker & publishing infrastructure

SCVMM Support

Remote Application Access

RemoteApp & Desktop Connections

RemoteApp & Desktop & Web Access

RD Gateway Security Improvements

Full Fidelity RemoteApp & Desktops

True multiple monitor support

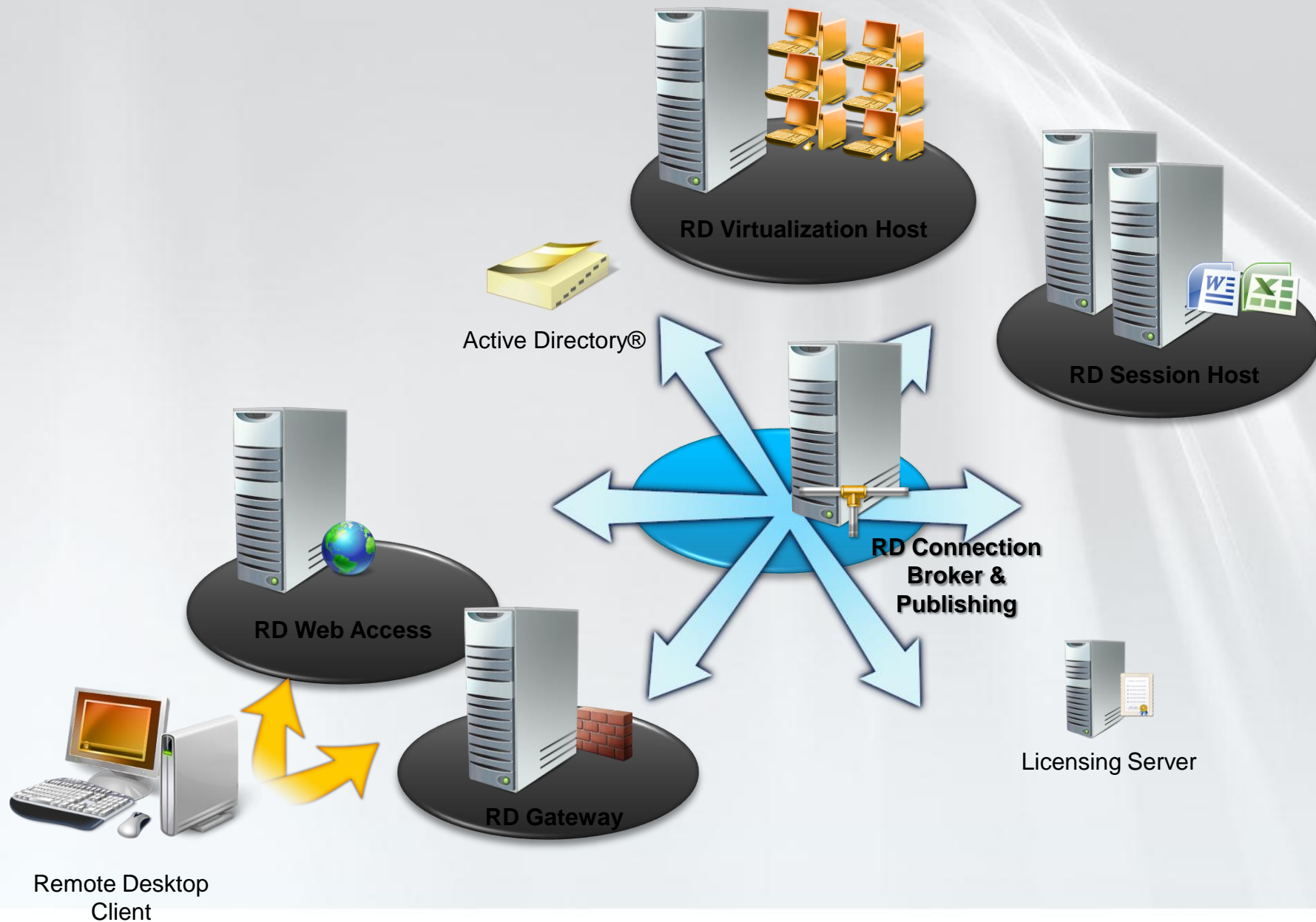
Multimedia Support & Bi direction audio

Enhanced Bitmap Remoting for Flash, PPT, Silverlight etc

Platform & Management Improvements

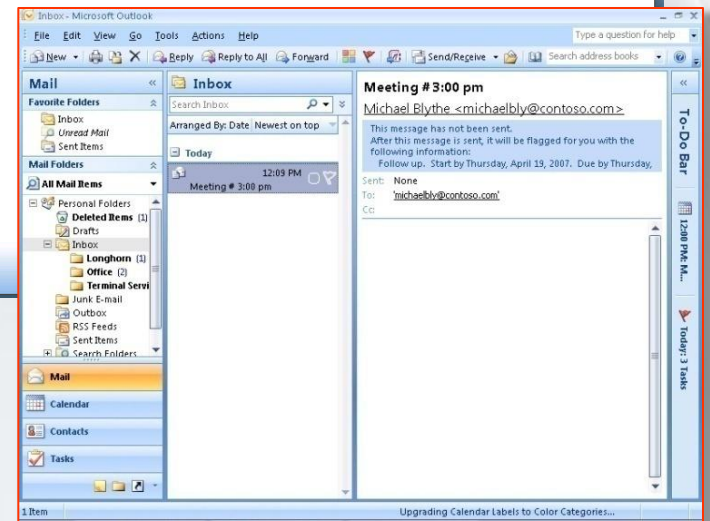
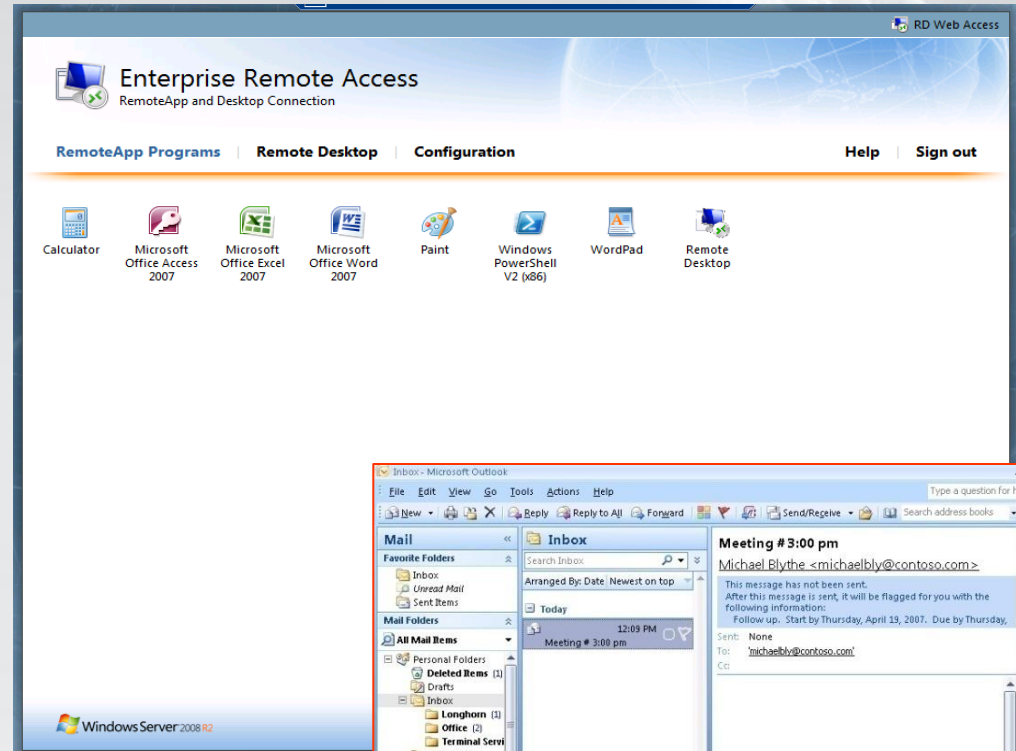
New API, Connection Broker Extensibility, Powershell Support, Best Practices Analyze, Full MSI support

Architecture Overview



RemoteApp Overview

- Applications as a service
- NEW in R2: RD Web Access for Per-user RemoteApp and Desktop filtering
- Integration with Active Directory
- Create NSI or RDP files



RD
Client



RD Session Host / RD Virtualization Host

RemoteApp App Publishing

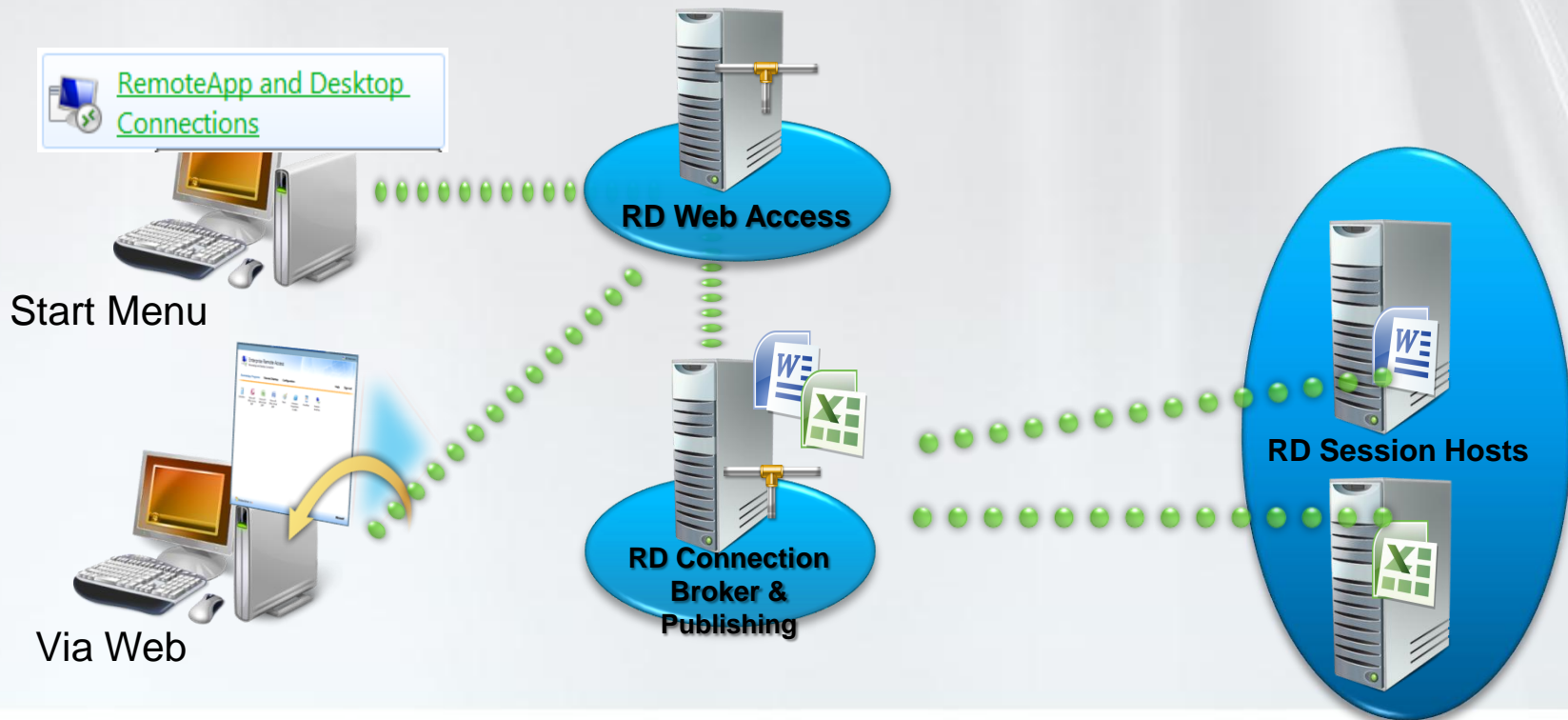
Each RemoteApp server can publish different apps

- Based on load, requirements or other criteria

Publishing server (part of RD Connection Broker) presents unified view

Publishing server delivers appropriate RDP settings to client to connect to correct server (RemoteApp and Desktop Connections)

- RDP settings can also include RD Gateway settings



Enabling Centralized Virtual Desktops

(or how we do VDI)

Personal / Pooled Virtual Desktops



Personal Virtual Desktops

Personal Virtual Desktops

- One OS image per user
- Administrator access, desktop customizable
- User state typically part of the image

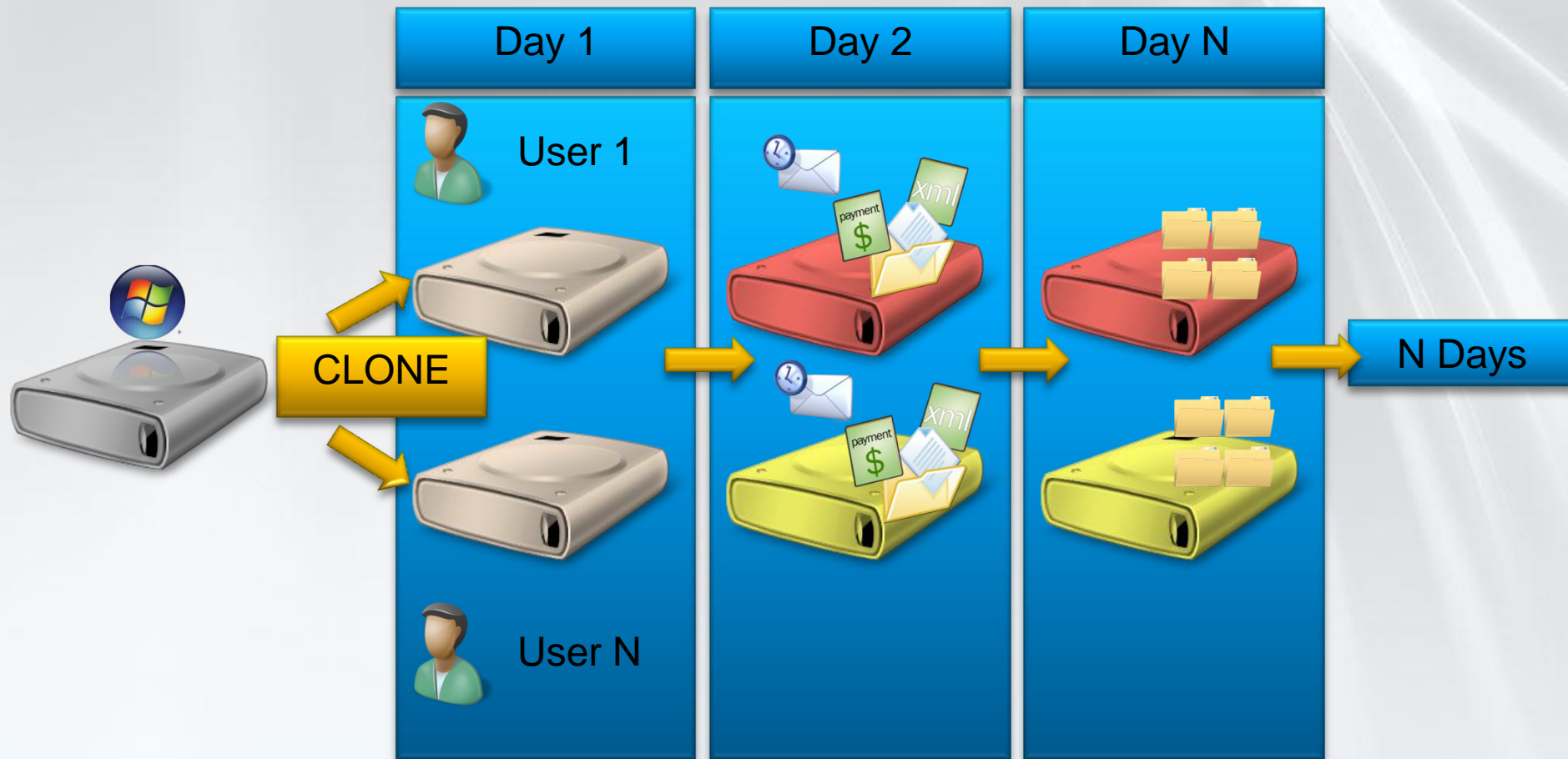


Pooled Virtual Desktops

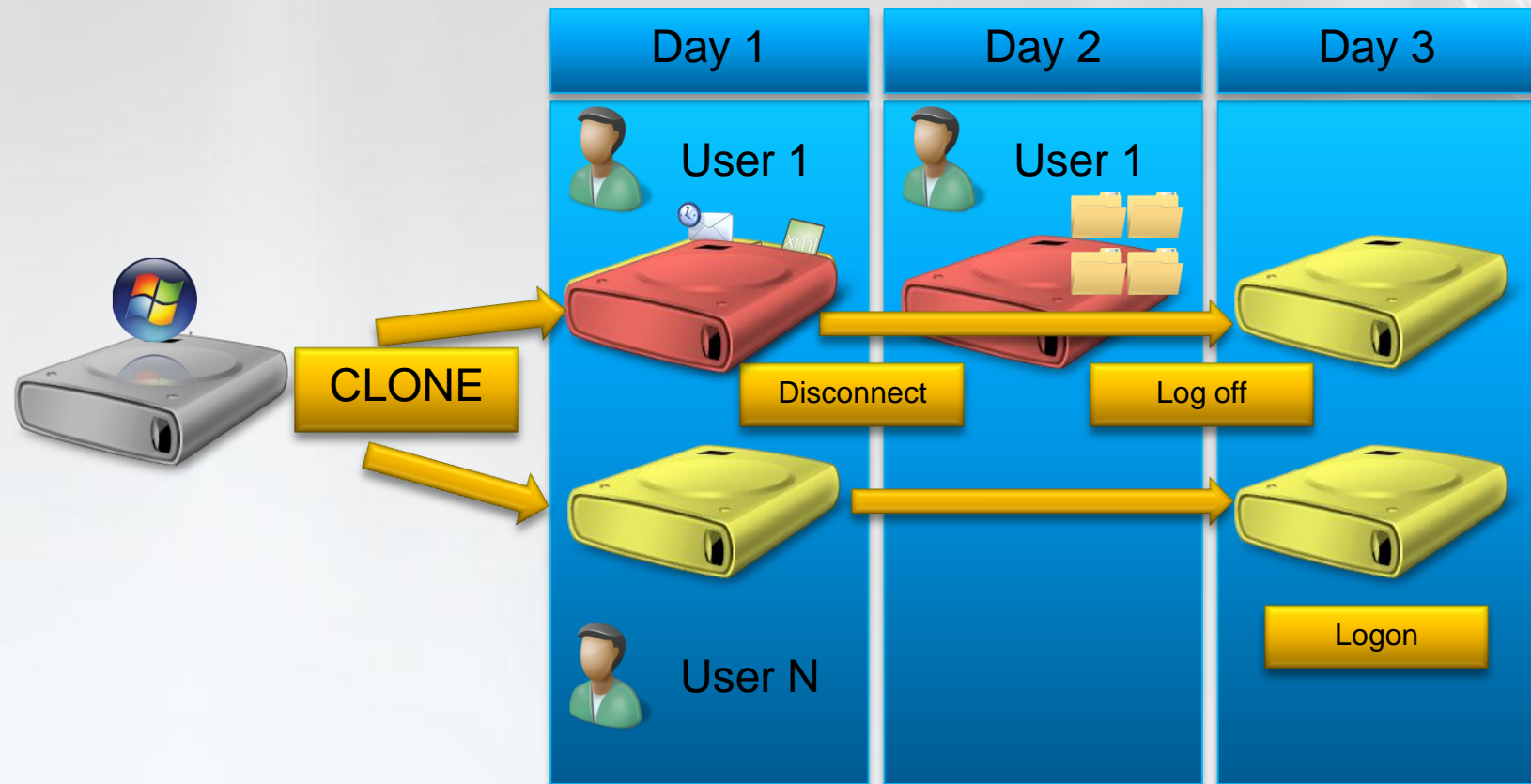
Pooled Virtual Desktops

- Shared OS images, identically configured
- No administrator access
- User state temporary (discarded at session end)

Personalized Desktops



Pooled Desktops



demo

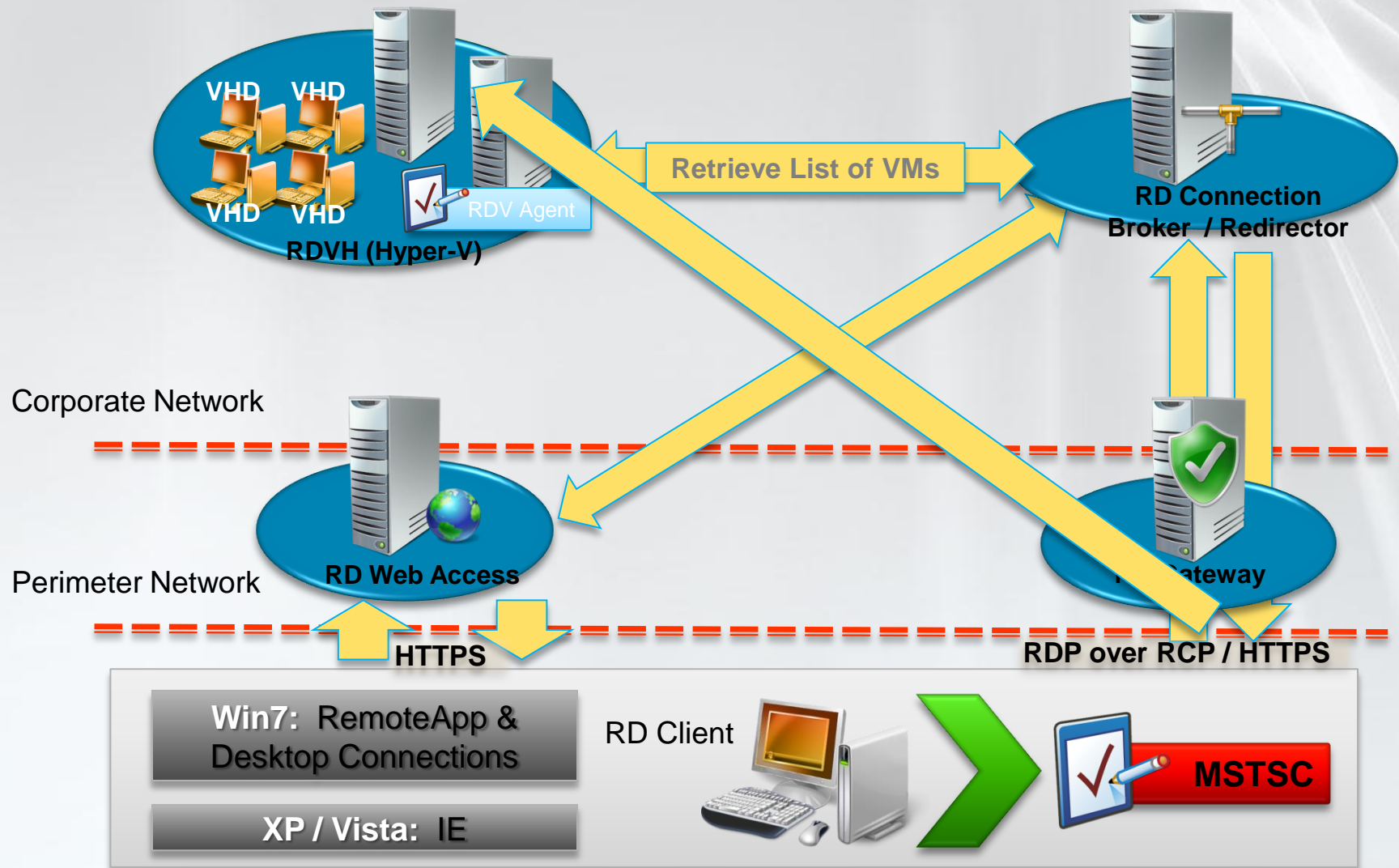
RemoteApp

Personal Virtual Desktop Setup

- As a mobile worker, Fred needs:
 - Access from anywhere
 - Business continuity



Personal Virtual Desktop Setup



Remoting Experience Improvements

RDS User Experience Enhancements

Multiple Monitor Support



Enhanced Audio Support



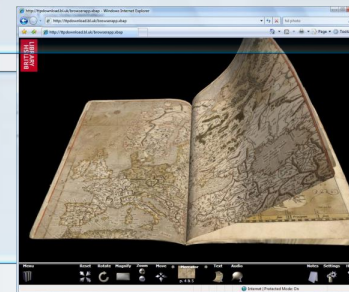
Windows Media Redirection



Windows Aero Glass Support



Enhanced Bitmap Acceleration



True Multi-Monitor Support

Support for multiple screens and resolutions

- Support for up to 16 monitors
- Multi-monitor support fully configurable by administrator
- Each monitor can be up to 1920x1080
- Works for remote desktop and RemoteApp



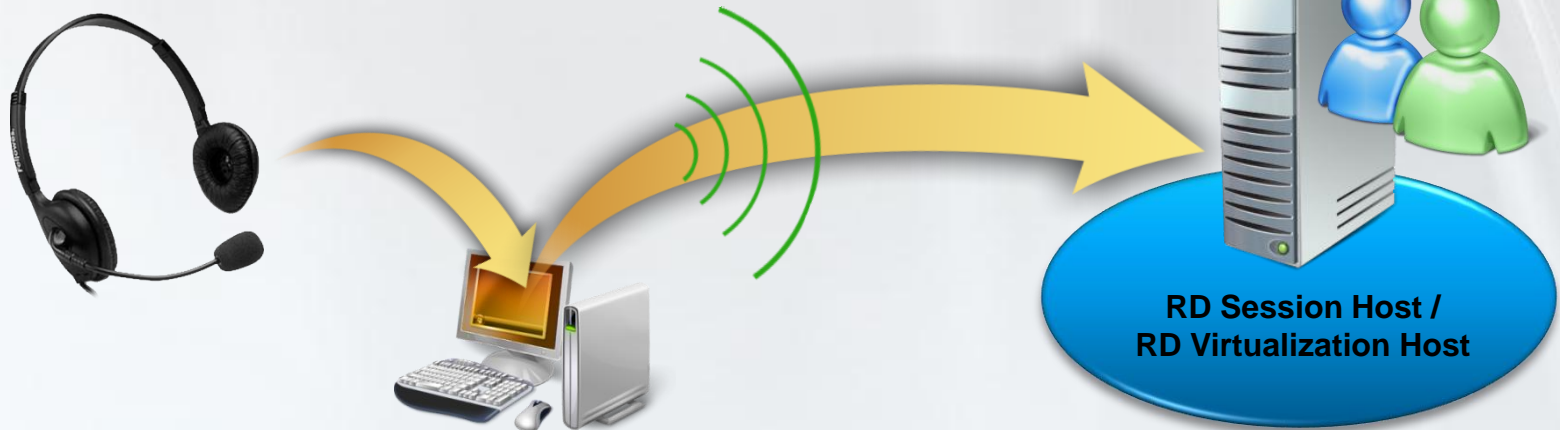
Audio Enhancements

Audio input and recording

- Streams microphone input from the user's machine to the Remote Desktop.

Improved Audio / Video synchronization

- Provides an experience closer to using an physical desktop



Windows Media Redirection

Windows Media Redirection

- Video bit stream sent to client for decompression
- Nearly no CPU usage on server
- Video codec must exist on client device
- Windows Media by default
- Full fidelity, bandwidth and latency permitting



Windows Aero Glass Support

Windows Aero Glass Support

- Provides the ability to use the Windows Aero® Glass experience with session-based remote desktops. Supported in RDS and latest RDC clients.



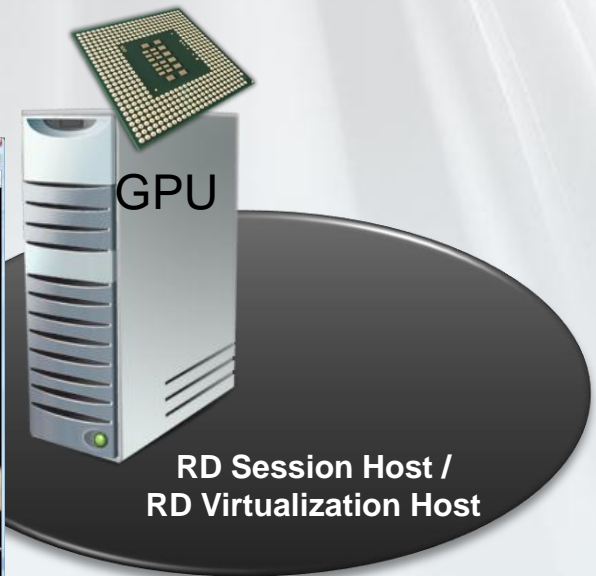
Enhanced Bitmap Acceleration

3D and Rich Media Experience

- Renders 3D and portable graphics stacks such as Silverlight and Flash on the server and transfers as a bitmap to clients.

Microsoft DirectX 9,10,11

- DirectX 9,10,11 is rendered on the host and sent to the client as a bitmap (requires GPU on host)

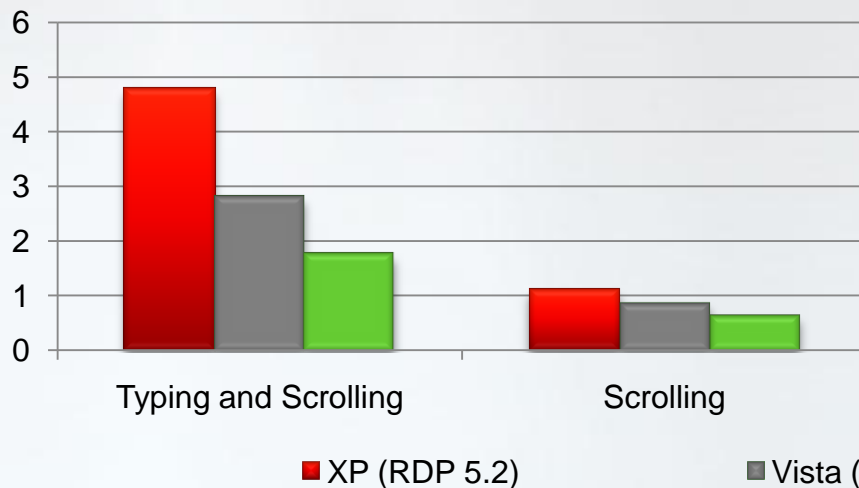


RDP Performance Enhancements

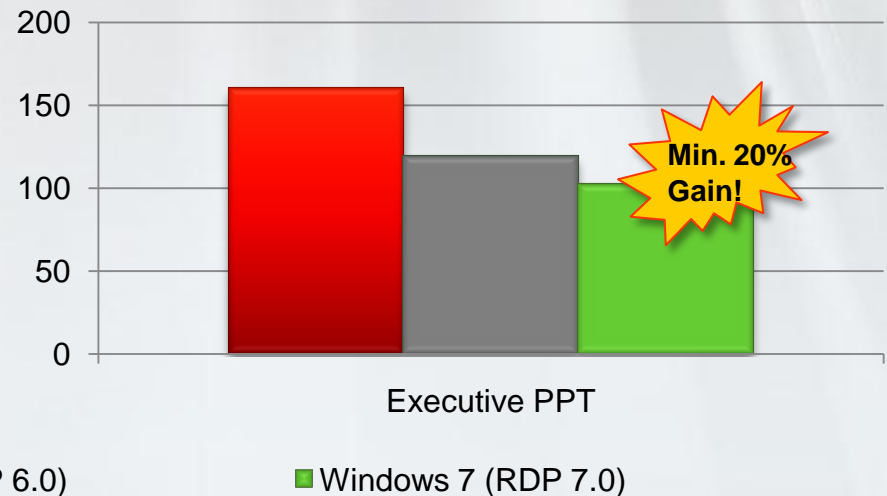
Multiple New Techniques Improve Performance of Bitmap & Command Remoting

- Command Remoting used for GDI applications.
- Bitmap Remoting used for anything that isn't GDI
- Bulk compressor defaults to use less bandwidth
- Disable bulk compression

Bandwidth - Kbps



Bandwidth Improvement per release



demo

Experience Demo

Shuba Iyer
Program Manager
RD Virtualization



Better Together Windows 7 and RDS

- RemoteApp & Desktop Connections
- Language Bar Redirection
- Aero Glass Remoting



Manageability Improvements

RD Easy Print – now for win7 too!

Historical Issues

No Match



Close Match

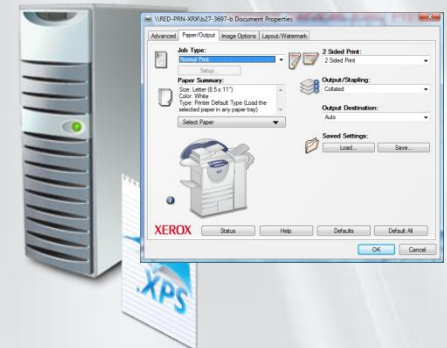


Bad Match



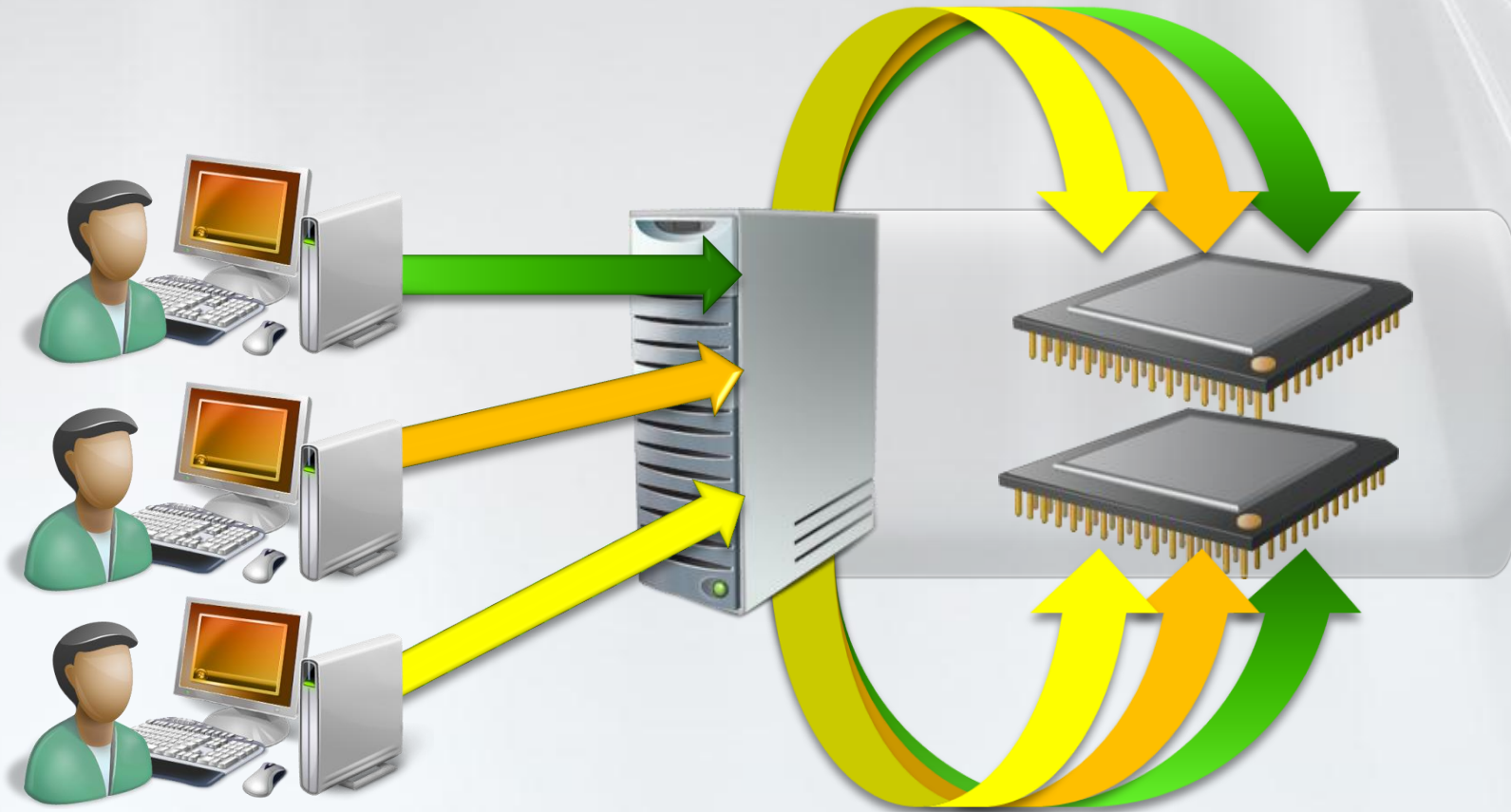
Solution

RD Easy Print



Fairshare CPU Scheduling (RDSH)

- Fairly distributes CPU cycles across sessions
- Processor resources are shared across CPUs
- Each session assigned a CPU quota



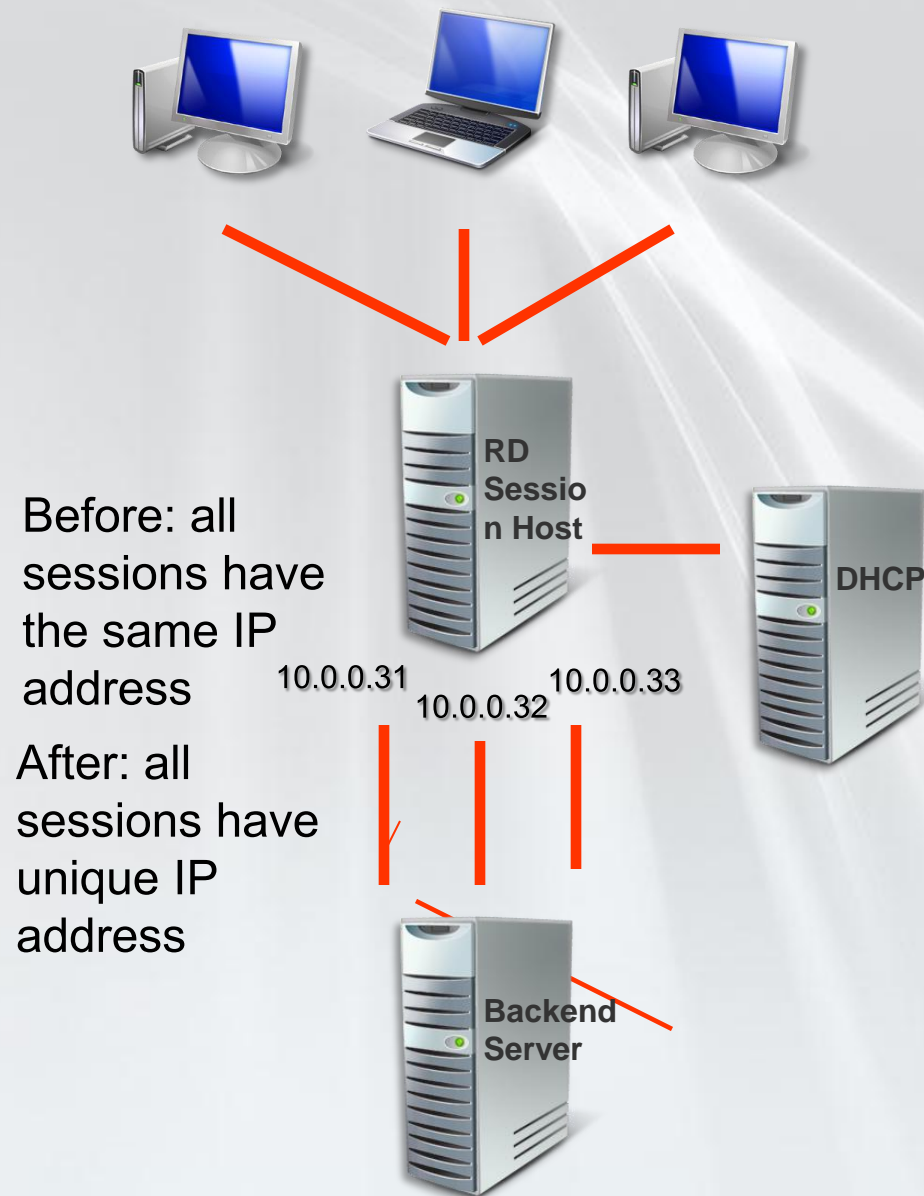
IP Virtualization

- IP Virtualization Modes

- Per session
 - All programs
 - Specified programs

- DHCP Integration

- Virtual IP addresses obtained from DHCP



Other Management Enhancements

Tighter Integration of RDS Services into Server Manager

- Streamlined administrative access to RDS features.



Enhanced Command-Line Management with Windows PowerShell

- Augments graphical tools, provides easy methods to automate repetitive tasks.



Roaming User Profile Cache Management

- Manage aggregate user profile size via Group Policy.



MSI Compatibility Improvements

- MSI queuing to prevent application installation errors. Easier to install applications on a Remote Desktop Session Host Server.



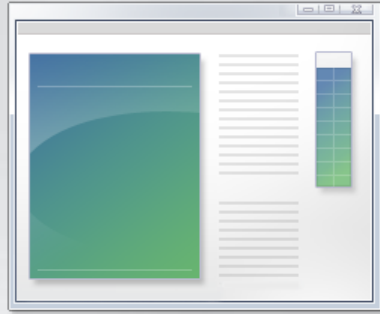
Platform Investments

- Multiple levels of extensibility for custom partner solutions for Remote Desktop Services and VDI-based solutions



App-V for Remote Desktop Services

App-V Benefits for RDS Scenarios



**Improve
application
compatibility**



**Consolidate
Terminal servers**



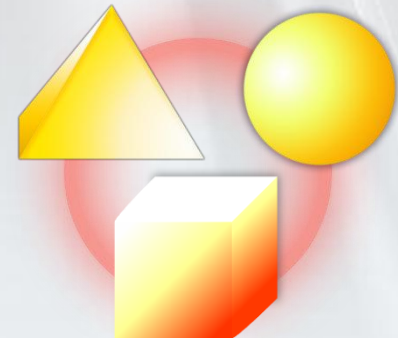
**Reduce time
to solution**



**Improve user
profile issues**



**Reduce Help
Desk calls**



**Turns RDS into a
dynamic system**



Windows Server[®] 2008 R2

Microsoft Application Virtualization For Remote Desktop Services

Key Challenge

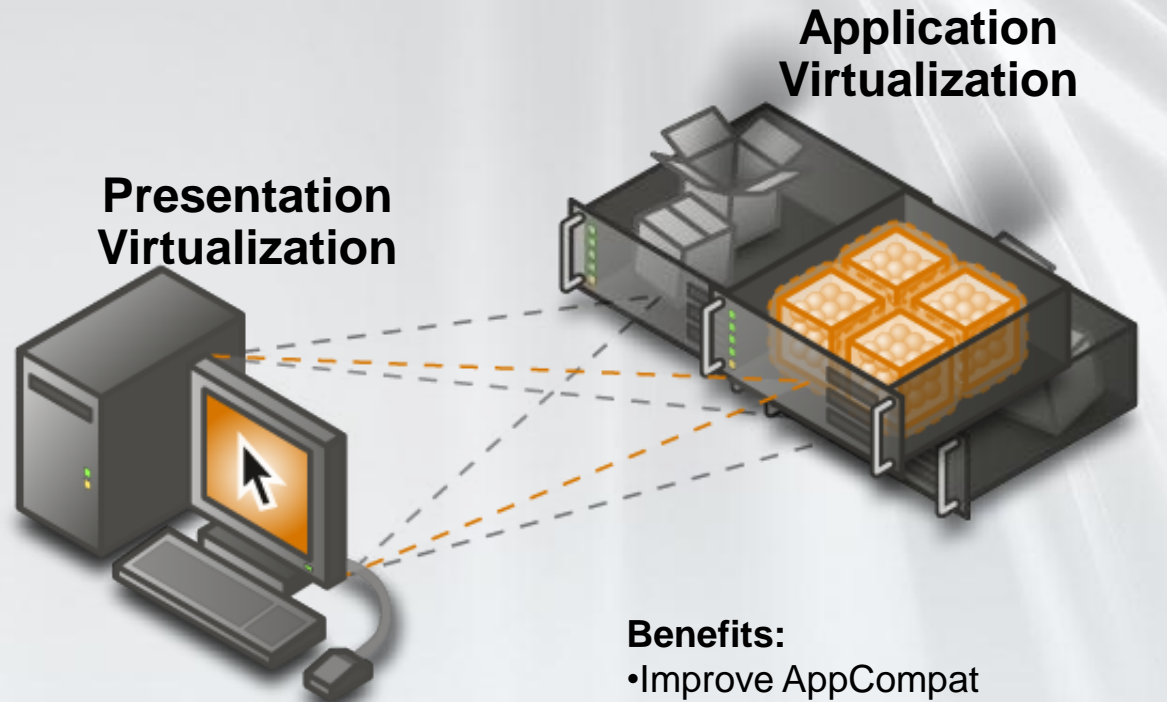
App Compat causing
server underutilization

Solution

Enable any applications
to run side-by-side
on any server at the
same time

Case Study

Consolidated servers by
over 40%



Availability:

Windows Server 2008 = now

Windows Server 2008 R2 = now

Benefits:

- Improve AppCompat
- Improve User Profiles
- Consolidate Servers
- Faster time to solution
- RDS becomes dynamic service

Windows Server[®] 2008 R2

Citrix & Microsoft

Better Together: Citrix and Microsoft

Citrix XenDesktop and Citrix XenApp:
On-Demand Desktop and Application Delivery

Dynamic
Application
Delivery

Enterprise
Scalability
& Access

Single
Instance
Management

High
Definition
Experience

Secure
by
Design

Security

Extensibility

Stability

Connectivity

Windows Server 2008 **R2**
Remote Desktop Services

Citrix drives the depth of the solution

Windows Server increases the breadth of the solution

Centralized Desktops: RDS vs. VDI

	RDS (Session-Based)	VDI (VM-Based)
Technology Maturity	Proven	Emerging
Scalability	Higher ratio of users/server	Lower ratio users/server
Isolation/Security	<ul style="list-style-type: none">• Session-based isolation• Shared OS across users• Must run as standard user	<ul style="list-style-type: none">• VM-based isolation• Dedicated OS per user• Can run as admin
Remote User Experience	Protocol-dependent	Protocol-dependent
User Flexibility	User is running as a user	User can have full rights
Application Compatibility	Windows Server OS	Windows Client desktop

- User requirements should dictate mode chosen
- Remoting protocol is common factor for both models
- Expect to have mix of both models

Resources

- Remote Desktop Services Home Page

<http://www.microsoft.com/windowsserver2008/en/us/rds-product-home.aspx>

- Remote Desktop Services Blog

<http://blogs.msdn.com/rds/>

- Desktop Virtualization and VDI

<http://www.microsoft.com/windows/enterprise/technologies/virtualization.aspx>

Session W-03

**Windows Server 2008
R2 Active Directory
Gentages kl. 17.00
Aud. 4 på 4. sal**

Campus Days
14.-16. januar 2010



THANK YOU!



Windows Server® 2008 R2

Microsoft TechNet