



Terminal Services

Presentation Virtualization

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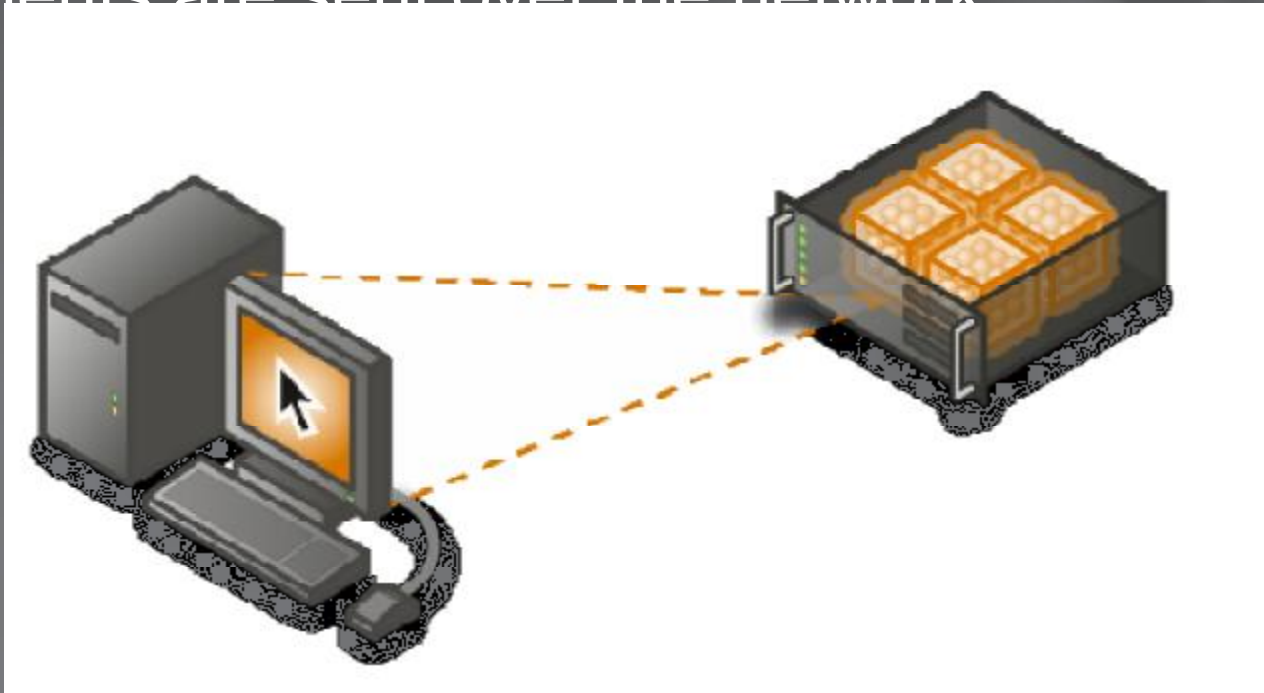
Citrix XenApp 5.0 for 2008 Terminal Services

- Will be announced September 9th, 2008
- Due to NDA obligations Syntax is not allowed to discuss anything further.

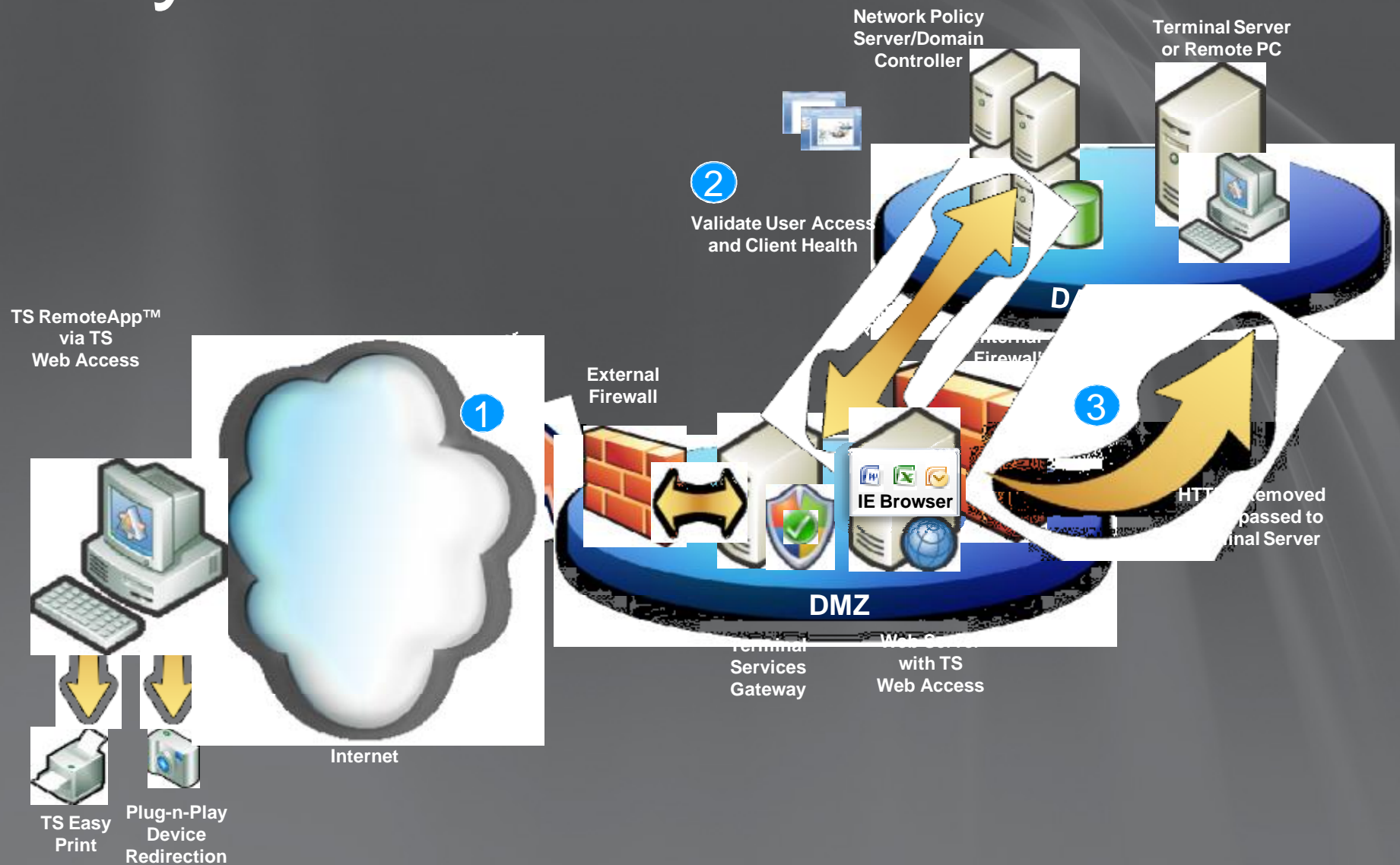
See Citrix's website for public information prior to next Tuesday.

Presentation Virtualization With Terminal Services

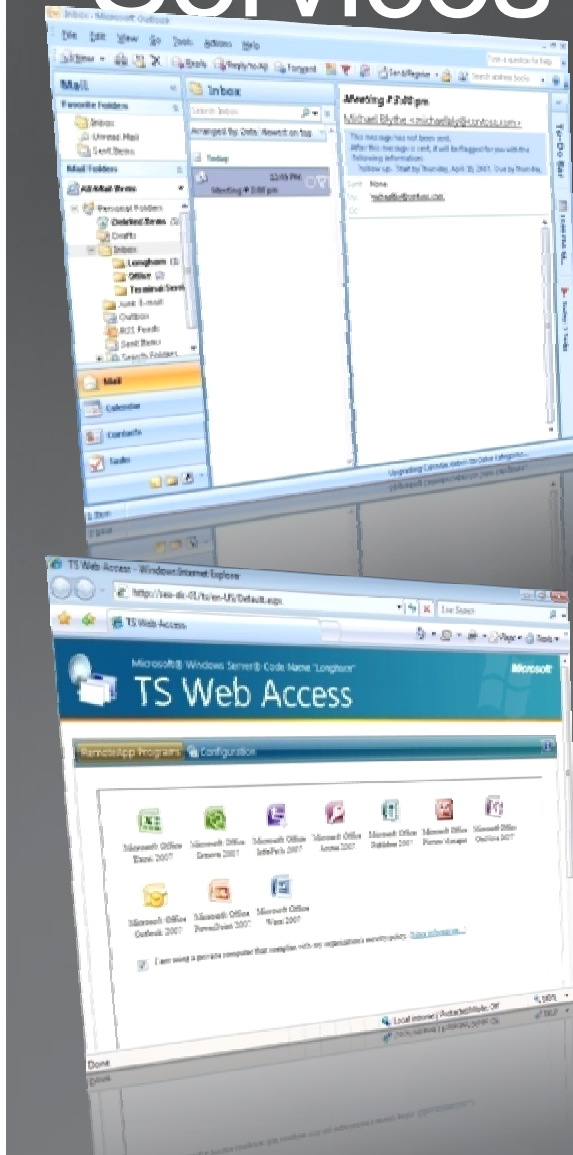
- Run an application in one location but have it be controlled in another
 - Only screen images, keystrokes and mouse movements are sent over the network



Key Features



Key Features In Terminal Services



- **Terminal Services RemoteApp™**
 - Remote applications appear the same as local applications, improving end-user productivity and reducing training requirements
- **Terminal Services Gateway**
 - More securely connects applications and data to users without a VPN
- **Terminal Services Web Access**
 - Simplifies application deployment by making applications available from a web page or a SharePoint portal

TS RemoteApp

ts-w2k864 - Remote Desktop

TS RemoteApp Manager

File Action View Help

TS RemoteApp Manager

RemoteApp programs are programs that are accessed through Terminal Services, and appear as if they are running on the client's local computer. Before you can make a RemoteApp program available to users, you must add it to the RemoteApp Programs list.

Overview

Terminal Server Settings [Change](#)

- Information: Clients will connect to: TS-W2K864.HOME.local
- Checkmark: Users can only start listed RemoteApp programs on initial connection. (Recommended)

TS Gateway Settings [Change](#)

- Information: Clients will use TS Gateway settings defined by their domain's Group Policy.

Digital Signature Settings [Change](#)

- Warning: No digital certificate is configured. (Using a digital certificate may improve security.)

RDP Settings [Change](#)

- Information: Clients will not use any custom RDP settings.

Distribution with TS Web Access

- Warning: The TS Web Access Computers group is empty. RemoteApp programs may be unavailable to users. [Refresh](#) | [Learn more](#)
- Checkmark: All RemoteApp programs are visible in TS Web Access.
- Information: A remote desktop connection for this server is not visible in TS Web Access. [Change](#)
- Help: [More about using TS Web Access](#)

Other Distribution Options

Select a RemoteApp program and choose an option below.

- Checkmark: [Create .rdp File](#)
- Checkmark: [Create Windows Installer Package](#)
- Help: [More about distribution options](#)

RemoteApp Programs

Name	Path	TS Web Ace...	Arguments
Microsoft Office Word 2007	C:\Program Files (x86)\Micros...	Yes	Disabled

Actions

- TS RemoteApp Manager (Lo... ▲
- Connect to Computer
- Add RemoteApp Progr...
- Terminal Server Settings
- TS Gateway Settings
- Digital Signature Settin...
- Export RemoteApp Set...
- Import RemoteApp Set...
- View ▶
- Help
- Microsoft Office Word 2007 ▲
- Properties
- Show in TS Web Access
- Hide in TS Web Access
- Create .rdp File
- Create Windows Install...
- Remove
- Help

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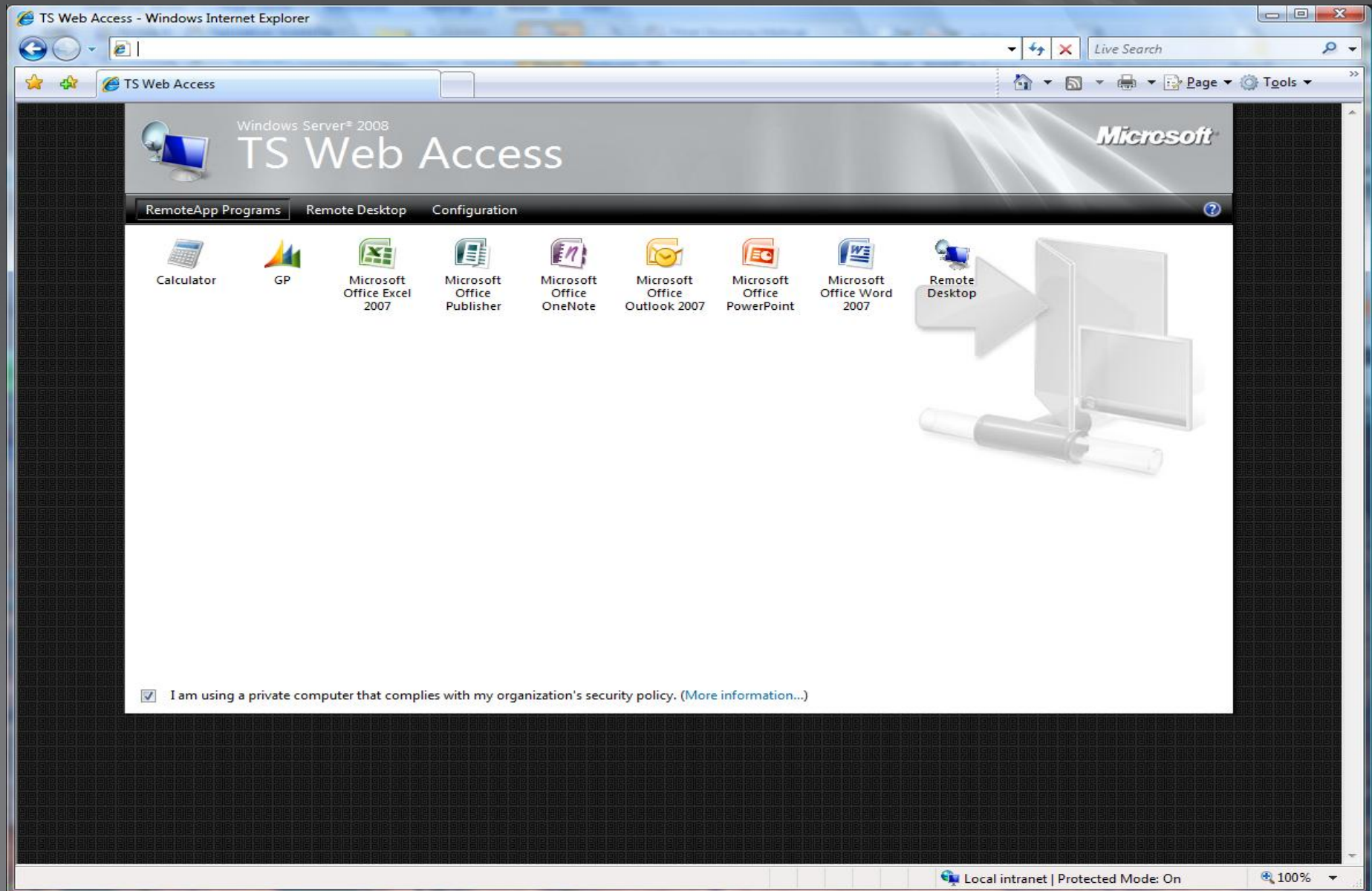
TS RemoteApp cont.

- Creates a customized RDP connection
- Can package as MSI installer with icon and file type association
- Is “seamless” like Citrix
- No publishing paradigm to users or groups

Terminal Services Gateway

- Similar to RPC over HTTP in Exchange
- RDP 6.x clients connect to TS Gateway server using SSL, converted back to RDP
- Works with both Terminal Servers and desktops with RDP enabled
- Can leverage Network Access Protocol (NAP), new in 2008, to enforce health checks on client machines

TS Web Access

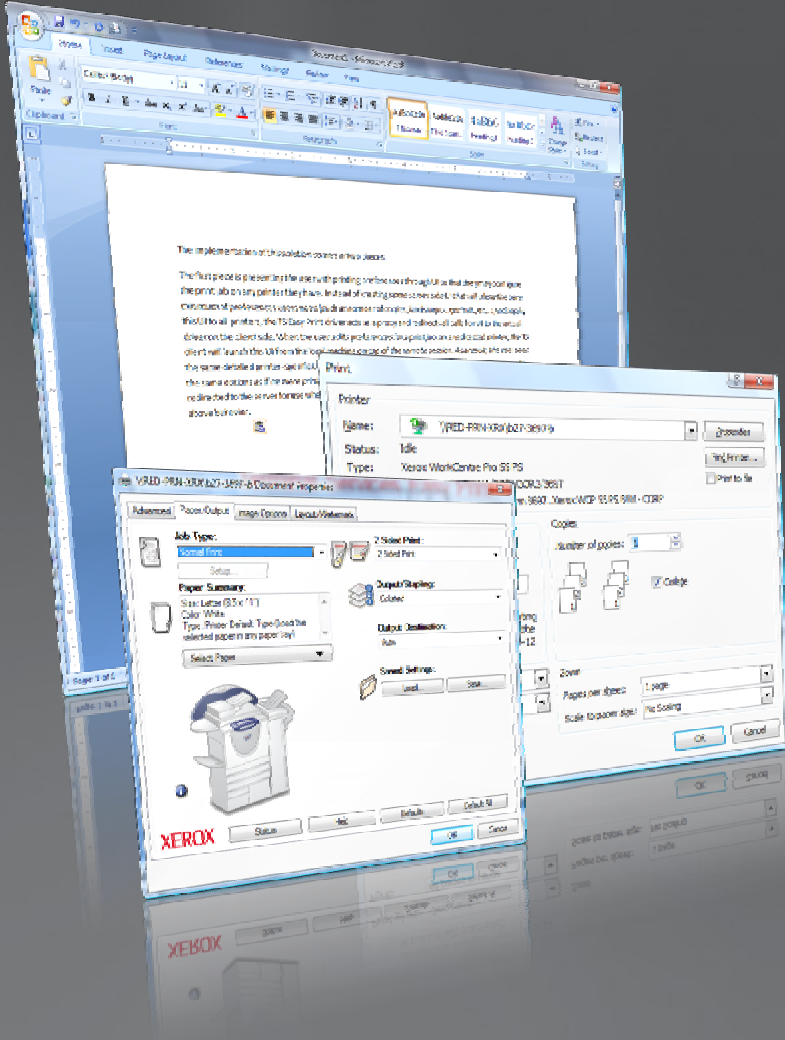


TS Web Access

- Simple web part, dynamically updates RemoteApps
- No authentication
- No “farm” concept
- RemoteApps gathered from single IP
- Users see ALL RemoteApps

Key Features In Terminal Services

- Terminal Services Session Broker
- Delivers session-based load-balancing providing better uptime and performance to your environment
- Terminal Services Easy Print
- Enables fast and reliable printing to a local or network-attached printer



Terminal Services Session Broker

- Load balancing for Terminal Server
- Requires Enterprise Edition
- Similar to TS Session Directory in 2003
- Balances only on number of session
- Session Broker is single point of failure, may need two and failover mechanism

Terminal Services Easy Print

- A universal printer solution
- Similar to Citrix UPD, version I from XP or II from 3.0
- Based on Microsoft XPS printing technology
- No need for drivers on server
- Requires Vista or XP SP3

Security Enhancements

- Network Level Authentication – client authenticates before user gets logon prompt
- SSL/TLS connections, by default. Fallback to traditional RDP 128bit encryption
- Reduction in attack footprint from 2003

ICA vs. RDP

Disclaimer!!!!

- These are my own tests and were ad hoc. Test equipment was a Packetshaper with latest code as of early August 2008.

ICA vs. RDP

- Setup, same Windows 2008 64bit server running in Citrix XEN virtual server.
- Server side connected to Comcast cable, no other users or activity, 1Mbps upload.
- Client side, T1 shared with other users. Used RDP 6.1 client and Citrix 11.0 beta client, both running on Vista. Both set to 1024x768, 24bit color depth.

ICA vs. RDP

Test 1

- Login to server, launch Word 2007.
- ICA peak bandwidth consumed approx. 300Kbps
- RDP peak bandwidth consumed approx. 460Kbps

ICA vs. RDP

Test 2

- Same activity, but limit bandwidth, then increase until “usable”.
- ICA 20Kbps Unusable
 40Kbps Unusable
 60Kbps Usable
- RDP 20 thru 100Kbps Unusable
 120Kbps Usable
- NOTE!: Usable is my own opinion, purely subjective!!!

Licensing Terminal Services

- Terminal Services is licensed on a per device or per user basis
- Each device or user required an appropriate license to be assigned
- Terminal Services functionality is integrated into the following Windows Server Products
 - Windows Server 2008, Standard Edition
 - Windows Server 2008, Enterprise Edition
 - Windows Server 2008, Datacenter Edition
 - Remote Desktop for Administration is available on all the products above plus Windows Server 2008, Web Edition



TERMINAL SERVICES

Demo



Terminal Services



Terminal Services

For More Information

- Microsoft Windows Server 2008 Terminal Services
<http://www.microsoft.com/windowsserver2008/terminal-services/default.aspx>
- Core Infrastructure Optimization
<http://www.microsoft.com/business/peopleready/coreinfra/default.aspx>
- Microsoft's Virtualization Strategy
<http://www.microsoft.com/virtualization/default.aspx>
- Terminal Services Partners
<http://www.microsoft.com/windowsserver2003/partners/termsrvs.aspx>