

HP ThinPro

True Multi-Monitor Mode for RDP



Table of contents

Overview.....	2
Span mode.....	2
True multi-monitor mode	2
Factors that influence mode choice	3
Client and server vintage.....	3
Policy and registry settings.....	3
RemoteFX driver setting.....	3
For more information	4

Overview

Microsoft Remote Desktop Protocol (RDP) has offered support for multiple monitors since RDP 6 in 2006. In RDP 7, an improved feature known as **true multi-monitor mode** was first supported. This white paper discusses the difference and subtleties of server setup that affect the choice of modes.

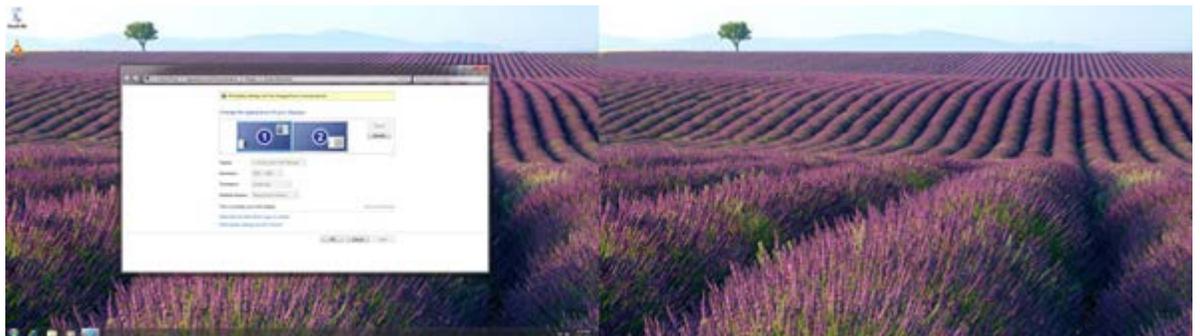
Span mode

In span mode, the client's monitors are treated as if they were one combined monitor with the combined resolutions of the monitors involved. In the case of two 1600x1200 monitors, the remote desktop behaves the same as if it were one 3200x1200 monitor. The taskbar spans both monitors. Newly-created windows might show up in the center of the combined screen, split between the monitors. An expanded window will fill both monitors rather than the one on which it originated. The **Screen Resolution** settings in the **Display** Control Panel utility show one large virtual monitor.



True multi-monitor mode

In true multi-monitor mode, the RDP server is aware of the layout of the client's monitors and behaves more intelligently. The taskbar exists only on the primary monitor. Newly-created windows tend to show up in the center of one of the monitors only. Windows expand to fill only their monitor, rather than all of them. The **Screen Resolution** settings in the **Display** Control Panel utility shows both virtual monitors.



Factors that influence mode choice

Client and server vintage

Span mode became available in RDP 6, which premiered with Windows Vista and Windows Server 2003 SP1. True multi-monitor mode became available in RDP 7, which premiered with Windows 7 and Windows Server 2008 R2. Both the client and server must support the RDP 7 protocol for true multi-monitor mode to be negotiated.

HP thin clients with WES7 or later or ThinPro/Smart Zero 4.1.2 or later support true multi-monitor mode. Windows servers support true multi-monitor mode with Windows Server 2008 R2 and Windows 7 or later.

Policy and registry settings

The group policy at the following location will force span mode when it is set to 1.

Local Computer Policy > Computer Configuration > Administrative Templates > Windows Components > Remote Desktop Services > Remote Desktop Session Host > Remote Session Environment > Limit maximum number of monitors

This is shadowed by the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows NT\Terminal Services\MaxMonitors
```

The following registry key has a similar function:

```
HKLM\System\CurrentControlSet\Control\TerminalServer\WinStations\RDP-Tcp\MaxMonitors
```

RemoteFX driver setting

On a system using RemoteFX with a vGPU, when the RemoteFX 3D Video Adapter is configured, there is a setting to control the maximum number and resolution of the monitors on the virtual machine's vGPU. If the setting for **Maximum number of monitors** is less than the number of physical monitors, the virtual desktop will not be able to fill the thin client's entire desktop. For example, if the setting is set to 1, the RDP remote desktop will usually be placed only on the primary monitor.

For more information

For more information about HP ThinPro, go to the following websites:

- **HP ThinPro home page:** <http://www.hp.com/go/thinpro>
- **HP Support Center:** <http://www.hp.com/go/hpsc> (search for your thin client model and see the Manuals page for documentation)

Sign up for updates

hp.com/go/getupdated

© Copyright 2014 Hewlett-Packard Development Company, L.P.

Microsoft and Windows are U.S. registered trademarks of the Microsoft group of companies.

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

First Edition: August 2014

