

Enable Concurrent (Multiple) RDP Sessions in Microsoft Windows 8.1 & 7

Microsoft offers the Remote Desktop Protocol (RDP) in Windows to allow remote desktop connections, and while most versions of Windows include a RDP client, only the Ultimate, Professional and Server editions offer the RDP server to accept incoming connections which allow users to access their machine remotely while away from work or home.

Unfortunately, the Remote Desktop Server in Windows other than the Server edition has a limitation to allow only one concurrent user per session by default, i.e. if someone remotely connects to the computer over RDP then whoever was logged in at that moment will be automatically logged off, even if that user is physically present at the computer.

This is not a technical limitation but rather a licensing one, as Remote Desktop in server editions of Windows by default supports two concurrent connections to remotely troubleshoot or administer a machine. More users can connect simultaneously too, as long as the machine can handle it with the resources it has available and you have the required client access licenses for that particular server.

We can remove this limitation by patching a file called termsrv.dll, located in %SystemRoot%\System32. And so, a remote user(s) can now log in to their account while also allowing a local user to log in to their account when physically at the PC. This is possible in all editions of Windows Vista and Windows XP that has Remote Desktop Server built into them.

I have uploaded the patched termsrv.dll file for Windows XP & Vista which can be downloaded from [here](#) in order to save time for other users (and myself while upgrading more computers). **Windows 7, 8 & 8.1 users please use the link available at the bottom.**

Steps to install the patched [termsrv.dll](#) file to remove RDP restrictions in Windows XP/Vista

1. Either boot into Safe mode or stop the remote desktop services. To stop, right click on My Computer and select Manage, goto services (you can also goto services directly by entering services.msc in Start->Run). In services, double click on "Remote Desktop Services" and stop it.
2. Go to C:\Windows\system32\dlcache and if termsrv.dll file is present then rename it to termsrv.dll.bak
3. Go to C:\Windows\System32 folder and rename the termsrv.dll to termsrv.dll.bak
4. Now, download and unzip the [termsrv.dll patched.zip](#) and copy the patched termsrv.dll to C:\Windows\System32 folder.
5. Open regedit.exe, goto Start->RUN and type regedit and press enter.
6. In regedit, go to "HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Control\Terminal Server\Licensing Core" registry and create a new DWORD key "EnableConcurrentSessions" without quotes and enter its value as 1.
7. Go to "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon" registry and create a new DWORD key "EnableConcurrentSessions" without quotes and enter its value as 1 and also create another DWORD key "AllowMultipleTSSessions" without quotes and enter its value as 1 too.
8. Now right click on My Computer and go to Properties->Remote. Enable allow remote connections and select the users for whom you want to enable Remote Desktop Services.
9. If you have not booted into Safe mode and stopped the "Remote Desktop Services" then start the service again and restart windows now.

To create a patched termsrv.dll, all I did was patched the original termsrv.dll (version 5.1.2600.5512) with a HEX editor to incorporate the changes, nothing more! By comparing the patched file against your original file, you will come to know the edits required in original termsrv.dll file to remove restrictions on RDP. You may use the FC/b command in windows as shown below to see the difference between the both files.

```
C:\WINDOWS\system32>fc/b termsrv.dll termsrv.dll.original
Comparing files termsrv.dll and TERMSRV.DLL.ORIGINAL
00022A17: 75 74
00022A69: 90 7F
00022A6A: 90 16
```

You can see the exact values that needs to be changed for patching the termsrv.dll file (if you're paranoid, then you can use the above info to patch your own file).

Note: For Domain Users, if the registry values are getting removed automatically every time you reboot the computer (domain environments), create a .bat file with below script and run it on startup (i.e. copy to C:\Documents and Settings\\Start Menu\Programs\Startup).

```
@ECHO OFF
::
::
@REG ADD "HKLM\SYSTEM\ControlSet001\Control\Terminal Server\Licensing Core" /v EnableConcurrentSessions /d 1 /t REG_DWORD /f >nul
@REG ADD "HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon" /v EnableConcurrentSessions /d 1 /t REG_DWORD /f >nul
@REG ADD "HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon" /v AllowMultipleTSSessions /d 1 /t REG_DWORD /f >nul
::
::
```

[Update 27th March, 2015] A Developer DeepXW has created a standalone patch which will allow you to patch Remote Desktop Protocol in Windows to allow multiple simultaneous connections without messing with the registry or copying of patched dll files manually. This utility can be downloaded from [here](#).

To apply patch, simply download and unzip the file, then run the corresponding file as administrator (right-click the exe file and select Run as Administrator). For 32-bit systems use UniversalTermsrvPatch-x86.exe and for 64-bit versions of Windows use UniversalTermsrvPatch-x64.exe.

[Update 27th March, 2015] The patch by Developer DeepXW mentioned above, works perfectly on new Microsoft Windows 7 that launched last year.

[Update 27th March, 2015] Windows 8 & 8.1 users please download the patched [termsrv.dll](#) file from [here](#) and edit the following registry keys at HKLM\System\CurrentControlSet\Control\Terminal Server.

fDenyTSConnections (DWORD) = 0

fSingleSessionPerUser (DWORD) = 0

If you want to patch your own termsrv.dll file for Windows 8 & 8.1 then, open termsrv.dll file from C:\Windows\System32 into any Hex Editor and then

For 64-bit version replace this hex string:

8B 81 38 06 00 00 39 81 3C 06 00 00 0F 84 1B 70 00 00

with this hex string:

B8 00 01 00 00 89 81 38 06 00 00 90 90 90 90 90 90

For 32-bit version replace this hex string:

3B 86 20 03 00 00 0F 84 ?? ?? ?? ??

with this hex string:

B8 00 01 00 00 90 89 86 20 03 00 00

Here's a step by step guide on how to run multiple concurrent RDP sessions.

My Test system configuration:

Desktop running Windows 7 Ultimate (Windows Pro is recommended) - Main System

Patch/crack Required to enable-concurrent-multiple-RDP-sessions:

Windows 7 patch:

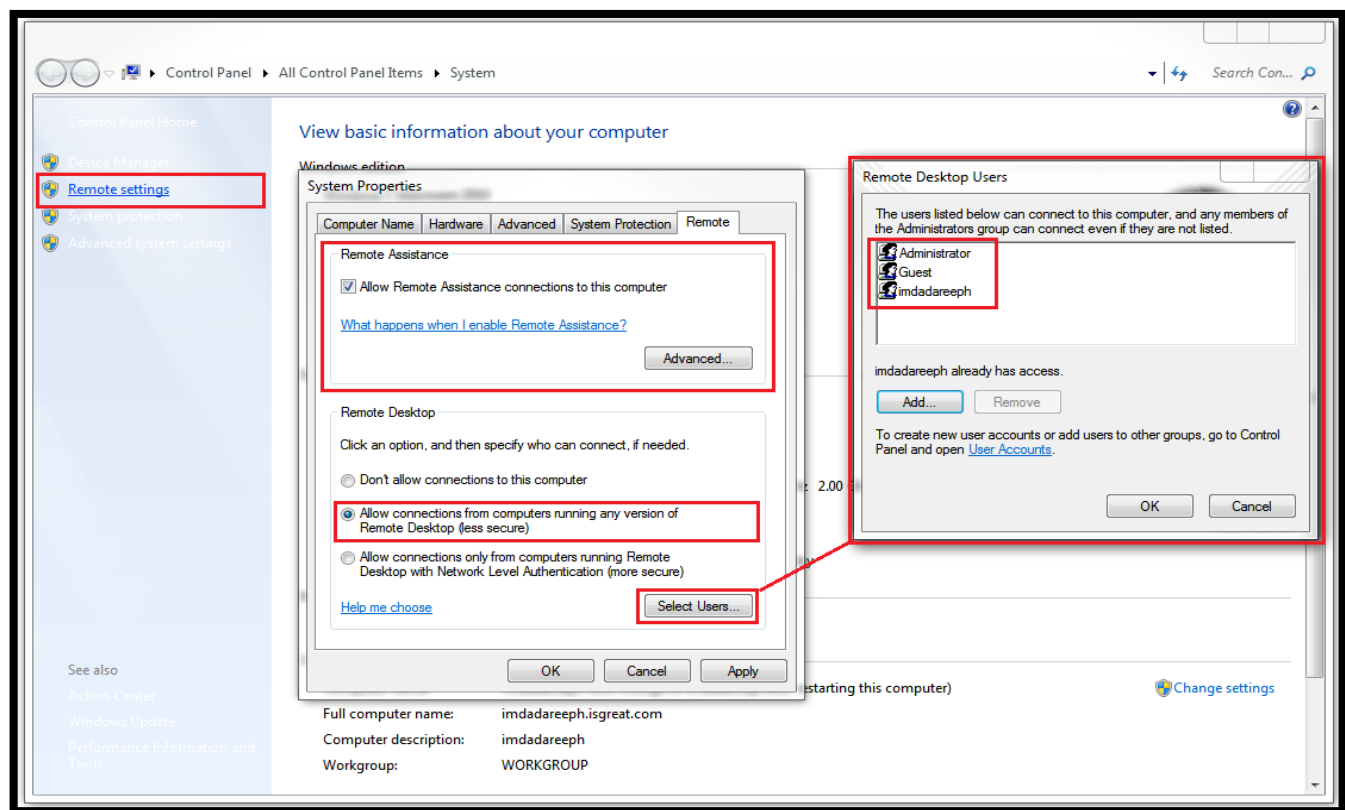
[UniversalTermsrvPatch_20090425.zip](#)^{2.9K} (132.5 KB)

Windows 8/8.1 Patch:

[termsrv.dll_patched-win8.zip](#)⁸¹⁵ (421.6 KB)

Step 1: Configure Remote Settings

Go to Control Panel, System, Remote Settings



A: Select **Allow Remote Assistance connections to this computer** check box

B. Select **Allow connections from computers running any version of Remote Desktop** to allow people using any version of Remote Desktop or RemoteApp to connect to your computer. This is a good choice if you don't know the version of Remote Desktop Connection that other people are using, but it is less secure than the third option.

Or

Select **Allow connections only from computers running Remote Desktop with Network Level Authentication** to allow people with computers running versions of Remote Desktop or RemoteApp with Network Level Authentication to connect to your computer. This is the most secure choice if you know that the people who will connect to your computer are running Windows 7 on their computers. (In Windows 7, Remote Desktop uses Network Level Authentication.)

C. Add Use Account for each RDP device.(in My example i have added Guest and imdadareeph.

Guest user account (standard user) will connect using Desktop1
imdadareeph user account (standard) will connect using Desktop2
Administrator user account (Admin) will be configured on Desktop3

Step 2: Install Patch Required to enable-concurrent-multiple-RDP-sessions:

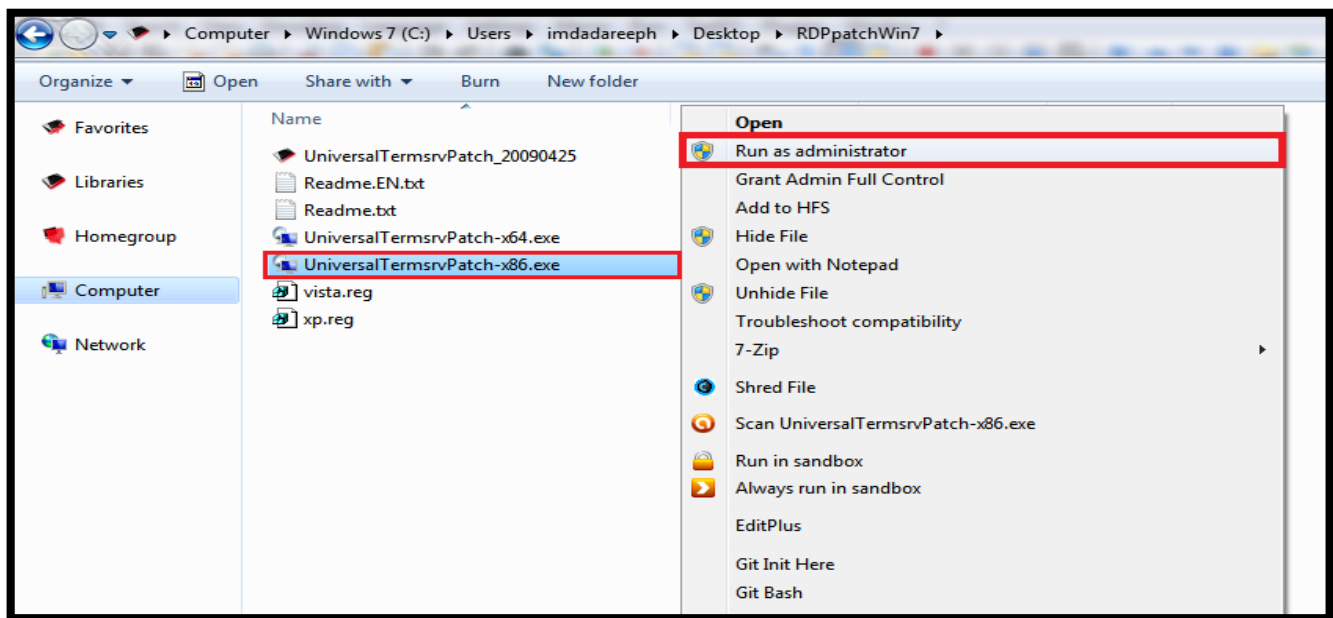
My system is Windows 7, so i'm going to configure Universal Termsrv.dll Patch for Windows 7.

Choose the corresponding patcher based on your Windows 7 :

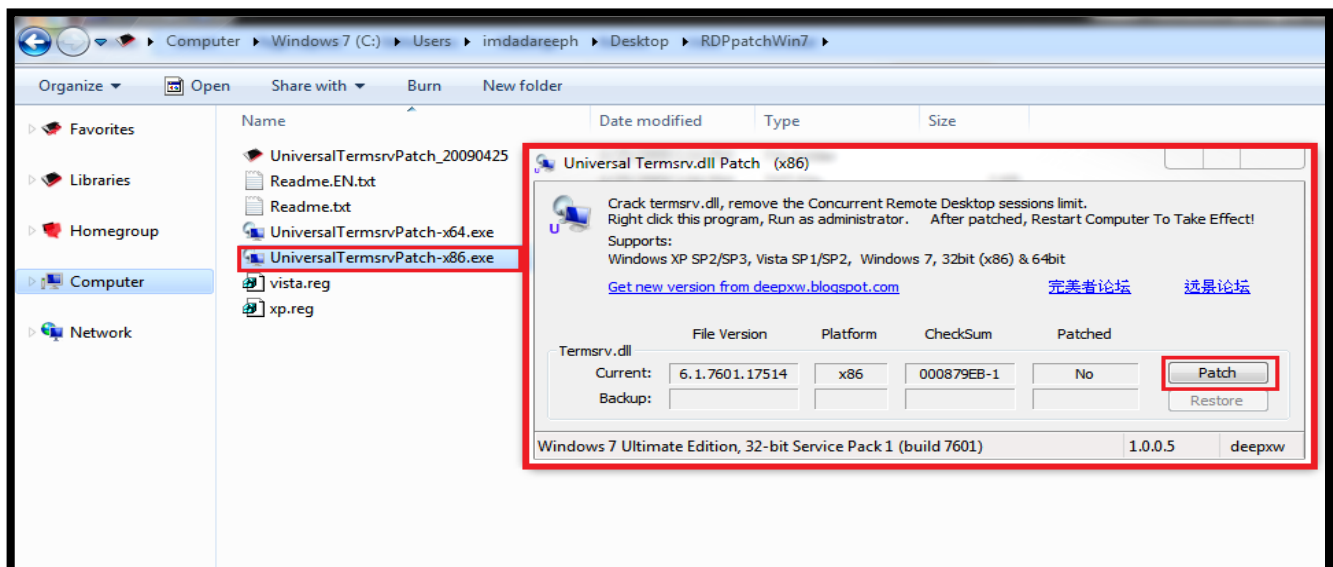
For 32bit(x86): U**niversalTermsrvPatch-x86.exe**

For 64bit(amd64): UniversalTermsrvPatch-x64.exe

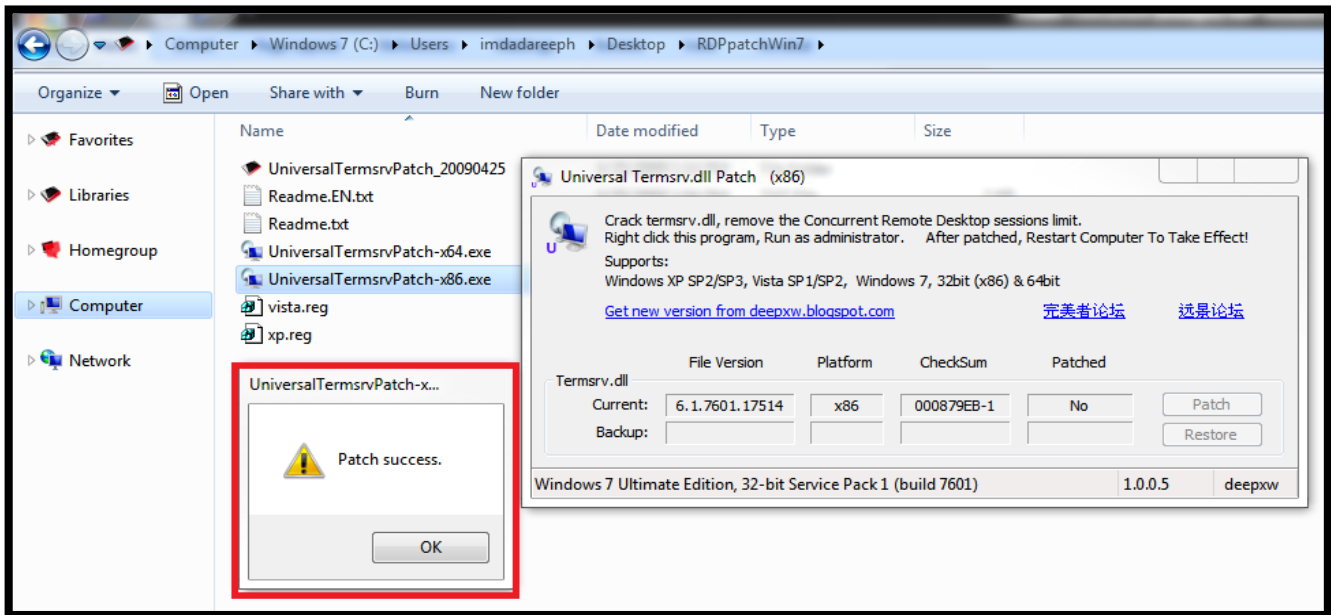
Require administrator rights. Right-click the exe file, select Run as Administrator.



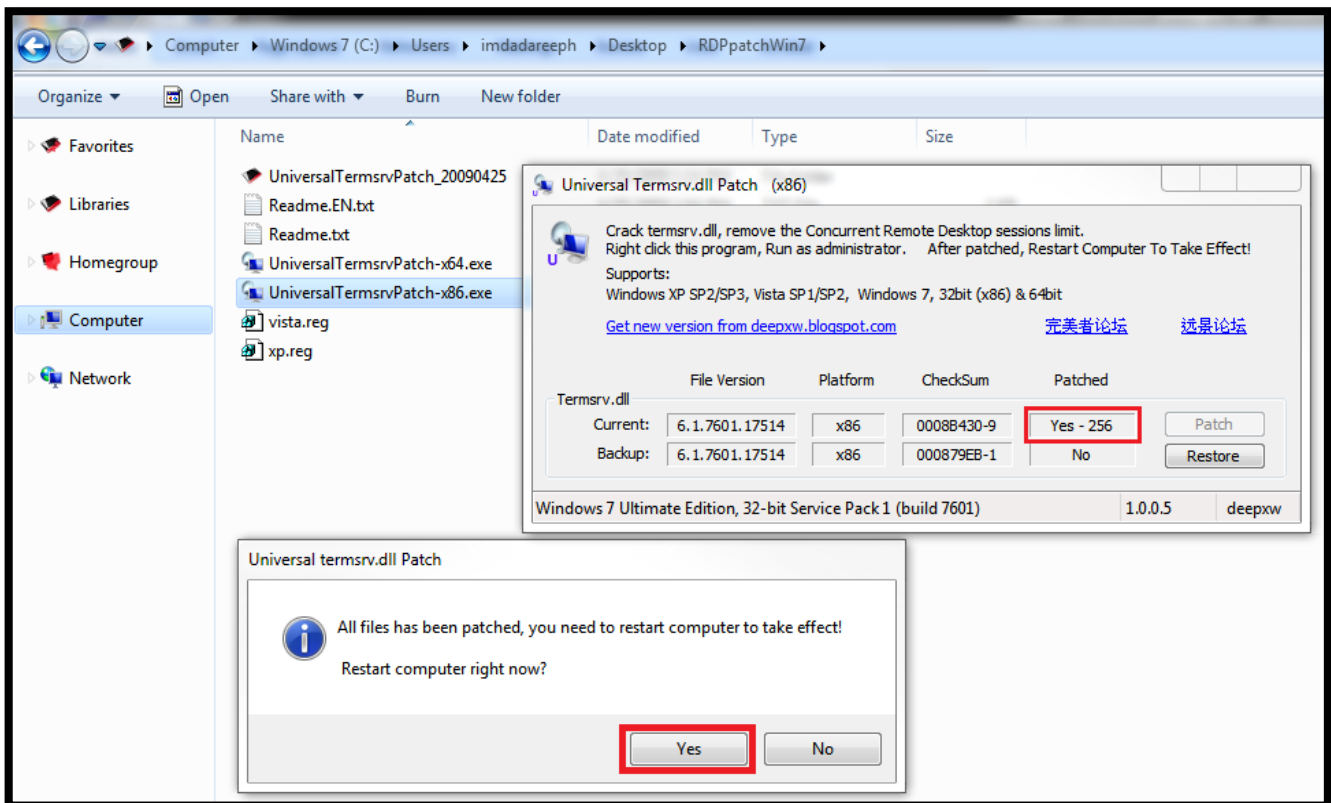
Click on Patch to Install



Click on OK



Click Yes to Restart- Installation complete.



Note: If wanted to restore the original Termsrv.dll file you can run the Universal Termsrv.dll Patch utility and select restore.