

XP Unlimited software

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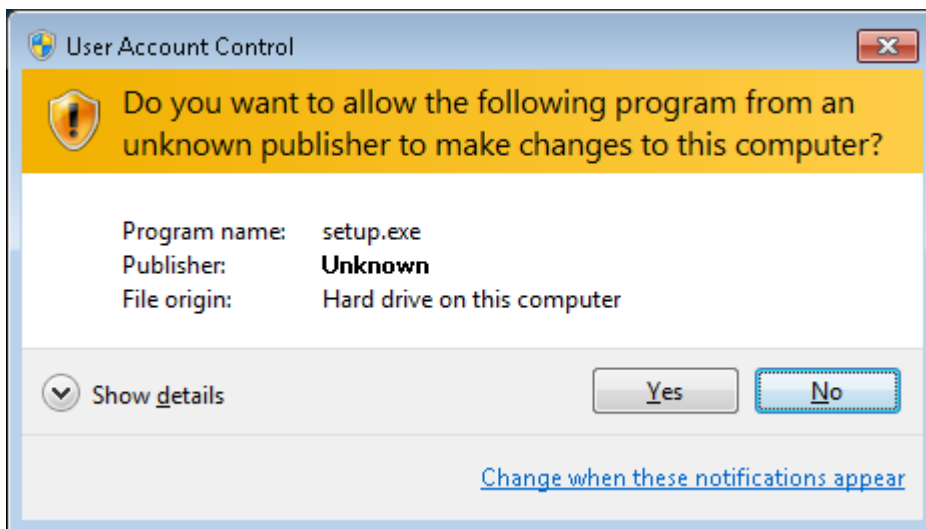
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Installation of XP Unlimited Classic

Setup Program

Administrator

Only an user with Elevated Administrator access on the system can install the XP Unlimited software.



No other users should be active while installing

Be sure that nobody is logged in except for the Administrator. In case other users are logged in, systemfiles and settings are locked and can not be updated by XP Unlimited.

32 bits versus 64 bits

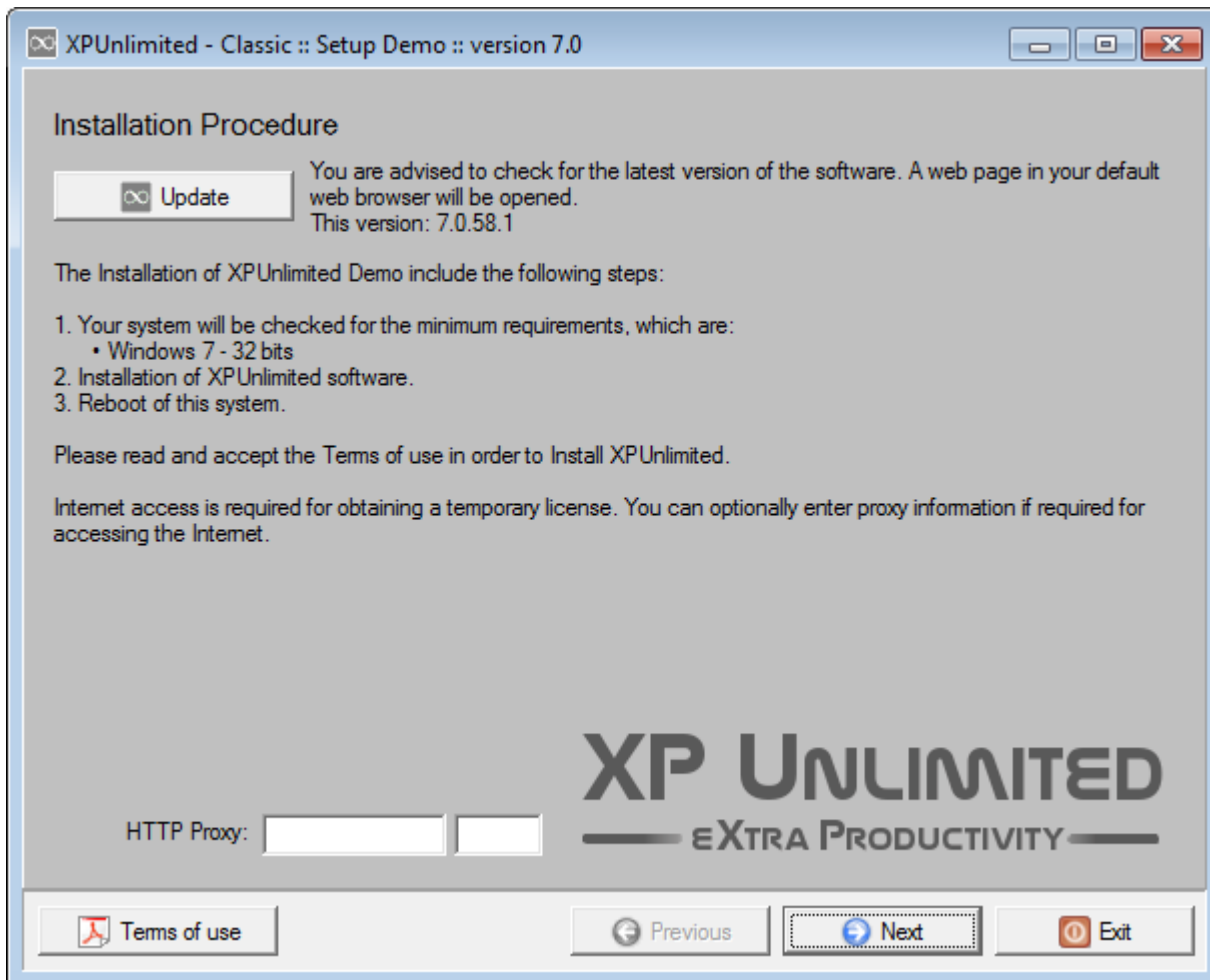
XPU Classic Version 7.0 is for Windows 7 –32 bits

XPU Classic Version 7.1 is for Windows 7 –64 bits

There are no functional differences between the 32 and 64 bits versions of XPUnlimited.

Installation Procedure

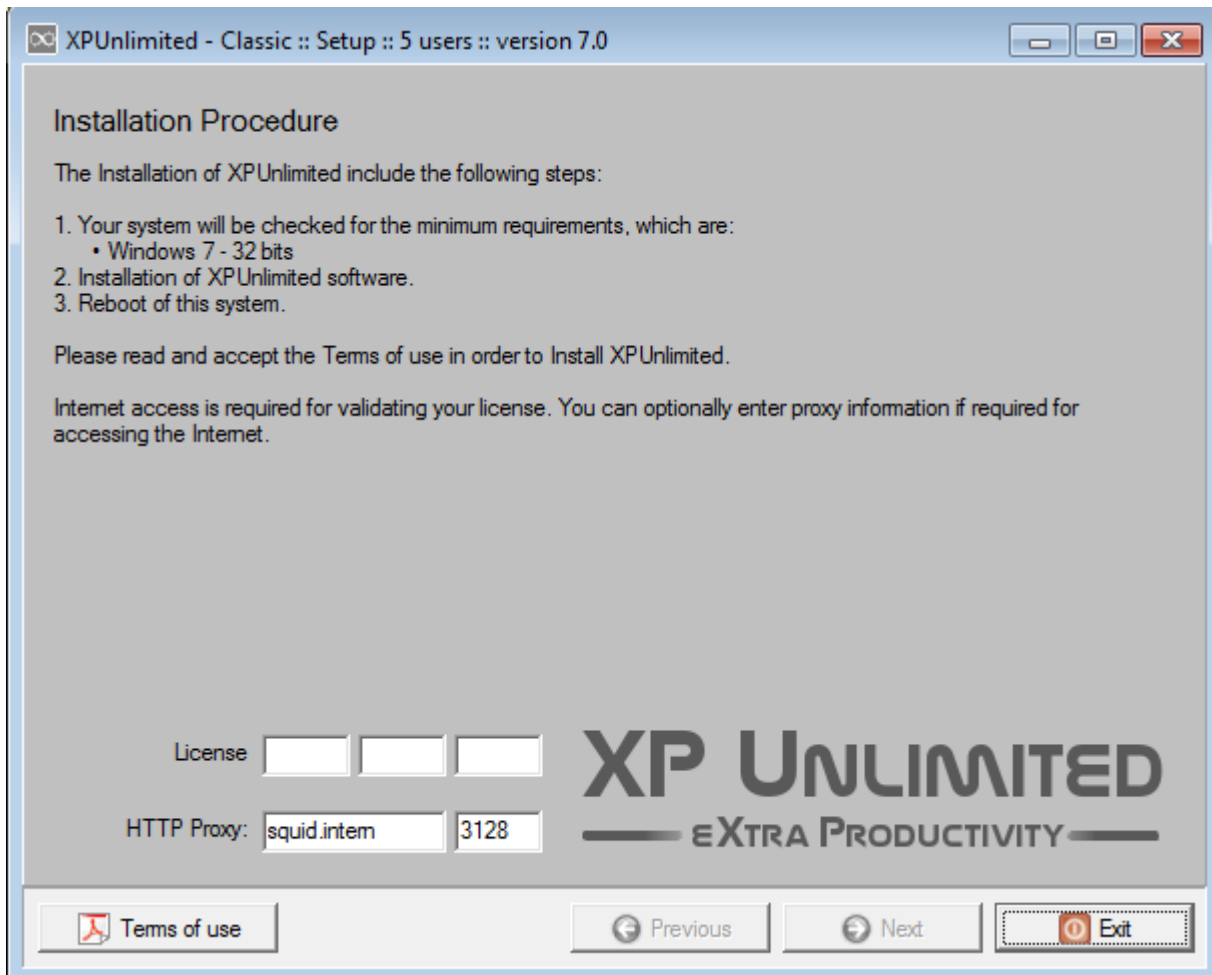
In the first screen of the "Demo Version" you are requested to read the Terms of use and acknowledge them. The demo version also contains a "check for update" button in the first screen:



The reason behind the Update button is that old versions of XP Unlimited seem to wander around on the Internet. With this Update button you can verify whether or not this version of XP Unlimited is up to date or out of date.

The Demo version needs to access the internet for obtaining a temporary license. The Demo will run for 60 days.

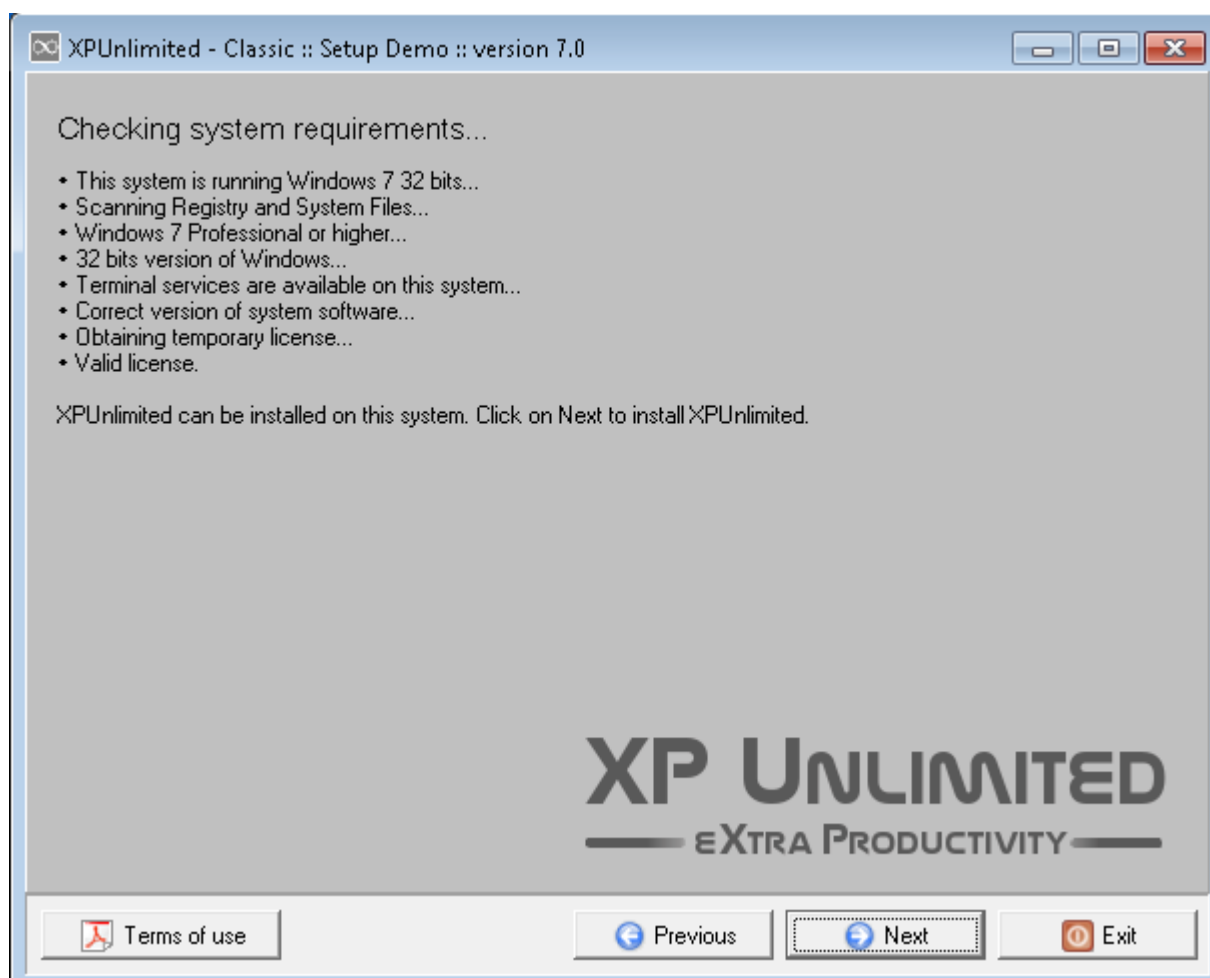
In the first screen of the "Unlimited version" you are requested to enter your license code. You are also requested to read the terms of use and acknowledge them.



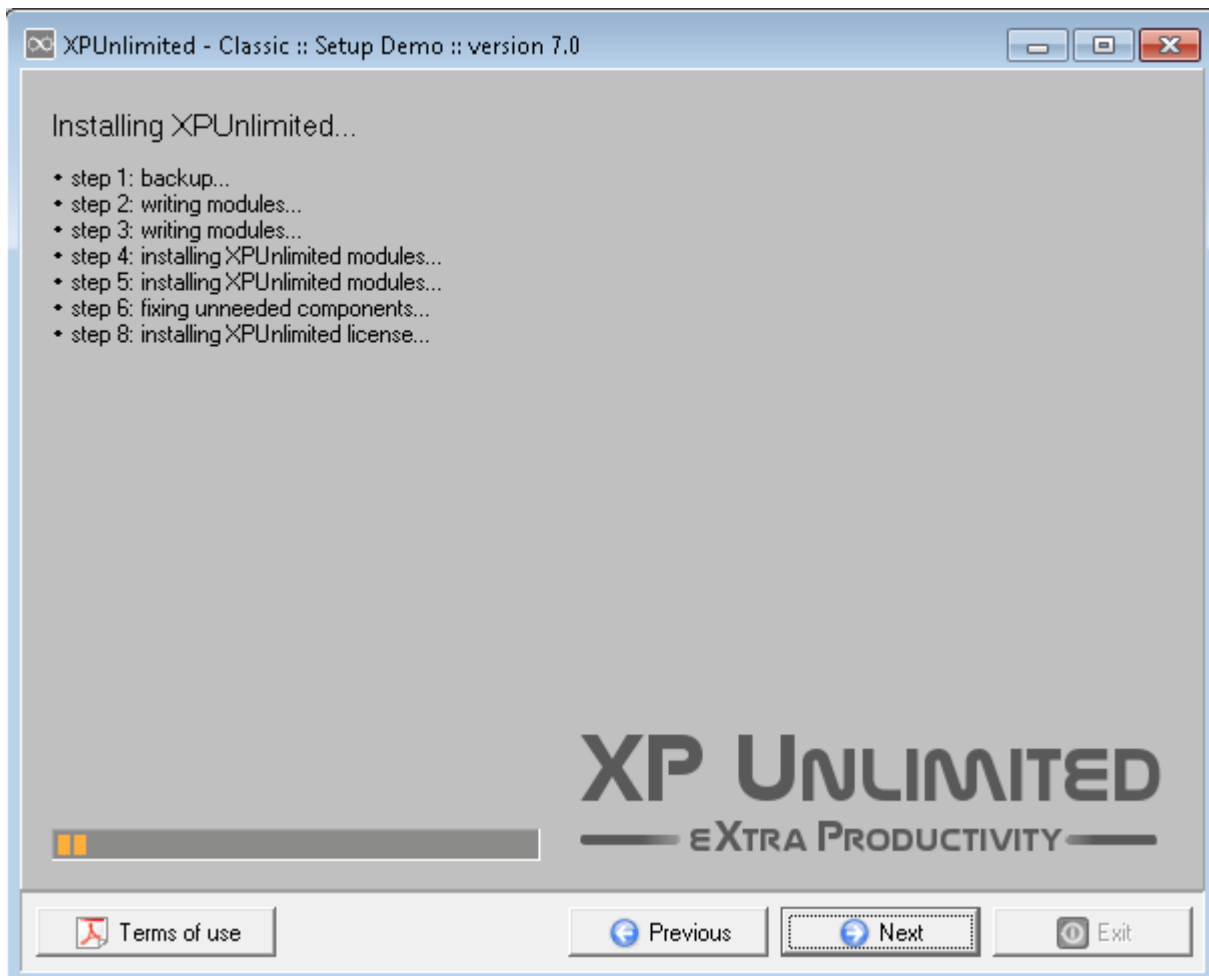
After entering you license code and the acknowledgement of the Terms of use, the Next-button becomes available.

The two fields for the HTTP Proxy are optional. Above entries are just an example.

A HTTP-request and reply is sent to our licenseservers in order to validate your license.



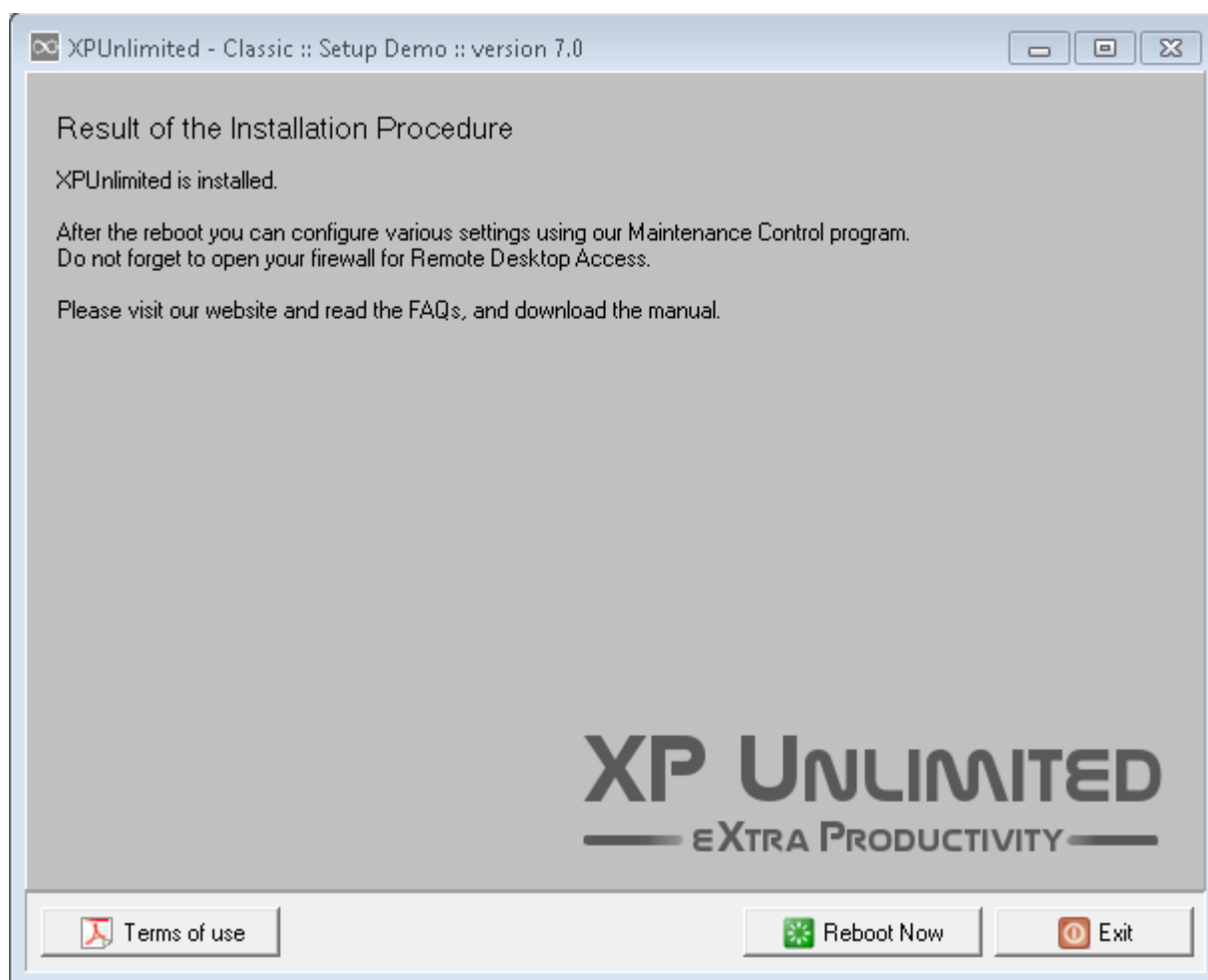
The Setup program checks whether or not the installation of XP Unlimited is possible. In case it is possible, you can click on Next in order to install XP Unlimited. If you click on Exit now, nothing will be installed.



The XP Unlimited software is installed in a couple of steps.

If you are wondering about some missing steps: these steps are only used in the Unlimited version of XP Unlimited, and are done for validating your license by contacting our website, and installing the license on your server. When installing the full unlimited version, your server needs to be connected to the internet for validating (once) of your license.

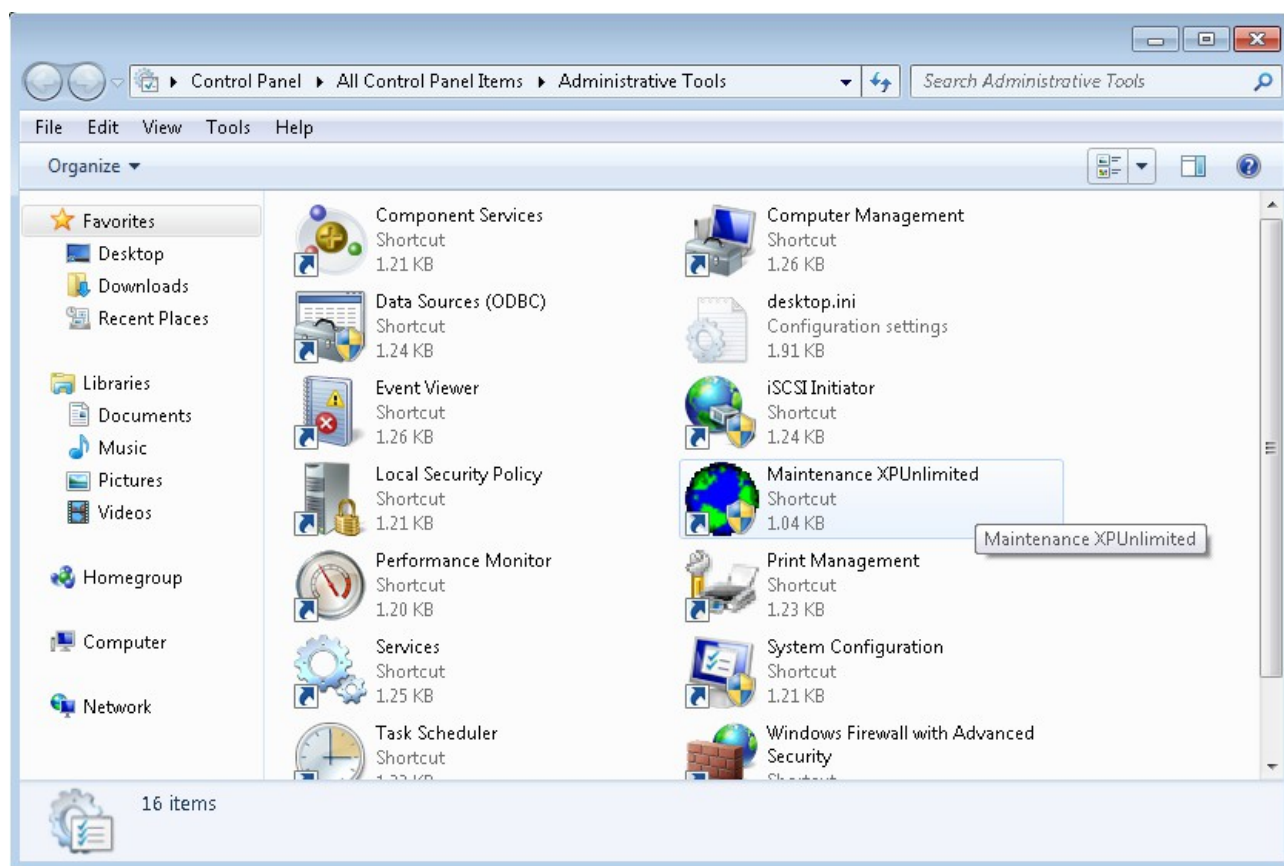
The full version can be re-installed on the same hardware in case of a problem.



The software is installed. You are one reboot away from using the XP Unlimited software.

Don't forget the actions as described in chapter "Additional steps for using XP Unlimited"

Result of the installation



A program entry will be made in the Administrative section of the Server.

Additional steps before using XP Unlimited

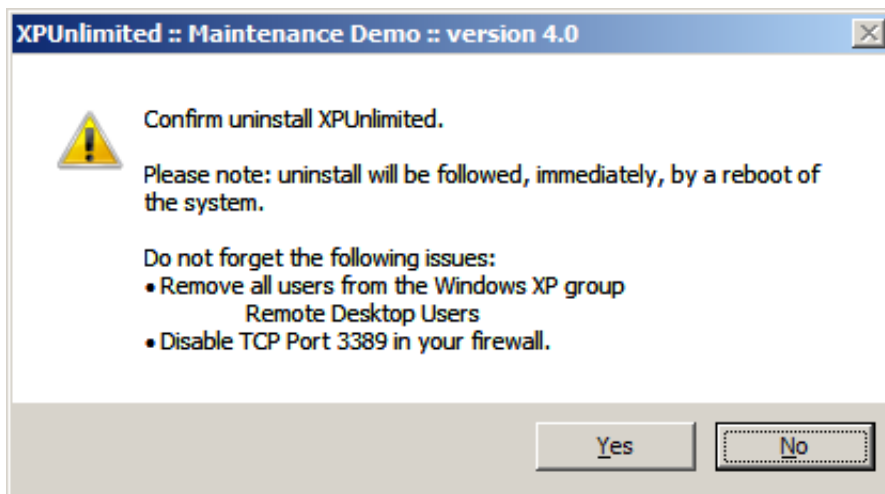
After the installation of the XP Unlimited software, and after the reboot of the system, you need to perform a couple of steps in order to use the XP Unlimited software:

- Create users that can login. If your Windows system has only one user, you will hardly use the benefits of the XP Unlimited software.
- Make sure that all users have a password. It is not possible to have a remote desktop session with an user ID that has no password. This is simply to unsafe.
- Make sure that all users are member of the group "Remote desktop users". If an user is not a member of the group "Remote desktop users", this user will not be allowed to have a remote desktop session. You can also use our Maintenance Program to give any verified user access to the XP Unlimited server. A verified user is an user who has entered his username and password.
- Open your firewall for remote desktop sessions. The port that needs to be open is TCP port 3389. Default this port is closed, so your Windows system does not allow you to have any remote desktop session.

Important: Sometimes you might turn off the Windows Firewall because you are testing a system and while doing such you are not interested in the protection as offered by the Windows Firewall. It does happen that the firewall is turned on again, without informing you. An example of this behaviour is joining or un-joining a Windows system from a domain. After the (un)join, the Windows Firewall is turned on again.

Please visit our website, specific the support-pages. You will find detailed examples and howto's between our FAQ's which describes how you can perform these steps. It is not difficult at all; most likely you can perform these steps in a couple of minutes.

Un-install



Using the Maintenance tool you can un-install the XP Unlimited software. Prior to un-installing this notification is shown.

The Maintenance tool is described in paragraph 'Operations of XP Unlimited'.

No other users should be active while un-installing

Be sure that nobody is logged in except for the Administrator. In case other users are logged in, systemfiles and settings are locked and can not be restored by XP Unlimited.

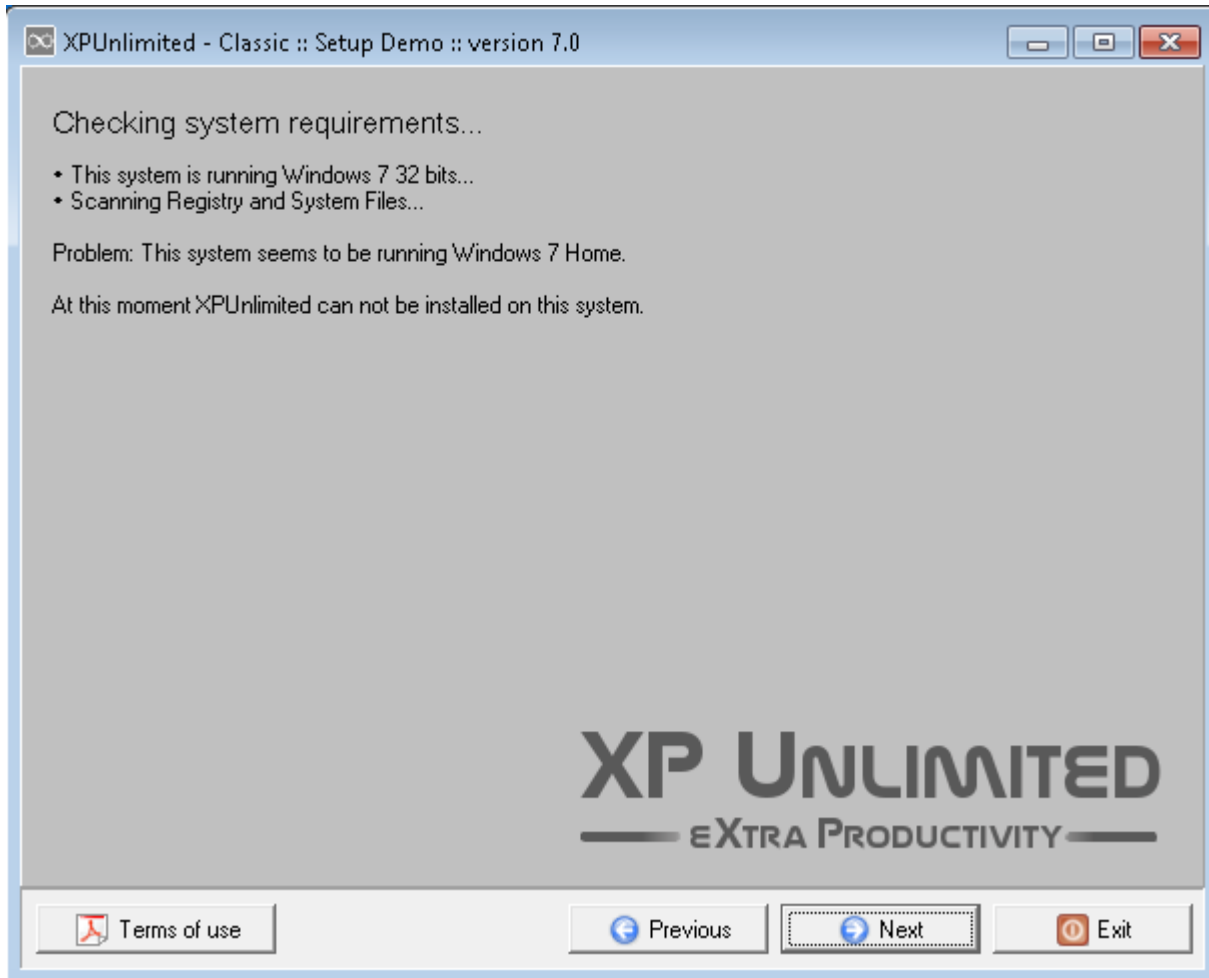
Manual activity after un-install

After the un-install of the XP Unlimited software you should perform the following actions:

- Configure your firewall in such a way that remote desktop sessions are not possible.
- Remove all users form the group Remote Desktop users.

Setup Problems

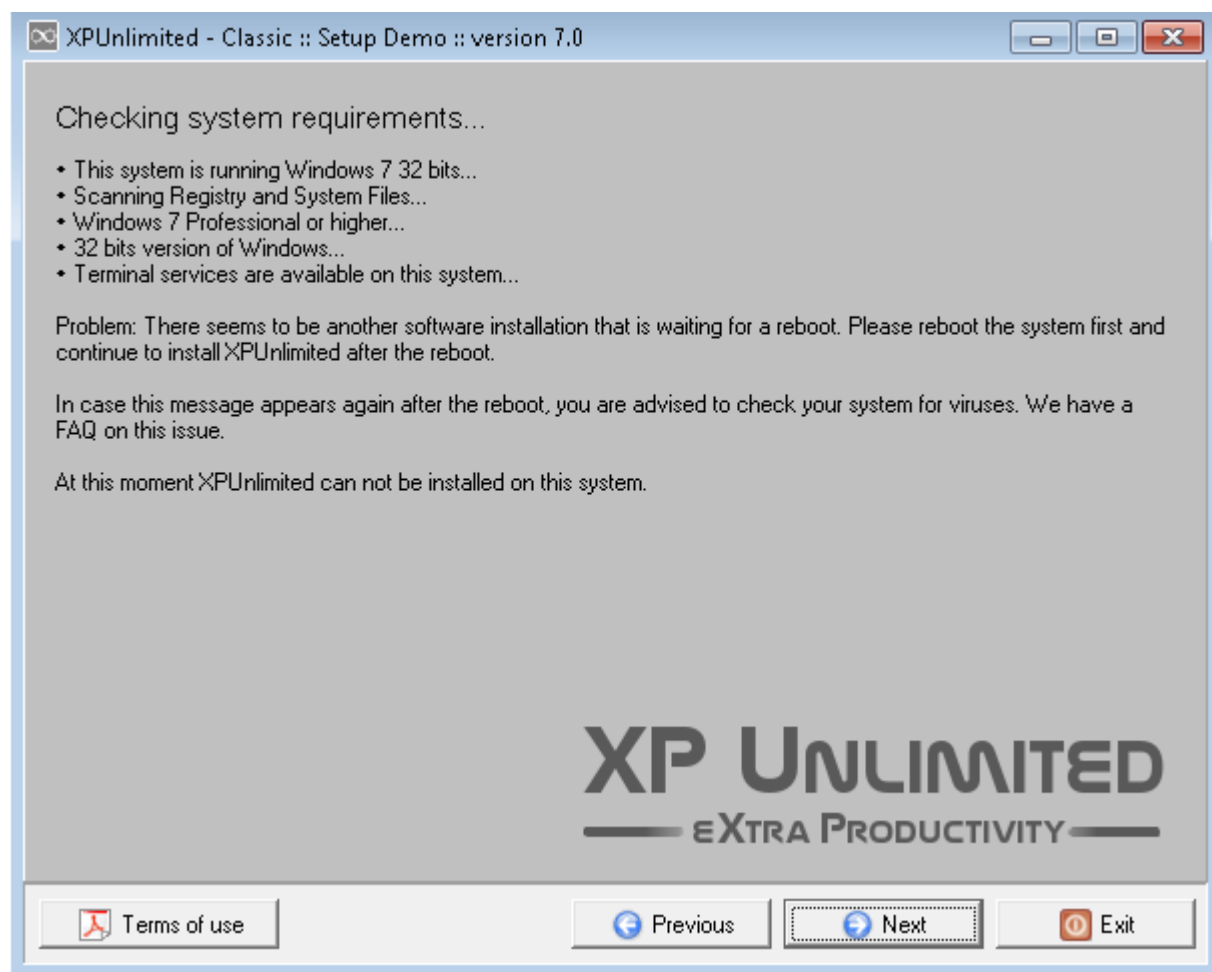
Example 1



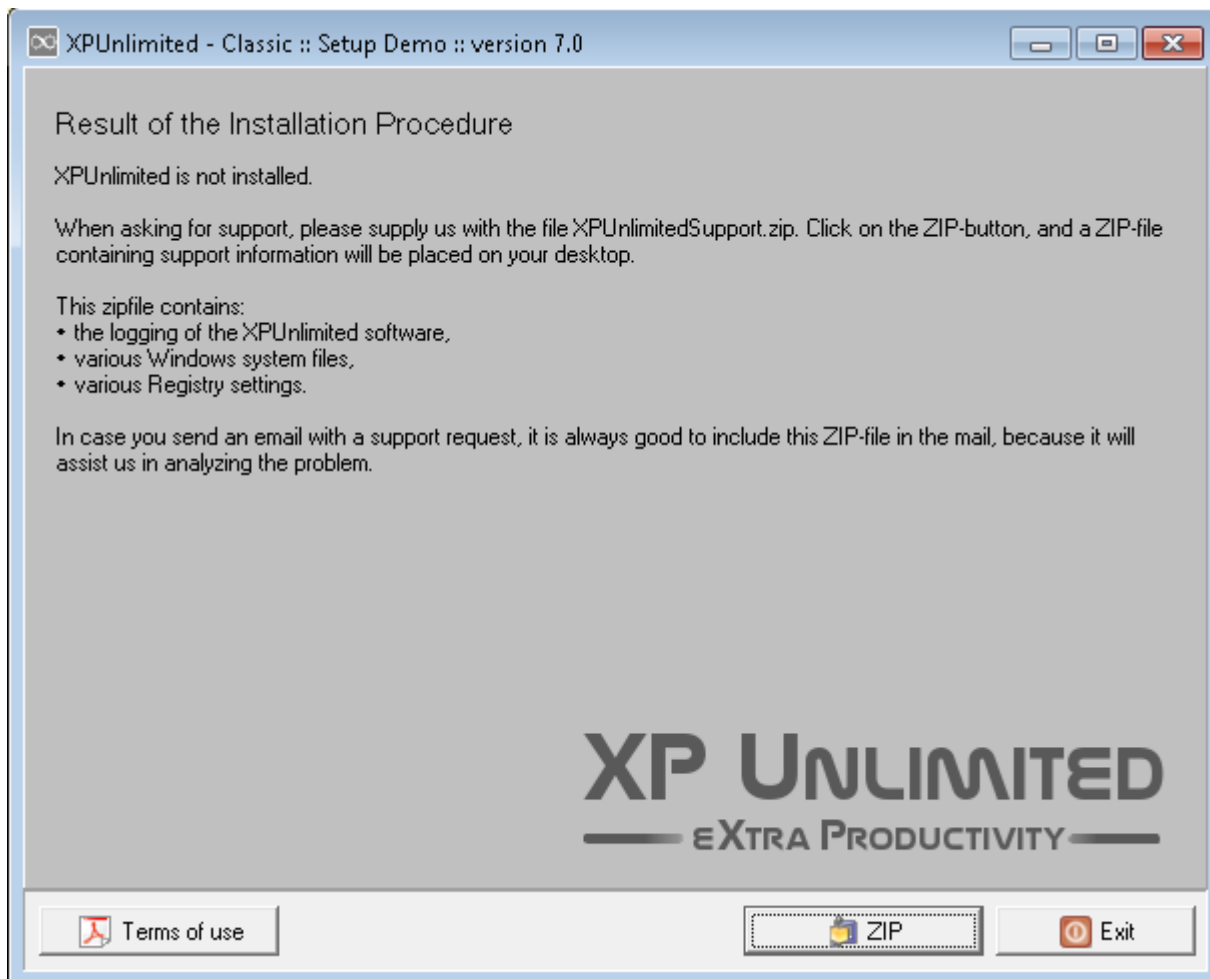
The Setup program does a checking of the system for requirements. In case the requirements are not met, you will be informed what the problem is.

XP Unlimited can not be used on Windows Home.

Example 2



Final screen in case of Setup problems



In case the Setup program decides that installation is not possible, it will finish as shown.

If you need support on the problem, you are requested to supply us with the XPUnlimitedSupport-ZIP-file. This will assist us with analysing the problem. You can use the ZIP-button to create the ZIP-file. It will be placed on your desktop.

Upgrade of XPUnlimited

The Setup program always behaves as if it is doing an upgrade. This implies that it will respect the settings that are already done.

An upgrade from the Demo version to a Full version is therefore quite simple:

- Buy the Full version,
- Run the Setup of the Full version,
and that's it.

The Upgrade behaviour does apply to:

- An upgrade from XPU Classic to XPU Enterprise,
- An upgrade from Demo to the Full version,
- An upgrade from XPU old version 1.2.3 to XPU new version 1.2.4.

and it applies to:

- A **downgrade** from XPU version 3.2.1 to XPU version 1.2.3

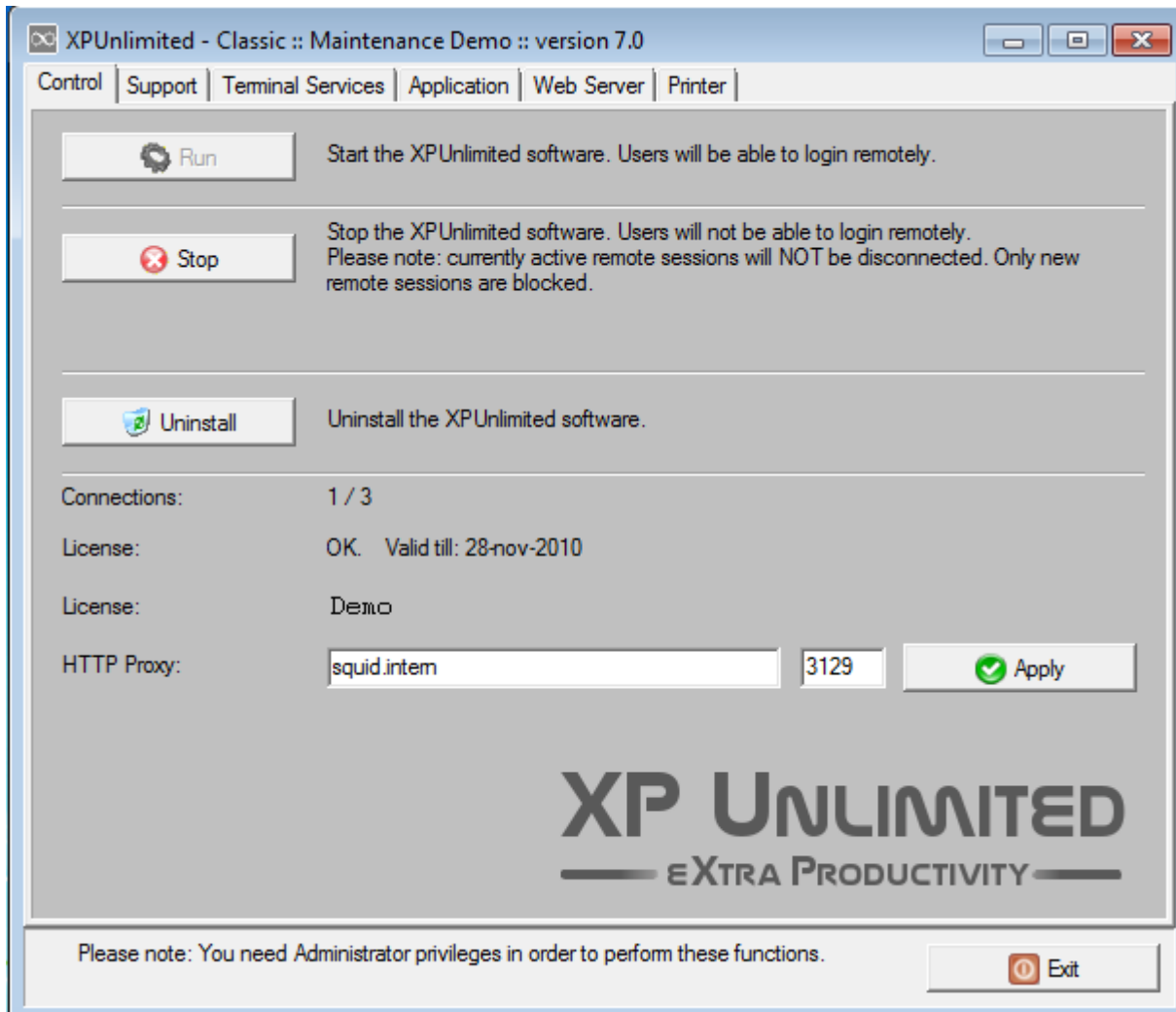
It is possible to downgrade XPU, although we would not know why you would want to do that. If you downgrade from Full version to Demo version, the result will be that your server is again limited to 3 users.

If you do not want the Setup program to do an upgrade of your current XPU server, you must first un-install the current XPU software, and after the un-install run the Setup program.

Operations of XP Unlimited

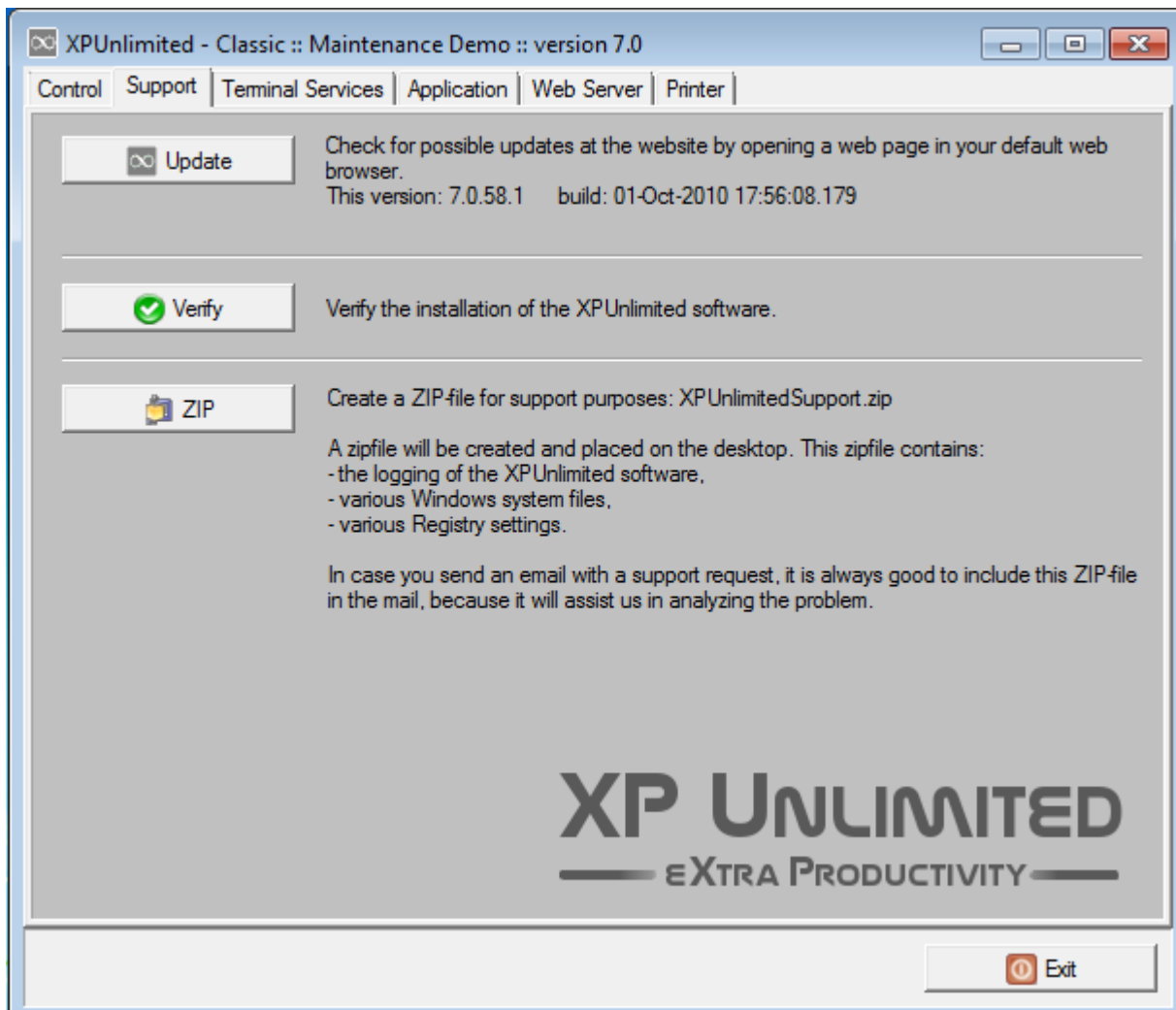
Maintenance tool

The Operation of XP Unlimited can be monitored and controlled using our Maintenance tool:



The first tabpage can be used to Start and Stop the functionality of the XP Unlimited software.

You can also first tabpage for un-installing the XP Unlimited software.



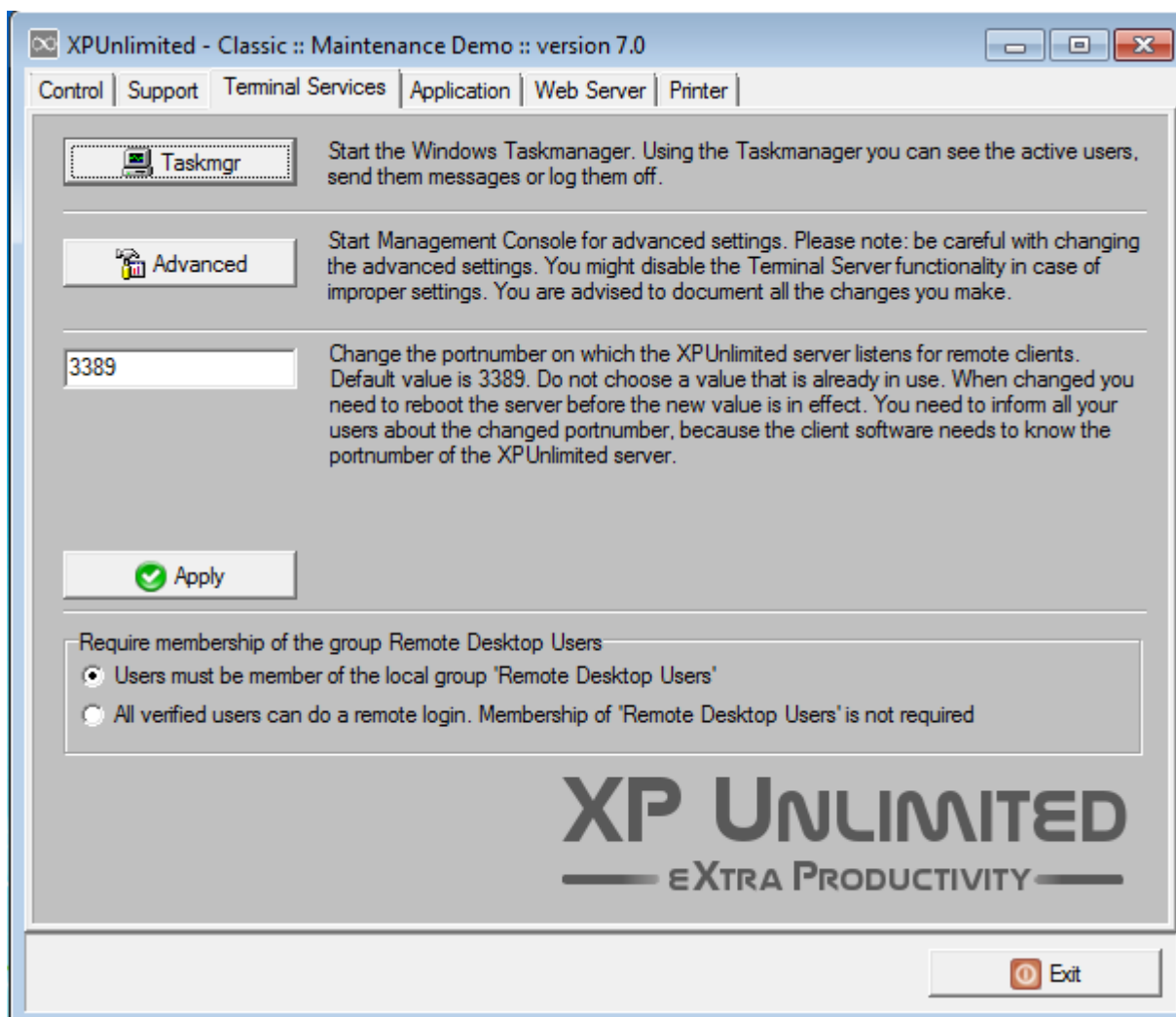
The Update-check button opens a website-page of the XP Unlimited website. This page will inform you whether or not you are running the most recent version of XP Unlimited, or an old version.

The Verify-button does the same check that is done while installing. Sometimes during a Windows-Update or because of the installation of other third-party software, important settings or files are replaced. By running a verify, you will be informed what is wrong. Most of times a re-install of the XP Unlimited software using the Setup-program will fix all settings.

The ZIP-button creates a ZIP-file on your desktop. This ZIP-file contains the information IPConsult needs for giving you support.

Advanced Terminal Services Control and Settings

The third tabpage of the Maintenance tool contains two buttons in order to monitor the users and to do advanced settings.



Monitoring using Taskmanager

Monitoring of Remote Desktop Users can be with the Taskmanager. See the paragraph "Monitoring using Taskmanager".

Microsoft Management Console

Advanced Settings is done using the Microsoft Management Console. When installing XP Unlimited using the Setup program, several default Terminal Server settings are applied in order to make things work. You can do some fine-tuning, but you are advised to be carefully with changing the default settings. You might render your system unusable.

Please read the paragraph "Tips from IPConsult". We have compiled some advices about the Advanced Settings you might consider useful.

Portnumber

You can change the default portnumber which is used by the XP Unlimited Terminal Server for listening for Remote Desktop Sessions. The default number is TCP portnumber 3389.

The range of the custom value is 1000 –65534. Although a number lower then 1000 might be technical possible, this is disabled in order to prevent problems.

If you change the portnumber to another value:

- You will also have to change your firewall settings.
- If you use some kind of router to connect to the Internet, most likely you have defined a NAT-entry in your router in order to forward a port to the XP Unlimited Terminal Server. You must also update this NAT-entry in your router.
- You must inform all you users, because the client software they use for connecting to the XP Unlimited Terminal Server needs to know about the changed portnumber. On our website we have some FAQ's about the client software for clients running Windows and clients running Linux.

Please note: a reboot is required before the new portnumber is used by the XP Unlimited Terminal Server.

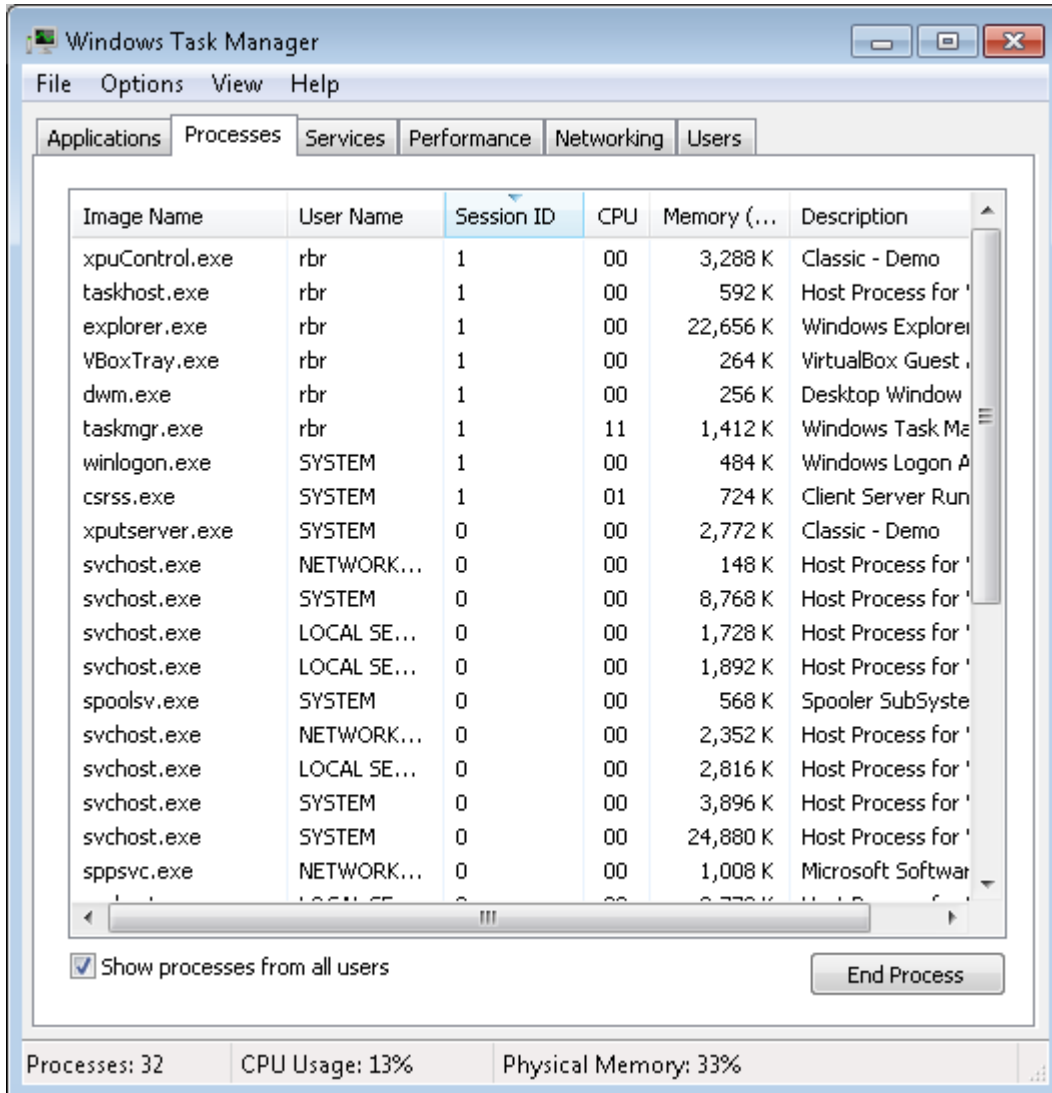
Require membership of the group Remote Desktop Users

Default only users who are member of the group Remote Desktop Users can login. You can remove this requirement by selecting "verified users". A verified user is an user who has a valid username *and* password defined locally in Windows.

Monitoring using Taskmanager

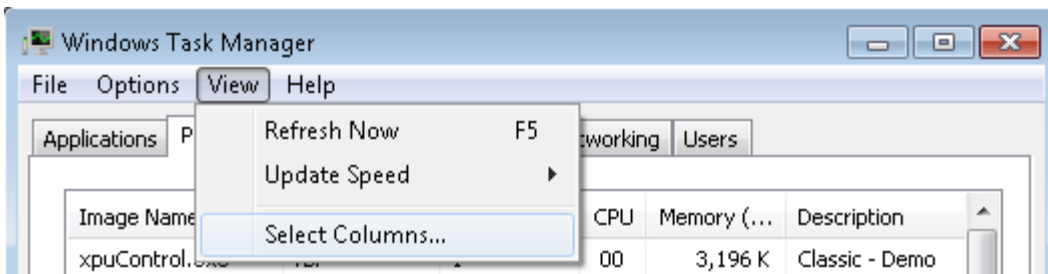
Processes

The processes tabpage of the Taskmanager shows you the running processes of all users.

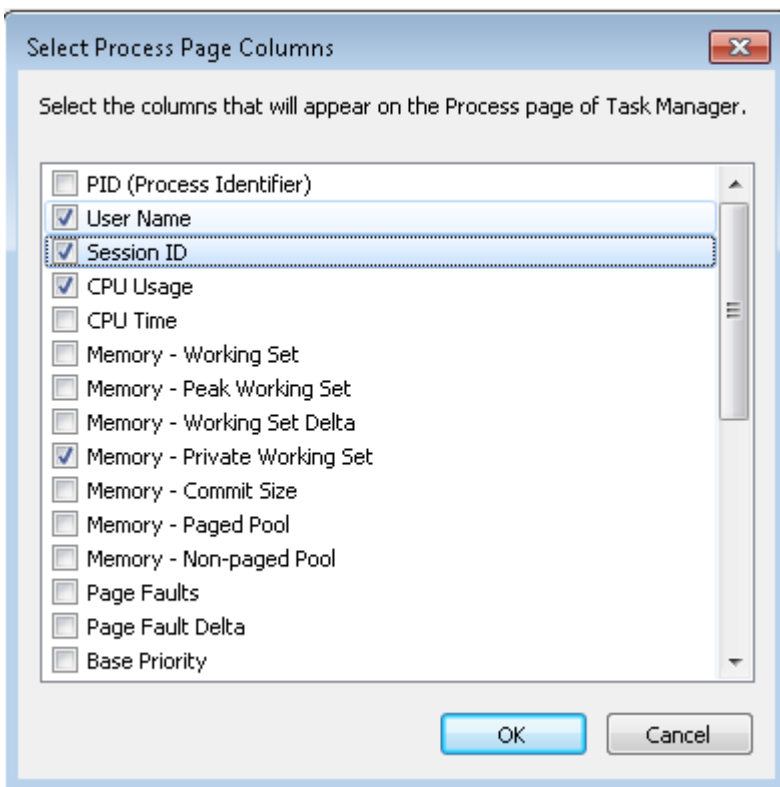


Please note: The Maintenance Program can only be used when started with Elevated Administrator rights. Because of this, the Task Manager as started by our Maintenance Program is also running with full, elevated Administrator rights.

In case you do not see all columns, use the menu of the Taskmanager to get more columns:



We like to see at least the following columns:



After enabling the 'User Name' and 'Session ID', you can sort all processes using the columns User Name or Session ID.

Users

The Users tabpage of the Taskmanager shows you all users.

xpuViewUsers

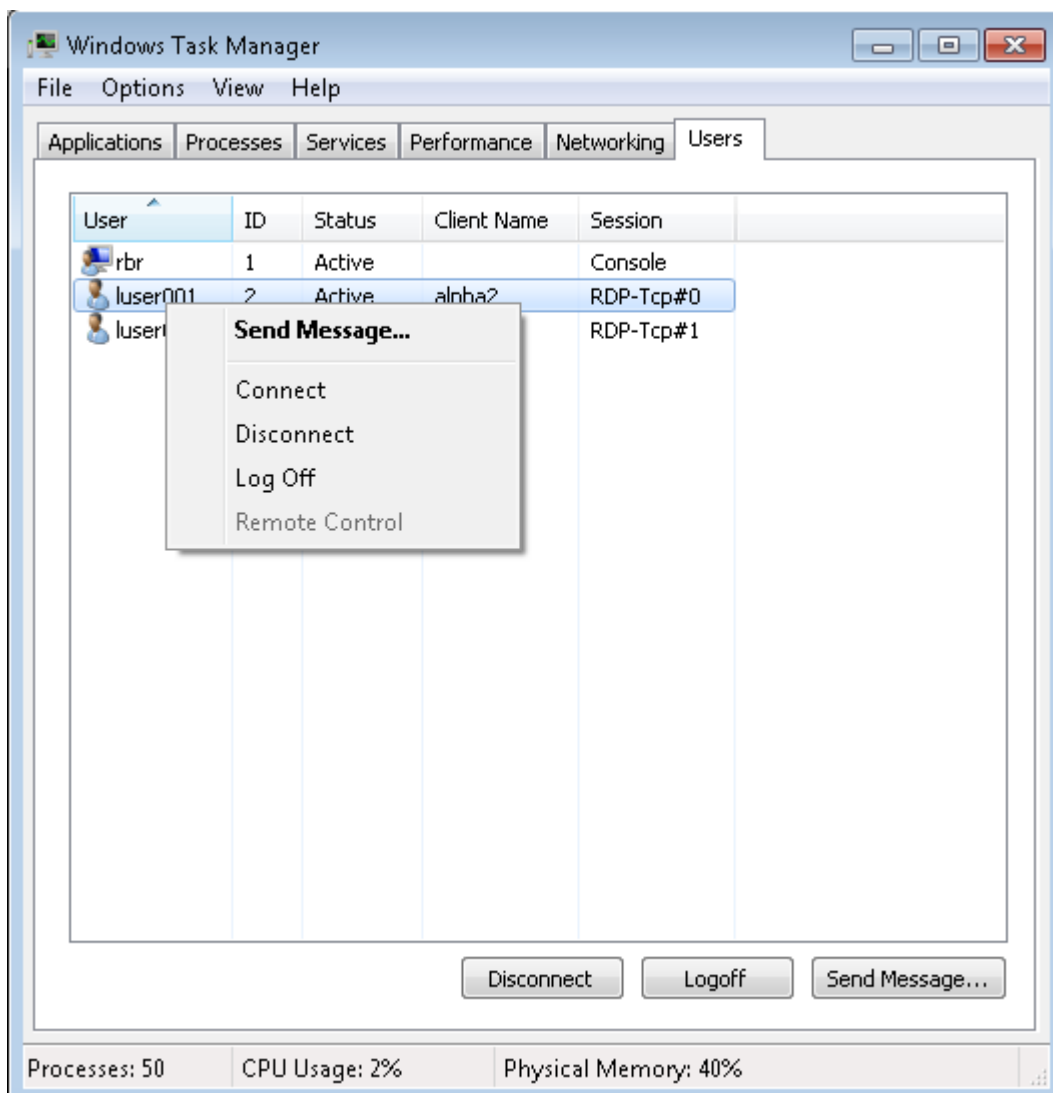
Whatever is possible with this tabpage, is also possible with the tool xpuViewUsers. It is installed in C:\Program Files\XPunlimited

Send Messages

Each user can send messages to the another users.

Disconnect and logoff

The Administrator can also disconnect or logoff an user.

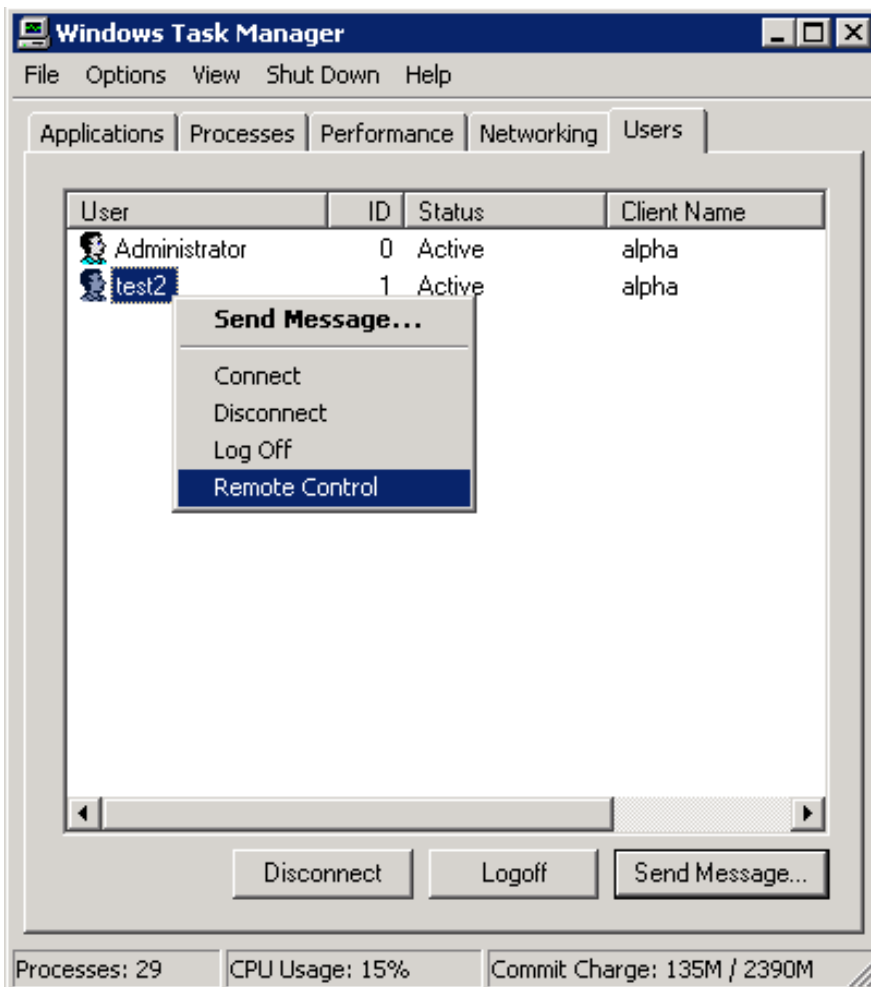


When a user gets disconnected, his desktop and all of his applications keep on running. When the user connects again (entering his userID and password) he will get his own desktop back with all the active applications. This is useful for the user, but it might not be desirable for all the other users. A running desktop with applications consumes memory and cpu. Therefore it would be better if the user logoffs, because then his desktop and applications will be terminated. This saves memory and cpu.

Remote Control

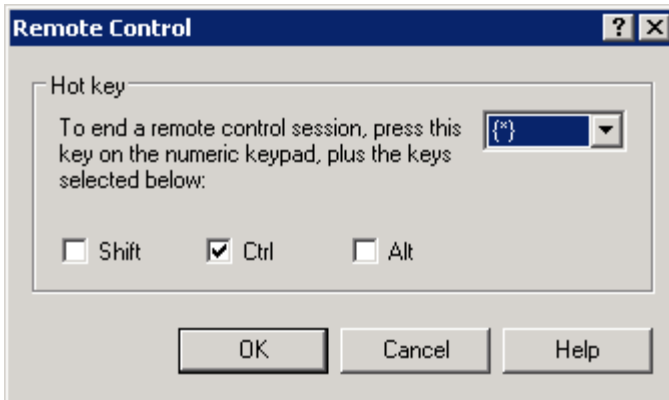
When working behind the console of the XP Unlimited Server, it is not possible to ‘shadow’ or to ‘remote control’ another session.

However, when working using a Remote Desktop Session, an Administrator can ‘shadow’ or ‘remote control’ another session:



Using the Taskmanager, an Administrator or an user with Administrator privileges can Remote Control the other users.

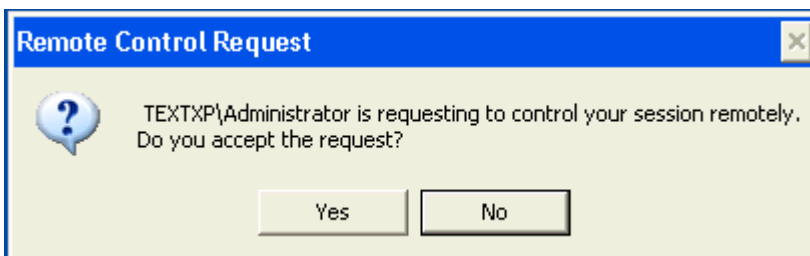
The following dialog is shown:



The hot-key Ctrl-* (found on the numeric keypad) is a good default hot-key to exit the Remote Control Session. The user can not use this hot-key. Only the Administrator can use the hot-key to terminate the Remote Control Session.

Terminating a Remote Control Session means that both the Administrator and the user continue to work with their own session; terminating a Remote Control Session does not imply that the user or Administrator get disconnected.

The user which session is about to be "remotely controlled" by an Administrator, has to acknowledge it:

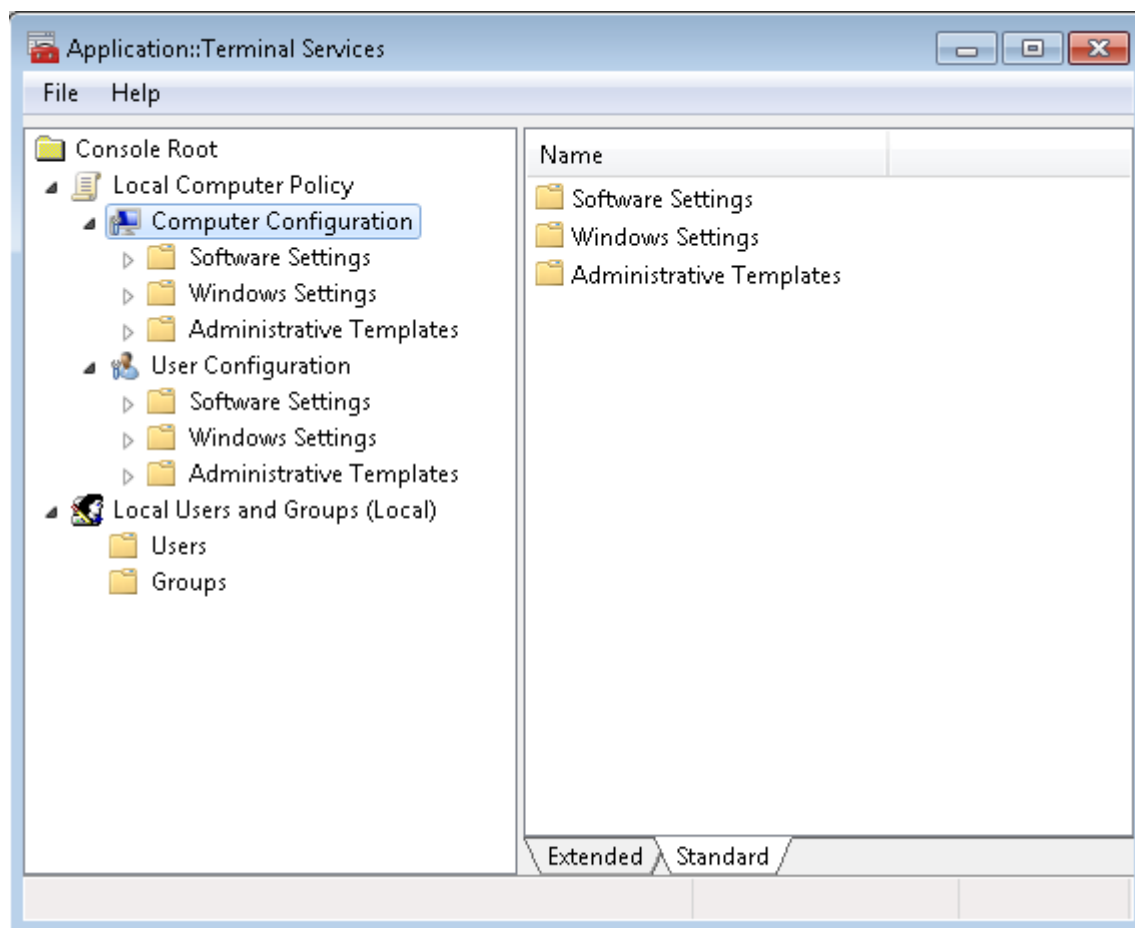


Using the Advanced Terminal Settings (see next paragraph) it is possible to configure the XP Unlimited server in such a way that a Remote Control Session is possible without acknowledgement of the user.

Advanced settings using Microsoft Management Console

Terminal Services

The initial screen of the XP Unlimited Terminal Services using MMC is as follows:



Please note: initial it can take several seconds to show this screen. When opening the "Administrative Templates" it might take several seconds depending on the cpu-speed of your system. This is normal; this is the way it works.

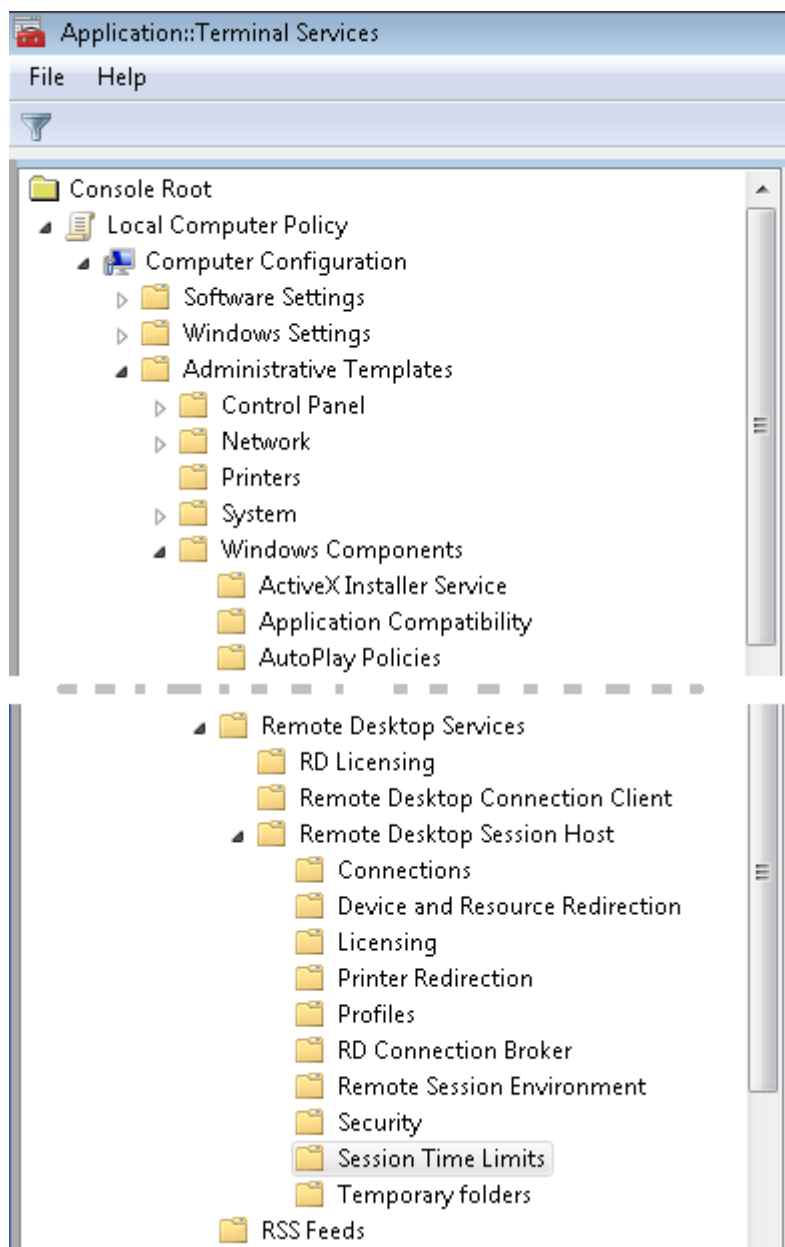
This screen gives you access to

- Advanced Settings of Terminal Services.
- Users and Groups.

The Advanced Settings of Terminal Services can be used for some fine-tuning. Please read the paragraph "Tips from IPConsult". We have compiled some advices about the Advanced Settings you might consider useful.

The Users and Groups can be used to give users a password, to make them member of the group "Remote Desktop Users", etc. You can find some examples on Users and Groups between our FAQ's in our website.

By opening the Administrative Templates / Windows Components you can find the Advanced settings of Terminal Services. It is located inside the branch "Remote Desktop Services".



You can do some fine-tuning, but you are advised to be carefully with changing the default settings. You might render your system unusable.

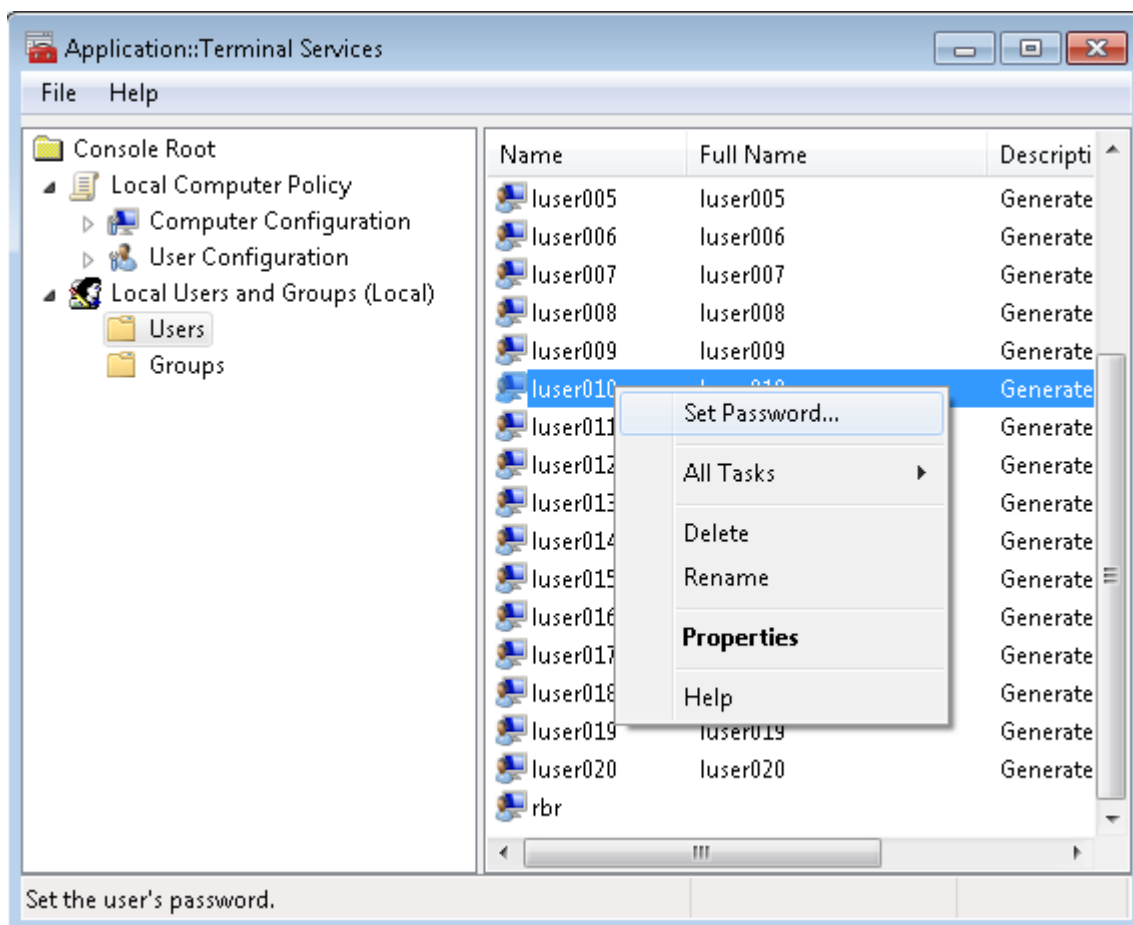
When you click on an option, extra text will appear that explains this option. You are advised to read this text carefully prior to changing an option.

Please note: not all options are implemented. Several options are displayed because Windows 7 shares the same "code base" with Windows Server 2003 and 2008, but not all options are implemented (by Windows or by XP Unlimited).

Reboot required

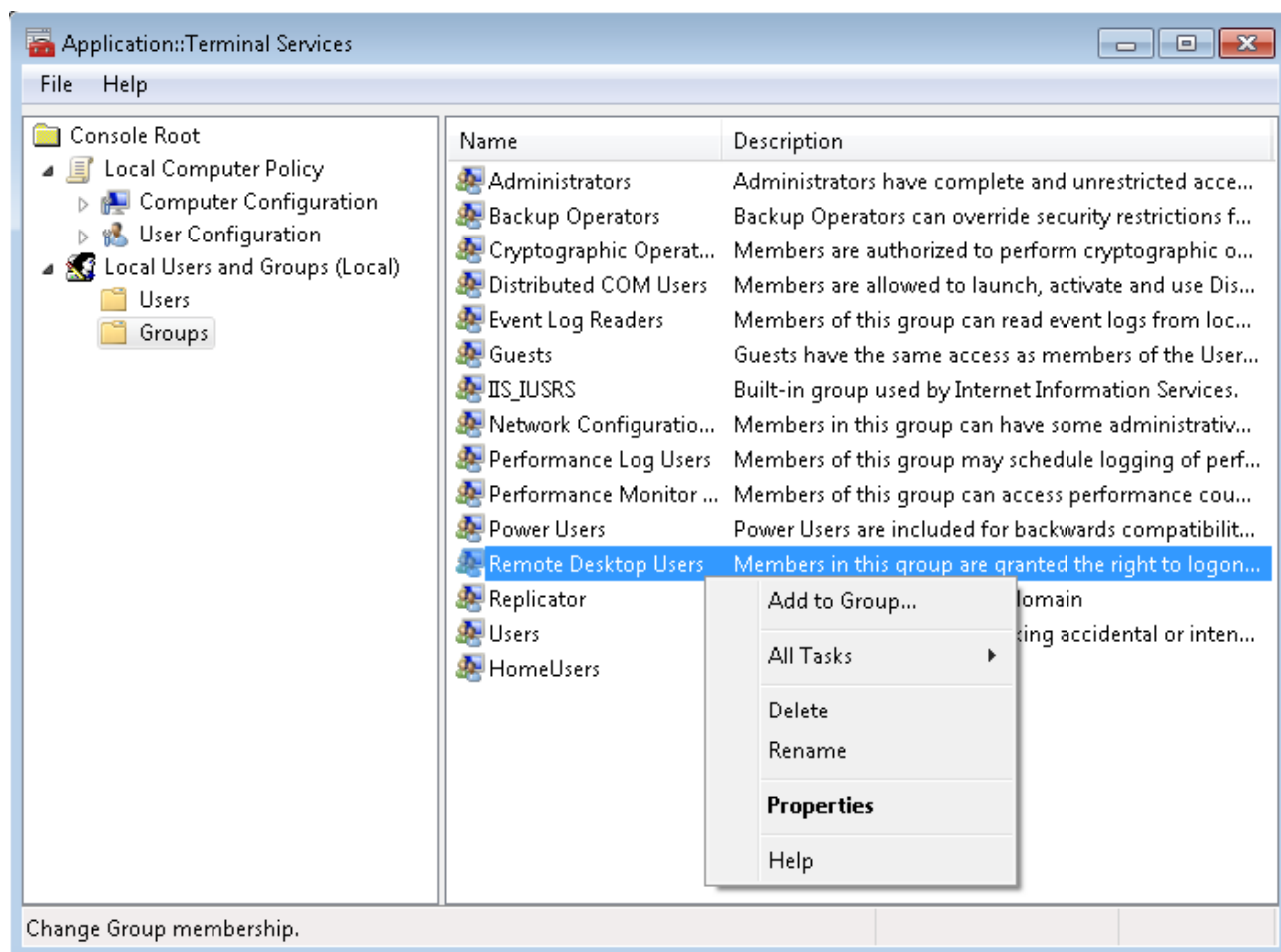
Changing an Advanced Setting of the Terminal Services will require a reboot of the Windows System; the change will be in effect after a reboot.



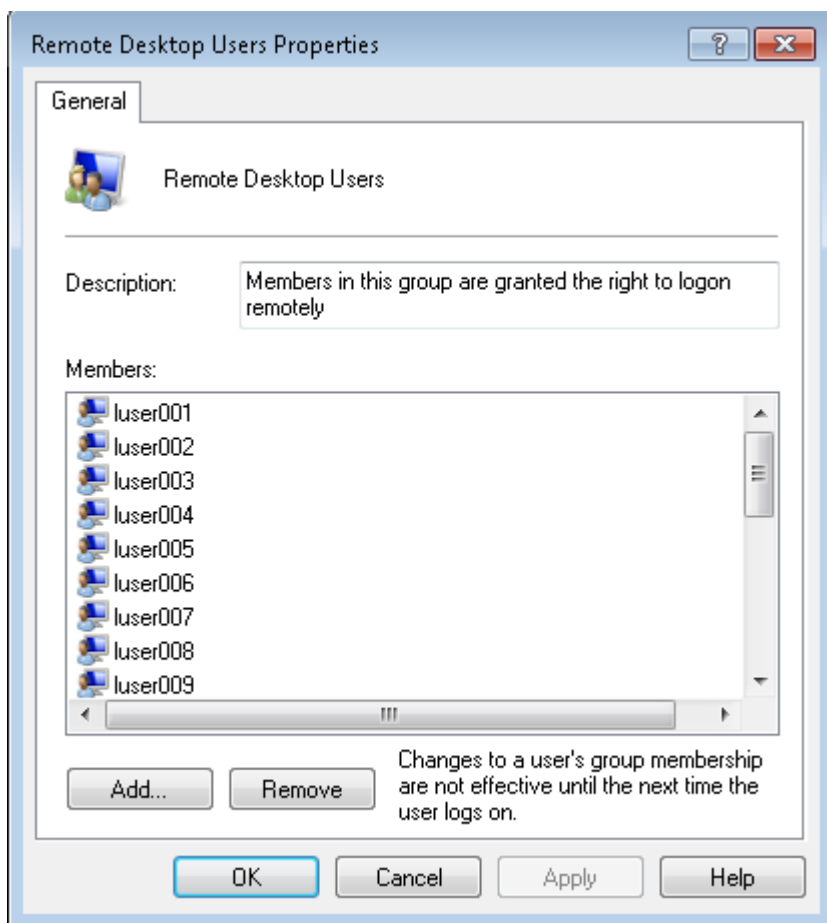


Use the right mouse on a user. The sub-menu that is shown contains the option for giving the user a password.

Users without a password can not have a remote desktop session. This is to unsafe.



Select Groups in the left panel. Use the right mouse on the group Remote Desktop Users. The sub-menu that is shown contains the option for adding an user to the group. Removing a user's membership of the group Remote Desktop Users is also done using the 'Add to Group' menu options. When clicking on the sub-menu 'Add to Group', a dialog is shown that can be used for both adding and removing users.



Only users who belong to the group Remote Desktop Users can have a remote session.

Terminal Services tips from IPConsult

Performance

Enforce Removal of Remote Desktop Wallpaper

Enable this setting and ‘fancy’ desktop wallpapers will not be shown on remote desktops. This will make the remote desktop session faster.

Limit maximum color depth

Set this setting to 15 bit. This will give decent colours for all your applications. Using 24 bit colours will make the remote desktop session (a bit) slower and request more resources from the server, while the user will not really notice the difference between 24 bit colours or 15 bit colours

Remove Disconnect option from Shut Down Dialog

By removing the Disconnect option, a user can not choose to disconnect his session, but only to logoff. A session that is only disconnected consumes resources from the server because the desktop of the (disconnected) user keeps on running and all applications keep on being active. By forcing the user to logoff, the resources of server become available for the other users. Currently there are some problems related to disconnected sessions. It is better to logoff then to disconnect.

Security

Encryption and Security | Always prompt client for password upon connection

A user can save his userID and password in his remote desktop client. Doing so, a user only can do a ‘double click’ on his remote desktop client, and he is logged in. He does not have to enter his name of password, because those two are saved in his remote desktop client.

When he leaves his desk, somebody else could just ‘double click’ on his remote desktop client and logging in on the server.

Using this setting all users are forced always to enter their password.

Sessions | Time outs

Several time-out options are possible. Short time-outs is always a good thing from a security point of view.

Sets a time limit for active but idle Terminal Services sessions

This one should be for instance 30 minutes. After 30 minutes of doing nothing, the remote desktop session will be disconnected or logged off.

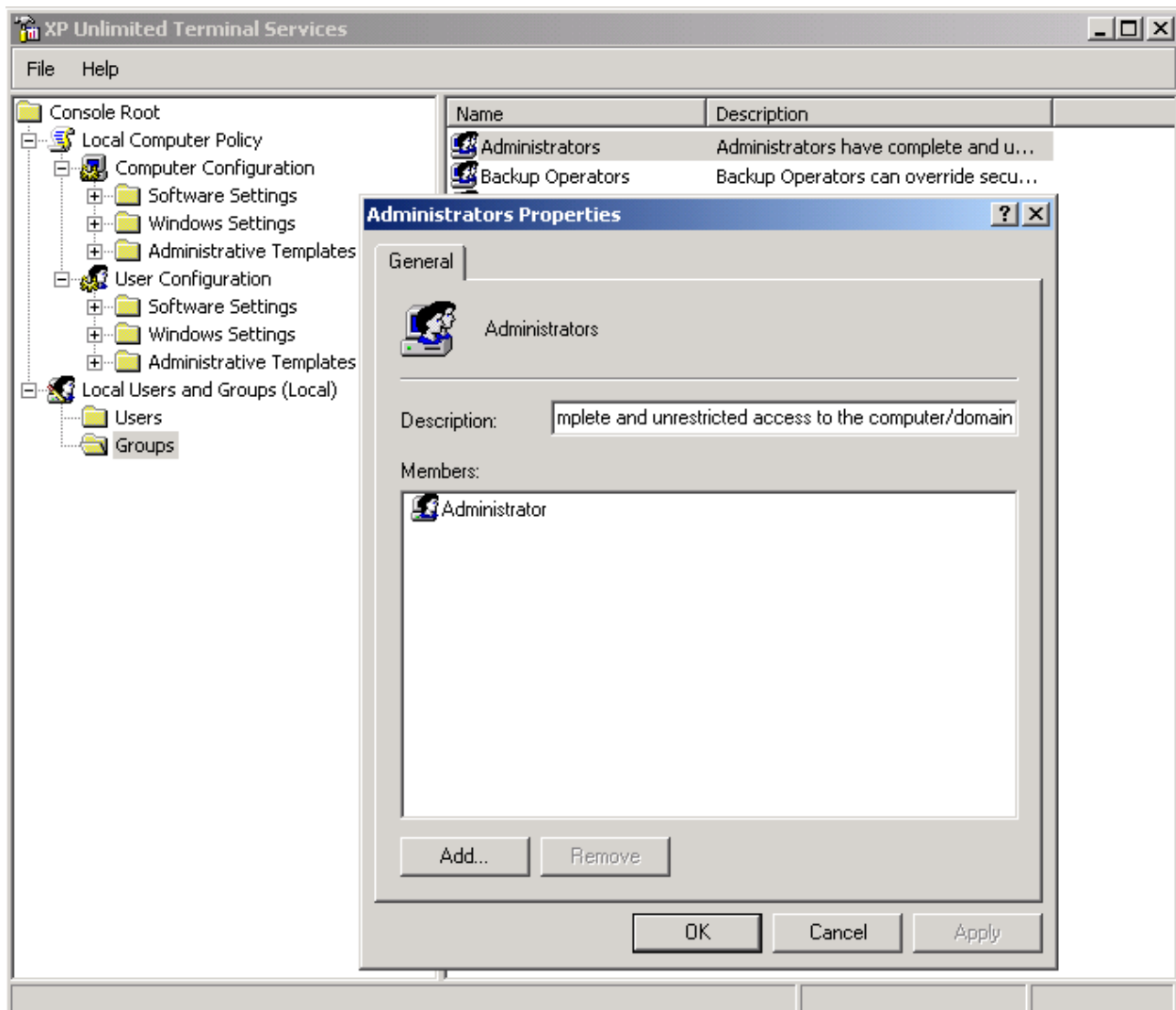
Terminate Session when time limits are reached

When the time limit of 30 minutes is reached, the remote desktop session will not be disconnected, but completely logged off. This saves resources on the server and is also safer from a security point of view.

Users and Groups tips from IPConsult

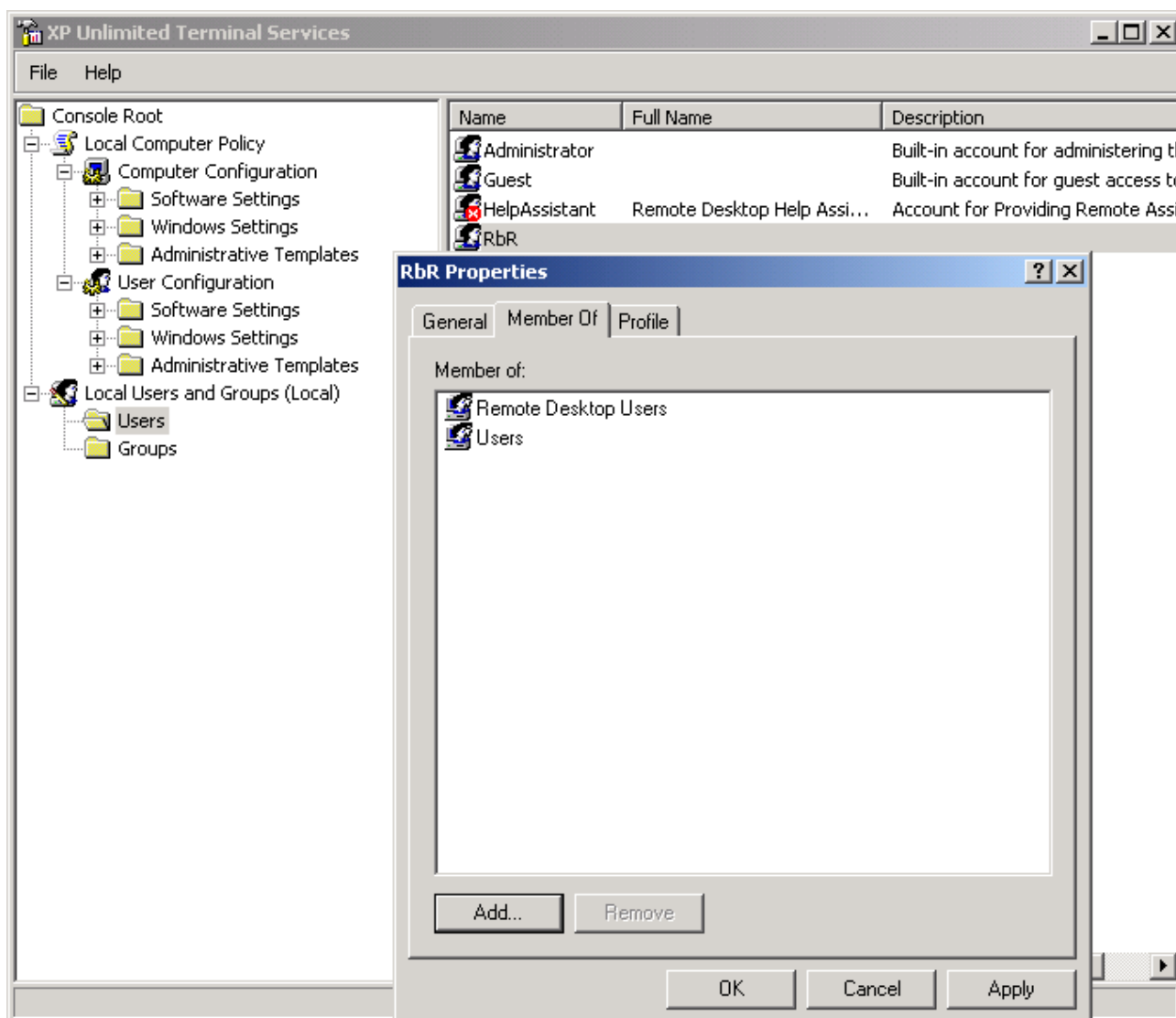
Membership of the group Administrators

From a security point of view not one remote desktop users should be member of the group Administrators. When a remote desktop user is member of the group Administrators, he can change all kind of Terminal Services settings.



Normal users are not a member of Administrators. Only the user Administrator self is member of the group Administrators.

Remote desktop users should have only membership of the group "Normal" users:

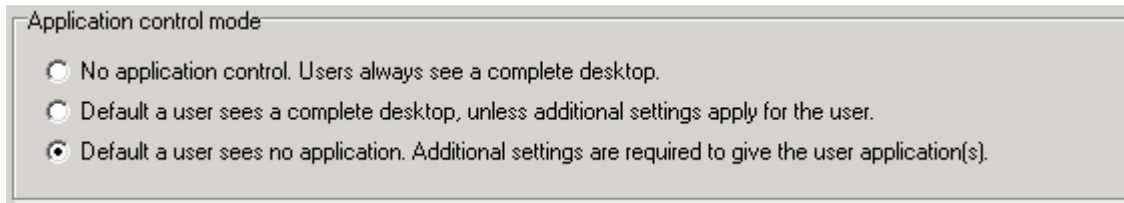


The normal users 'RbR' is member of 'Users' and 'Remote Desktop Users'.

Application Control

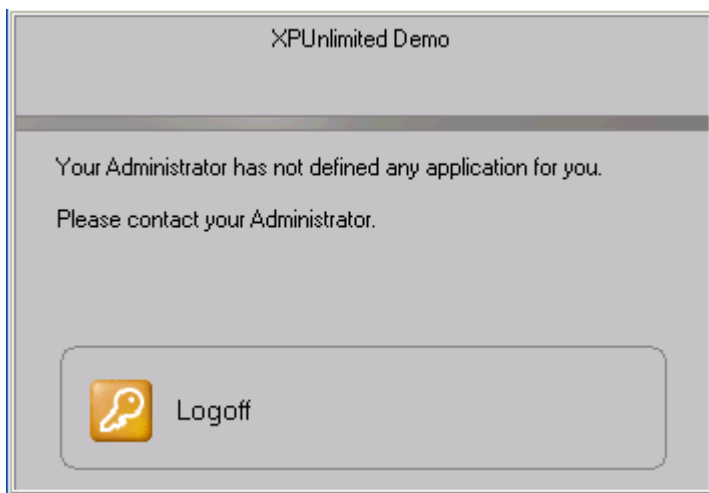
Modes

Application Control has 3 different modes of operation:



The default mode is "No Application Control". Every remote user always sees a complete desktop.

The second and third option turns on the Application Control. The difference between the second and third option is what a user sees in case no applications are available for the user. The second option will give the user a complete desktop without any restriction. The third option will show the remote user a message that the Administrator has not made any application available for the user. The remote user is not able to continue to work:



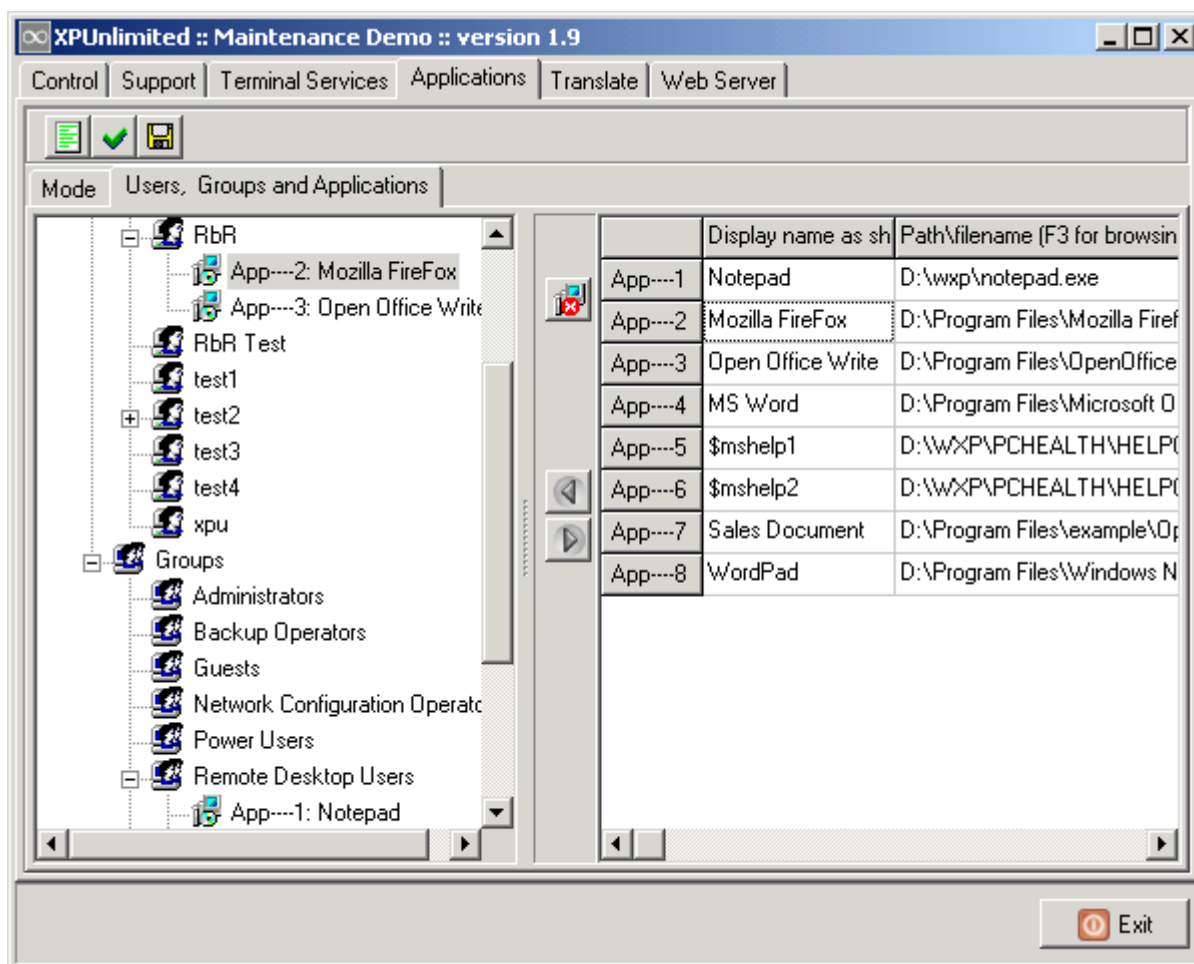
Administrator and Application Control

Application Control does also apply to the users who belong to the group Administrators. The only one that is not under control of Application Control, is the user Administrator.

It is important that the user Administrator can not be restricted using Application Control, because if he gets restricted, he can not start the Maintenance program any more in order to fix his restrictions.....

Users, Groups and Applications

Example:



The group 'Remote Desktop Users' has the applications:

- Notepad
- Mozilla Firefox
- WordPad

Read, Verify and Save

The button bar contains 5 buttons:



- The Read button reads the configuration as it is saved in the Registry. Any recent changes the Administrator has made without using the Save button, will be lost when reading the settings from the registry.
 - You can use the Read button to “reset” any changes you just made which should not have been made.
 - You can use the Read button to “re-read” the users and groups in case you made some changes like defining new users.
- The Verify button checks the consistency of the settings. For example, in case users are deleted, they will be shown with a red cross. In case a File\Pathname of an application does not exist, you will be informed.
- The Save button will save the configuration including all changes the Administrator has made. Please note that, prior to the actual saving, a Verify will be done. In case of inconsistencies like non-existing applications, these inconsistencies will be fixed automatically.
- The Backup button saves the Application Settings in a file.
- The Restore button reads the Application Settings from a file.

Adding Applications

The table with Application behaves like a table in your word processor. Using the TAB-key you can jump through the fields. When you use the TAB-key while the cursor is in the most-right, most-bottom location, a new line for a new Application will be made available.

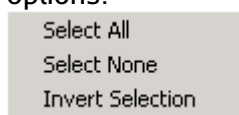
An Application has a name and a Path\Filename. You can use the F3-key or double-click for browsing for executables. The name will be shown in the Startmenu of the remote user.

Do not forget to save the new settings using the Save button.

Selecting Applications

The first column is used for selecting Applications. By clicking on the first column you can (de-)select any Application.

By using the right-mouse on the first column, a small popup menu appears for some smart select options:



Delete Applications

Deleting an Application implies that it will be deleted from the table. It will not be deleted, removed, un-installed, etc, from the server.

Select the Applications that should be deleted using the first column and click on the Delete button. Example:

	Display name as sh	Path\filename (F3 for browsing)
App---1	Notepad	[xpu_dummy_app]
App---2	Mozilla FireFox	D:\Program Files\Mozilla Firefox\firef
Remove selected application(s) from the list		Files\OpenOffice.org1.1.
App---4	MS Word	D:\Program Files\Microsoft Office\OI

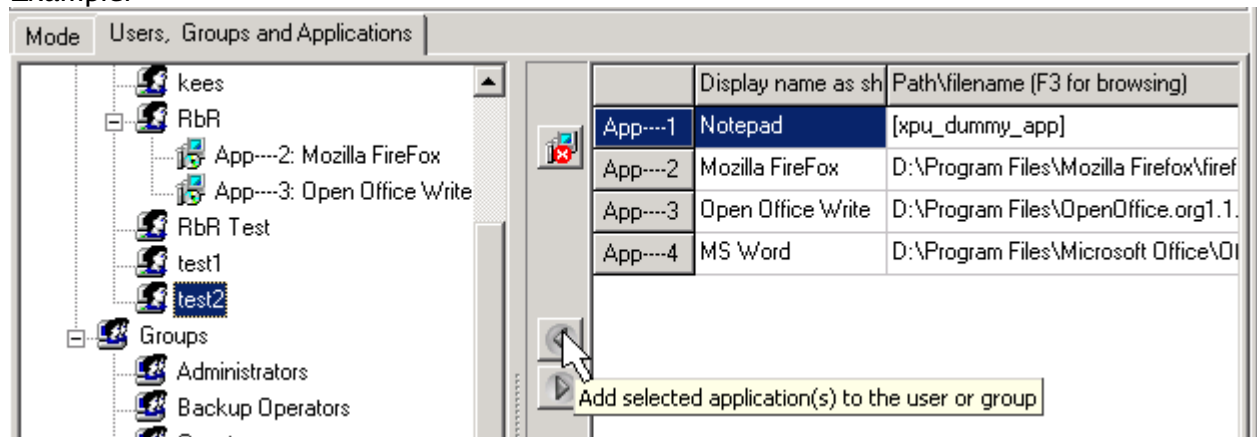
App1 and App4 will be deleted from the table.

Do not forget to save the new settings using the Save button.

Assigning Applications to an user or group

1. Select the Applications
2. Select the user or group
3. Click on the Assign button

Example:

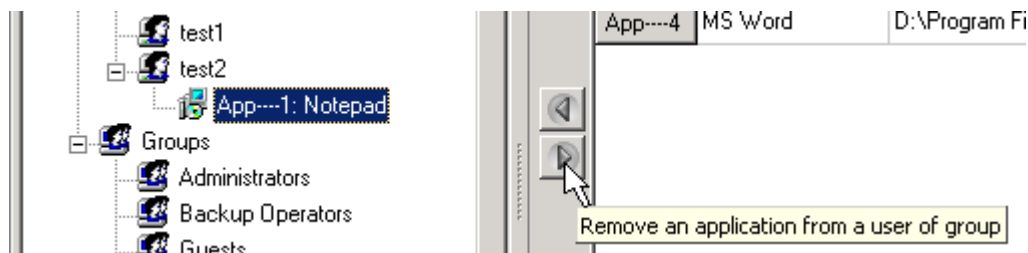


App 1 is selected. User test2 is selected. By clicking on the Assign button, user test2 gets the Application FireFox.

Do not forget to save the new settings using the Save button.

Removing Applications from user or group

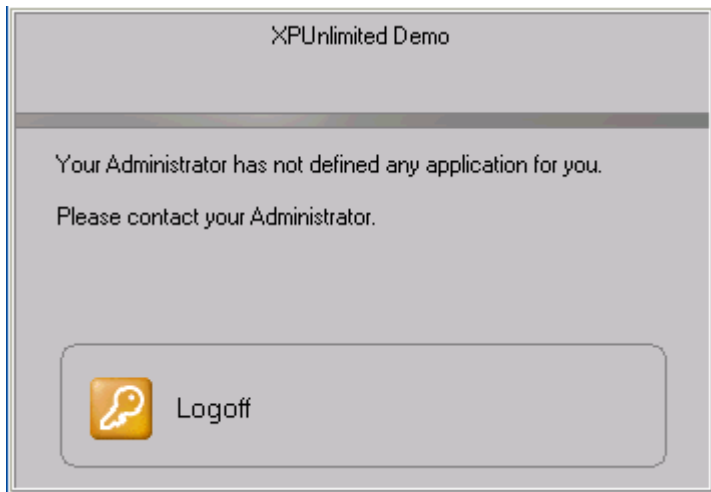
1. Select the Application.
2. Click on the Remove button.



Do not forget to save the new settings using the Save button.

Zero Assigned Applications

In case the third Application mode is chosen, and the remote user has no assigned Applications, the remote user will see the following message:



One Assigned Application

In case a user has 1 (one) assigned Application, this application will be started directly after a login and will be shown full screen. When the user closes the Application, the remote session will be terminated.

Please note that sometimes an Application can not be shown full screen because the Application does not enable or support full screen. The default calculator of Windows is an example of an Application that can not be shown full screen.

See also Hidden Applications. A Hidden Application does not "count". In case an user has 1 Application and 3 Hidden Applications, this 1 not-hidden Application will be started directly after the login.

Several Assigned Applications

In case an user has 2 or more assigned Applications, a small Startmenu button will be shown in the upper-left corner of the screen.



This Startmenu button gives the user access to the assigned applications:

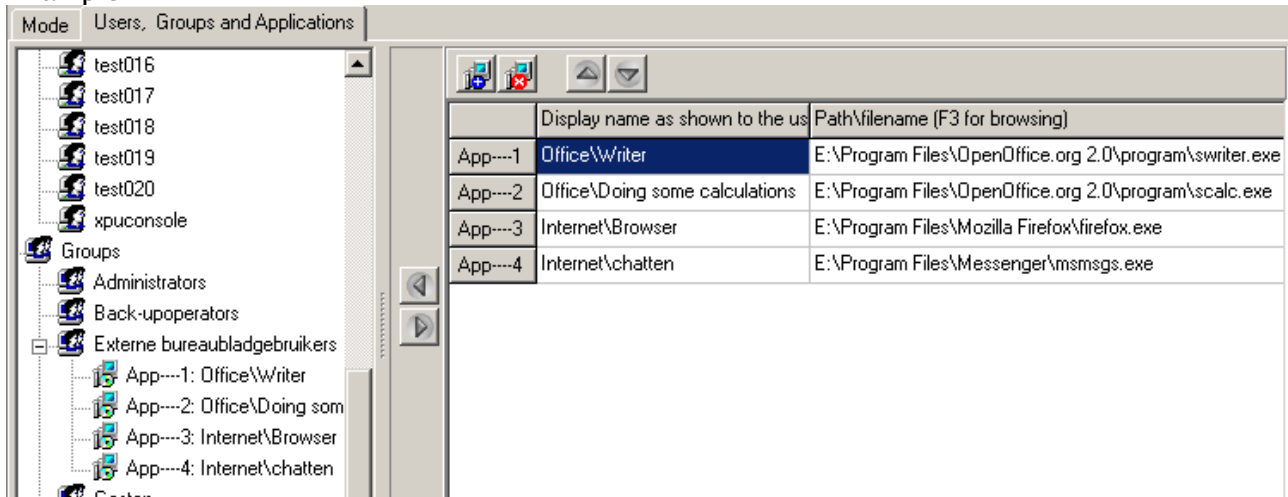


The difference between 1 or more Assigned Applications is the Startmenu button. In case of 1 assigned Application, the Startmenu button will not be shown.

Sub menus

Using a \ in the Display name of an application, the System Administrator can create a sub menu:

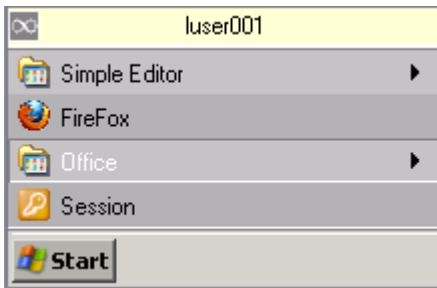
Example:



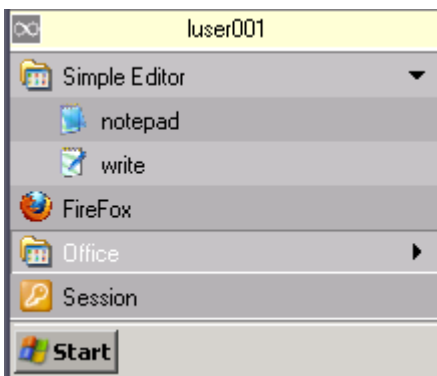
The System Administrator has defined 2 sub menus, called Office and Internet. Both sub menus contains each 2 applications.

The menu items can be sorted using the Up- and Down button above the Applications.

The user experience is as follows: *(next page)*



The user can select the submenus, and the Applications will appear:



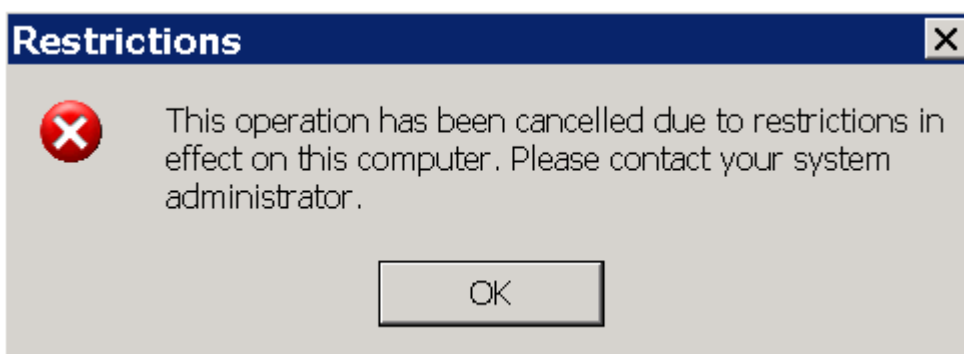
The user experience is slightly different than the default Start menu as shown by Windows. This way showing the applications has the advantage that all applications are also visible and selectable on small devices like PDAs.

Only 1 level of sub menus

Only 1 level of sub menus is possible. Do not specify 2 slashes in a displayname.

Restrictions

It is not possible for the user to start any application that is not within the list of assigned Applications. In case the user tries to start anything outside the list of assigned Applications, a notification is shown:



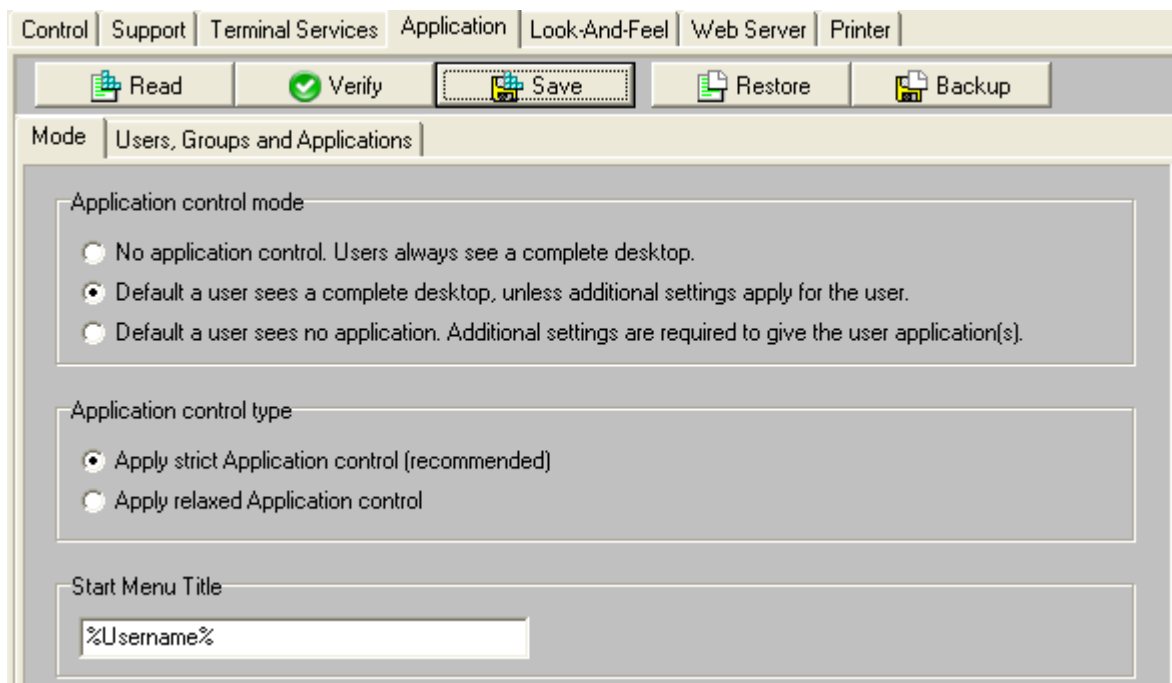
Apply strict or relaxed Application Control

Strict Application Control means that your users can only start those programs you have assigned to them. Sometimes this is too strict. It is possible that an application needs to start all kind of other (sub)-applications. When using strict Application Control, this is not allowed.

From a security and stability point of view is strict Application Control desirable; it prevents that unwanted programs are started by users.

However, if strict Application Control is too strict for your applications, the Administrator can select Relaxed Application Control. This still implies that the user only sees the applications that have been assigned to the user. However, if an application tries to start another (sub-)application, it is allowed.

Sometimes this setting is needed for your applications. Please note that from a security and stability point of view it is not as good as strict Application Control.



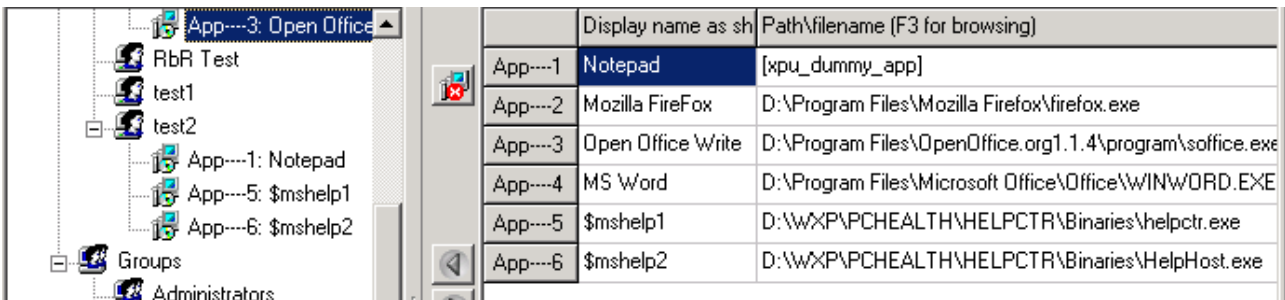
The next paragraph is about Hidden Applications. By using Hidden Applications, you might be able to avoid the use of relaxed Application Control.

Hidden Applications

Sometimes an Application starts another Applications. These sub-applications should not appear in the Startmenu of the user, but the user should be allowed to run these sub-applications.

Any Application with a name that starts with a \$ (dollar sign) is a so called Hidden Application.

Example:

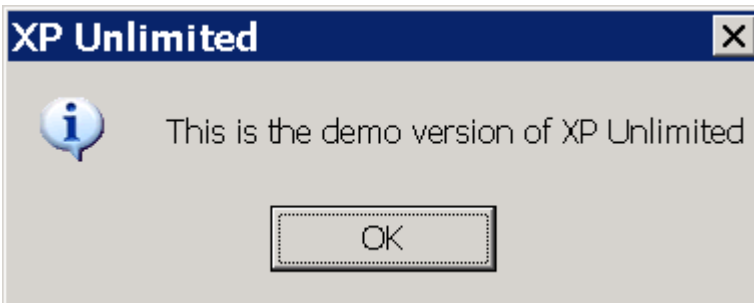


User test2 is allowed to start the default Help-programs of Windows. Those help programs can be started by Notepad or by pressing F1.

Hidden implies that the user can run the Application, but it is not shown in the Startmenu of the remote user.

Nag screen

The demo version of XP unlimited shows a nag screen after a login, in case Application Control is used:



This nag screen is not shown when using the full, unlimited version of XP Unlimited.

Command line parameters and Startup Folder

An Application can have a specific Startup Folder. The default Startup folder is the folder where the program is located.

You can also specify 1 or more optional Command Line parameters.

	Display name	Path\filename (F3 for browsing)	Startup Folder (optional, F3 for browsing)
App---1	myApp	E:\Program Files\xpUnlimited\xpUTestToolShowCommandLineParams.exe	
App---2	notepad	E:\windows\system32\notepad.exe	E:\Documents and Settings\%username%
App---3	FireFox	E:\Program Files\Mozilla Firefox\firefox.exe	
App---4	Write	E:\Program Files\Windows NT\Bureau-accessoires\wordpad.exe	
App---5	cmdfile	E:\Program Files\xpUnlimited\startapp.cmd	
App---6	This Is Me	E:\Program Files\xpUnlimited\xpUTestToolThisIsMe.exe	

Commandline (optional)	Startup
param1 param2 "this is param 3"	
http://www.xpunlimited.nl	

Usually the character "space" is used to separate the parameters. You can use double quotes in case a space is needed within a parameter.

Environment variables in Command line Parameters and Startup folder

If you open a classic Dos-box, you can type the command 'set'. It will show you the available 'Environment variables'. Most of the environment variables are always available on every windows-system. Sometimes there are a couple of extra environment variables that are only available on *your* windows-system, because they are the result of some kind of application you installed.

Example of environment variables that are always available:

```

C:\ E:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [versie 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

E:\Documents and Settings\rbr>set
ALLUSERSPROFILE=E:\Documents and Settings\All Users
APPDATA=E:\Documents and Settings\rbr\Application Data
CommonProgramFiles=E:\Program Files\Common Files
COMPUTERNAME=TESTXP
ComSpec=E:\WINDOWS\system32\cmd.exe
FP_NO_HOST_CHECK=NO
HOMEDRIVE=E:
HOMEPATH=\Documents and Settings\rbr
LOGONSERUER=\\TESTXP
NUMBER_OF_PROCESSORS=1
OS=Windows_NT
Path=E:\WINDOWS\system32;E:\WINDOWS;E:\WINDOWS\System32\Wbem
PATHEXT=.COM;.EXE;.BAT;.CMD;.UBS;.UBE;.JS;.JSE;.WSF;.WSH
PROCESSOR_ARCHITECTURE=x86
PROCESSOR_IDENTIFIER=x86 Family 6 Model 8 Stepping 0, AuthenticAMD
PROCESSOR_LEVEL=6
PROCESSOR_REVISION=0800
ProgramFiles=E:\Program Files
PROMPT=$P$G
SESSIONNAME=Console
SystemDrive=E:
SystemRoot=E:\WINDOWS
TEMP=E:\DOCUME~1\rbr\LOCALS~1\Temp
TMP=E:\DOCUME~1\rbr\LOCALS~1\Temp
USERDOMAIN=TESTXP
USERNAME=rbr
USERPROFILE=E:\Documents and Settings\rbr
windir=E:\WINDOWS

E:\Documents and Settings\rbr>_
    
```

Examples how to use Environment variables

You can use those environment variables in the command line parameters. Examples:

<i>Command line parameter or Startup folder</i>	<i>Result for user rbr</i>
E:\documents\%username%	E:\documents\rbr
%userprofile%\some folder	E:\Documents and Settings\rbr\some folder

Environment variables , Escape character &

Within a command line parameter you can use the & character for special character in the range \$01 .. \$FF (hexadecimal between 1 and 255).

The & character is used as a so called escape character. Examples:

<i>Command line parameter or Startup Folder</i>	<i>Result for user rbr</i>
E:\documents\&25username&25	E:\documents\%username%
E:\documents\&26username&26	E:\documents\&username&
E:\documents\&22username&22 %username%	E:\documents\`username`rbr
E:\documents\username"%username%	E:\documents\username`rbr

Take a good look at the last 2 examples: the first occurrence of username is not considered to be an environment variable because it is not enclosed in %. In the third example it is enclosed in &22. This is the hex-value of the character “, so result will be “username”.

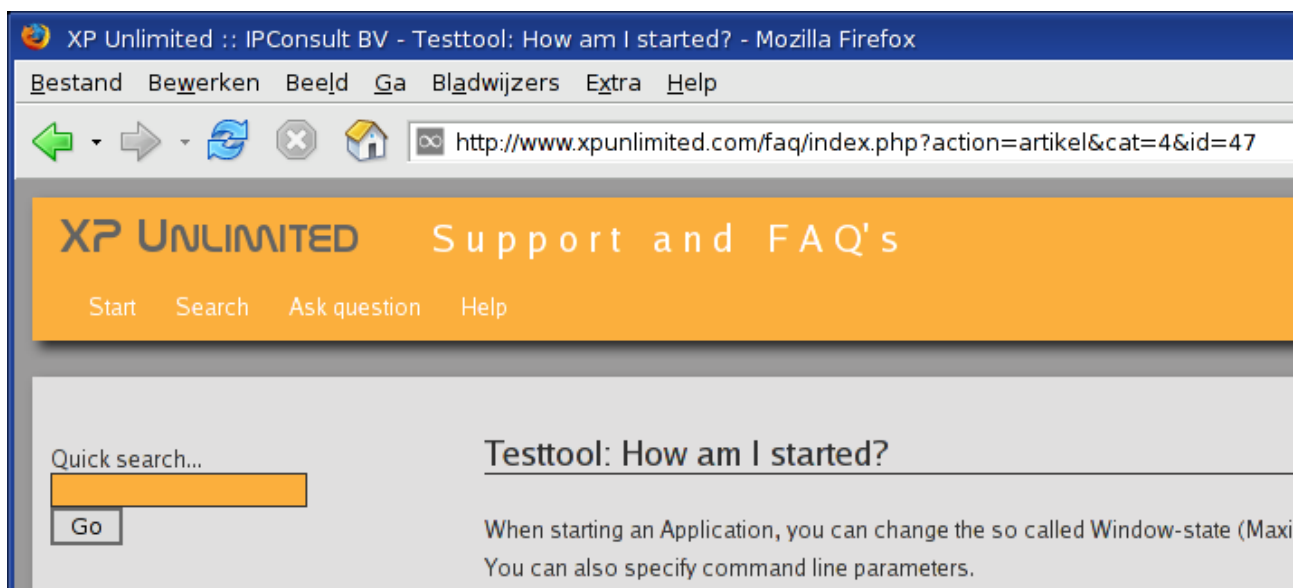
The second occurrence of username is considered as an environment variable because it is enclosed in %. Therefore it is replaced with rbr.

The &XX appearance in a command line parameter will always be translated to a character:

<i>Command line parameter or Startup Folder</i>	<i>Result for user rbr</i>
E:\documents\&25username&25	E:\documents\%username%
E:\documents\&25username&25”	E:\documents\%username%”
E:\documents\&26username”	E:\documents\&username”

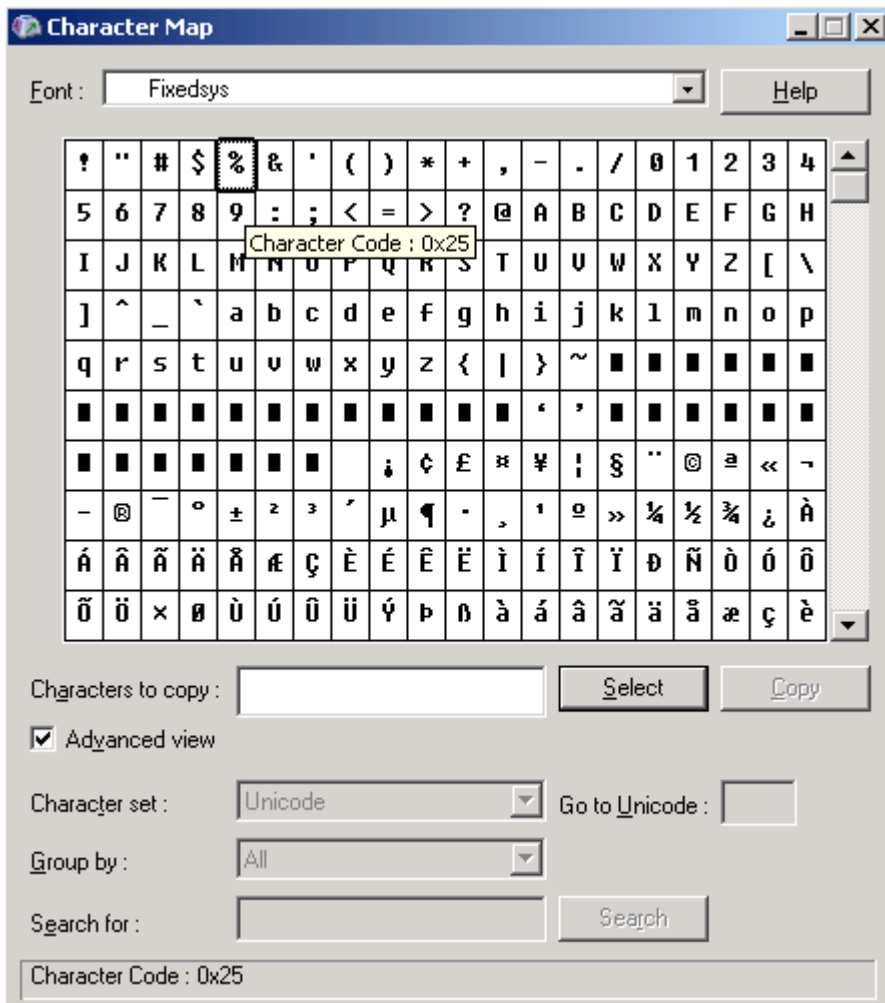
Test tool 'How Am I Started'

From our website you can download a free testtool called 'How Am I Started'. It can assist you in testing and understanding of command line parameters and environment variables:







Windows Character Map

You can use the default available ‘character map tool’ for obtaining the hex-value of characters:



Startup Options

An Application can be started as follows:

-  **Autorun** The Application will be started directly after the login of the user. Multiple Applications can be flagged as Autorun (as many as you want...)
-  **Maximize** When started, the Application will be initially shown Maximized. The user is able to Restore or Minimize the Application.
-  **Minimize** When started, the Application will be initially shown Minimized. The user is able to Restore or Minimize the Application.
-  **Visible** Default all Applications are shown Visible. An Application can be flagged as 'not shown Visible' aka 'Hidden'. An user can not interact with a Hidden Application.
This option is useful voor starting CMD-files which will start another Application.
In combination with Autorun, you can start some kind of Hidden Service application for the user, without showing it. For instance, you might use it to start some Anti Virus client software without showing it to the user.

Read carefully: Hidden implies here that the 'form' or 'window' of the application is hidden. It is NOT hidden from the menu.

If you want an application to be hidden from the menu, see the previous chapter Hidden Applications and start reading about the dollar sign in the name of the Application.

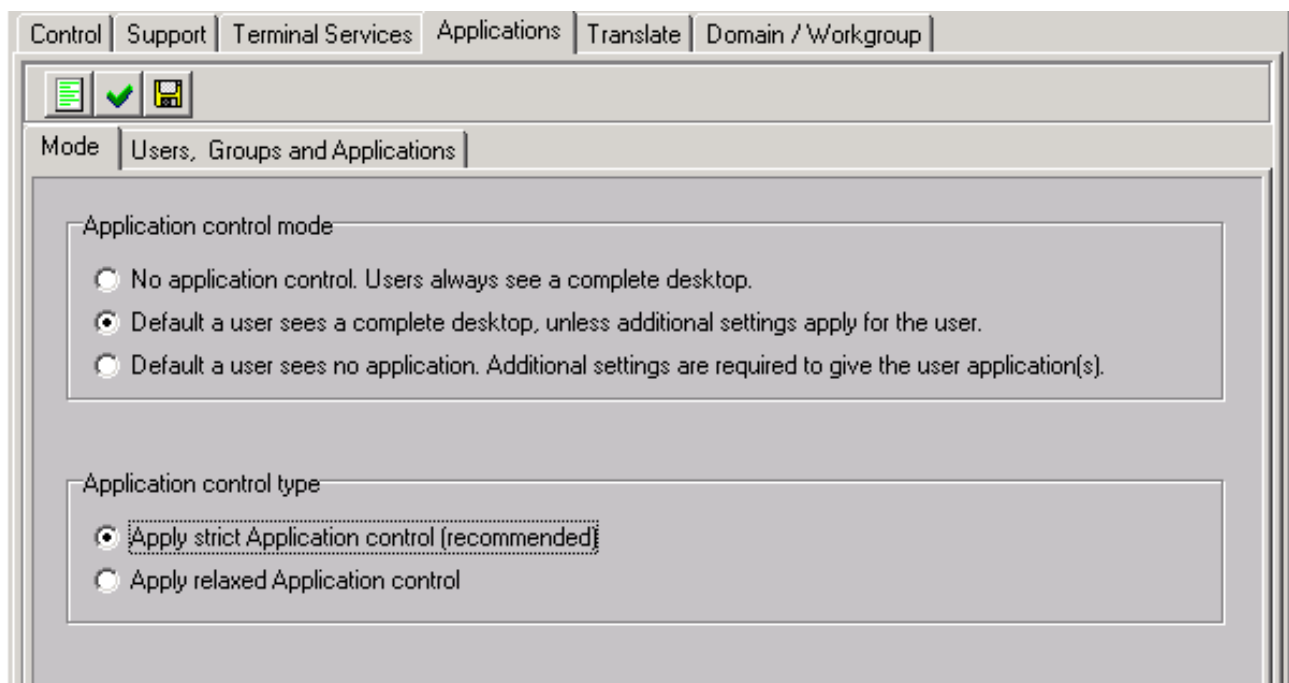
Application Control and Explorer / Desktop

When you do not use Application Control as described in the previous chapter, a user does see the default Windows desktop.

Showing the default Windows desktop might be desirable, because this is what the user does expect. However, the desktop should be restricted, because otherwise the users might make a mess of their desktop.

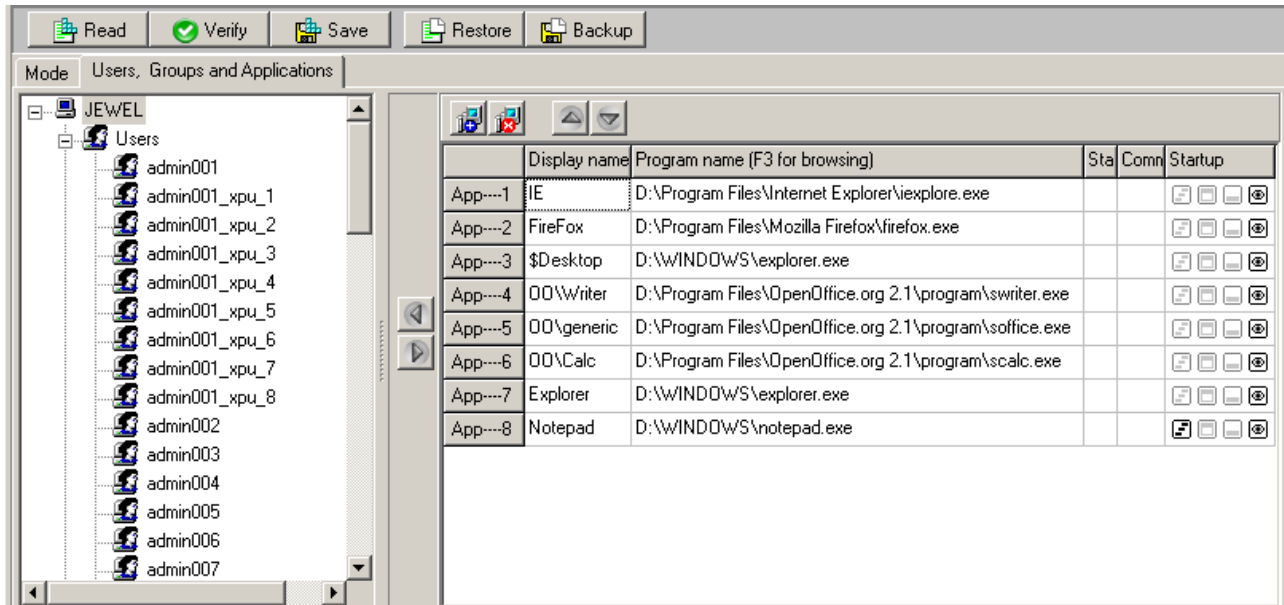
A special combination of Explorer / Desktop and our Application Control is possible, such that the user sees a default desktop, but everything restricted.

This special combination of Explorer / Desktop and our Application Control does assume that you select 'Restrict Application Control'!



Assign Explorer.exe

In the following example Explorer.exe is assigned:



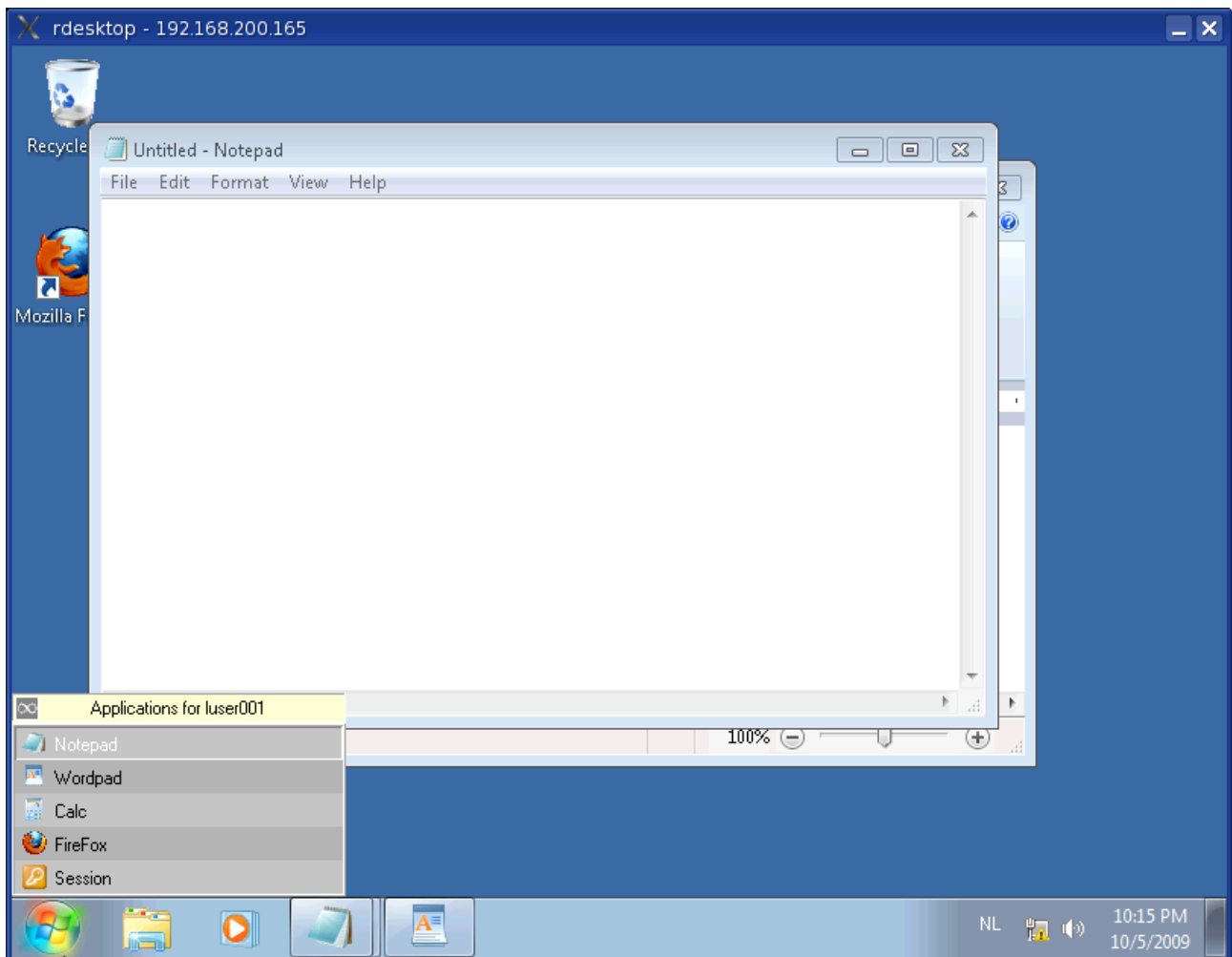
- A hidden application is defined, called \$Desktop.
 - Because of the dollar sign in the name it is hidden. The user will not see an entry called "Desktop" in the Start menu.
- Whenever an user has Explorer.exe in it's list, it will always be started. It is not required to select the Autostart-option. Explorer.exe will be auto started anyway.

Explorer.exe is always auto started

You might want Explorer.exe to be optional, like "explorer.exe" with a commandline parameter containing c:\my documents. This is possible and is described a few pages further.

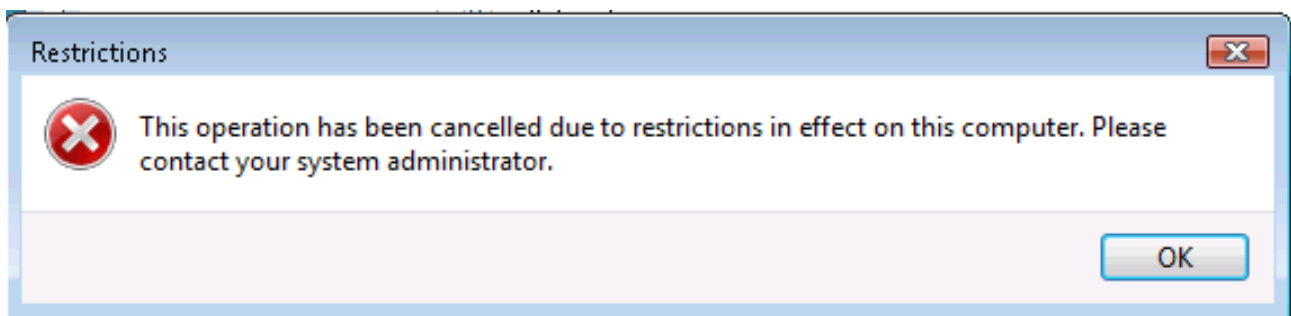
However, when an user is assigned Explorer.exe, it will always be auto started, because when Explorer.exe is started for the first time, it will always create and show a desktop. This is build in Explorer.exe; this is how Explorer.exe is made by Microsoft. Therefore it is not possible to show the user his documents-folder and not having a desktop with a taskbar, etc.

Default Start Menu of the desktop is replaced by XPU Start Menu

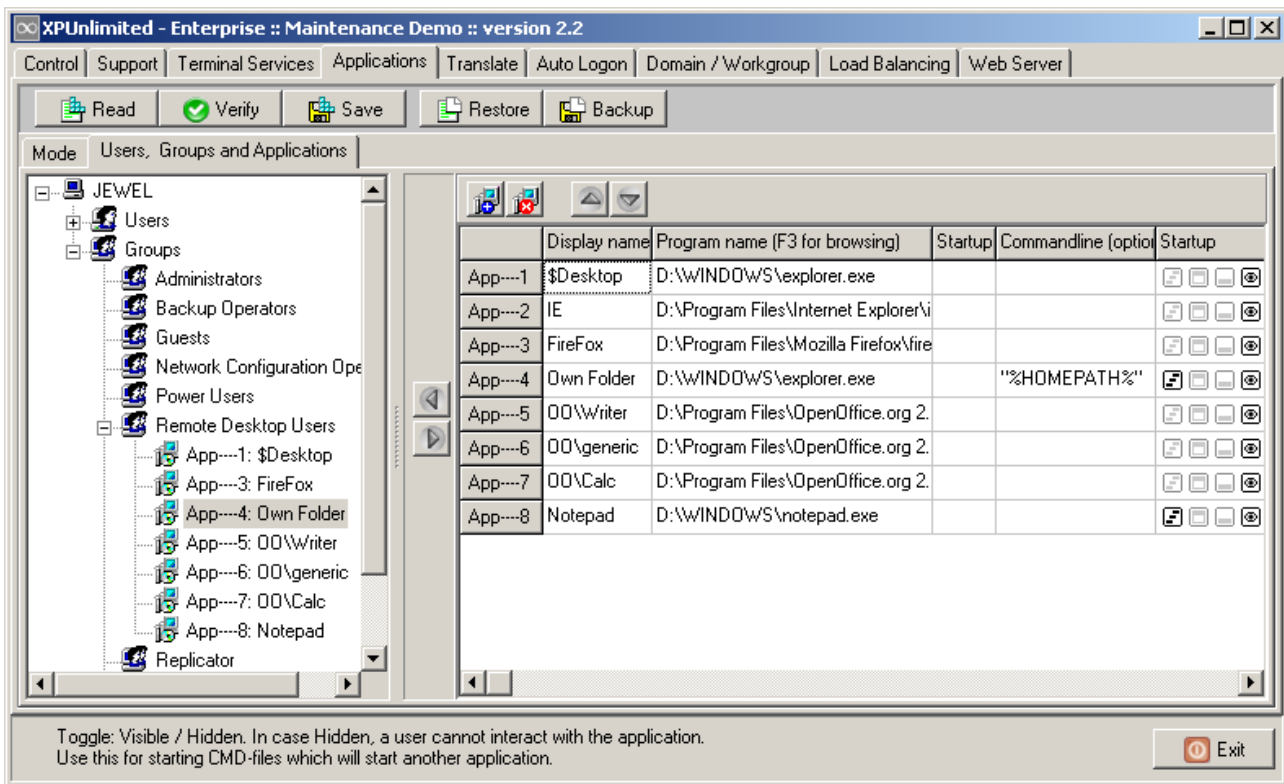


In the example above, the users can only start Notepad, Firefox and Wordpad. The default Windows Start menu is replaced by the restricted XPU Start menu.

In case the user attempts to start something else, the following message will appear:

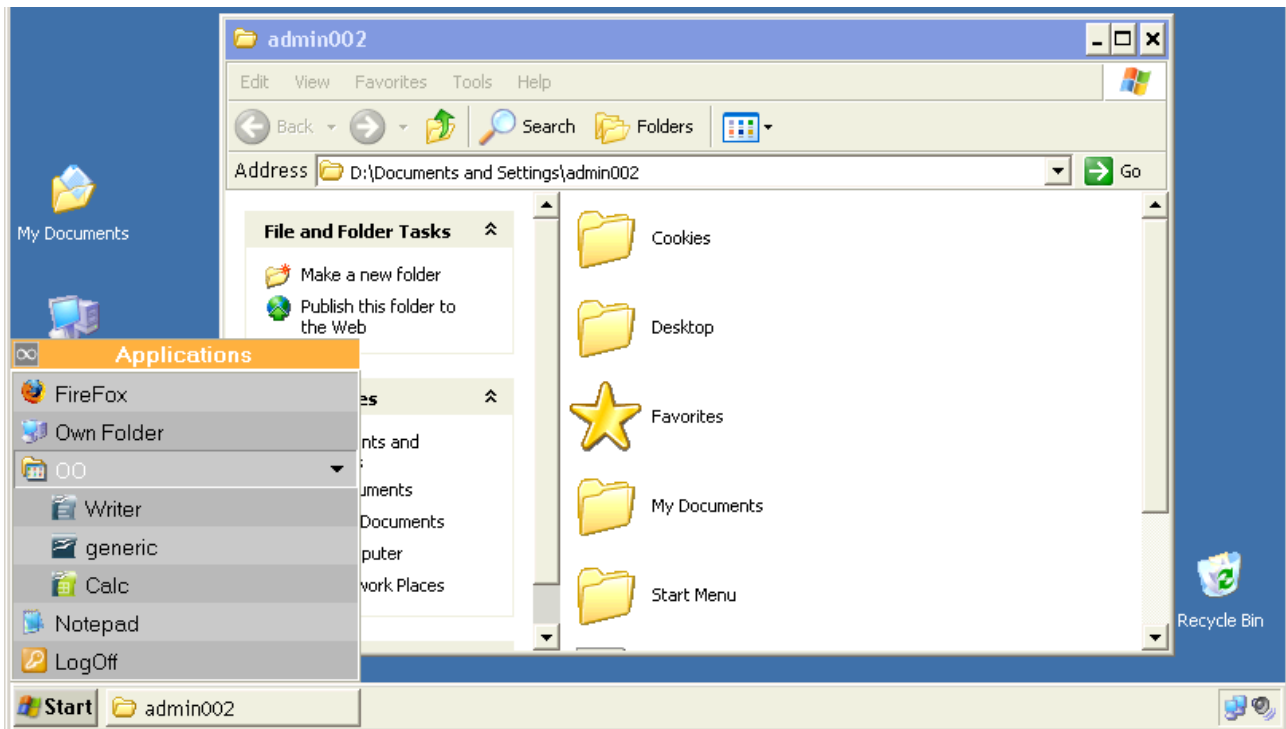


It is possible to mention Explorer.exe in the menu of a user. Example:



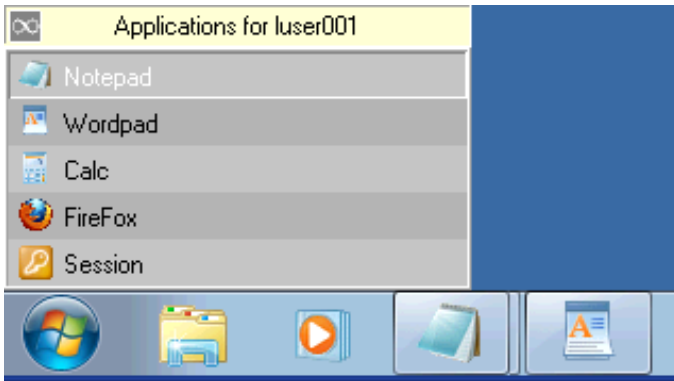
- A menu entry called 'Own Folder' is assigned to the group Remote Desktop Users.
- Above the menu entry 'Own Folder' the hidden menu entry \$Desktop is assigned.
 - Because of \$Desktop (and because of 'Own Folder'), the user gets a desktop.
- The menu entry 'Own Folder' will appear in the Start menu of the user.
 - The menu entry 'Own Folder' is also flagged as auto start. This is optional and just an example.

The desktop of the users looks as follows:

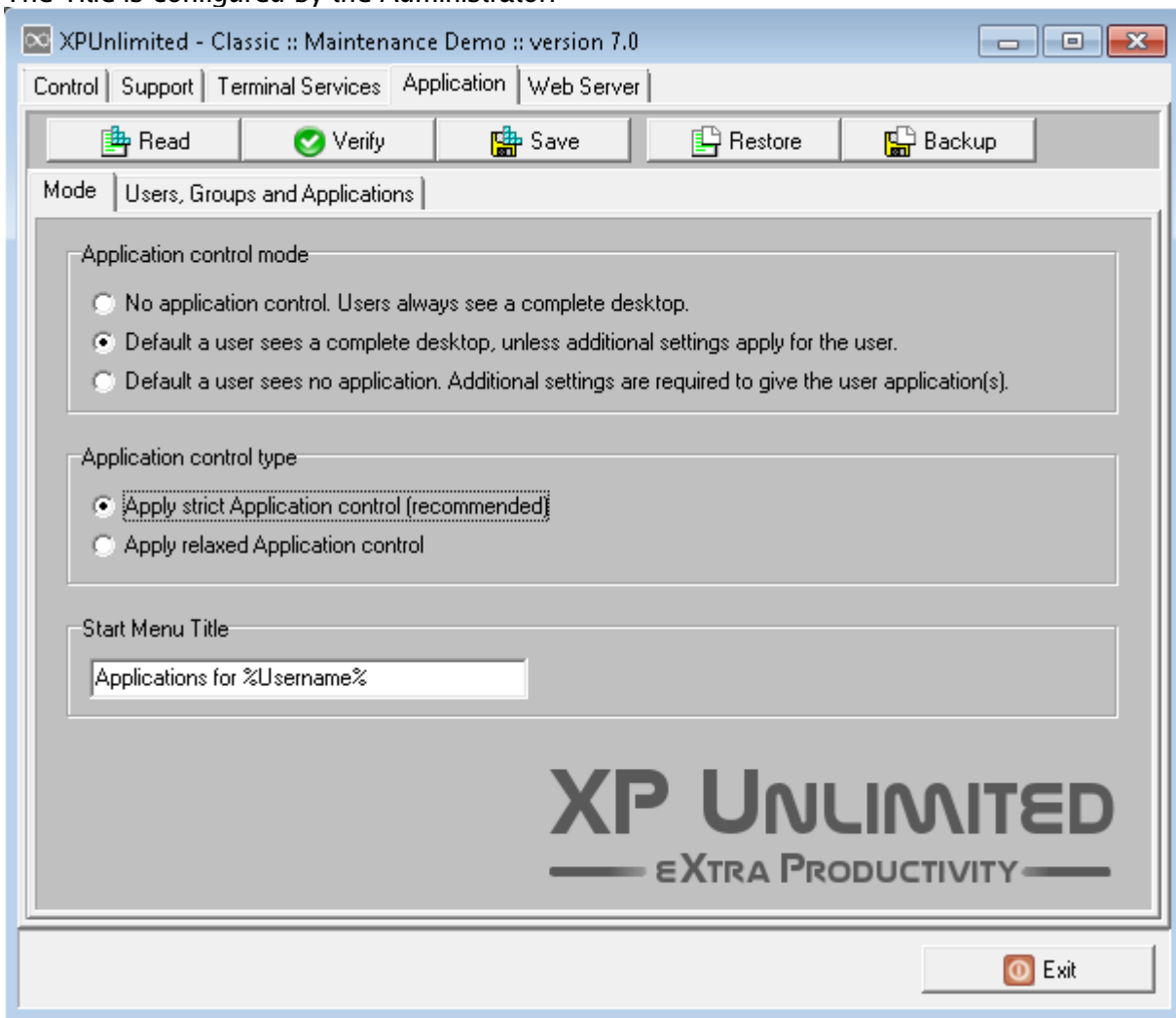


Start Menu Title

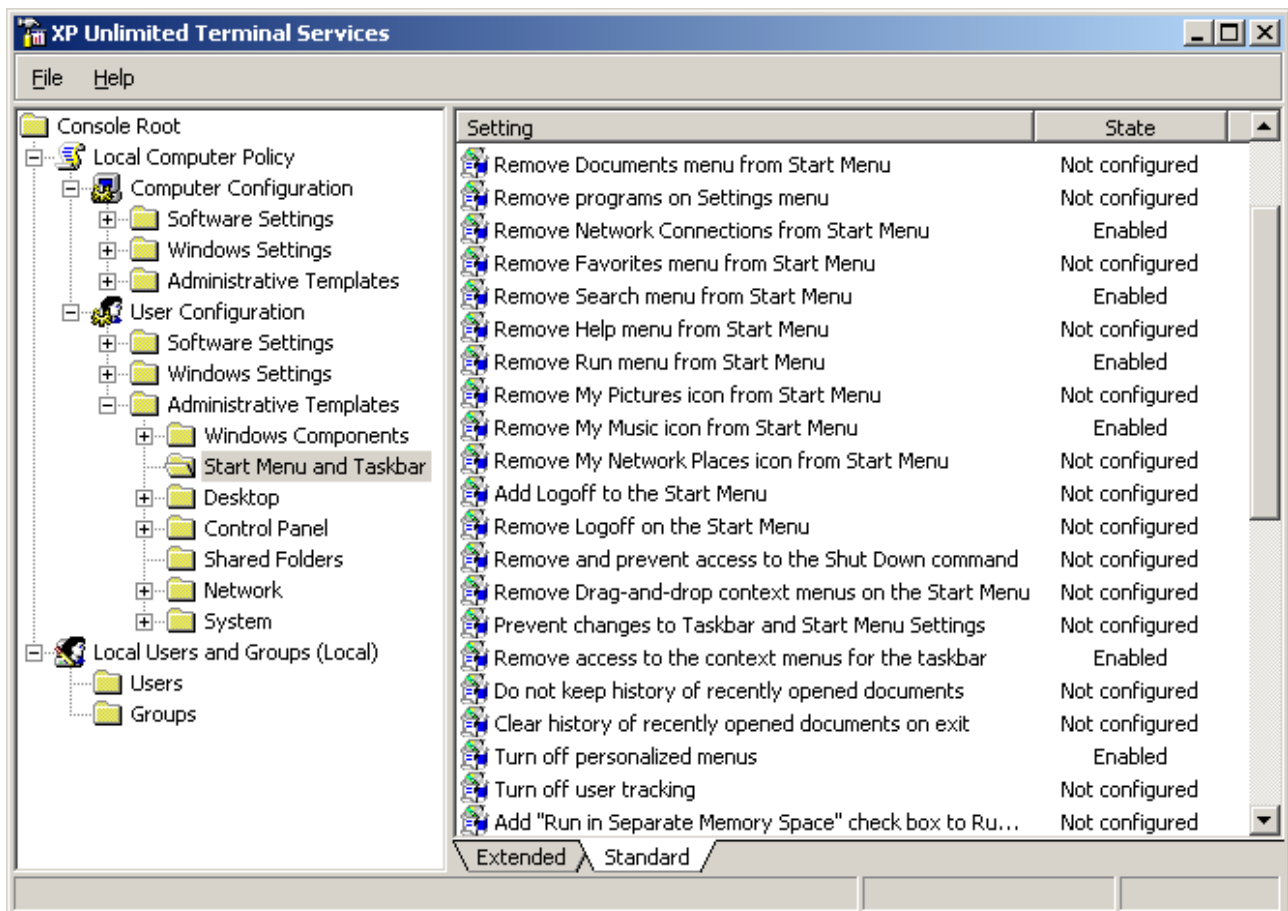
It is possible to change the Title of the Start Menu as presented to the user:



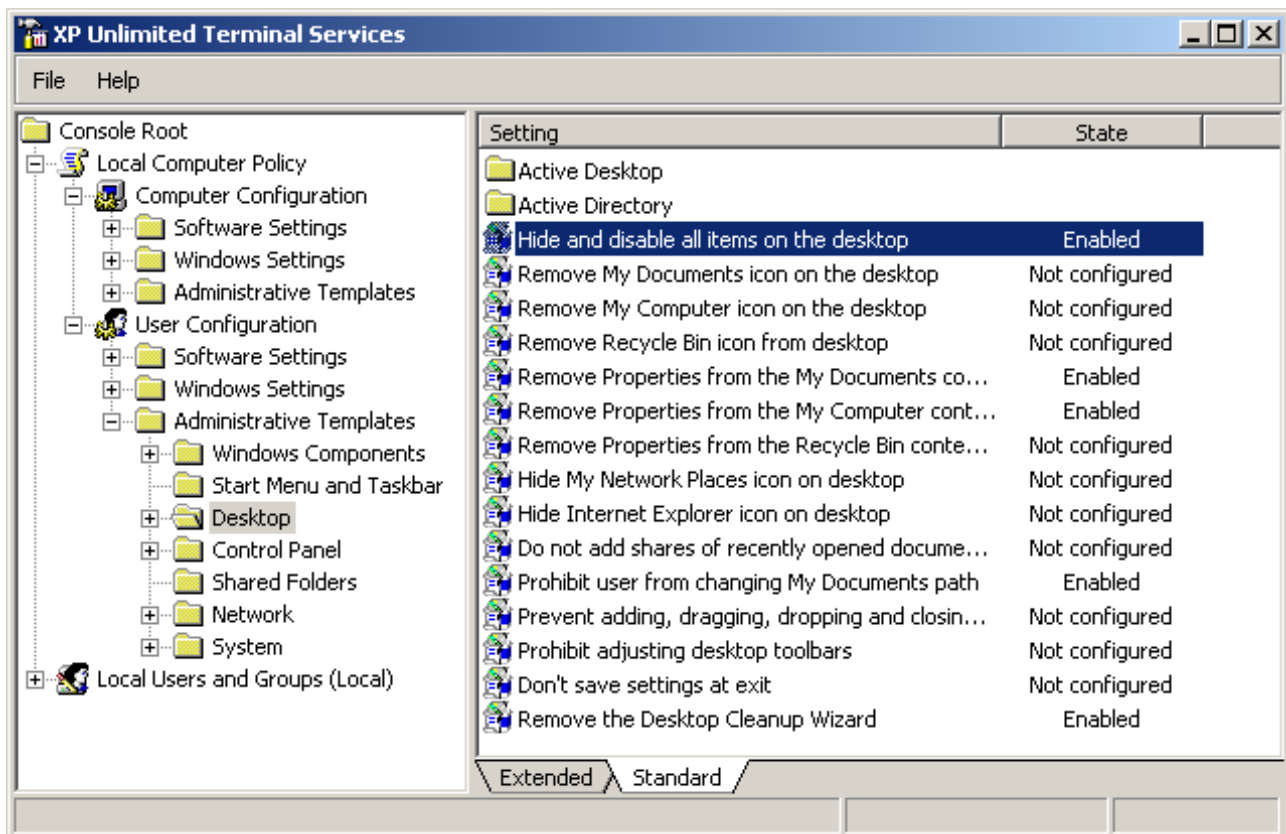
The Title is configured by the Administrator:



Next: do some tuning with Policies



A few policies as an example of restrictions for the users. Some of them are not relevant any more. For example, all those policies related to the Start menu are not relevant any more because the Windows Start menu is not showed at all.



A few policies as an example of restrictions for the users.

Do not test it in a production environment

You should test this on a separate Test environment before trying it in production. For instance, if you apply to many policies or to many restrictions, you might restrict yourself and you might not be able any more to reverse the restrictions. In such case, a reboot of the XPU-server in Safe Mode is required, which is not desirable in a production environment.

Client software

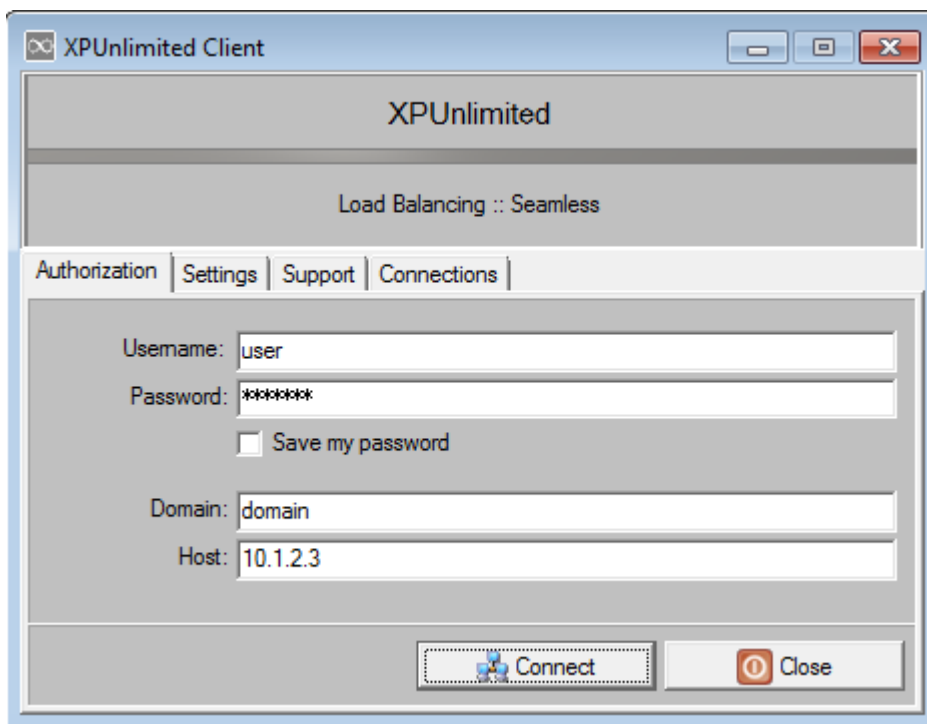
A XPUnlimited server can be used with the default client software as available on Windows, Mac and Linux:

- Windows: RDP 5.x or higher
- Mac and Linux: rdesktop. Preferable 1.41 or higher.

The default Windows RDP client software as delivered by Microsoft does have some 'annoying' popups. Specific the RDP client of Vista, although showing 'annoying' popups to the user is part of the normal Vista user experience.

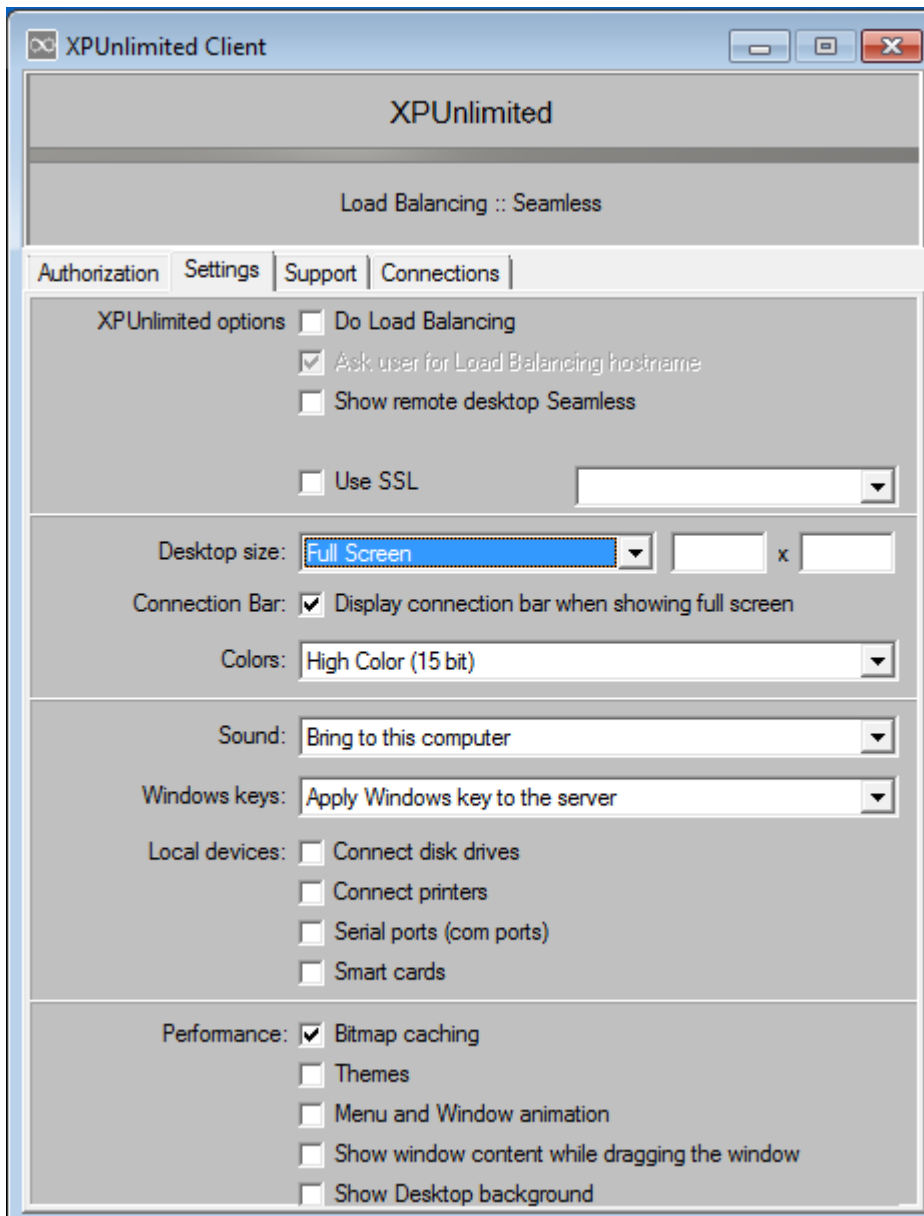
As an extra you can find client software for Windows on the XPUnlimited server. Inside the folder %program files%\xpunlimited you will find our client called xpuWin32client.exe. Using the XPU client does avoid the popups.

The xpuWin32client is the same client that is used for the Seamless- and Load Balancing functionality as available in the Enterprise version of XPUnlimited. Because of this, it does show some options that are not available in the Classic version of XPUnlimited.



Settings

The first group of settings do belong to the Enterprise version of XPUnlimited and can not be used with the Classic version of XPUnlimited.



The remaining settings on this tabpage do show the same options as know by the default Microsoft RDP client.

Save My Password (in a RDP-file)

The xpuWin32client, like the Microsoft client itself, does have the option to save the password. When this option is selected, the next time the xpuWin32client is started it will start with the user and password of the previous use.

The password is written in the file "xpu_farm.rdp" in the folder Local Settings of the current logged in user. Please read this carefully; the user mentioned in the previous sentence is **not** the user that is logged in the Domain, but is the user that is using the local client PC. This client PC can be a WXP-PC or higher, and this client might request a local login before this PC can be used.

So, the password is written in a RDP-file, which is placed in a folder that belongs to the local logged in user.

The password in a RDP-file is written in such a way that the password can only be used again on the same PC and same local user. You can copy the RDP-file to another-client-PC, but the password can not be used or interpreted on another client PC.

Next to this, the RDP-file is written in the folder Local Settings of the current logged in user. If the Administrator has done a good job, no other users are able to access the folder Local Settings.

Pre-defined RDP-file

It is possible to start the xpuWin32client with a pre-defined RDP-file; just specify it on the command-line. Every parameter in the pre-defined RDP-file will be used by the xpuWin32client.

The password in the pre-defined RDP-file can only be used in case the RDP-file is generated on the PC where the RDP-file is used. Otherwise, the password in the RDP-file can not be used, and the user will be asked to enter his / her password. This is not a limit of the XPUnlimited or the xpuWin32client; this is a security feature of Windows. Because the password in the RDP-file can only be used when the RDP-file is created on this specific Windows client, it is not possible to "steal" the password by copying the RDP-file. The obvious disadvantage is that an Administrator can not globally distribute predefined RDP-files with userIDs and passwords to all Windows clients.

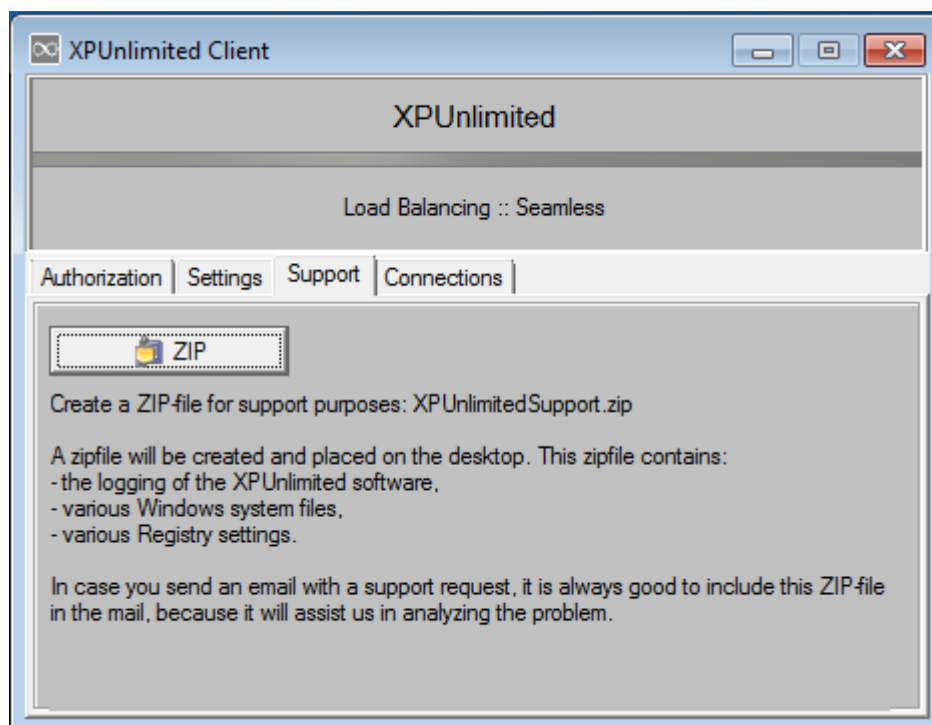
When the xpuWin32client is started with a pre-defined RDP-file it will automatically login to the XPUnlimited server. When the user ends the session, the xpuWin32client will terminate itself.

Logfile

The xpuWin32client generates a logfile called xpUnlimited_FarmClient.log in the personal %tmp% folder of each user. The Administrator can use this logfile for analysing problems.

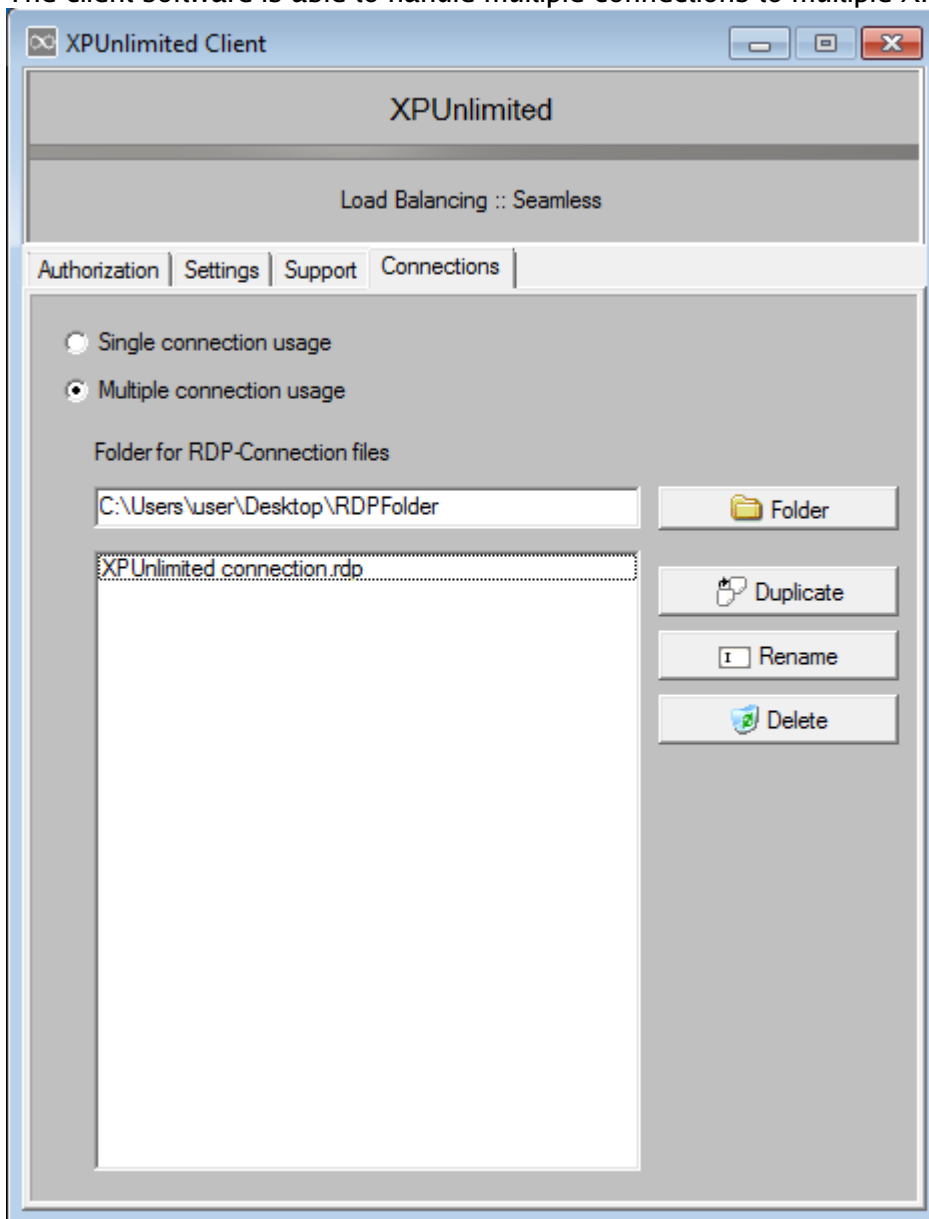
Support

In case of issues related to xpuWin32client, the 3th tabpage contains a button which will create a ZIP Support File on the desktop, and which can be sent to us by email.



Connections

The client software is able to handle multiple connections to multiple XPU Servers.



- The button Folder can be used to change the location of the multiple RDP-files.
- The button Duplicate can be used to copy the selected connection.rdp file to a new one.
- The button Rename can be used to rename the selected connection.rdp.
- The button Delete can be used to delete the selected connection.rdp.

Changing the settings of a selected RDP file, is done using the other tabpages:

- First select one of the rdp files.
- Goto the tabpage 'Settings' and change whatever needs to be changed.
- Goto the 1th tabpage 'Authorization' and enter the details like username, etc. These will be placed into the selected rdp file.

Integrated Web server

Introduction

The integrated web server offers browser based access to a XP Unlimited server. Remote desktop access is possible using only a browser.

Supported browsers

Unfortunately not any browser can be used; only Microsoft Internet Explorer can be used. This is caused by the fact that the integrated web server is based on Active-X components, and Active-X is only possible using Microsoft Internet Explorer.

A so called java based RDP client is available and using this it should be possible to have a web server that is based on Java. However, there are many small but important details related to the strict security within Java that prohibits us to deliver an easy and usable web server based on a java object.

Editing the HTML

The demo version of XP Unlimited does limit your options for changing the layout of the pages as served by the integrated web server. The full version does give you the possibility to change the layout in any way you want.

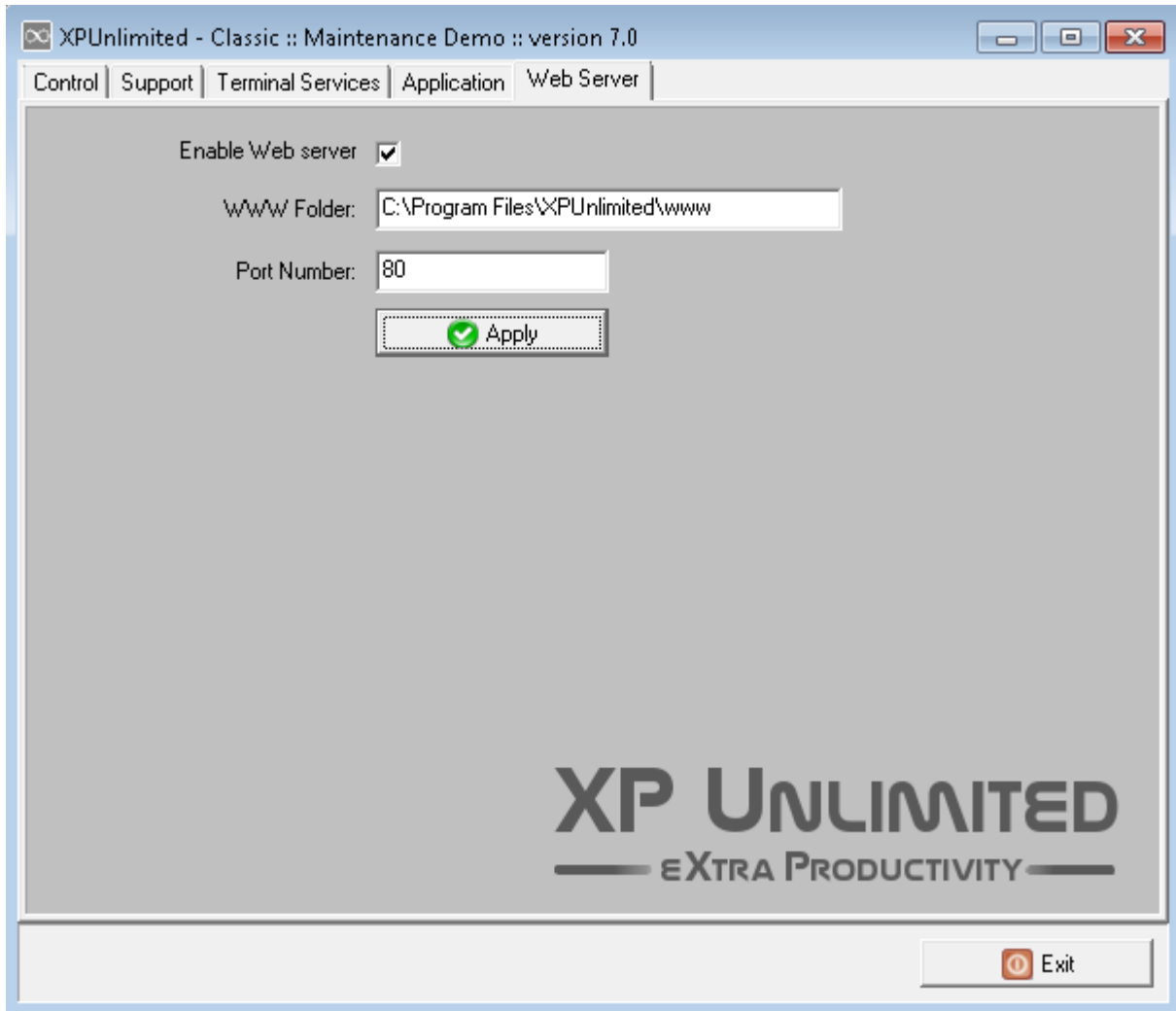
Please note: the support of IPConsult is limited to XP Unlimited. We will not support you on how to write HTML, CSS, or other web page issues". It is OK with us if you change the HTML-pages as served by our web server, but it is your responsibility to ensure you write valid, usable and working HTML-pages.

We do appreciate the books from O'Reilly. Go to to their website and search for HTML-books.

<http://www.oreilly.com/>

Starting the web server

Within our Maintenance Program is tab-page for the web server:



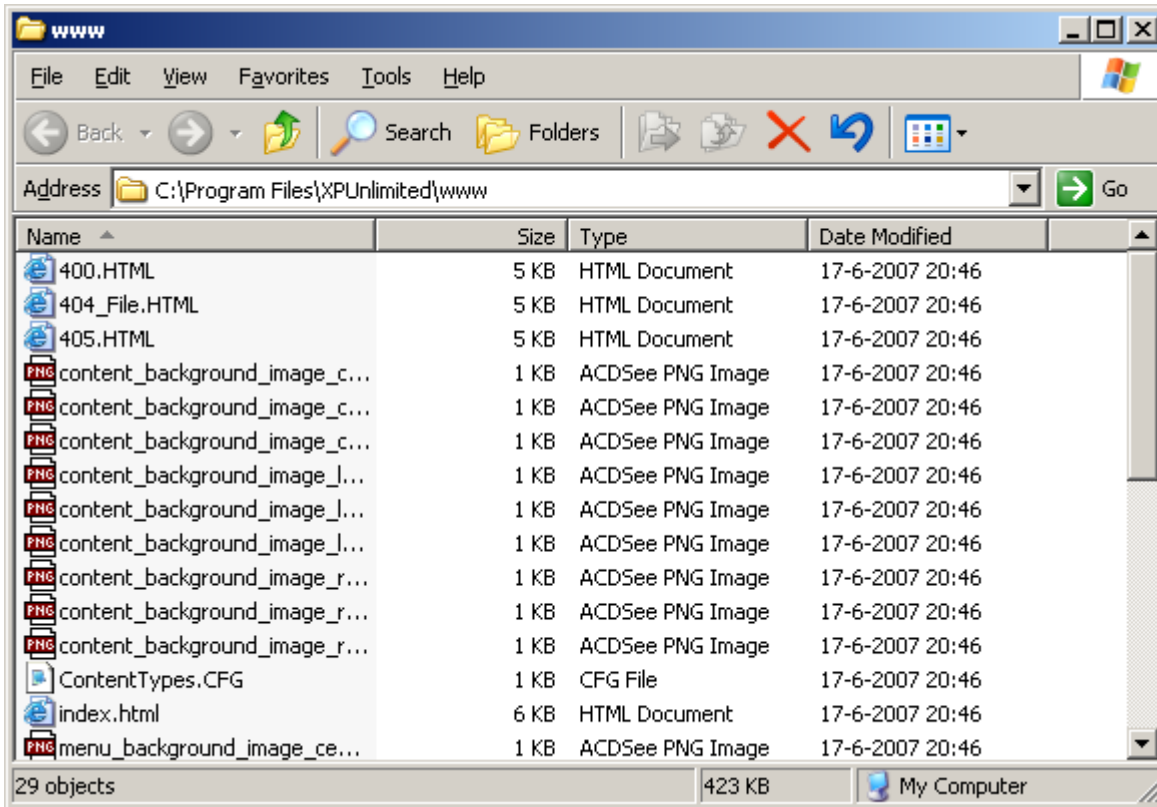
When changing a parameter, click on Apply. The parameters will be immediately applied. So, if you select the checkbox, and click on Apply, the web server will be started right away.

When you click on Apply, the web server will be stopped, and depending on the checkbox started again. Stopping and starting the web server does NOT affect current remote desktop session with the XP Unlimited server.

When the checkbox is checked, the web server will also be started when the XP Unlimited server is rebooted.

Location of the WWW folder

The default folder for the HTML-pages is below the Program Files folder of the XP Unlimited software:



When you change the location to something else, and click on the Apply button, the default HTML-files will be created in this new location.

Security / Limitations of the integrated web server

The integrated web server is limited to:

- HTTP Get and Head command. Anything else like HTTP Post is not supported.

This implies that the integrated web server can not be used for "accessing," "updating" or "writing" to the www-folder. There is no logic within the integrated web server to do such thing.

Our integrated web server has nothing to do with Microsoft Internet Information Server (IIS) and is not based on IIS; it does not use any IIS code; it is a completely self-developed web server. Updates from Microsoft related to IIS are not required for a XP Unlimited server.

The objects / files in the WWW folder are accessed by the web server using "Read and Share right". This implies that the WWW folder can be made read only and that the web server does not try to get write, lock or update access to the WWW folder.

The only exception to the previous statement is, when the web server is restarted with a new WWW folder path, it does write to the WWW folder, because then the www server and Maintenance Program will write the default HTML-objects in the new WWW-folder.

We should mention the following: because of the Active-X object as served by the web server, only the browser Microsoft Internet Explorer is supported. This browser does have its peculiar non-standard, proprietary behaviour. For instance, sometimes this browser sends the command OPTIONS to a web server. This command is a non-standard, proprietary command that is used between Microsoft Internet Explorer and Microsoft Internet Information Server (IIS).

Our integrated web server has nothing to do with Microsoft IIS and is not based on IIS. Therefore our integrated web server does not support this non-standard, proprietary OPTIONS command. The result will be 4xx errors in the logfile of our web server.

Indexing a folder

- Our web server does not index a folder like IIS or Apache can do.
- When a client enters an URL which contains a folder and not an object, our web server appends index.html to the URL.
 - When index.html does not exist in the requested folder, a 404-error is generated.

If you want to have a folder indexed, do create a file called index.html inside this folder and keep it up-to-date with the contents of the folder.

If you do NOT want to index a folder, and do NOT want to confront your users with a 404-error, create an index.html file in every folder. The contents of the index.html can be a nice message and some kind of javascript-refresh statement that loads the default index.html as located in the root of the www-folder.

Traversing

Our web server only serves objects inside or below the WWW-folder as entered in the Maintenance Program. Your users might want to try ../.. in URL with the objective to traverse beyond the WWW-folder. This is not allowed or supported by our www server.

ContentTypes.cfg

If you change the HTML-pages and starts to serve filetypes like EXE, BIN, DMG, MP3, AVI, SWF, etc, be sure to edit the file ContentTypes.cfg. In case the web server serves an object and its filetype is not found in ContentTypes.cfg, the default filetype reported to the browser of the client is "application/octet-stream". The impact of this is that the browser will show a message to the user, asking "where to save this file".

Parameters in HTML-pages

It is possible to include parameters within the HTML-pages as served by the web server. The default Error pages do use them and can be interpreted as an example for these parameters. A FAQ on our website describes the full list of parameters and their meaning.

Logfile

As usual with the XP Unlimited products, there is a logfile. It is located in \Windows\Temp and it is called XPUnlimited_www_Server.log.

The logfile shows the following info:

- date / time
- Info, Warning or Error
- IP Address of the client
- HTTP-result code:
 - 200 is OK
 - 4XX is an error related to the client
 - 5XX is an error related to the server
- Hostname as entered by the client in the address bar of the browser:
 - The web server can be accessed using the IP Address of the server, or DNS-name.
- object served:
 - In case of the Demo version of XP Unlimited, the objects are server from internal memory and not from the WWW-folder, although they must exist in the WWW-folder.

The logfile is a wrap-around logfile and will overwrite itself. The maximum size is 1 MB. If auditing is important, the Administrator should schedule some kind of automatic backup of this logfile.

Using the Web Server for updating of the client software

The client software is called xpuWin32client.exe, and is installed in 2 locations:

- c:\program files\xpunlimited
- and
- c:\program files\xpunlimited\www

The next time when you install an update of XPUnlimited on the XPU Server, a new version of the client is also updated in the WWW-folder.

When an client connects to the XPUnlimited-server, it requests the version of the client as served by the Web Server. When the version of the client as served by the Web Server differs from the client itself as it is running on a remote PC, the client software on this remote PC will update itself with the version of the client as server by the Web Server.

Client software is "signed". After downloading the client software from the Web Server, the signature is verified before the new client software is used on the remote PC.

Disable updates of client software from the Web Server

When you do not want that the Web Server does also offer the client software, delete xpuWin32client.exe from the WWW-folder.

Use the Web Server ONLY for updating the client software

It is also possible to configure the Web Server such that it ONLY provides updates of the client software but it does NOT offer Remote Desktop Sessions for browsers. If this is desired, proceed as follows:

- Delete the following files from the WWW-folder
 - xpu_connectdirect.html
 - xpu_settings.html
 - msrdp.cab

Do not delete other files like the 4xx-HTML error messages or CFG-files.

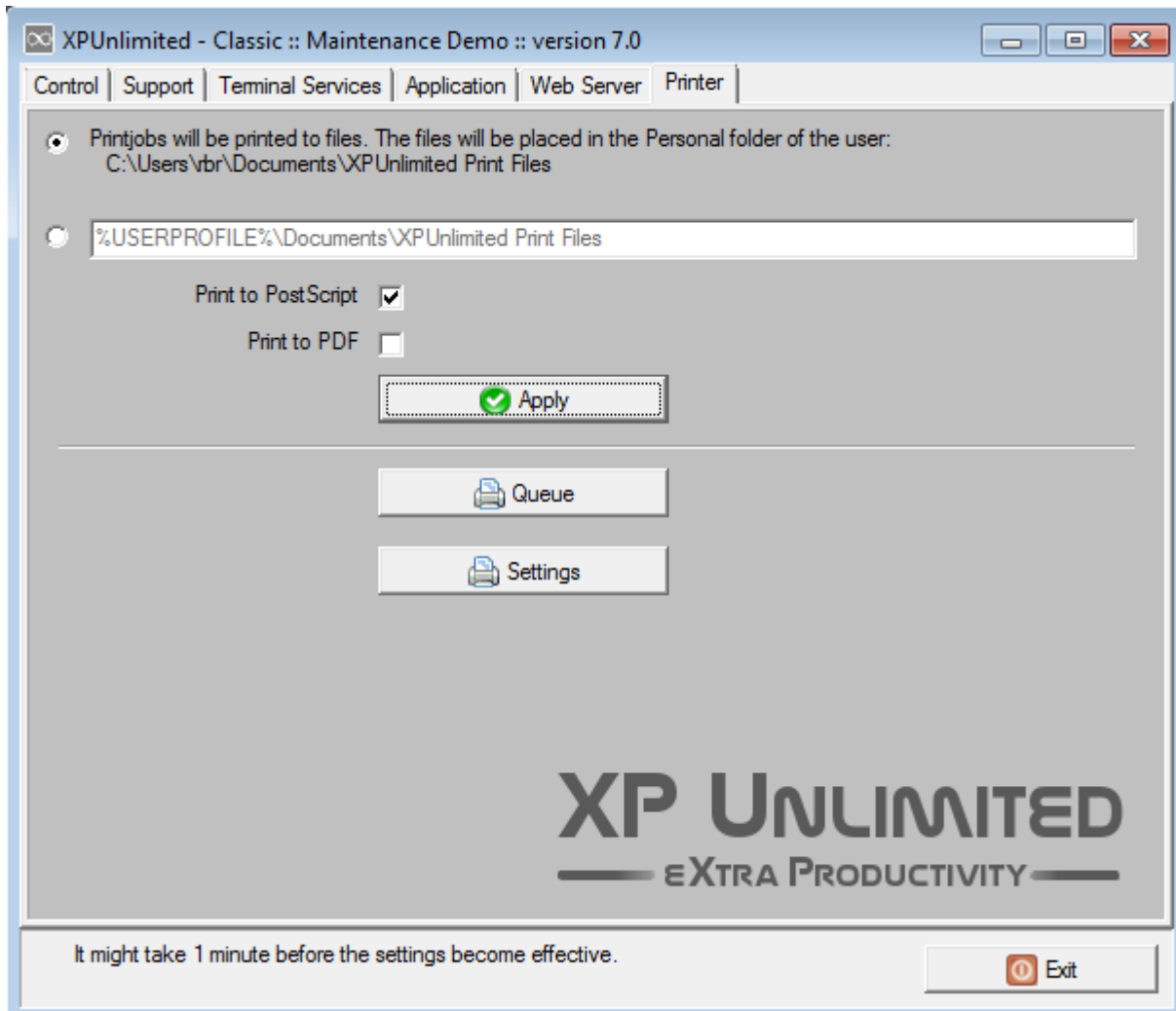
Place the following index.html file in the WWW-folder (overwrite the index.html that is already in the WWW-folder):

```
<html>
<head><title>Nothing to see here...</title></head>
<body>Nothing to see here...</body>
</html>
```

Integrated PostScript / PDF Printer

Introduction

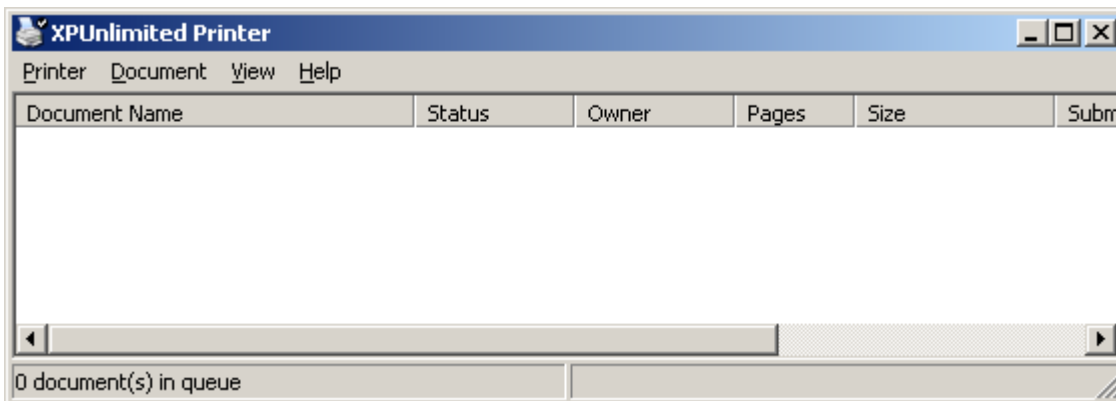
When the PostScript / PDF printer is enabled, automatically a XPUnlimited Printer is created. Users can select and use the printer. Result will be a printed file in their Personal Folder.



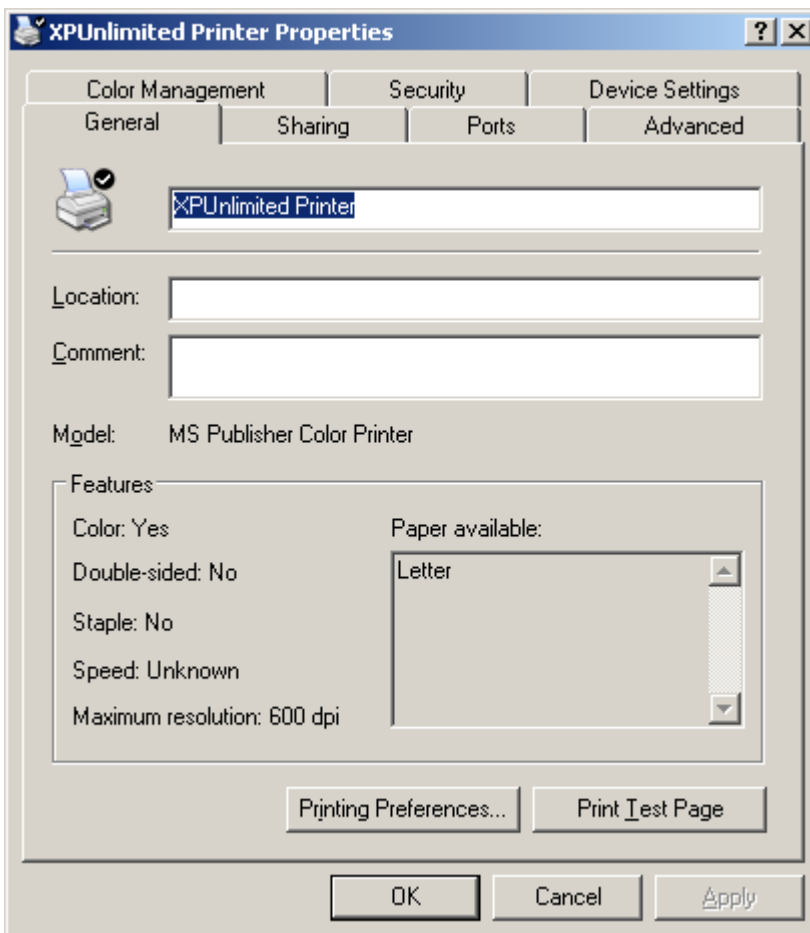
When either, or both PostScript and / or PDF is selected, the XPUnlimited Printer will be available. When neither PostScript or PDF is selected, the XPUnlimited Printer will be removed.

The location of where the PDF / Postscript files are placed, can be changed. If this is changes, for instance, on a different server, please note that the the user must have create and write rights on this different server.

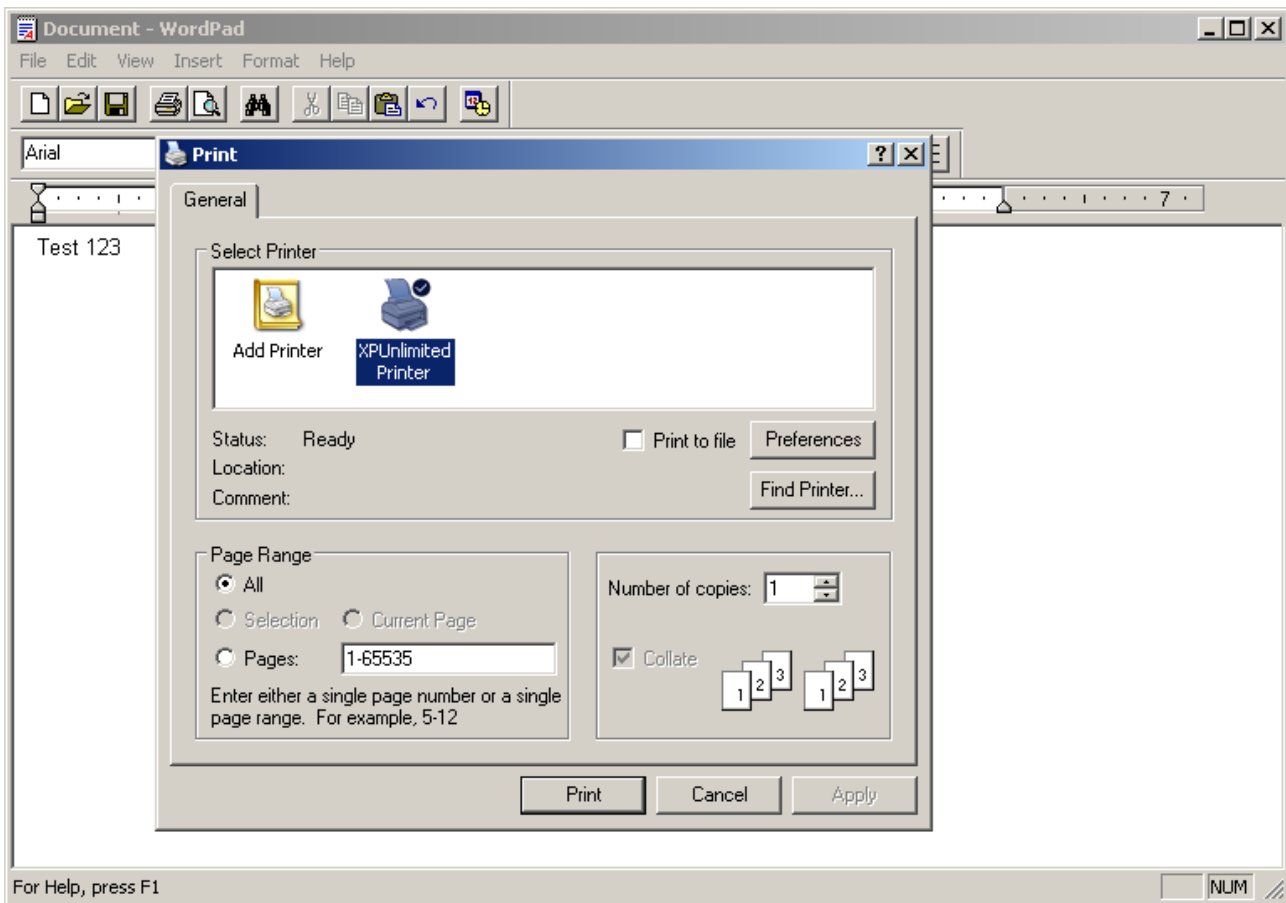
The printer queue can be viewed in the usual way:



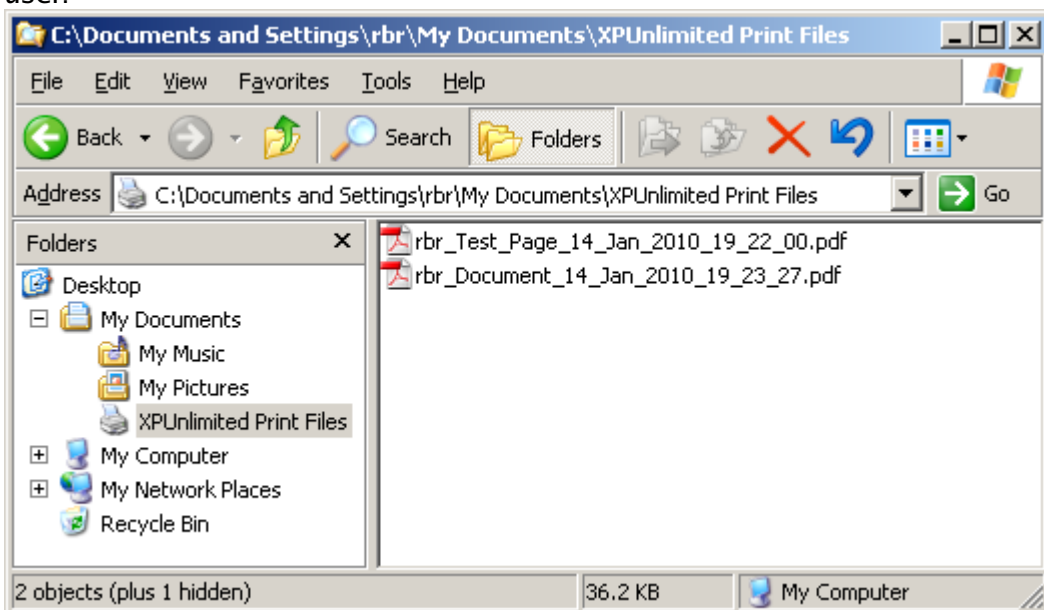
Detailed settings are also possible, although the default settings will be OK in most cases:



Users can select the XPUnlimited Printer for a printjob:



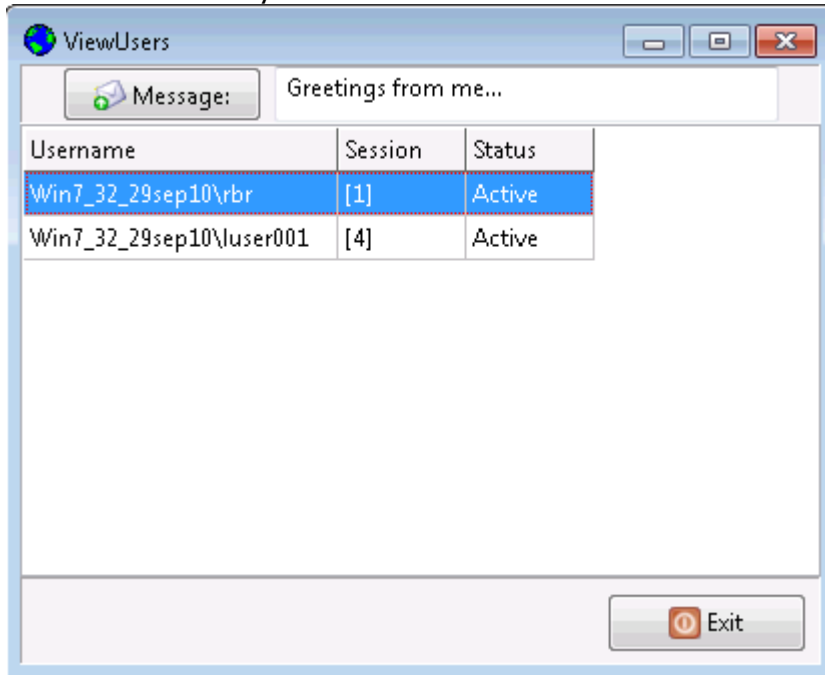
Result of the print job is a file in the folder XPUnlimited Printer Files, in the Personal folder of the user:



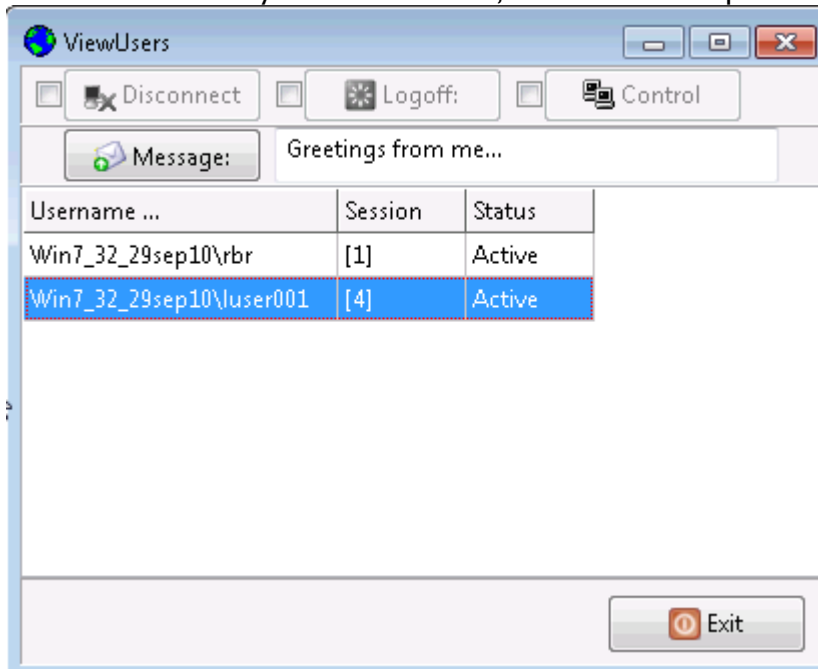
xpuViewUsers

In the folder Program Files\XPUnlimited the tool xpuViewUsers is installed:

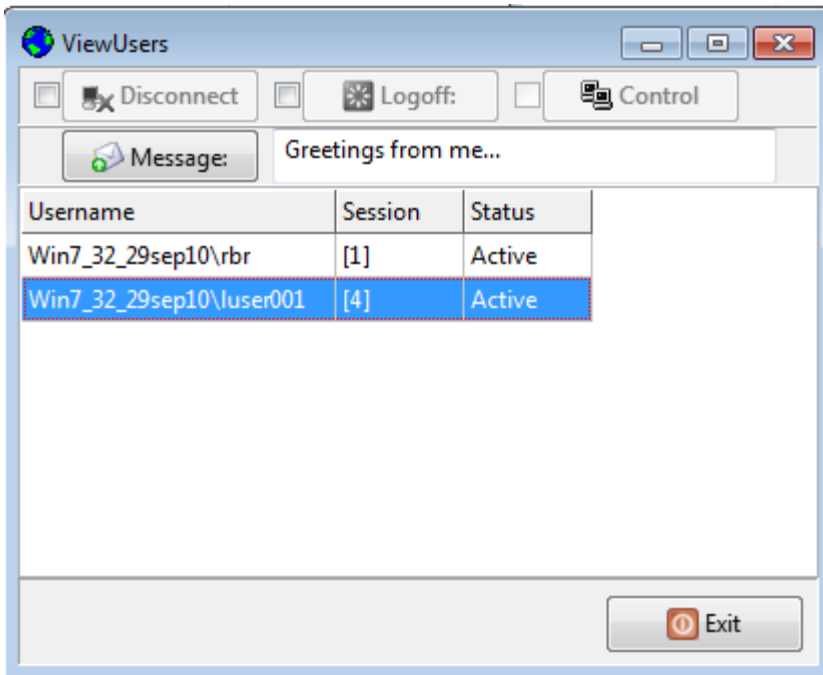
When it is started by an user which does not have Administrator Rights, it is shown as follows:



When it is started by an Administrator, it shows more options:

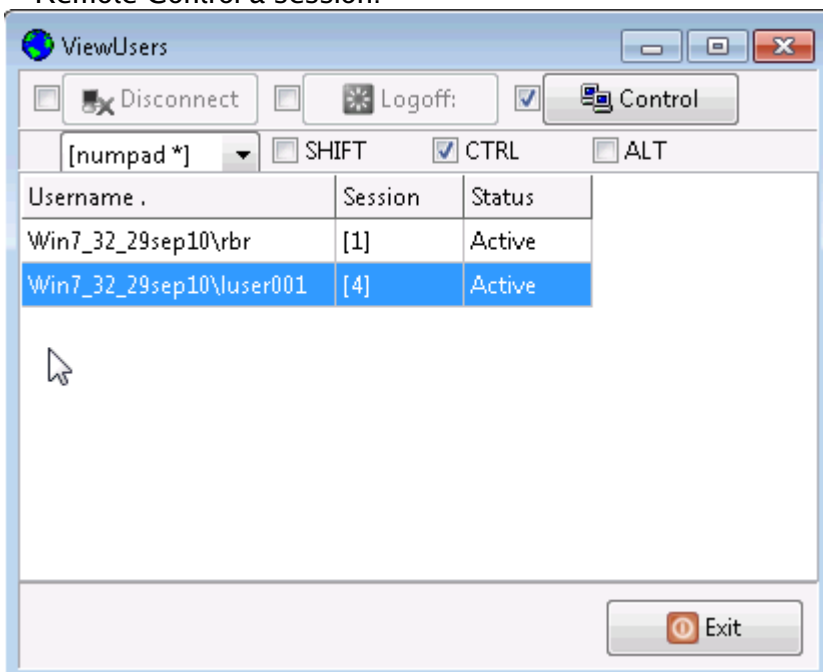


When it is started in the Console of the XP Unlimited Server, the button for Control is not available.



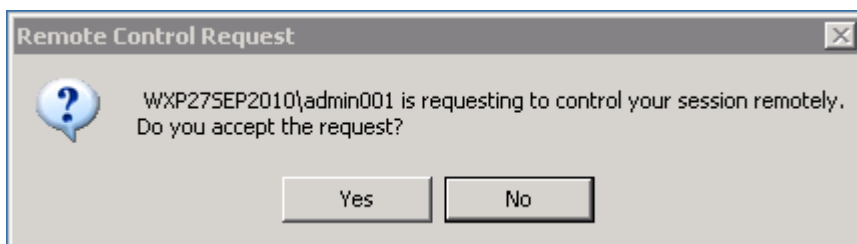
What can xpuViewUsers do

- Users are able to send messages to each other.
- Administrators are able to Disconnect or Logoff an user.
- Administrators which are not working on the Console of the XP Unlimited Server are able to Remote Control a session:



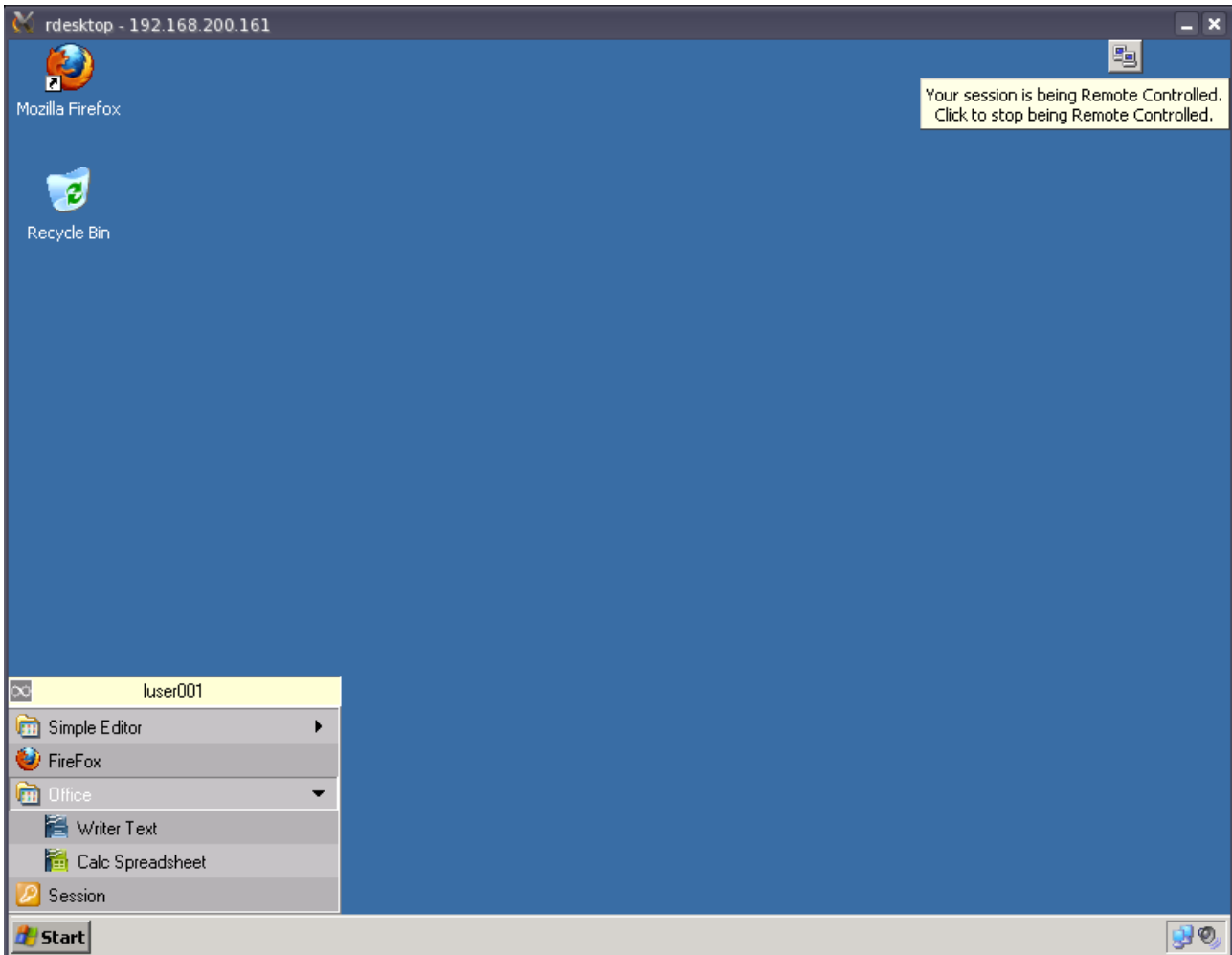
- Select an user (not yourself)
- Select a preferred hot-key combination that can be used to disconnect the Remote Control Session
- click on Control.

Depending on the Policy Settings related to Remote Control, the target user is asked (or not) for allowing the Remote Control action:



When the request is accepted, the Administrator can remote view or control the session of the user.

In the upper-right corner of the Remote Controlled Session, a small button is shown as an indication that the session of the user is being Remote Controlled:



Test Tools

For the IT professional or for those involved in testing XP Unlimited, we have some Test Tools. You can download the Test Tools from our website.

The Test Tools can assist you in understanding and working with Application Control, the Command line Parameters and the Autorun options of an Application.

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