Global Information Assurance Certification Paper

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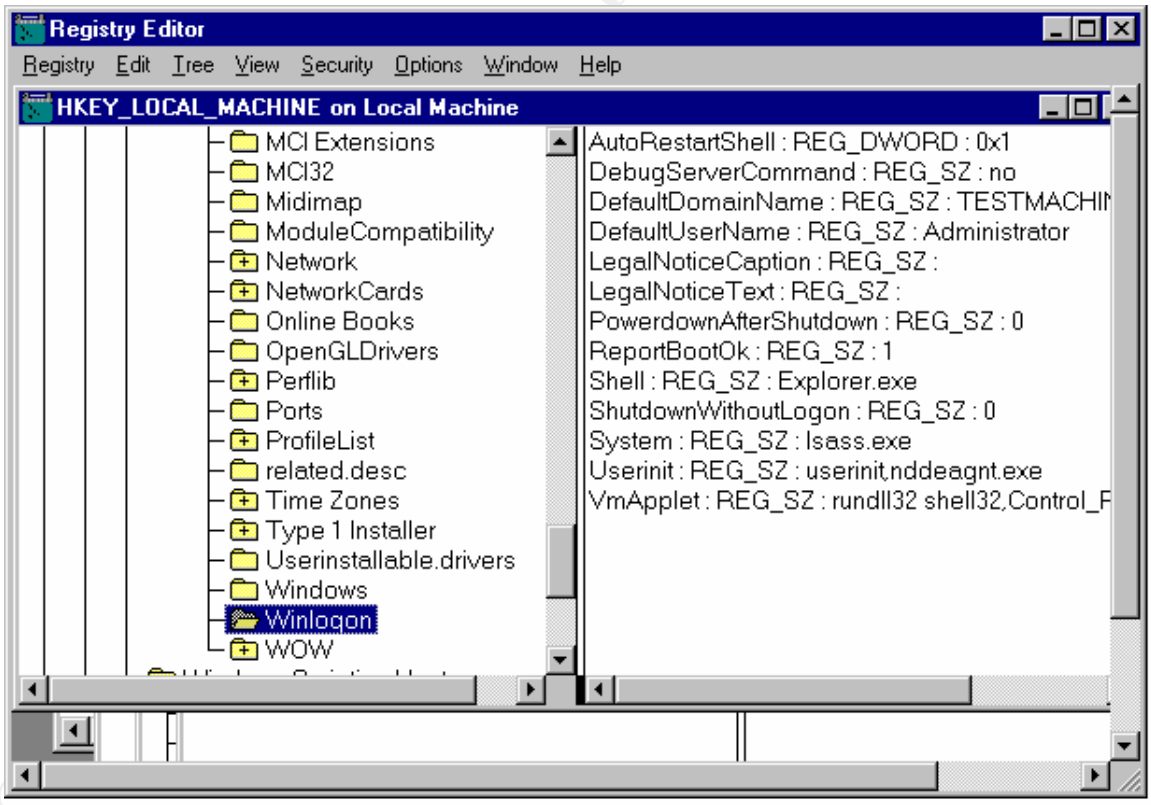
Option 1 – Developments in securing NT

Author – Raymond Chan
SANS San Jose 2000 – Windows NT Security GIAC Training

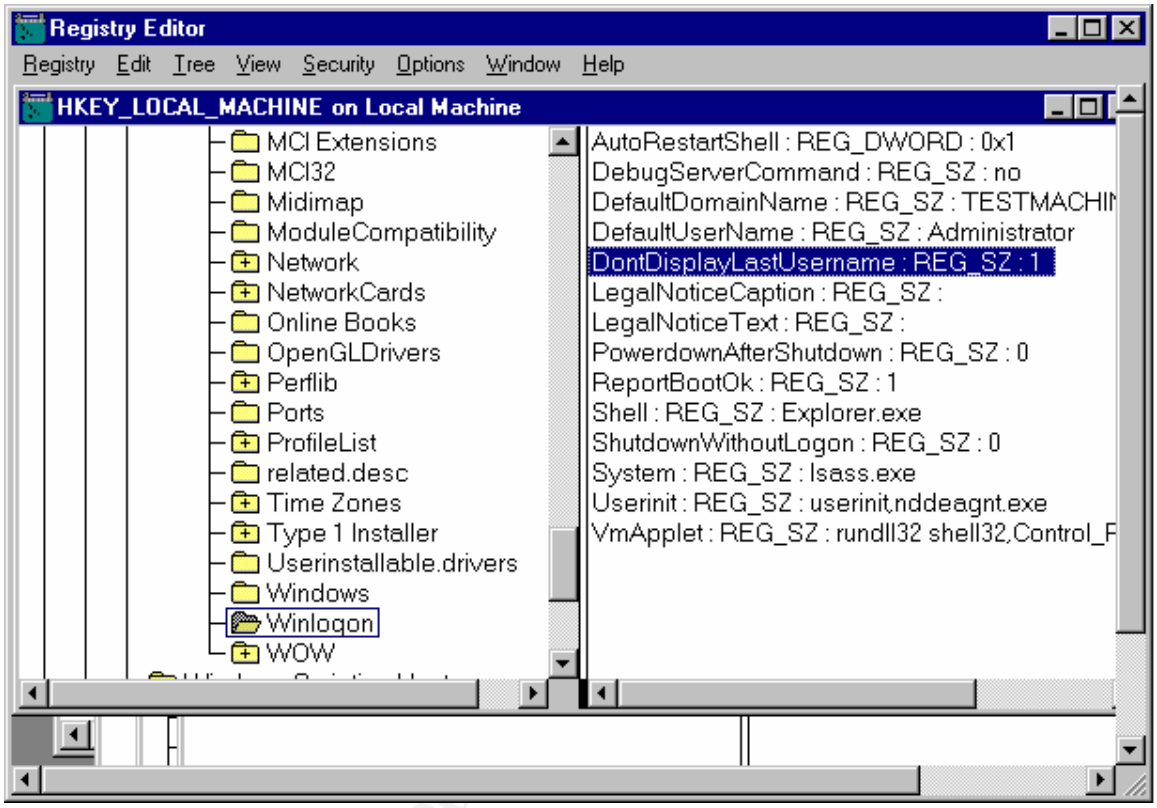
A Step-By-Step Guide for Setting Registry Keys

A. Disable the display of the last logged on username

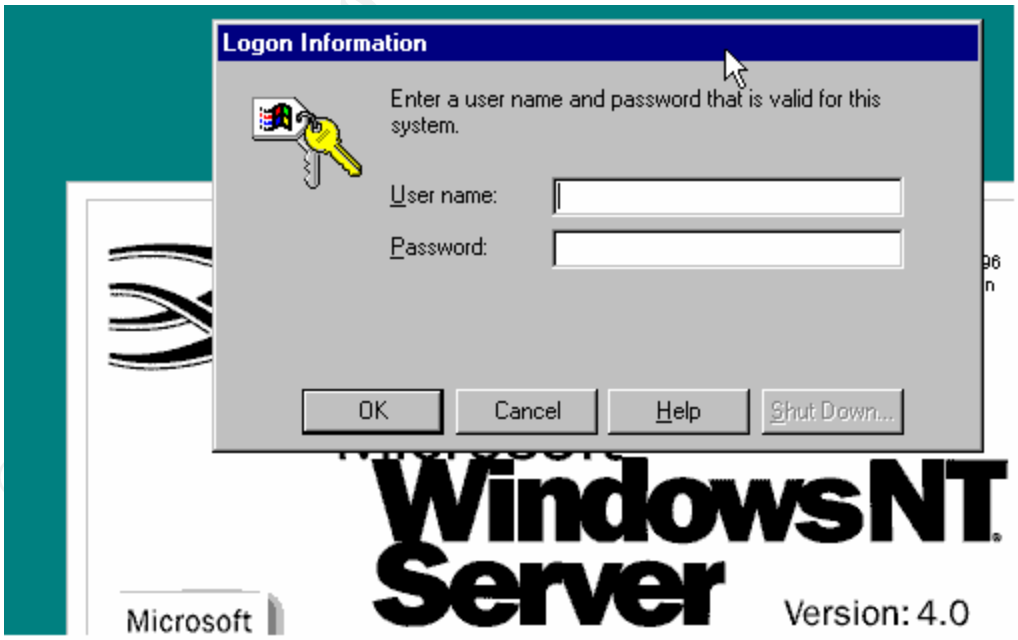
1. Run regedt32 using Start->Run
2. Select the hive HKEY_LOCAL_MACHINE
3. Select Software\Microsoft\Windows NT\CurrentVersion\Winlogon. The screen shall look like:



4. Select Edit->Add Value
5. Enter DontDisplayLastUsername for the value name and REG_SZ for the data type. Press OK.
6. Enter '1' in the string edit box and press OK
7. The screen shall look like:

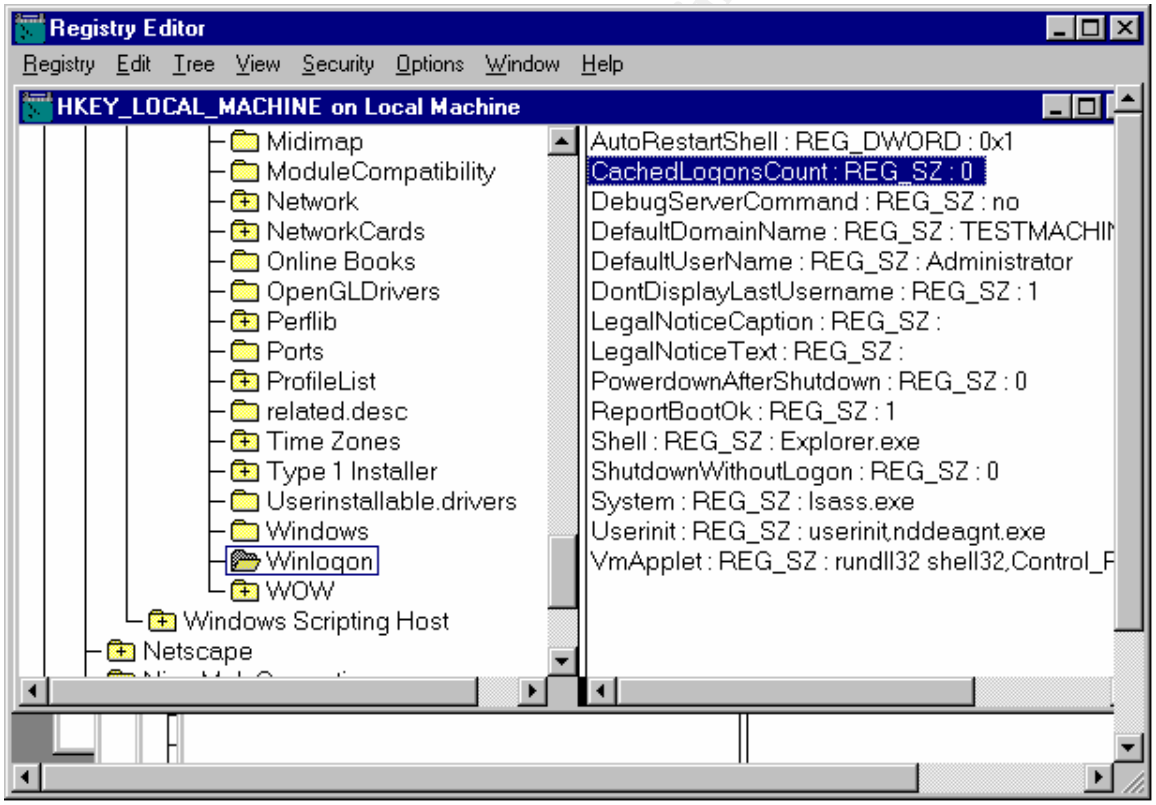


8. Now the logon box will not show the last logged on username.



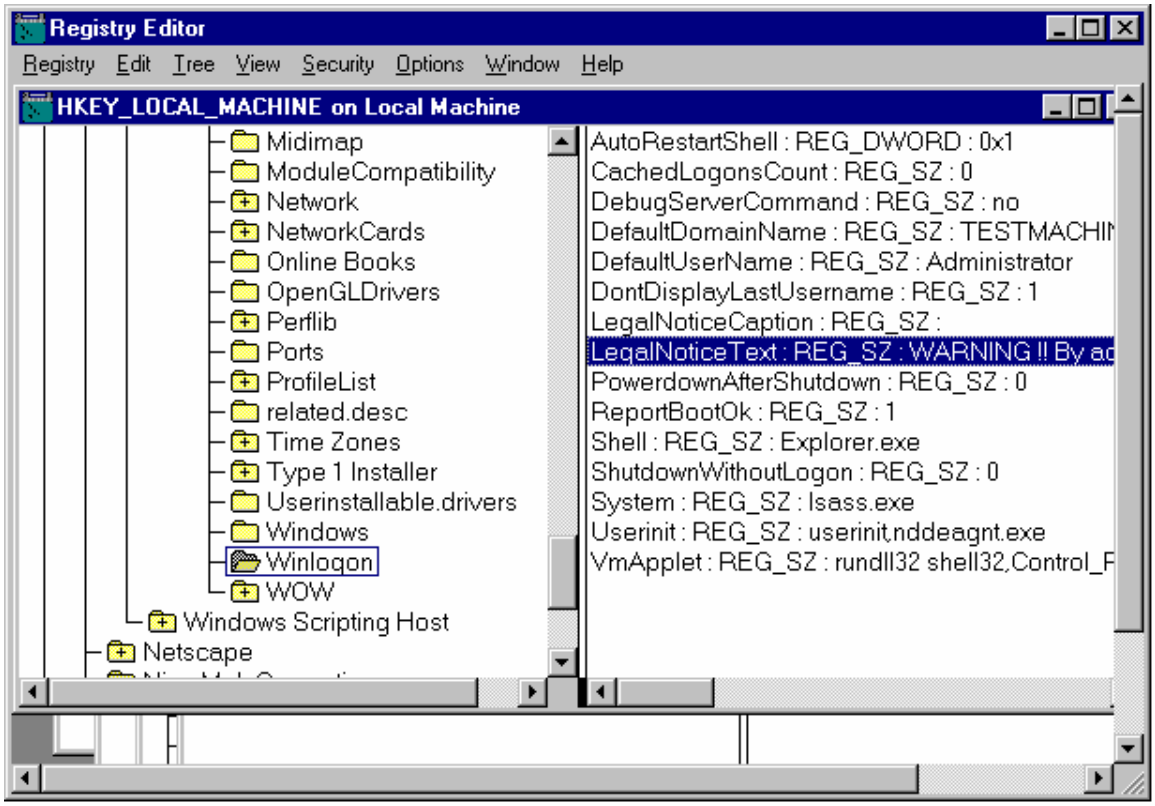
B. Disable caching of logon information

1. Run regedt32 using Start->Run
2. Select the hive HKEY_LOCAL_MACHINE
3. Select Software\Microsoft\Windows NT\CurrentVersion\Winlogon.
4. Select Edit->Add Value
5. Enter CachedLogonsCount for the value name and REG_SZ for the data type. Press OK.
6. Enter '0' in the string edit box and press OK.
7. The screen shall look like:



C. Use the logon message to warn intruders

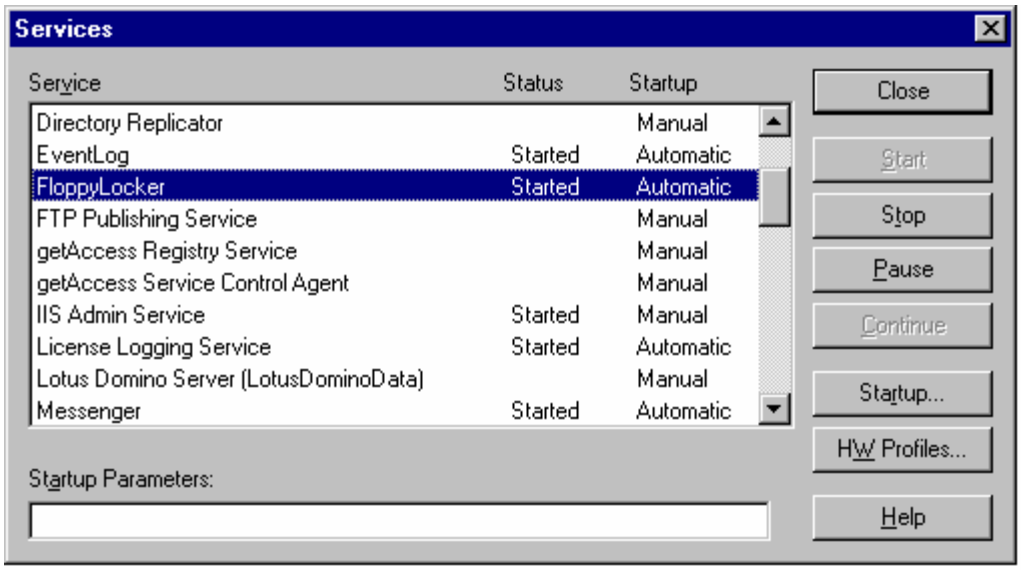
1. Run regedt32 using Start->Run
2. Select the hive HKEY_LOCAL_MACHINE
3. Select Software\Microsoft\Windows NT\CurrentVersion\Winlogon.
4. Select Edit->Add Value
5. Enter LegalNoticeText for the value name and REG_SZ for the data type. Press OK.
6. Enter a logon message that you want to warn intruders and press OK.
7. The screen shall look like:



8. Now a logon message will be displayed before each logon.

D. Disable floppy disk drives for non-administrators

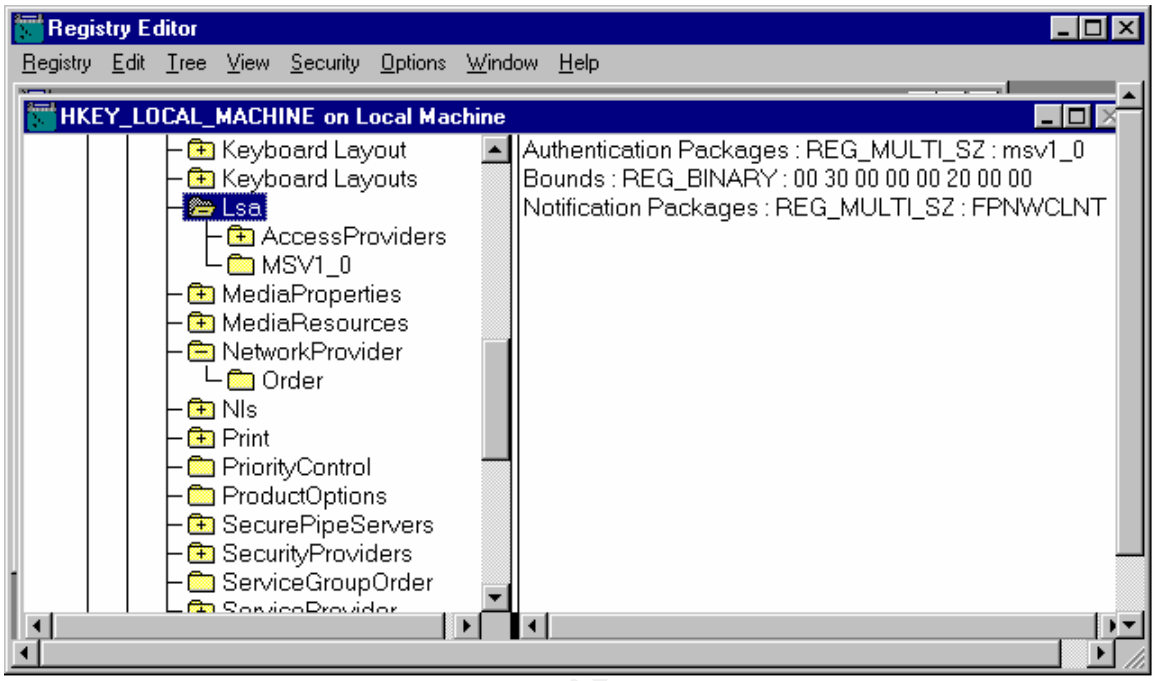
1. Install NT Resource Kit.
2. Run cmd using Start->Run
3. Enter "instsrv FloppyLocker c:\ntreskit\floplock.exe" assuming the resource kit is installed at the default location.
4. Start the FloppyLocker service using Start->Settings->Control Panel->Services as shown below or reboot since the FloppyLocker will be started on bootup.



5. Now logoff and re-login as an ordinary user instead of administrator.
6. Any attempts to access the floppy drive will result in errors:

E. Avoid the Netware DLL Trojan horse

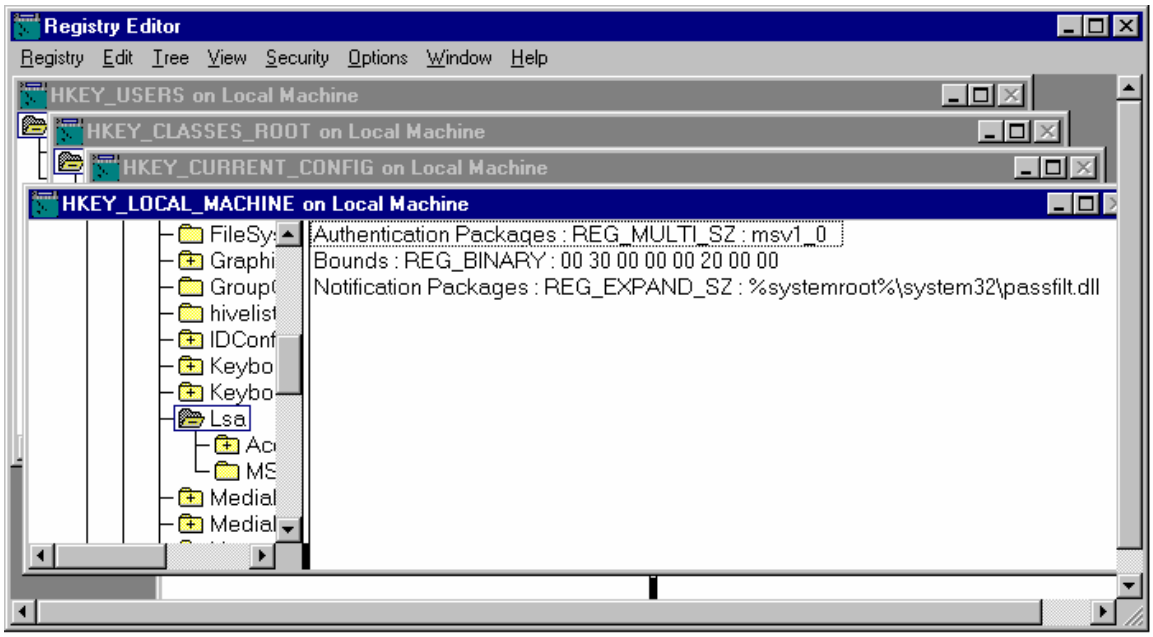
1. Run regedt32 using Start->Run
2. Select the hive HKEY_LOCAL_MACHINE
3. Select SYSTEM\CurrentControlSet\Control\Lsa
4. The screen shall look like:



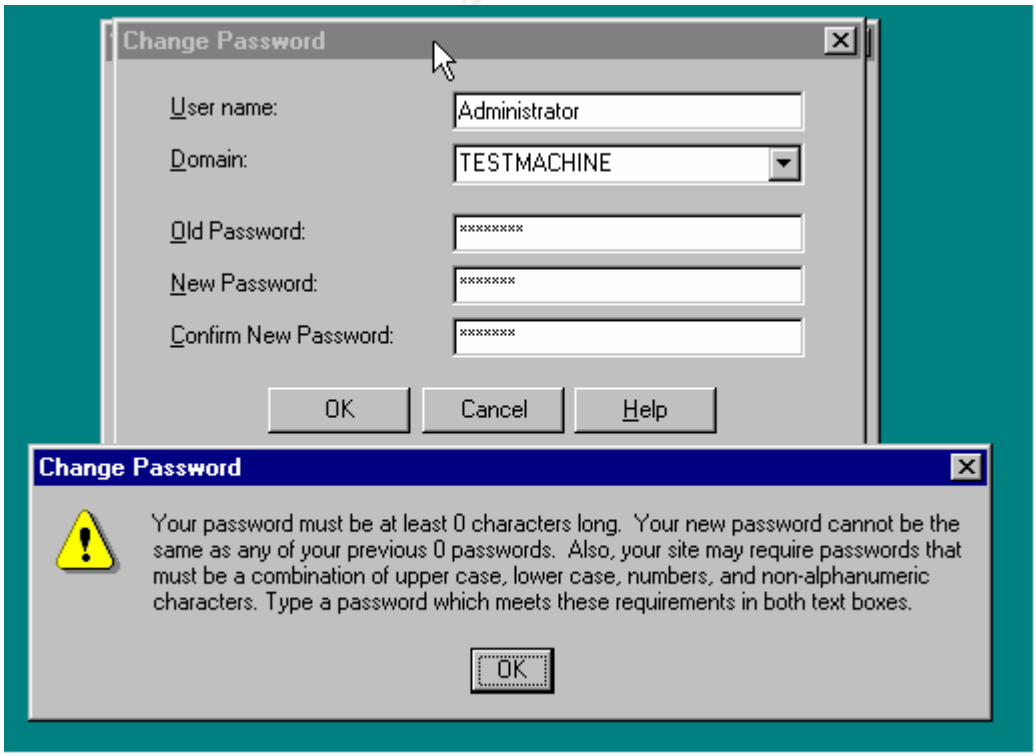
5. Select "Notification Packages"
6. Delete the "Notification Packages" value using Edit->Delete

F. Enforce strong passwords

1. Run regedt32 using Start->Run
2. Select the hive HKEY_LOCAL_MACHINE
3. Select SYSTEM\CurrentControlSet\Control\Lsa
4. Select Edit->Add Value
5. Enter "Notification Packages" for the value name and REG_EXPAND_SZ for the data type. Press OK.
6. Enter %systemroot%\system32\passfilt.dll in the string edit box and press OK.
7. The screen shall look like:

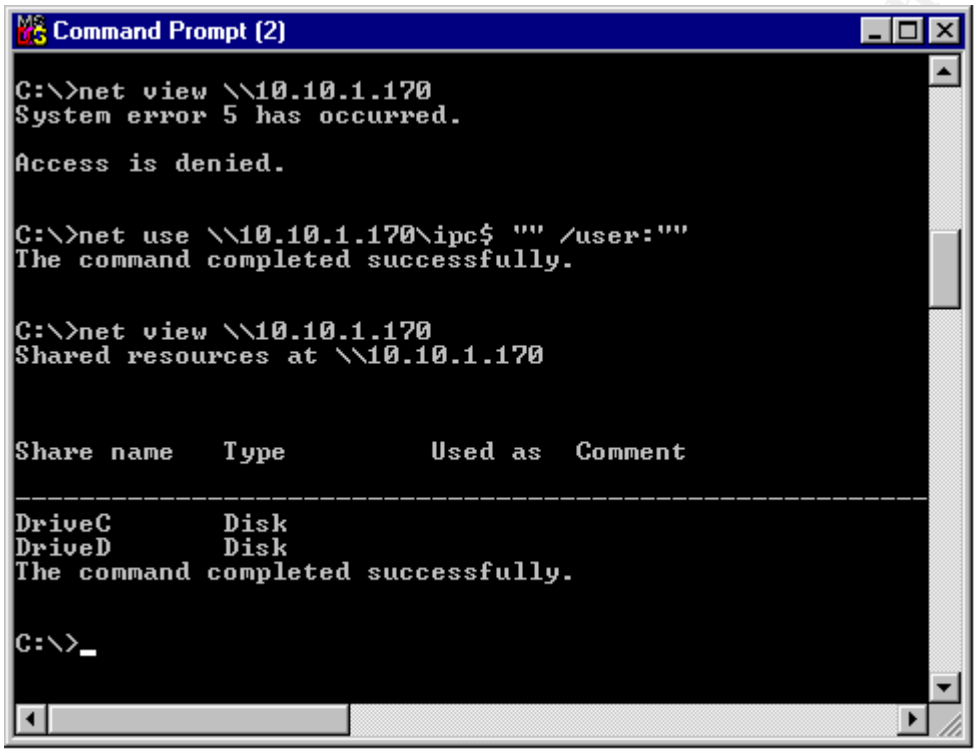


8. Exit regedt32 and reboot the system.
9. After the system comes up, log in and try to change password using Control-Alt-Delete "Change Password" option. If the new password does not satisfy the new password requirement, an error message will be generated as follows:

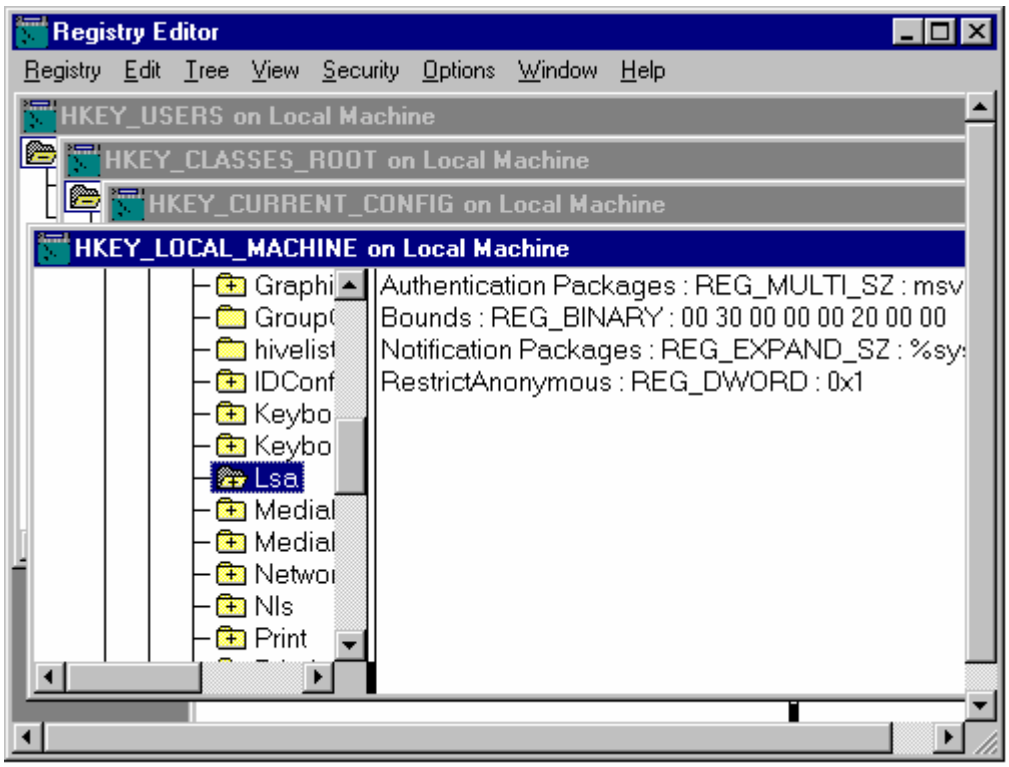


G. Restrict anonymous logon

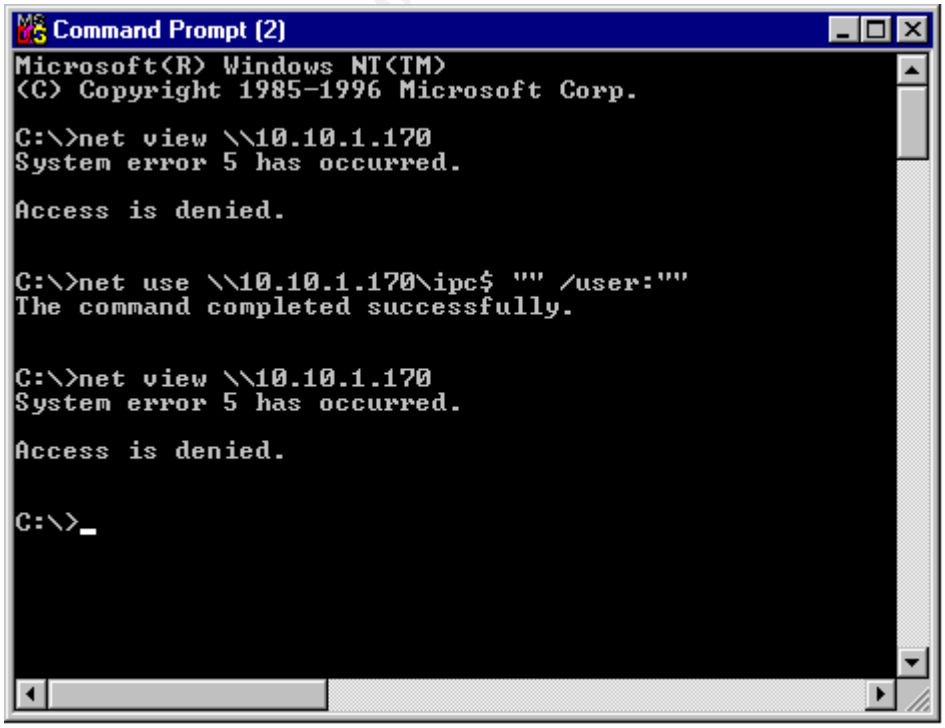
1. Verify "null session" has not been disable in the system by performing the following command sequence in a command box on a remote NT machine. The NT server used for this example is at 10.10.1.170.



2. Run regedt32 using Start->Run
3. Select the hive HKEY_LOCAL_MACHINE
4. Select SYSTEM\CurrentControlSet\Control\Lsa
5. Select Edit->Add Value
6. Enter "RestrictAnonymous" for the value name and REG_DWORD for the data type. Press OK.
7. Enter "1" in the data edit box and press OK.
8. The screen shall look like:

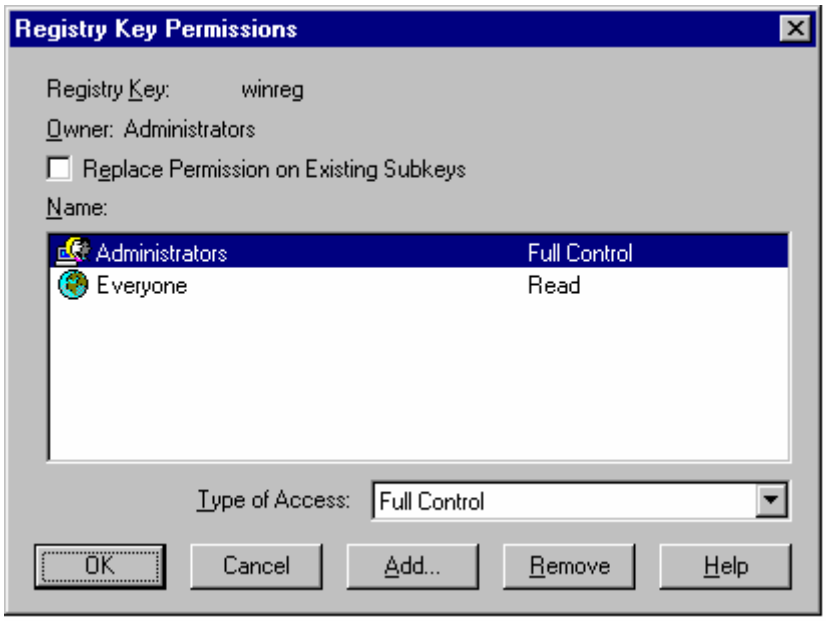


9. Now reboot the local NT server and remote machine.
10. Logon to the remote machine and try to setup a "null session" again.
11. This time an error message will be generated as follows:

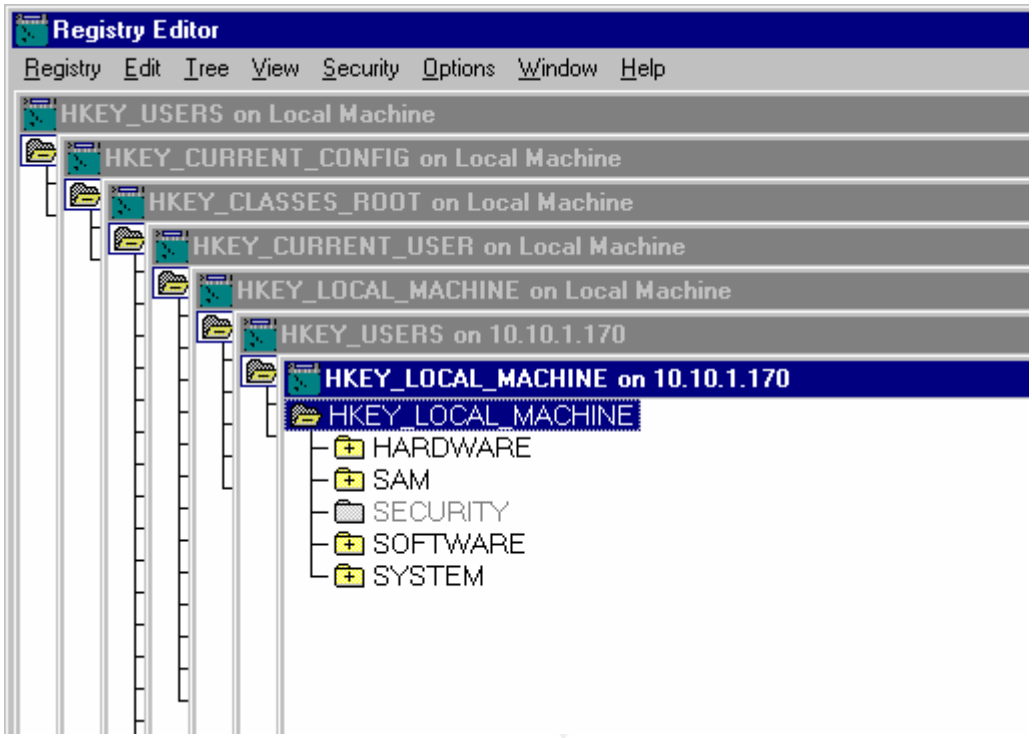


H. Control remote access to the registry

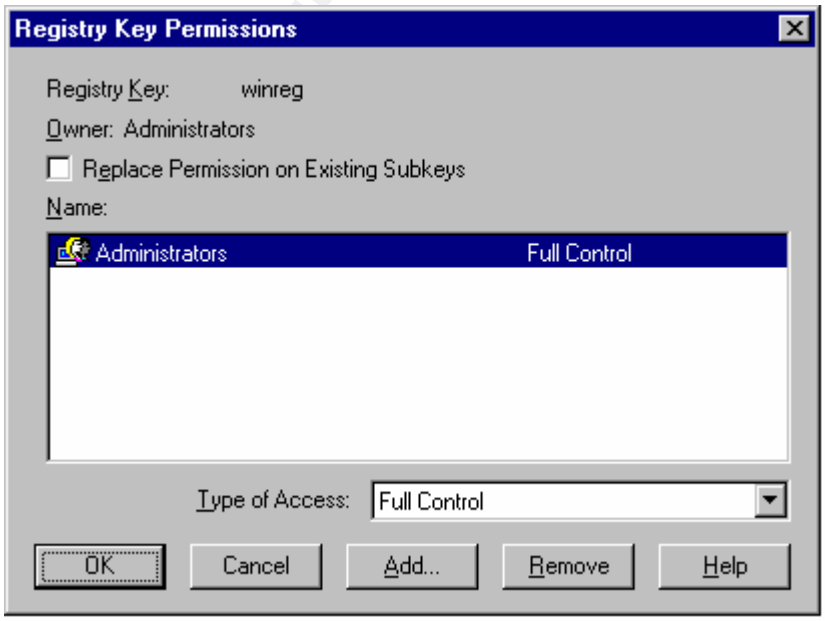
1. Run regedt32 using Start->Run
2. Select the hive HKEY_LOCAL_MACHINE
3. Select SYSTEM\CurrentControlSet\Control\SecurePipeServers\winreg
4. Select Security->Permissions
5. The screen shall look like:



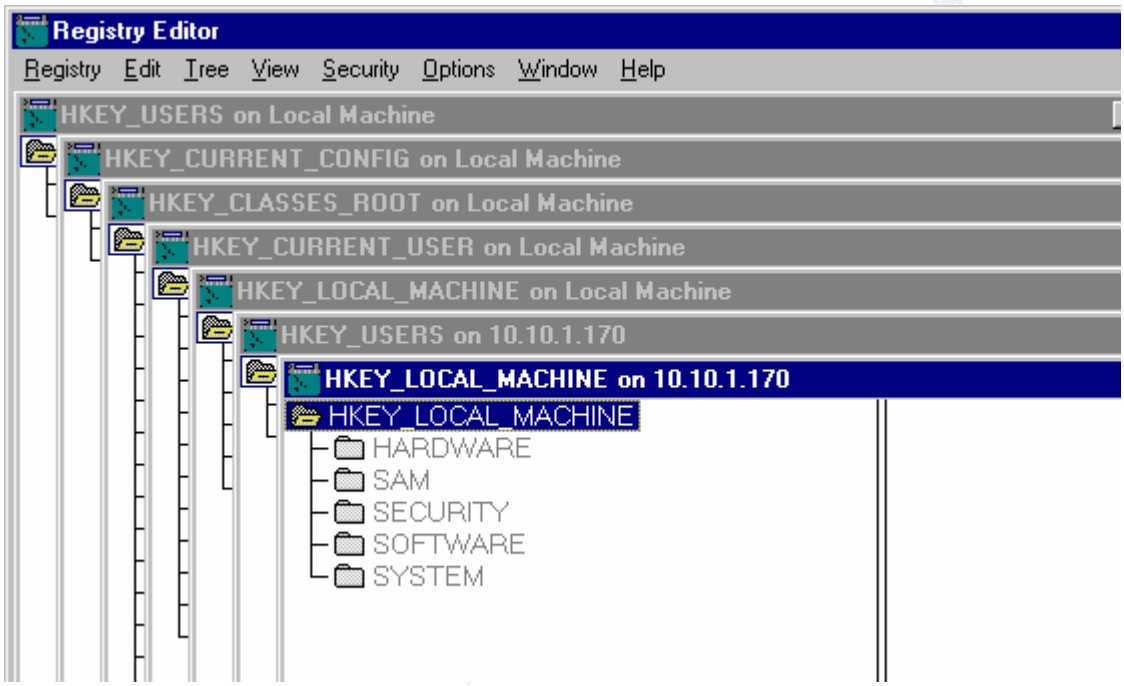
6. Log on to a remote computer and run regedt32.
7. Select Registry->Select Computer
8. Enter the IP address (10.10.1.170 in this example) or computer name of the NT server.
9. The screen shall look like:



10. The remote computer can display/update the registry on the NT server.
11. On the local NT server, run regedt32.
12. Select the hive HKEY_LOCAL_MACHINE
13. Select SYSTEM\CurrentControlSet\Control\SecurePipeServers\winreg
14. Select Security->Permissions
15. Remove all users except Administrators.
16. The screen shall look like:



17. Reboot the local and remote machines.
18. Access the NT server registry from the remote machine again using a non-administrator account.
19. The screen shall now look like:



20. The keys in the registry under HKEY_LOCAL_MACHINE for the NT server are now gray out indicating they are now not accessible remotely.