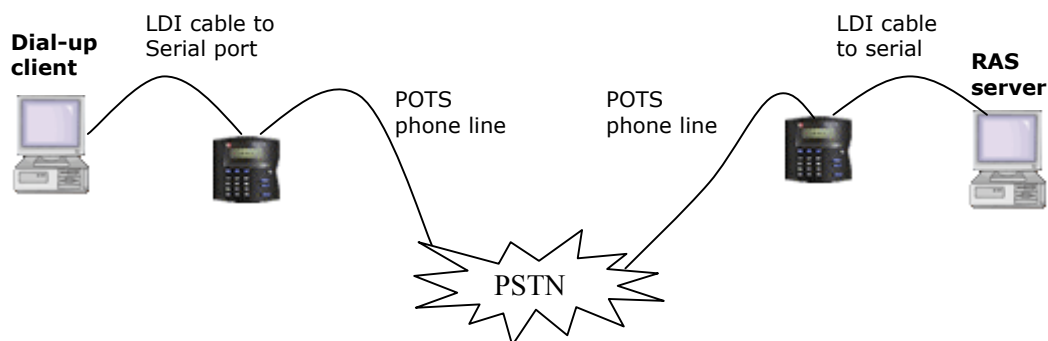


OMNI Application Note

Title: OMNI and Dial-up Access – Windows NT
Date: March 1, 2004
Revision: 1

1 Overview

By using two OMNIs in combination with a Windows RAS server and Dial-up connection, the user can achieve a secure dial-up networking connection to perform typical Internet tasks such as checking email, browsing web documents, FTP, and NetMeeting.



Note: Client and Server setup are identical except where noted.



2 Prerequisites

The following items will be required in order to establish a secure Dial-up connection:

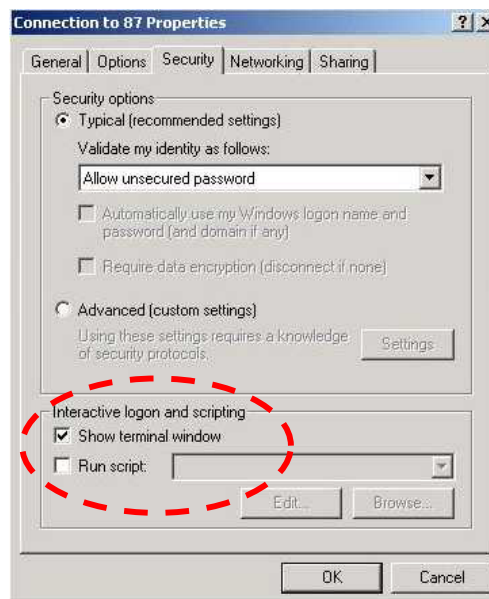
- 2 OMNIs – one for local and one for remote computer
- 2 LDI cables – included with OMNI
- 2 phone cables
- 2 PCs – one to act as client and one to act as server. Note: Not all windows operating systems can accept incoming connections
- 2 phone lines
- OMNI modem driver .inf file available on the SecurePhone web site
- 2 Serial port adapters 9 pin-25 pin (only necessary if the PCs have 9 pin serial port only)

3 Quick Start Setup

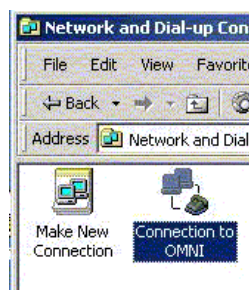
1. Connect both OMNIs to the PC via the Local Digital Interface, and to the phone network.
2. Configure the OMNIs for remote control.
3. On both computers, install the OMNI as a modem. Instructions for this are detailed in the OMNI Modem Installation application note.
4. Create a dial-up networking connection on the client PC, and an incoming connection (RAS) on the server PC.



If the **OMNI Show Details** modem driver is installed, the “after-dial terminal window” will need to be enabled by opening the **Properties** of the newly created connection and checking the proper box, usually found on the **Security** tab. The terminal window requires the user to review security information before allowing the call to proceed; this configuration may not be ideal for an unattended server.



5. Double-click the client dial-up connection icon to initiate a call.





4 Detailed Setup

1. Configure 2 OMNIs with the following settings:

OMNI Remote Operation

Remote Control	Enabled
ACL	Optional, if enabled, populate with required DAO/KMID entries
Secure Data	Enabled
SACS Data	Enabled for version 2.0 and less
Ring Count	0
Baud Rate	Match computer's baud rate settings

2. Place the OMNIs in Remote Control
3. Connect each OMNI to a separate phone line using standard phone cables
4. Connect each OMNI to their designated computer's serial port using LDI cables. An adapter may be needed from the 25 pin cable to a 9 pin port, however a gender changer will NEVER be necessary. If the setup requires a using a gender changer, it is most likely the wrong cable or the wrong port on the computer.
5. Install the OMNI as a modem. For details on adding a modem, please see the Modem Install application note.
6. When the "Modem Setup" window informing that Dial-up Networking needs to be reconfigured is displayed, click "Yes".

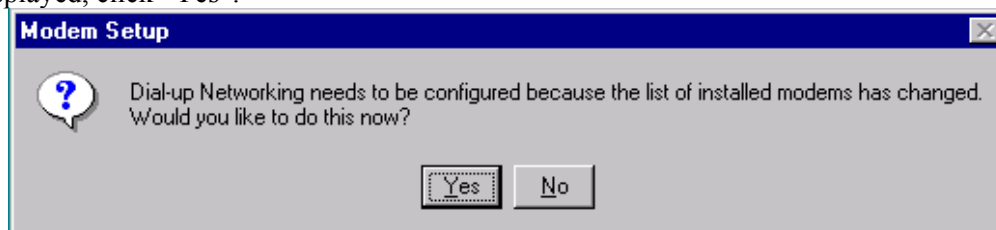


Figure 1



7. If an OMNI had previously been installed as a modem, the “Remote Access Setup” window will be displayed showing the previous modem. If this happens, click “Remove”, otherwise proceed to step 21.

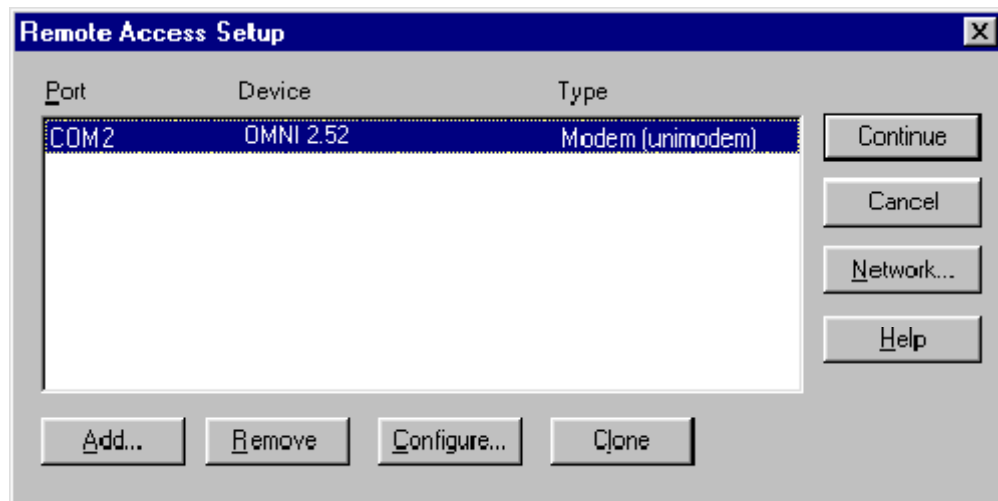


Figure 2

8. When the removal confirmation window is displayed, click “Yes” and then, in the “Remote Access Setup” window, click “Add”.

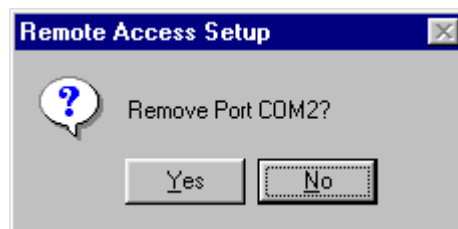


Figure 3



9. When the “Add RAS Device” window is displayed, ensure that the desired modem is selected and click “OK”.

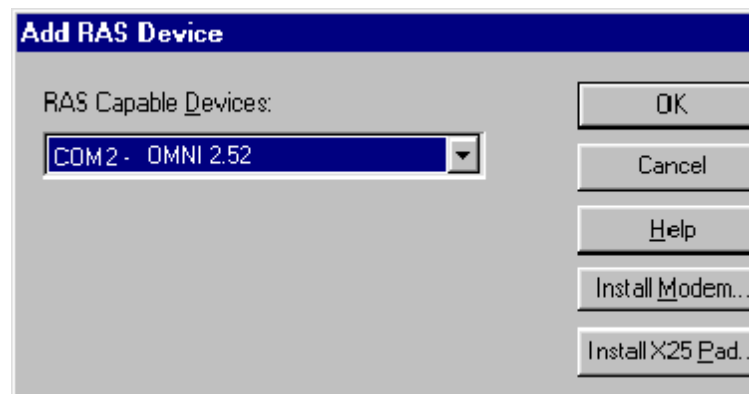


Figure 4



10. When the “Remote Access Setup” window is redisplayed with the new OMNI configuration, click “Configure...”.

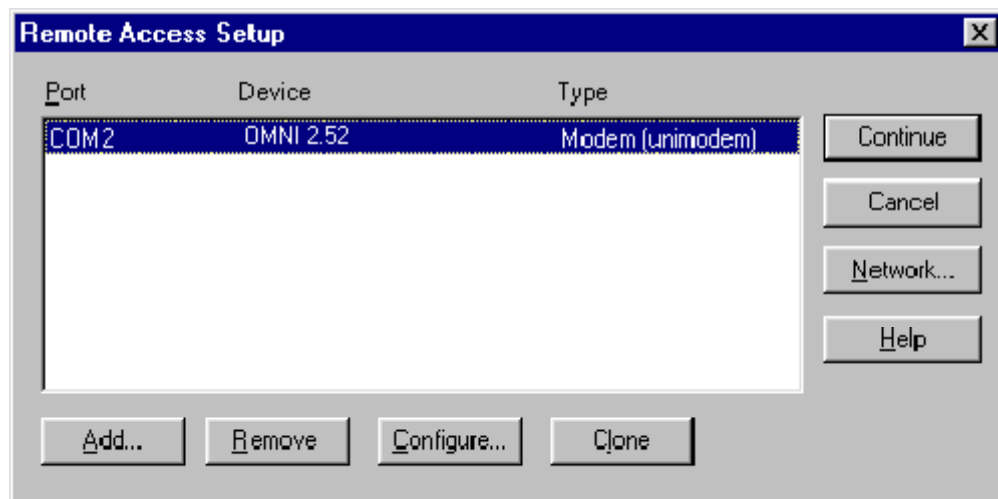


Figure 5



11. When the “Configure Port Usage” window is displayed, click the desired “Port Usage” and click “OK”. “Dial out only” should be selected if this computer is to be a client only, “Receive calls only” should be selected if this computer is to be a server only, and “Dial out and Receive calls” should be selected if this computer is to be a server with dial out capability.

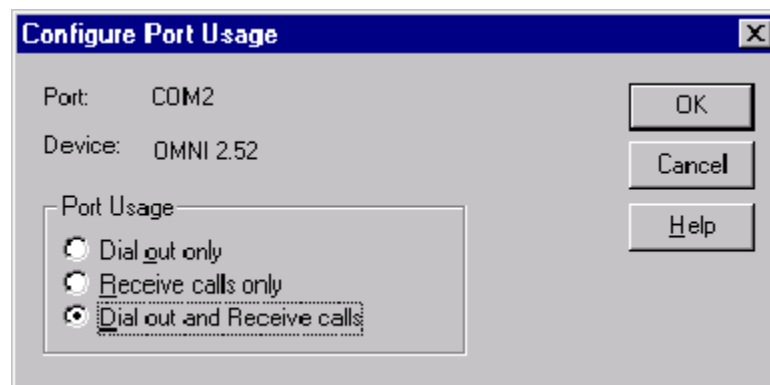


Figure 6



12. When the “Remote Access Setup” window is redisplayed, click “Network...”. Depending on the selection in “Port Usage”, one of three windows for network protocol setup will be presented.

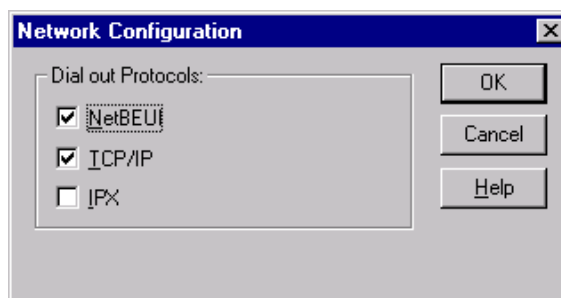


Figure 7 – Dial Out Only

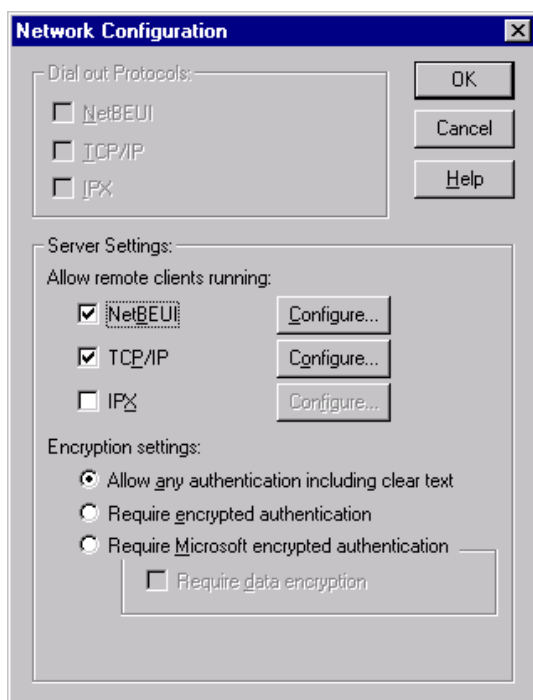


Figure 8 – Dial In Only

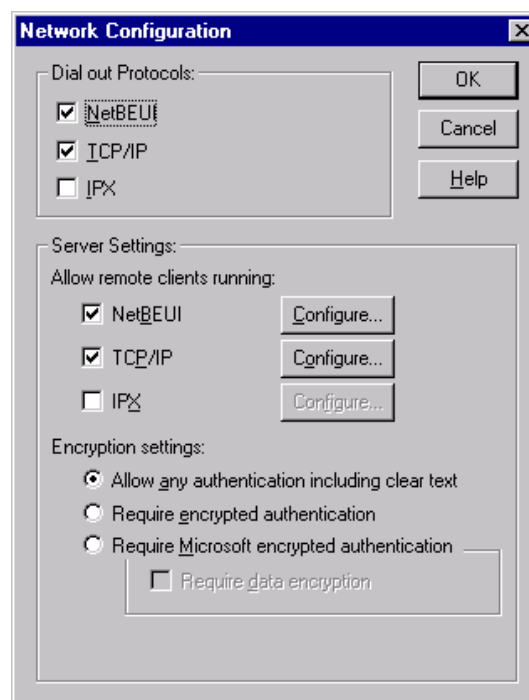


Figure 9 – Dial In and Dial Out



13. Ensure that NetBEUI and TCP/IP are checked for Dial out Protocols (if selected) and Server Settings (if selected).
14. If Server Settings are displayed, ensure that Encryption settings are set to “Allow any authentication including clear text” for now. This can be changed later to a stronger authentication if desired.
15. If Server Settings are displayed, click “Configure...” next to NetBEUI.
16. When the “RAS Server NetBEUI Configuration” window is displayed, select the desired access and click “OK”.

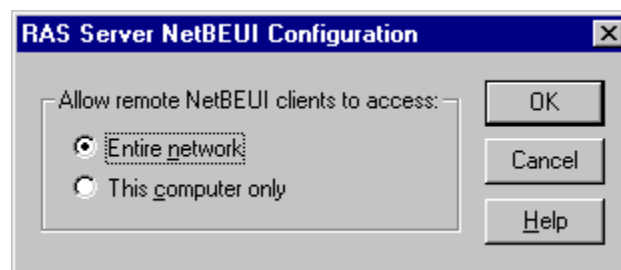


Figure 10 – Dial Out Only

17. If Server Settings are displayed, click “Configure...” next to TCP/IP.



18. When the “RAS Server TCP/IP Configuration” window is displayed, select the desired assignment of client addresses and click “OK”. If there is no DHCP server, a static address pool can be used.

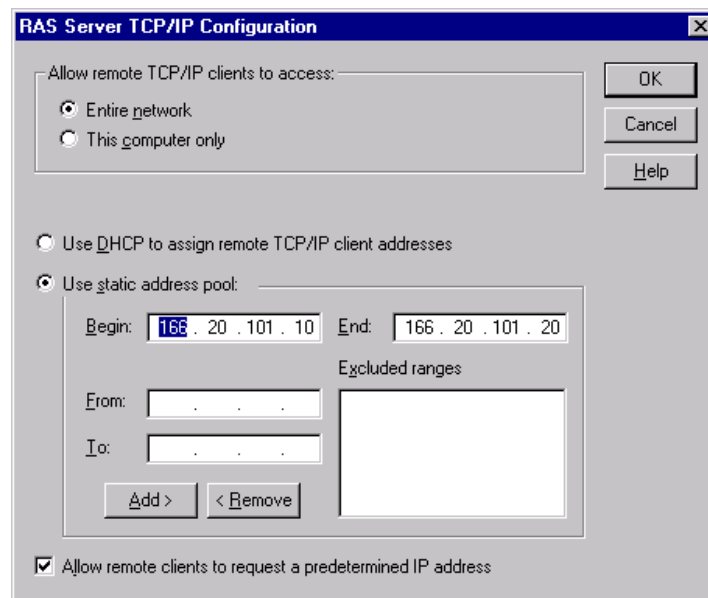


Figure 11 – Dial Out Only

19. When the settings of the “Network Configuration” window, are complete, click “OK”.

20. When the “Remote Access Setup” window is redisplayed, click “Continue”.
21. Several windows will be displayed as the bindings are updated. When the “Network Settings Change” window is displayed, remove the CD or floppy from the appropriate drive and click “Yes”.

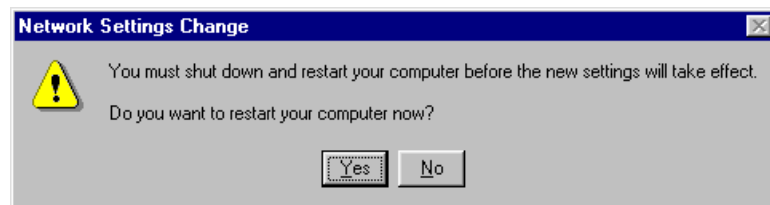


Figure 12

22. Verify both connections have matching baud rates to their designated OMNI.
23. To start a call, open the client computer’s dial-up connection.
24. If using the Show Details modem driver, a black terminal window will appear. After viewing the security information, click the **continue** button. Windows user authentication will now take place.

5 Troubleshooting

If an error occurs during the connection process, please check these items:

1. If the OMNI is not dialing out, verify the baud rates match from computer to OMNI.
2. If the OMNI is not dialing out, verify cables are connected properly.
3. Verify both OMNIs are in remote control and configured with the above specifications. (An OMNI may appear to be in remote control from the display, however if it has been turned off and back on again, it is actually logged out. Press **menu** to log off, and then log back in and place the OMNI in remote mode)
4. If the OMNIs are not going secure, verify the OMNIs contain matching ACL codes and keys.
5. If the the call fails, verify the Windows login information is setup for the remote machine. Windows requires a username/password in order to login during dial-up.
6. If the OMNIs are not going secure or the call fails, and the Show Details driver is installed, verify that the after dial terminal window is enabled on the dialup connections.

6 Reference

1. For detailed instructions on setting up a Dial-up Networking connection, please see the Modem Install application note.



2. For detailed instructions on setting up a RAS server on Windows 2000 Professional/Server, please see the Microsoft support page at http://msdn.microsoft.com/library/default.asp?url=/library/en-us/apcguide/htm/appdevisv_8.asp
3. OMNI User manual K10048254
4. For additional assistance, please contact the L-3 tech support line at 1-800-339-6197 (toll free) or 1-856-338-6207 (outside the US)