

Configuring Microsoft Windows Server 2003 as a PPP Server for MCE TCP/IP Serial Connection With Print Console

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Revision History

Revision	Date	Author	Comments
1st	10 Sep, 2004	S. Stacey/J. Delgado	Document for Windows 2000 PPP server setup revised for Windows Server 2003.
2nd	13 Oct, 2004	S. Stacey/J. Delgado	New screen captures and corrections. Added information about Service Shell 2.6.
3rd	18 Apr, 2005	S. Stacey/J. Delgado	Revised information about creating user account
4th	22 Nov., 2005	S. Stacey/J. Delgado	Corrected information in Selecting an Authentication Server
5th	04 Jan. 2006	S. Stacey/J. Delgado	Removed step 2 in “Testing the TCP/IP Connection” because telnet functionality is no longer included in MCE firmware.

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OVERVIEW

The purpose of this document is to help you set up a Print Console workstation that is running Microsoft® Windows® Server 2003 as a point-to-point protocol (PPP) server.

Note: If you are using Service Shell version 2.6 or later, you can use the Service Shell configuration wizard to set up Windows 2003 as a PPP server. If you are using Service Shell version 2.4 or 2.5, you must use the procedures in this document.

When Windows Server 2003 is functioning as a PPP server, it can accept incoming communications from:

- The MCE output device to which the workstation is connected (via communications cable between two computers COM3)
- The modem that is used for remote support (typically through COM1)

To set up Windows Server 2003 as a PPP server, do the following:

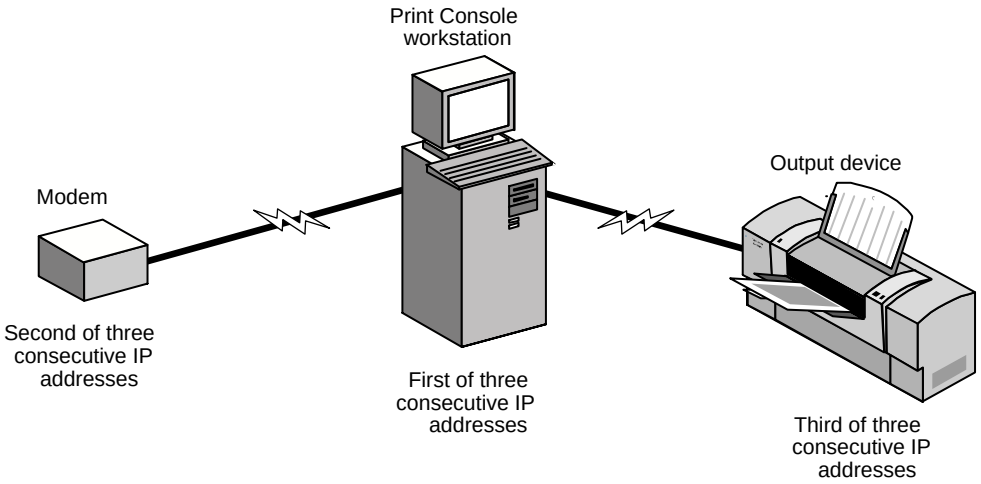
Step	Comments
Confirm that preconditions are met.	See Sections 1 and 2.
Identify whether the Print Console workstation is part of a workgroup or domain.	To see whether the workstation/server is attached to a domain or a workgroup, go to **Start>Settings>Control Panel>System>Network Identification**.
On the MCE device, configure the firmware with an IP address, an account name, and a password.	See Section 3.
On the Print Console workstation, create a new user account with the same account name and password as in the device firmware.	See Section 4.
Create a null modem port.	This enables communication over the RS-232 cables that connect COM ports on the output device and the Print Console workstation. See Section 5.
Create a remote access server.	This configures Windows Server 2003 to function as a PPP server. See Section 6.
Edit the HOSTS file to include the name and IP address assigned to the MCE device.	Print Console cannot query the device to find out its address. It finds the device name in its Registry. See Section 7.
Test the connection.	See Section 8.

How the devices communicate after Windows Server 2003 is set up as a PPP server

When the device firmware tries to establish an authenticated connection with the server over serial COM3, it provides its IP address, account, and password. Windows Server 2003 compares the account and password with the account and password in its own user account and authenticates the device. Print Console uses its registry and the HOSTS file to map to the correct IP address to communicate with the device. PPP server setup affects only the workstation serial port (normally COM3). The diagnostic port (normally COM4) has not changed and still uses the same protocol to communicate with Service Shell.

PPP server setup involves:

A workstation/server provided by Creo	This is a Dell® workstation running Windows Server 2003. This may be a new machine or a machine that has been in use at a customer site and is now being set up as a PPP server for Print Console version 3.1 or later.
One IP address to the workstation	This connects the workstation's network card to the local area network (LAN). This IP address must be configured before performing the procedures in this document. It can be configured in the Local Area Connection properties through the TCP/IP protocol.
An MCE output device	The device must have firmware that supports TCP/IP. Check the latest controlled release for the device.
A modem	A modem is required for remote support.
Three unique, consecutive, static IP addresses per MCE device	These addresses are required for configuring the network component of the incoming connection or remote access server. All their properties must be the same. • The first address is for the workstation socket • The second is for the RAS modem • The third is for the output device, and is the IP address that must be entered in the HOSTS file Note: Using DHCP to automatically assign TCP/IP addresses to the device is not supported.



Components that require an IP address for PPP server setup

Setup Scenarios

There are several different setup scenarios:

- New workstations are already configured for the PPP Server. All you need to change are the IP addresses, Networking Properties, and Device Address.
- Workstations that have Service Shell version 2.6 installed can use the Service Shell configuration wizard to set up Windows 2003 as a PPP server. If you have a workstation with version 2.4 or 2.5 installed, you must use the procedure in this document.

Setting up Microsoft Windows Server 2003 as a PPP Server				
Step	**Where to find information**	**Workgroup**		**Domain**
		New machine	**Field machine**	
Preconditions: • Get administrator privileges for the machine (and domain administrator privileges if the workstation is attached to a domain) • Configure an IP address for the workstation. • Verify that Print Console and Service Shell are installed on the workstation. • Get three consecutive IP addresses	Customer's IT department	√	√	√
Verify output device capability	Section 1	√	√	√
Verify current system configuration	Section 2	√	√	√
Configure the firmware on the MCE device	Section 3	√	√	√
Create a new user called MCEDevice on the local machine	Section 4	May be done already	√	N/A
Create a Null-Modem port	Section 5		√	√
• Set up remote access using the Routing and Remote Access Server (RRAS) setup wizard • Configure remote access properties. • Configure log files. • Configure remote access policies.	Section 6	√	√	√
Edit the HOSTS file	Section 7	√	√	√
Test the connection	Section 8	√	√	√

1 CHECKING REQUIREMENTS

- Microsoft Windows Server 2003 Server
- Print Console version 3.17 or higher
- Prinergy 2.1 or later
- MCE Device firmware that supports TCP/IP. Creo has adopted TCP/IP as its standard and it will be used for all future products and features. To check whether the firmware supports TCP/IP, use the Service Shell Client and type the command *Net Status, Help Net Set Net.* The results should match the information below (results may not be exactly as shown, depending on the version of firmware).

```
TSSPENG>> net status
Net Interface Port Information:
Port Type:      SERIAL
```

```
      Serial Port Id: 53
      Baud Rate:      57600
      Protocol:       PPP Client
      Protocol Link:  Down
      Net disabled:   FALSE
      *** Command Complete

      TSSPENG>> help net
      net status                          Net Interface Status
      net newaccount <n> <name>
      <n>                                 Which account number to update
      <name>                              Update the account name
      net newpassword <n> <password>
      <n>                                 Which account number to update
      <password>                          Update the account password
      net <on|off>                        Net Subsystem Commands
      <on|off>                            <on|off>
      *** Command Complete
TS>> set net
PRM net parameters:
Group        Parameter       Active             Default            Units
-------------------------------------------------------------------------
-
net          IpAddress        ""                    ""
net          NetMask          ""                    ""
net          Gateway          ""                    ""
net          AccountName      ""                    ""
net         NetDisabled       false                 false
*** Command Complete
```

- TMCE Board with ECO 810 implemented. Check this using one of the following methods:

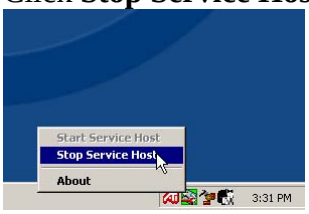
    - Check the revision level on the board label. It should be at least TMCE 10-4766A-C.

    - In the Service Shell Client, type *TS>> list version*
      Version Information:
      FW: TSMCE Jul 09 2002 18:07:18
      Version: 1.03.04 Build No: 00409
      Built using Baseline #2399 - Jun 06 2002
      HW: Master Control Electronics Hardware Board (MCE)
      MCE PCB Version is 04 or higher
      MCE PCB Population Option Number 01, 02
      Xilinx Version: 1.05
      Machine Serial Number: **Not Available**

    - Visually inspect the MCE board for:
      Jumper wire between pins 1 and 7 on serial port connectors J37, J38, J39, and J40.
      Jumper wire between pins 1 and 2 on J35, which is the version register.
      (All jumper wires are soldered on the rear side of the board. On the latest boards, the jumpers are an integral part of the board).

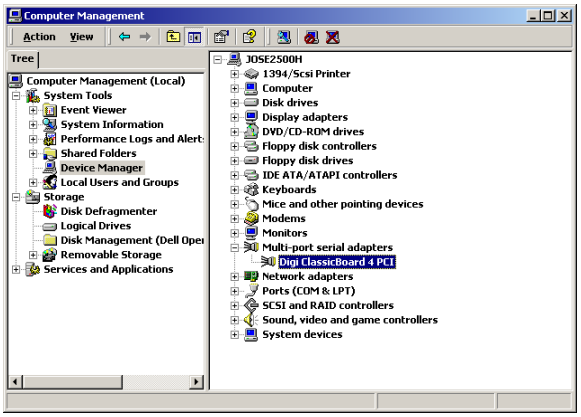
2 VERIFYING THE CURRENT SYSTEM CONFIGURATION

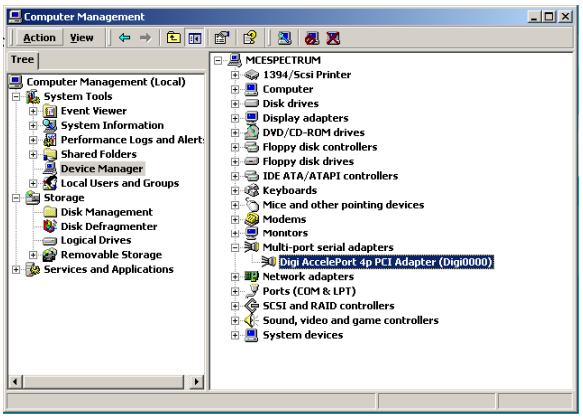
1. Right-click the Service Shell icon.
2. Click **Stop Service Host**.



3. The Digi ClassicBoard 4 PCI W2K driver is preloaded in the ghost OS image. Use this procedure to verify that the driver is correctly loaded and that COM3 to COM6 exist:

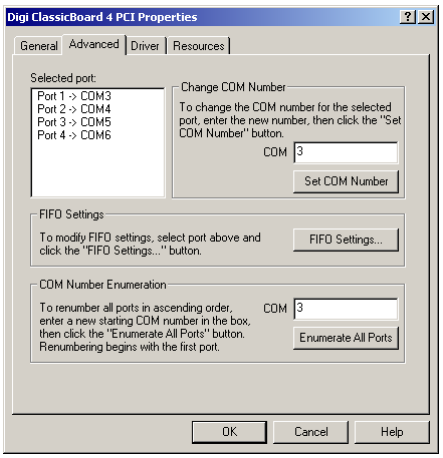
   - Right-click the **My Computer** icon on the desktop and select **Manage**.
   - In the left pane click **Device Manager** and in the right pane double-click **Multi-port serial adapters**.
   - Verify that the PCI adapter appears—this could be the **Digi ClassicBoard 4 PCI** or the **Digi AccelePort 4p PCI** adapter.

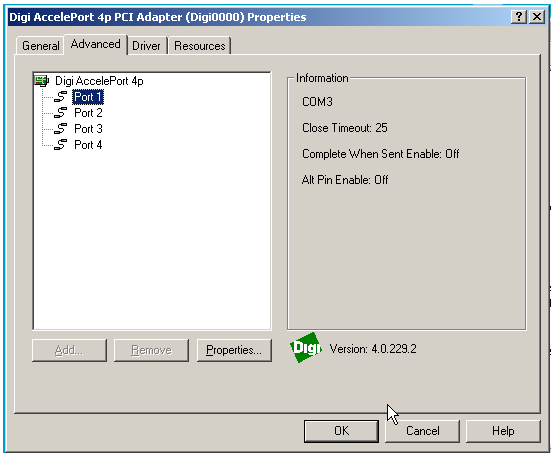




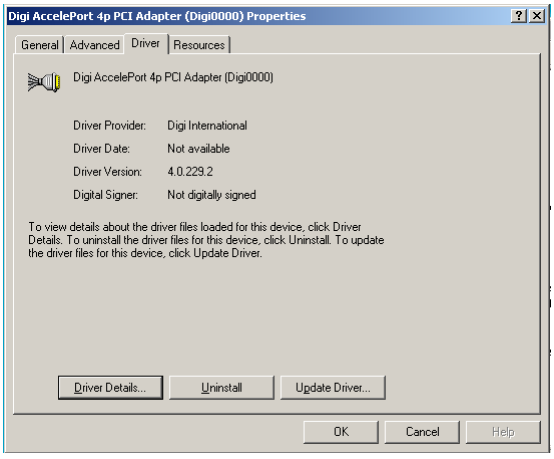
   - Right-click on **Digi ClassicBoard 4 PCI** or **Digi AccelePort 4p PCI** and select **Properties** to open the device properties window.

- Select the **Advanced** tab.
- Verify that Ports 1-4 are mapped to COM3-COM6 as shown in the next pictures. **Note:** Depending on your setup, this window may look different.



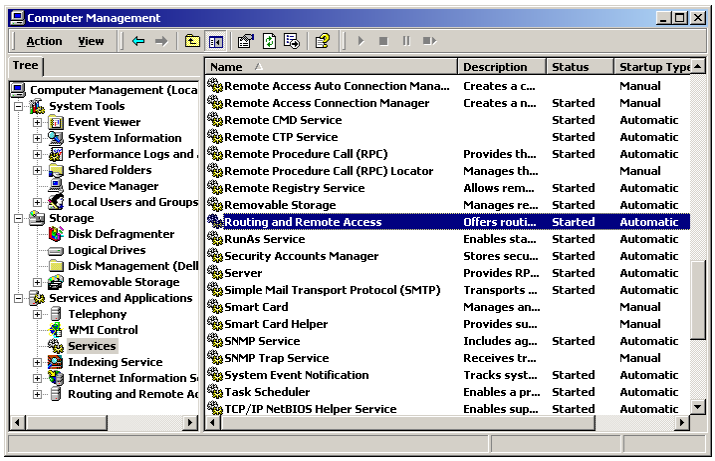


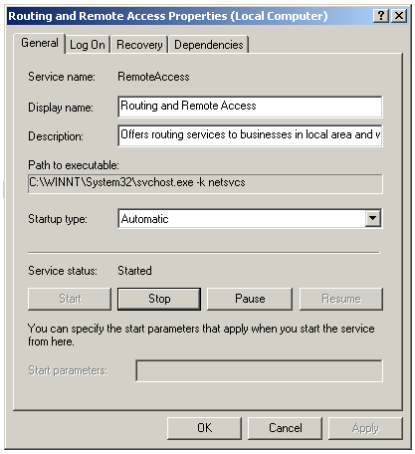
- For the Digi AccelePort board verify the driver version is 4.0.229.2 or higher.



4. Identify the port used for Print Console.

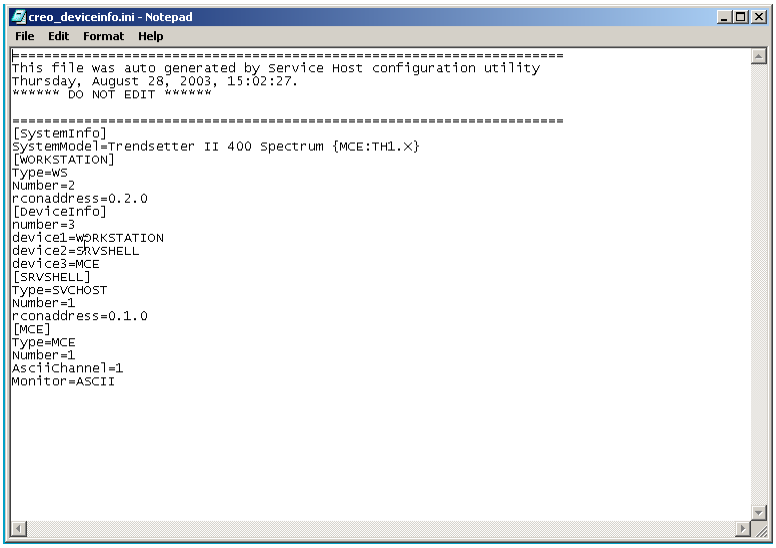
5. Verify that Routing and Remote Access service is running by double-clicking **Routing and Remote Access** and confirming that service is Enabled, Automatic, and Running.



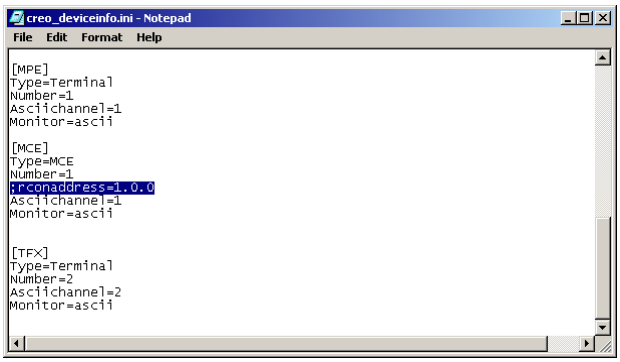


6. Click **OK**.

If you are running Service Shell version 2.5 or later, you should see the following:



If you are running a version of Service Shell earlier than version 2.5, in the **Service Shell\bin\creo_deviceinfo.ini** file, check that the rcon address for the MCE device has been commented out. If not, add a semicolon to comment it out as shown. If Print Console is installed later, the installer detects that it is already commented out and will not make any further changes.



3 CONFIGURING FIRMWARE SETTINGS ON THE MCE DEVICE

Use the Service Shell client to configure the firmware on the MCE device.

1. Set the "active" values for IPAddress, AccountName and Password for the MCE by typing the following diagnostic monitor commands:

   `set net IPAddress  "123.456.789.2 "` (use the third of three consecutive IP addresses supplied by the customer)
   ```
   net newaccount 1 MCEDevice
   net newpassword 1 Creo1Spot
   ```

2. Type `set net` at the MCE diagnostic monitor. You should see:

   ```
   TS>> set net
   PRM net parameters:
   Group    Parameter   Active              Default                  Units
   ------------------------------------------------------------------------
   net      IPAddress   "123.456.789.2"         ""
   net      NetMask            ""               ""
   net      Gateway            ""               ""
   net      AccountName    "MCEDevice"          ""


   *** Command Complete
   ```

Note: The password will not appear.

3. Reset the MCE device:

   ```
   TS>> reset
   ```

3.1 Service and Production IP Addresses

IP addresses for service and production *only*:

169.254.255.100 to 169.254.255.110

4 SELECTING AN AUTHENTICATION SERVER

This step determines the name of the computer on which Windows will authenticate the connection (compare the account and password with the account and password provided by the output device). You must decide whether authentication will take place on a workstation or in the domain, and then create a registry entry and an MCEDevice account on the appropriate server:

- If you are authenticating the connection on the local workstation (recommended), create this registry entry on the local workstation:
  HKEY_LOCAL_MACHINE \ SYSTEM \CurrentControlSet \ Services \ RasMan \ PPP \ ControlProtocols \ BuildIn \ DefaultDomain = [name of local workstation]

  (**Note:** If the customer wants *operators* to authenticate with the domain controller, that is done in the usual way, but the *device* will authenticate with the local workstation.)

  If you are authenticating the connection on the domain, ask the network administrator to create this registry entry on the domain controller:
  HKEY_LOCAL_MACHINE \ SYSTEM \CurrentControlSet \ Services \ RasMan \ PPP \ ControlProtocols \ BuildIn \ DefaultDomain = [name of domain controller]

- Create an MCEDevice account on the same computer on which you created the registry entry (above).

  If you are authenticating the connection on the local workstation (recommended), create the MCEDevice account using the procedure in section 4.1.

  If you are authenticating the connection on the domain, ask the network administrator to create an MCEDevice account with these properties on the domain controller:

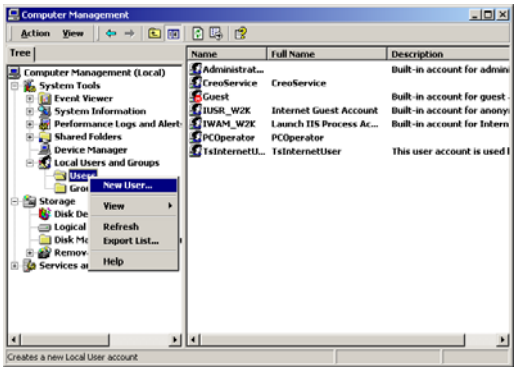
Username:	MCEDevice
Password:	Creo1Spot
Properties:	Account is enabled
	Account is not locked out
	User must change password at next login = FALSE
	Password never expires = TRUE
	RAS access = Defined by Remote Access policy

4.1 Creating an MCEDevice Account on the Authentication Server

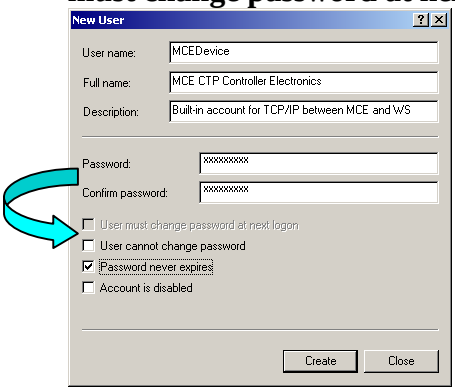
The MCEDevice user account may have already been created on the machine. If not, you must create it now. If you are creating the MCEDevice user account on the local machine (recommended), use the following procedure.

Create a new user account:

1. Right-click the **My Computer** icon on the desktop and select **Manage**.
2. Double-click **Local Users and Groups**, right-click **Users**, and click **New User** to set up a user account for the connection.



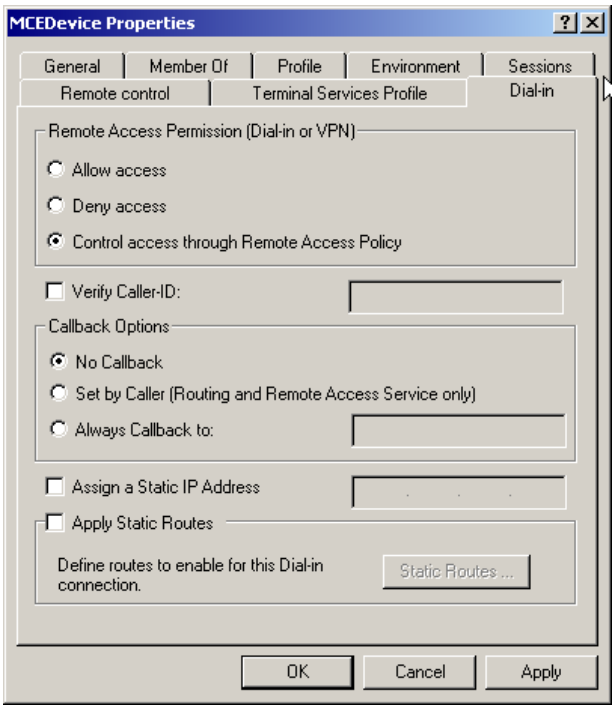
3. Enter the user information shown below. Make the password `Creo1Spot`, clear **User must change password at next logon,** and select **Password never expires.**



4. Click **Create**.
5. Close the window.

Edit the Dial-in properties for the new user account:

1. Right-click the **My Computer** icon on the desktop and select **Manage**.
2. Double-click **Local Users and Groups**, then **Users**, and select the **MCEDevice** user account.
3. In the **Dial-in** tab, **Remote Access Permission (Dial-in or VPN)** area, select either **Allow access** or **Control access through Remote Access Policy**.
4. In the **Callback Options** section, select **No Callback**.

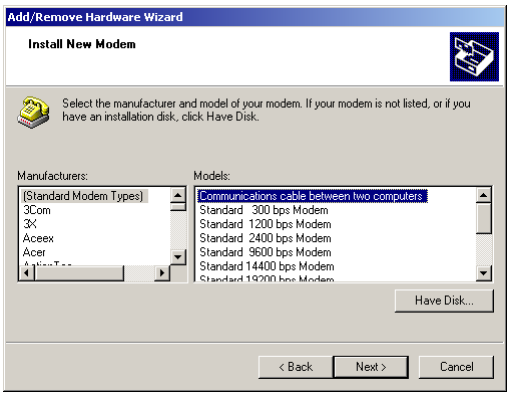


5. Click **OK**.

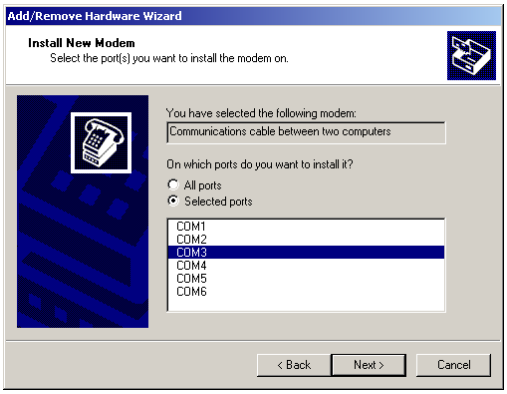
5 CREATING A NULL MODEM PORT

Note: If this is a new machine, the null modem port may have been created before the workstation was shipped.

1. Select **Start > Settings > Control Panel > Phone and Modem Options**.
2. Select the **Modems** tab and click **Add**.
3. Select **Don't detect my modem; I will select it from a list** and click **Next**.
4. For modem type, select **Communications cable between two computers** and click **Next**.

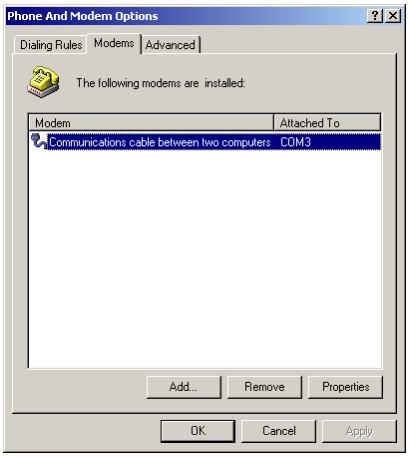


5. Select the COM port that is being used for the PPP Server port. This is the same port that you verified earlier (usually COM3).

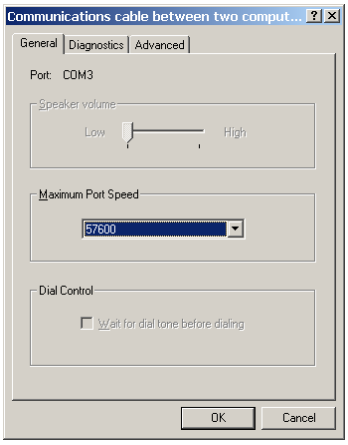


6. Click **Next** and then click **Finish**.

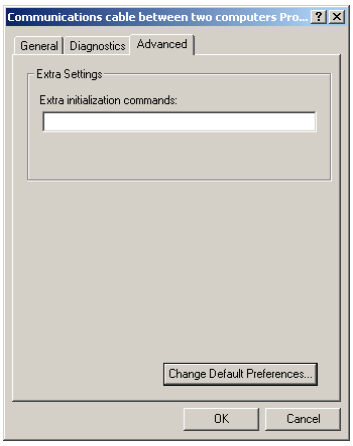
7. With **Communications cable between two computers** highlighted, click **Properties**.



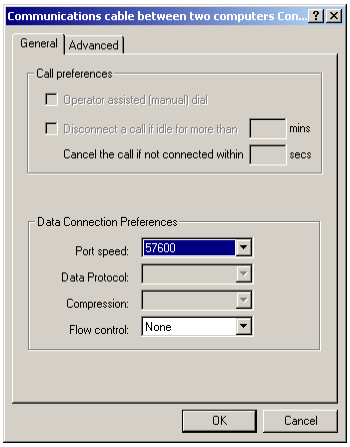
8. In the **Modem** tab, set the **Maximum Port Speed** to **57600**.



9. In the **Advanced** tab, select **Change Default Preferences**.

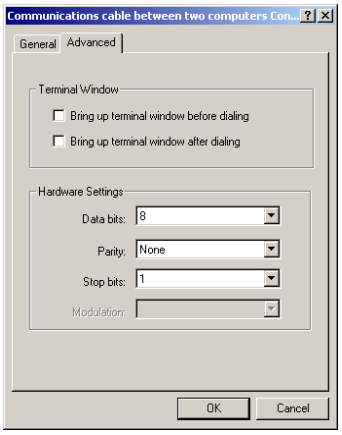


10. In the **General** tab, **Data Connection Preferences** section, configure **Port Speed** as **57600** and **Flow Control** as **None**.



11. In the **Advanced** tab, **Terminal Window** section, clear both check boxes.

12. In the **Hardware Settings** section, set **Data bits** as **8**, **Parity** as **None**, and **Stop bits** as **1**.



13. Click **OK** three times to exit all windows.

6 CONFIGURING WINDOWS SERVER 2003 AS A PPP SERVER

In this procedure you will configure the Print Console workstation to act as a remote access server, using the Routing and Remote Access wizard in Windows Server 2003. This includes:

- Using the Routing and Remote Access (RRAS) tool to set up remote access. See page 15. The Incoming Connection configuration and RRAS configuration are mutually exclusive. If the workstation has already been configured for Incoming Connection, that configuration must be deleted.
- Configuring remote access properties. See page 19.
- Configuring the log file. See page 22.
- Ensuring that Remote Access Policies do not conflict with the properties you configured for remote access. See page 23.

Note: Currently, Domain Configuration using DHCP is not supported.

You will need to provide IP addresses for the remote clients. Scenarios may include:

- A workgroup with a range of addresses provided by customer—with or without access to the rest of the customer's corporate LAN.
- A domain with a range of addresses provided by customer—with or without access to the rest of the customer's corporate LAN.

The exact configuration for the workstation depends on the customer's requirements and needs. For security reasons, workstations leaving Creo are configured as servers within a workgroup. They have non-routable addresses and callers cannot access the rest of the customer's corporate LAN. *The TCP/IP addresses shown in the procedures are not valid numbers and must be changed to meet the customer's specific requirements.*

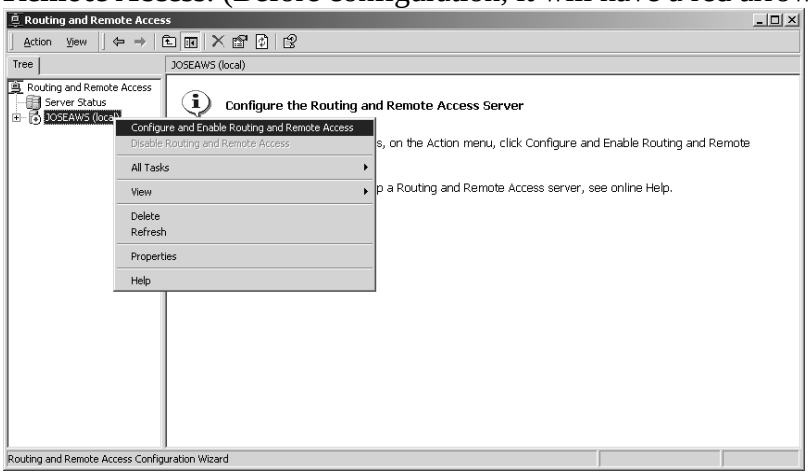
Note:

- In an MCE with TCP/IP connection to the workstation, *do not use the directions in the operating system's installation document to configure the Remote Access Server*. This will interfere with the MCE connection. Use the procedures in this document for all RAS settings.
- Before performing the procedures in this document, configure an IP address for the PPP server's connection to the LAN.
- You will need three more IP addresses (in addition to the one for the server's connection to the LAN) for the procedures in this document. These addresses must be consecutive. The first address is for the workstation socket. The second is for the RAS modem. The third is for the output device, and is the IP address that must be entered in the HOSTS file and in the firmware.

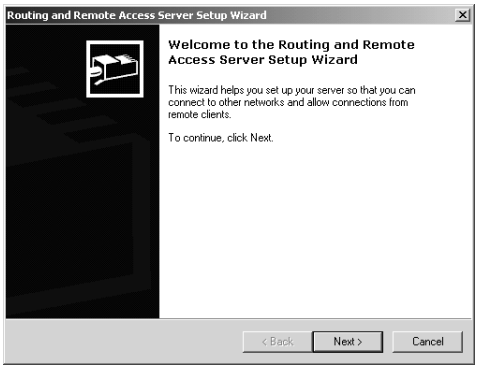
To set up remote access:

1. If an Incoming Connection has already been configured, delete it.
2. Select **Start > Programs > Administrative Tools > Routing and Remote Access**.

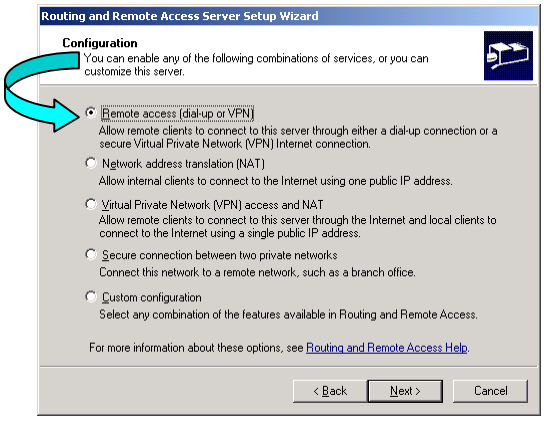
3. Select the local machine, right click, and select **Configure and Enable Routing and Remote Access**. (Before configuration, it will have a red arrow pointing down.)



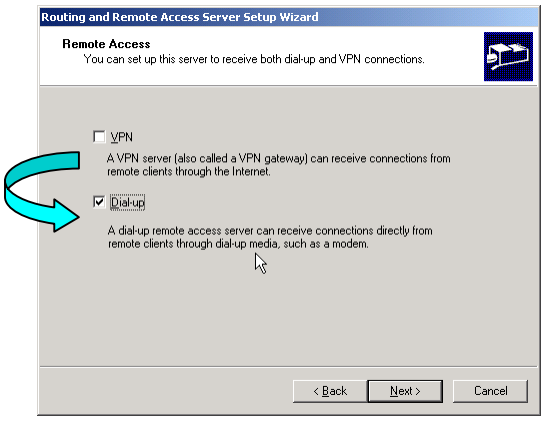
4. The Setup Wizard dialog opens. Click **Next**.



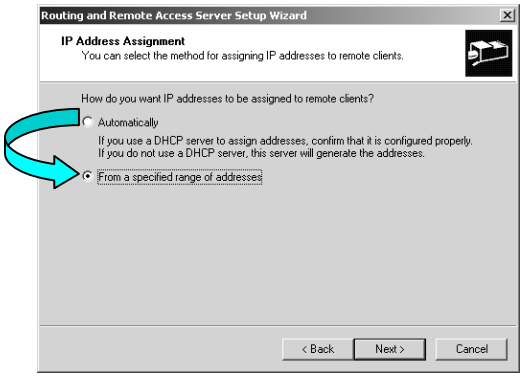
5. In the Configuration dialog box, select **Remote Access (dial-up or VPN)** and click **Next**.



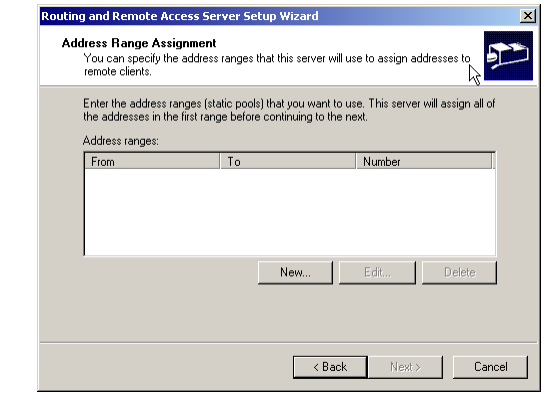
6. In the Remote Access dialog box, select **Dial-up** and click **Next**.



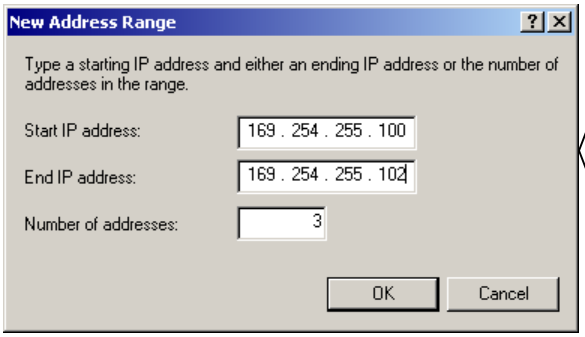
7. In the IP Address Assignment dialog box, select **From a Specified Range of Addresses** and click **Next**.



8. In the Address Range Assignment dialog box, click **New**.



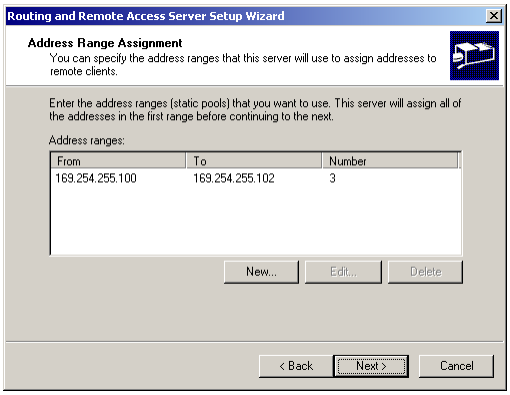
9. In the New Address Range dialog box, enter the first of the customer's three consecutive IP addresses in **Start IP address** and the third of the three consecutive IP addresses in **End IP address**.



Replace these numbers with numbers specified by the customer.

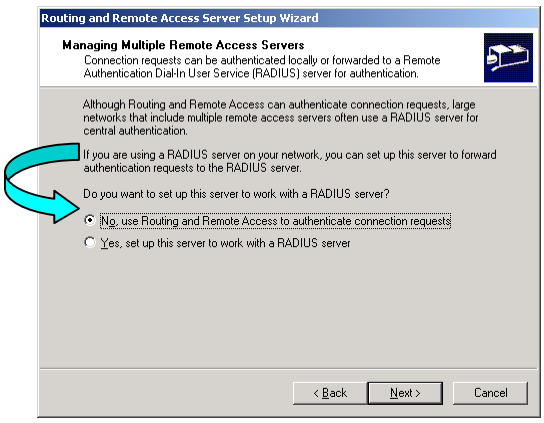
If this procedure is being done before shipment to the customer, see page 9 for the range of IP addresses for service and production.

10. Click **OK**.

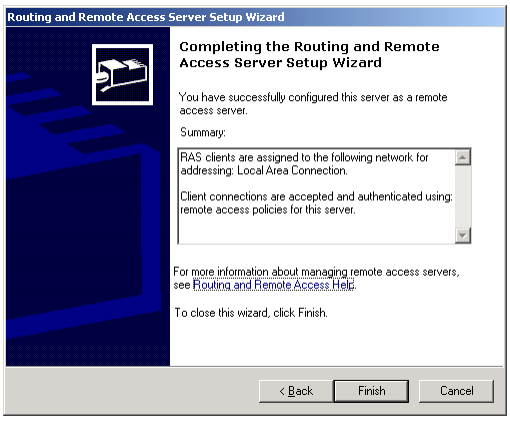


11. Click **Next**.

12. In the Managing Multiple Remote Access Servers dialog box, ensure that **No, use Routing and Remote Access to authenticate connection requests** is selected.

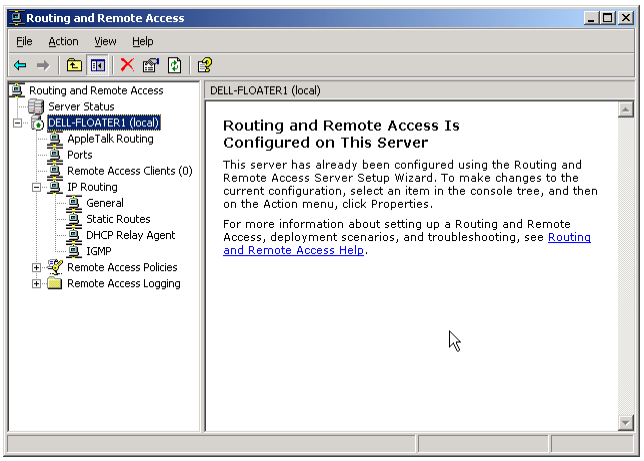


13. Click **Next**.



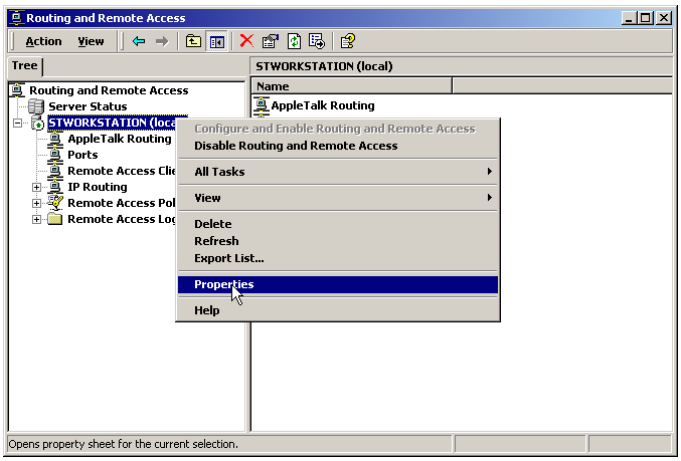
14. Click **Finish**. An error message may appear stating it is not able to add this computer to the list of valid remote access servers in the Active Directory.

15. Click **OK**. You should see the Routing and Remote Access window. The local machine will now have a green arrow pointing up to indicate that it has been set up for remote access. You must now configure remote access properties for the local machine.

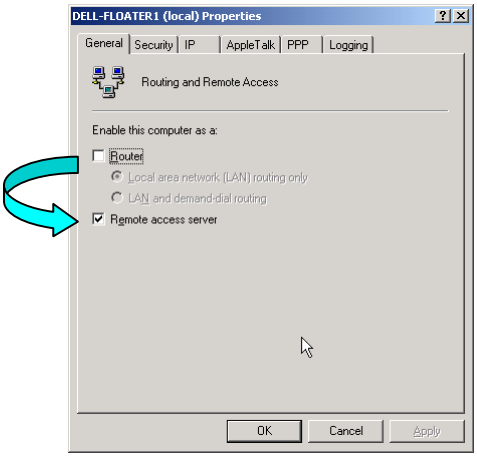


To configure remote access properties:

1. Right-click the local machine and select **Properties**.

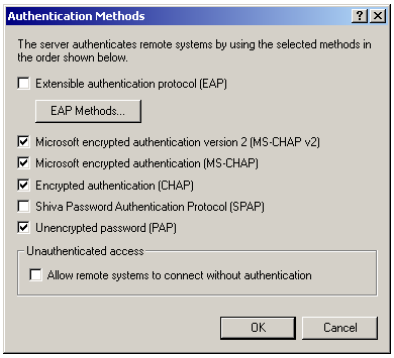


2. Leave the **General** tab at **Remote access server**.



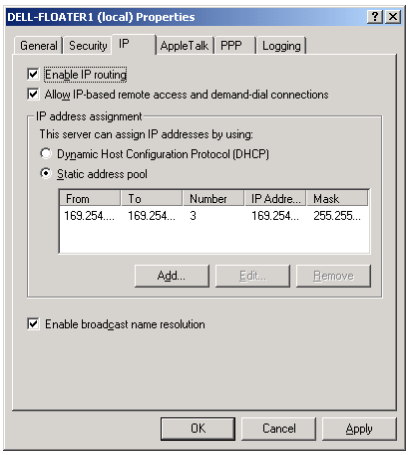
3. On the **Security** tab, click **Authentication Methods** and select these check boxes:

   - **Microsoft encrypted authentication version 2 (MS-CHAP v2)**
   - **Microsoft encrypted authentication (MS-CHAP)**
   - **Encrypted authentication (CHAP)**
   - **Unencrypted password (PAP)**



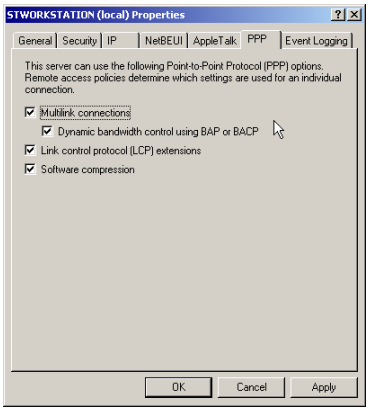
4. Click **OK** and ignore the warning message.

5. In the **IP** tab, select **Enable IP routing**, **Allow IP-based remote access and demand-dial connections**, **Static address pool** in the **IP address assignment** area, and **Enable broadcast name resolution**.

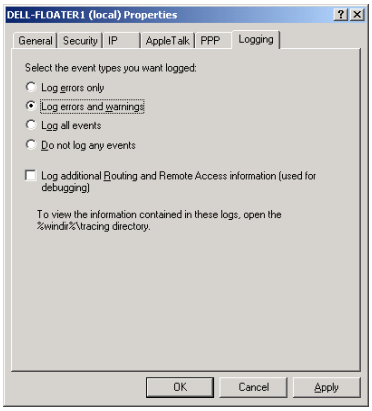


6. Accept the default settings in the **AppleTalk** tab.

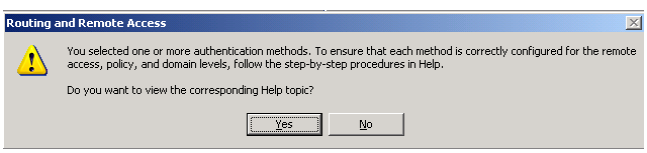
7. Select all check boxes in the **PPP** tab.



8. In the **Logging** tab, select settings based on the customer's preferences. Creo recommends selecting **Log errors and warnings**.

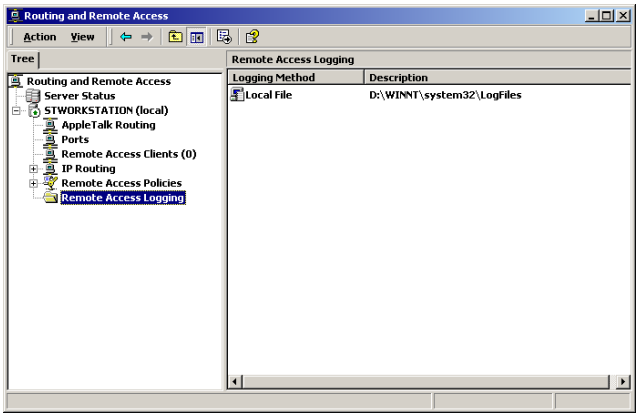


9. Click **OK** and then click **Yes** in the following message:

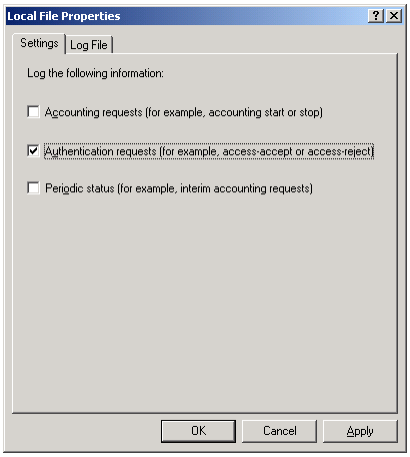


To set up log files:

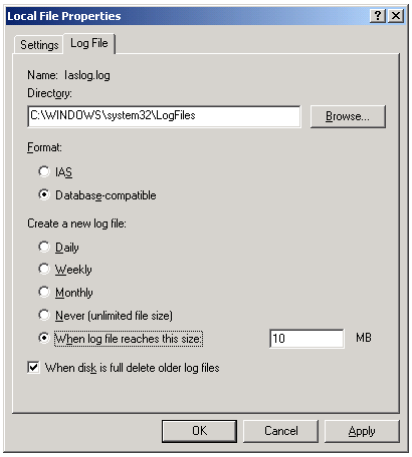
1. Highlight **Local File**, right-click, and select **Properties**.



2. In the **Settings** tab, select **Log authentication requests**.



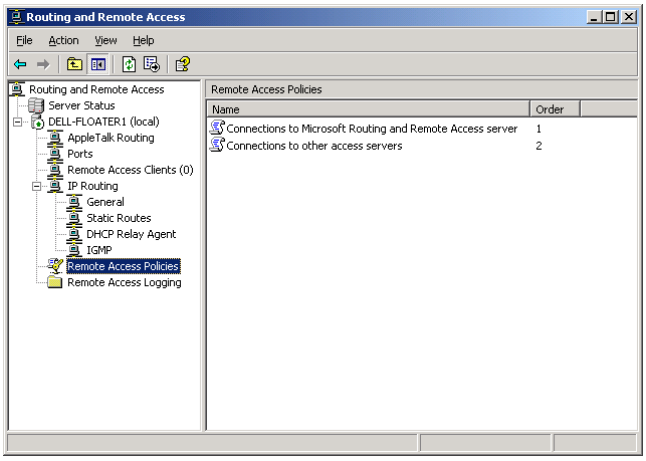
3. In the **Log File** tab, in the F**ormat** section, select **Database compatible**. In the **Create a new log file** section, select **When log file reaches this size** and enter a size in the **MB** box (suggested size is 5 - 10 MB).



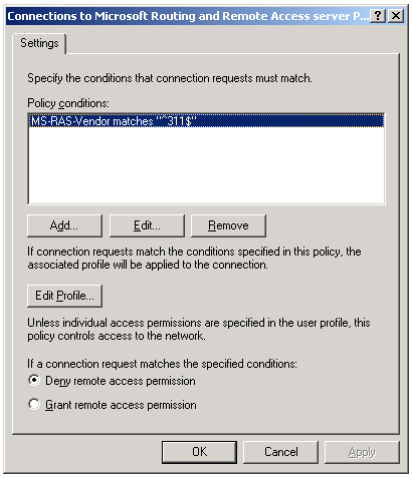
4. Click **OK**.

To configure Remote Access Policies:

1. Double-click the policy for remote access.

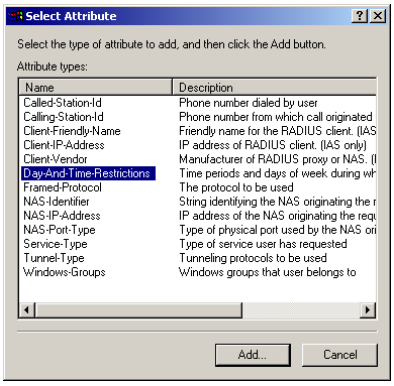


2. Remove the default policy condition and then click **Add**.

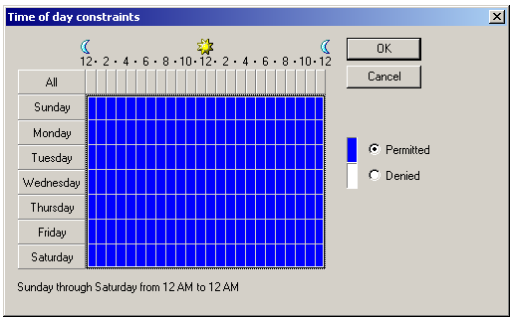


3. Select an attribute and click **Add**.

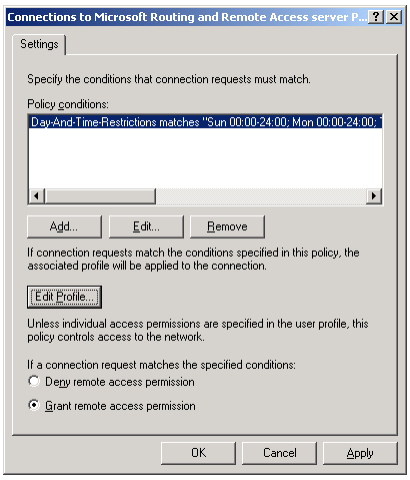
   Day and Time Restrictions is the only attribute that makes sense for the purpose of setting up a PPP server.



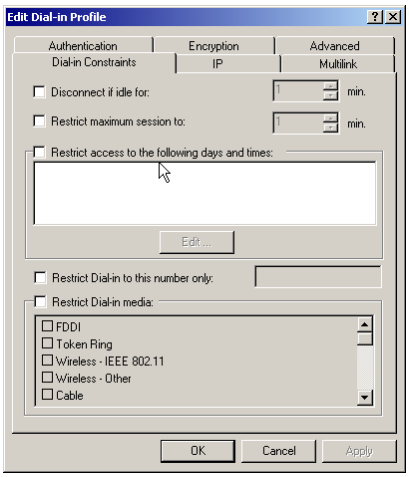
4. Select the **Time of day constraints** and click **OK**.



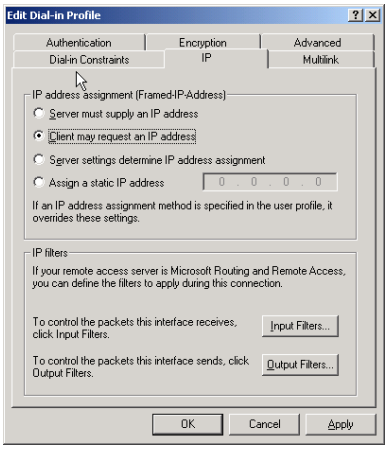
5. Select **Grant remote access permission** and click **Edit Profile**.



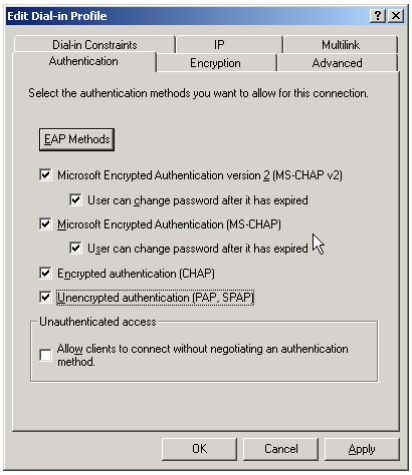
6. Clear any dial-in constraints.



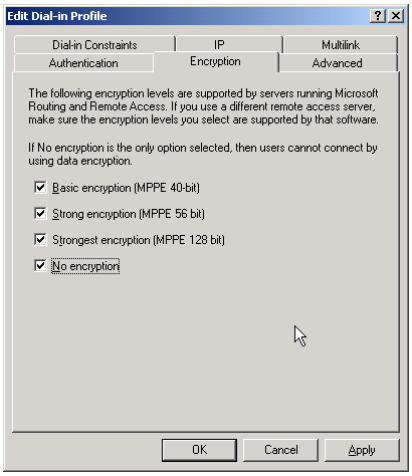
7. In the **IP** tab, in the **IP Address Assignment Policy** area, select **Client may request an IP address**.



8. Configure the **Authentication** tab to match the settings in the RRAS **Security** tab (**Authentication Methods**). See page 20.



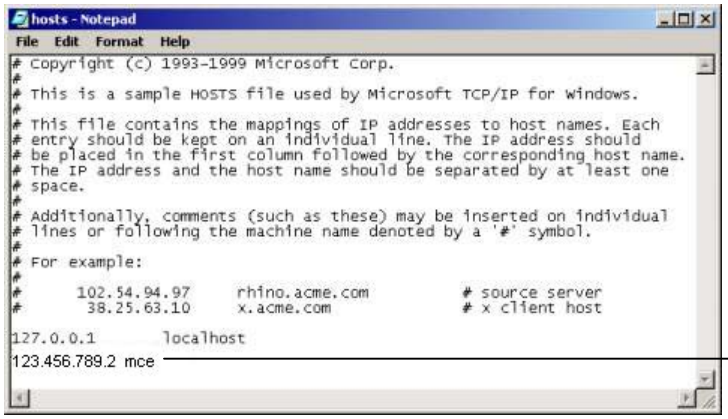
9. In the **Encryption** tab, select all the options.



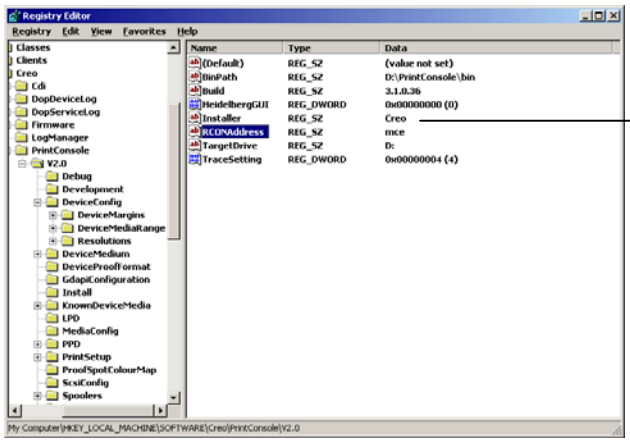
10. Click **OK**.

7 EDITING THE HOSTS FILE

Edit the HOSTS file at **WINNT\System32\drivers\etc** to reflect the new MCE IP, and then reset the device. The host name that follows the IP address in the HOSTS file must be identical to the entry for RCONAddress in the Print Console registry. In the examples that follow, it is **mce**.



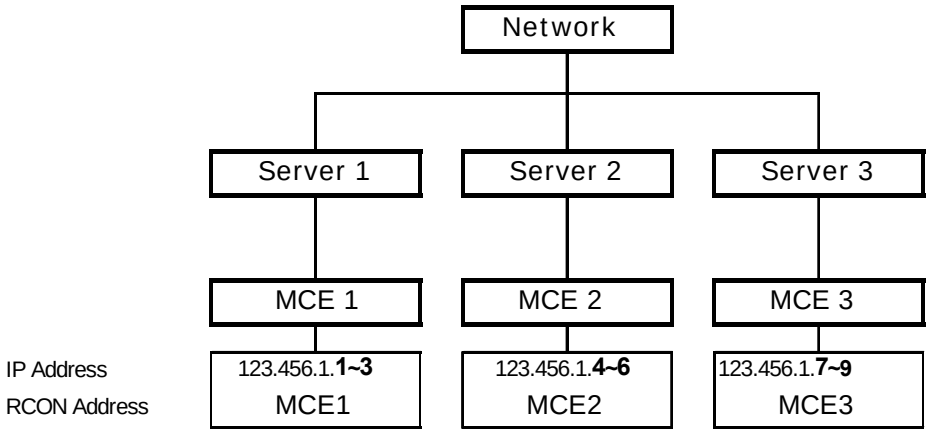
Host name in HOSTS file is **mce**



RCONAddress in Print Console registry is **mce**

To set up multiple server HOSTS files:

Settings for Multiple MCE devices



Three static IP addresses are assigned to each MCE device. The MCE should be given the last of these addresses.

Example: From the table above, for MCE 1, the address would be 123.456.1.**3**

For MCE 2, the address would be 123.456.1.**6**

For MCE 3, the address would be 123.456.1.**9**

For RCON address settings see Section 8, Testing the TCP/IP Connection, steps 5 and 6.

Restart the workstation.

8 TESTING THE TCP/IP CONNECTION

1. Open a DOS command window and type `ping MCE`. The following appears:

```
Pinging MCE [123.456.789.2] with 32 bytes of data:
Reply from 123.456.789.2: bytes=32 time=31ms TTL=255
Reply from 123.456.789.2: bytes=32 time=31ms TTL=255
Reply from 123.456.789.2: bytes=32 time=16ms TTL=255
Reply from 123.456.789.2: bytes=32 time=16ms TTL=255

Ping statistics for 123.456.789.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 16ms, Maximum =  31ms, Average =  23ms
```

2. Using the Service Shell client, search the messages sent by the device and confirm the MCE has connected and got this address:

```
CC NET: Restarting PPP Client Protocol

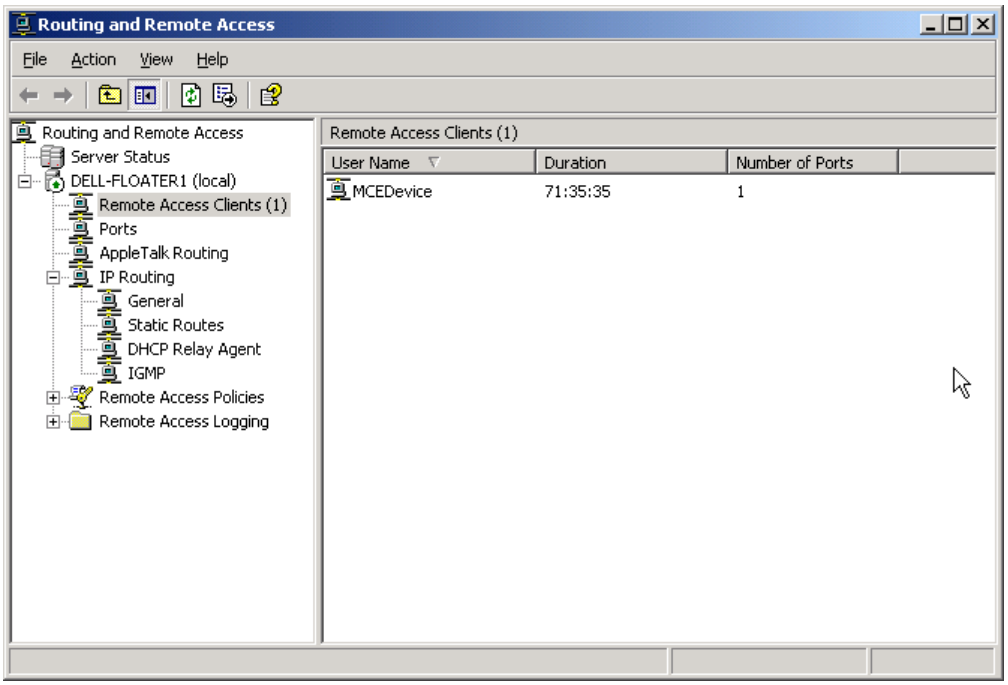
C HLT: HLT - Failure to Ping the workstation

C NET: Restarting PPP Client Protocol

C NET: PPP link is Up, IP Address: 123.456.789.2, Net
Mask:255.255.255.0, Gateway: 123.456.789.0

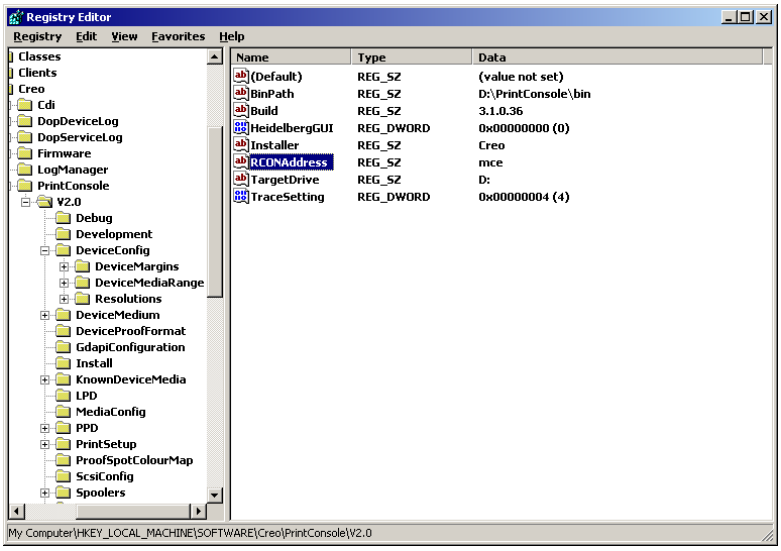
C HLT: Connection established between MCE and workstation
```

3. Select **Remote Access Clients** and confirm that MCEDevice has connected and authenticated with the MCEDevice user name:



4. Start Print Console and verify that the MCE and the workstation are communicating. In the Print Console Messages pane, look for the query commands sent by the workstation.

5. Run `regedit` and verify that the value for **RCONAddress** is **MCE**.



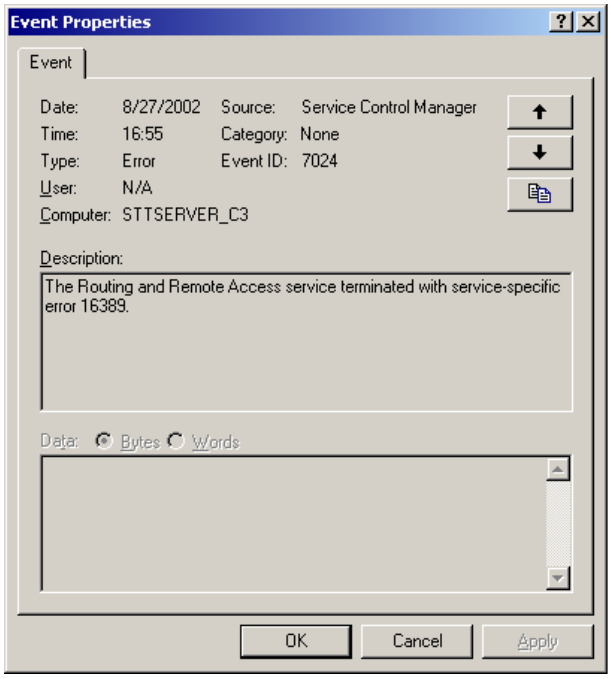
6. For multiple MCE devices there must be an RCONAddress entry for each MCE device, (**MCE1**, **MCE2**, and so on). Edit the registry as needed.

9 TROUBLESHOOTING

Note: You can use the log files to check for troubleshooting data.

9.1 Unable to Start 'Routing and Remote Access Service'

Problem: Windows displays the error message `The Routing and Remote Access Service terminated with service-specific error 16389` as shown in the "Event Log" error shown:



This problem has two possible solutions:

Solution 1: Cannot create temp files for the following reasons.

1. Confirm the following system variables are correctly set up:

   TEMP <*systemdrive*>:\WINNT\TEMP

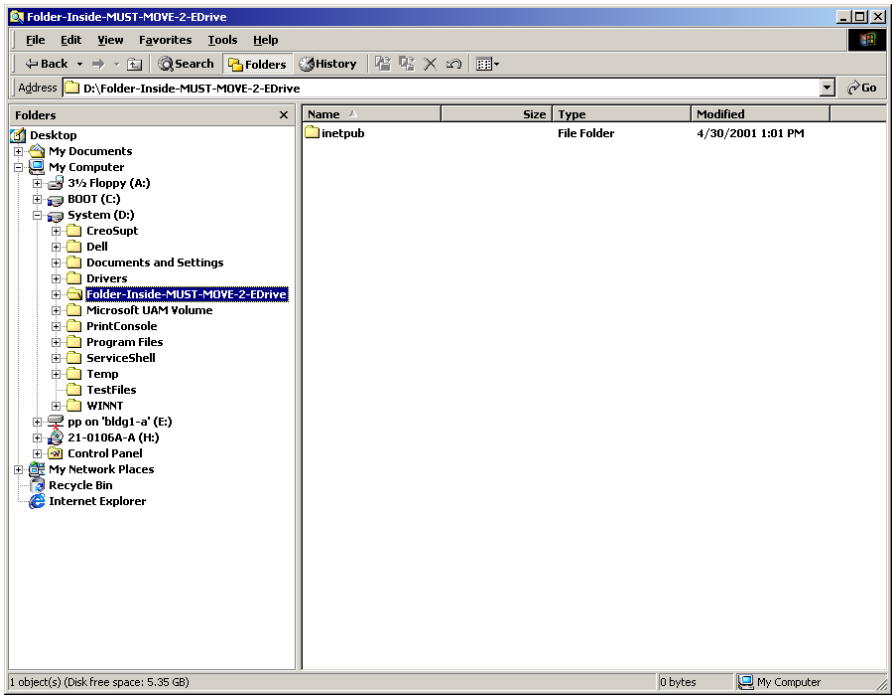
   TMP <*systemdrive*>:\WINNT\TEMP

2. The service usually runs in the local system account and tries to use **<*systemdrive*>:\WINNT\TEMP** as the temp folder. In the NTFS permissions for this folder, there has to be the user “SYSTEM”with full control permissions.

3. Give the “SERVICE” user full access permission to the **<*systemdrive*>:\WINNT\TEMP** folder.

Solution 2: Internet information services (IIS) has not been properly installed. When using Windows 2000 Server, production ghosts the server and leaves the folder **inetpub** inside the folder **Folder-Inside-MUST-MOVE-2-EDRIVE** in the system drive (D:) to be moved at a later day. To resolve this problem, move this folder to the root of E: drive.

This problem has been found in Prinergy secondary servers.



9.2 Routing and Remote Access Server Stops Authenticating Dial-Up Networking Clients

Problem: Windows 2003, Windows 2000, NT, 98, 95 error messages:

- 619 `The port was disconnected.`

- 645 `Dial-Up Networking could not complete connection to the server.`
- 930 `The authentication server did not respond to authentication requests in a timely fashion.`

This problem happens when the account you used to log on at the time you joined the domain didn't have administrator privileges on the Windows 2000 based domain.

Solution: You must register the RRAS server in Active Directory using an account that has domain administrator permissions.

For Windows 2003- or 2000-based and Windows NT-based RRAS or RAS servers:

1. Log on to your computer with an account that has administrator privileges on the Windows 2000 domain.
2. Launch the **Active Directory Users and Computers** MMC snap in and then double click the domain name.
3. Double-click the **Users** folder and then double-click the **RAS and IAS Servers** security group.
4. Select the **Members** tab.
5. Add the RRAS server to this group.

For Windows 2000-based RRAS servers:

1. Log on to the RRAS computer using an account that has domain administrator privileges, type `netsh ras add registeredserver` at a command line and then press ENTER.

An alternate method to run a command with administrator privileges without being logged in as an administrator.

1. At a command line on the RRAS computer, type `runas / user:<domain name>\<administrator name>"cmd"`.
2. Type your password at the prompt; the computer will connect to the domain controller and verify the credentials.
3. A command line will open with the message:

   `Cmd (running as domain name\administrator name)`

4. At a command line, type `netsh ras add registeredserver` and then press ENTER.

Windows will display one of the following messages:

```
Command is successful:

   Registration completed successfully:
```

```
   Ras Server: RAS server name

   Domain: domain name

Command is not successful:

   Registration FAILED:

   RAS Server: RAS server name

   Domain: domain name The specified domain either does not
      exist or could not be contacted
```

9.3 Device Does Not Connect and Cannot Ping the MCE

Problem: The workstation or the device does not connect.

Solution 1: Make sure that the workstation and device passwords match.

1. Because the password in the device does not display, the only way to be sure of what it is is to change it: type `TS>>net newpassword 1 Creo1Spot.`
2. Also change the workstation password for the MCEDevice account to `Creo1Spot`.
3. Reset the device.

Note: The modem status light (TR) indicates the status:

On – modem is set up correctly

Off – modem is not set up correctly