

SAR130 Configuration

Simple Configuration

Assuming TCP/IP is configured on the PC.

1. In your web browser enter the IP address of the router 192.168.7.1 this should bring up the following.

Enter Network Password

Please type your user name and password.

Site: 192.168.7.1

Realm: Viking

User Name: DSL

Password: DSL

Save this password in your password list

OK Cancel

2. Enter username DSL, Password DSL click OK.

GlobespanVirata Solwise

Home | LAN | WAN | Bridging | Routing | Services | Admin

Home | System Mode | Quick Configuration

System View

Use this page to get the summary on the existing configuration of your device.

Device		DSL			
Model:	Viking	Operational Status: Startup Handshake			
H/W Version:	81001a	Last State: 0x0			
S/W Version:	VIK-1.38.030917a	DSL Version: Y1.16.3			
Serial Number:	Solwise-271003d	Standard: Multimode			
Mode:	Routing	Up		Down	
Up Time:	3:15:54	Speed	Latency	Speed	Latency
Time:	Sat Jan 03 22:48:07 2004	0 Kbps	-	0 Kbps	-
Time Zone:	GMT				
Daylight Saving Time:	OFF				
Name:	-				

3. Click on “Quick Configuration”. You should see the following window.

Use this page to quickly configure the system.

ATM Interface:	0
Operation Mode:	Enabled
Encapsulation:	PPPoA VC-Mux
VPI:	0
VCI:	38
Bridge:	Disabled
IGMP:	Disabled
IP Address:	0 0 0 0
Subnet Mask:	0 0 0 0
Use DHCP:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Default Route:	Enabled
Gateway IP Address:	0 0 0 0
PPP	
Username:	xxxx@plusdsl.net
Password:	*****
Use DNS:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
DNS	
Primary DNS Server:	0 0 0 0
Secondary DNS Server:	0 0 0 0

4. Everything here is already configured for a BT line, so you only need to enter your username and password for your ISP. Click on “submit the screen should flash off briefly and back on.

5. Go to the “admin” tab, click on “Commit and Reboot” and click on the “Commit” button.

6. Go back to the “home” tab, in WAN Interfaces you should now see an IP address, if so your connected to your ISP and should be able to access the internet.

Setting up the Router as a DHCP Server

Go to the Lan tab in the web configuration and click on “DHCP Mode”

The screenshot shows the router's web configuration interface. At the top, there are navigation tabs: Home, LAN, WAN, Bridging, Routing, Services, and Admin. Below the tabs, the breadcrumb path is LAN Config | DHCP Mode | DHCP Server | DHCP Relay. The main heading is "Dynamic Host Configuration Protocol (DHCP) Configuration". Below this, there is a text block explaining the DHCP mode. A dropdown menu labeled "DHCP Mode:" is set to "DHCP Server". Below the dropdown are four buttons: Submit, Cancel, Refresh, and Help. At the bottom, there is a copyright notice: "Copyright © 2001-2003 GlobespanVirata, Inc. All rights reserved."

Change the DHCP mode to DHCP server and click on submit. Click on “DHCP server”.

The screenshot shows the router's web configuration interface for DHCP Server Configuration. At the top, there are navigation tabs: Home, LAN, WAN, Bridging, Routing, Services, and Admin. Below the tabs, the breadcrumb path is LAN Config | DHCP Mode | DHCP Server | DHCP Relay. The main heading is "Dynamic Host Configuration Protocol (DHCP) Server Configuration". Below this, there is a text block explaining the DHCP server configuration. Below the text is a table with the following columns: Start IP Address, End IP Address, Domain Name, Gateway Address, Status, and Action(s). The table is currently empty, with the text "No DHCP Server Pool!" displayed below it. Below the table are four buttons: Add, Address Table, Refresh, and Help.

Then click on the add button to configure DHCP.

DHCP Server Pool - Add

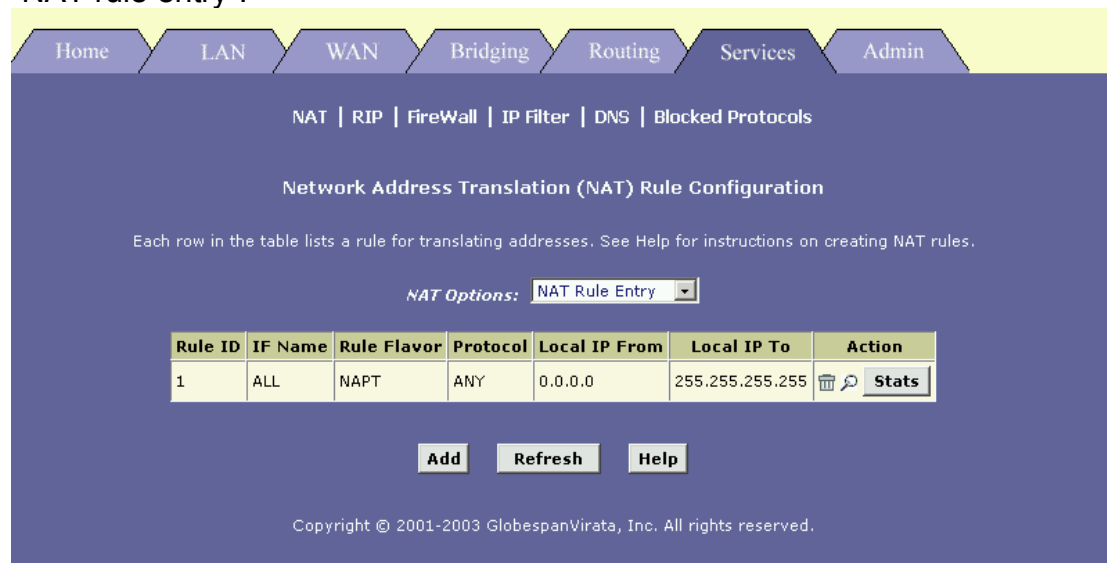
DHCP Pool Information				
Start IP Address:	<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="7"/>	<input type="text" value="2"/>
End IP Address:	<input type="text" value="192"/>	<input type="text" value="168"/>	<input type="text" value="7"/>	<input type="text" value="30"/>
Mac Address:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Netmask:	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="255"/>	<input type="text" value="0"/>
Domain Name:	<input type="text"/>			
Gateway Address:	<input type="text" value="192"/>	<input type="text" value="169"/>	<input type="text" value="7"/>	<input type="text" value="1"/>
DNS Address:	<input type="text" value="212"/>	<input type="text" value="159"/>	<input type="text" value="11"/>	<input type="text" value="150"/>
SDNS Address:	<input type="text" value="212"/>	<input type="text" value="159"/>	<input type="text" value="13"/>	<input type="text" value="150"/>
SMTP Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
POP3 Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
NNTP Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
WWW Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
IRC Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
WINS Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
SWINS Address:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

You need only fill in the fields as above, the DNS addresses shown are for Plusnet. Click on "Submit" and then close, go to the "Admin" tab click on "Commit and Reboot" and click on the "Commit" button to save the changes. DHCP is now enabled on the router.

Port Forwarding

Port forwarding on the SAR130 is done by means of RDR rules below is an example of creating a rule you would need if you were running a webserver on your LAN.

1. Go to the “Services” tab and click on NAT. In the drop down box select “NAT rule entry”.

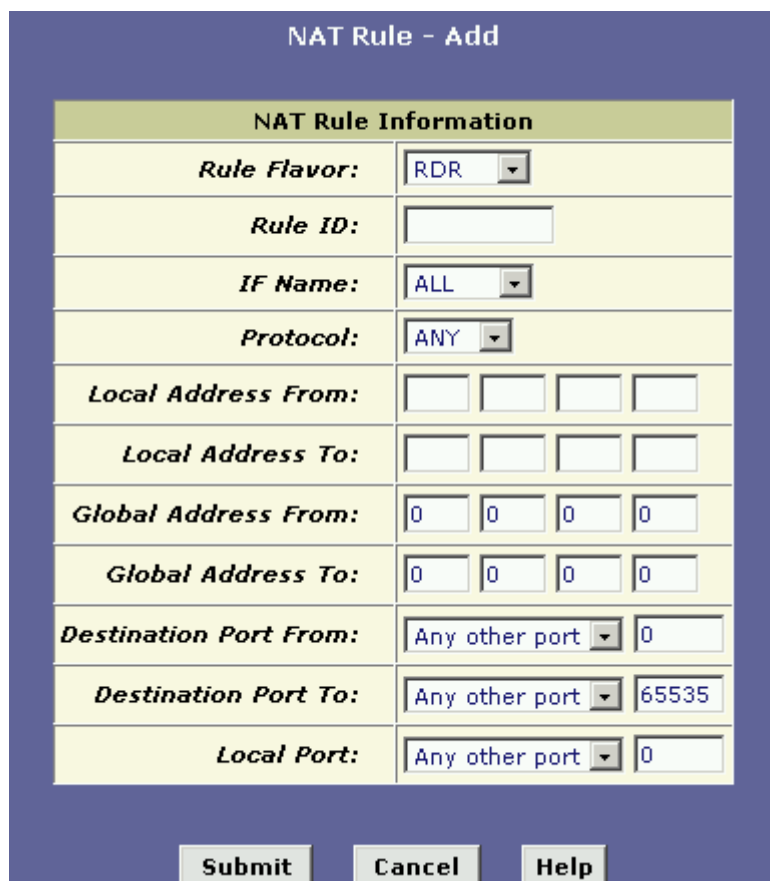


The screenshot shows the "Services" tab selected in the top navigation bar. Below it, the "NAT" sub-tab is active. The page title is "Network Address Translation (NAT) Rule Configuration". A message states: "Each row in the table lists a rule for translating addresses. See Help for instructions on creating NAT rules." Below this message is a dropdown menu for "NAT Options" set to "NAT Rule Entry". A table displays one rule with the following details:

Rule ID	IF Name	Rule Flavor	Protocol	Local IP From	Local IP To	Action
1	ALL	NAPT	ANY	0.0.0.0	255.255.255.255	Stats

At the bottom of the table are three buttons: "Add", "Refresh", and "Help". The footer contains the copyright notice: "Copyright © 2001-2003 GlobespanVirata, Inc. All rights reserved."

2. Now click on “Add” the following window will appear.



The screenshot shows the "NAT Rule - Add" configuration window. It contains the following fields:

- Rule Flavor:** RDR (dropdown)
- Rule ID:** (empty text box)
- IF Name:** ALL (dropdown)
- Protocol:** ANY (dropdown)
- Local Address From:** (four empty input boxes)
- Local Address To:** (four empty input boxes)
- Global Address From:** 0 0 0 0 (four input boxes)
- Global Address To:** 0 0 0 0 (four input boxes)
- Destination Port From:** Any other port (dropdown) 0 (input box)
- Destination Port To:** Any other port (dropdown) 65535 (input box)
- Local Port:** Any other port (dropdown) 0 (input box)

At the bottom are three buttons: "Submit", "Cancel", and "Help".

3.Fill in the details as shown.

NAT Rule Information	
Rule Flavor:	RDR
Rule ID:	5
IF Name:	ppp-0
Protocol:	TCP
Local Address From:	192 168 7 5
Local Address To:	192 168 7 5
Global Address From:	0 0 0 0
Global Address To:	0 0 0 0
Destination Port From:	HTTP (80)
Destination Port To:	HTTP (80)
Local Port:	HTTP (80)

Submit Cancel Help

The rule ID is a unique number, the router has a default rule (Rule ID 1). When adding more rules it's worth numbering them 5, 10, 15 etc as rules can then be inserted at a later date if required.

The IF Name is the name of the interface that traffic will be arriving at, in this case it's the WAN interface, which is called PPP-0.

Protocol in our case for a webserver the protocol is TCP.

Local address from/to: This is the local address of your webserver.

Global address: This can be left as it is, the router will use the present WAN IP address.

Destination port from/to/local: In our case we are only forwarding port 80 so we enter 80 in all fields. If you wanted to forward a range of ports, say 5000 to 6000 you would enter From 5000, To 6000, Local port 0.

4. Click on submit, go to the Admin tam, click on "Commit and Reboot" and click on the "commit" button in order to save the changes.

Configuring your SAR110/130 when you have only 2 useable IP addresses.

1. Configure the router in Natted mode, i.e. enter your user name and password,. Do NOT enter any IP addresses. Commit the changes.
2. Check your WAN IP address on the home tab.
3. Unplug the ADSL cable.
4. On the Services tab click on NAT and disable NAT.
5. Go to the LAN tab and change your LAN IP address to the one you have just seen as your WAN address, subnet mask 255.255.255.252. NB You must submit this twice.
6. In Hyperterminal type **commit** to save the changes.
7. Still in Hyperterminal enter the command:-
delete ppp intf ifname ppp-0

Create the new interface with the command
create ppp intf ifname ppp-0 ppoa lowif aal5-0 numif eth-0 droute true

Now type:-
commit
to save the changes.

8. Change the IP address of your computer to your other public one, reconnect
The ADSL cable and you've finished.

Entering the Command Line Interface (CLI) with a Windows PC

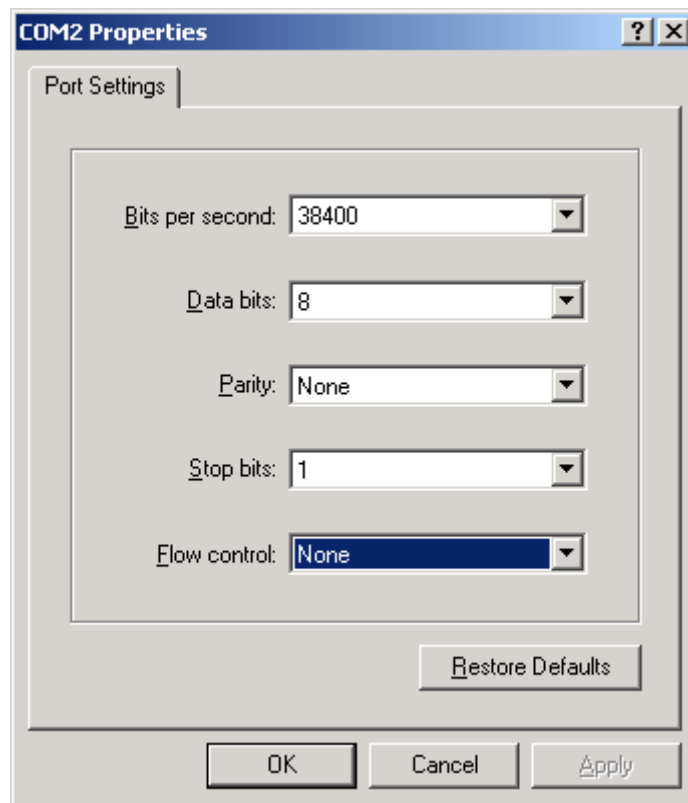
1. Connect the console cable to a Com port on your computer and the console port of the router.
2. Go to Start>Programs>Accessories>Communications>Hyperterminal. A box like below will appear.



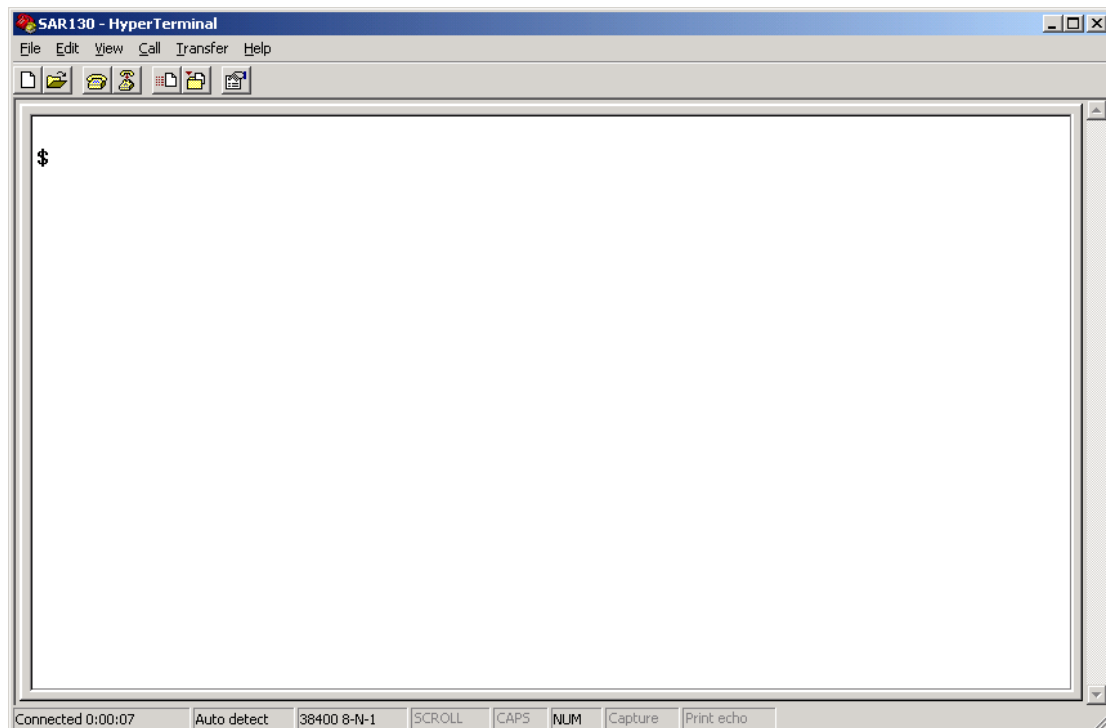
3. Enter a name and click OK.



4. You now need to select the Com port you attached the console cable to and click OK.

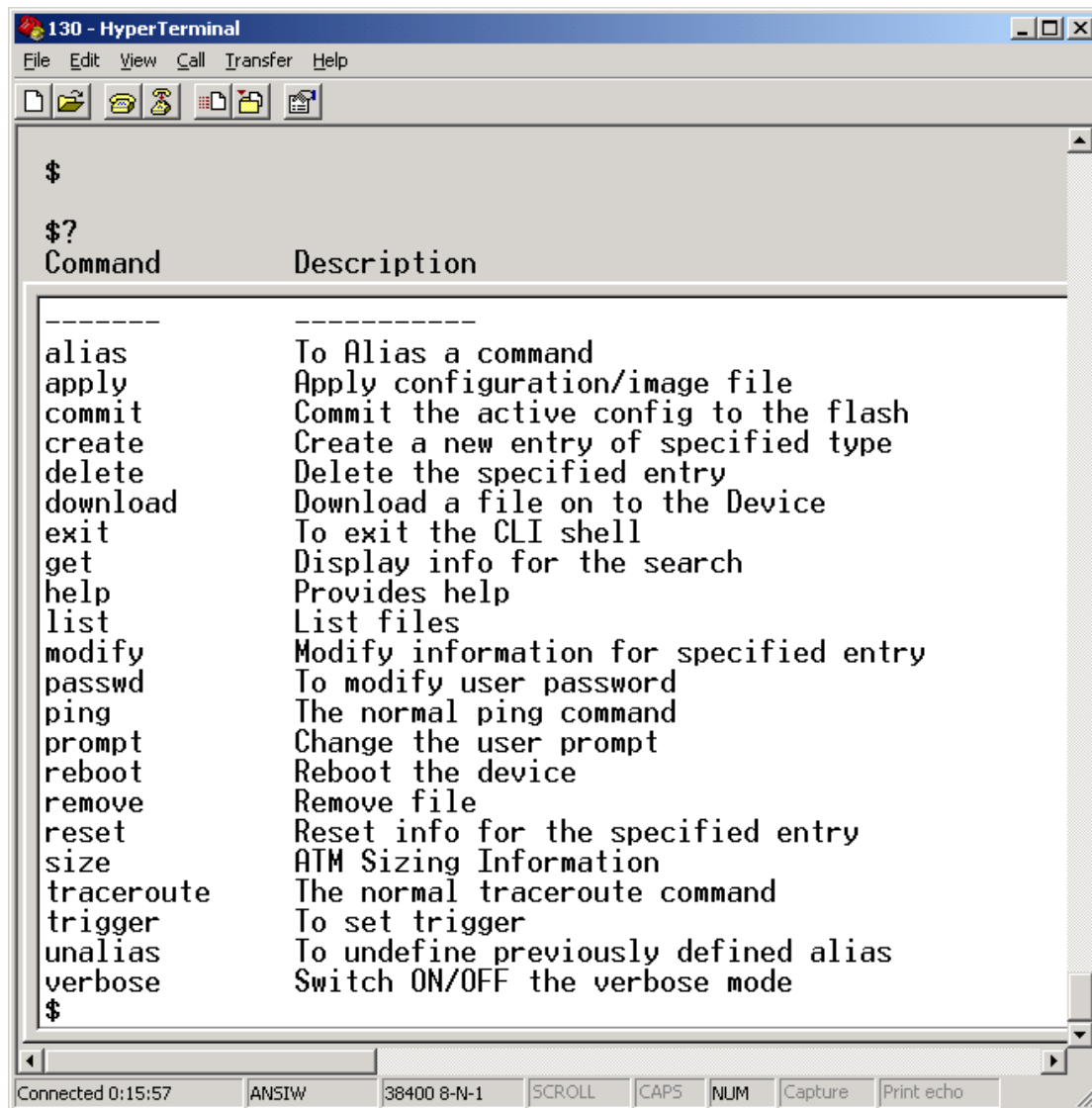


5. Change the port settings to those pictured above and click OK.



6. Press the "Enter" key on your keyboard and you should see a "\$" prompt.

7. Type a “?” mark and press enter and you’ll see a list of available commands as below.



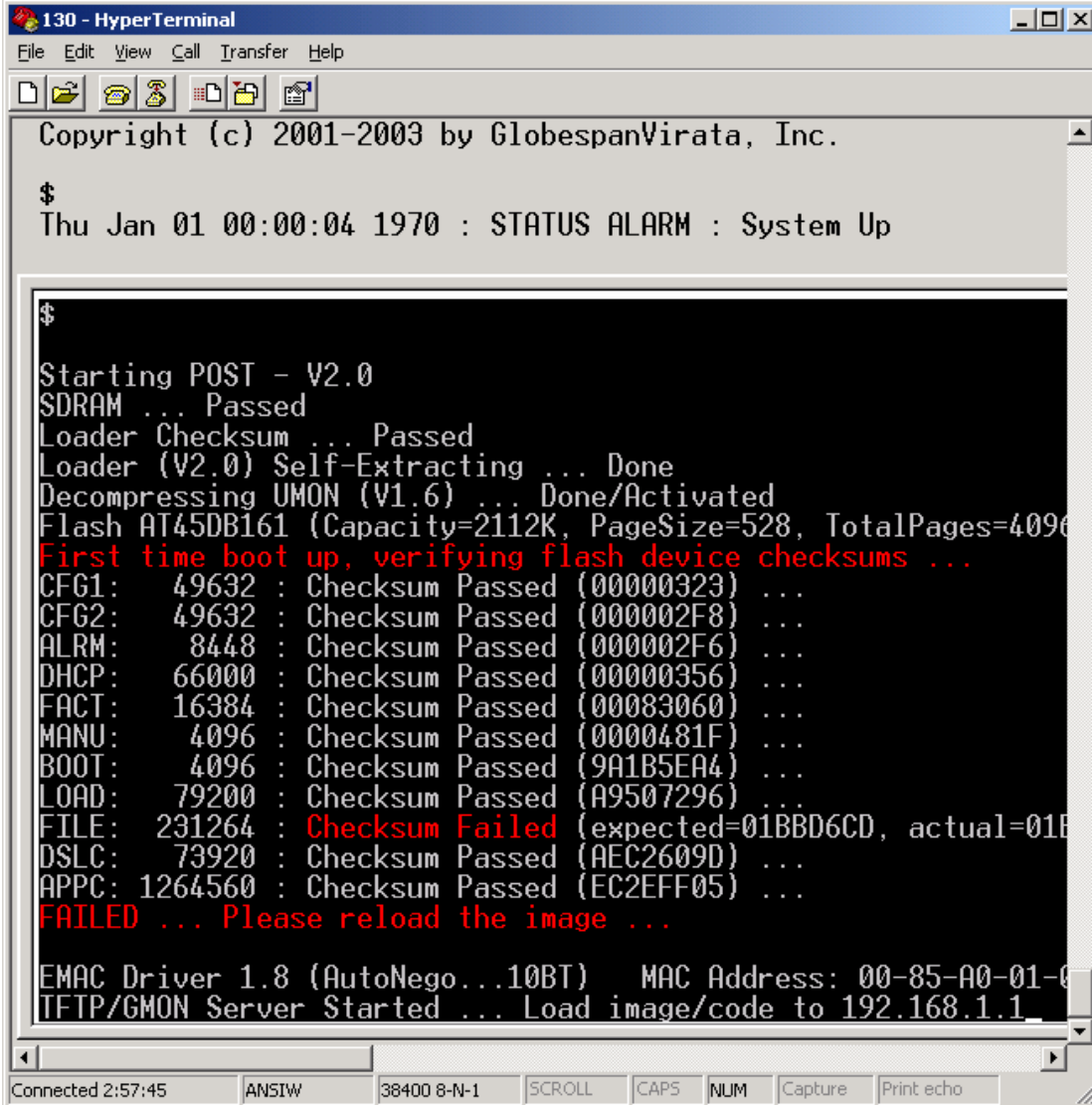
The screenshot shows a HyperTerminal window titled "130 - HyperTerminal". The window contains a list of commands and their descriptions, displayed in a table format. The commands are listed in the left column, and their descriptions are in the right column. The list is separated by dashed lines. The commands include: alias, apply, commit, create, delete, download, exit, get, help, list, modify, passwd, ping, prompt, reboot, remove, reset, size, traceroute, trigger, unalias, and verbose. The window also shows a status bar at the bottom with various settings like "Connected 0:15:57", "ANSIW", "38400 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

```
130 - HyperTerminal
File Edit View Call Transfer Help
-----
$
$?
Command      Description
-----
alias        To Alias a command
apply        Apply configuration/image file
commit       Commit the active config to the flash
create       Create a new entry of specified type
delete       Delete the specified entry
download     Download a file on to the Device
exit         To exit the CLI shell
get          Display info for the search
help         Provides help
list         List files
modify       Modify information for specified entry
passwd       To modify user password
ping         The normal ping command
prompt       Change the user prompt
reboot       Reboot the device
remove       Remove file
reset        Reset info for the specified entry
size         ATM Sizing Information
traceroute   The normal traceroute command
trigger      To set trigger
unalias      To undefine previously defined alias
verbose      Switch ON/OFF the verbose mode
$
```

Connected 0:15:57 ANSIW 38400 8-N-1 SCROLL CAPS NUM Capture Print echo

Firmware upgrade failure

In the event of a failure upgrading firmware. Or the firmware becoming corrupted, you may see the following in Hyperterminal:-



```
130 - HyperTerminal
File Edit View Call Transfer Help
Copyright (c) 2001-2003 by GlobespanVirata, Inc.
$
Thu Jan 01 00:00:04 1970 : STATUS ALARM : System Up

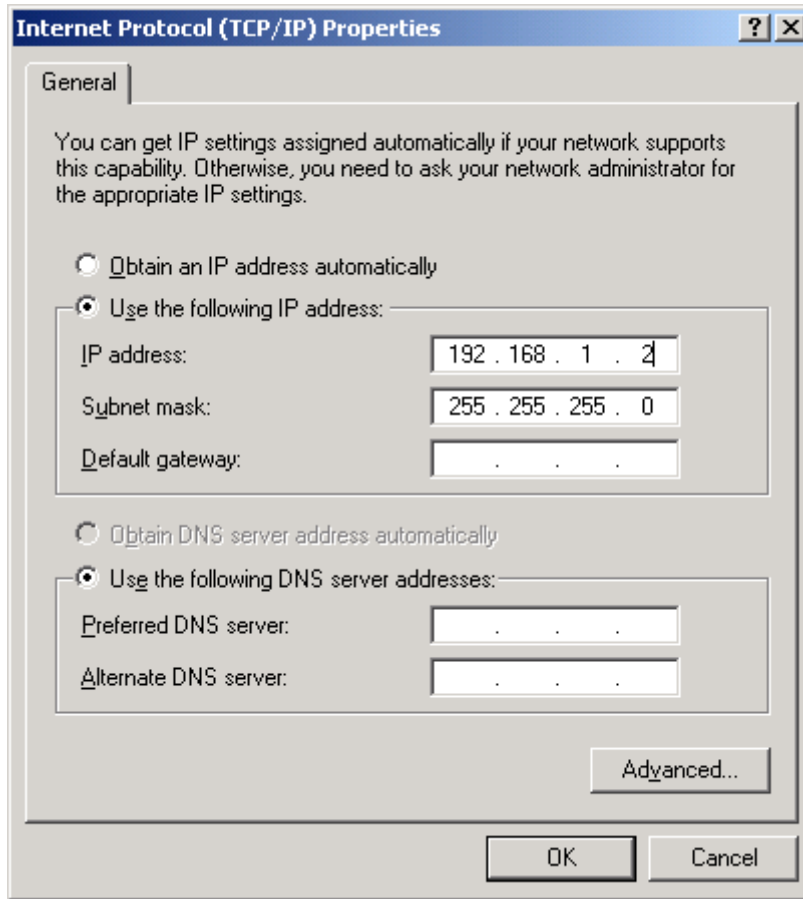
$
Starting POST - V2.0
SDRAM ... Passed
Loader Checksum ... Passed
Loader (V2.0) Self-Extracting ... Done
Decompressing UMON (V1.6) ... Done/Activated
Flash AT45DB161 (Capacity=2112K, PageSize=528, TotalPages=4096)
First time boot up, verifying flash device checksums ...
CFG1: 49632 : Checksum Passed (00000323) ...
CFG2: 49632 : Checksum Passed (000002F8) ...
ALRM: 8448 : Checksum Passed (000002F6) ...
DHCP: 66000 : Checksum Passed (00000356) ...
FACT: 16384 : Checksum Passed (00083060) ...
MANU: 4096 : Checksum Passed (0000481F) ...
BOOT: 4096 : Checksum Passed (9A1B5EA4) ...
LOAD: 79200 : Checksum Passed (A9507296) ...
FILE: 231264 : Checksum Failed (expected=01BBD6CD, actual=01BBD6CD) ...
DSLCL: 73920 : Checksum Passed (AEC2609D) ...
APPC: 1264560 : Checksum Passed (EC2EFF05) ...
FAILED ... Please reload the image ...

EMAC Driver 1.8 (AutoNegotiation 10BT) MAC Address: 00-85-A0-01-00-00
TFTP/GMON Server Started ... Load image/code to 192.168.1.1

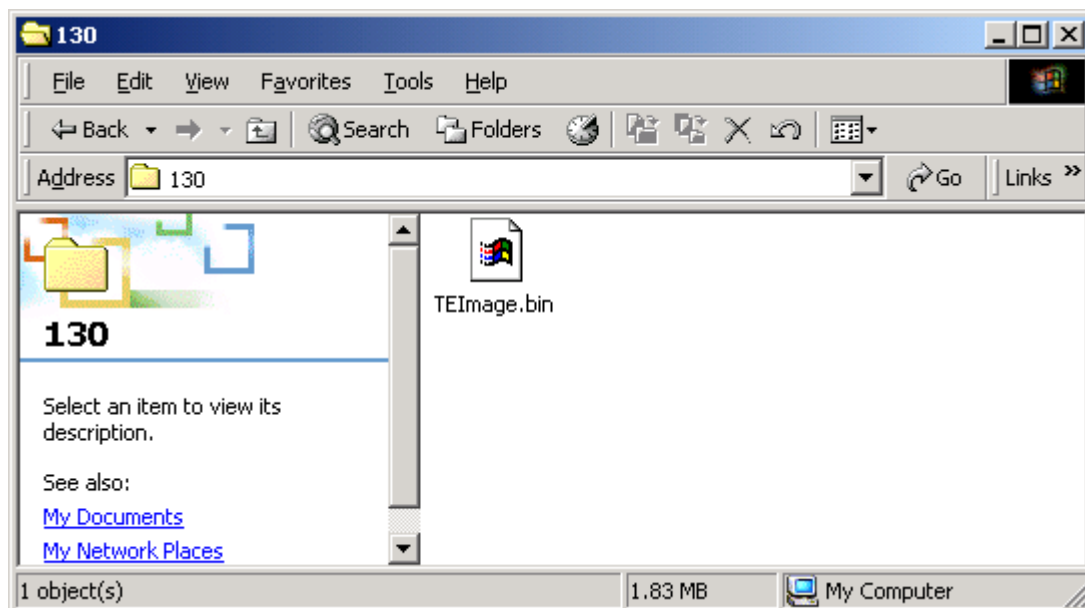
Connected 2:57:45 ANSIW 38400 8-N-1 SCROLL CAPS NUM Capture Print echo
```

From here it may be possible to recover using a Windows PC.

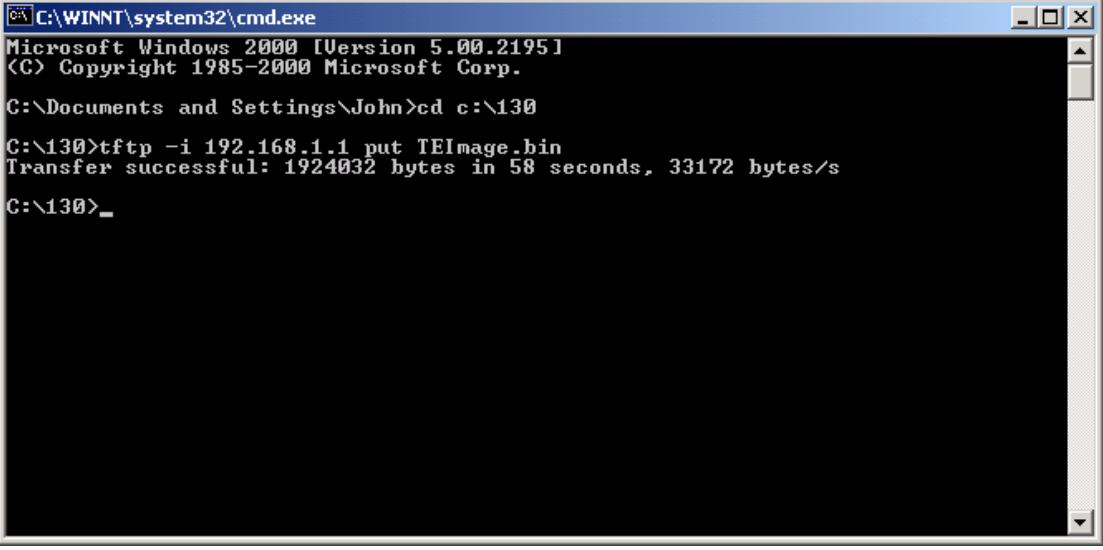
1. NB You'll see in the screenshot above it says load the image to 192.168.1.1 not the routers usual address. In order to do this you must change the TCP/IP properties of your network card to an IP address within the same subnet.
The following will suffice



2. Now you need to create a directory and put in the firmware file. Open My computer and double click on your C Drive (or the drive that has your operating system installed). Go to the File menu>New and click on folder, name this folder 130. Put the firmware file in this folder.



2. Go to Start>Run and type **cmd** to open a command prompt.



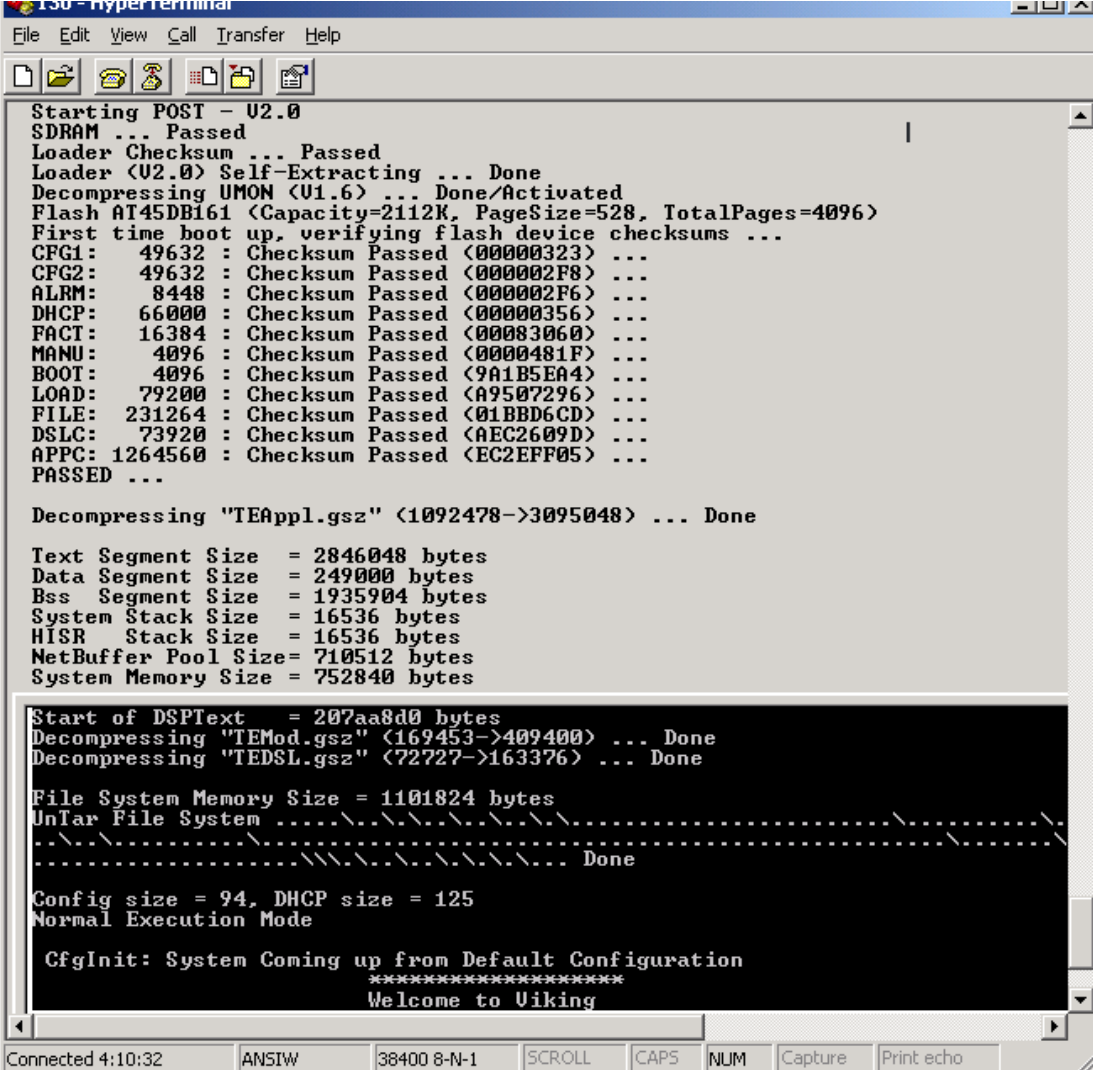
```
C:\WINNT\system32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\Documents and Settings\John>cd c:\130

C:\130>tftp -i 192.168.1.1 put TEImage.bin
Transfer successful: 1924032 bytes in 58 seconds, 33172 bytes/s

C:\130>_
```

3. Type **cd C:\130** and enter to change to the 130 directory you just created. (as above)
4. Type **tftp -i 192.168.1.1 put TEImage.bin** and enter hopefully after about a minute or 2 you'll see the "Transfer Successful" message as above.
5. With Hyperterminal running reboot the router, you should now see the following screen.



```
U30-Hyperterminal
File Edit View Call Transfer Help

Starting POST - U2.0
SDRAM ... Passed
Loader Checksum ... Passed
Loader (U2.0) Self-Extracting ... Done
Decompressing UMON (U1.6) ... Done/Activated
Flash AT45DB161 (Capacity=2112K, PageSize=528, TotalPages=4096)
First time boot up, verifying flash device checksums ...
CFG1: 49632 : Checksum Passed (00000323) ...
CFG2: 49632 : Checksum Passed (000002F8) ...
ALRM: 8448 : Checksum Passed (000002F6) ...
DHCP: 66000 : Checksum Passed (00000356) ...
FACT: 16384 : Checksum Passed (00003060) ...
MANU: 4096 : Checksum Passed (0000481F) ...
BOOT: 4096 : Checksum Passed (9A1B5EA4) ...
LOAD: 79200 : Checksum Passed (A9507296) ...
FILE: 231264 : Checksum Passed (01BBD6CD) ...
DSLC: 73920 : Checksum Passed (AEC2609D) ...
APPC: 1264560 : Checksum Passed (EC2EFP05) ...
PASSED ...

Decompressing "TEAppl.gsz" (1092478->3095048) ... Done

Text Segment Size = 2846048 bytes
Data Segment Size = 249000 bytes
Bss Segment Size = 1935904 bytes
System Stack Size = 16536 bytes
HISR Stack Size = 16536 bytes
NetBuffer Pool Size= 710512 bytes
System Memory Size = 752840 bytes

Start of DSPText = 207aa8d0 bytes
Decompressing "TEMod.gsz" (169453->409400) ... Done
Decompressing "TEDSL.gsz" (72727->163376) ... Done

File System Memory Size = 1101824 bytes
UnTar File System ..... Done

Config size = 94, DHCP size = 125
Normal Execution Mode

CfgInit: System Coming up from Default Configuration
*****
Welcome to Uiking

Connected 4:10:32 ANSIW 38400 8-N-1 SCROLL CAPS NUM Capture Print echo
```

SAR130 FAQs

I can't access the web configuration pages.

- ❑ Is the LAN Link light on the router? if not check all cables are connected properly and that the cable from your network card is connected to the LAN port of the router.
- ❑ Check the IP address of your PC, it should be in the range 192.168.7.2 up to 192.168.7.254.
- ❑ Are you using a software firewall? If so, disable it.
- ❑ In Internet Explorer go to Tools>Internet Options>connections tab, ensure "Never dial a connection" is ticked, click on the "Lan settings" button and make sure that nothing is ticked.
- ❑ If your using Windows 2000 or XP go to a command prompt and type **arp -d *** <enter> and try again.

When I click on the tabs at the top in the web configuration the tabs change but the page stays the same

- ❑ *This is invariably caused by the use of a software firewall; disable it.*

The DSL link light is flashing

- ❑ *Make sure the cable from the DSL port on the router to the phone socket is connected properly.*
- ❑ *Make sure that all devices plugged into your phone line are connected into microfilters, this includes fax machines, Sky digi boxes, burglar alarms and of course telephones.*
- ❑ *Ensure with your ISP that your line has been activated, BT have been known to be late!!*
- ❑ *If everything is supposed to be OK then you'll need to test the router on a known working line in order to establish whether the router or the line is faulty.*

I have a WAN IP address on the Home page but I can't get any web pages

- ❑ *In the "Quick Configuration" make sure the "Default Route" is enabled.*
- ❑ *In your TCP/IP settings make sure you have the default gateway set to the IP address of the router.*
- ❑ *Also in TCP/IP ensure the DNS addresses for your ISP are correct.*

I changed the DSL password and cant remember the new one

- ❑ *You need to go into the CLI via the console port and type:-
Passwd DSL
This assumes the username is DSL, you then be asked to enter a new password and then to confirm it.
Alternatively typing **reboot default** will reset the password to DSL.*

