ZyXEL

Firmware Release Note

ZyAIR B-2000

Release 3.50(HB.1)c0

Date:	**May 30, 2003**
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ZyXEL ZyAIR B-2000 Standard Version
release 3.50(HB.1)c0
Release Note

Date: May 30, 2003

Supported Platforms:

ZyXEL ZyAIR B-2000

Versions:

ZyNOS F/W Version : V3.50(HB.1) | 05/30/2003 16:01:13
BootBase : V2.10 | 03/22/2002 14:38:58

Notes:

1. When Authentication Server (SMT Menu 23.2) is active, the ZyAIR will authenticate wireless users through external authentication server. Otherwise the ZyAIR authenticate wireless users through user profile (SMT Menu 14).

2. If Authentication Control (SMT Menu 24.4) value is "Auto", ZyAIR will enable user authentication method, a wireless user must use 802.1x client software to login the ZyAIR before accessing network service. If Authentication Control value is "Force Authorized", ZyAIR will allow all wireless users to access network service. If Authentication Control value is "Force UnAuthorized", ZyAIR will not allow wireless user to access network service.

Known Issues:

1. When WAN is disable, DHCP still sends DHCP broadcast packets. This issue needs more time to debug and test. It is not fixed at this released version.
2. WEB configuration for SUA/NAT default server IP (DMZ) will not function well. Please configure DMZ through SMT15.2.
3. Early firmware version has problem in downloading firmware from WEB. Please try ftp while you encounter this problem.

CI Command List

Features:

Modifications in V3.50(HB.1)c0 | 05/30/2003

1. [FEATURE CHANGED] Default Wireless Channel is CH06.

Modifications in V3.50(HB.1)b1 | 03/21/2003

1. [FEATURE ENHANCED] Support udp check point.

Modifications in V3.50(HB.0)b6 | 10/04/2002

1. [FEATURE CHANGED] In order to support some WLAN card, that doesn't support shared key authentication, B-2000 supports both open system and shared key authentication no matter WEP is enabled or not.
2. [BUG FIXED]
   Symptom: Windows XP shows UPnP data rate only 1M.
   Condition: This symptom is observed when B-2000 UPnP is enable, the data rate is only 1M.
3. [BUG FIXED]
   Symptom: Windows XP deassociates from AP and associates to AP again. 802.1x authentication will not function well.
   Condition: This symptom is observed when authenticated XP user remove wireless card and plug it into station again, 802.1x authentication will not function properly.

Modifications in V3.50(HB.0)b5 | 09/30/2002

2. [FEATURE CHANGED] Enable MANY_ONE_TO_ONE.
3. [FEATURE CHANGED] Change SMT 24-11 Access policy from ALL to LAN only for all server configuration.
2. [FEATURE CHANGED] The behavior of WLAN activity LED is changed.
3. [FEATURE CHANGED] Change the term "Firmware upgrade" to "Firmware upload" in Web GUI.
4. [FEATURE CHANGED] Change string "Write to EEPROM Success" to "Verify EEPROM OK" when EEPROM is verified OK.
5. [FEATURE EHHANCED] Add log message for 802.1x.
6. [FEATURE EHHANCED] Add EAP-TLS and EAP-TTLS passthrough.
7. [FEATURE EHHANCED] Update sptgen.c to support ftp download and upload RomFile for 802.1x and IAPP RomFile configuration.
8. [FEATURE ENHANCED] Implement CI command "wlan diagnose" to support WLAN card self-diagnostics.
9. [BUG FIXED]
   Symptom: Memory alloc error.
   Condition: Too many MAC addresses recorded in the bridge table will cause memory alloc error.
10. [BUG FIXED]
    Symptom: The RomFile version will be increased by one after reboot.
    Condition: This symptom is observed when user reboot the device.
11. [BUG FIXED]
    Symptom: sys mrd atsh shows wrong RomFile version.
    Condition: This symptom is observed when user types sys mrd atsh at CI command mode.
12. [BUG FIXED]
    Symptom: HTP loopback test fail during manufacture with empty EERPOM.
    Condition: This symptom is observed when EEPROM is empty and run HTP loopback test.
13. [BUG FIXED]
    Symptom: ether driver status enet0 and ether driver status enet1 commands show wrong MAC address.

Condition: This symptom is observed when user types the above two CI commands.
14. [FEATURE EHHANCED] Revise 802.1x timer function interface in order to support multi-platform.

Modifications in V3.50(HB.0)b4 | 09/05/2002

1. [BUG FIXED]
    Symptom: Windows XP UPnP will display "P314 Plus" as model name.
    Condition: This symptom is observed when user use Windows XP and the ZyAIR B-2000 UPnP is turn on.
2. [BUG FIXED]
    Symptom: Change settings in Advance|WAN|IP and save it, the web message shows wrong warning message.
    Condition: This symptom is observed when user changes WAN IP through WEB.
3. [BUG FIXED]
    Symptom: After LAN IP changed, reserved SUA server for Roadrunner does not take effect until reboot system.
    Condition: This symptom is observed when user configure LAN IP through SMT3.2 or WEB, reserved SUA server does not changed.
4. [BUG FIXED]
    Symptom: UPnP NAT traversal does not work.
    Condition: This symptom is observed when user runs Windows XP MSN Messanger.
5. [FEATURE EHHANCED] Add embedded web help menu for 802.1x, RADIUS and Roaming.
6. [FEATURE CHANGED] Support WLAN external loopback test in HTP. In order to support this loopback test, a Wireless AP with ESS ID = "loopback" as a fixture is required.
7. [BUG FIXED]
    Symptom: Turn on WEP on AP and station, supplicant can not be authenticated and authorized.
    Condition: This symptom is observed when we turn on WEP on both AP and station, supplicant can not be authenticated and authorized.
8. [BUG FIXED]
    Symptom: Default DNS will not function probably.
    Condition: This symptom is observed when the default DNS server has been changed but the ZyAIR default DNS server does not change to new DNS server. Add CI command for user to configure DNS IP.

Modification in 3.50(HB.0)b3 | 8/12/2002

1. [NEW FEATURE] Support 802.11f.
2. [FEATURE CHANGED] Change SMT Menu 23.2 field label string "Key" to "Shared Secret"
3. [FEATURE CHANGED] The default value of RADIUS authentication server and accounting server ports are changed to 1812 and 1813 respectively
4. [BUG FIXED]
    Symptom: Revise 802.1x SPT related data structure in order to follow SPT specification
5. [BUG FIXED]
    Symptom: 802.1x drop unauthenticated user packets, the system will reboot (data abort)
    Condition: If an unauthenticated user access ZyAIR, 802.1x will drop all packets come from the user except 802.1x packets. Then 802.1x will access string from the table in which the string is not defined

Modification in 3.50(HB.0)b2 | 7/25/2002

1. [FEATURE CHANGED] Change SMT Menu 23.4 Authentication Control default value to Force Authorized (The original default value is Auto)
2. [FEATURE EHHANCED] Delete supplicant`s data if supplicant logoff
3. [FEATURE EHHANCED] Send Radius Accounting Stop message to Radius accounting server when SMT 23.4 Authentication Control value has been changed from Auto to other value

Modification in 3.50(HB.0)b1 | 7/23/2002

1. First release for C3 baseline firmware

CI Command List

Command Class List Table		
System Related Command	Exit Command	Ethernet Related Command
Wireless LAN Related Command	IP Related Command	Bridge Related Command
802.1x Related Command		

System Related Command   Home

Command				Description
sys				
	Adjtime			retrive date and time from Internet
	Callhist			
		display		display call history
		remove	<index>	remove entry from call history
	countrycode		[countrycode]	set country code
	date		[year month date]	set/display date
	domainname			display domain name
	Edit		<filename>	edit a text file
	extraphnum			maintain extra phone numbers for outcalls
		add	<set 1-3> <1st phone num> [2nd phone num]	add extra phone numbers
		display		display extra phone numbers
		node	<num>	set all extend phone number to remote node <num>
		remove	<set 1-3>	remove extra phone numbers
		reset		reset flag and mask
	Feature			display feature bit
	hostname		[hostname]	display system hostname
	Log			
		clear		clear log error
		disp		display log error
		online	[on|off]	turn on/off error log online display
	Rn			
		load	<entry no.>	load remote node information
		disp	<entry no.>(0:working buffer)	display remote node information
		nat	<none|sua|full_feature>	config remote node nat
		nailup	<no|yes>	config remote node nailup
		save	[entry no.]	save remote node information
	Stdio		[second]	change terminal timeout value
	systemname		[system name]	Change system name
	time		[hour [min [sec]]]	display/set system time
	Trcdisp	parse, brief, disp		monitor packets
	Trclog			

	trcpacket				
	Syslog				
		server	[destIP]		set syslog server IP address
		facility	<FacilityNo>		set syslog facility
		type	[type]		set/display syslog type flag
		mode	[on|off]		set syslog mode
	Version				display RAS code and driver version
	View		<filename>		view a text file
	Wdog				
		switch	[on|off]		set on/off wdog
		cnt	[value]		display watchdog counts value: 0-34463
	romreset				restore default romfile
	Socket				display system socket information
	Filter				
		netbios			
	roadrunner				
		debug	<level>		enable/disable roadrunner service 0: diable <default> 1: enable
		display	<iface name>		display roadrunner information iface-name: enif0, wanif0
		restart	<iface name>		restart roadrunner
	Ddns				
		debug	<level>		enable/disable ddns service
		display	<iface name>		display ddns information
		restart	<iface name>		restart ddns
		logout	<iface name>		logout ddns
	Cpu				
		display			display CPU utilization

Exit Command   Home

Command			Description
exit			exit smt menu

Ethernet Related Command   Home

Command				Description
ether				
	Config			display LAN configuration information
	Driver			
		cnt		
			disp <name>	display ether driver counters
		ioctl	<ch_name>	Useless in this stage.
		status	<ch_name>	see LAN status
	version			see ethernet device type
	edit			
		load	<ether no.>	load ether data from spt
		save		save ether data to spt

Wireless LAN Related Command   Home

Command			Description
wlan			
	association		display association list
	chid	[channel id]	set channel
	essid	[ess id]	set ESS ID

	version			display WLAN version information
	diagnose			check wireless card

IP Related Command

Command				Description
ip				
	address		[addr]	display host ip address
	alias		<iface>	alias iface
	aliasdis		<0|1>	disable alias
	arp			
		status	<iface>	display ip arp status
	dhcp		<iface>	
		client		
			release	release DHCP client IP
			renew	renew DHCP client IP
		status	[option]	show dhcp status
	dns			
		query		
		server	<primary> [secondary] [third]	set dns server
		stats		
		default		set default DNS server
	httpd			
	icmp			
		status		display icmp statistic counter
		discovery	<iface> [on|off]	set icmp router discovery flag
	ifconfig		[iface] [ipaddr] [broadcast <addr> |mtu <value>|dynamic]	configure network interface
	ping		<hostid>	ping remote host
	route			
		status	[if]	display routing table
		add	<dest_addr|default>[/<bits>] <gateway> [<metric>]	add route
		addiface	<dest_addr|default>[/<bits>] <gateway> [<metric>]	add an entry to the routing table to iface
		addprivate	<dest_addr|default>[/<bits>] <gateway> [<metric>]	add private route
		drop	<host addr> [/<bits>]	drop a route
	status			display ip statistic counters
	udp			
		status		display udp status
	rip			
	tcp			
		status	[tcb] [<interval>]	display TCP statistic counters
	telnet		<host> [port]	execute telnet clinet command
	tftp			
	traceroute		<host> [ttl] [wait] [queries]	send probes to trace route of a remote host
	xparent			
		join	<iface1> [<iface2>]	join iface2 to iface1 group
		break	<iface>	break iface to leave ipxparent group
	igmp			
		debug	[level]	set igmp debug level
		forwardall	[on|off]	turn on/off igmp forward to all interfaces flag
		querier	[on|off]	turn on/off igmp stop query flag
		iface		
			<iface> grouptm <timeout>	set igmp group timeout

			<iface> interval <interval>	set igmp query interval
			<iface> join <group>	join a group on iface
			<iface> leave <group>	leave a group on iface
			<iface> query	send query on iface
			<iface> rsptime [time]	set igmp response time
			<iface> start	turn on of igmp on iface
			<iface> stop	turn off of igmp on iface
			<iface> ttl <threshold>	set ttl threshold
			<iface> v1compat [on|off]	turn on/off v1compat on iface
		robustness	<num>	set igmp robustness variable
		status		dump igmp status

Bridge Related Command   [Home](#)

Command				Description
Bridge				
	cnt			related to bridge routing statistic table
		Disp		display bridge route counter
		Clear		clear bridge route counter
	stat			related to bridge packet statistic table
		Disp		display bridge route packet counter
		Clear		clear bridge route packet counter

802.1x Related Command   [Home](#)

Command				Description
8021x				
	radius	authentication	Show	show current radius authentication server configuration
		accounting	Show	show current radius accounting server configuration
	debug	Reauth	<0:off 1:on>	set IEEE802.1x reauthentication method
		Level	[debug level]	set ieee802.1x debug message level
		Trace		show all supplications in the supplication table
		User	[username]	show the specified user status in the supplicant table

350HB1c0   8/24

Internal Information:

1. Modification

Modification in 3.50(HB.0)c0 | 10/21/2002

1. [FEATURE CHANGED]
   Add sys mbuf debug off to autoexec.net.

Modification in 3.50(HB.0)b8 | 10/18/2002

2. [BUG FIXED]
   Symptom: B2000 crashes under SMT24.10 setting.
   Condition: B2000 crashes under "Time and Date Setting" from SMT24.10.

Modification in 3.50(HB.0)b7 | 10/15/2002

3. [FEATURE EHHANCED]
   Revise 802.1x to delete supplicant data structure if the following two conditions match: 1. Supplicant is in Authorized state. 2. Supplicant associates with AP.
4. [BUG FIXED]
   Symptom: B2000 crashes under SNMP scan.
   Condition: B2000 crashes under SNMP scan from NetworkView.
5. [FEATURE CHANGED]
   The unused port (WDS port) is left unused.

Modification in 3.50(HB.0)b5 | 09/30/2002

1. [FEATURE EHHANCED]
   Revise 802.1x timer function interface in order to support multi-platform.

Modification in 3.50(HB.0)b4 | 09/05/2002

1. [FEATURE EHHANCED]
   The CI command series "sys mrd" is added, but it is hidden.

2. Manufactory Data in Bootbase

ZyNOS Version	: V3.50(HB.1)	05/30/2003 16:01:13
Bootbase Version	: V2.10	03/22/2002 14:38:58
Vendor Name	: ZyXEL Communications Corp.
Product Model	: ZyAIR B-2000
ZyNOS ROM address	: 06008000
System Type	: 5
MAC Address	: 00A0C5012345
Default Country Code	: FF
Boot Module Debug Flag	: 01
RomFile Version	: E6
RomFile Checksum	: 79c2
ZyNOS Checksum	: 6502
Core Checksum	: 87fc
SNMP MIB level & OID	: 06010203040506070809101112131415161718 1920
Main Feature Bits	: C0
Other Feature Bits	:
	9F FE 00 00 00 00 00 00-00 00 00 00 00 00 00 00
	00 00 00 00 00 00 00 00-00 41 33 00 00 00

Notes:
- Debug Flag should be 0 after production. In our default release will be 1. Because in the manufacture process will need it to set the MAC address.
- Country code value will be change by production process. It will depend on the shipping country.
- MAC address will be change by production process. Only the fist 3 octets will be correct. The last 3 octets will depend on the production process.

3. Default ROM File Value Setting

- Menu 1 – General Setup

```
                    Menu 1 - General Setup

             System Name= ?
             Domain Name=
             Edit Dynamic DNS= No

             Press ENTER to Confirm or ESC to Cancel:
```

- Menu 1.1 – Configure Dynamic DNS

```
                    Menu 1.1 - Configure Dynamic DNS

       Service Provider= WWW.DynDNS.ORG
       Active= Yes
       DDNSType= DynamicDNS
       Host=
       EMAIL=
       USER=
       Password= ********
       Enable Wildcard= No
       Offline= N/A


               Press ENTER to Confirm or ESC to Cancel:

 Press Space Bar to Toggle.
```

- Menu 2 – WAN Setup

```
                      Menu 2 - WAN Setup

               MAC Address:
                 Assigned By= Factory default
                 IP Address= N/A

             Press ENTER to Confirm or ESC to Cancel:

 Press Space Bar to Toggle.
```

- Menu 3.1 – LAN Port Filter Setup

```
                  Menu 3.1 - LAN Port Filter Setup

             Input Filter Sets:
              protocol filters=
                device filters=
             Output Filter Sets:
              protocol filters=
                device filters=

             Press ENTER to Confirm or ESC to Cancel:
```

- Menu 3.2 – TCP/IP and DHCP Ethernet Setup

```
                  Menu 3.2 - TCP/IP and DHCP Ethernet Setup
```

```
                      DHCP= Server
                      Configuration:
                        Client IP Pool Starting Address= 192.168.1.33
                        Size of Client IP Pool= 32
                        Primary DNS Server= 0.0.0.0
                        Secondary DNS Server= 0.0.0.0
                        DHCP Server Address= N/A

                      TCP/IP Setup:
                        IP Address= 192.168.1.1
                        IP Subnet Mask= 255.255.255.0
                        RIP Direction= Both
                          Version= RIP-1
                        Multicast= None
                        Edit IP Alias= No



                      Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 3.2.1 – IP Alias Setup

```
                      Menu 3.2.1 - IP Alias Setup

                  IP Alias 1= No
                    IP Address= N/A
                    IP Subnet Mask= N/A
                    RIP Direction= N/A
                      Version= N/A
                    Incoming protocol filters= N/A
                    Outgoing protocol filters= N/A
                  IP Alias 2= No
                    IP Address= N/A
                    IP Subnet Mask= N/A
                    RIP Direction= N/A
                      Version= N/A
                    Incoming protocol filters= N/A
                    Outgoing protocol filters= N/A



                   Enter here to CONFIRM or ESC to CANCEL:

 Press Space Bar to Toggle.
```

- Menu 3.5 – Wireless LAN Setup

```
                      Menu 3.5 - Wireless LAN Setup

                  ESSID= AOL
                  Hide ESSID= No
                  Channel ID= CH06 2437MHz
                  RTS Threshold= 0
                  Frag. Threshold= 2432
                  WEP= Disable
                    Default Key= N/A
                    Key1= N/A
                    Key2= N/A
                    Key3= N/A
                    Key4= N/A
                  Edit MAC Address Filter= No
                  Edit Roaming Configuration= No
```

```
                          Press ENTER to Confirm or ESC to Cancel:
```

- Menu 3.5.1 – WLAN MAC Address Filter

```
                    Menu 3.5.1 - WLAN MAC Address Filter

            Active= No
            Filter Action= Allowed Association
            MAC Address Filter
             Address  1= 00:00:00:00:00:00
             Address  2= 00:00:00:00:00:00
             Address  3= 00:00:00:00:00:00
             Address  4= 00:00:00:00:00:00
             Address  5= 00:00:00:00:00:00
             Address  6= 00:00:00:00:00:00
             Address  7= 00:00:00:00:00:00
             Address  8= 00:00:00:00:00:00
             Address  9= 00:00:00:00:00:00
             Address 10= 00:00:00:00:00:00
             Address 11= 00:00:00:00:00:00
             Address 12= 00:00:00:00:00:00


             Enter here to CONFIRM or ESC to CANCEL:

Press Space Bar to Toggle.
```

- Menu 3.5.2 – Roaming Configuration

```
                   Menu 3.5.2 - Roaming Configuration

            Active= No
            Port #= N/A


            Press ENTER to Confirm or ESC to Cancel:

Press Space Bar to Toggle.
```

- Menu 4 - Internet Access Setup

```
                    Menu 4 - Internet Access Setup

            ISP's Name= ChangeMe
            Encapsulation= Ethernet
              Service Type= Standard
              My Login= N/A
              My Password= N/A
              Login Server= N/A

            IP Address Assignment= Dynamic
              IP Address= N/A
              IP Subnet Mask= N/A
              Gateway IP Address= N/A
            Network Address Translation= SUA Only

            Press ENTER to Confirm or ESC to Cancel:
```

- Menu 11.1 - Remote Node Profile

```
                   Menu 11.1 - Remote Node Profile
```

```
    Rem Node Name= ChangeMe              Route= IP
    Active= Yes

    Encapsulation= Ethernet             Edit IP= No
    Service Type= Standard              Session Options:
    Service Name= N/A                    Edit Filter Sets= No
    Outgoing:
      My Login= N/A
      My Password= N/A
      Server= N/A


              Press ENTER to Confirm or ESC to Cancel:

Press ENTER to Confirm or ESC to Cancel:
```

- Menu 11.3 – Remote Node Network Layer Options

```
                Menu 11.3 - Remote Node Network Layer Options

                IP Address Assignment= Dynamic
                IP Address= N/A
                IP Subnet Mask= N/A
                Gateway IP Addr= N/A

                Network Address Translation= SUA Only
                Metric= 1
                Private= N/A
                RIP Direction= None
                 Version= N/A
                Multicast= None

                 Enter here to CONFIRM or ESC to CANCEL:

Press Space Bar to Toggle.
```

- Menu 11.5 – Remote Node Filter

```
                    Menu 11.5 - Remote Node Filter

            Input Filter Sets:
              protocol filters=
                device filters=
            Output Filter Sets:
              protocol filters=
                device filters=


              Enter here to CONFIRM or ESC to CANCEL:
```

- Menu 12 – IP Static Route Setup

```
                 Menu 12 - IP Static Route Setup


            1. _____
            2. _____
            3. _____
            4. _____
            5. _____
            6. _____
            7. _____
            8. _____
```

```
                         Enter selection number:
```

- Menu 12.1 – Edit IP Static Route

```
                  Menu 12.1 - Edit IP Static Route

              Route #: 1
              Route Name= ?
              Active= No
              Destination IP Address= ?
              IP Subnet Mask= ?
              Gateway IP Address= ?
              Metric= 2
              Private= No



              Press ENTER to Confirm or ESC to Cancel:
```

- Menu 14 – Dial-in User Setup

```
                     Menu 14 - Dial-in User Setup

    1. _____      9. _____     17. _____     25. _____
    2. _____     10. _____     18. _____     26. _____
    3. _____     11. _____     19. _____     27. _____
    4. _____     12. _____     20. _____     28. _____
    5. _____     13. _____     21. _____     29. _____
    6. _____     14. _____     22. _____     30. _____
    7. _____     15. _____     23. _____     31. _____
    8. _____     16. _____     24. _____     32. _____

                   Enter Menu Selection Number:
```

- Menu 14.1 – Edit Dial-in User

```
                    Menu 14.1 - Edit Dial-in User

              User Name= ?
              Active= No
              Password= ?



              Press ENTER to Confirm or ESC to Cancel:
```

- Menu 15.1.1 – Address Mapping Rules

```
          Menu 15.1.1 - Address Mapping Rules

  Set Name= ?

 Idx  Local Start IP  Local End IP    Global Start IP Global End IP   Type
 ---  --------------- --------------- --------------- --------------- ------
  1.
  2.
  3.
  4.
  5.
  6.
  7.
  8.
  9.
```

```
10.
                 Action= None          Select Rule= N/A

                 Press ENTER to Confirm or ESC to Cancel:
```

- Menu 15.2 – NAT Server Setup

```
                 Menu 15.2 - NAT Server Setup


         Rule   Start Port No.   End Port No.   IP Address
         ------------------------------------------------------
          1.    Default          Default        0.0.0.0
          2.      0                0             0.0.0.0
          3.      0                0             0.0.0.0
          4.      0                0             0.0.0.0
          5.      0                0             0.0.0.0
          6.      0                0             0.0.0.0
          7.      0                0             0.0.0.0
          8.      0                0             0.0.0.0
          9.      0                0             0.0.0.0
         10.      0                0             0.0.0.0
         11.      0                0             0.0.0.0
         12.      0                0             0.0.0.0

             Press ENTER to Confirm or ESC to Cancel:
```

- Menu 21 – Filter Set Configuration

```
                 Menu 21 - Filter Set Configuration

    Filter                         Filter
    Set #       Comments           Set #        Comments
    ------  -----------------      ------   -----------------
      1     NetBIOS_WAN              7       _____
      2     NetBIOS_LAN              8       _____
      3     TEL_FTP_WEB_WAN          9       _____
      4     _____         10      _____
      5     _____         11      _____
      6     _____         12      _____



            Enter Filter Set Number to Configure= 0

            Edit Comments= N/A

            Press ENTER to Confirm or ESC to Cancel:
```

- Menu 21.1 – Filter Rules Summary (for `NetBIOS_WAN`)

```
                 Menu 21.1 - Filter Rules Summary

 # A Type              Filter Rules                         M m n
 - - ---- ----------------------------------------------------------- - - -
 1 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=137                N D N
 2 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=138                N D N
 3 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=139                N D N
 4 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=137               N D N
 5 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=138               N D N
 6 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=139               N D F
```

```
                 Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.1.1 – TCP/IP Filter Rule (for `NetBIOS_WAN`)

```
                    Menu 21.1.1 - TCP/IP Filter Rule

           Filter #: 1,1
           Filter Type= TCP/IP Filter Rule
           Active= Yes
           IP Protocol= 6    IP Source Route= No
           Destination: IP Addr= 0.0.0.0
                     IP Mask= 0.0.0.0
                     Port #= 137
                     Port # Comp= Equal
                Source: IP Addr= 0.0.0.0
                     IP Mask= 0.0.0.0
                     Port #=
                     Port # Comp= None
           TCP Estab= No
           More= No          Log= None
           Action Matched= Drop
           Action Not Matched= Check Next Rule

           Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 21.1.1 – TCP/IP Filter Rule (for `NetBIOS_WAN`)

```
                    Menu 21.1.2 - TCP/IP Filter Rule

           Filter #: 1,2
           Filter Type= TCP/IP Filter Rule
           Active= Yes
           IP Protocol= 6     IP Source Route= No
           Destination: IP Addr= 0.0.0.0
                     IP Mask= 0.0.0.0
                     Port #= 138
                     Port # Comp= Equal
                Source: IP Addr= 0.0.0.0
                     IP Mask= 0.0.0.0
                     Port #=
                     Port # Comp= None
           TCP Estab= No
           More= No           Log= None
           Action Matched= Drop
           Action Not Matched= Check Next Rule

           Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 21.1.1 – TCP/IP Filter Rule (for `NetBIOS_WAN`)

```
                    Menu 21.1.3 - TCP/IP Filter Rule

           Filter #: 1,3
           Filter Type= TCP/IP Filter Rule
           Active= Yes
           IP Protocol= 6     IP Source Route= No
           Destination: IP Addr= 0.0.0.0
```

```
                                    IP Mask= 0.0.0.0
                                    Port #= 139
                                    Port # Comp= Equal
                        Source: IP Addr= 0.0.0.0
                                    IP Mask= 0.0.0.0
                                    Port #=
                                    Port # Comp= None
                    TCP Estab= No
                    More= No          Log= None
                    Action Matched= Drop
                    Action Not Matched= Check Next Rule

                    Press ENTER to Confirm or ESC to Cancel:
    Press Space Bar to Toggle.
```

- Menu 21.1.1 – TCP/IP Filter Rule (for `NetBIOS_WAN`)

```
                        Menu 21.1.4 - TCP/IP Filter Rule

                    Filter #: 1,4
                    Filter Type= TCP/IP Filter Rule
                    Active= Yes
                    IP Protocol= 17    IP Source Route= No
                    Destination: IP Addr= 0.0.0.0
                                    IP Mask= 0.0.0.0
                                    Port #= 137
                                    Port # Comp= Equal
                        Source: IP Addr= 0.0.0.0
                                    IP Mask= 0.0.0.0
                                    Port #=
                                    Port # Comp= None
                    TCP Estab= N/A
                    More= No          Log= None
                    Action Matched= Drop
                    Action Not Matched= Check Next Rule

                    Press ENTER to Confirm or ESC to Cancel:
    Press Space Bar to Toggle.
```

- Menu 21.1.1 – TCP/IP Filter Rule (for `NetBIOS_WAN`)

```
                        Menu 21.1.5 - TCP/IP Filter Rule

                    Filter #: 1,5
                    Filter Type= TCP/IP Filter Rule
                    Active= Yes
                    IP Protocol= 17    IP Source Route= No
                    Destination: IP Addr= 0.0.0.0
                                    IP Mask= 0.0.0.0
                                    Port #= 138
                                    Port # Comp= Equal
                        Source: IP Addr= 0.0.0.0
                                    IP Mask= 0.0.0.0
                                    Port #=
                                    Port # Comp= None
                    TCP Estab= N/A
                    More= No          Log= None
                    Action Matched= Drop
                    Action Not Matched= Check Next Rule

                    Press ENTER to Confirm or ESC to Cancel:
    Press Space Bar to Toggle.
```

- Menu 21.1.1 – TCP/IP Filter Rule (for `NetBIOS_WAN`)

```
                    Menu 21.1.6 - TCP/IP Filter Rule

          Filter #: 1,6
          Filter Type= TCP/IP Filter Rule
          Active= Yes
          IP Protocol= 17    IP Source Route= No
          Destination: IP Addr= 0.0.0.0
                       IP Mask= 0.0.0.0
                       Port #= 139
                       Port # Comp= Equal
                 Source: IP Addr= 0.0.0.0
                       IP Mask= 0.0.0.0
                       Port #=
                       Port # Comp= None
          TCP Estab= N/A
          More= No            Log= None
          Action Matched= Drop
          Action Not Matched= Forward

          Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 21.2 – Filter Rules Summary (for NetBIOS_LAN)

```
                    Menu 21.2 - Filter Rules Summary

 # A Type                 Filter Rules                      M m n
 - - ---- ------------------------------------------------------------ - - -
 1 Y IP   Pr=17, SA=0.0.0.0, SP=137, DA=0.0.0.0, DP=53          N D F
 2 N
 3 N
 4 N
 5 N
 6 N



              Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.2 – Filter Rules Summary (for NetBIOS_LAN)

```
                    Menu 21.2.1 - TCP/IP Filter Rule

          Filter #: 2,1
          Filter Type= TCP/IP Filter Rule
          Active= Yes
          IP Protocol= 17    IP Source Route= No
          Destination: IP Addr= 0.0.0.0
                       IP Mask= 0.0.0.0
                       Port #= 53
                       Port # Comp= Equal
                 Source: IP Addr= 0.0.0.0
                       IP Mask= 0.0.0.0
                       Port #= 137
                       Port # Comp= Equal
          TCP Estab= N/A
          More= No            Log= None
          Action Matched= Drop
          Action Not Matched= Forward
```

```
                        Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 21.3 – Filter Rules Summary (for TEL_FTP_WEB_WAN)

```
                      Menu 21.3 - Filter Rules Summary

 # A Type                 Filter Rules                          M m n
 - - ---- ---------------------------------------------------------------- - - -
 1 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=23                      N D N
 2 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=21                      N D N
 3 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=80                      N D F
 4 N
 5 N
 6 N



                 Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.3 – Filter Rules Summary (for TEL_FTP_WEB_WAN)

```
                      Menu 21.3.1 - TCP/IP Filter Rule

                Filter #: 3,1
                Filter Type= TCP/IP Filter Rule
                Active= Yes
                IP Protocol= 6     IP Source Route= No
                Destination: IP Addr= 0.0.0.0
                           IP Mask= 0.0.0.0
                           Port #= 23
                           Port # Comp= Equal
                     Source: IP Addr= 0.0.0.0
                           IP Mask= 0.0.0.0
                           Port #=
                           Port # Comp= None
                TCP Estab= No
                More= No          Log= None
                Action Matched= Drop
                Action Not Matched= Check Next Rule

                Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 21.3 – Filter Rules Summary (for TEL_FTP_WEB_WAN)

```
                      Menu 21.3.2 - TCP/IP Filter Rule

                Filter #: 3,2
                Filter Type= TCP/IP Filter Rule
                Active= Yes
                IP Protocol= 6     IP Source Route= No
                Destination: IP Addr= 0.0.0.0
                           IP Mask= 0.0.0.0
                           Port #= 21
                           Port # Comp= Equal
                     Source: IP Addr= 0.0.0.0
                           IP Mask= 0.0.0.0
                           Port #=
                           Port # Comp= None
                TCP Estab= No
```

```
                       More= No          Log= None
                       Action Matched= Drop
                       Action Not Matched= Check Next Rule


                       Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 21.3 – Filter Rules Summary (for TEL_FTP_WEB_WAN)

```
                         Menu 21.3.3 - TCP/IP Filter Rule

             Filter #: 3,3
             Filter Type= TCP/IP Filter Rule
             Active= Yes
             IP Protocol= 6     IP Source Route= No
             Destination: IP Addr= 0.0.0.0
                          IP Mask= 0.0.0.0
                          Port #= 80
                          Port # Comp= Equal
                  Source: IP Addr= 0.0.0.0
                          IP Mask= 0.0.0.0
                          Port #=
                          Port # Comp= None
             TCP Estab= No
             More= No          Log= None
             Action Matched= Drop
             Action Not Matched= Forward


             Press ENTER to Confirm or ESC to Cancel:
 Press Space Bar to Toggle.
```

- Menu 22 – SNMP Configuration

```
                       Menu 22 - SNMP Configuration

            SNMP:
              Get Community= public
              Set Community= public
              Trusted Host= 0.0.0.0
              Trap:
                Community= public
                Destination= 0.0.0.0



              Press ENTER to Confirm or ESC to Cancel:
```

- Menu 23.1 – System Security – Change Password

```
            Menu 23.1 - System Security - Change Password

              Old Password= ?
              New Password= ?
              Retype to confirm= ?


               Enter here to CONFIRM or ESC to CANCEL:
```

- Menu 23.2 – System Security – RADIUS Server

```
                   Menu 23.2 - System Security - RADIUS Server

              Authentication Server:
                Active= No
                Server Address= ?
                Port #= 1812
                Key= ?

              Accounting Server:
                Active= No
                Server Address= ?
                Port #= 1813
                Key= ?

              Press ENTER to Confirm or ESC to Cancel:

 Press Space Bar to Toggle.
```

- Menu 23.4 – System Security – IEEE802.1X

```
                   Menu 23.4 - System Security - IEEE802.1X

              Authentication Control= Force Authorized
              ReAuthentication Timer (in second)= N/A

              Press ENTER to Confirm or ESC to Cancel:

 Press Space Bar to Toggle.
```

- Menu 24.2.2 – System Maintenance - Setup

```
            Menu 24.2.2 - System Maintenance - Change Console Port Speed

                 Console Port Speed: 9600


                 Press ENTER to Confirm or ESC to Cancel:

 Press Space Bar to Toggle.
```

- Menu 24.3.2 – System Maintenance – UNIX Syslog

```
                 Menu 24.3.2 - System Maintenance - UNIX Syslog

              Syslog:
              Active= No
              Syslog IP Address= ?
              Log Facility= Local 1

              Types:
              CDR= No
              Packet triggered= No
              Filter log= No
              PPP log= No


              Press ENTER to Confirm or ESC to Cancel:

 Press Space Bar to Toggle.
```

- Menu 24.10 – System Maintenance – Time and Date Setting

```
          Menu 24.10 - System Maintenance - Time and Date Setting

      Use Time Server when Bootup= None
      Time Server Address= N/A

      Current Time:                     02 : 43 : 54
      New Time (hh:mm:ss):               02 : 43 : 09

      Current Date:                     2000 - 01 - 01
      New Date (yyyy-mm-dd):             2000 - 01 - 01

      Time Zone= GMT

      Daylight Saving= No
      Start Date (mm-dd):                       01 - 01
      End Date (mm-dd):                         01 - 01


              Press ENTER to Confirm or ESC to Cancel:

Press Space Bar to Toggle.
```

- Menu 24.11 – Remote Management Control

```
                    Menu 24.11 - Remote Management Control

    TELNET Server:     Port = 23         Access = LAN only
                       Secured Client IP = 0.0.0.0

    FTP Server:        Port = 21         Access = LAN only
                       Secured Client IP = 0.0.0.0

    Web Server:        Port = 80         Access = LAN only
                       Secured Client IP = 0.0.0.0

    SNMP Service:      Port = 161        Access = LAN only
                       Secured Client IP = 0.0.0.0

    DNS Service:       Port = 53         Access = LAN only
                       Secured Client IP = 0.0.0.0


              Press ENTER to Confirm or ESC to Cancel:
```

- Menu 26 – Schedule Setup

```
                    Menu 26 - Schedule Setup

    Schedule                      Schedule
    Set #          Name           Set #          Name
    ------ -----------------      ------ -----------------
      1    _____          7    _____
      2    _____          8    _____
      3    _____          9    _____
      4    _____         10    _____
```

```
     5      _____          11      _____
     6      _____          12      _____


                    Enter Schedule Set Number to Configure= 0

                    Edit Name= N/A

                    Press ENTER to Confirm or ESC to Cancel:
```

- ras> sys view autoexec.net
  sys errctl 0
  sys trcl level 5
  sys trcl type 1180
  sys trcp cr 64 96
  sys trcl sw on
  ip tcp mss 512
  ip tcp limit 2
  ip tcp irtt 65000
  ip tcp window 2
  ip tcp ceiling 6000
  ip rip activate
  ip rip merge on
  ppp ipcp com off
  ip icmp disc enif0 off
  bridge mode 1
  sys mbuf debug off