

ZyXEL Prestige 100L

ZyNOS v2.40(AI.0) | 06/08/2000

Release Notes & Manual Supplement

Date: June 08, 2000

This Release Note/Manual Supplement contains information about the features, and bug fixes.

Supported Platforms

Prestige 100L

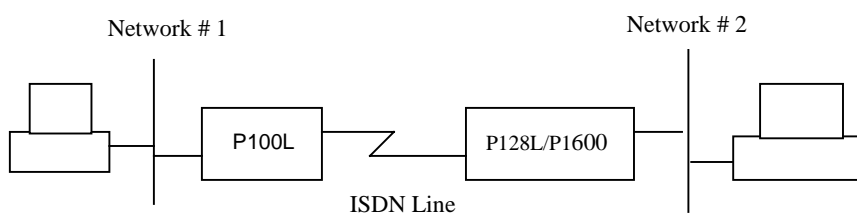
Versions:

ZyNOS F/W Version: v2.40(AI.0)| 6/8/2000

Romfile: 4/10/2000

New Features:

Prestige 100L is a new member of the Prestige family and is the client side of IDSL, the server side can be P128L or P1600. Prestige 100L is a multiprotocol router that deliver a feature-rich, reliable, and secure interconnection between your LAN and the remote network such as Internet or Corporate network via IDSL. Prestige 100L supports IP routing and is designed for data-only applications. IDSL uses the 2B1Q line coding standard for ISDN BRI circuits. IDSL can be a leased cable subscribed from local phone company, or a single unshielded twisted pair of wire. The length of IDSL can be up to 18,000 feet and its transmission rate can be up to 128K bps.



ISDN Leased Line support

Support ISDN leased line besides dial-up line.

DHCP relay

Prestige can be a middle role between DHCP server and DHCP client.

More IP Static Routes

In this release, the number of IP Static Routes have increased to 8.

More DHCP users

The maximum IP address managed by DHCP server is 253.

DNS Proxy

This feature allows you to use DNS Settings provided by the ISP automatically.

SUA Enhancements

In this release, SUA has been enhanced to support the popular applications: Microsoft's tracert under Windows9x and Windows NT, CuSeeMe, IRC, RealAudio, VDOLive, Quake, and PPTP. Besides above, multiple SUA servers are supported. NetMeeting is also supported for both incoming and outgoing call.

Backup and Restore Configuration File via LAN

Users can backup and restore configuration by TFTP.

Upgrade Firmware via LAN

User can upgrade ZyNOS F/W by TFTP. It is not recommended you upgrade your firmware via WAN even though it may work.

Others

1. The ICMP discovery protocol is turned off by default ROM file, and if users want to turn on this protocol to let users' workstation (including PC) to recognize the P202 as one of default route, then users should follow the procedure below.
 - Go to CI command mode (menu 24.8 or menu 24.4.22)
 - sys edit autoexec.net
 - Continue pressing n until finding the string as "ip icmp discovery enif0 off"
 - Press d to delete.
 - Press x to save. It will work at next boot up.
2. In order to make ICQ 99a to receive file behind SUA, you should do the following procedure.
 - open ICQ preference in ICQ icon.
 - open connections slot.
 - In "internet connect type" select "I am using a permanent internet connection(LAN)"
 - choose "I am behind a firewall or proxy"
 - enter firewall settings. Modify firewall time out to 80 seconds.
3. If you run NetMeeting program behind SUA to connect an outside user, the outside user will see two identical users in screen.
4. Add CI command : PPP LCP ACFC ON/OFF.

Enhancement Details

◆ ISDN Leased Line support

Functional Description

P100L is the client side of IDSL, the server side can be P128L or P1600. For P1600, The connect speed can be auto-adapted by P1600 server by bandwidth management through embedded operation channel (EOC). If the speed is fixed by P1600, then user can't change the connect speed in SMT menu 2.

SMT Changes

Menu 2 - WAN Port Setup

Service Type= IDSL Client
B Channel Usage= Leased 128K

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

New CI command

No new CI command.

◆ DHCP relay

Functional Description

DHCP stands for Dynamic Host Configuration Protocol. It includes three types of roles, DHCP server, DHCP relay and DHCP client. DHCP server is a server who manages the IP addresses to DHCP clients. DHCP relay is a middle role between server and client. Whenever DHCP client request an IP address, DHCP relay will forward the request to a DHCP server and forward the response to the DHCP client from the DHCP server. We have supported DHCP server in 1.40. And DHCP relay will be supported in 2.40.

SMT Changes

New option will be added in 3.2 for DHCP relay.

Menu 3.2 - TCP/IP and DHCP Ethernet Setup

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

TCP/IP Setup:
IP Address= 192.168.4.1
IP Subnet Mask= 255.255.255.0
RIP Direction= Both
Version= RIP-2B

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

New CI command

ip	dhcp	Iface name	mode	server/relay/none	set DHCP mode for server/relay/none
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			relay	server <ipaddr>	set DHCP relay server address
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◆ More IP static routes

Functional Description

In this release, the number of IP static routes have increased to 8.

SMT Changes

<p style="text-align: center;">Menu 12 - IP Static Route Setup</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> <p>8. _____</p> <p style="text-align: center;">Enter selection number:Press Space Bar to Toggle.</p>

New CI command

No new CI command.

◆ More DHCP users

Functional Description

The current IP addresses managed by DHCP server is 32 at maximum. In 2.40, the maximum will be increased to 253 at least.

SMT Changes

No changes.

New CI command

No new CI command.

◆ DNS proxy

Functional Description

If this feature is enabled, the Prestige will act as the DNS server to the local network. The

Prestige

will get the IP address of the actual DNS server from remote site via IPCP negotiation. So this feature works only if the remote site supports RFC 1877.

I. How to Configure DNS Proxy

This feature is enabled if the value of the *Primary DNS Server* field in Menu 3.2 is 0.0.0.0. By default, this feature is enabled in a brand new Prestige. In this case, The Prestige will assign its IP address as the Primary DNS in the responses to the DHCP requests on the local network. A SMT restriction enforces the consistency between the *Primary DNS server* and *Secondary DNS server* fields in Menu 3.2 by skipping *Secondary DNS Server* field if the IP address of the *Primary DNS Server* field is 0.0.0.0.

If this feature is disabled, the DHCP mechanism will be performed like before. Therefore, the Prestige will assign the values entered in *Primary DNS server* and *Secondary DNS server* fields in Menu 3.2 to the responses to the DHCP requests on the local network.

II. Functions

1. Only the default route remote node will negotiate with the remote site for the DNS servers.
2. If the default remote node is down and the Prestige receives a DNS request, then the Prestige will attempt to bring up the connection to the default remote node.
3. If the default remote node is up, but no DNS server is negotiated, then all DNS requests to the Prestige will be dropped.
4. If only one DNS server is negotiated or set in menu 3.2, then this will be the active DNS server for the rest of the session.
5. If both Primary and Secondary DNS servers are negotiated or set in menu 3.2, then the Prestige will send the first DNS request to both DNS servers replacing the source IP address with its own WAN IP address. The DNS that responds first will be the active DNS server for the rest of the session. The first response will be forwarded to the original client. The second response will be discarded.
6. If there is only one active DNS server, then all DNS request will be forwarded to that server.
7. In the case that the Prestige negotiates both the Primary and Secondary DNS server, and the active DNS server has not been determined, all DNS request will be sent to both servers.
8. When the Prestige receives a DNS request, it will save the request in a table to be match with the response from the DNS server. The Prestige will send the

request to the DNS server(s) with a new ID that is unique to all outstanding DNS requests from the Prestige. The timeout for a request waiting for a response is 60 seconds.

SMT Changes

<p>Menu 3.2 - TCP/IP and DHCP Ethernet Setup</p> <p>DHCP= Server Configuration: Client IP Pool Starting Address= 192.168.1.33 Size of Client IP Pool= 253 Primary DNS Server= 0.0.0.0 Secondary DNS Server= 0.0.0.0 Relay Server Address= N/A</p> <p>TCP/IP Setup: IP Address= 202.132.50.47 IP Subnet Mask= 255.255.255.0 RIP Direction= Both Version= RIP-1</p> <p>Press ENTER to Confirm or ESC to Cancel:</p>

New CI command

No new CI command.

◆ SUA enhancements

Functional Description

SUA has been enhanced to support the popular Internet applications: MS tracert, CuSeeMe, IRC, RealAudio, VDOLive, Quake, and PPTP. There is no configuration needed for supporting these applications.

For multiple SUA server support, the **Server IP Addr** field in Menu 4 and 11.2 has been removed and a new Menu 15 is added.

There are up to eight SUA servers can be configured in this menu. The first one is reserved for the default server, and it can not be changed. You only need to assign the IP address to this default server. For other SUA servers, you need to assign them both of the Port number and the IP address.

NetMeeting is supported for both incoming and outgoing call. For outgoing call, there is no special setting. For incoming call, port 1503 and 1720 is required to set for server.

SMT Changes

No changes.

New CI command

ip	sua	wanif0/wanif1	disp	display the SUA table for iface wanif0 or wanif1
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◆ Backup and restore configuration file via. LAN or WAN

Functional Description

1. How to use TFTP to Transfer data to/from The Prestige.
 - 1) Use the TELNET client program in your PC to login to your Prestige, and use menu 24.8 to enter C/I command mode:
Because TFTP doesn't have any security check, so we record the IP address that can telnet into the Prestige. Only TFTP requests from this IP address can be accepted.
 - 2) Type C/I Command "sys stdio 0" to disable console idle timeout.
This command is to prevent console idle timeout causing TFTP data transfer failure.
 - 3) The User can open TFTP client, set it to octet mode (binary mode) and transfer data from/to the Prestige.
2. To backup your configuration, use TFTP client program to get file "rom-0" from the Prestige.
3. To restore your configuration, use TFTP client program to put your configuration in file "rom-0" in the Prestige.

SMT Changes

No changes.

New CI command

No new CI command.

◆ Upgrade firmware via. LAN

Functional Description

1. To upgrade firmware, use the TFTP client program to put firmware in file "ras" in the Prestige. After data transfer is finished, the Prestige will program the upgraded Firmware into FLASH ROM and reboot your Prestige.
2. To backup your firmware, use the TFTP client program to get file "ras" from the Prestige.

SMT Changes

No changes.

New CI command

No new CI command.

Frequently used C/I Commands

ZyNOS keeps the familiar user interface (SMT, System Management Terminal) although the internal architecture is vastly different. The syntax and semantics of the CI commands remain the same even though some of them are changed.

Here is the brief description about the most frequently used CI commands. The sequence of the following table is based on the v2.20 commands' alphabetic order.

pre-ZyNOS	V2.40	brief description
	dev channel disp [bri0 bri1]	show channel information on bri0 or bri1
isdn drop [1 2]	dev channel drop [bri0 bri1]	drop channel bri0 or bri1
	ether config	show the current Ethernet configuration
lan cnt disp	ether driver cnt disp	statistics on the Ethernet driver
Exit	*	exit from CI mode
ip address	*	LAN IP address
ip ping {IP address}	*	Ping {IP address}
ip route stat	*	IP routing table
ip status	*	statistics on IP packets
ip sua iface [wan0ppp wan1ppp] disp	ip sua iface [wanif0 wanif1] disp	display the SUA table for iface wanif0 or wanif1
	isdn atring clear [bri0 bri1]	clear the ISDN ring buffer of bri0 or bri1
isdn drv ring [1 2]	isdn atring disp [bri0 bri1]	display the ISDN ring buffer of bri0 or bri1
	isdn config	show the current ISDN configuration
sys epa	isdn fw ana dump	display ISDN trace messages on screen
isdn ana [on off]	isdn fw ana [on off]	enable/disable ISDN trace mechanism
Isdn p128 cnt disp	Isdn fw cnt disp	display ISDN transmission counters
	isdn initstring clear	clear ISDN init string
isdn set initstring {at commands}	isdn initstring set {at commands}	set ISDN init string to {at commands}
isdn init	isdn reset	initialize the ISDN line
ppp lcp acfc [on off]	*	enable/disable PPP LCP ACFC negotiation
ppp lcp bacp [on off]	*	enable/disable PPP LCP BACP negotiation
ppp lcp callback [on	*	enable/disable PPP LCP Microsoft

off]		callback negotiation
ppp lcp pfc [on off]	*	enable/disable PPP LCP PFC negotiation
sys countrycode	sys countrycode x	set country code
sys event	sys trcl call	show call trace on the screen
sys log disp	*	display the error/warning/information messages in the system log
sys log clear	*	clear the existing contents in system log
sys mbuf pool	*	display the pool of mbuf; mbuf is the buffer pre-allocated for data transmission
sys mbuf status	*	display mbuf status
sys memutil mqueue	*	statistics on pre-allocated system memory cell
sys memutil usage	*	statistics on the memory utilization
sys stdio 0	*	set SMT session timeout value to 0 -> never timeout
sys trcd	*	display the packet trace on screen
sys trcl clear	*	clear the existing contents in logic trace log
sys trcl disp	*	display the contents in both of logic and packet trace logs
sys trcl switch [on/off]	*	enable/disable logic trace log mechanism
sys trcp chann [in/out/both enet0]	*	Enable the packet trace mechanism on incoming, outgoing, or both from WAN; or from Ethernet.
sys trcp disp	*	display the contents in packet trace log
sys trcp switch [on/off]	*	enable/disable packet trace log mechanism

Notes:

- blank – no corresponding CI command
- * - no change from the previous versions.

See Support Tool Manual for detailed information on ZyNOS commands.

Error Code Summary in Syslog

- 3000 ==== remote node is connecting
- 3001 ==== configured incoming call only, outgoing call fails
- 3002 ==== configured outgoing call only, incoming call fails
- 3003 ==== packet is filtered
- 3004 ==== no iface
- 3005 ==== no channel available

-3006 ==== call request fail
-3007 ==== remote node is waiting call back
-3020 ==== call dial fail
-3022 ==== filter groups are mixed, so call is not allowed
-3023 ==== received unexpected event
-3024 ==== state timeout
-3025 ==== waiting RADIUS authentication
-3026 ==== RADIUS call back fail
-3028 ==== the node is not found
-3029 ==== the node is inactive
-3030 ==== dial fail
-3031 ==== no budget
-3032 ==== radius authentication fail
-3033 ==== CLID is required
-3034 ==== CLID can not be found
-3035 ==== an outgoing call has already been placed for this remote node
-3036 ==== call is blocked
-3037 ==== invalid phone number
-3038 ==== remote side is busy
-3039 ==== no carrier
-3040 ==== no dial tone
-3041 ==== remote node is not active
-3042 ==== no answer received
-3043 ==== dial timeout
-3044 ==== redial no method
-3045 ==== redial stopped
-3046 ==== redial no number
-3047 ==== first call is CLID authenticated and remote node is obtained but ppp
is not up yet, second call has same CLID
-3048 ==== remote node does not supported L2TP

To Upgrade Prestige

Get the files from ZyXEL anonymous FTP server ([ftp.zyxel.com](ftp://ftp.zyxel.com)). Upgrade your Prestige by following the instructions for your model:

Versions:

RAS S/W Version - V2.40(A1.0)| 6/8/2000

IDSL F/W Version - V 09E

RAS and IDSL firmware file: p100l.bin

Commands:

ATBAx: Where x = baud rate

options available are:

1= 38.4K

2= 19.2K

3= 9.6K

4= 57.6K

5= 115.2K

ATUR: Upload Firmware file via XMODEM

Romfile: p100l.rom

ATUR3: Upload Romfile and reset configuration to factory default.

ZyXEL P100L Firmware V2.40(AI.0)

Bug Fixes:

1. Change connect type display message in menu 24.1.
2. Add feature that router can auto-detect rate of P1600, once the rate is changed, P100L will system reboot to make it effect.
3. Support IDSL switch connected to Ascend with MAX TNT, the user can select this function through SMT menu 2.

Known Bugs:

1. In SMT menu 24.7.2, the Prestige will show some error message if directly press ENTER.