ZyXEL Prestige 100IH and Prestige 100IH+
ZyNOS v2.41(G.00) | 03/16/2000
Release Note / Manual Supplement

Date: March 16, 2000

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

Supported Platforms

ZyNOS v2.41(G.00) supports following Prestige models only:
P100IH and P100IH Plus with S/T ISDN interface.
*__Note__: Because the default configuration for ZyNOS v2.41 is not compatible with the one for the previous ZyNOS firmware releases, so if your P100IH is upgraded from the previous ZyNOS versions, please also update the default configuration file ("p100ihpe.rom") for ZyNOS v2.41.

New Features in ZyNOS v2.41:

CLID callback support for dial-in users

Dial-in user is capable for callback in Version 2.41.

Outgoing data call bumping support

Prestige will drop a channel in an MP bundle if there is a packet to other remote node.

DHCP relay

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

More DHCP users

The maximum IP address managed by DHCP server is 253.

NetMeeting support for SUA/NAT

NetMeeting is supported for both incoming and outgoing call.

Minimum toll period support

Prestige will try to use all the toll period at most with minimum toll period.

Time and Date Setting

Three time protocols Daytime (RFC-867), Time (RFC-868) and NTP (RFC-1305) are supported.

Call Scheduling

Prestige can allow the user to schedule a dial-up connection in specified time.

NAT (Network Address Translation)

Prestige supports four types NAT for IP packets:

One to One

Many to One (which was the previous SUA implementation)

Many to Many Overload

Many to Many No Overload

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 P100IH 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.Added CI command: PPP LCP ACFC ON/OFF.

5.Support ISDN embedded protocol analyzer (EPA).
   - "isdn fw analyzer on" turn on EPA.
   - "isdn fw analyzer off" turn off EPA
   - "isdn fw analyzer dump" dump EPA raw data, it need another program to analyze it.

Enhancement Details

◆ **CLID callback support for dial-in users**

Functional Description

CLID is an authentication method to identify dial-in user. CLID callback is used for toll saving on ISDN because the call is disconnected immediately without picking up the phone. In previous version, only remote node is capable for CLID callback because there is no outgoing information for dial-in users. In 2.40, the CLID outgoing information will be set in Menu 13, and dial-in user is capable for callback.

SMT Changes

In Menu 13, login and password is not only for mutual authentication but also for outgoing callback.

```
                    Menu 13 - Default Dial-in Setup

  Telco Options:                        IP Address Supplied By:
    CLID Authen= None                   Dial-in User= Yes
                                        IP Pool= No
  PPP Options:                              IP Start Addr= N/A
    Recv Authen= CHAP/PAP                 IP Count(1,2)= N/A
    Compression= Yes
    Mutual Authen= Yes
    O/G Login= p100                   Session Options:
    O/G Password= ********              Edit Filter Sets= No
    Multiple Link Options:
      Max Trans Rate(Kbps)= 128

  Callback Budget Management:
    Allocated Budget(min)=
    Period(hr)=

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

New CI command

No new CI command.

- **Outgoing data call bumping support**

Functional Description

Call bumping is a feature which Prestige will manage a MP bundle dynamically for different traffic. That means Prestige will drop a channel in a bundle when necessary, and reconnect it when possible. The current implementation works for POTS call only. For data packet, Prestige won't drop a channel for it if all channels are occupied. With outgoing data call bumping, Prestige will drop a channel in an MP bundle if there is a packet to other remote node.

SMT Changes

No changes.

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
			relay	server <ipaddr>	set DHCP relay server address

- **More DHCP users**

Functional Description

The current IP addresses managed by DHCP server is 32 at maximum. In ZyNOS v2.41, the maximum will be increased to 253 at least.

SMT Changes

No changes.

New CI command

No new CI command.

◆ **NetMeeting support for SUA**

Functional Description

In previous ZyNOS firmware version (v2.2x), Microsoft's NetMeeting did not work if SUA was enabled. Now in ZyNOS v2.41, NetMeeting will be supported for both incoming and outgoing calls. For outgoing call, there is no special setting. For incoming calls, port 1503 and 1720 is required to set for server in SMT menu 15.

SMT Changes

No changes.

New CI command

No new CI command.

◆ **Minimum Toll Period external specification**

Functional Description

Phone call is charged by time in most places. It is always rounded up at the charging period. For example, Prestige may be idled out and drop the call at 10 seconds in a 3 minutes toll period. That call is still charged for 3 minutes. That means the left 2 minutes and 50 seconds is wasted. With minimum toll period, Prestige will try to use all the toll period at most. In above case, Prestige will try to extend the idle timeout to the nearest 3 minutes. If there is any packet during the extended 2 minutes and 50 seconds, the idle timeout will be cleared and the second call is eliminated. Since the session time calculation by Prestige is not necessary synchronized with Telecom, Prestige will drop the channel 5 seconds shorter than the edge of toll period. Therefore, the minimum toll period won't work if the toll period is less than 5 seconds.

SMT Changes

```
                    Menu 11.1 - Remote Node Profile

Rem Node Name= ?                  Edit PPP Options= No
Active= Yes                         Rem IP Addr= ?
Call Direction= Both                  Edit IP= No

Incoming:                           Telco Option:
  Rem Login= ?                        Transfer Type= 64K
  Rem Password= ?                     Allocated Budget(min)=
  Rem CLID=                           Period(hr)=
  Call Back= No                       Nailed-Up Connection= N/A
Outgoing:                             Toll Period(sec)= 0
  My Login=                         Session Options:
  My Password= ********                Edit Filter Sets= No
  Authen= CHAP/PAP                    Idle Timeout(sec)= 100
  Pri Phone #= ?
  Sec Phone #=

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

New CI command

No new CI command.

◆ **Time and Date Setting**

Functional Description

During boot procedure, Prestige will try to connect to a time server somewhere in Internet to calibrate its system clock. In menu 24.10, Prestige administrator can choose which time protocol is preferred, where is the time server (i.e. its IP address) and the time zone of where Prestige is. The Prestige supports three time protocols, which are “Daytime (RFC-867)”, “Time (RFC-868)” and “NTP (RFC-1305)”. The former two protocols employ TCP protocol, and the last one use UDP protocol. Valid date value is from January 1, 1990 to February 5, 2036. The “Time Zone” field is referred to the time zone of where Prestige is located. It is NOT to the time server’s location.

SPECIAL NOTE: Daytime server offers reference time referred to server’s own local time, but not Greenwich Mean Time (GMT). So, the “Time Zone” field DOES NOT apply to this time service. The other two kinds of time service offer GMT reference time.

SMT design

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


          Use Time Server when Bootup= None/Daytime/ Time/NTP
          Time Server IP Address= 202.132.154.169

          Current Time:                          14 : 00 : 47
          New Time (hh:mm:ss):                   14 : 00 : 47

          Current Date:                          1999 - 12 - 21
          New Date (yyyy-mm-dd):                 1999 - 12 - 21

          Time Zone= GMT+0800

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

New CI command

sys	adjtime	calibrate system clock with time server

◆ **Call Scheduling**

Functional Description

Prestige can allow the user to schedule a dial-up connection in specified time. It can let the ISP or the remote nodes in menu 11 to connect or to be dropped down automatically. User may configure a remote node with multiple schedules on a specified day or weekdays. Just like what the scheduled recording function in a video recorder, you can schedule a remote node to connect in a specified date and time.

SMT design

Menu 26 'Schedule Setup' is added in Main Menu.

```
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                           Prestige 100IH Main Menu

    Getting Started                     Advanced Management
      1. General Setup                     21. Filter Set Configuration
      2. ISDN Setup
      3. Ethernet Setup                     23. System Password
      4. Internet Access Setup               24. System Maintenance

    Advanced Applications                  26. Schedule Setup
      11. Remote Node Setup
      12. Static Routing Setup
      13. Default Dial-in Setup
      14. Dial-in User Setup
      15. NAT Setup                       99. Exit

                          Enter Menu Selection Number:
```

There are twelve individual schedule sets in Menu 26.

```
                        Menu 26 - Schedule Setup

Schedule                                Schedule
Set #     Name                          Set #     Name
------   -----------------              ------   -----------------
  1      hinet                           7       _________________
  2      _________________               8       _________________
  3      _________________               9       _________________
  4      _________________               10      _________________
  5      _________________               11      _________________
  6      _________________               12      _________________

               Enter Schedule Set Number to Configure= 1

               Edit Name= hinet

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

- Select a schedule number first.
- Give it a name and enter menu 26.1.

  (P.S. If clear the 'Name' field to blank, Prestige will delete this schedule.)

Menu 26.1 is the schedule configuration

```
                    Menu 26.1 Schedule Set Setup

      Active= Yes/No
      Start Date(yyyy-mm-dd)= 1990 - 1 - 1
      How Often= Once/Weekly
      Once:
        Date(yyyy-mm-dd)= 1990 - 1 - 1
      Weekdays:
        Sunday= Yes/No or N/A
        Monday= Yes/No or N/A
        Tuesday= Yes/No or N/A
        Wednesday= Yes/No or N/A
        Thursday= Yes/No or N/A
        Friday= Yes/No or N/A
        Saturday= Yes/No or N/A
      Start Time(hh:mm)= 12 : 00
      Duration(hh:mm)= 16 : 00
      Action= Forced On/Forced Down/Disable Dial-on-demand
             /Enable Dial-on-demand

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

- Active: schedule will be run or not.
- Start Date: valid from this day; doesn't mean the first running day.
- How Often: selecting 'Once', and the schedule will be executed only on the 'Once''Date'. If selecting 'Weekly', it will run on selected weekdays during each week.
- Start Time: hour and minute for start this schedule
- Duration: how long will this schedule continue?
- Action
  - Forced On: during the period, the remote node will always keep online (idle timeout will be disabled).

- Forced Down: during the period, this remote node will always keep down, If this remote node is already connected, then it will be dropped. Demanded dial or trigger call from LAN will be ignored.
- Enable Dial-on-demand: Enable Dial-on-demand: during the period, this remote node will allow to connect. D.O.D. is default to a remote node without schedules. This scheduled action can be used to override the other actions, like 'Forced Down'.
- Disable Dial-on-demand: during the period, this remote node will deny any demand dial. If there are any connection online, will not drop it. After that connection is dropped manually or by idle timeout, remote node can't be triggered up then.

- When out of duration, scheduler will do nothing to this remote node. If a remote node with schedule 'Forced On' is over, it will return to normal operation 'dial-on-demand', not opposite 'Forced Down'.

You can assign 1~4 schedule sets to a remote node in menu 11.1

```
                    Menu 11.1 - Remote Node Profile

Rem Node Name= Hinet                Edit PPP Options= No
Active= Yes                         Rem IP Addr= 192.168.50.22
Call Direction= Outgoing            Edit IP= No

Incoming:                           Telco Option:
  Rem Login= N/A                      Transfer Type= 64K
  Rem Password= N/A                   Allocated Budget(min)=
  Rem CLID= N/A                         Period(hr)=
  Call Back= N/A                      Schedules= 1,3,2,11
Outgoing:                             Nailed-Up Connection= No
  My Login= abcd                      Toll Period(sec)= 0
  My Password= ****                 Session Options:
  Authen= CHAP/PAP                    Edit Filter Sets= No
  Pri Phone #= 4125678                Idle Timeout(sec)= 100
  Sec Phone #=

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

New CI command

No new CI command.

◆ **NAT (Network Address Translation) – previously ZyXEL called it SUA (Single User Account)**

Functional Description

NAT only applies to IP packets. NAT will change a packet's IP address and port number to allow networks which do not have legal Internal address to access the Internet. NAT has four types: One to One, Many to One, Many to Many Overload, and Many to Many No Overload. The current SUA is considered NAT type Many to One. Multiple NAT entries can be set up to handle different IP address ranges on the LAN.

NAT types Many to One and Many to Many Overload use Port Address Translation (PAT). PAT utilizes port number and IGA (Internal Global Address: The outside IP address) to determine the ILA (Internal Local Address: The inside IP address). Each IGA can be shared by multiple ILAs.

Each remote node can be assigned one NAT set. When NAT is turned on, the rules in this set will be applied to all traffic through this remote node. One IP address per remote node can be designated as the SUA Server IP address. Packets received by the SUA Server can be redirected to an inside server as defined by the user.

SMT design

The menu 15 is changed from “SUA Server Setup” to “NAT Setup”.

```
                Copyright (c) 1994 - 1999 ZyXEL Communications Corp.

                          Prestige 100IH Main Menu

  Getting Started                       Advanced Management
    1. General Setup                      21. Filter Set Configuration
    2. ISDN Setup
    3. Ethernet Setup                     23. System Password
    4. Internet Access Setup                24. System Maintenance

  Advanced Applications                   26. Schedule Setup
    11. Remote Node Setup
    12. Static Routing Setup
    13. Default Dial-in Setup
    14. Dial-in User Setup
    15. NAT Setup                         99. Exit

                        Enter Menu Selection Number:
```

```
                           Menu 15 - NAT Setup

                          1. Address Mapping Sets
                          2. NAT Server Sets

                        Enter Menu Selection Number:
```

```
                    Menu 15.1 - Address Mapping Sets

                      1. hinet
                      2.
                      3.
                      4.
                      5.
                      6.
                      7.
                      8.
                    255. SUA (Read Only)

                            Enter Set Number to Edit:
```

```
                    Menu 15.1.1 - Address Mapping Rules

 Set Name= hinet

Idx  Local Start IP   Local End IP     Global Start IP  Global End IP    Type
---  -------------    -------------    ---------------  ---------------  ------
 1.  0.0.0.0          255.255.255.255  0.0.0.0                           M-1
 2.  Server Set= 1                     0.0.0.0                           Server
 3.
 4.
 5.
 6.
 7.
 8.
 9.
10.

                    Action= Edit          , Select Rule= 0

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

Note:

1. 4 actions are “Edit”, “Insert Before”, “Delete”, and “Save Set”; the default is “Edit”. “**Edit**” means to edit the selected rule. “**Insert Before**” means to insert a rule before the select rule and all the rules after the selected rule will be drawn back one rule. “**Delete**” means to delete the selected rule and all the rules after the selected one will advance one rule. “**Save Set**” means to save the whole set and when users choose the action as that, “**Select Rule**” item will be disabled.
2. The system processes the rules by turn.

```
                    Menu 15.1.1.1 - hinet - Rule 1

                    Type: Many-to-One

                    Local IP:
                      Start= 0.0.0.0
                      End  = 255.255.255.255

                    Global IP:
                      Start= 0.0.0.0
                      End  = N/A

                    Server Mapping Set= N/A

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

```
Menu 15.1.1.2 - hinet - Rule 2

Type: Server

Local IP:
  Start= N/A
  End  = N/A

Global IP:
  Start= 0.0.0.0
  End  = N/A

Server Mapping Set= 1

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

Note:

1. Total 5 types, “One-to-One”, “Many-to-One”, “Many-to-Many Overload”, “Many-to-Many No Overload” and “Server”.
2. Whichever Local IP or Global IP, the end address must be after the start address.
3. If the rule is for all local IP, put start address as 0.0.0.0 and end address as 255.255.255.255.
4. If dynamic IP, put the value of Global Start IP as 0.0.0.0.
5. The server mapping set is mapped in menu 15.2.

```
Menu 15.2 - NAT Server Sets

 1. Server Set 1
 2. Server Set 2
 3. Server Set 3
 4. Server Set 4
 5. Server Set 5
 6. Server Set 6
 7. Server Set 7
 8. Server Set 8
 9. Server Set 9
10. Server Set 10

        Enter Set Number to Edit:
```

```
Menu 15.2.1 - Multiple Server Configuration

  Port #         IP  Address
  ------       ---------------
 1. Default      0.0.0.0
 2. 0            0.0.0.0
 3. 0            0.0.0.0
 4. 0            0.0.0.0
 5. 0            0.0.0.0
 6. 0            0.0.0.0
 7. 0            0.0.0.0
 8. 0            0.0.0.0
 9. 0            0.0.0.0
10. 0            0.0.0.0
11. 0            0.0.0.0
12. 0            0.0.0.0

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

Remote node setting is in menu 11.3 and menu 4

```
                Menu 11.3 - Remote Node Network Layer Options

                   Rem IP Addr: 0.0.0.0
                   Rem Subnet Mask= 0.0.0.0
                   My WAN Addr= 0.0.0.0

                   NAT= Full Feature
                     Address Mapping Set= 1

                   Metric= 2
                   Private= No
                   RIP Direction= Both
                     Version= RIP-2B

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

```
                       Menu 4 - Internet Access Setup

                   ISP's Name= hinet
                   Pri Phone #= 4125678
                   Sec Phone #=
                   My Login= icchung
                   My Password= ********
                   My WAN IP Addr= 0.0.0.0

                   NAT= [None/SUA Only/Full Feature]
                     Address Mapping Set= 1

                   Telco Options:
                     Transfer Type= 64K

                   Multilink= Off
                   Idle Timeout= 300

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

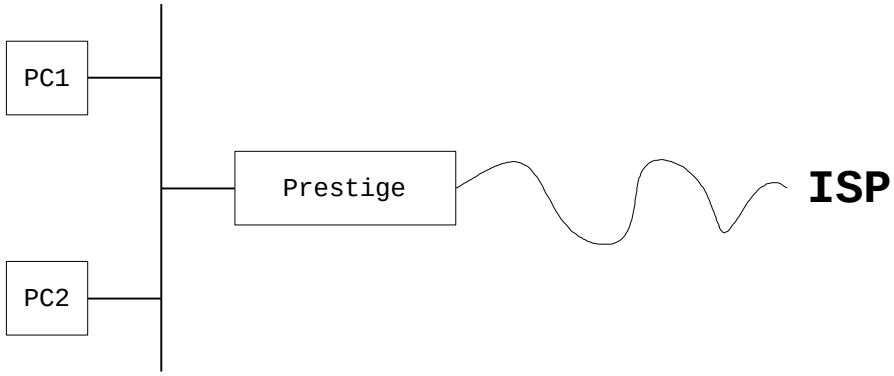
Note: To leave "My WAN IP Addr" as 0.0.0.0 means dynamic IP.

New CI commands

ip	nat	iamt		Display NAT system information.
		iface	<iface name>	Show the NAT status of an interface.
		lookup	<set #>	List all the active rules in a set.
		new-lookup	<set #>	List all the new rules which are not yet used due to conflicts with old rules.
		reset	<iface name>	This deletes all the entries inside the session table and IAMT table but not the lookup table.
		server		Display server table.
		update		Updates the runtime NAT data to what is in ROM.

- **Examples**

Case 1 (ISP case, internet access only)



In ISP case with internet access only, we need one rule that all ILAs share one dynamic IGA assigned by ISP for outgoing packet.

Enter to menu 15.1 and choose a set to create an address mapping set named ISP (the first set is used in this case).

```
                    Menu 15.1 - Address Mapping Sets

                  1.
                  2.
                  3.
                  4.
                  5.
                  6.
                  7.
                  8.
                255. SUA (Read Only)

                         Enter Set Number to Edit:
```

In menu 15.1.1, give the set a name (ISP in this case), then toggle action to edit and select rule 1 to edit.

```
                  Menu 15.1.1 - Address Mapping Rules

 Set Name= ISP

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= Edit          , Select Rule= 0

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

Toggle type to many-to-one because more than one machines share 1 IP in the most ISP case, enter local start IP as 0.0.0.0 and local end IP as 255.255.255.255 to mean this rule is used by all machines in local LAN, and enter global IP as 0.0.0.0 to mean the IGA is a dynamic IP.

```
                    Menu 15.1.1.1 - ISP - Rule 1

                    Type: Many-to-One

                    Local IP:
                      Start= 0.0.0.0
                      End  = 255.255.255.255

                    Global IP:
                      Start= 0.0.0.0
                      End  = N/A

                    Server Mapping Set= N/A

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

After doing that, the user will watch the menu 15.1.1 as following:

```
                    Menu 15.1.1 - Address Mapping Rules

 Set Name= ISP

Idx  Local Start IP   Local End IP     Global Start IP  Global End IP    Type
---   ------------    ------------     ---------------  -------------    ------
 1.  0.0.0.0          255.255.255.255  0.0.0.0                           M-1
 2.
 3.
 4.
 5.
 6.
 7.
 8.
 9.
10.

                    Action= Edit          , Select Rule= 0

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

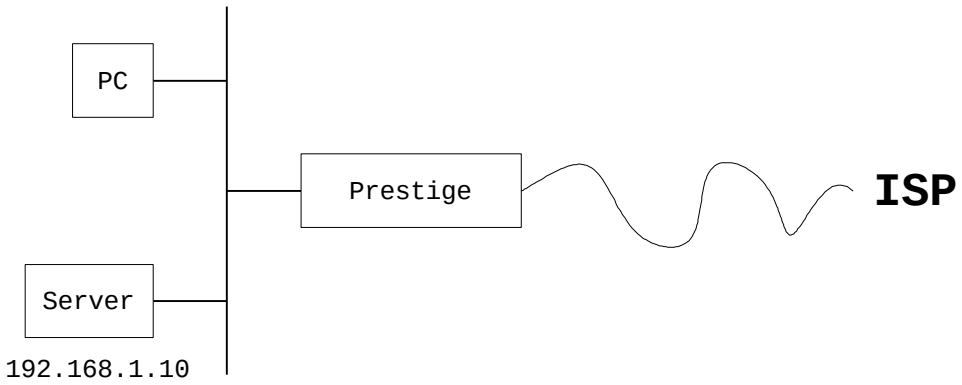
Toggle action to Save Set to save all the set.

```
                       Menu 15.1 - Address Mapping Sets

                      1. ISP
                      2.
                      3.
                      4.
                      5.
                      6.
                      7.
                      8.
                    255. SUA (Read Only)

                            Enter Set Number to Edit:
```

Edit menu 4 as following,

```
                Menu 4 - Internet Access Setup

ISP's Name= ISP
Pri Phone #= 4125678
Sec Phone #=
My Login= icchung
My Password= ********
My WAN IP Addr= 0.0.0.0

NAT= [None/SUA Only/Full Feature]
  Address Mapping Set= 1

Telco Options:
  Transfer Type= 64K

Multilink= Off
Idle Timeout= 300

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

Case 2 (ISP case, with internal server)



In ISP case, we need to add one extra rule in menu 15.1.1 as one server rule for incoming packet. Firstly, go to menu 15.2, and select a NAT server set to edit (set 1 in this case), and then edit the default value as 192.168.1.10 shown as below.

```
                Menu 15.2 - NAT Server Sets

 1. Server Set 1
 2. Server Set 2
 3. Server Set 3
 4. Server Set 4
 5. Server Set 5
 6. Server Set 6
 7. Server Set 7
 8. Server Set 8
 9. Server Set 9
10. Server Set 10

          Enter Set Number to Edit:
```

```
                    Menu 15.2.1 - Multiple Server Configuration

                     Port #      IP  Address
                     ------       ---------------
                  1. Default       192.168.1.10
                  2. 0             0.0.0.0
                  3. 0             0.0.0.0
                  4. 0             0.0.0.0
                  5. 0             0.0.0.0
                  6. 0             0.0.0.0
                  7. 0             0.0.0.0
                  8. 0             0.0.0.0
                  9. 0             0.0.0.0
                 10. 0             0.0.0.0
                 11. 0             0.0.0.0
                 12. 0             0.0.0.0

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

Secondly, go to menu 15.1.1.2 (rule 1 is used for outgoing packet), and then toggle type to Server, and insert global IP as 0.0.0.0 (dynamic IP) and server mapping set as 1.

```
                    Menu 15.1.1.2 - ISP - Rule 2

                    Type: Server

                    Local IP:
                      Start= N/A
                      End  = N/A

                    Global IP:
                      Start= 0.0.0.0
                      End  = N/A

                    Server Mapping Set= 1

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

Then the user can watch the menu 15.1.1 as following,

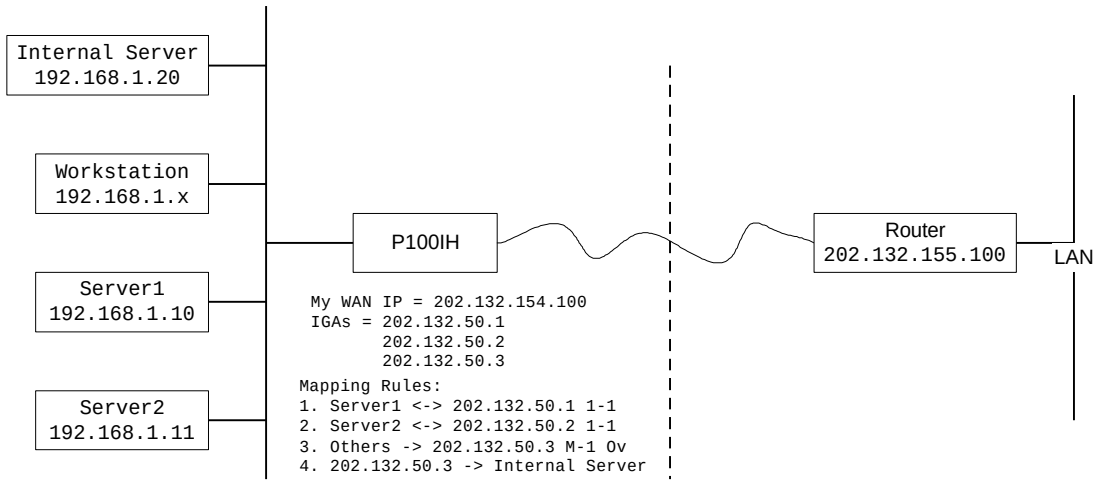
```
                    Menu 15.1.1 - Address Mapping Rules

 Set Name= ISP

Idx  Local Start IP   Local End IP     Global Start IP  Global End IP    Type
---   -------------   ------------     ---------------  -------------   ------
 1.  0.0.0.0          255.255.255.255  0.0.0.0                          M-1
 2.  Server Set= 1                     0.0.0.0                          Server
 3.
 4.
 5.
 6.
 7.
 8.
 9.
10.

                    Action= Edit          , Select Rule= 0

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

Toggle action to Save Set to save all the set.

```
                    Menu 4 - Internet Access Setup

                ISP's Name= ISP
                Pri Phone #= 4125678
                Sec Phone #=
                My Login= icchung
                My Password= ********
                My WAN IP Addr= 0.0.0.0

                NAT= Full Feature
                  Address Mapping Set= 1

                Telco Options:
                  Transfer Type= 64K

                Multilink= Off
                Idle Timeout= 300

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

Case 3 (General case, with 3 IGAs)

In this example, user has to configure 4 rules, 2 for one-to-one mapping (one-to-one for both



incoming packets and outgoing packets), one for outgoing packets, and the other for incoming packets. The address mapping set has to be configured as following (use set 1 in this case).

```
                  Menu 15.1.1 - Address Mapping Rules

 Set Name= test

Idx  Local Start IP   Local End IP      Global Start IP  Global End IP    Type
---   ------------    ------------      ---------------  --------------   ------
 1.  192.168.1.10                       202.132.50.1                      1-1
 2.  192.168.1.11                       202.132.50.2                      1-1
 3.  0.0.0.0         255.255.255.255    202.132.50.3                      M-1
 4.  Server Set= 1                      202.132.50.3                      Server
 5.
 6.
 7.
 8.
 9.
10.

                  Action= Edit          , Select Rule= 0

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

Another, the server set 1 has to be set as following.

```
                  Menu 15.2.1 – Multiple Server Configuration

                    Port #      IP  Address
                    ------       ---------------
                 1. Default       192.168.1.20
                 2. 0             0.0.0.0
                 3. 0             0.0.0.0
                 4. 0             0.0.0.0
                 5. 0             0.0.0.0
                 6. 0             0.0.0.0
                 7. 0             0.0.0.0
                 8. 0             0.0.0.0
                 9. 0             0.0.0.0
                10. 0             0.0.0.0
                11. 0             0.0.0.0
                12. 0             0.0.0.0

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

In this case, menu 11.3 has to be configured as following,

```
               Menu 11.3 - Remote Node Network Layer Options

                  Rem IP Addr: 202.132.155.100
                  Rem Subnet Mask= 255.255.255.0
                  My WAN Addr= 202.132.154.100

                  NAT= Full Feature
                    Address Mapping Set= 1

                  Metric= 2
                  Private= No
                  RIP Direction= Both
                    Version= RIP-2B

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

Bug fixes:

1. Fix DHCP client leasing time problem with Linux.
2. If remote router does not send ACCM option in LCP phase, Prestige will have problem to handle correct control and char mapping.
3. If both MSN of POTS ports are the same or none, both phones should answer the incoming analog call.

Known Bugs:

1. For DSS-1 version, Prestige may stop placing outgoing data calls after Call Waiting/Call Hold/ Call Retrieve scenario if both of POTS ports are assigned the identical phone number. When it happens, the B-channel status shown on Menu 24.1 is wrong.
2. Prestige performance will be degraded if there exists a telnet session in Menu 24.1 via LAN at the same time.
3. For old P100IH models with 0.5M DRAM, you may have difficulties to backup configuration due to system unable to allocate enough memory to perform the function. The workaround is to use PCT (Prestige Configuration Transfer) or PNC (Prestige Network Commander) to perform backup function in this case.