

# Thinvent Dumb Terminal User Manual

## Introduction

Thinvent has developed a highly customised thin client based Dumb Terminal by leveraging their expertise in embedded system design. Thinvent's Dumb Terminals are highly compatible with legacy products and have been handling the most time critical mission of train ticketing.

Thinvent's Dumb Terminals support the following:

- Server based UTS and PRS applications running in terminal emulation mode.
- Connection to servers using both serial (25 pin/9 pin) connection to Terminal Servers, and Ethernet (IP) connection to network switch.

## Dumb Terminal Features:

- Ruggedised hardware to withstand harsh Indian operating conditions.
- Customised to support the CRIS PRS and UTS application.
- RS232C interface with 25 pin D-type male and LAN connectivity to Railways Servers.
- ISCII (83, 88 and 91) printing for tickets with Epson emulation standards configurable for both serial and parallel ports.
- Railways UTS and PRS form downloadable capacity with answer back support.
- Compatible with DEC VT200 style 105 keys Keyboard, as well as PC 104 and 107 key keyboards.
- Remote accessibility is disabled.
- Built in calculator, calendar, clock and other helpful tools.
- Fastest hardware in the market with 1.6 GHz Intel Atom processor, 1GB DDR3 RAM and 4GB flash. Gives twice the performance of competing thin clients.
- Two high speed serial ports and one Centronics Parallel port built in.
- Uses Thinvent's secure Thinix Embedded Linux operating system with industry lowest footprint.

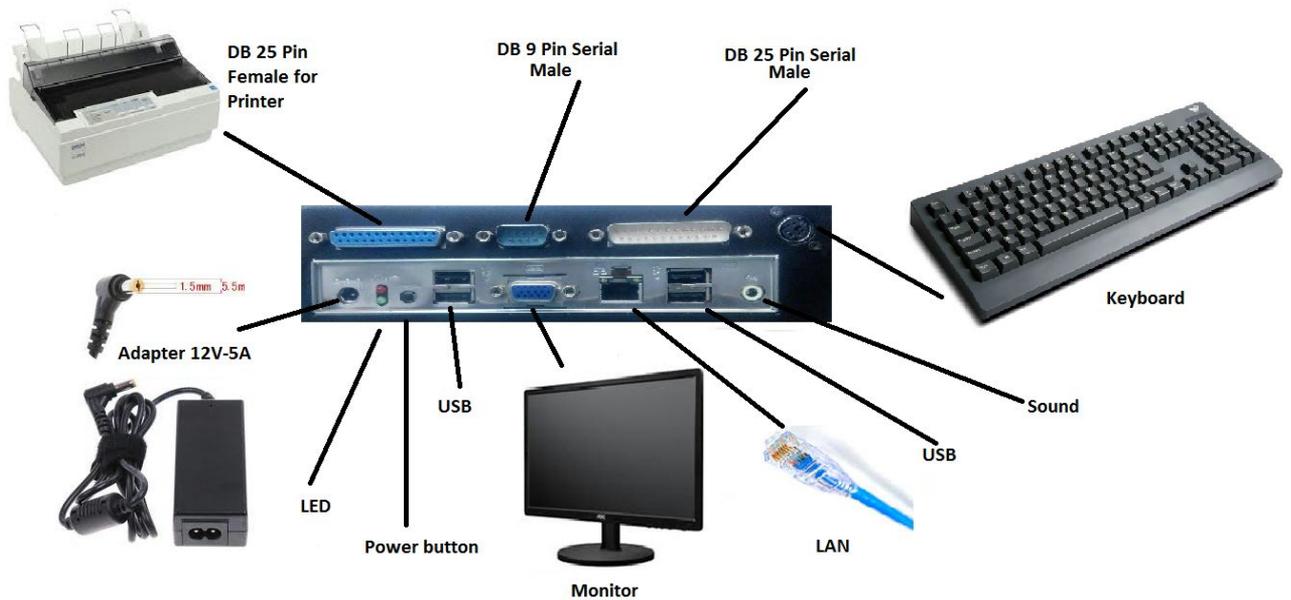
## Keyboard Features:

- Long Life Mechanical Switch – more than 50 million strokes per switch
- Compatible with all our thin client products
- Feather Touch, Power Impact – Operating force: 60+ / -15 cN
- Low Fatigue to User – Sculpted keycap with "click" sounds for key press
- Highly Reliable – More than 200,000 Hrs MTBF
- Colour – Black

● Connectivity – PS/2

## Installation:

**Step 1:** Unpack the machine and connect the VGA, Adaptor, 25 pin serial, PS/2 keyboard, display and Printer in proper order.



**Step 2:** Check the connection thoroughly and switch on the machine and connect devices.

**Step 3:** When the machine starts press Enter and you will see "Local>" on the screen.

```
Local>
VT100 Beginning Par Printer OK 14:06:55 Thu 30 Oct 2014
```

**Note:**

1. If Local doesn't show then check the connectivity, Baud rate as well as system settings properly.
2. If you short 2-3 pins of 25 Pin Serial Connector on Dumb Terminal, then press any keys, the keys you type will show on the monitor. If this works then Dumb Terminal is fine; please check your connectivity.

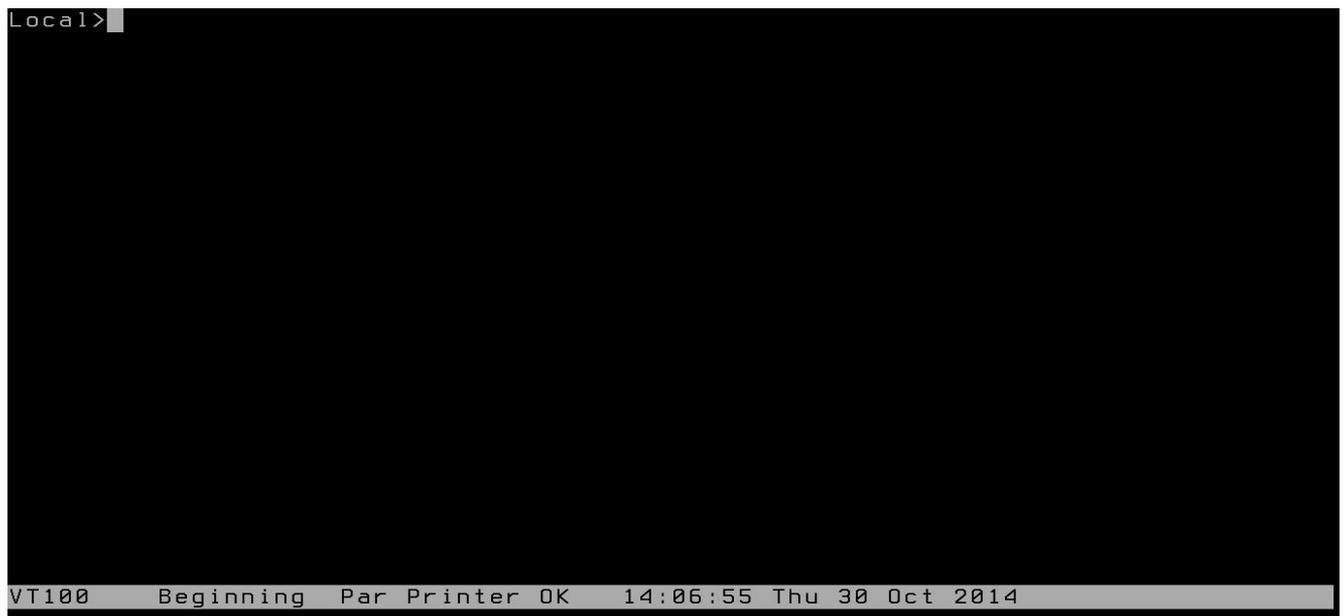
**Main Menu:**

By pressing the F3 key the terminal enters the Main Menu. To return back press F11 or select the last option in the menu (Exit Setup).



## Main Menu Options:

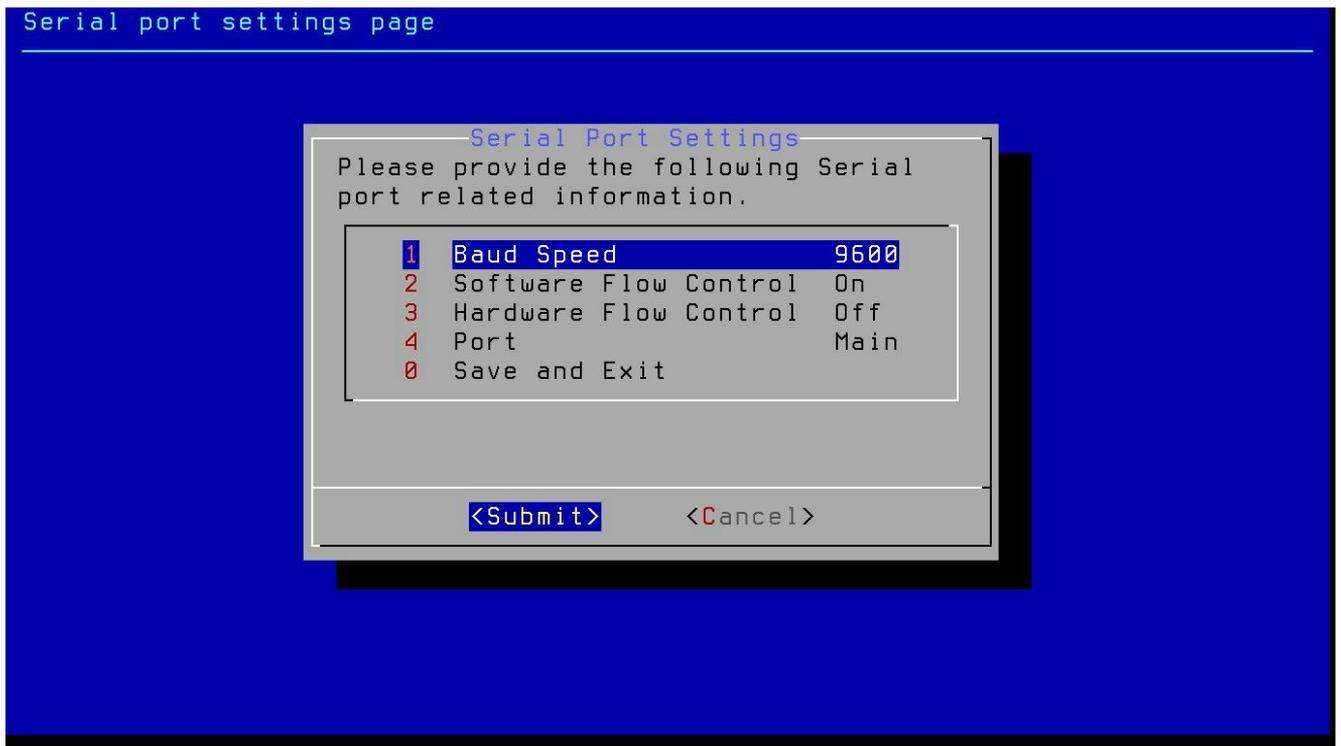
**1. Reset Serial Terminal:** Causes the terminal to reset and come back to the local screen.



**2. Reset All Network Terminals:** To reset (restart) all network terminal connections.

**3. Serial Settings:** To set the serial settings of the Dumb terminal.

**3.1 Baud Speed:** To set the Baud Speed of the Dumb Terminal.



In the next menu, you can select from one of various predefined baud speeds:

Baud rate settings page

Baud rate Settings  
Please select the baud rate of the Serial port.

<input type="radio"/>	4800
<input checked="" type="radio"/>	9600
<input type="radio"/>	19200
<input type="radio"/>	38400
<input type="radio"/>	57600
<input type="radio"/>	115200

<Submit> <Cancel>

**3.2 Software Flow Control:** Lets you set the software flow control (XON/XOFF). This setting should usually be kept ON / Enabled.

Software Flow Control settings page

Software Flow Control Settings  
Do you want to enable or disable software flow control (XON/XOFF).

<Enable > <Disable>

Software Flow Control settings page

Software Flow Control Settings  
Do you want to enable or  
disable software flow control  
(XON/XOFF).

<Enable > <Disable>

**3.3 Hardware Flow Control:** To set the hardware flow control. This setting should usually be kept OFF / Disabled.

**3.4 Port:** Used to select the ports of Dumb Terminal.

Port selection page

Port Settings  
Please select the port to  
use for communication.

Main  
 Aux  
 Offline

<Submit> <Cancel>

**There are 3 ports named:**

**Main:** Select main when you connect DT to server through 25 pin serial.

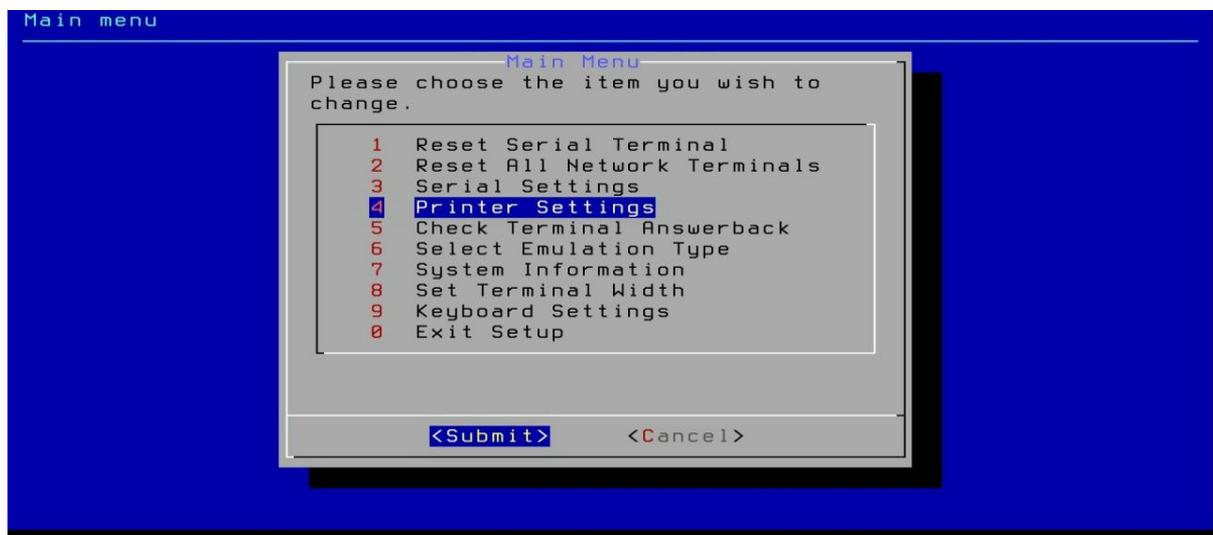
**Aux:** Used for 9 pin serial connection.

**Offline:** Facilitate automatic loopback.

To move **up** and **down** use navigation keys and to select port use space bar.

**Save and Exit:** After setting and selection you can save your setting and exit from this menu.

**4. Printer Setting:** Select printer settings option from main menu to enter in printer settings.



**4.1 Printer Port:** By selection of this menu you can move to port selection menu where you can choose parallel or serial port for printer connectivity.

Printer settings page

Printer Settings

Please provide the following printing related information.

1	Printer Port	Parallel
2	Printing Type	Ticketing
0	Save and Exit	

<Submit>   <Cancel>

Printer port selection page

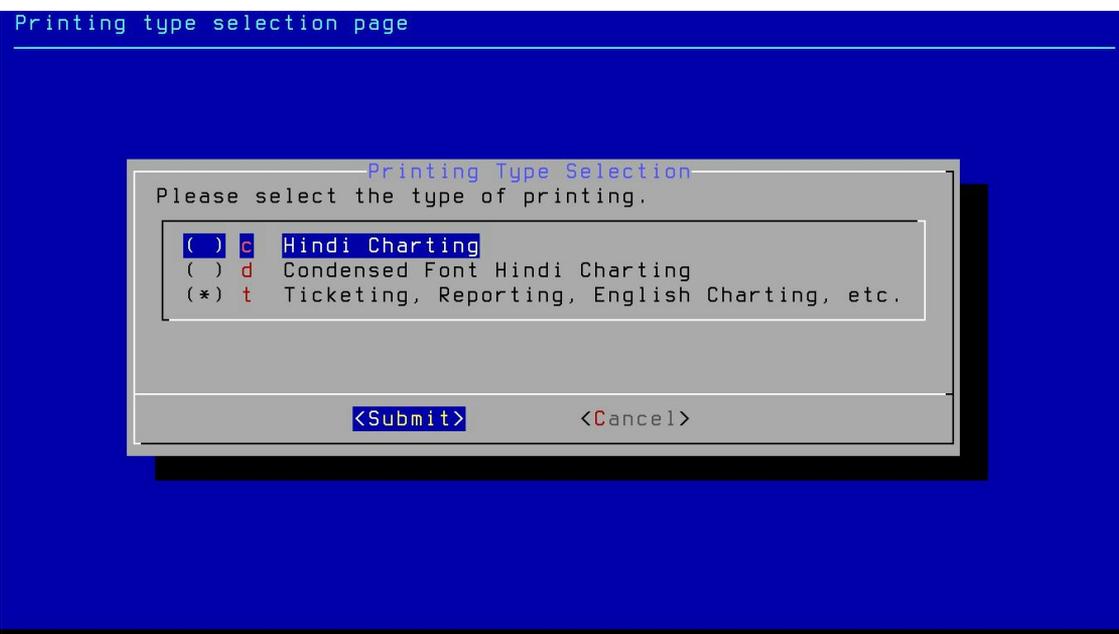
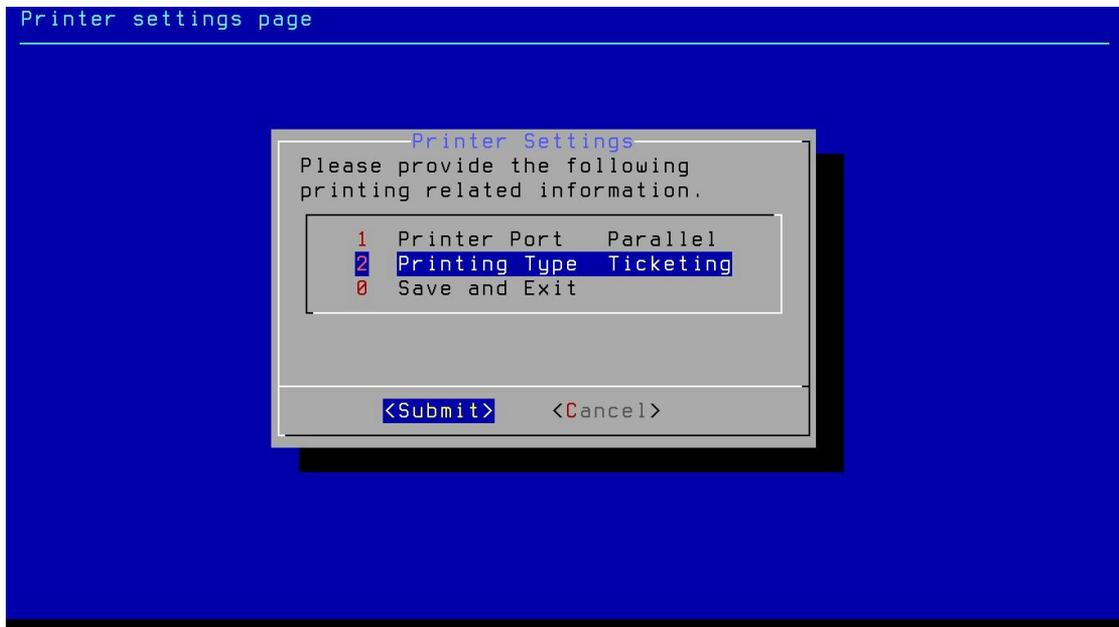
Printer Port Selection

Please select which port to use for printing.

(*)	p	Parallel
( )	s	Serial

<Submit>   <Cancel>

**4.2 Printing Type:** This menu is used for selecting Printing Types.

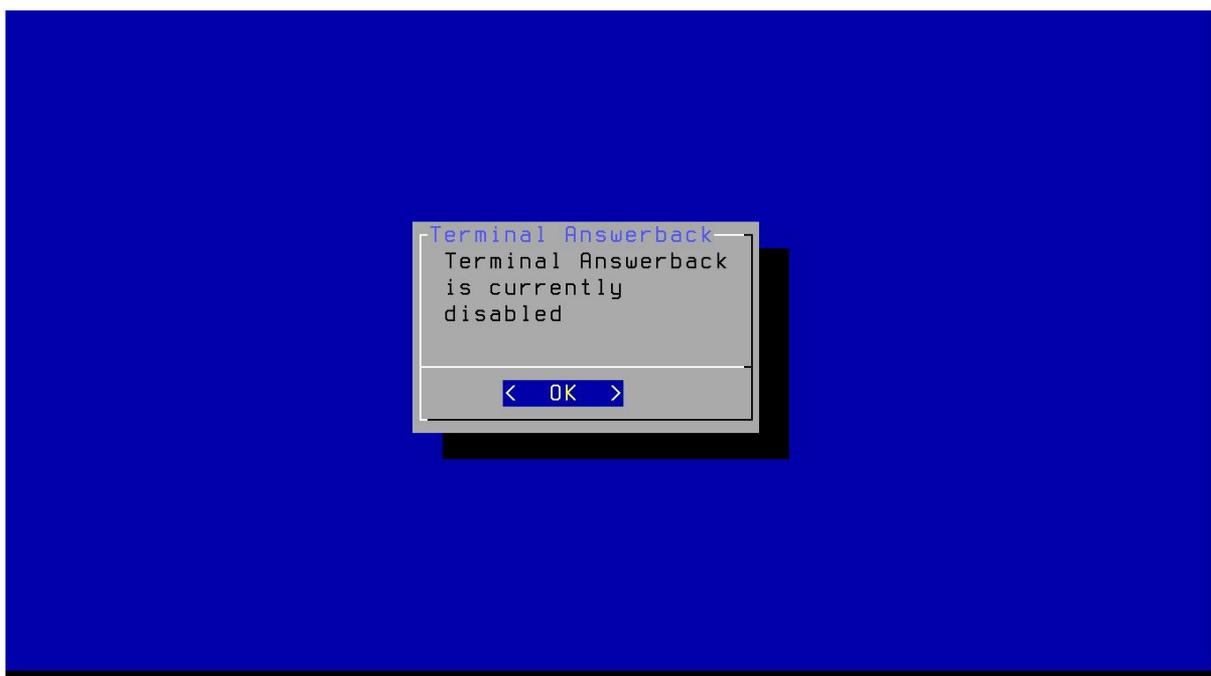
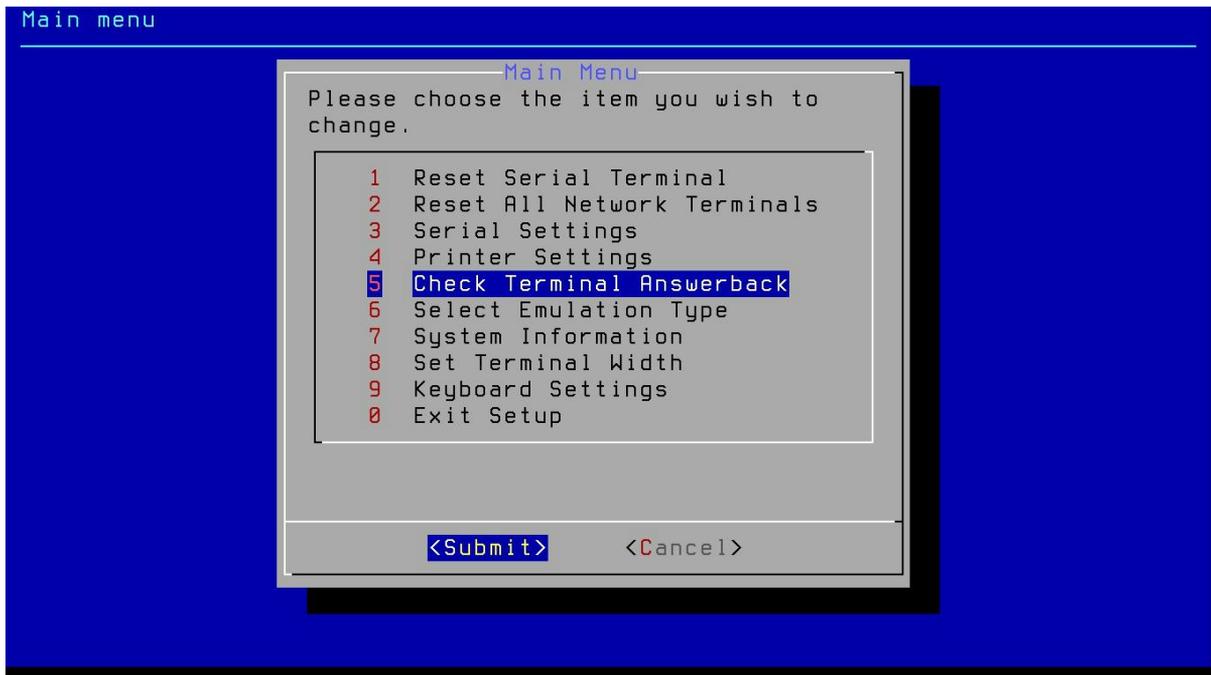


Here you can select different printing types as per your requirements.

- **Hindi Charting:** To print hindi chart
- **Ticketing, Reporting, English Charting:** To print ticket, report and English chart.
- **Condensed Font Hindi Charting:** If you select condensed mode in printer then you have to select this option to print condensed font hindi charting.

**4.3 Save and Exit:**To save your setting and go back to main menu select this option.

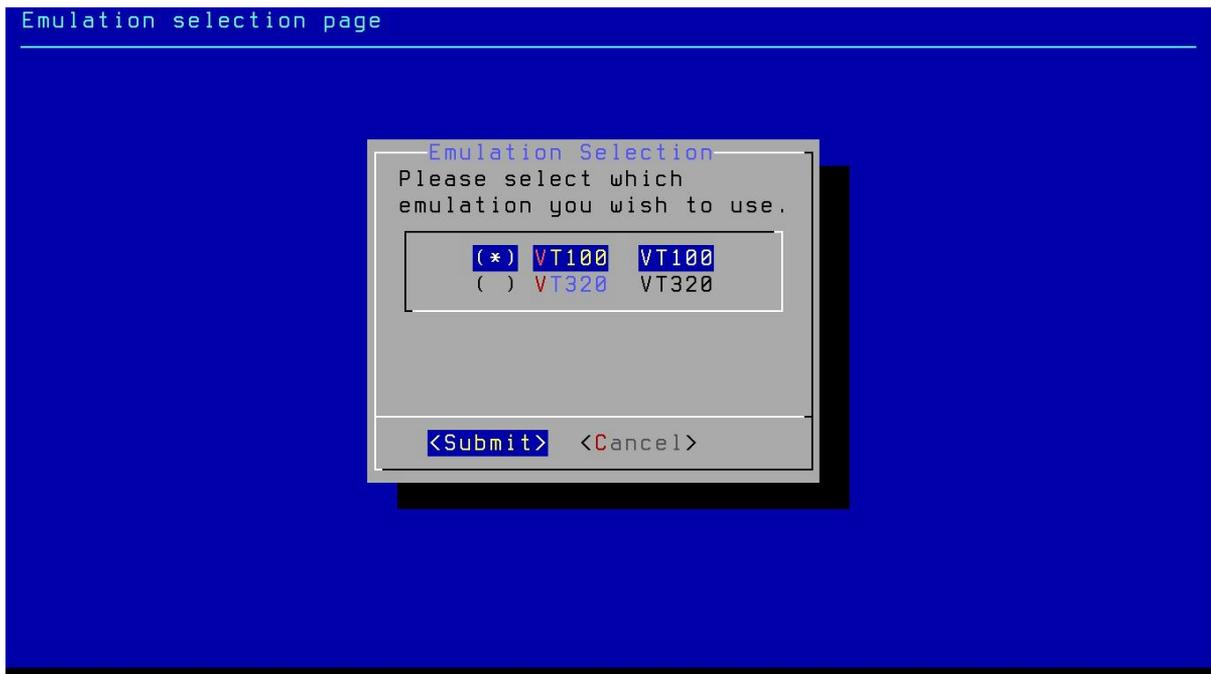
**5. Check Terminal Answerback:** This option is to check Terminal Answerback.



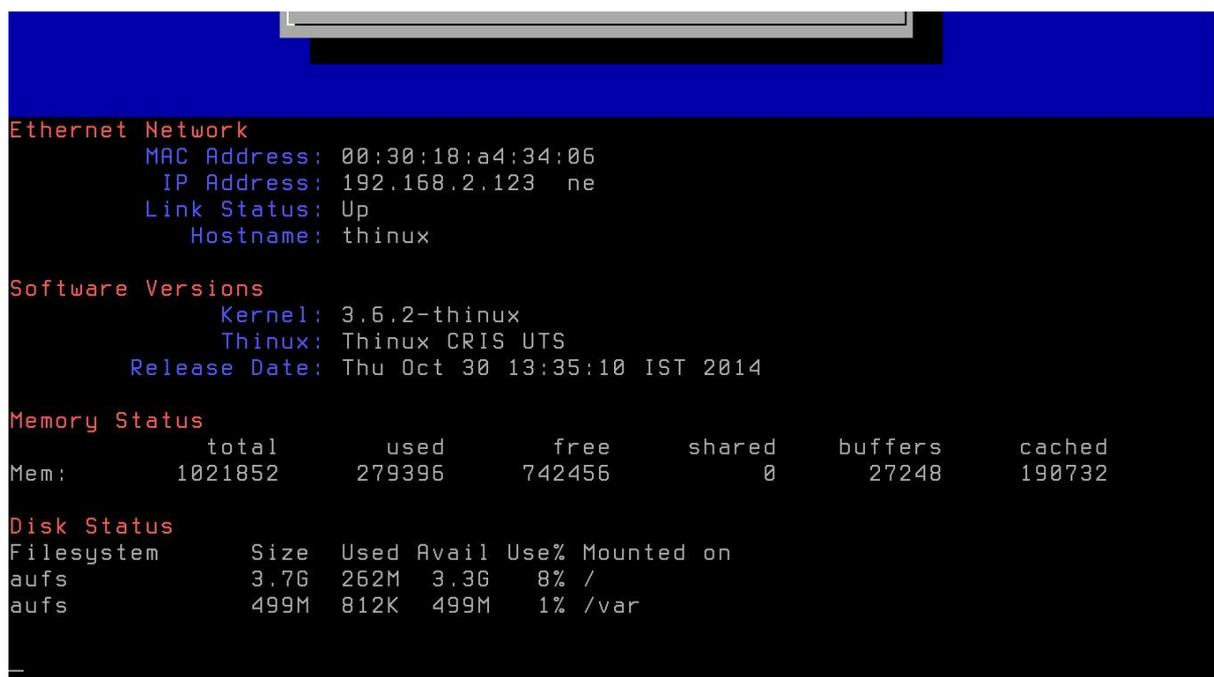
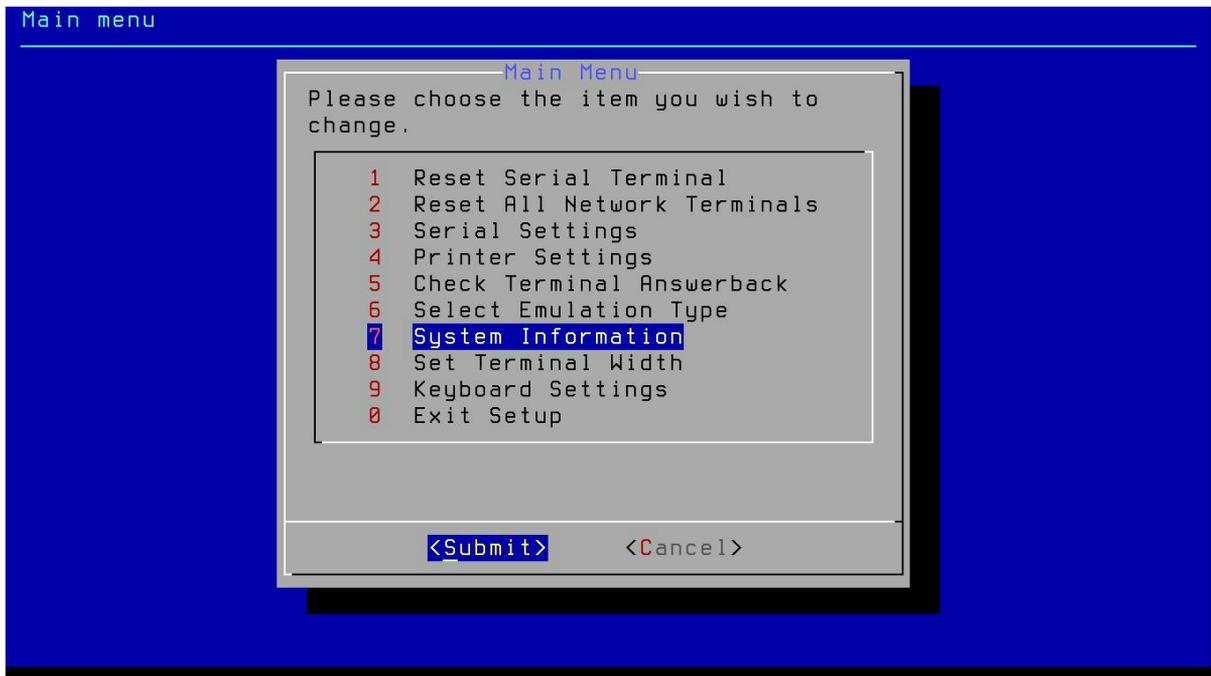
**6. Select Emulation Type:** This option is to select Emulation Type which you wish to use.



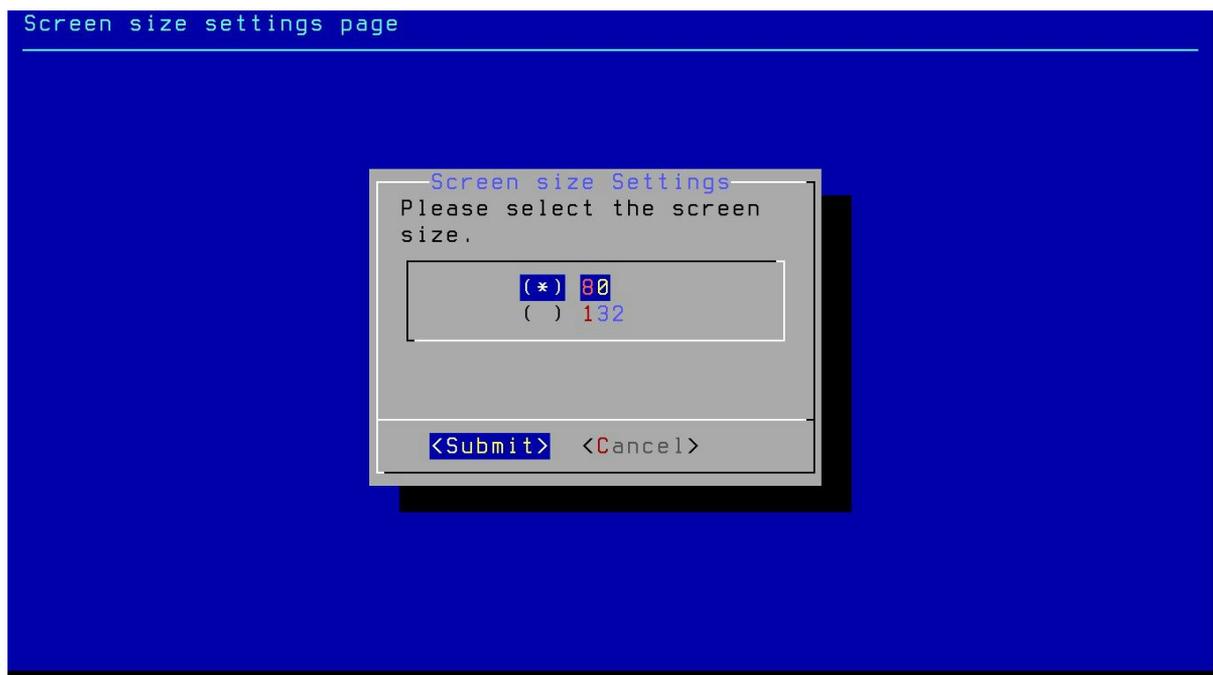
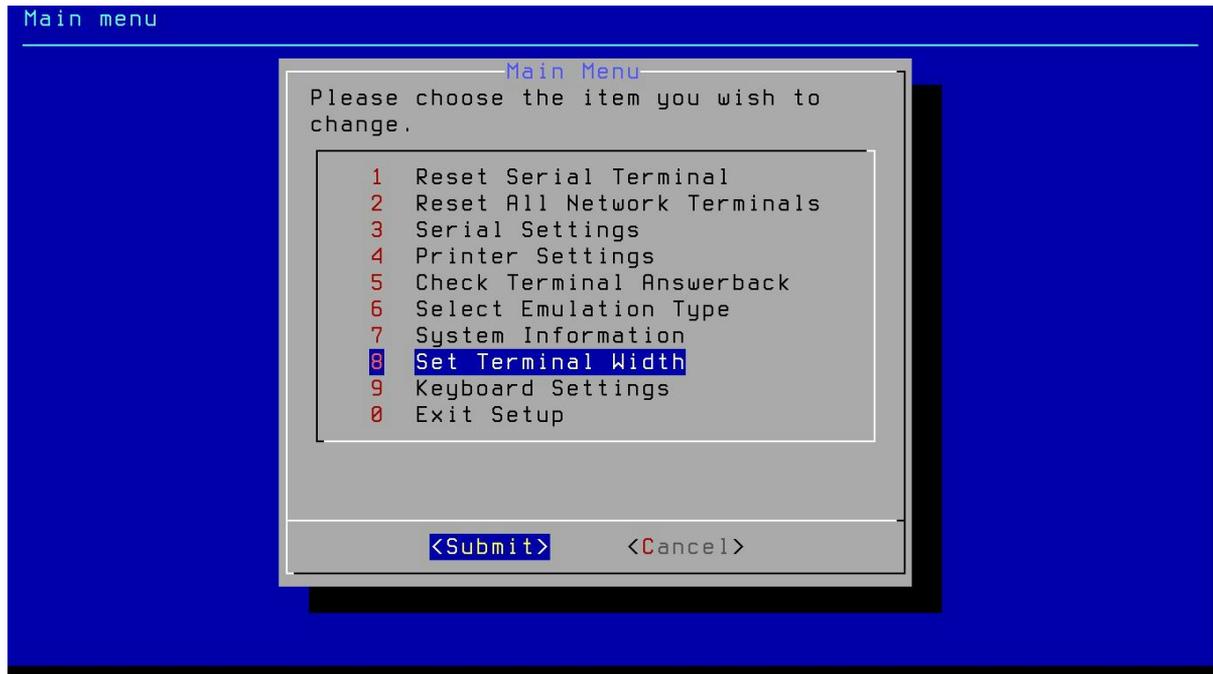
Note : Default emulation type is VT100.



## 7. System Information: To check System Information of your working terminal.

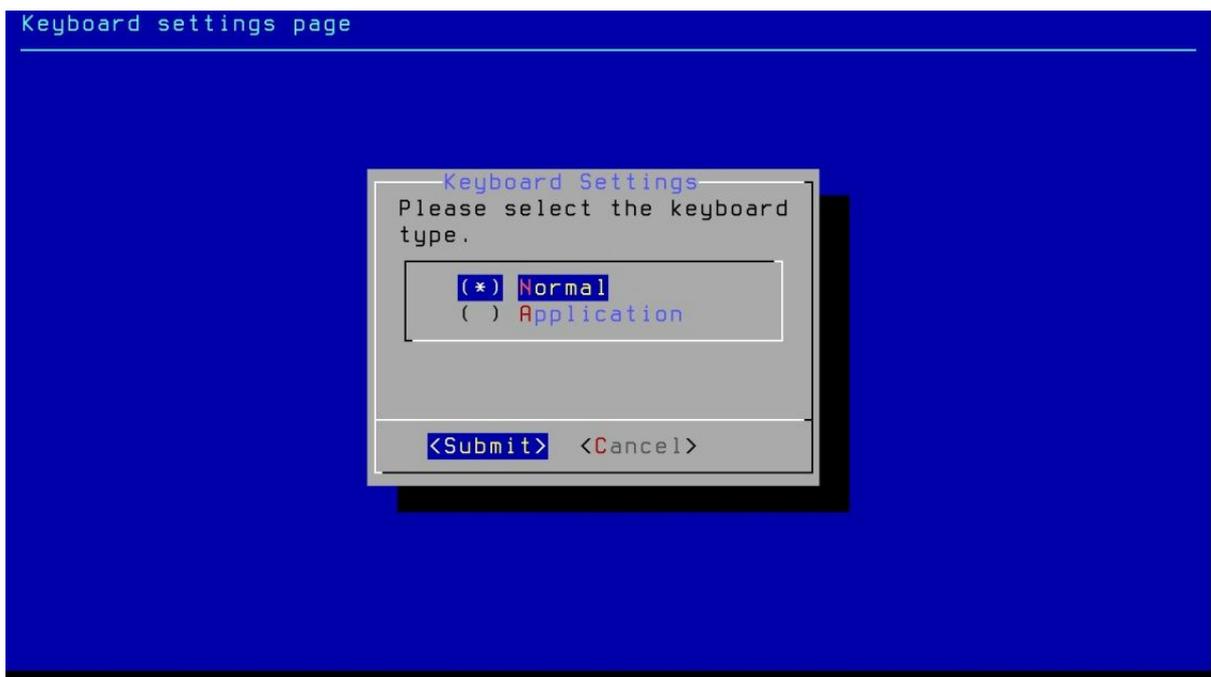
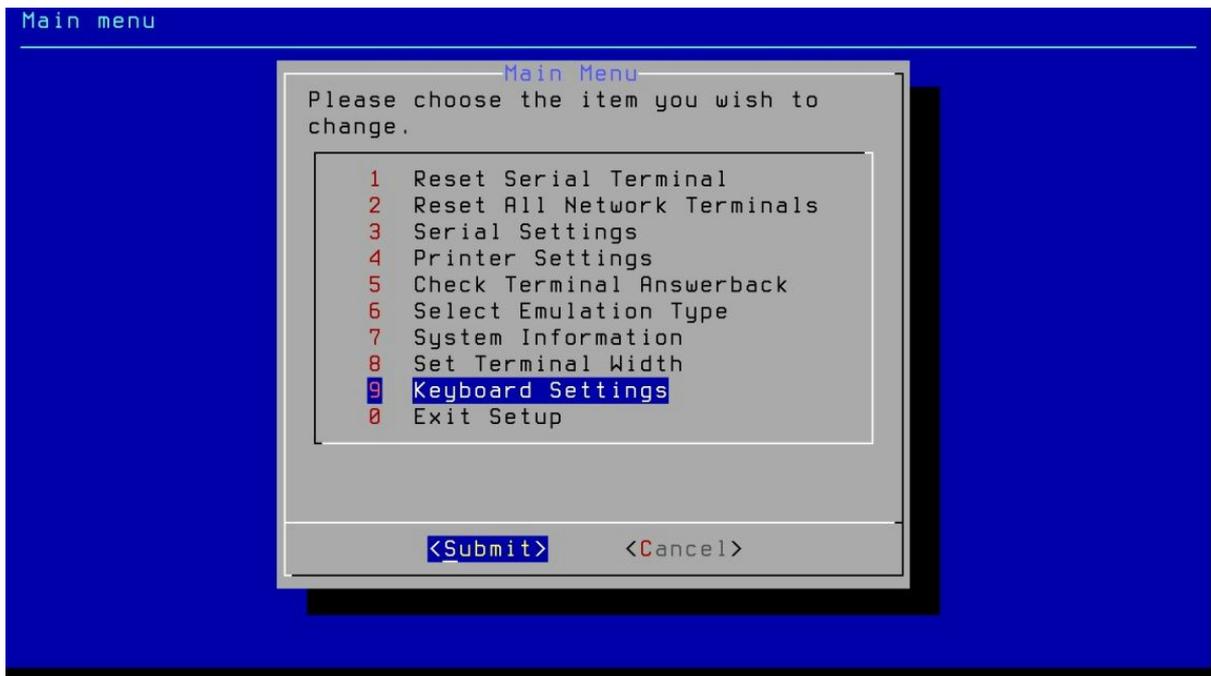


## 8. Set Terminal Width: Used to set working terminal screen size.



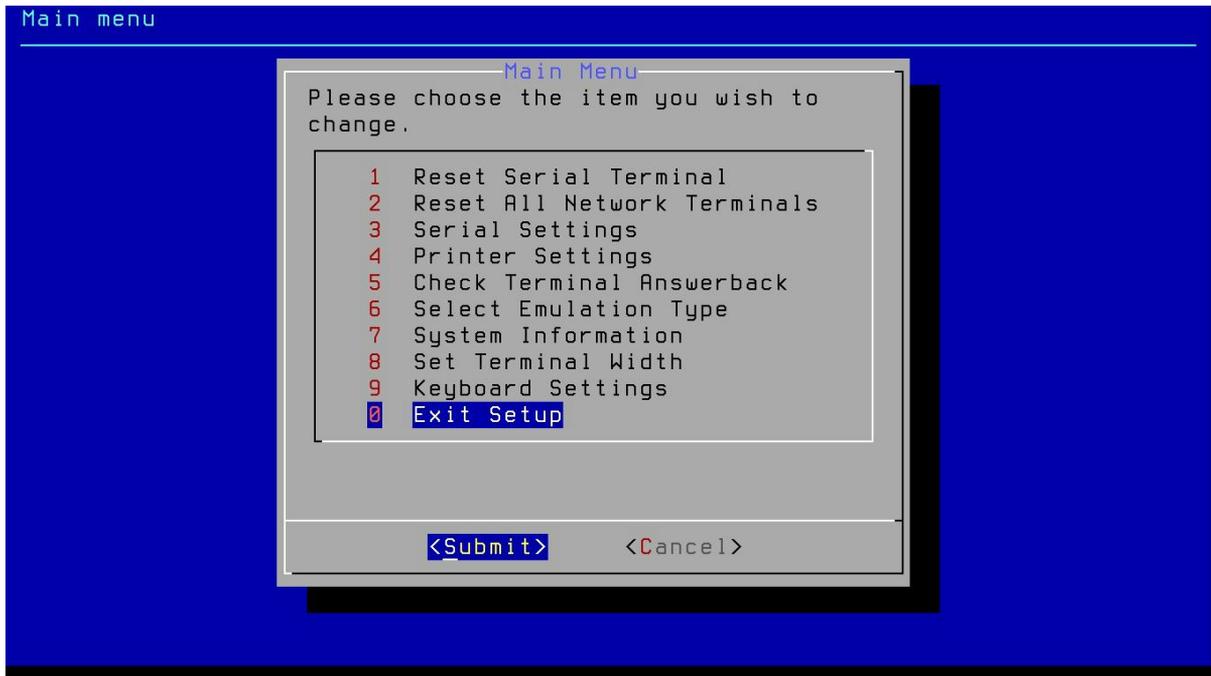
- It is recommended to not use this setting

**9. Keyboard Setting:** This option of Main Menu is used for Keyboard setting.



- It is recommended to not use this setting

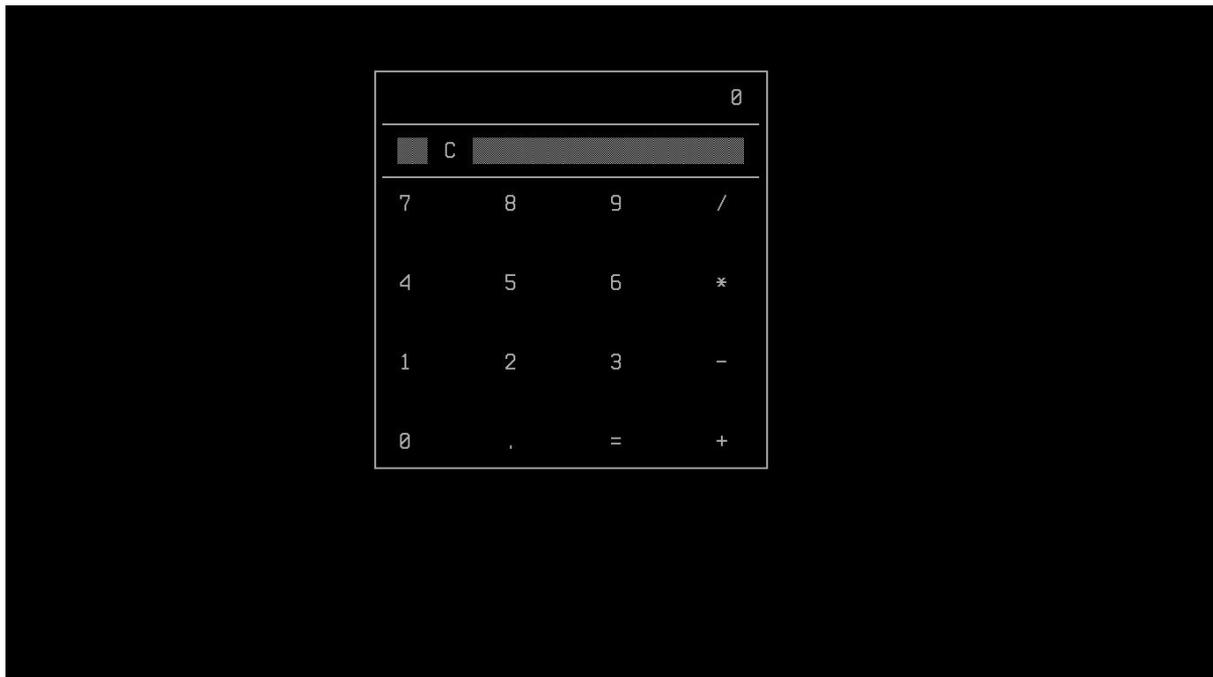
**10. Exit Setup:** This option is used to exit from Main Menu.



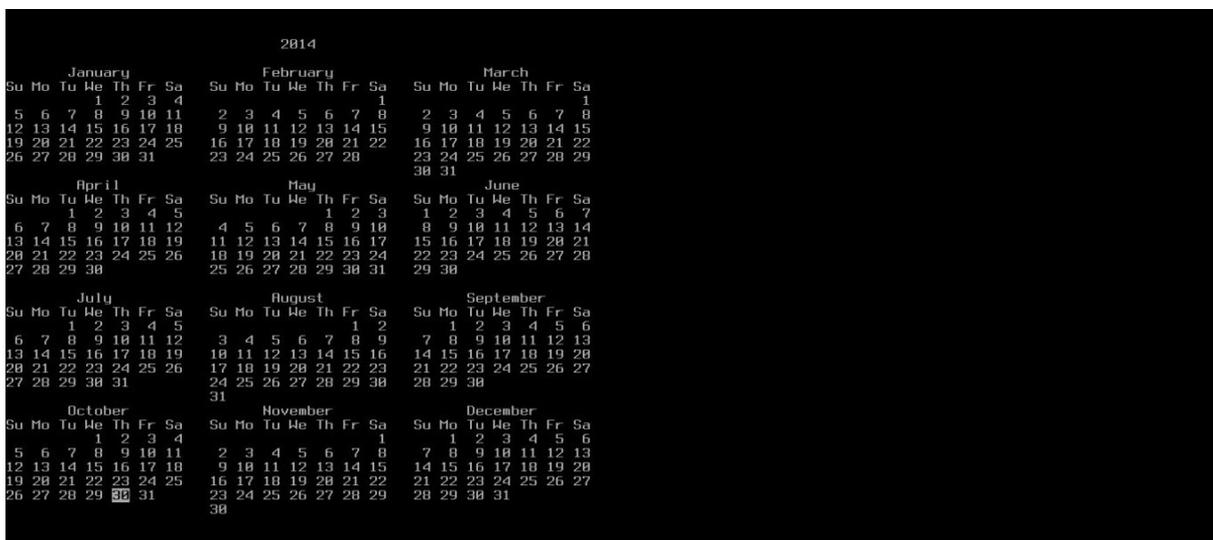
**Key Codes:**

Hold Screen 56	Print Screen 57	Set-Up 58	Date/Talk 59	Break 5A					F6 64	F7 65	F8 66	F9 67	F10 68					F11 (ESC) 71	F12 (BS) 72	F13 (LF) 73	F14 74	Hold Screen 7C	Lock 7D	Compose 7E	Wait 7F					F17 80	F18 81	F19 82	F20 83	
Esc BE	1 C0	2 C5	3 CB	4 D0	5 D6	6 DB	7 E0	8 E5	9 EA	0 EF	- F9	= F5	[ FA	] FB	Return BD	Find 8A	Insert Here 8B	Remove 8C	Select 8D	Prev Screen 8E	Next Screen 8F	PF1 A1	PF2 A2	PF3 A3	PF4 A4	7 9D	8 9E	9 9F	- A0					
Tab BE	Q C1	W C6	E CC	R D1	T D7	Y DC	U E1	I E6	O EB	P F0	{ FA	}	[ FB	]	Ctrl AF	A C2	S C7	D CD	F D2	G D8	H DD	J E2	K E7	L EC	; F2	" FB	Return BD	Find 8A	Insert Here 8B	Remove 8C	PF1 A1	PF2 A2	PF3 A3	PF4 A4
Lock E0	Compose Character B1															Up AA	Left A7	Down A9	Right A8	4 99	5 9A	6 9B	' 9C	1 96	2 97	3 98	Enter 98	0 92	.	94	95			
														Key Groups	1	2	3	4	5	6	7	8	9	10	11	12	13	14						

- F1:** By pressing the F1 key the screen freezes and stops taking any input and displays the 'HOLD' message on the taskbar which indicate this status. Pressing F1 again returns the terminal to normal operation.
- F2:** By pressing the F2 Key the text on the screen is sent to the local printer to print.
- Ctrl+F6:** Calculator [Desktop utility]. Use numeric key to use it.



- F5:** Pressing F5 key causes a communication line disconnection.
- Ctrl+F7:** Calendar [Desktop Utility] : Use left and right arrow to change year.

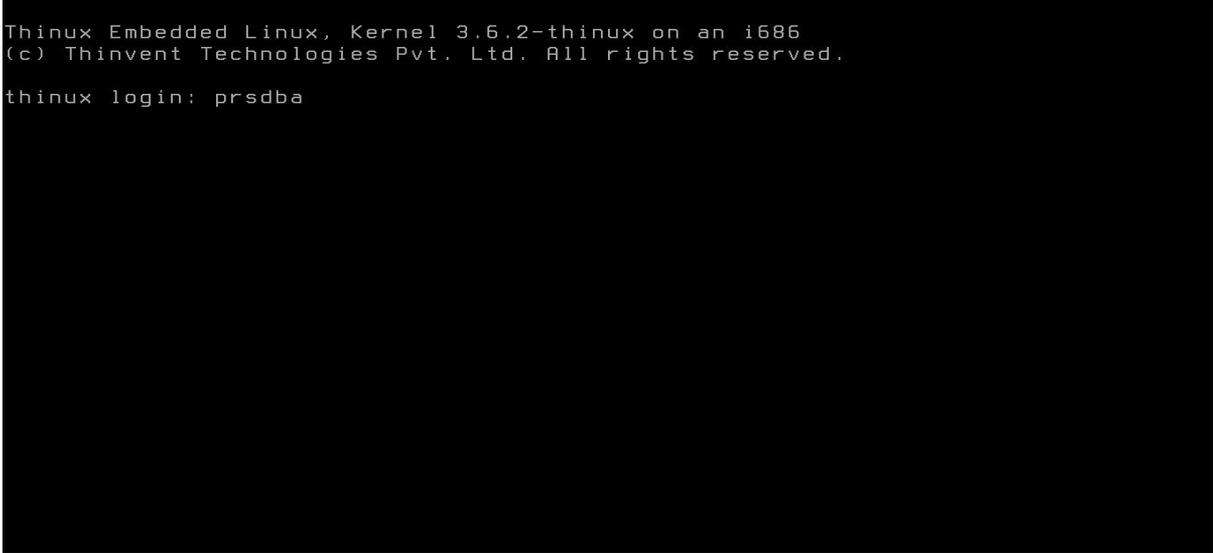


**6. F11:** Press F11 key to quit from Desktop Utility (e.g Calculator, Calendar).

**7. PF1 - PF4:** In Thinvent 104 mechanical keyboard these keys are available. Each of these keys causes to transmit a code which has a special meaning to your system. Consult your local operating procedures for the meanings of these keys.

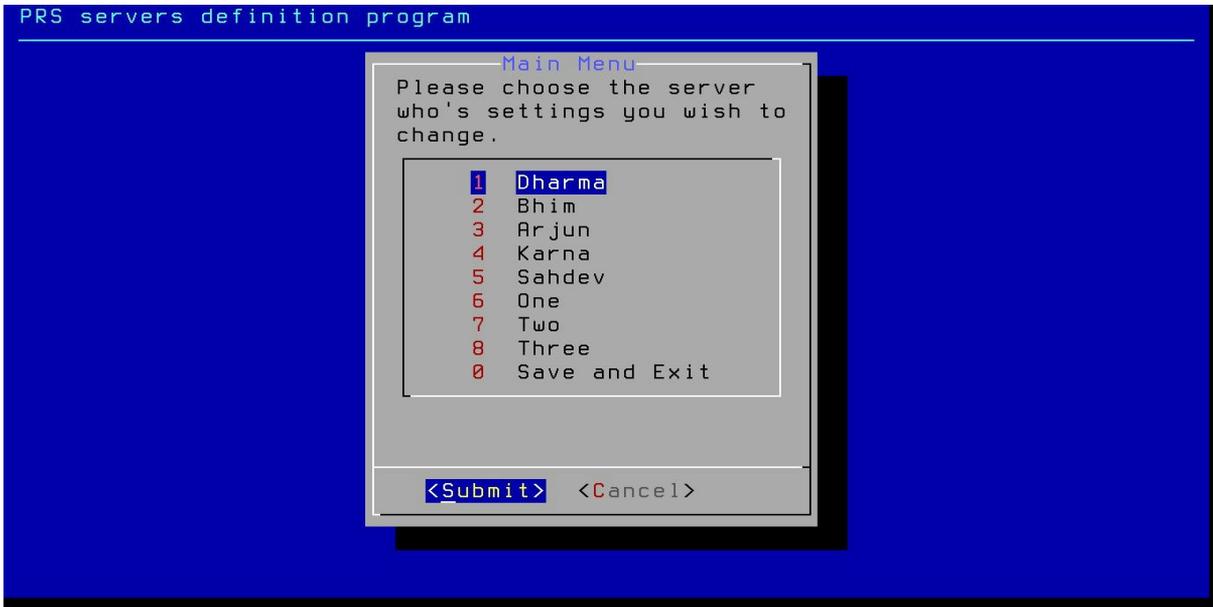
## **PRS Server Setting:**

By pressing "**ALT+F3**" or "**ALT+F4**" or "**ALT+F5**" you can go to Login Page directly for server settings , enter "**prsdba**" as login name.

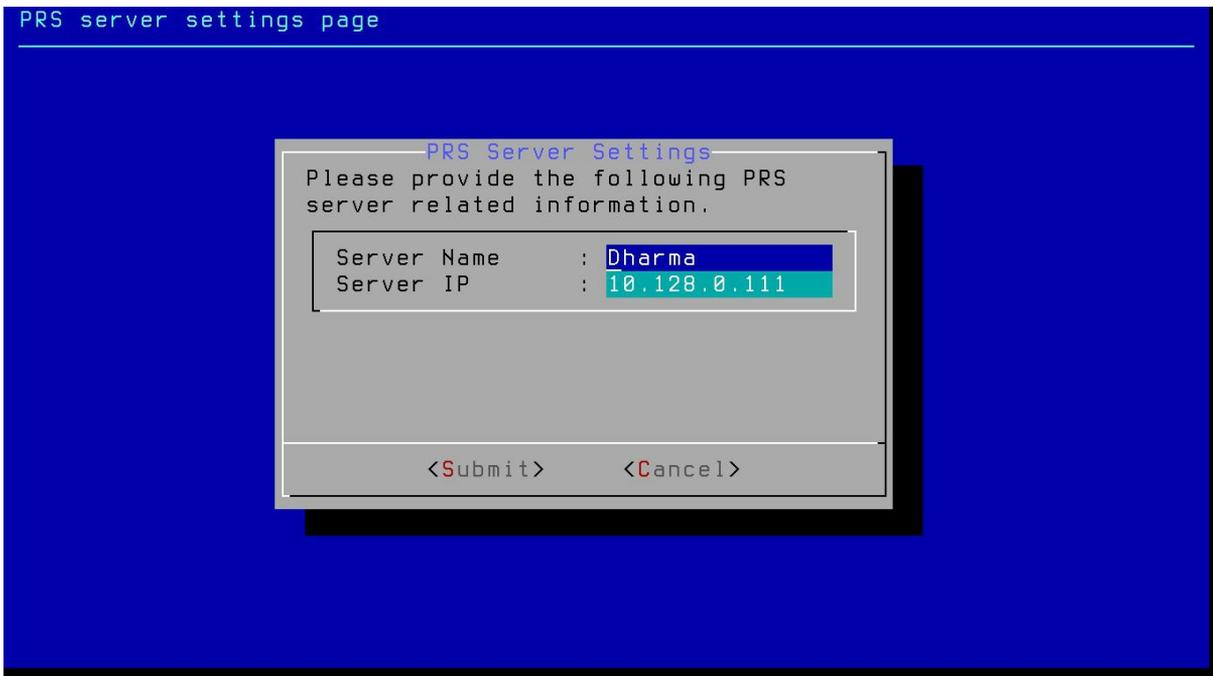


```
Thinix Embedded Linux, Kernel 3.6.2-thinix on an i686
(c) Thinvent Technologies Pvt. Ltd. All rights reserved.
thinix login: prsdba
```

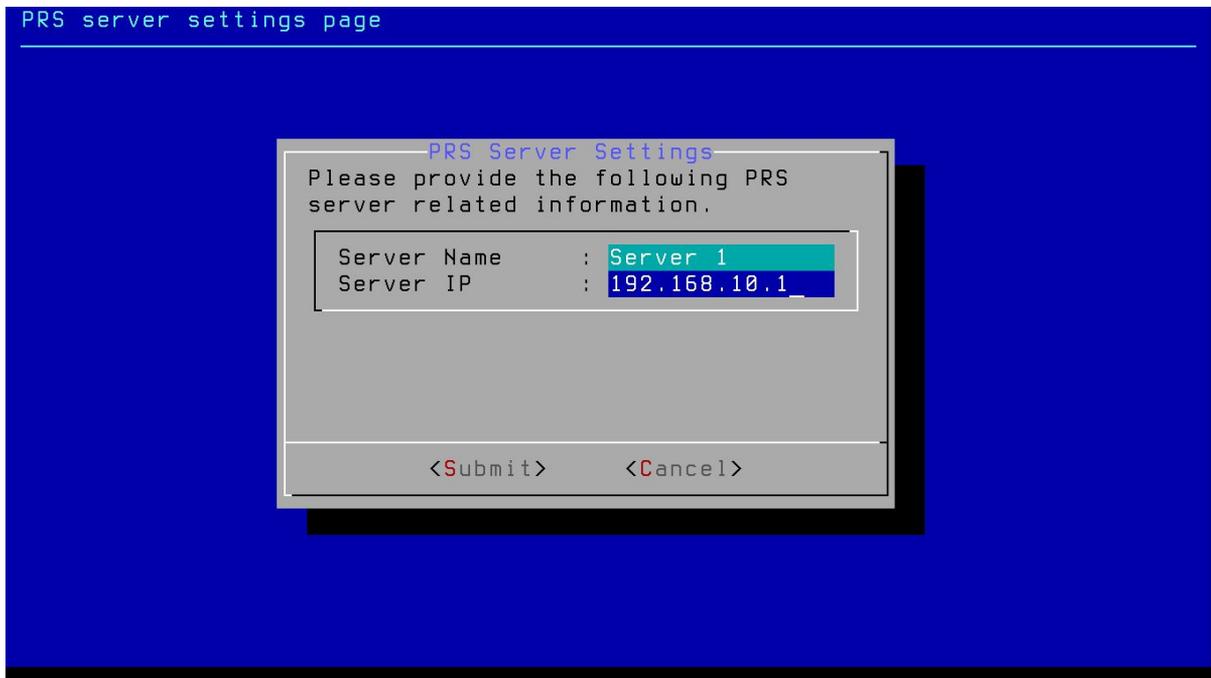
**Server name and Setting:** To change setting select server.



**Server name and IP Address of server:** Select to choose server name and provide server IP.



**3. Submit:** To save settings.



**4. Save and Exit :**This option is used to save and exit from server setting.



## Root Login

Press "alt+F4" and you go to the terminal where you have to login as root like this:

```
Thinix Embedded Linux, Kernel 3.6.2-thinix on an i686
(c) Thinvent Technologies Pvt. Ltd. All rights reserved.

thinix login: root
Password: _
```

\*password :xxxxxx

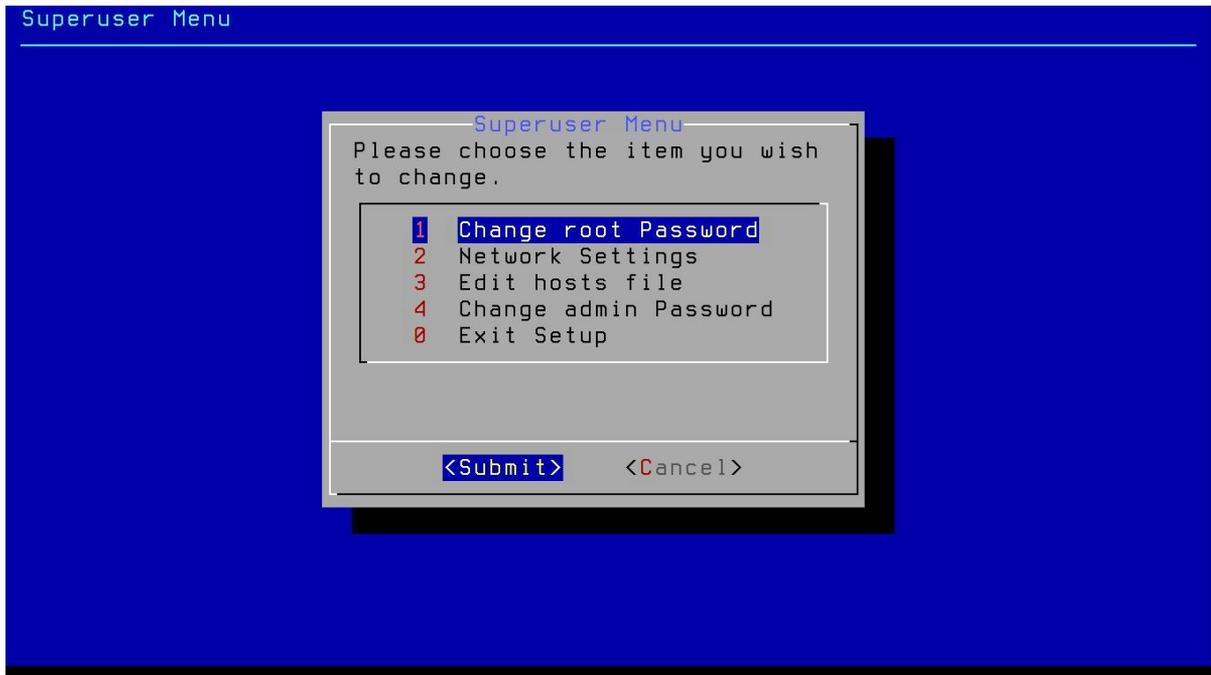
## Setup (Superuser menu)

First you have to login as root after that type command “setup” in the command prompt like this:

```
Thinix Embedded Linux, Kernel 3.6.2-thinix on an i686
(c) Thinvent Technologies Pvt. Ltd. All rights reserved.

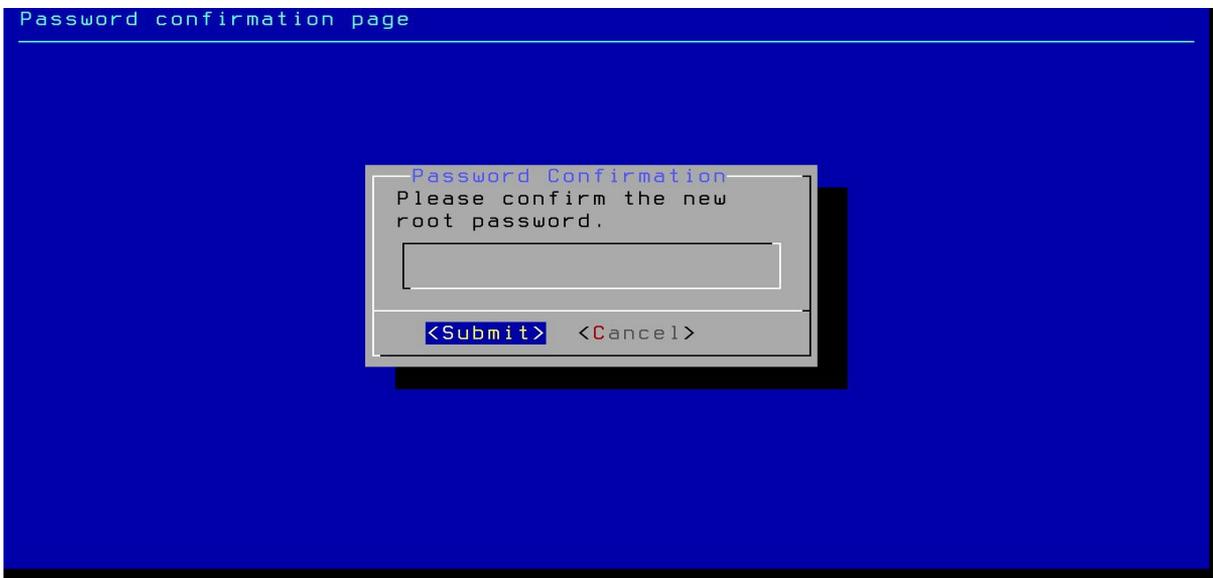
thinix login: root
Password:
Last login: Fri Nov 14 17:17:30 on tty4
[root@thinix ~]# setup
```

By pressing enter you find superuser menu.

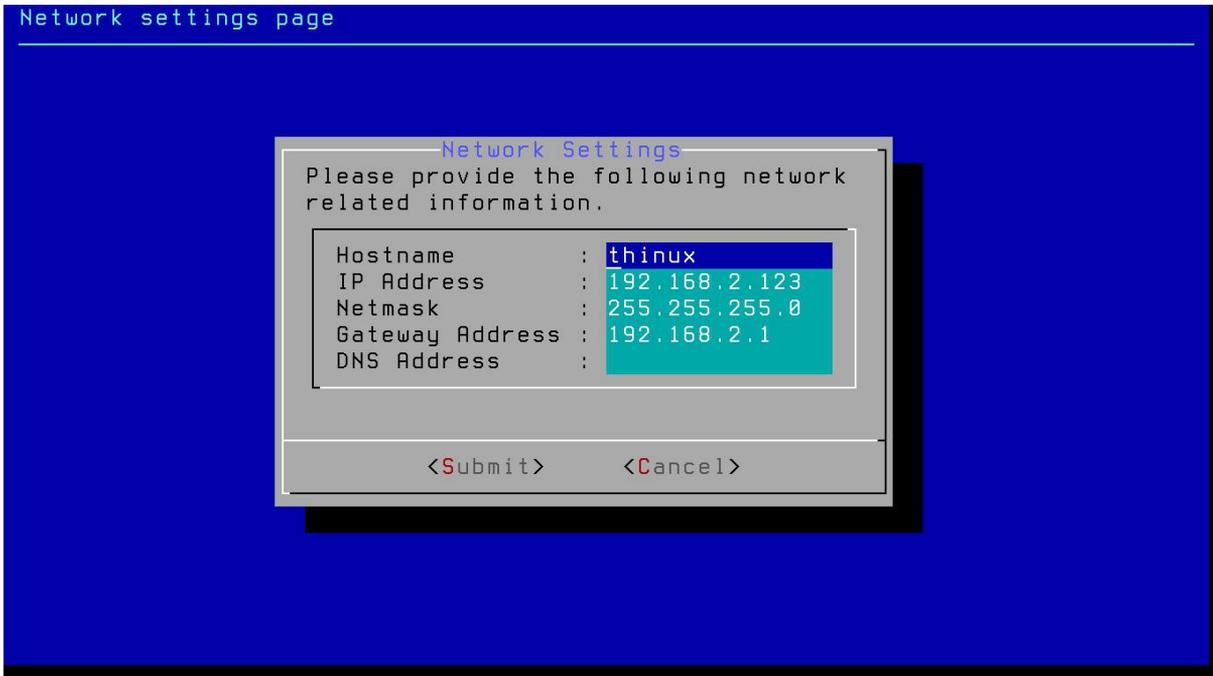


1. **Change root password:** To change root password by entering new password and after that conforming it and save by submitting.





**2. Network Setting:** To setup Network host name, Network IP, Netmask, Gateway and DNS address and save this change by clicking "submit" button.



### 3. Edit Hosts File: To edit and save hosts file.

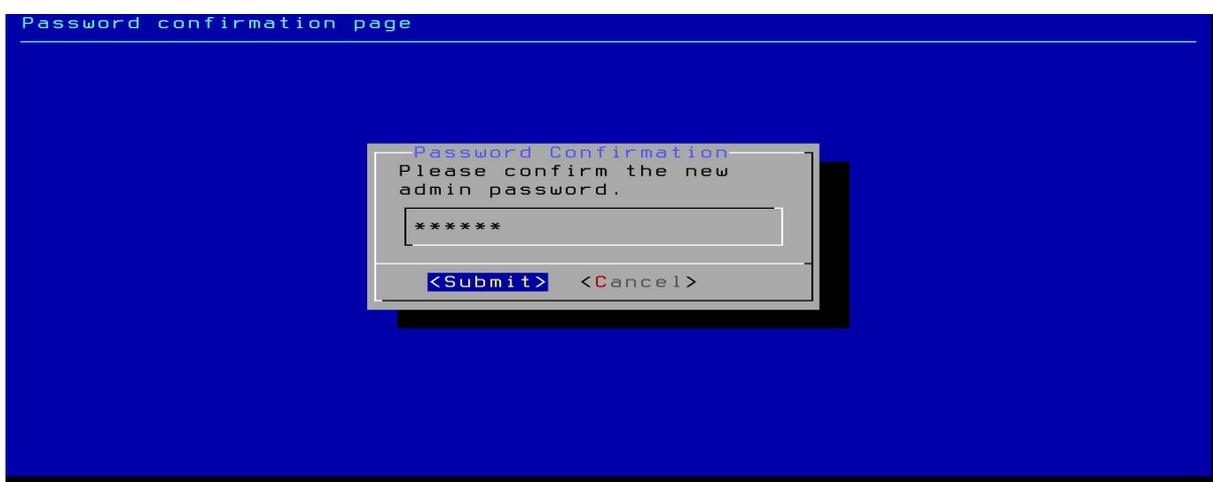
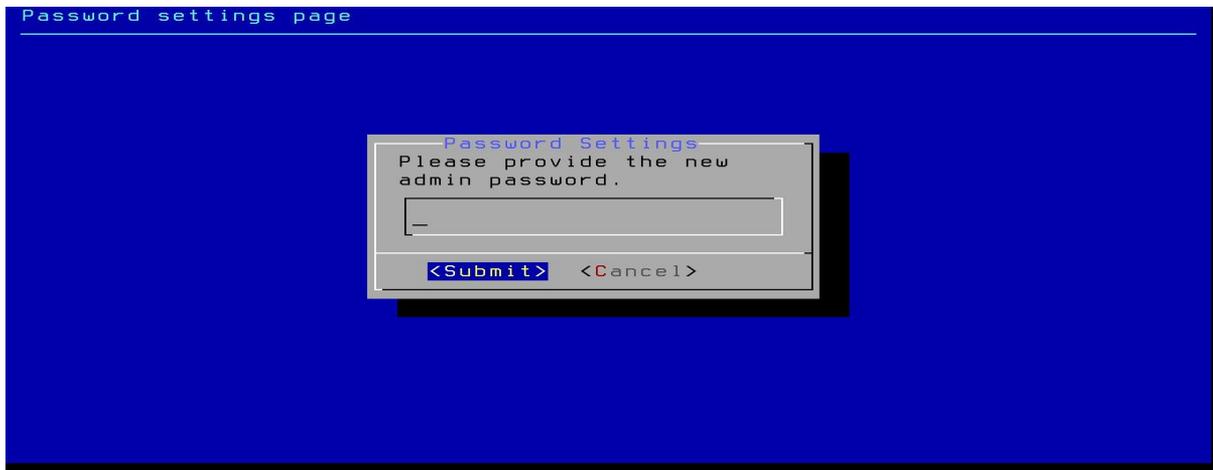
```
GNU nano 2.3.1                    File: /etc/hosts
# *****
#
# Author           : Thinvent Technologies Pvt. Ltd.
# Copyright(c): 2008 Thinvent Technologies Pvt. Ltd., All rights reserved
# History :
# date            person    comments
# =====
# 27/9/2008       Saurabh   Initial version
# 29/2/2009       Saurabh   Updated per CRIS Delhi requirements
#
# *****
#
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1         localhost.localdomain   localhost        thinux
::1              localhost localhost.localdomain localhost6 localhost6.localdoma$
# Change to new IP, and change hostname to new hostname. Then remove #
#10.64.9.82       hostname

[ Read 19 lines ]
^G Get Help    ^O WriteOut   ^R Read File   ^Y Prev Page   ^K Cut Text    ^C Cur Pos
^X Exit        ^J Justify    ^W Where Is    ^V Next Page   ^U UnCut Text  ^T To Spell
```

```
GNU nano 2.3.1 File: /etc/hosts
# *****
#
# Author : Thinvent Technologies Pvt. Ltd.
# Copyright(c): 2008 Thinvent Technologies Pvt. Ltd., All rights reserved
# History :
# date person comments
# =====
# 27/9/2008 Saurabh Initial version
# 29/2/2009 Saurabh Updated per CRIS Delhi requirements
#
# *****
#
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1 localhost.localdomain localhost thinux
::1 localhost localhost.localdomain localhost6 localhost6.localdoma$
# Change to new IP, and change hostname to new hostname. Then remove #
#10.64.9.82 hostname

File Name to Write: /etc/hosts
^G Get Help M-D DOS Format M-A Append M-B Backup File
^C Cancel M-M Mac Format M-P Prepend
```

**4. Change admin password:** To change administrator password by providing new password and save it after confirmation.



5. **Exit Setup:** To exit superuser menu Setup.

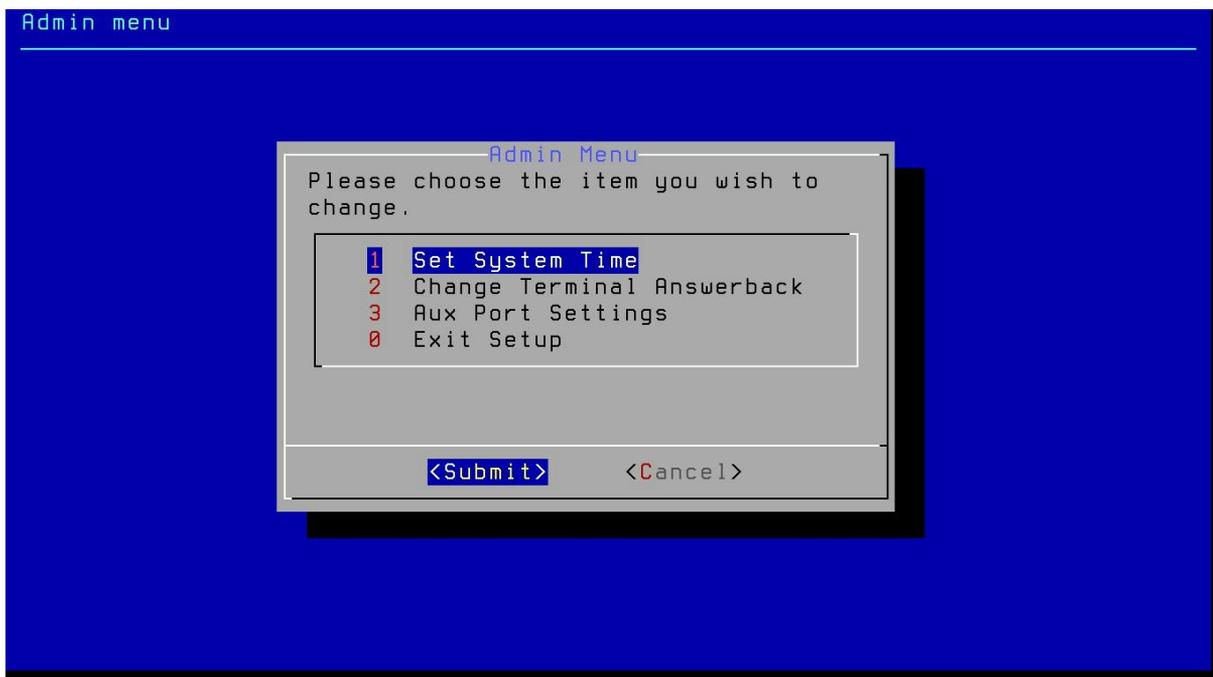
## Administrator Menu

First you Login as admin and give password like this:

```
Thinix Embedded Linux, Kernel 3.6.2-thinix on an i686
(c) Thinix Technologies Pvt. Ltd. All rights reserved.

thinix login: admin
Password: _
```

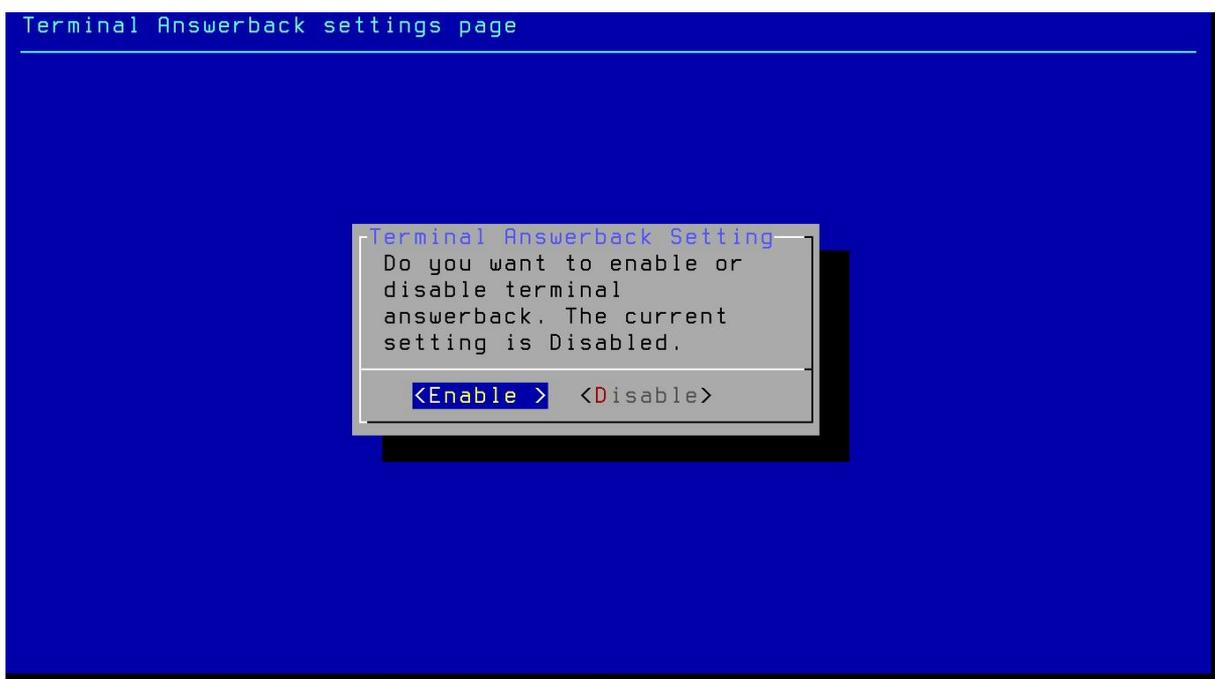
After that you get Administrator Menu.



**1. Set System Time:** To set system time like this:



**2. Check Terminal Answerback:** To Enable or Disable as well as set terminal answerback like this:



Terminal Answerback string settings page

Terminal Answerback String Setting  
Please enter the terminal  
answerback value.

< OK >    <Cancel>

Terminal Answerback settings page

Terminal Answerback Setting  
Do you want to enable or  
disable terminal  
answerback. The current  
setting is Disabled.

<Enable >    <Disable>

**3. Aux Port Setting:** Here you can set auxiliary port like this. It is recommended that don't disturb this setting.



**4. Exit Setup:** This will exit you from Administrator setup.

## References:

1. [www.thinvent.in](http://www.thinvent.in)
2. <http://www.thinvent.in/catalog/dt-keyboard/>

