LevelOne

VoIP Gateway

Dial-Plan Setting and Console IP setting

VOI-2000
VOI-4000
VOI-4100
VOI-8000

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Setting Dial-plan

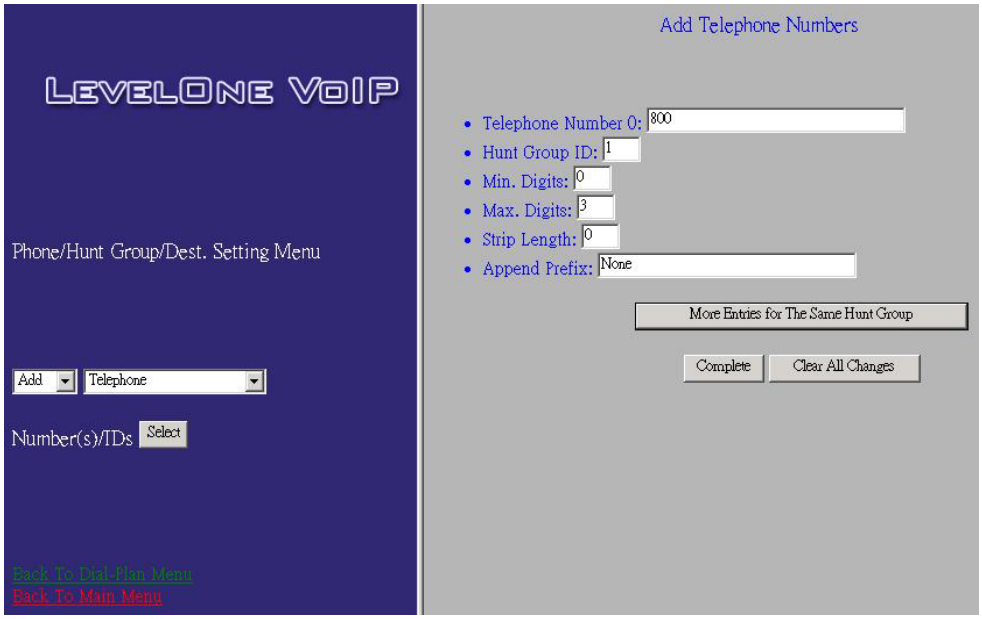
This manual describes how to use web browser to build a sample scenario dial plan in LevelOne VOIP Gateways. The models suitable using this manual are VOI-2000/4000/4001/8000.

This manual only refers to set up dial-plan in several different scenarios. As to other basic setting, such as IP, Connection, or LED status, please refer to the other manual that enclosed in the package

1 Web screen of dial-plan

1.1 Add Telephone

Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu



1. Telephone Number: Assign a telephone number to the destination port.

2. Hunt Group ID: Set the hunt Group ID to the destination port. You can set several numbers into a same Hunt Group ID to enable the transferring call function. Please refer to the scenario of “Transferring call setting” for more detail.

3. Min. Digits: Set the minimum digit of your telephone number.

4. Max Digits: Set the maximum digits of your telephone number. Be sure that the digits of your dialing number are within the range that defined by min. and max. Digit.

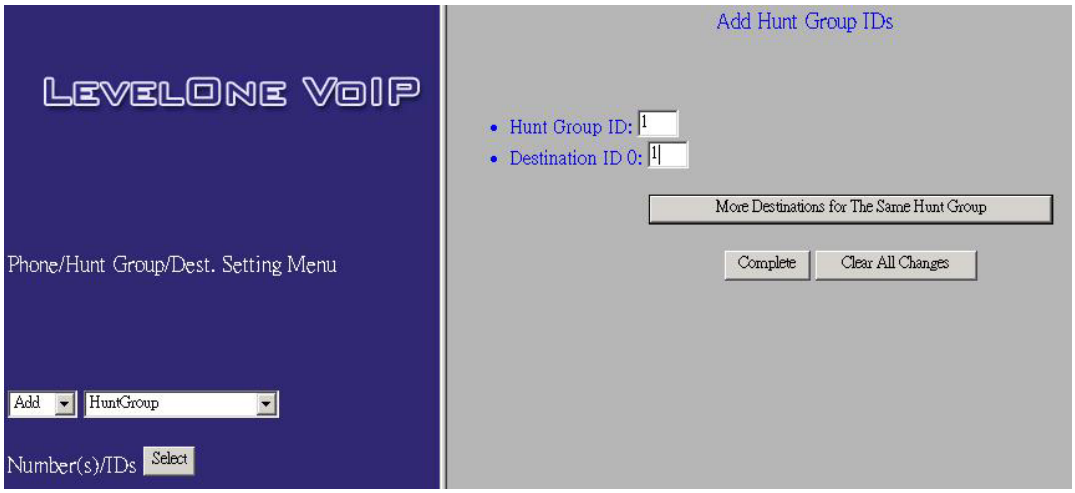
5. Strip Length: Since you can dial the numbers through several gateways, you can strip digits after dialing. Please refer to the dialing scenario for more details.

6. Appendix Prefix: You can also add some digit when dialing.

1.2 Add HuntGroup

Back To Dial-Plan Menu

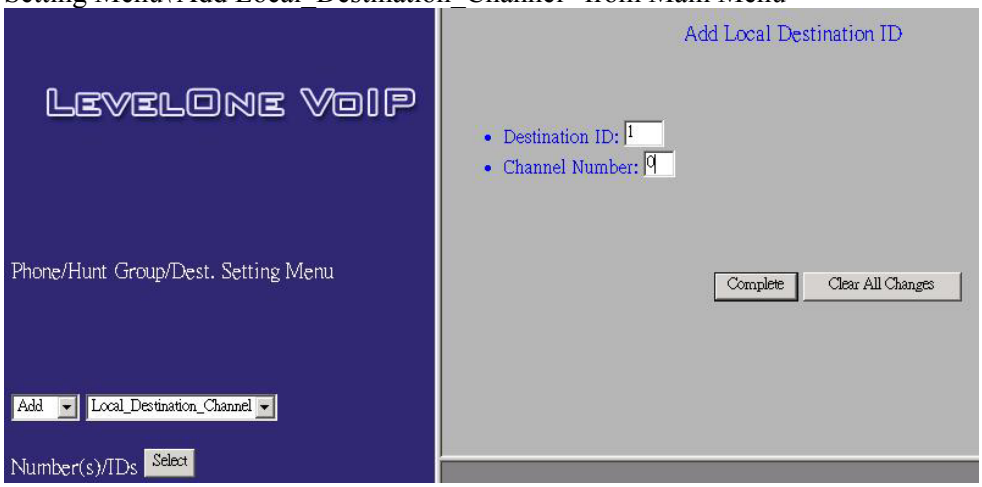
Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Hunt Group” from Main Menu



Set the corresponding relationship of Hunt Group ID and Destination ID.
For most of the cases, please use the same digit for Hunt Group ID and Destination ID.
Only when setting up the transferring calls, you will need to assign several Destination IDs in one Hunt Group ID.

1.3 Add Local_Destination_Channel

Back To Dial-Plan Menu
Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Local_Destination_Channel” from Main Menu



Set the corresponding relationship of Destination ID and Channel Number.
In this screen, the Destination ID 1 is bound to local channel 0. Adding destination ID to destination IP mapping table into dial plan. Channel Number can have values from 0 to 3 (number of port no. –1)

2. Scenarios

2.1 Setting Connection between VoIP Gateway

This section will guide you to set the connections between VoIP Gateways.

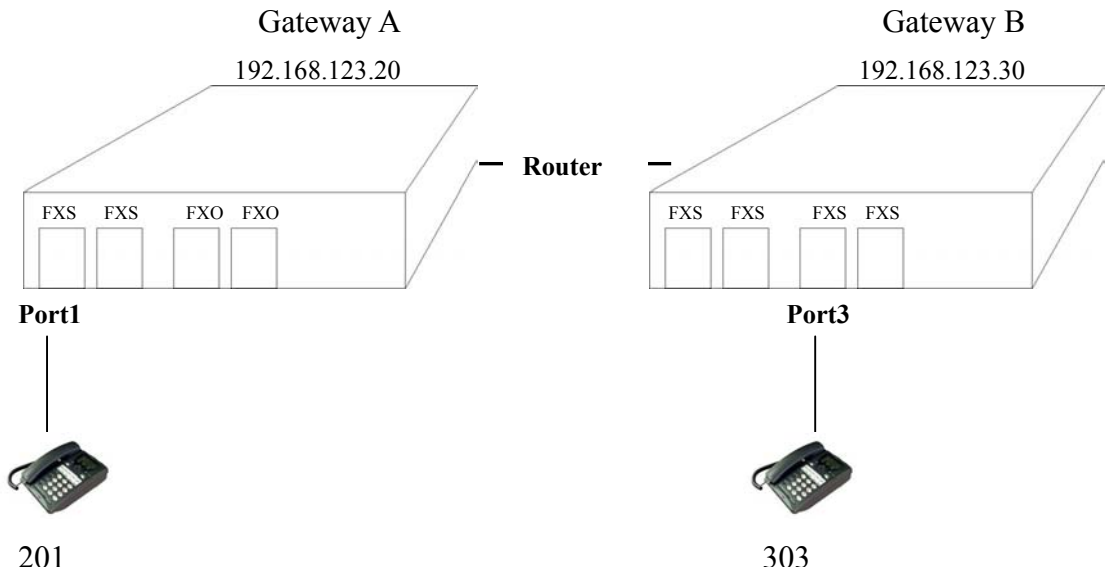


Fig 2.1

Environment description.

There are two VoIP Gateways in one subnet. The IP address has been assigned as in Fig 2.1.

The steps of setting up the scenario are:

1. Set no.201 into port 1 of Gateway A.
2. Set no.303 into port 3 of Gateway B
3. Set remote Gateway no. of Gateway A in Gateway B`s dial plan.
4. Set remote Gateway no. of Gateway B in Gateway A`s dial plan.

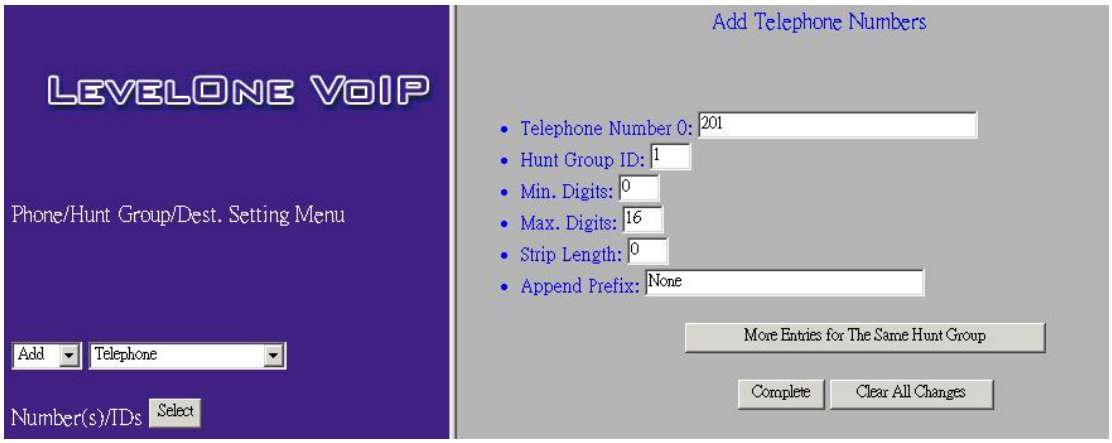
Step 1 description: Set no. 201 into port 1 of Gateway A

After successfully assign the IP address of Gateway A as 192.168.123.20, open the Web browser and type 192.168.123.20 in address column. After the login page show up, key in “eitg” as the login name and “123” as the password. The login name and password mentioned are default settings.

Dial-Plan Menu

Setting. 201 locates at Port 1 of Gateway A.

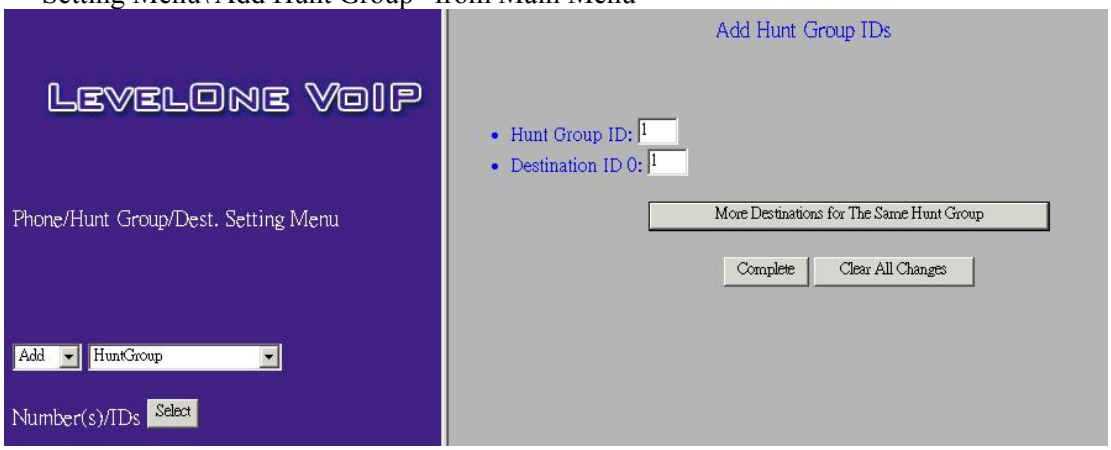
1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu
   Set the setting as the screen below:



2. Push “Complete” button. And screen will show “Telephone Number Added 201 OK” table. Telephone number 201 is added in gateway dial plan.
3. Purpose: add telephone address to hunt group mapping table of phone number 201 into dial plan.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Hunt Group” from Main Menu

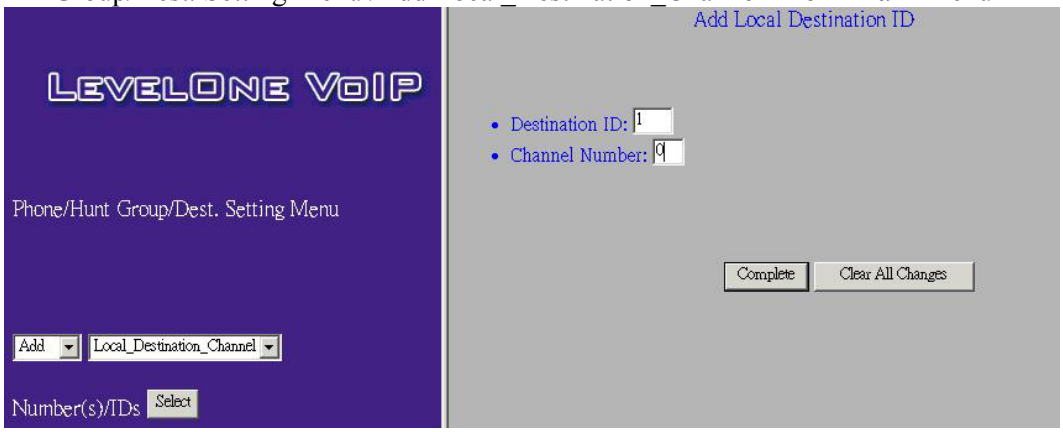


2. Push “Complete” button. And screen will show “List All Hunt Group IDs Result:” table.
3. Purpose: add hunt group to destination ID mapping table of phone number 201 into dial plan. For most

of the cases, the destination ID should be as the same as HuntGroup ID, to avoid confusions.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Local_Destination_Channel” from Main Menu



2. Push “Complete” button. And screen will show “Add Destination ID Result:” table
   The Destination ID 1 is bound to local channel 0.
3. Purpose: Add destination ID to bundle with the Channel Number.

Channel Number is the connected port number minus1.
For example, the telephone 201 is connected to port 1, so the channel number of the telephone is 1-1= 0.

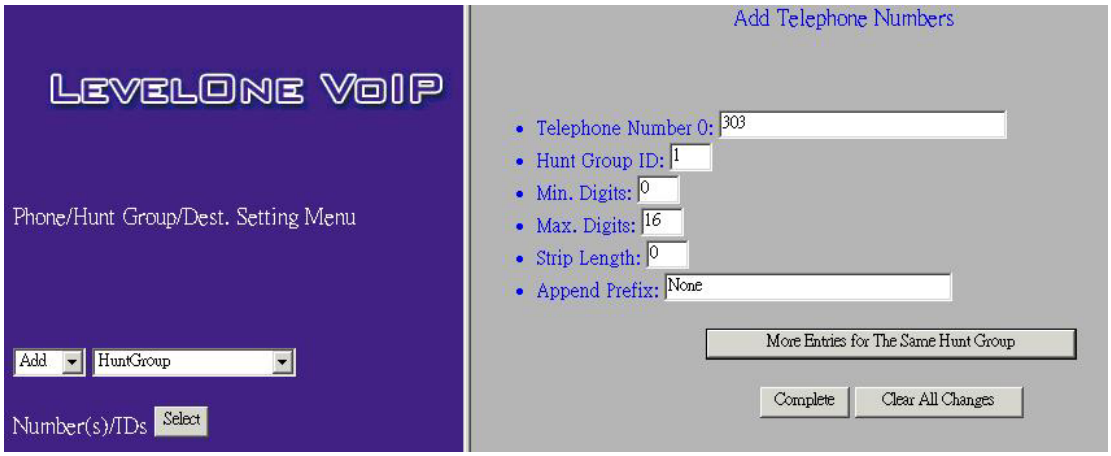
Step 2 description: Set no. 303 into port 3 of Gateway B

After successfully assign the IP address of Gateway B as 192.168.123.30, open the Web browser and type 192.168.123.30 in address column. After the login page show up, key in “eitg” as the login name and “123” as the password. The login name and password mentioned are default settings.

Dial-Plan Menu

Setting. 303 locates at Port 3 of Gateway B.

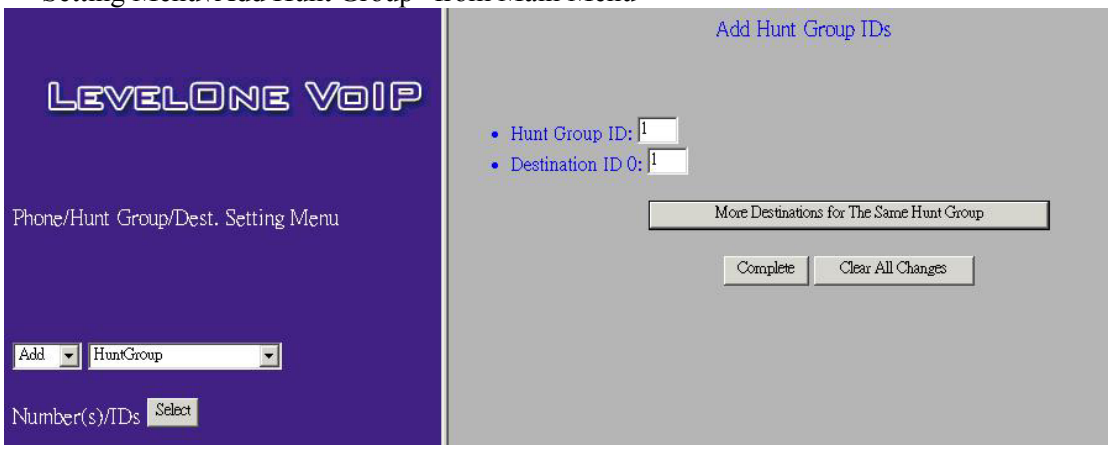
1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu
   Set the setting as the screen below:



2. Push “Complete” button. And screen will show “Telephone Number Added 303 OK” table. Telephone number 301 is added in gateway dial plan.
3. Purpose: add telephone address to hunt group mapping table of phone number 303 into dial plan.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Hunt Group” from Main Menu

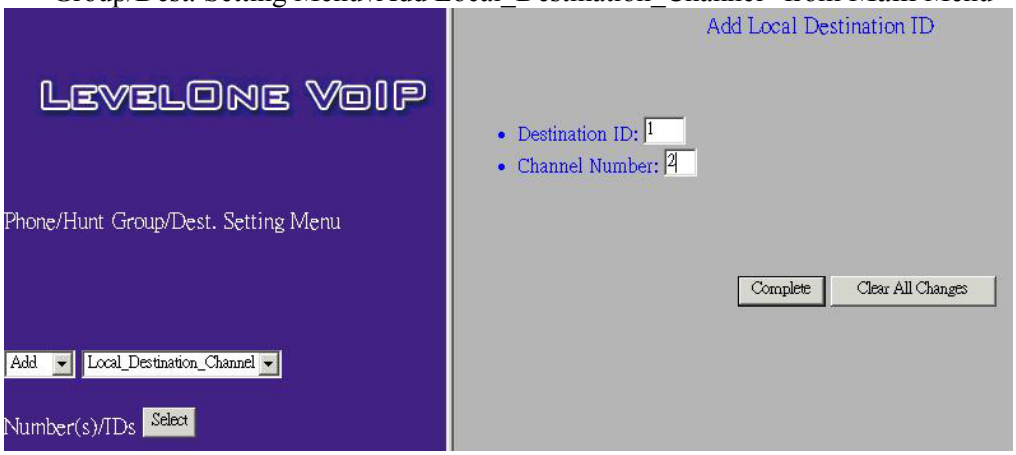


2. Push “Complete” button. And screen will show “List All Hunt Group IDs Result:” table.

3. Purpose: add hunt group to destination ID mapping table of phone number 303 into dial plan. For most of the cases, the destination ID should be as the same as HuntGroup ID.

Back To Dial-Plan Menu

2. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Local_Destination_Channel” from Main Menu



2. Push “Complete” button. And screen will show “Add Destination ID Result:” table
   The Destination ID 1 is bound to local channe2(port 3).
4. Purpose: Add destination ID to bundle with the Channel Number.

Channel Number is the connected port number minus1.
For example, the telephone 303 is connected to port 3, so the channel number of the telephone is 3-1= 2

Step 3 Set remote Gateway no. of Gateway A in Gateway B`s dial plan.

Assigning a number for Gateway B to recognize the calling destination in Gateway A.
Here we use 200 for example.

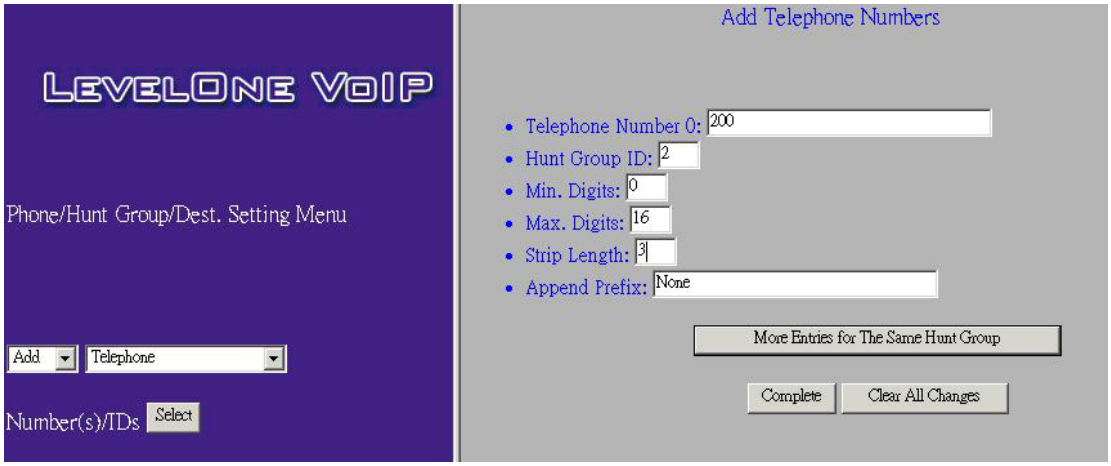
Login the configuration page in Gateway B as typing 192.168.123.30 in your web browser.

The default setting of login name and password are eitg/123

Dial-Plan Menu

Setting. 200 in the dial plan of Gateway B.

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu
   Sets the setting as the screen below:



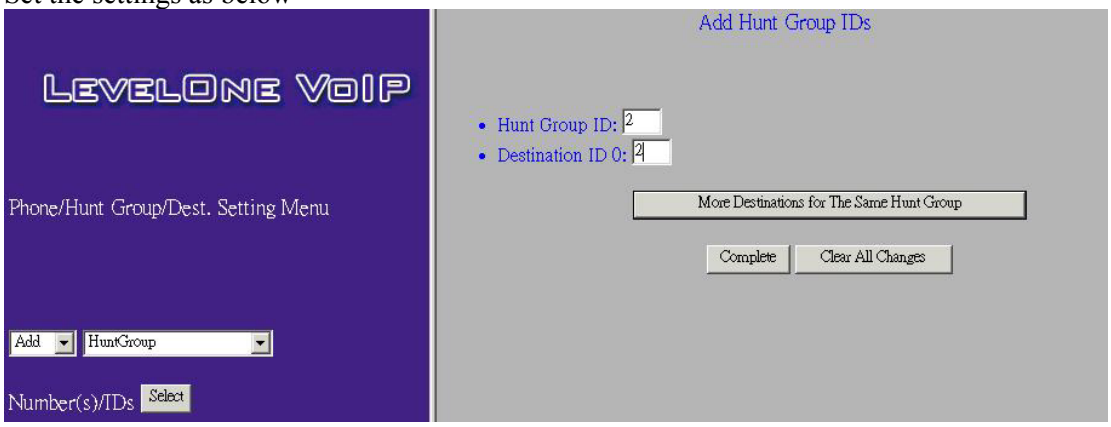
2. Push “Complete” button. And screen will show “Telephone Number Added 200 OK” table. Telephone number 200 is added in gateway dial plan.
3. Purpose: add telephone address to hunt group mapping table of phone number 200 into dial plan.

Be noticed of the strip length setting.
In this case, after setting successfully, you should dial “200201” to reach port 1 in GatewayA.
But for GatewayA , it can only recognize 201,not 200201. So you have to strip the 3 digit of the dialing number. Therefore the setting of Strip Length here should be 3.

Back To Dial-Plan Menu
1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest.

Setting Menu\ Add Hunt Group" from Main Menu

Set the settings as below

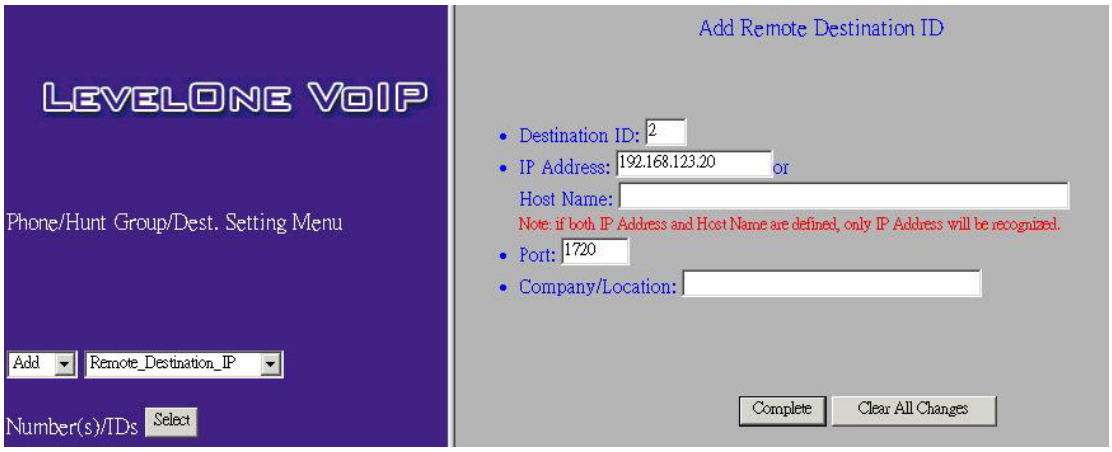


2. Push "Complete" button. And screen will show "List All Hunt Group IDs Result:" table.
3. Purpose: add hunt group to destination ID mapping table of phone number 200 into dial plan. For most of the cases, the destination ID should be as the same as HuntGroup ID.

Back To Dial-Plan Menu

1. Please select "Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Remote_Destination_IP" from Main Menu

Set the settings as below



2. Push "Complete" button. And screen will show "Add Destination ID Result: The Destination ID 2 is bound to IP address 192.168.123.20(Gateway A) for H.323 VoIP application."
3. Purpose: add destination ID to destination IP mapping table of phone number into dial plan

Step 4　Set remote Gateway no. of Gateway B in Gateway A`s dial plan.

Assigning a number for Gateway A to recognize the calling destination in Gateway B.
Here we use 300 for example.

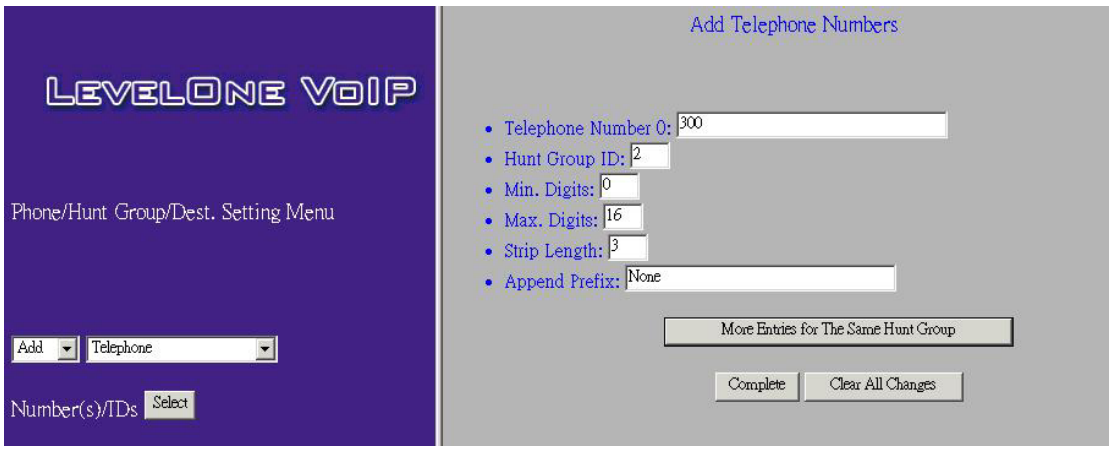
Login the configuration page in Gateway A as typing 192.168.123.20 in your web browser.

The default setting of login name and password are eitg/123

Dial-Plan Menu

Setting. 300 in the dial plan of Gateway A.

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu
   Set the setting as the screen below:



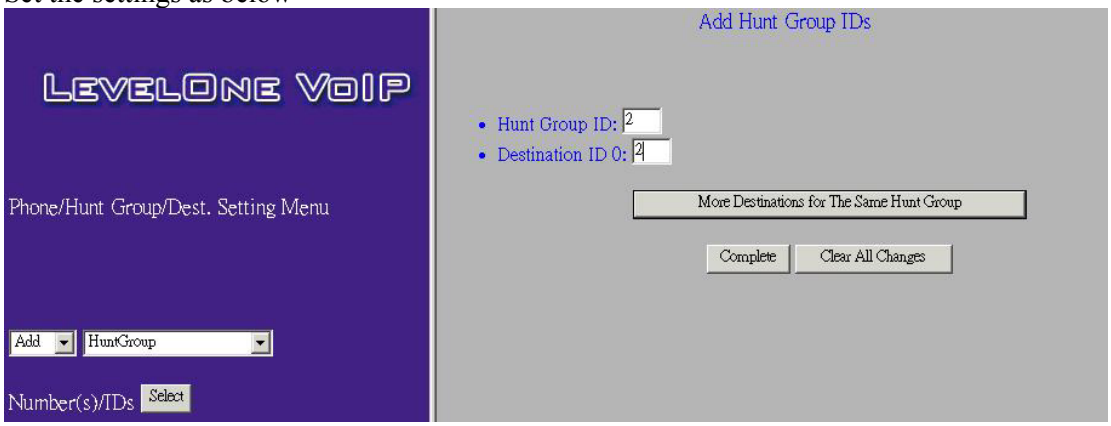
2. Push “Complete” button. And screen will show “Telephone Number Added 300 OK” table. Telephone number 300 is added in gateway dial plan.
3. Purpose: add telephone address to hunt group mapping table of phone number 200 into dial plan.

Be noticed of the strip length setting.
In this case, after setting successfully, you should dial “300303” to reach port 3 in GatewayB..
But for GatewayB , it can only recognize 303,not 300303. So you have to strip the 3 digit of the dialing number. Therefore the setting of Strip Length here should be 3.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Hunt Group” from Main Menu

Set the settings as below

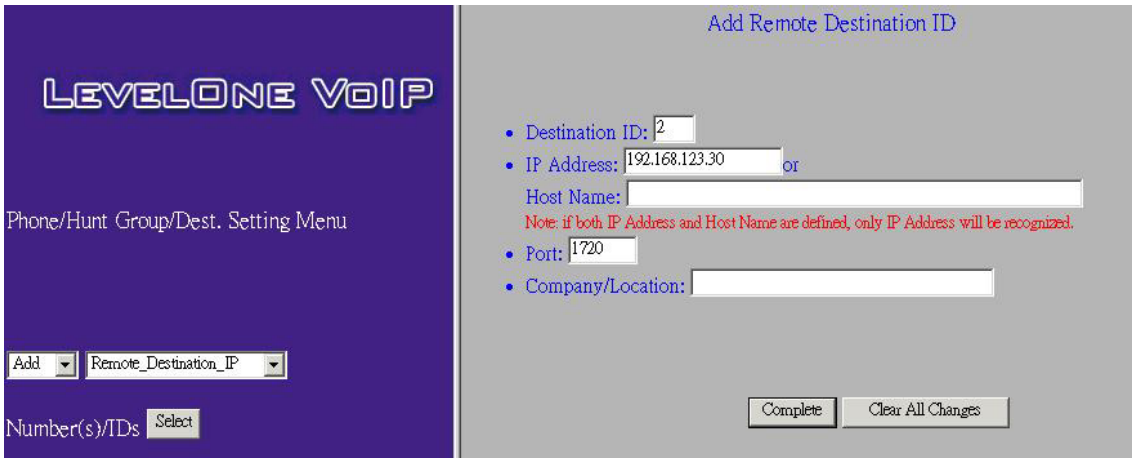


2. Push “Complete” button. And screen will show “List All Hunt Group IDs Result:” table.
3. Purpose: add hunt group to destination ID mapping table of phone number 200 into dial plan. For most of the cases, the destination ID should be as the same as HuntGroup ID.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Remote_Destination_IP” from Main Menu

Set the settings as below



2. Push “Complete” button. And screen will show “Add Destination ID Result: The Destination ID 2 is bound to IP address 192.168.123.30(Gateway B) for H.323 VoIP application.”
3. Purpose: add destination ID to destination IP mapping table of phone number into dial plan

Please select Main Menu\Dial Plan\Store Settings To Flash. The above setting will be stored to flash memory. Otherwise the settings will be deleted after logout or reboot.

Step 5 Making calls between VoIP Gateways.

After the above settings are completed, you should be able to dial from Gateway A to Gateway B, vice versa.

1. Dial 300303 from Gateway A , port 1 to reach Gateway B port 3.
2. Dial 200201 from Gateway B , port3 to reach Gateway A port 1.

Attached with the complete dial-plan in this scenario.

Gateway A

Address Entry	Hunt Grp_Id	Min. Digits	Max. Digits	Prefix strip	Prefix Address
201	1	0	16	0	None
300	2	0	16	3	None

Gateway A hunt group/destination table

No.	Group id	Dest id	Mode	Destination
201	1	1	Local	Port=0
300	2	2	H.323	Dest = 192.168.123.30/1720 TCP

Gateway B

Address Entry	Hunt Grp_Id	Min. Digits	Max. Digits	Prefix strip	Prefix Address
303	1	0	16	0	None
200	2	0	16	3	None

Gateway B hunt group/destination table

No.	Group id	Dest id	Mode	Destination
303	1	1	Local	Port=2
200	2	2	H.323	Dest = 192.168.123.20/1720 TCP

2.2 Setting transferring calls

This section will guide you to set the transferring calls

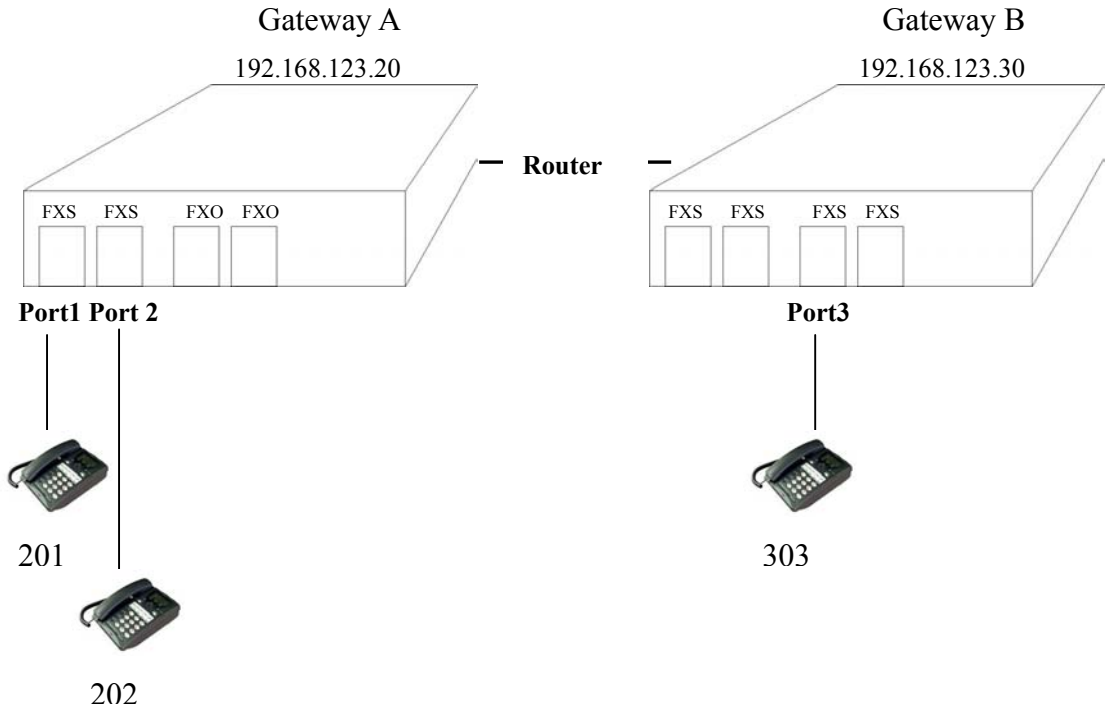


Fig 2.2 Transferring calls environment

Environment description.

Following the settings in Chapter 2.1, we can set no.202 in to the port 2 in Gateway A and use as a backup line of 201. If line 201 is busy, the call will transfer to 202 automatically. Also 201 will work as a backup line of 202,too.

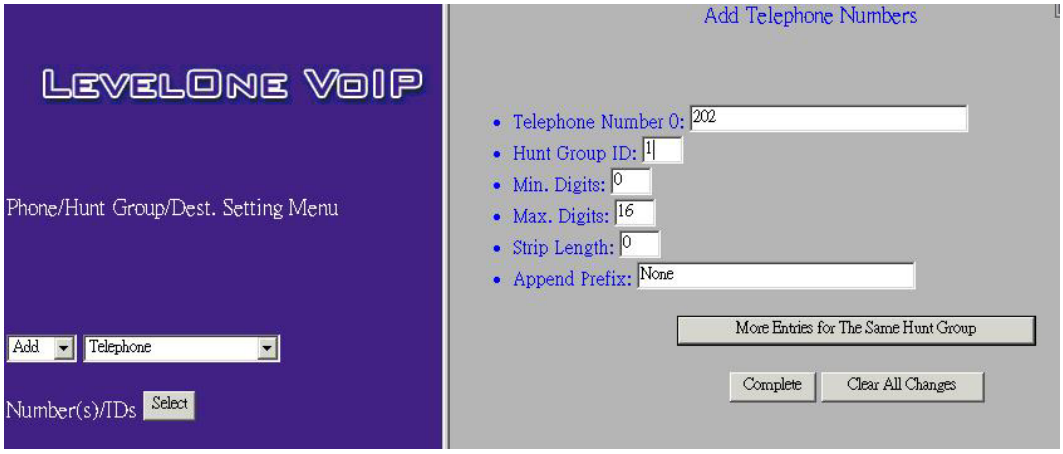
The steps here will guide you to set 202 into the dial plan in Gateway A.

Step 1 description: Set no. 202 into the dial-plan

Dial-Plan Menu

Sets no. 202 into the same Hunt Group of Gateway A.

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu
   Sets the setting as the screen below:



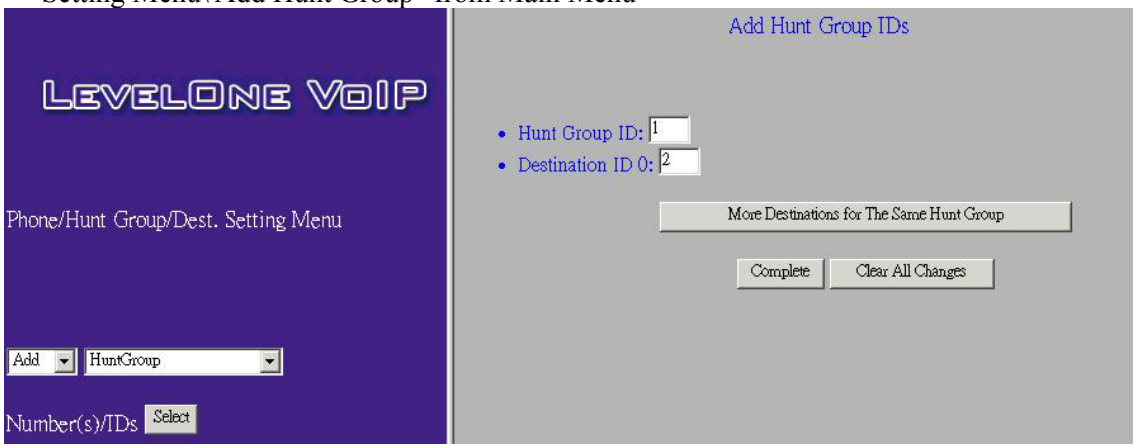
2. Push “Complete” button. And screen will show “Telephone Number Added 202 OK” table. Telephone number 202 is added in gateway dial plan.

3. Purpose: add telephone address to hunt group mapping table of phone number 202 into dial plan.

Be noted with the HuntGroup ID setting. The ID must be the same as HuntGroup ID of no. 201.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Hunt Group” from Main Menu



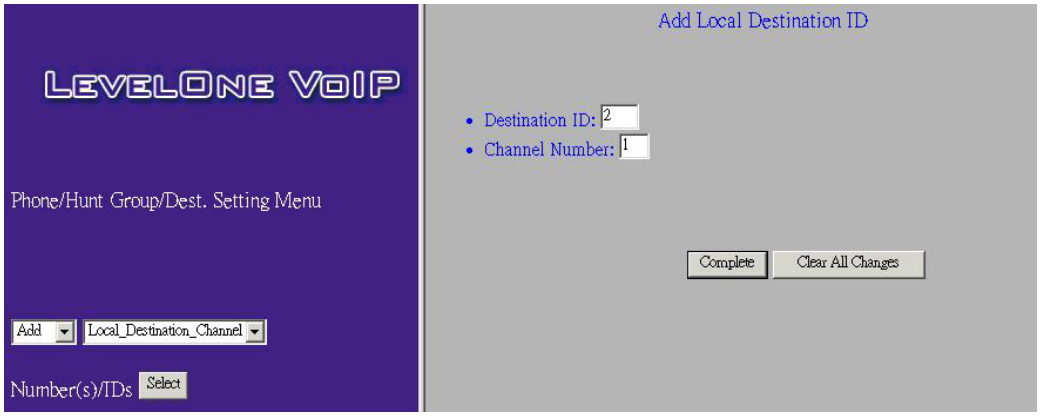
2. Push “Complete” button. And screen will show “List All Hunt Group IDs Result:” table.

3. Purpose: add hunt group to destination ID mapping table of phone number 202 into dial plan. In order to enable transferring calls, you must assign two Destination IDs into one Hunt Group.

Assign an exclusive Destination ID for no.202.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Local_Destination_Channel” from Main Menu



2. Push "Complete" button. And screen will show "Add Destination ID Result:" table The Destination ID 2 is bound to local channel 1.
3. Purpose: Add destination ID to bundle with the Channel Number.

Channel Number is the connected port number minus1.
For example, the telephone 202 is connected to port 2, so the channel number of the telephone is 2-1= 1

Please select Main Menu\Dial Plan\Store Settings To Flash. The above setting will be stored to flash memory. Otherwise the settings will be deleted after logout or reboot.

Step 2 Making calls between VoIP Gateways.

After the above settings are completed, the transferring calls should enable.
1. Dial 200201 from Gateway B. And if 201 is busy, the call will be transferred to 202 directly.

Attached with the dial-plan of Gateway A in this scenario.
Gateway A

Address Entry	Hunt Grp_Id	Min. Digits	Max. Digits	Prefix strip	Prefix Address
201	1	0	16	0	None
300	2	0	16	3	None
202	1	0	16	0	None

Gateway A hunt group/destination table

No.	Group id	Dest id	Mode	Destination
201	1	1	Local	Port=0
300	2	2	H.323	Dest = 192.168.123.30/1720 TCP
202	1	2	Local	Port=1

2.3 Setting outgoing calls

This section will guide you to set the outgoing calls

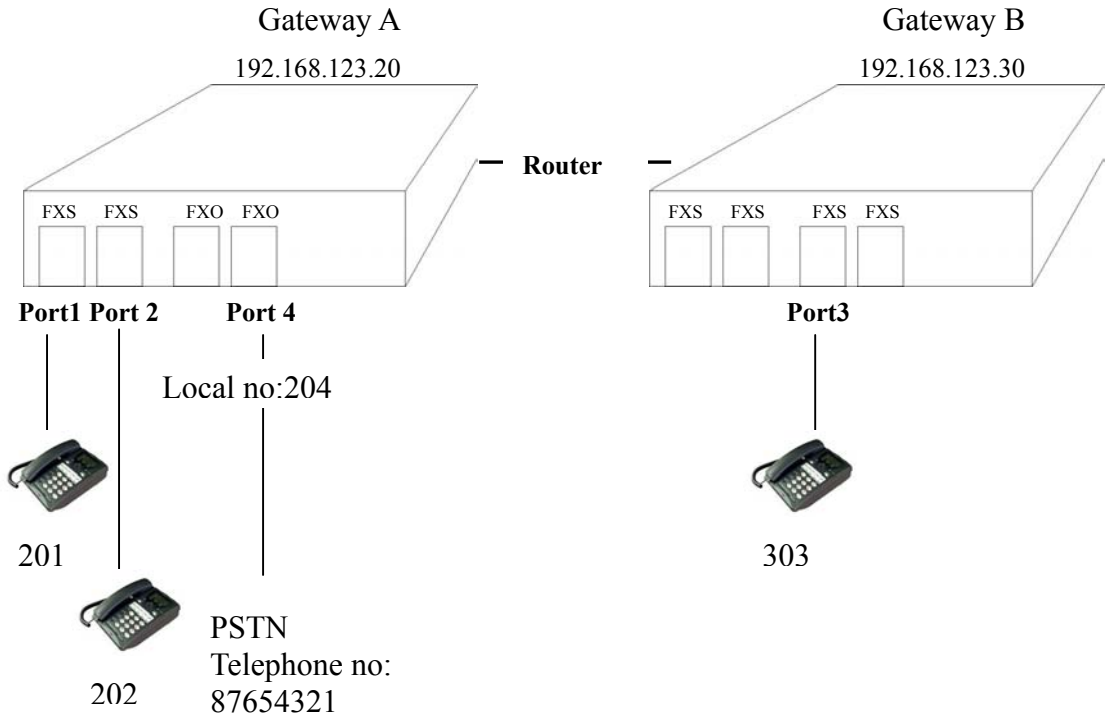


Fig 2.3 Outgoing calls environment

Environment description.

Following the settings in Chapter 2.1 and 2.2, we can set no.204 in to the port 4 in Gateway A for dialing outgoing calls.

Please be noted that you must connect the PSTN line into **FXO** port of VoIP Gateways.

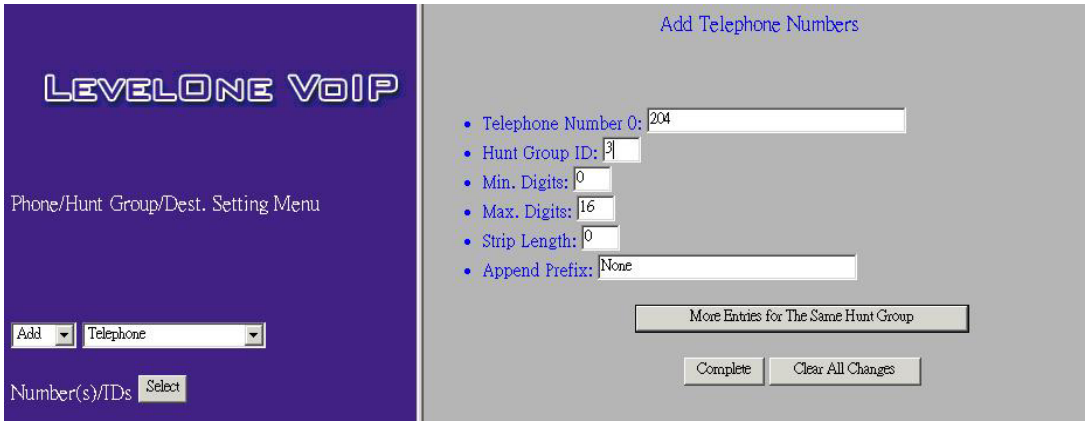
After set successfully, you should be able to dial the PSTN calls via VoIP Gateways.

Step 1 description: Set no. 204 into the dial-plan

Dial-Plan Menu

Sets no 204 into the Gateway A.

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add telephone” from Main Menu
   Sets the setting as the screen below:

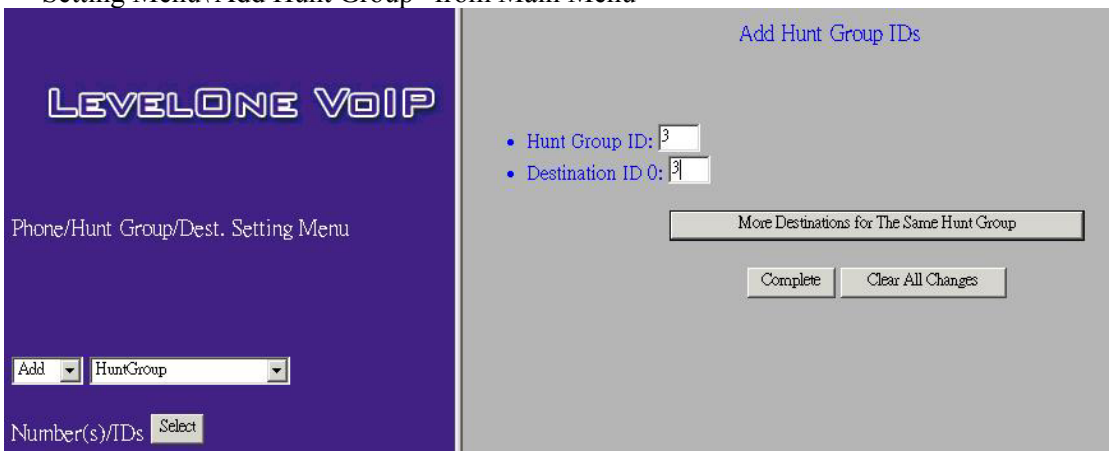


2. Push “Complete” button. And screen will show “Telephone Number Added 204 OK” table. Telephone number 204 is added in gateway dial plan.

3. Purpose: add telephone address to hunt group mapping table of phone number 204 into dial plan.

Back To Dial-Plan Menu

1. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Hunt Group” from Main Menu

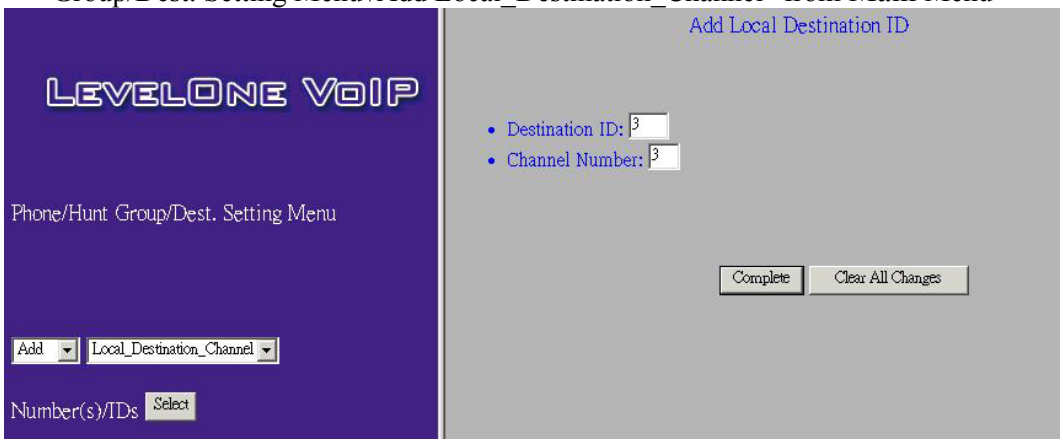


2. Push “Complete” button. And screen will show “List All Hunt Group IDs Result:” table.

3. Purpose: add hunt group to destination ID mapping table of phone number 204 into dial plan. For most of the cases, the destination ID should be as the same as HuntGroup ID.

Back To Dial-Plan Menu

2. Please select “Main Menu\ Dial Plan\ Phone/Hunt Group/Destination Settings\ Phone/Hunt Group/Dest. Setting Menu\ Add Local_Destination_Channel” from Main Menu



2. Push “Complete” button. And screen will show “Add Destination ID Result:” table
   The Destination ID 3 is bound to local channel 3.
4. Purpose: Add destination ID to bundle with the Channel Number.

Channel Number is the connected port number minus1.
For example, the telephone 204 is connected to port 4, so the channel number of the telephone is 4-1= 3

Please select Main Menu\Dial Plan\Store Settings To Flash. The above setting will be stored to flash memory. Otherwise the settings will be deleted after logout or reboot.

Step 2 Making outgoing calls / Receiving incoming calls

After the above settings are completed, you should be able to make PSTN calls to ordinary phone line.

1. From Gateway A, phone 201/202
   Pick up handset and dial 204. Wait for dial tone, and dial out the PSTN number.
2. From Gateway B, phone 303
   Pick up handset and dial 200204 from Gateway B. Wait for dial tone, and dial out the PSTN number.

Calling to VoIP Gateways.
Using PSTN no. to call to VoIP Gateway.

1. Calling to Gateway A, phone 201/202
   Pick up the handset and dial 8765-4321. Wait for dial tone, and dial 201/202.
2. Calling to Gateway B, phone 303
   Pick up the handset and dial 8765-4321. Wait for dial tone, and dial 300303.

Attached with the dial-plan of Gateway A in this scenario.
Gateway A

Address Entry	Hunt Grp_Id	Min. Digits	Max. Digits	Prefix strip	Prefix Address
201	1	0	16	0	None
300	2	0	16	3	None
202	1	0	16	0	None
204	3	0	16	0	None

Gateway A hunt group/destination table

No.	Group id	Dest id	Mode	Destination
201	1	1	Local	Port=0
300	2	2	H.323	Dest = 192.168.123.30/1720 TCP
202	1	2	Local	Port=1
204	3	3	H.323	Port=3

Assigning IP address by Console configuration

For VOI-4000/4001/8000, you may need to connect to console for basic IP setting for easy connection.

The IP address is the unique logical address identifying each IP node, such as the VOI-4000/4001/8000, on an IP network device. An IP address is a 32-bit number expressed as four decimal numbers from 0 to 255 separated by periods. The VOI-4000/4001/8000 needs a static IP address and are aware of the subnet mask and default gateway (typically a router) of your network to be able to send to and receive data from the IP network. Consult your network manager to obtain a unique and static IP address for the VOI-4000/4001/8000, the IP subnet mask and default gateway of your network.

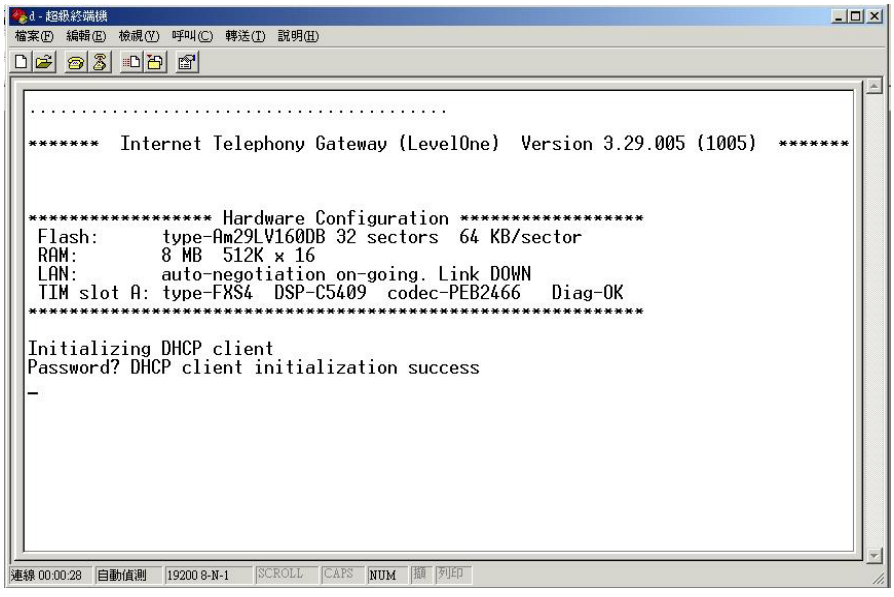
1 Assigning IP address to the VOI-4000/4001

If you would like to set the IP address via console, please refer to the following setup steps.

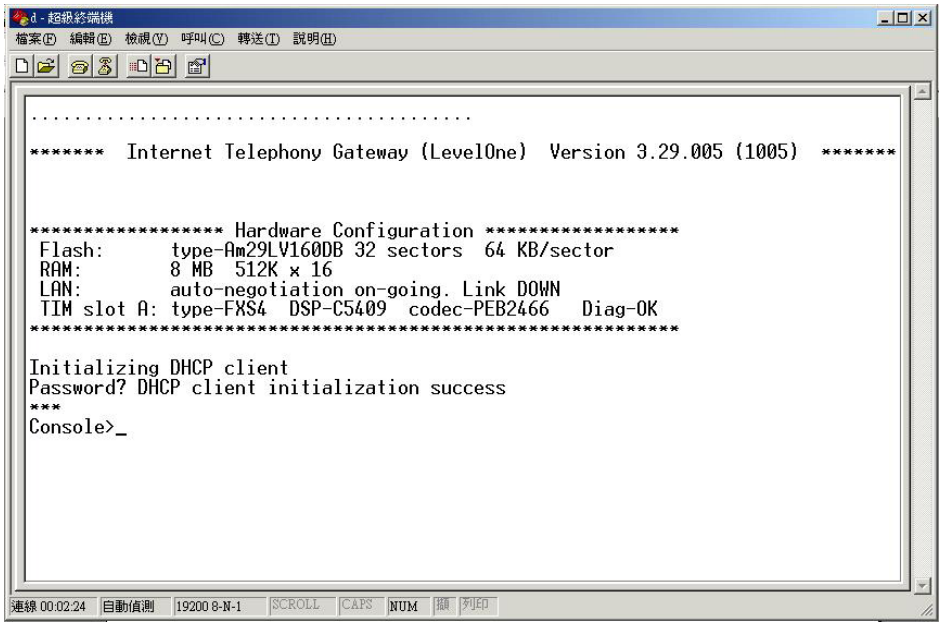
1) Connect your PC`s COM port to the console port of the VOI-4000/4001 with a RS-232 cable.
2) Start up your terminal program. Ex: Hyper Terminal.
3) Set up the parameters as below for your COM port:

   Baud rate: 19200bps
   Data bit: 8
   Parity Check: None
   Stop bit: 1
   Flow Control: None

4) Press enter. After the password prompt show up, type the password as “123” and press enter.



5) The terminal will prompt “Console>” to show it is ready.



Under the console prompt, you may key in **"net"** for showing the available commands and information associated with the commands.

6) For setting a new IP, eg 192.168.10.123, please type "net set ip 192.168.10.123 ".
7) Type "y" to restart the system.
8) You can use the WEB interface to configure VOI-4000/4001 via new set IP address now.

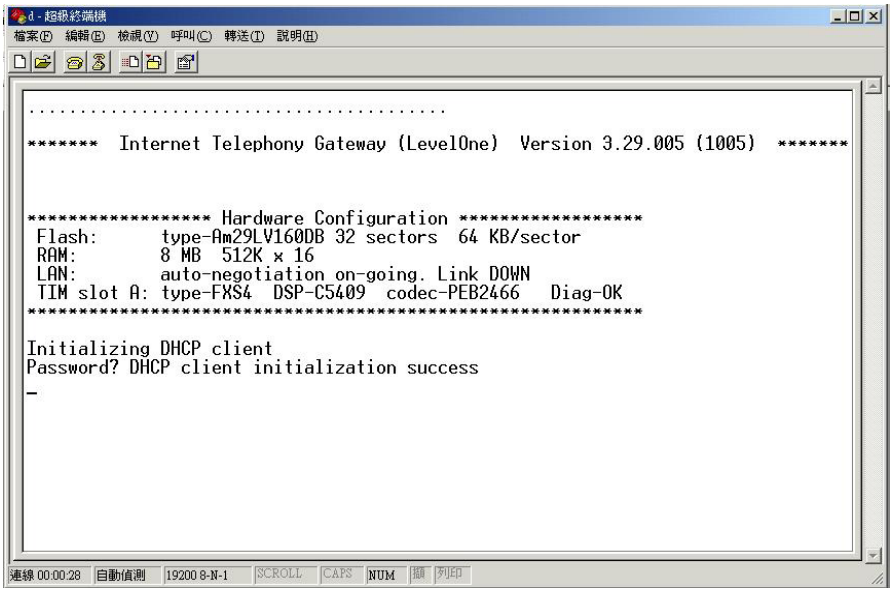
2 Assigning IP address to the VOI-8000

If you would like to set the IP address via console, please refer to the following setup steps.

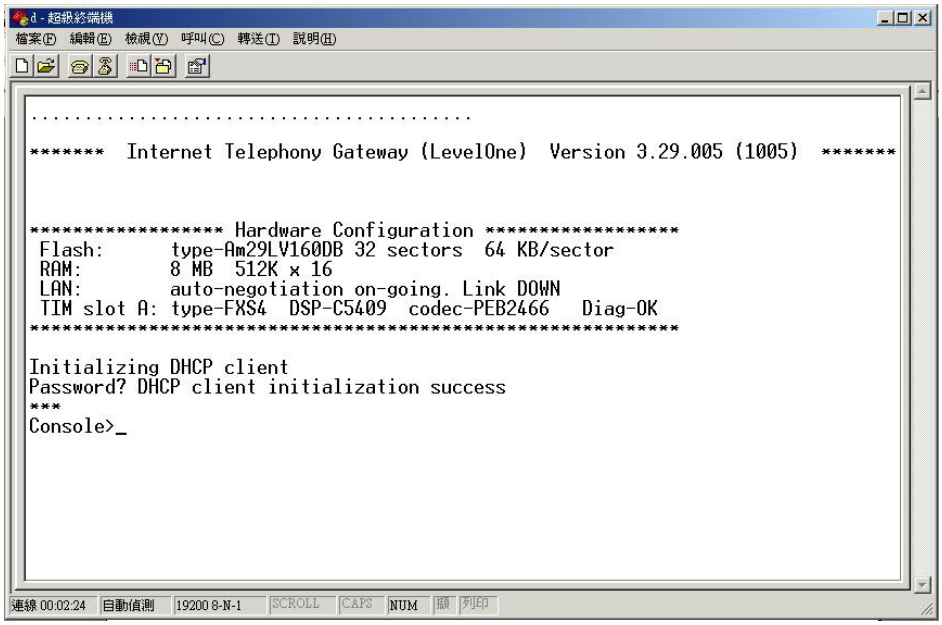
1) Connect your PC`s COM port to the console port of the VOI-8000 with a RS-232 cable.
2) Start up your terminal program. Ex: Hyper Terminal.
3) Set up the parameters as below for your COM port:

   Baud rate: 9600bps
   Data bit: 8
   Parity Check: None
   Stop bit: 1
   Flow Control: None

4) Press enter. After the password prompt show up, type the password as "123" and press enter.



5) The terminal will prompt “Console>” to show it is ready.



Under the console prompt, you may key in **“net”** for showing the available commands and information associated with the commands.

6) For setting a new IP, eg 192.168.10.123, please type “net set ip 192.168.10.123 “.
7) Type “y” to restart the system.
8) You can use the WEB interface to configure VOI-8000 via new set IP address now.