

Cisco Call Manager Express+ SiSky (Skype Landline Gateway) Solution

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Yeastar Technology Co., Ltd.

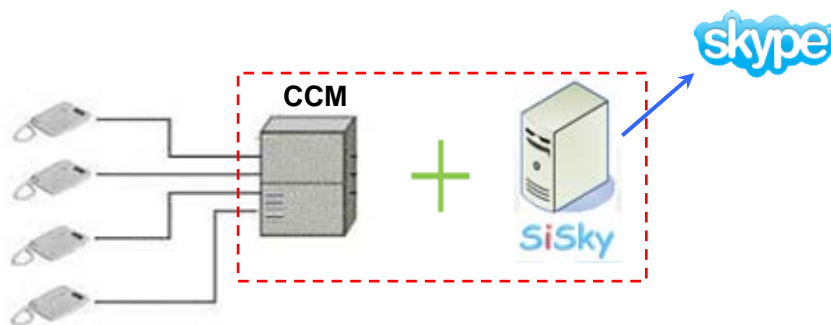
1. Introduction

1.1 Solution Overview

SiSky is a 100% software Skype gateway that supports maximum 30 channels on a single computer. Utilizing SiSky gateway with Cisco Call Manager, businesses can substantially save on both domestic long-distance and international calls.

Firstly install SiSky on a server and then dock the Call Manager in the IP address of SiSky server, users can make the calls to any landline number (PSTN & Mobile) at low SkypeOut rates on the normal desk phone without any habits changed.

1.2 Flow Chart



1.3 Environment

SiSky Server Requirements:

CPU	Intel Xeon X5410 * 2
Mainboard	MCH Intel 5000V ICH Intel 6321ESB
Memory	ECC 2G * 2
Disk	SATA 80G 7200rpm
Power Supply	AC Input: 100~240V, 50~60Hz, 3~6A; AC Output: 600W (MAX)
Network	RJ45 (100M Ethernet)
OS	Windows XP / 2003
Internet Connection	Dedicated Broadband downlink >=2Mbps, uplink >=2Mbps

Best Application

Skype Unlimited Calls Subscriptions

Management

Load Balancing: system will distribute the call rate equally among all trunks

Correct Billing System: Whether to not to answer SIP incoming calls immediately. System takes with reversal signal that can charge the calling time correctly.

Compatibility

Compatible with all soft switch platforms support with standard SIP protocol

Carrier Class Stable Performance

30 Channels in a single server is unique to SiSky Skype gateway.

Non-destructive control of Skype voice stream to assure the excellent call quality.

2. Installing SiSky Server

2.1 Installing SiSky Software

This section shows how to install SiSky EE software on the PC.

Note: Before installing SiSky software, you should first **uninstall** Skype software on your computer if you already have Skype software installed.

Steps:

1. Download software from website <http://www.yeastar.com>. And Double-Click to Start Installation Process.
2. A **Welcome to the SiSky Installation** screen will come up. Click **Next** to continue. See Figure 2-1.

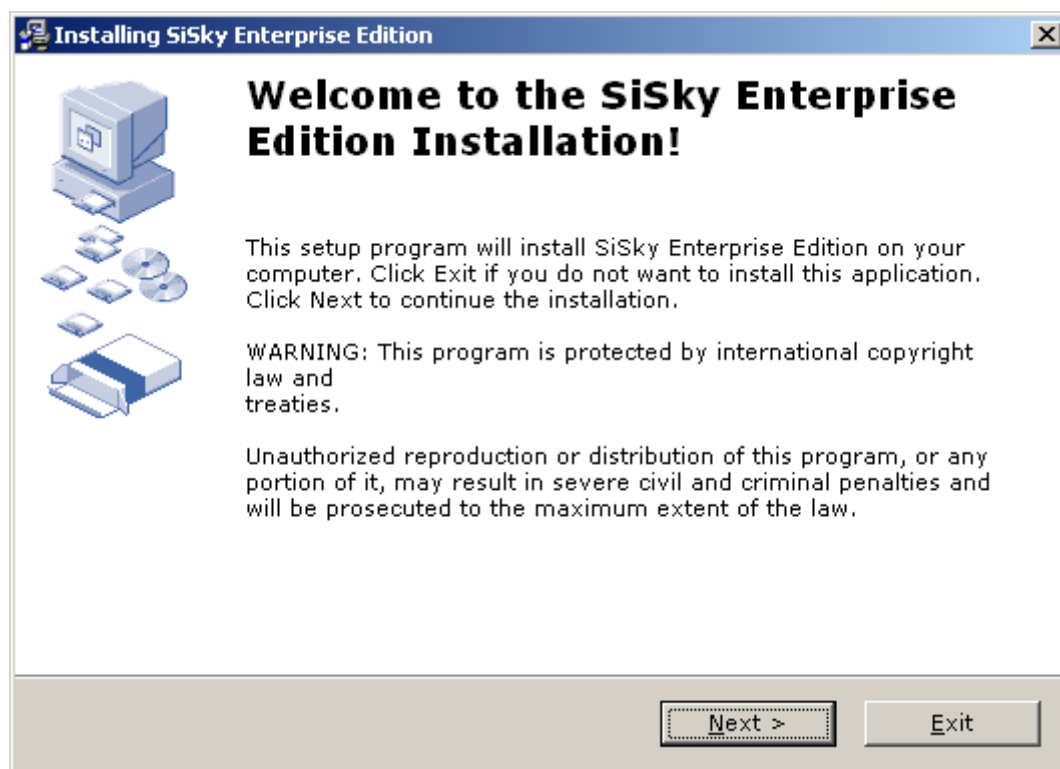


Figure 2-1

3. Read through the software **License Agreement**, select **I agree with the above terms and conditions**, and then click **Next** to continue. See Figure 2-2

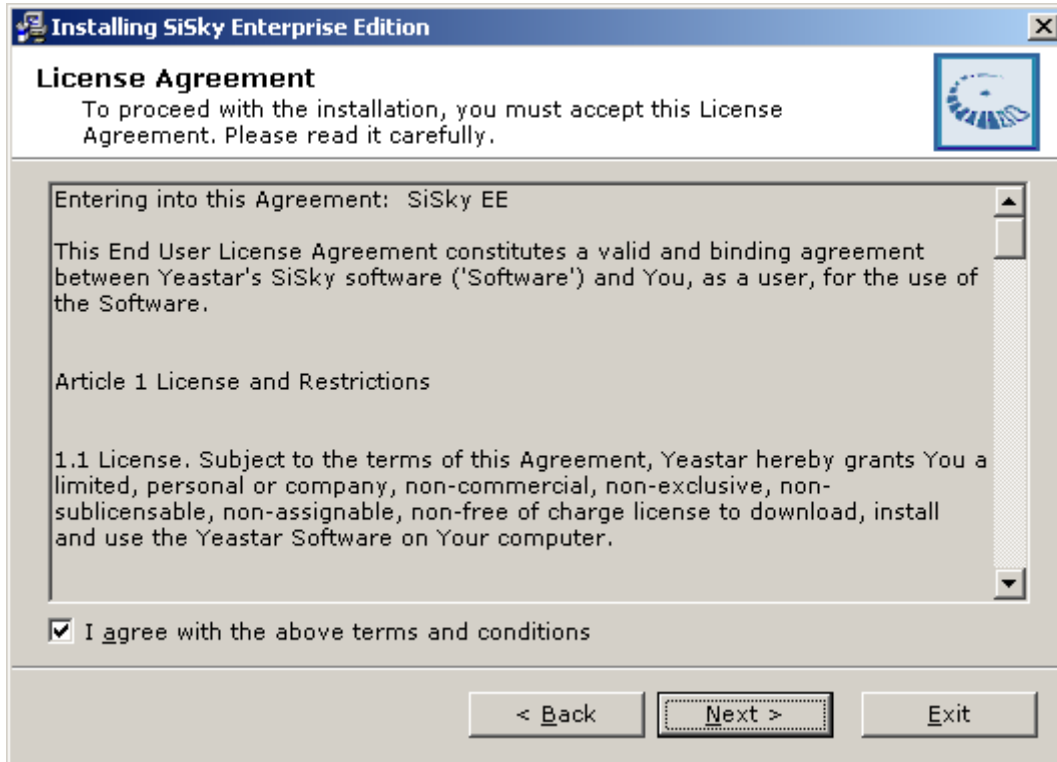


Figure 2-2

4. A Readme info window will appear. Click **Next** to continue.

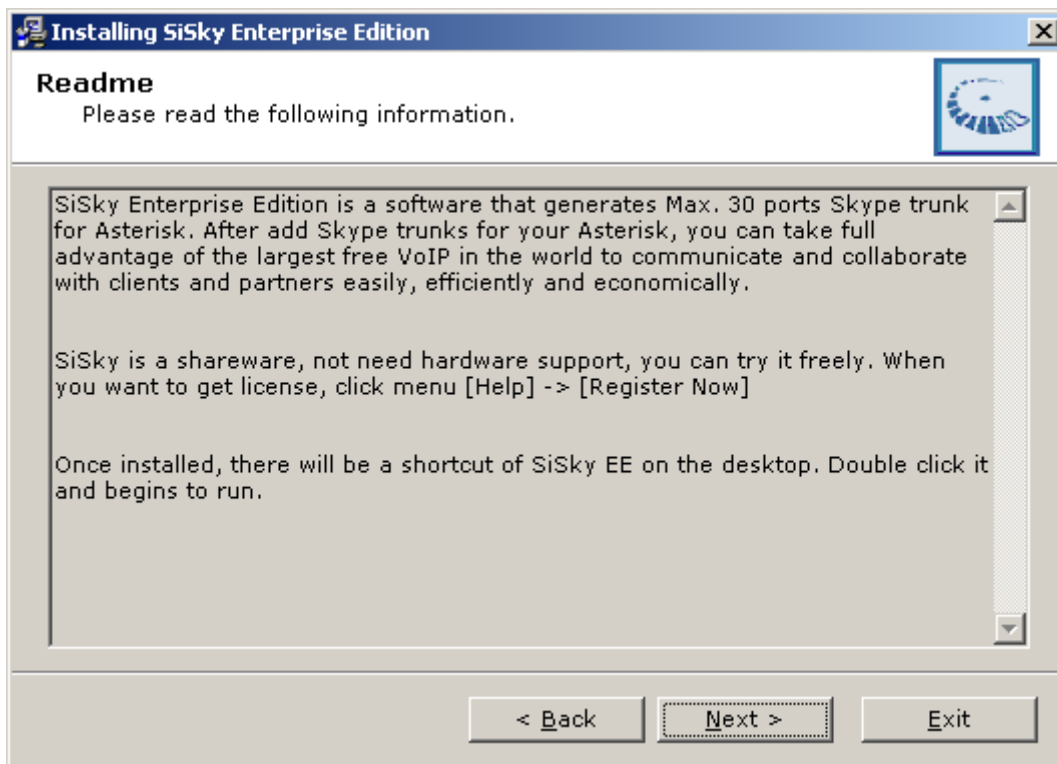


Figure 2-3

5. The **Destination folder** window will offer you the option where you would like SiSky to

be stored on your computer. Click **Next** to continue.

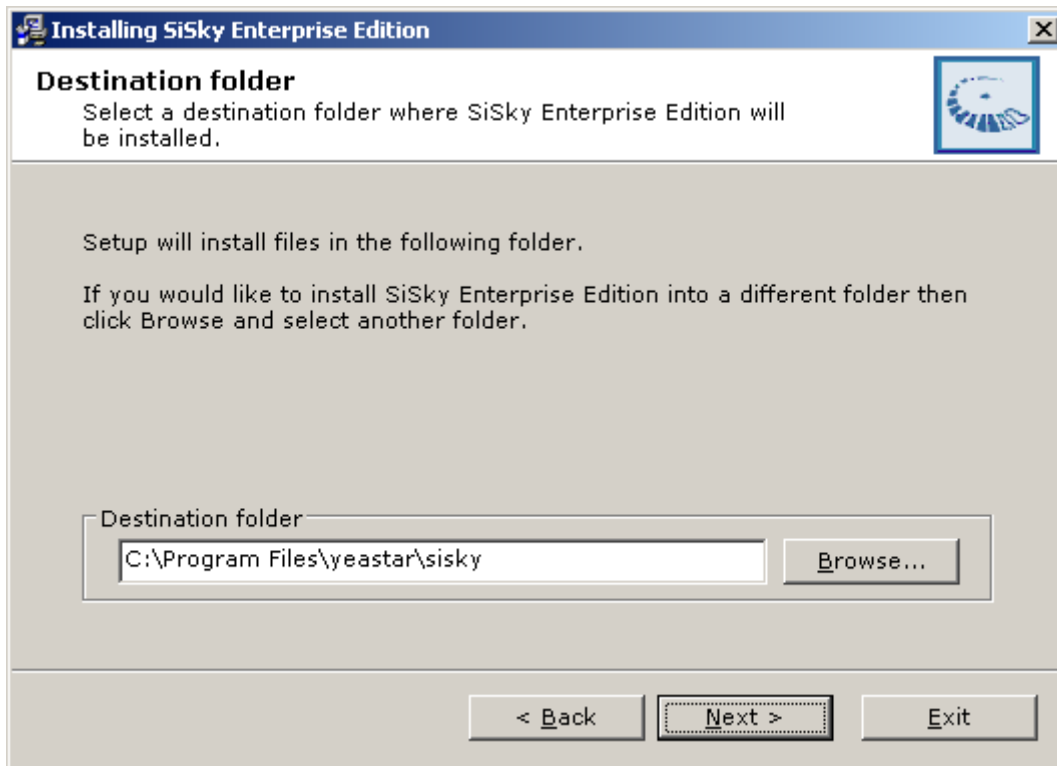


Figure 2-4

6. Enable the options by your own demands, and then click **Next**.

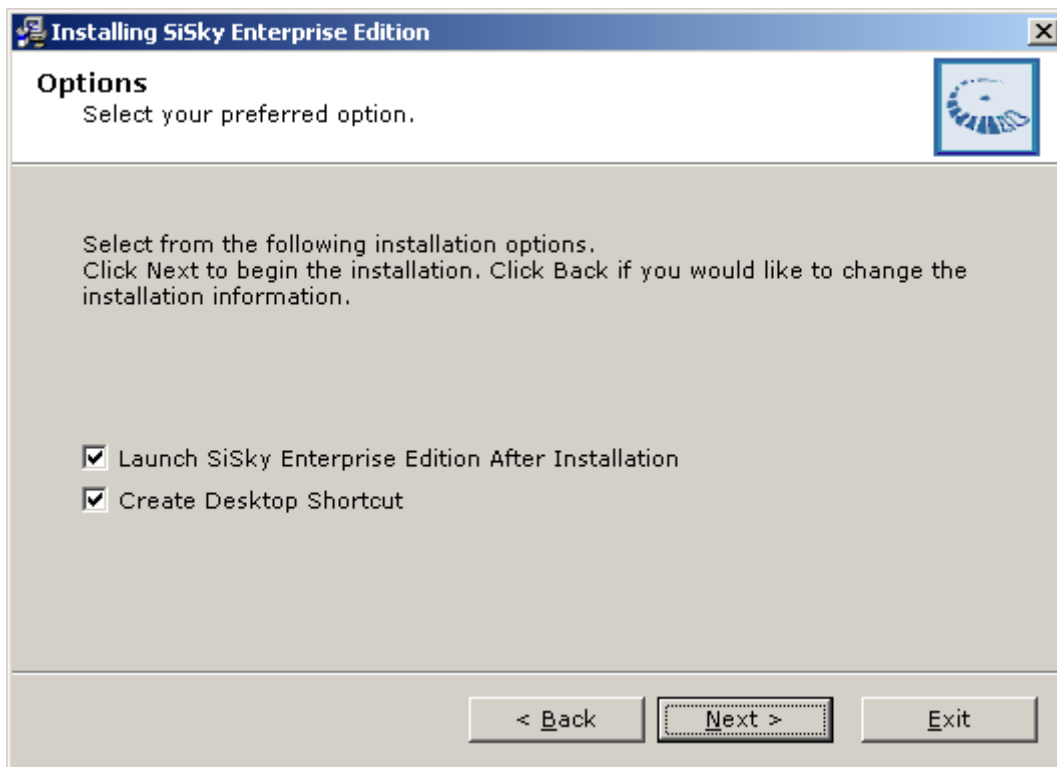


Figure 2-5

7. Enter into the **Installing Files**, system begin to configuration, which will last for a

while.

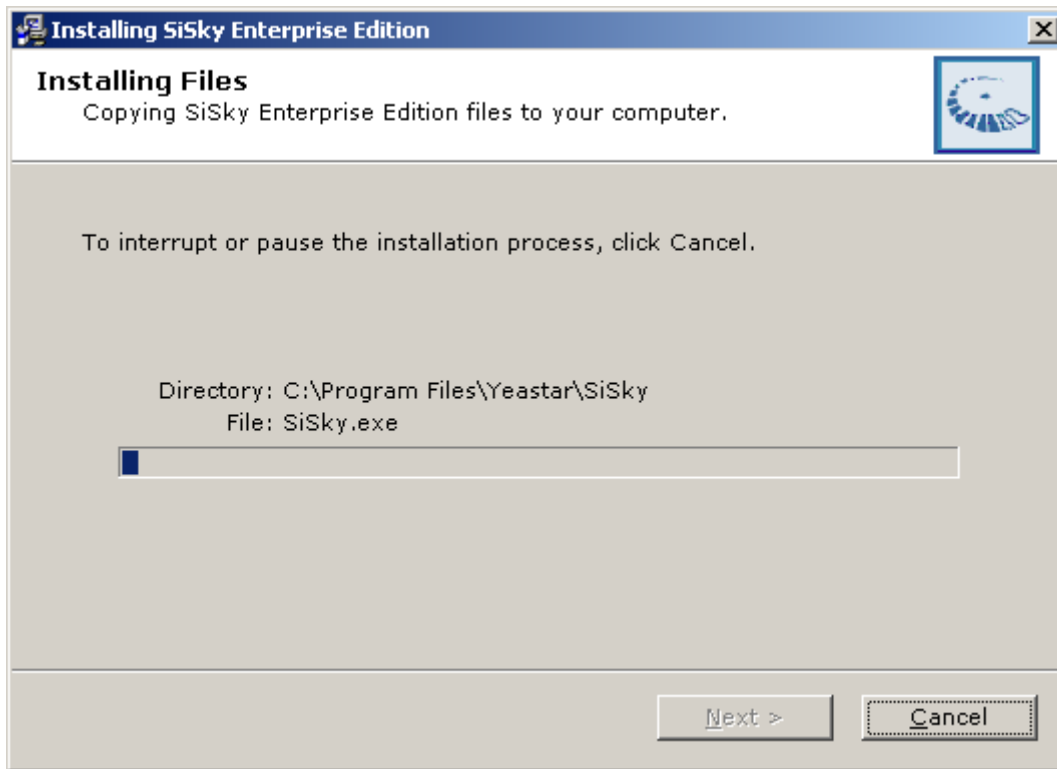


Figure 2-6

8. When the installation is complete, a screen will pop-up to notify you that the software is installed successfully. Click **Finish**.

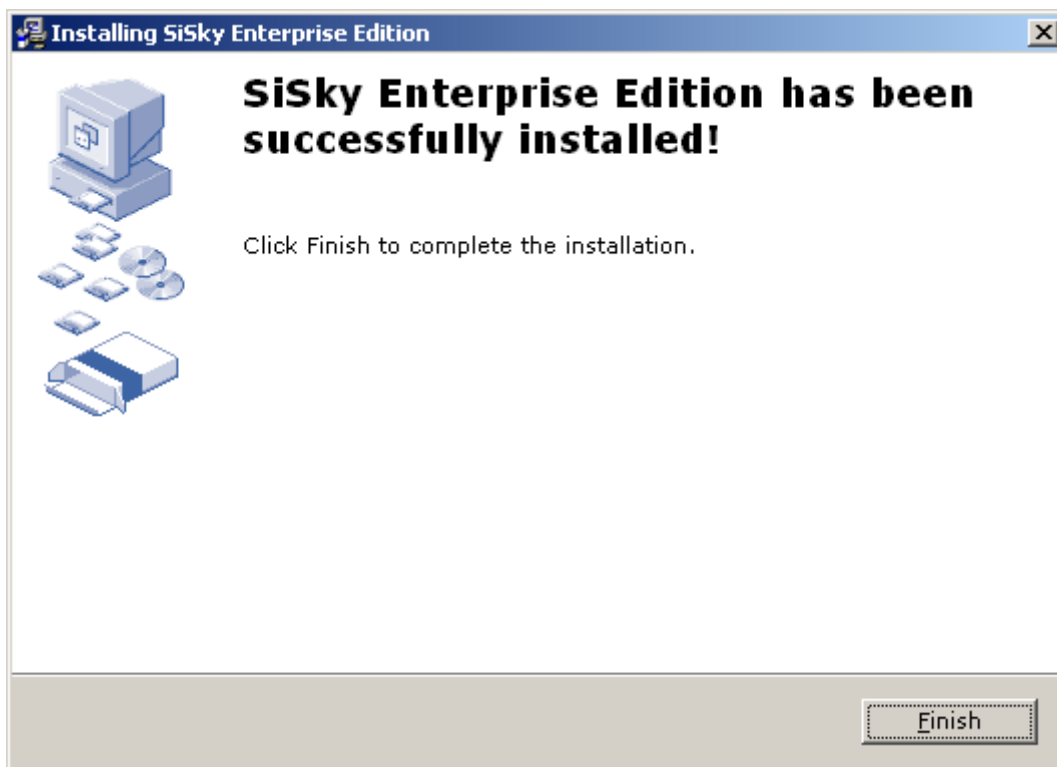


Figure 2-7

9. The final screen reminds you to restart computer in order to complete the installation.

You would better to restart now.

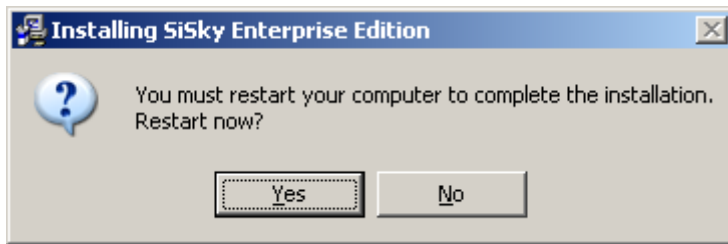


Figure 2-8

10. Launch SiSky to enter the next chapter.

2.2 Configuring Skype Accounts

Step 1: Configure SiSky through Wizard

On initial use, a **Message** screen will pop-up and click 'Yes' to launch the Wizard.

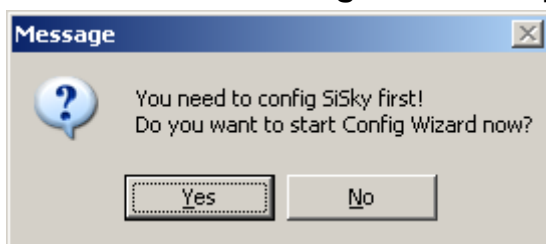


Figure 2-9

Or you can click the **Config** on SiSky to launch the Wizard. (If the **Config** button is invalid, please click **Stop** to stop SiSky first)

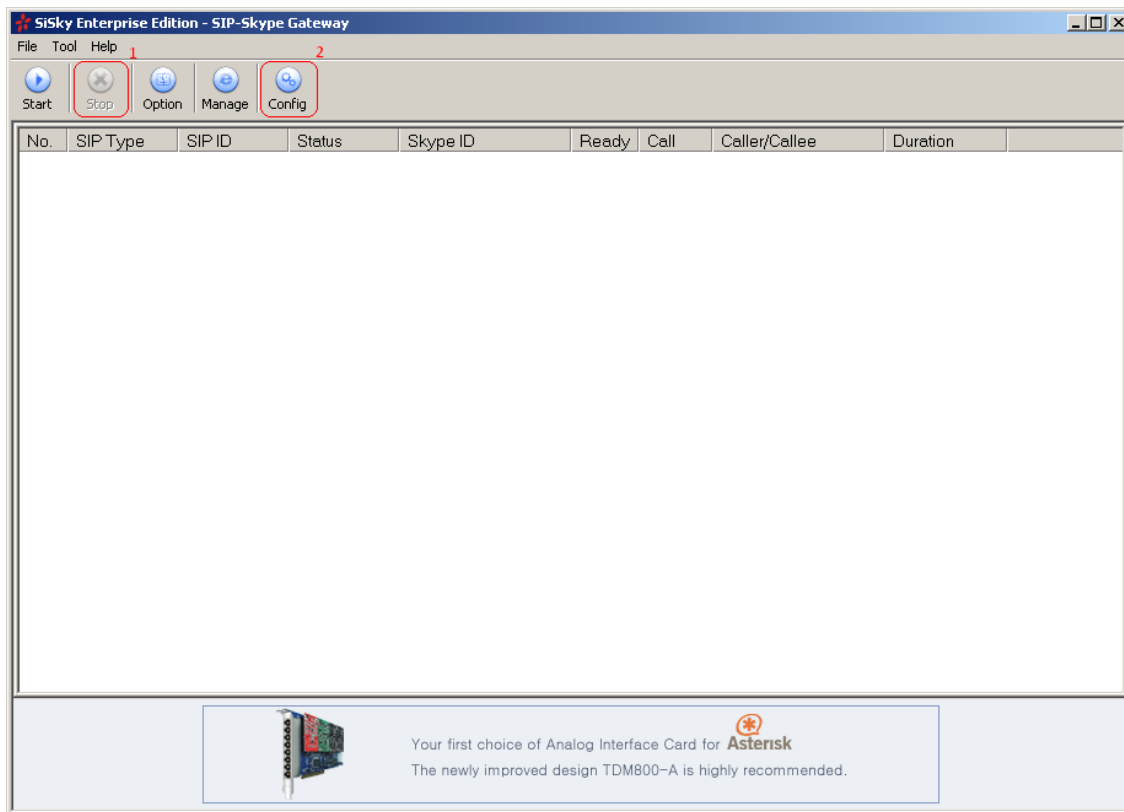


Figure 2-10

Step 2: Launch the Config Wizard

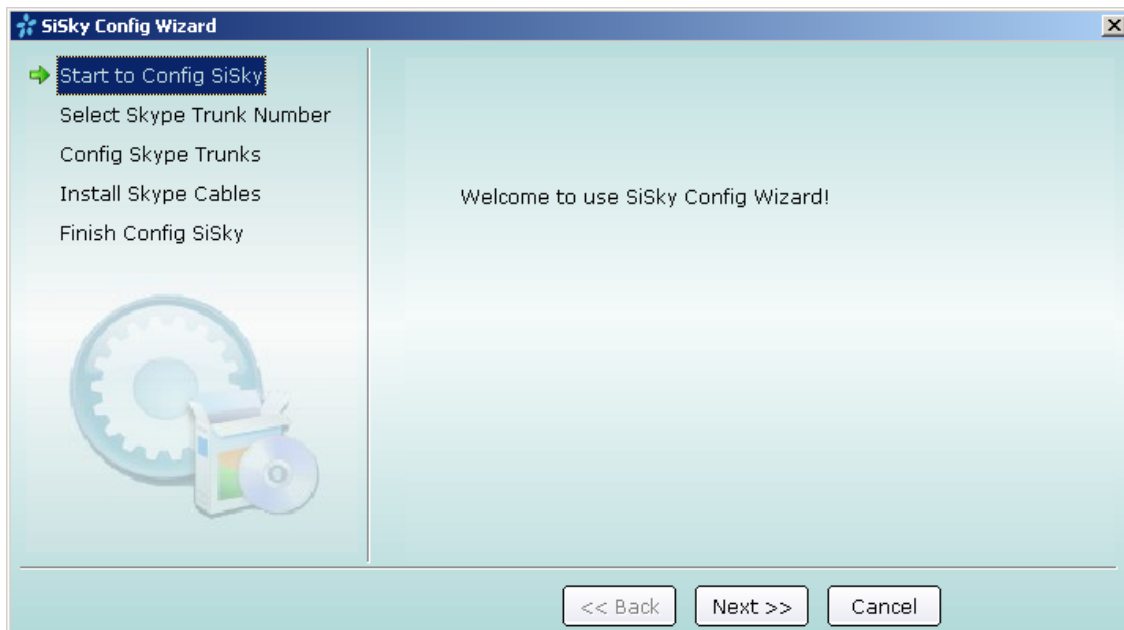


Figure 2-11

Step 3: Select Skype Trunk Number

Select the **Skype Trunk Number** and then click **Next**

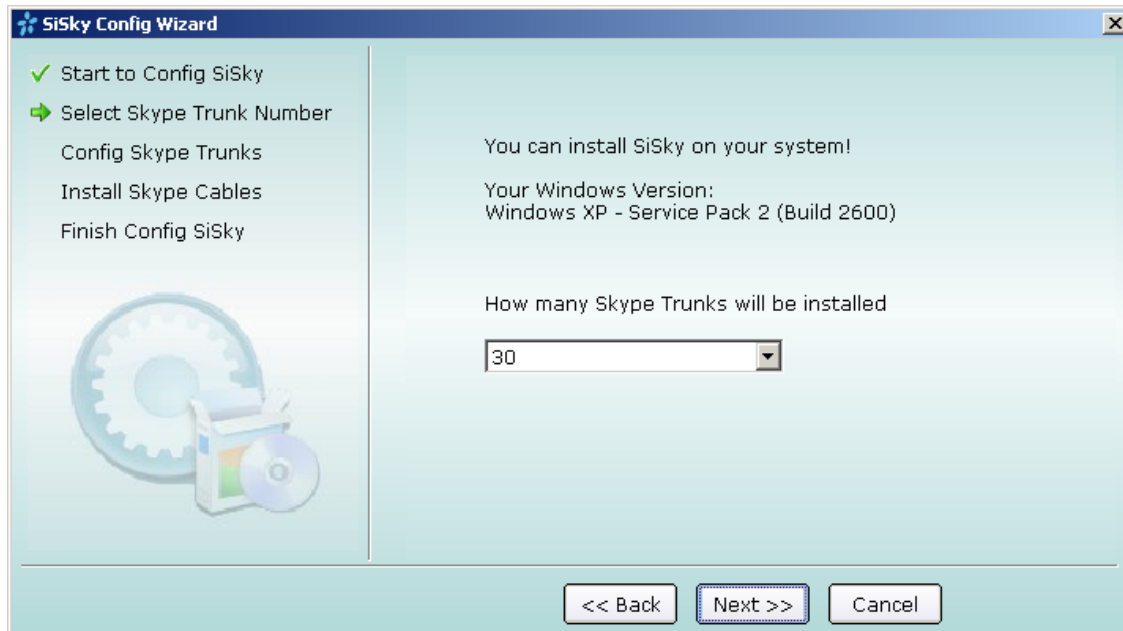


Figure 2-12

Step 4: Configure Skype for Each Port

Enable **Install Skype for this port** and Skype will launch.

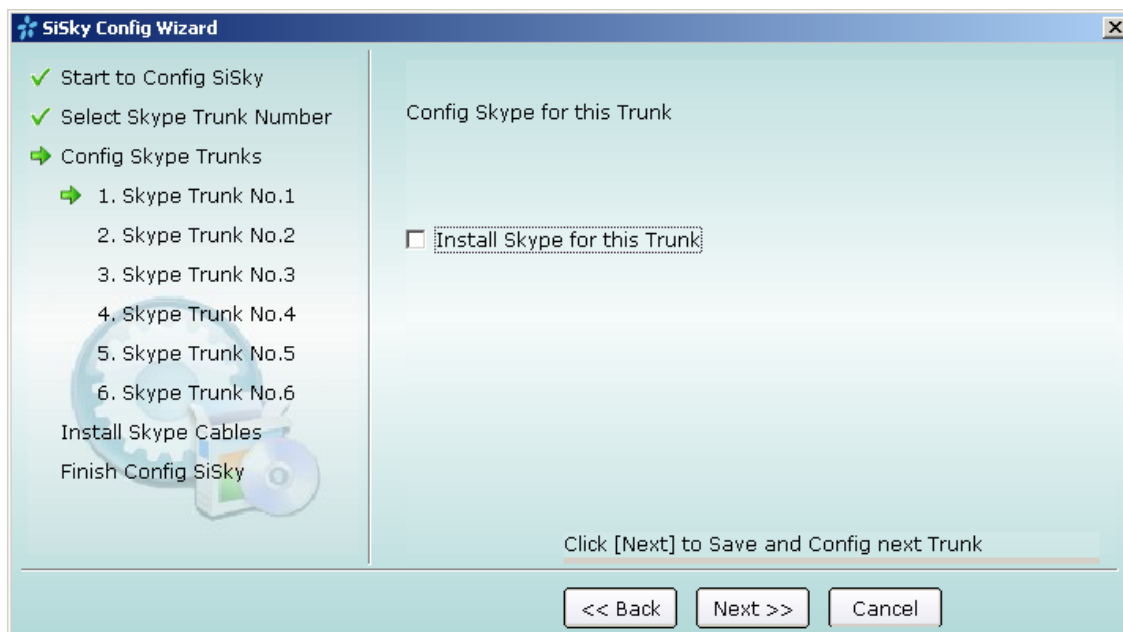


Figure 2-13

A **Skype?—Creat Account** will appear. Create a new account (see Figure2-14) or Cancel it and log in by using an existing Skype account.

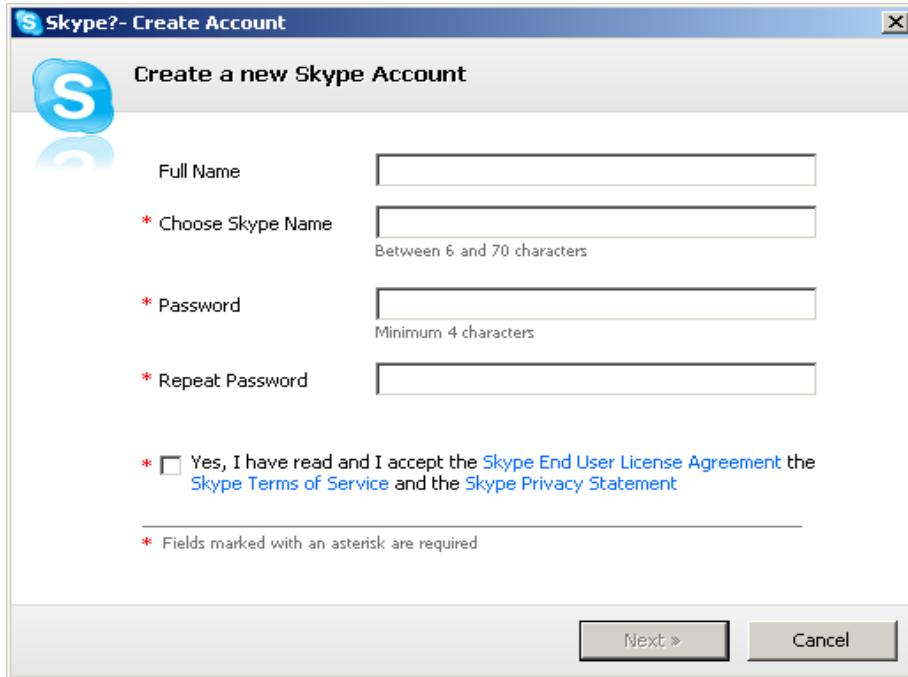


Figure 2-14

Enable the **Sign me in when Skype Starts** and wait for Skype to log you in.



Figure 2-15

When SiSky get the Skype Name automatically, the configuration of Port 1 is finished. Click **Next** to configure other ports by the same way.

Note: After these steps are complete, repeat step4 to configure the remaining ports and their Skype accounts. When the remaining ports are configured, there will be a green tick before every port. See Figure 2-16

Step 5: Install Skype Cables

Enable **Install Skype Cables** and click **Next** to continue.

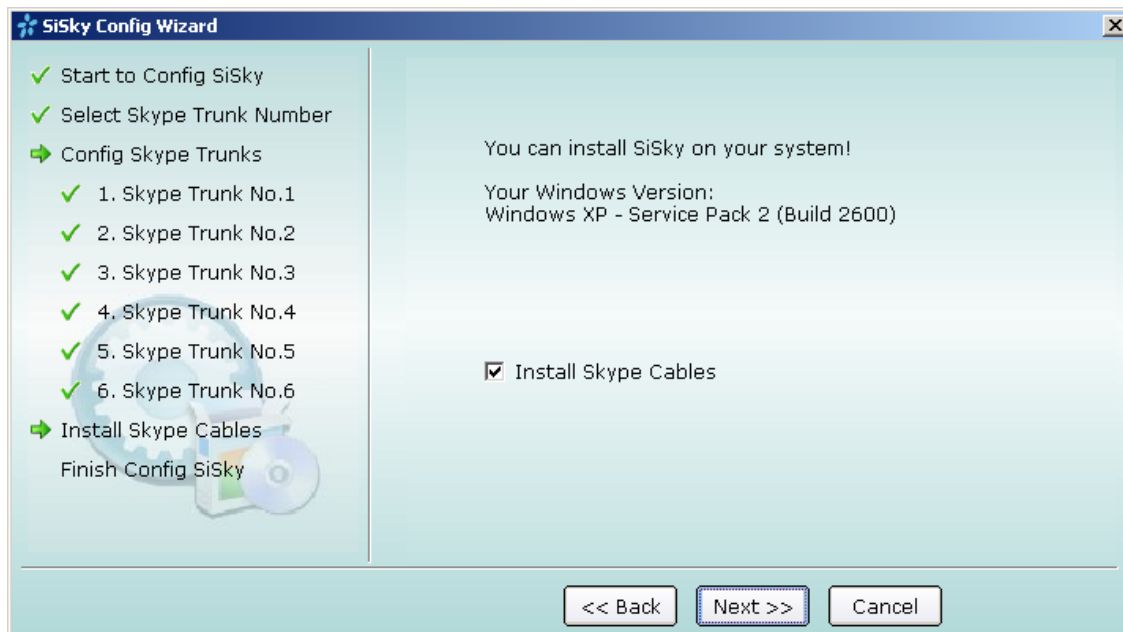


Figure 2-16

The following window maybe will appear during the system installation. Click **Continue Anyway**



Figure 2-17

Step 6: Finish Config. Wizard

Select the country you are living, and then click 'Finish'.

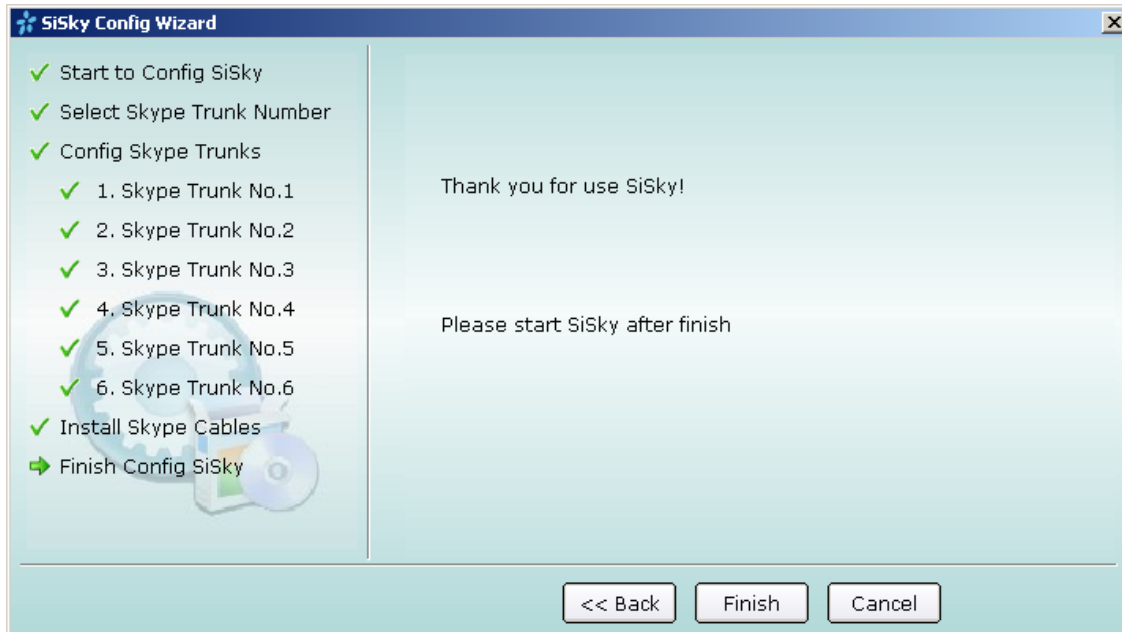


Figure 2-18

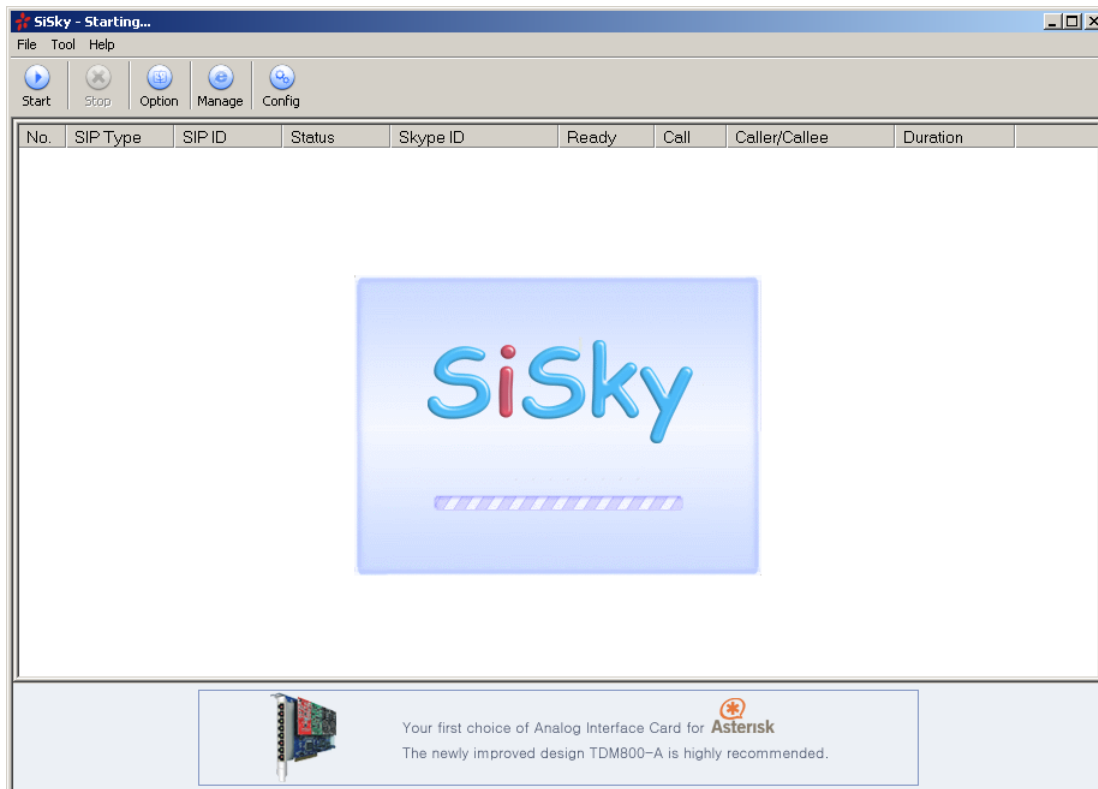
Step 7: Double-click the shortcut on desk to run the SiSky software

Figure 2-19

Step 8: Wait for all Skype IDs to log in. **Another program wants to use Skype** screen will come up. Click on the circle next to the first option, Allow this program to use Skype, and click **OK** to save.

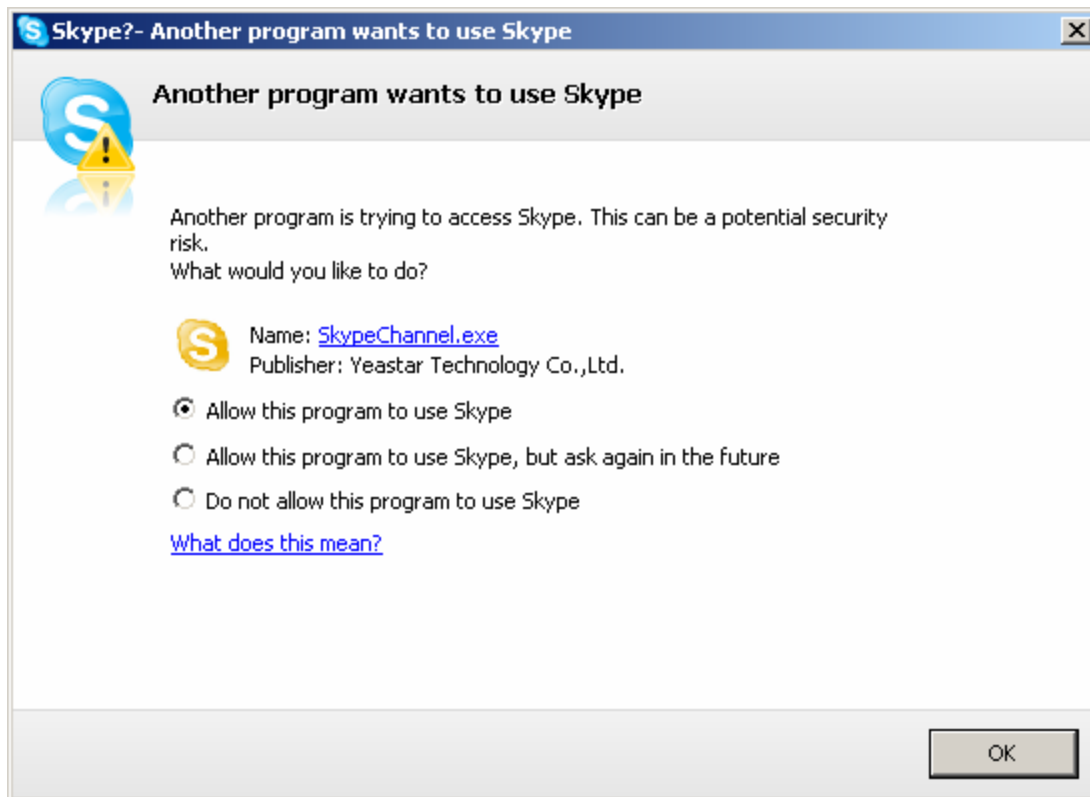
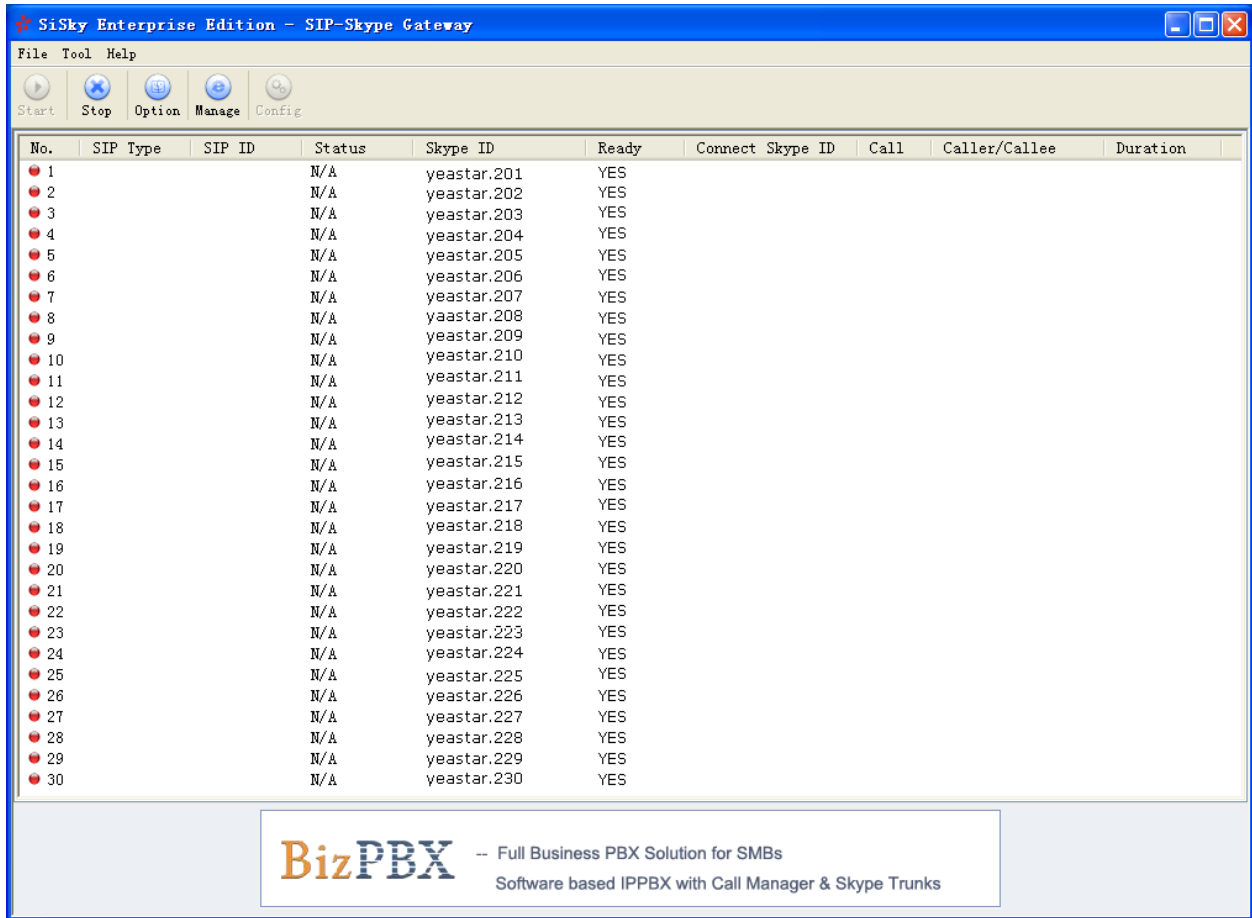


Figure 2-20

Step 9: Check if the status of all ports and Skype are absolutely normal as Figure 2-21. If Skype is launched successfully, the status of 'Ready' will show as 'Yes' on SiSky main interface.



The screenshot shows the SiSky Enterprise Edition - SIP-Skype Gateway application window. The window title is "SiSky Enterprise Edition - SIP-Skype Gateway". The menu bar includes "File", "Tool", and "Help". Below the menu bar are five buttons: "Start", "Stop", "Option", "Manage", and "Config". The main area contains a table with the following columns: "No.", "SIP Type", "SIP ID", "Status", "Skype ID", "Ready", "Connect", "Skype ID", "Call", "Caller/Callee", and "Duration". The table lists 30 entries, all with "N/A" in the "SIP Type" column, "N/A" in the "Status" column, and "yeastar.XXX" in the "Skype ID" column. The "Ready" column for all entries is "YES".

No.	SIP Type	SIP ID	Status	Skype ID	Ready	Connect	Skype ID	Call	Caller/Callee	Duration
1	N/A		N/A	yeastar.201	YES					
2	N/A		N/A	yeastar.202	YES					
3	N/A		N/A	yeastar.203	YES					
4	N/A		N/A	yeastar.204	YES					
5	N/A		N/A	yeastar.205	YES					
6	N/A		N/A	yeastar.206	YES					
7	N/A		N/A	yeastar.207	YES					
8	N/A		N/A	yaastar.208	YES					
9	N/A		N/A	yeastar.209	YES					
10	N/A		N/A	yeastar.210	YES					
11	N/A		N/A	yeastar.211	YES					
12	N/A		N/A	yeastar.212	YES					
13	N/A		N/A	yeastar.213	YES					
14	N/A		N/A	yeastar.214	YES					
15	N/A		N/A	yeastar.215	YES					
16	N/A		N/A	yeastar.216	YES					
17	N/A		N/A	yeastar.217	YES					
18	N/A		N/A	yeastar.218	YES					
19	N/A		N/A	yeastar.219	YES					
20	N/A		N/A	yeastar.220	YES					
21	N/A		N/A	yeastar.221	YES					
22	N/A		N/A	yeastar.222	YES					
23	N/A		N/A	yeastar.223	YES					
24	N/A		N/A	yeastar.224	YES					
25	N/A		N/A	yeastar.225	YES					
26	N/A		N/A	yeastar.226	YES					
27	N/A		N/A	yeastar.227	YES					
28	N/A		N/A	yeastar.228	YES					
29	N/A		N/A	yeastar.229	YES					
30	N/A		N/A	yeastar.230	YES					

At the bottom of the window, there is a logo for "BizPBX" with the text: "Full Business PBX Solution for SMBs" and "Software based IPPBX with Call Manager & Skype Trunks".

Figure 2-21

3. Connecting CCME with SiSky

For instance, Cisco Call Manager Express server's IP address is [192.168.5.240](#), SiSky server's IP address is [192.168.5.246](#). Take the voice code G711 as an example.

3.1 Configuring SiSky Server

3.1.1 Set SiSky Options

1. Set the Access IP Address

Click 'Option' on SiSky main menu.

- 1) Start SiSky When I start Windows
- 2) Add load balancing engine:

Note: this function will help system to equal call rate among all trunks.

- 3) Answer SIP incoming call immediately

Note: If disable this function, system will not sent reversal signal.

- 4) Access IP Address: [Cisco Call Manager Express IP address](#)

Note: Multiple IP Address separated by ';':

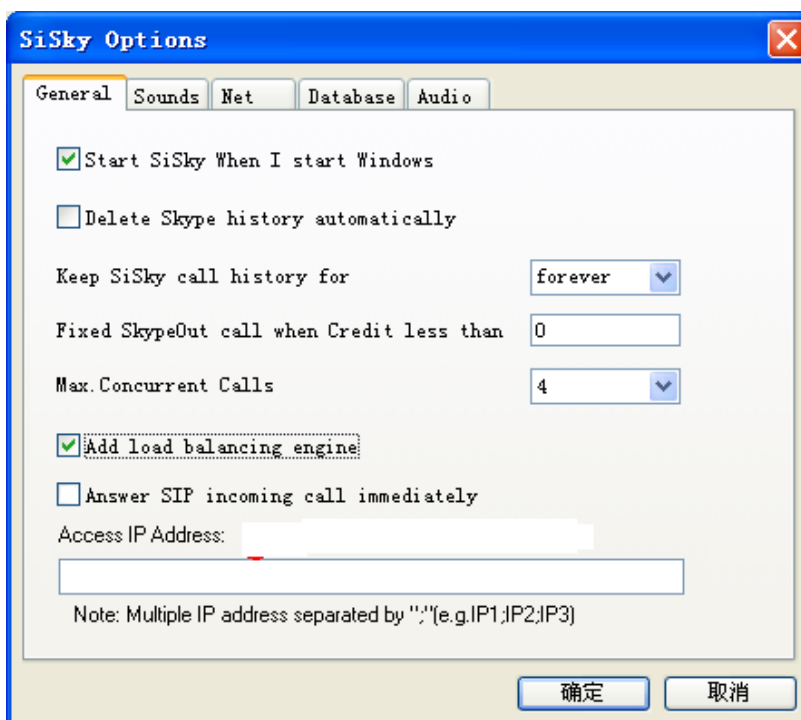


Figure 3-1

2. Net

- 1) Enable Direct Outward Dialing-One of Extension Mode: P2P mode.
- 2) Use STUN Server: Enable STUN Server

Note: If server is under router, please enable this function.

3) Local Port: SIP port

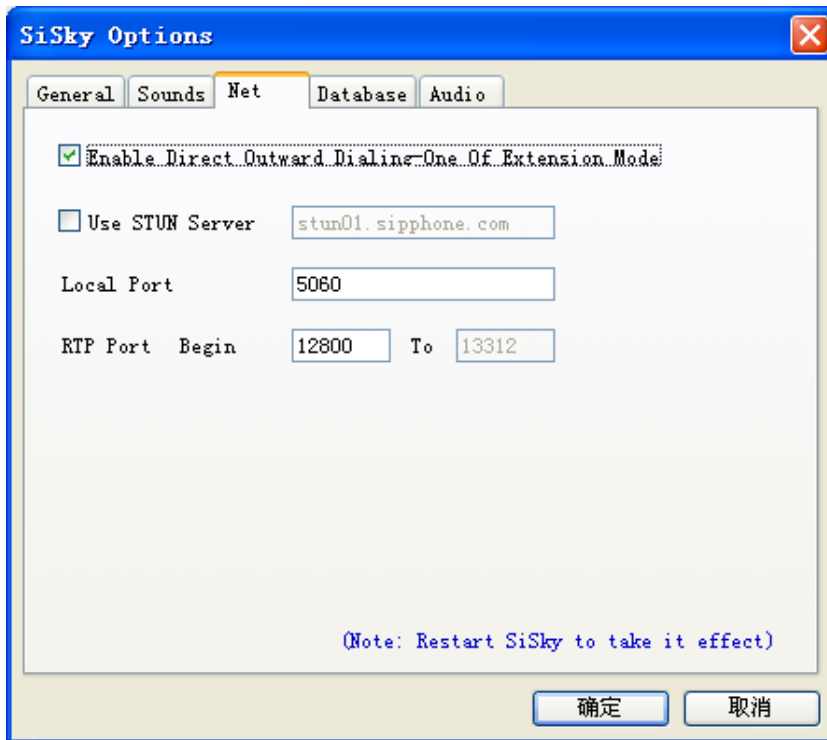


Figure 3-2

3. Audio

SiSky default code is G711. If you want to use G729 or G723, please click on the box and up it to the first rank.

Note: You need to restart SiSky software to activate the new configuration.

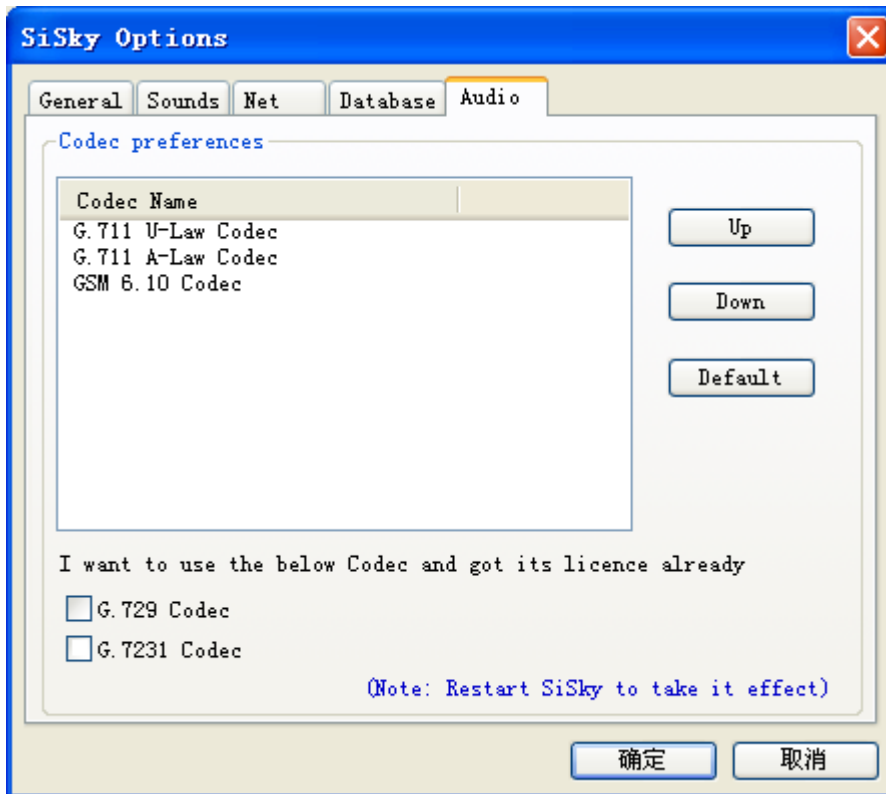


Figure 3-3

3.1.2 Set Dial Rule for SiSky

Step1: Open the SiSky Administration page.

Click 'Manage' button to enter into the page.

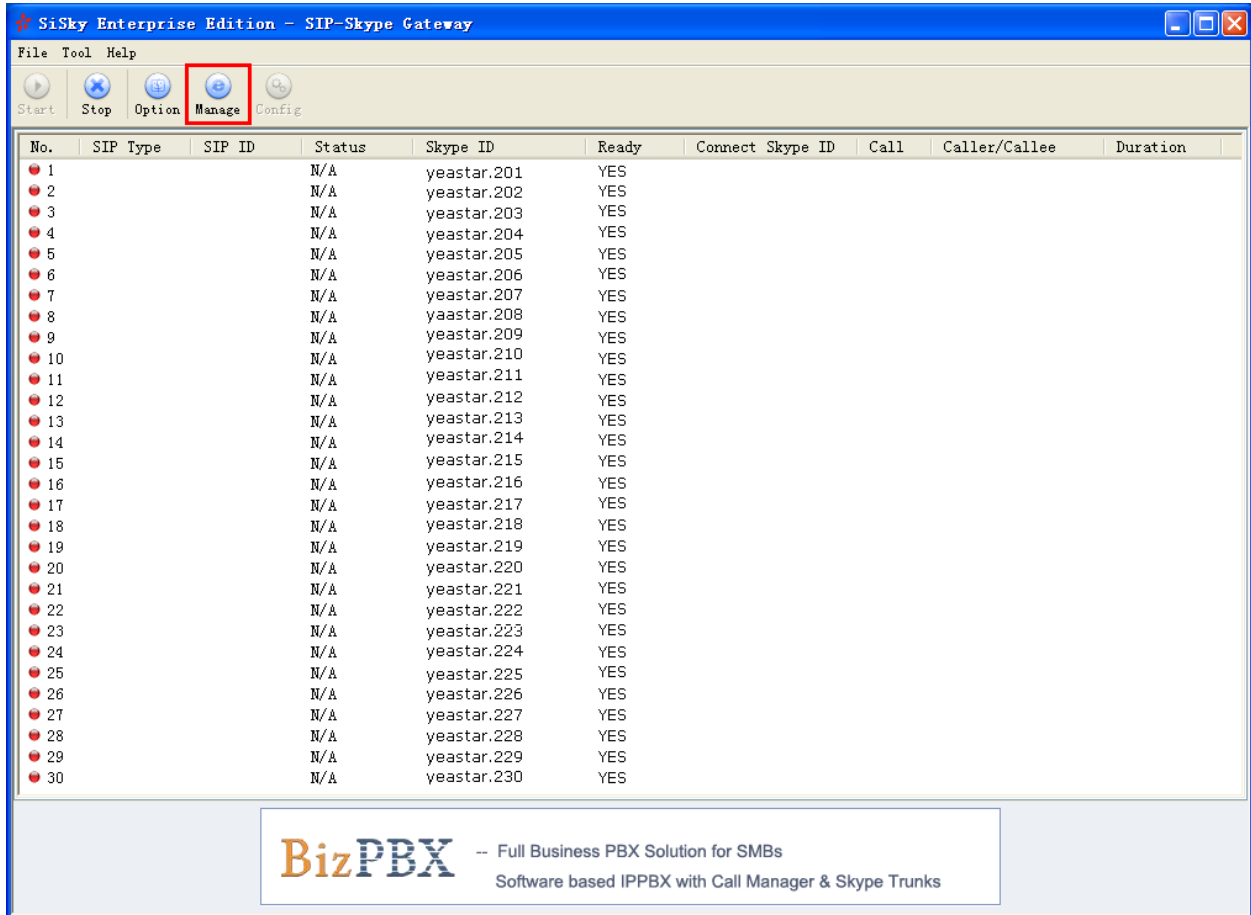


Figure 3-4

Step 2: Admin Log In

Enter the user name and password

The default user name is **admin**, and password is **password**

Step 3: Set Dial Rule

Making calls through Skype, one have to conform to the Skype dialing scheme as well as calling through PSTN. Maybe you had already got used to PSTN scheme and not accustomed to Skype rules. Therefore, **Dial Rule** settings will assist you to make Skype calls based on traditional PSTN calling habits. Keep the dialing habit as same as PSTN.

For example, a PSTN user in the mainland of China wants to make an international call IDDD (international direct distance dialing), which format is **00+country code+area code+telephone number**; make a domestic call DDD (domestic distance dialing), which format is **0+area code+telephone number**; While the SkypeOut format, no matter of

domestic or international calls, is **00+country code+area code+ telephone number**.

An International call:

1) A Chinese user calls to Canada in traditional **PSTN format**: the country code is 1, the area code is 416, phone number is "12345678", then he would dial: **00 +1+ 416 + 12345678**;

2) A Chinese user calls to Canada in **SkypeOut format**: the country code is 1, the area code is 416, phone number is "12345678", then he would dial: **00 +1+ 416 + 12345678**;

In this example, the PSTN and SkypeOut format for an international call is the same.

A Domestic Distance call:

3) A Chinese user in Peking calls to Shenzhen in traditional **PSTN format**: the area code is "755", phone number is "12345678", then he would dial:

0+755+12345678;

4) A Chinese user in Peking calls to Shenzhen in **SkypeOut format**: the area code is "755", phone number is "7571234", then he would dial:

00+86 (country code)+755+12345678;

Therefore, in order to not change the PSTN dialing format, this user can take advantage of dial rule to set it as below for simple:

substitute **00** for **00**; and substitute **0** for **0086** as Figure 4-5:

When the number begins by 00, SiSky will identify it as international call requirement. When the dialing call begins by 0, SiSky will identify the 0 as domestic call requirement and transfer it to 0086 automatically to conform SkypeOut format.

Why we substitute 00 for 00? Say it simply, to prevent 00 matches with 0. Because both the international and domestic calls are begin by 0, for fear of replacing **00141612345678** with **00860141612345678**.

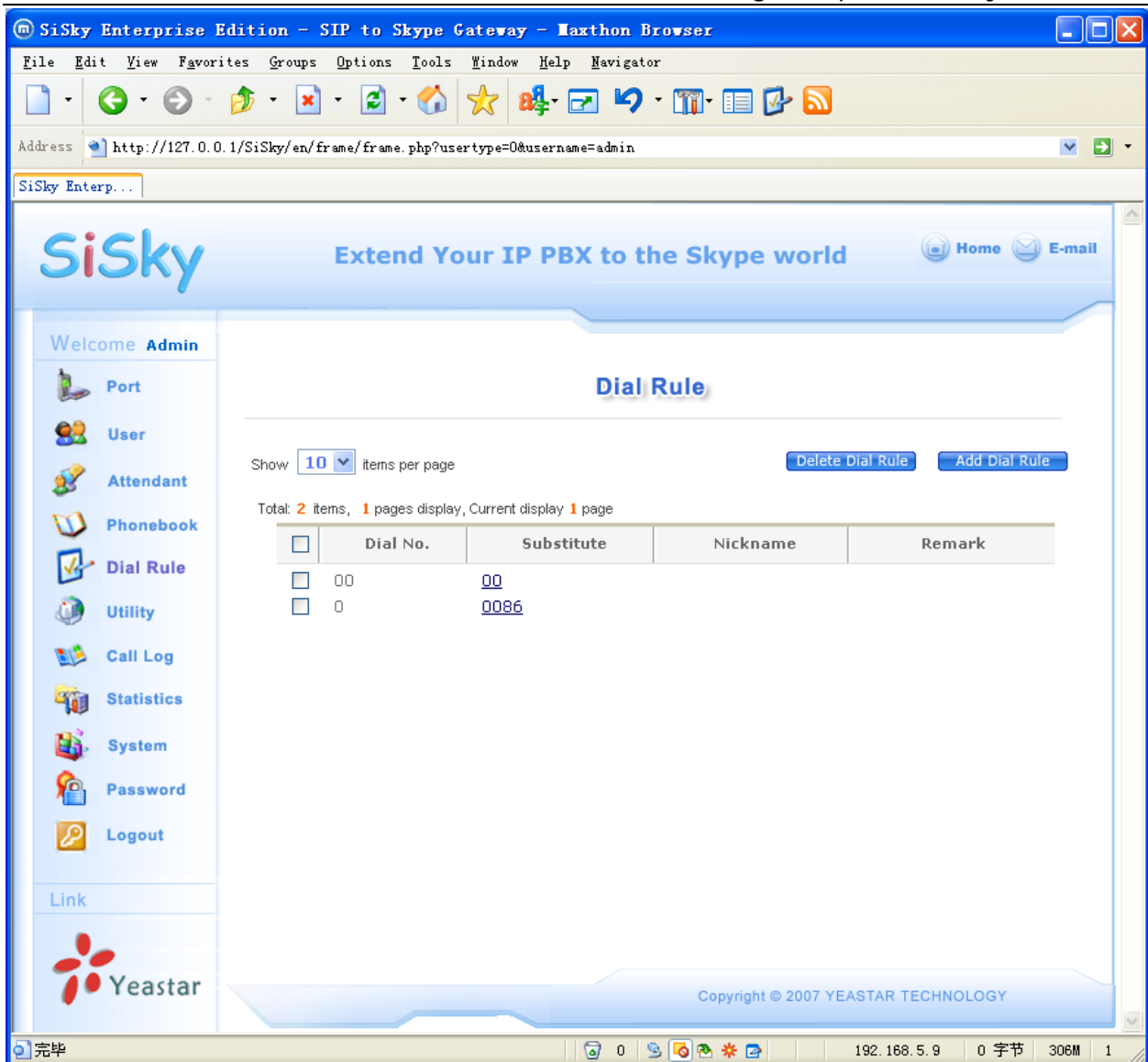


Figure 3-5

3.1.3 Set Skype incoming call route in SiSky

E.g. Configuration the **Port1** incoming route.

Step1: Open the SiSky Administration page → Port configuration page.

Step2: Choose Port1.

Example, If have skype user make callin, let it call to SIP Server's Extension number or IVR Number **7777**, and the SIP Server's IP Address is 192.168.5.246. so the configuration like below.

Direct In: 7777@192.168.5.246 (extension number@sip server's ip address)

Busy Transfer: selected "To Any Idle Port in this server"

Note: other ports settings like port1.

Port List

Port 1 Setting

Trunk Error! Please ensure if it is available.

SIP mode

Work as Asterisk'/IPPBX's Extension

Work as Asterisk'/IPPBX's Trunk

SIP Account:

SIP Account:

Password:

Password:

SIP Proxy: : 5060

DTMF Mode: RFC 2833

SIP Domain:

STUN: Disable

DTMF Mode: RFC 2833

Expire Time: 1800

STUN: Disable

Skype Profile

Allow this Skype Status to be shown to everyone

Use Skype: Yes

Skype Status: No

Skype ID:

Skype Balance: 0

Other

Direct In:

Extension Number@SIP Server IP Address

(always dial this number for incoming calls)

Direct Out:

(always dial this number for outgoing calls)

No Transfer

Busy Transfer: To Any Idle Port in this Server

To Customized Skype ID

Figure 3-6

3.2 Set Cisco Call Manager Express

This section only introduces the connectivity part of Cisco Call Manager Express and SiSky. If you have any other questions regarding the configuration of Cisco Call Manager Express, please refer to Cisco Call Manager User Manual.

Connect CCME to SiSky Server

Config the dial peer in CCME, like below:

```
dial-peer voice 30 voip
translation-profile outgoing SIP CALL
destination-pattern 3T
session protocol sipv2
session target ipv4: 192.168.5.246
session transport udp
dtmf-relay rtp-nte
codec g711ulaw
ip qos dscp cs5 media
ip qos dscp cs4 signaling
no vad
!
!
```

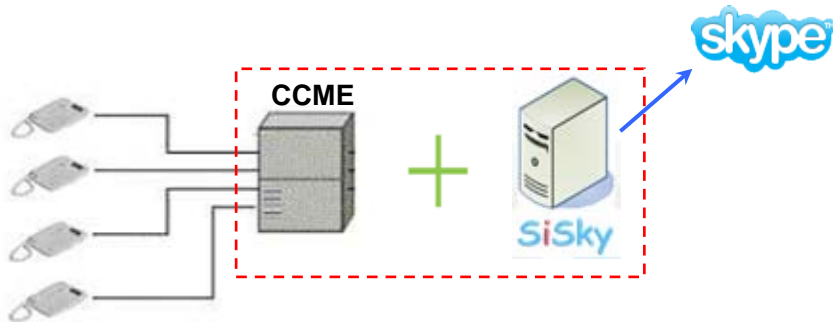
Note: 192.168.5.246 is SiSky's IP Address.

4. Sample

1. Application Demands

- 1) Utilizing SiSky as Skype landline for Cisco Call Manager Express
- 2) Make both domestic long distance and international calls at low rate

2. Application Environment



3. Test

1) Make call out via Skype

If extension 'ipphone' wants to make calls through Skype, dial like this: 00 + country code + city code + telephone number or 00 + country code + mobile phone number.

If you want to dial like this: 0+city code + phone number or 0 + mobile phone number, please configure the Dial Rule in sisky, see chapter 3.1.2

2) Receive the incoming call from Skype

Skype user make call to the SiSky server's skypeid, it will auto call to the extension number 7777.