

A walk with the Skype VoIP client

PHONE BANDIT

The free but proprietary Skype is a popular calling option.

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If you use Voice-over-IP (VoIP), you are probably familiar with the feeling that the world just keeps shrinking. Calling a friend in Japan cost a fortune just a few years ago, but thanks to VoIP, you can now call remote corners of the globe for free, and without sacrificing voice quality – assuming you have a computer with a broadband Internet connection. VoIP technology is putting a lot of pressure on the telcos. Niklas Zennström, the inventor of the Skype [1] VoIP client, recently stated in a Spiegel-Online interview that Vodafone is trying to prevent wireless high-speed Skype access to the Internet. This is unlikely to faze Niklas Zennström: his free client is currently storming the desktops – Skype is easy to install and easy to use, and it offers usable voice quality.

Of course, some critics have taken aim at Skype: the program is closed source, so you have trust the company's promises when it comes to security. And the client uses a closed, proprietary protocol, rather than keeping to known VoIP

standards, at least at the present time.

Does this make Skype a bad thing? One thing the program has going for it is the fact that free packages are available for various distributions. Skype typically works on the first attempt, and it normally doesn't trip up over NAT or firewalls. But there is no alternative to Skype if you want to talk to the innumerable Skype users. A few alternative free VoIP clients exist, but using them means doing without talking to Skype users.

You may be wondering how the makers of Skype make money if the client is free. The answer is that Skype makes more of its money from commercial value-added services (see the "Skype Services" box). Skype bills you if you call landlines via SkypeOut, or if you want your own Skype phone number.

Installing and Searching for Buddies

The installation procedure for version 1.2 is fairly unspectacular; version 1.2 is the latest offering for Linux users. The

download area of the website has binary packages for Debian, Ubuntu, Suse, Red Hat, and Mandriva. Download the package for your distribution and use your distribution's package manager to install. There is no need to resolve software requirements, and you will not typically need to allow any ports on your router. Skype uses Ports 80 and 443, which are used for HTTP and/or SSL traffic anyway – and it is unusual for administrators to block these ports for any other protocols.

After completing the install, press [Alt-F2] and enter *skype*. This command gives you a window with two tabs – as a new user, you will want to select *New Users – Create a Skype Account*. Enter your name, a password, and some kind of email address in the appropriate boxes, and accept the conditions of use (Figure 2) – you are then logged on. Once you have an account, you can log on via the *Existing Users – Log in to Skype* tab. You probably want to call another Skype user: to do so, you need to



Figure 1: You can download Skype on the Internet for no charge.

know if that user is online right now.

Click the magnifying glass icon in the toolbox to launch the search tool, and enter the name of the subscriber you want to talk to. If you do not know this person's Skype name, but you do know their date of birth, home address, or mobile phone number, you can try your luck in the *Advanced* field.

If the subscriber has entered this information in his or her profile, the search should be successful. If so, the name appears in the lower part of the window. Right click the name to drop down the context menu, and use the *Add to Contacts* entry to add the name to your contact list.

The name appears in the list below the *Contacts* tab. An authorization dialog follows. The other party is asked if he or she wants to talk, and you can specify if the target is allowed to see when you are online. The icon next to the entry in the *Contacts* tab displays the current status. If the icon is green, your target is online. You can set your own status via the small icon in the bottom left of the window. This allows you to tell potential callers that you don't want to

be disturbed or that you are not at home.

Speaking...

To get started, connect your headset to your sound card, select the name of the person you want to call, and click the green phone logo. The target's PC loudspeaker will now start to ring, and the target can accept the call. If communication problems occur, you can start off by chatting. To do so, right click the required name in the *Contacts* tab, and select *Start a Chat* (Figure 3) in the drop-down menu. You can use the same menu to send your buddy your holiday snaps or other files. Just right click, select *Send a file*, and point to a file on your own PC to send. However, this kind of file transfer is fairly slow. Skype just isn't designed for high-volume data transfer operations.

If you are having trouble with the connection because the volume is too low, you get an echo, or you can't hear the person at the other end, a number of things might have gone wrong. First check if the headset is correctly connected to the sound card. Are the volume controls set correctly? The Skype [2] website gives you more help, al-



Figure 2: New to Skype? You need to register first. To do so, enter your name, an email address, and a password.

though it must be said that the connection usually works without changing any settings. You may experience an echo during voice communications, but you can reduce this echo by reducing the microphone volume.

If you want to use the commercial SkypeOut service (see the “Skype Services” box), change to the *Dial* tab. Then use your keypad to type the number of a landline or mobile phone. The *Call List* tab takes you to a call management feature. This is also where you access the voicemail service: you can listen to calls that arrived while you were out or check an overview of the calls you have made. Skype also supports telephone conferencing with up to five lines. Linux users

can take part in these conferences, but they can’t host a conference at present.

Look Who’s Listening

If you need to hold a telephone conference to discuss some important business, security will be an important issue. You definitely don’t want your competitors listening. Security is always an issue with proprietary software: according to Skype, the exchange is protected by the asymmetric AES algorithm, with a 256-bit key. The company uses a 1024-bit RSA key to handle the key exchange, they say, but you can’t check this, as Skype is not willing to publish the source code. And even if you enable encryption, it is dropped as soon as you enter a PST network.

Skype Tweaks

You can change a few security preferences. Click on the *Privacy* tab in the *Tools* menu, where you can specify who is allowed to chat with you or call you. If you prefer not to give the whole world access, you can restrict your availability to the members of your contact list.

General lets you decide whether Skype should automatically look for program updates. This is also the place where you decide how long you have to be absent before your status changes. If you leave your computer running while you are out, you might annoy business partners who try to reach you but can’t get through.

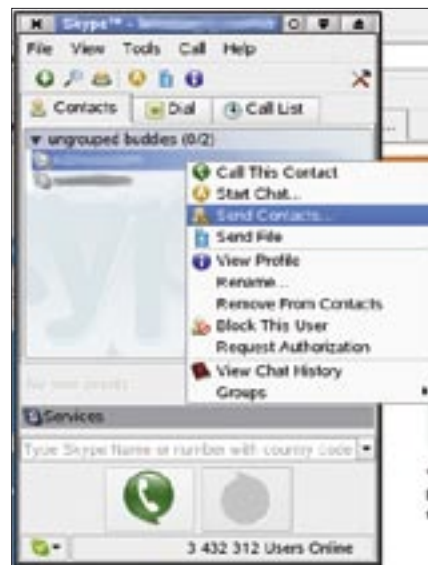


Figure 3: Skype’s context menu gives you chat and phone functions, along with file transfer.

The *Hand/Headset* tab lets you specify the interface that your sound card uses – this is typically */dev/dsp*. If this does not give you any results, try another interface. The *Call Alerts* and *Chat Alerts* tabs allow you to specify what happens when a call or chat request comes in. Do you want a ring tone or chat window, or would you prefer a message? The *Advanced* tab lets you specify which ports Skype should use. If you prefer not to use the standard ports, 80 and 443, you can enter another port number above 1024. You may need to allow this port on your router.

Skype Services

SkypeOut gives you the ability to place calls in PST or mobile networks. Before you can make any calls, though, you need to credit your account via PayPal. You can then place calls while your balance is in the black. Of course there are different rates for different countries [3]. Although you are really just paying national call rates, because calls use the Internet up to the border of the target national network, there are still major price differences: a call to the Solomon Islands costs 1.08 Euros per minute, whereas a call to Japan costs just 0.02 Euros a minute.

SkypeIn is another service. You are given your own phone number so that people can call you from landlines. Charges are at about the same level as normal telephone rates. If you have a Berlin number, but you happen to be in Sydney, your

friends in Berlin are just charged local rates. You are given a block of ten numbers, which cost you 30 Euros per year or 10 Euros for three months.

Skype Voicemail is a kind of virtual telephone answering machine. If you are a Skypeln subscriber, you are entitled to a free mailbox with your phone number, and this guarantees your availability.

Festoon is a tool that brings video support to Skype; unfortunately, it only works on Windows at this time of writing.

Skype Zones is a service for travelers and laptop users. The Boingo tool gives you wireless Skype via public hotspots in Internet cafés – and even on planes. The service costs 6.50 Euros a month – but again, this software is restricted to Windows users.

Staying Friends

Skype is a highly functional and practical VoIP solution for home use. But if you prefer open source and open standards, or if you are worried about the security aspects, you might like to check out one of the alternatives discussed in the other articles in this issue. And before you start calling your friends on the other side of the world, be sure to check the time zone. ■

INFO

[1] Skype website: <http://www.skype.com>

[2] Troubleshooting Skype problems: http://support.skype.com/?_a=troubleshooter

[3] Price list for calls to PST networks: http://www.skype.com/products/skypeout/rates/all_rates.html