MICROMEDIA INTERNATIONAL telecommunication & multimedia	*Micromedia International*	**Technical Study** **SIP configuration for Alert**

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SIP driver configuration in ALERT

Réf. : ETT_20081218_000001.docx

This document specifies how to configure Alert to use with the SIP driver for VOIP.

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Attached Documents:

Of all the media available to make calls with ALERT, the VoIP driver offers the possibility to interface with IP telephony equipment in accordance with the SIP (Session Initiation Protocol) protocol.
This document describes the configuration of the SIP Alert driver and on call operators using this medium.

Prerequisites

VoIP (Voice Over IP), as its name suggests, is based on the IP protocol. An IP network interface is required to use this driver.

The VoIP Alert driver is subject to license. The user must have acquired a license based on the number of simultaneous calls (using SIP) desired.

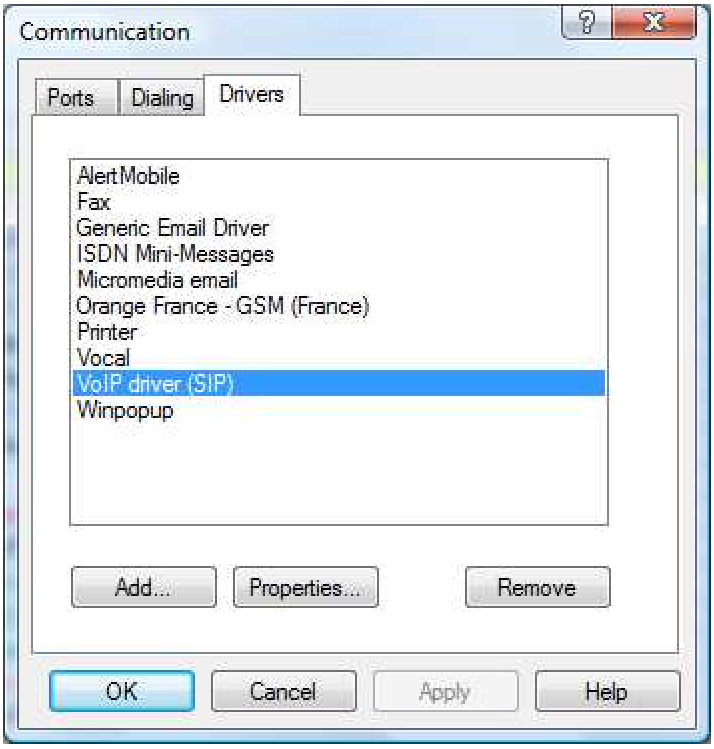
Devices that Alert has to communicate with need to be compatible with the SIP protocol, they may be telephones, PBXs, SoftPhone...
These devices must meet the following specifications:

Technical specifications:

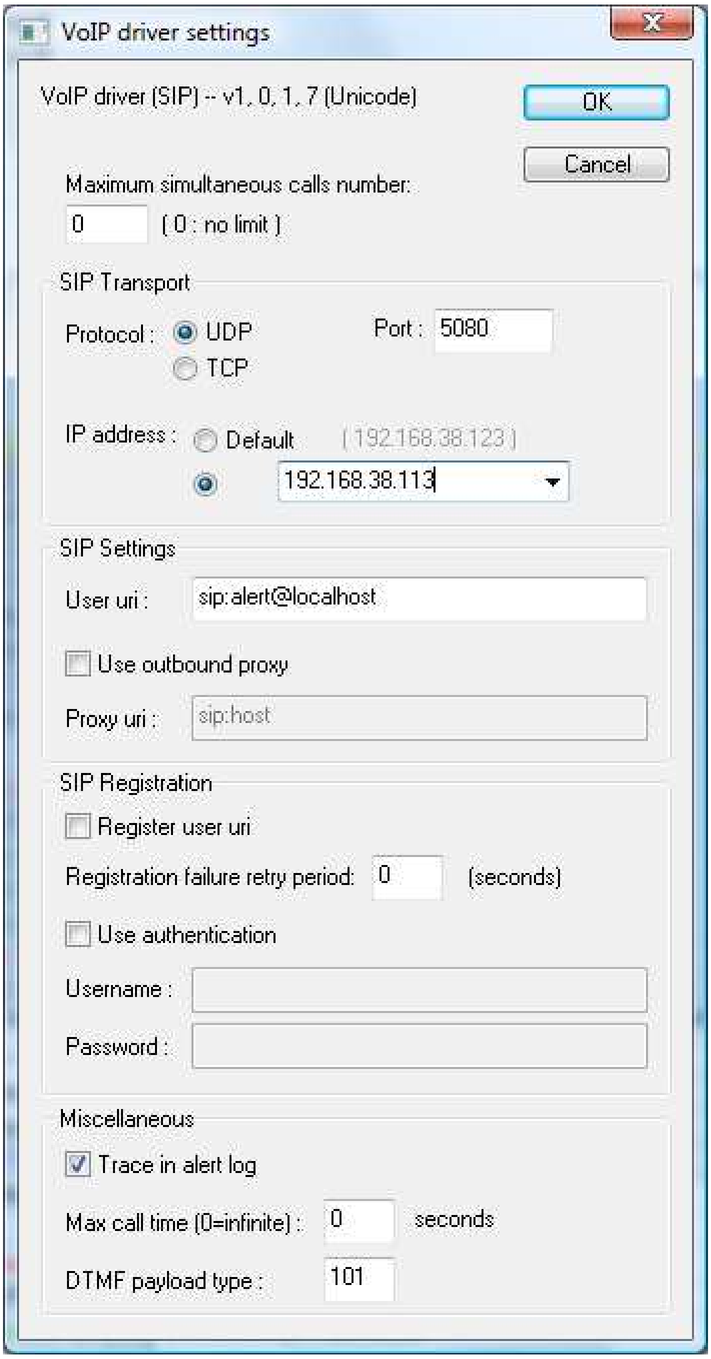
SIP protocol supported: RFC 3261
Audio formats supported: G711 Mu Law and G711 A Law
DTMF management: RFC 2833

ALERT configuration

The driver configuration is done through the properties box. Menu "Configuration / Communication .... Then select the "Drivers" tab.



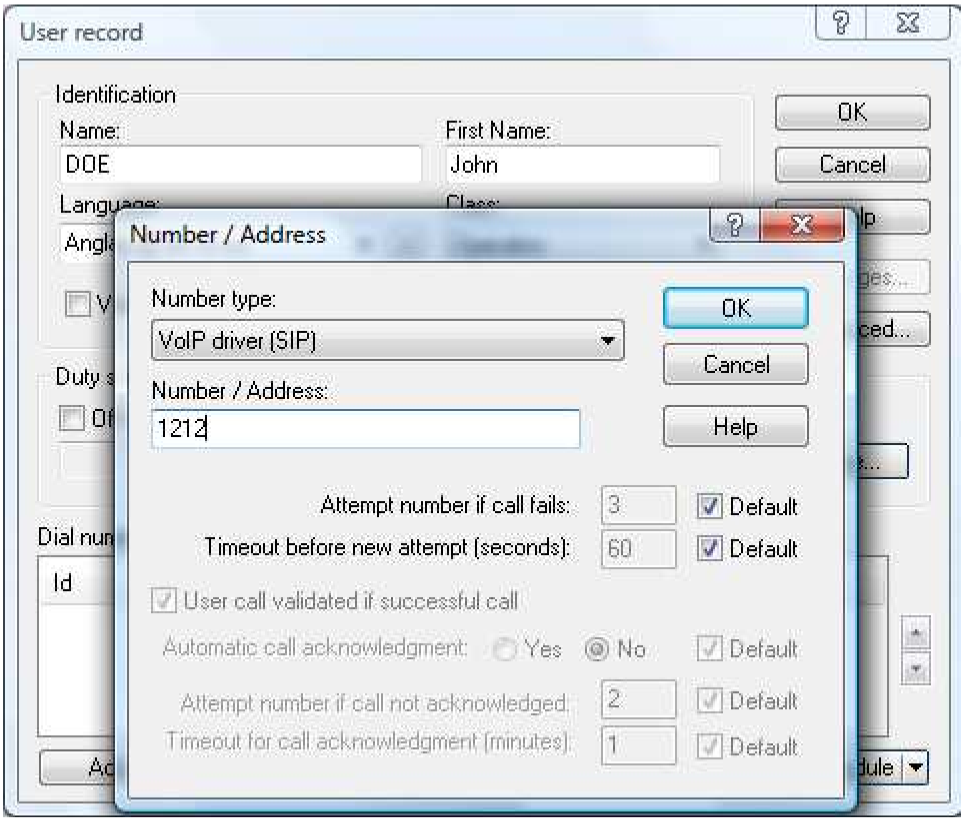
Select the driver "VoIP Driver (SIP)" and press "Properties ...".
The properties box of the driver will appear.



The values of the parameters to specify will depend on the telephone architecture. Depending on the telephone system, three types of configuration stand out:

- Setup without proxy
- Setup with proxy without registration (Registar)
- Setup with registration

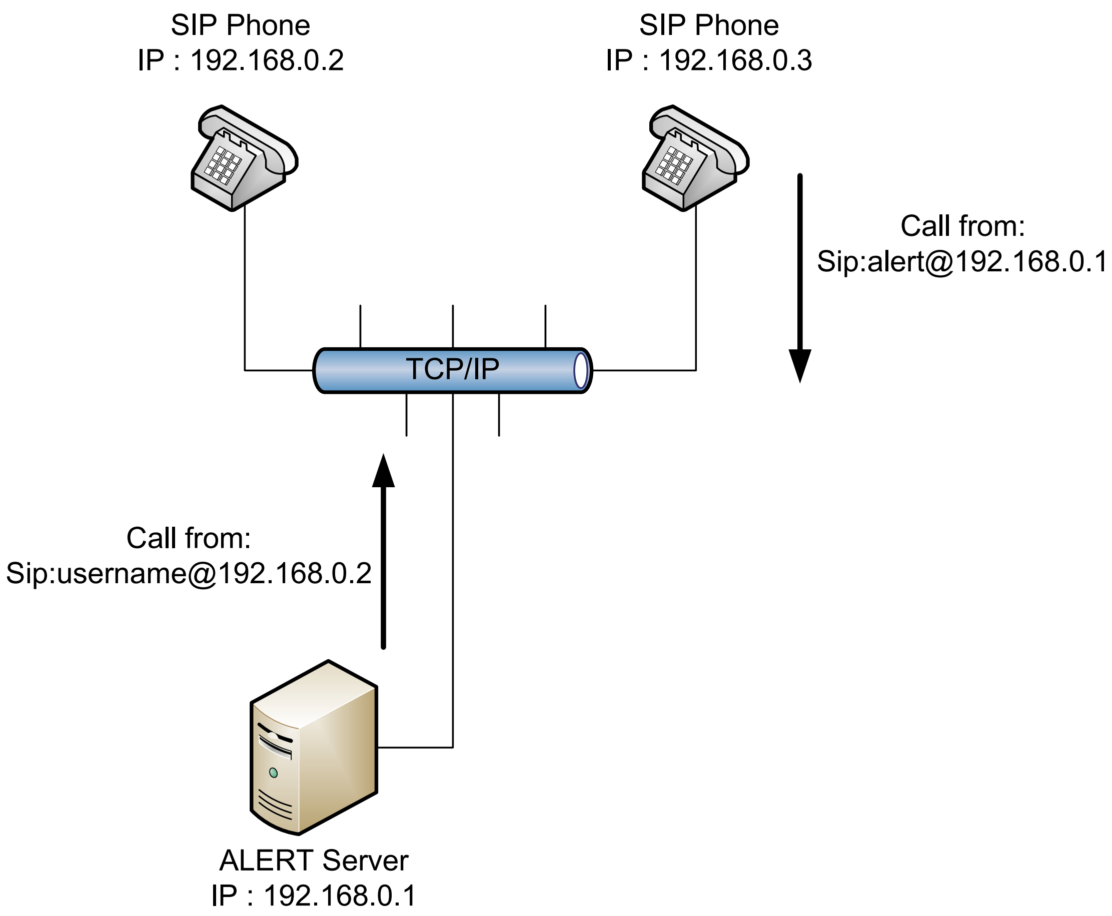
In the user record properties, the telephone numbers supplied must be associated with the VOIP driver. Here is a sample configuration with a SIP number.



These numbers will also be dependent on the telephone architecture.

Setup without proxy

In this configuration, ALERT calls SIP phones or softphones directly.
Since there is no intermediary (proxy or PBX) for routing calls, ALERT must know the IP addresses of each device.

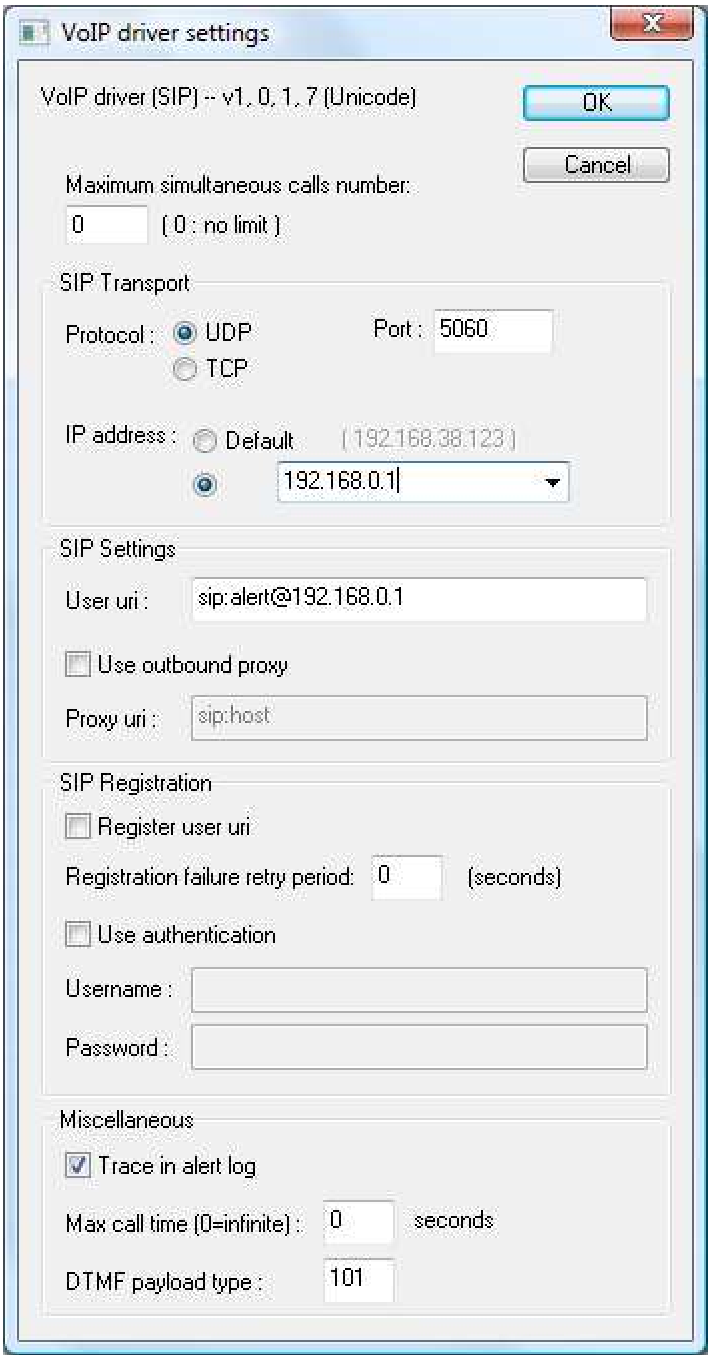


SIP driver

To configure the driver, here is an example of an installation without a proxy.

For SIP transporting, the values to indicate are the default values of the SIP protocol. The IP address to choose is the one of the machine on the network where the devices to contact are located. The same address will be used by the devices to call ALERT

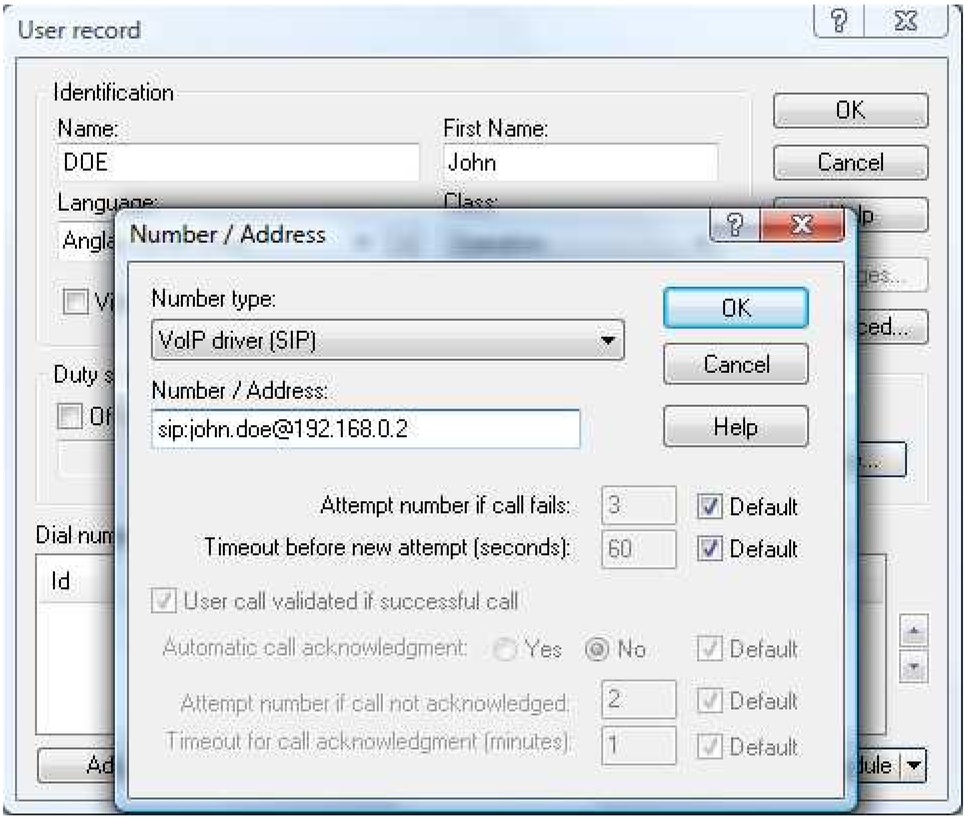
The uri of the user matches the call number of ALERT which is dialed from the SIP phones.



User record

Regarding the setting of on call operators: For the number to call, you must indicate the complete sip address (uri) of the correspondent.
Sip:username@ipaddress:port

The port is optional if you use the default sip port: 5060.



Usage examples

This type of configuration is used for small installations or for testing. The SIP equipment is not managed centrally.
This configuration also allows you to have a softphone on the same machine as ALERT.
In this case, you need to set the port number to, for example 5080, to transport sip for ALERT and 5060 for the softphone. Both programs will then be able to coexist.

Alert will call address sip:username@192.168.0.1
The softphone will call ALERT using sip:alert@192.168.0.1:5080

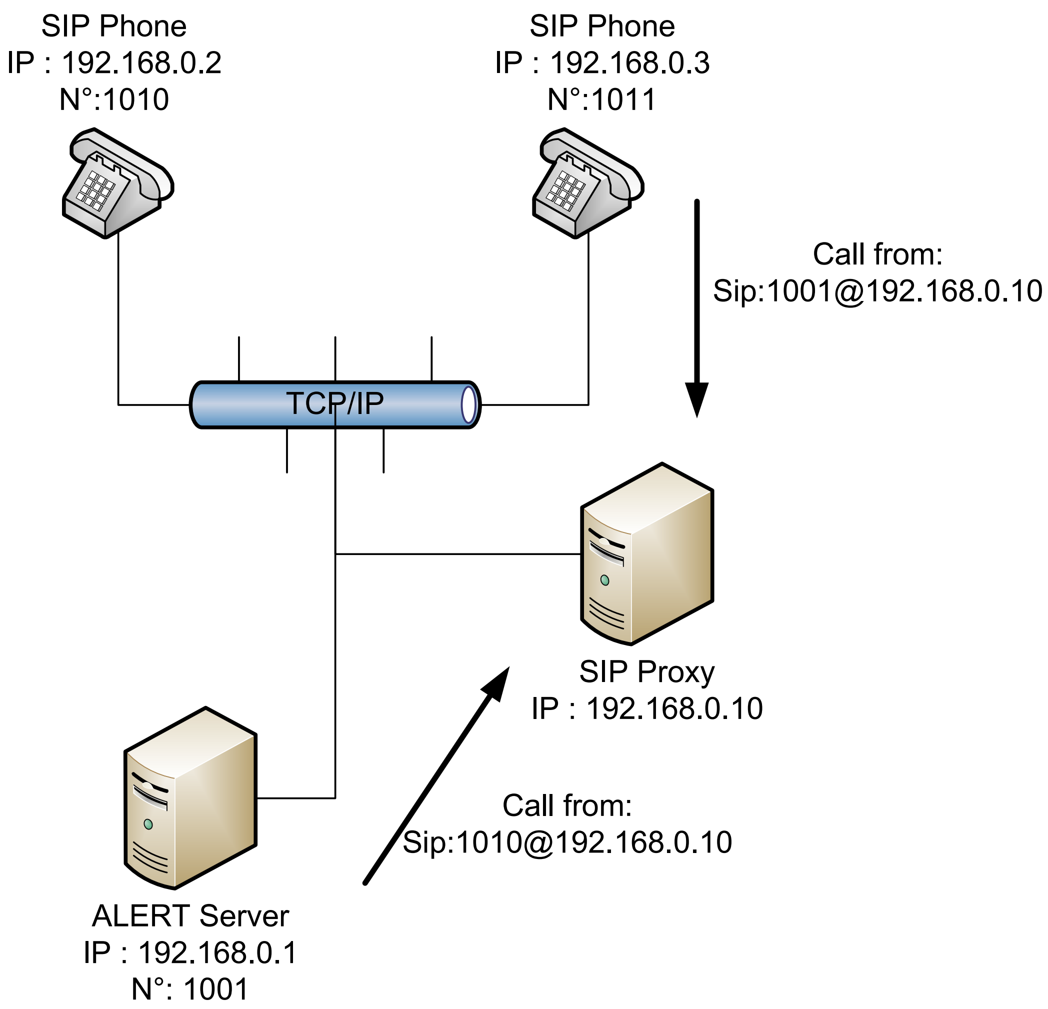
Setup with proxy without registration

Proxy configuration with no registration

With this architecture, ALERT no longer needs to know the IP addresses of the phones. The proxy, if it is an IPBX, will generally manage telephone number vs. IP address correspondence.
User record configuration is thus simplified; only their phone number needs to be specified.

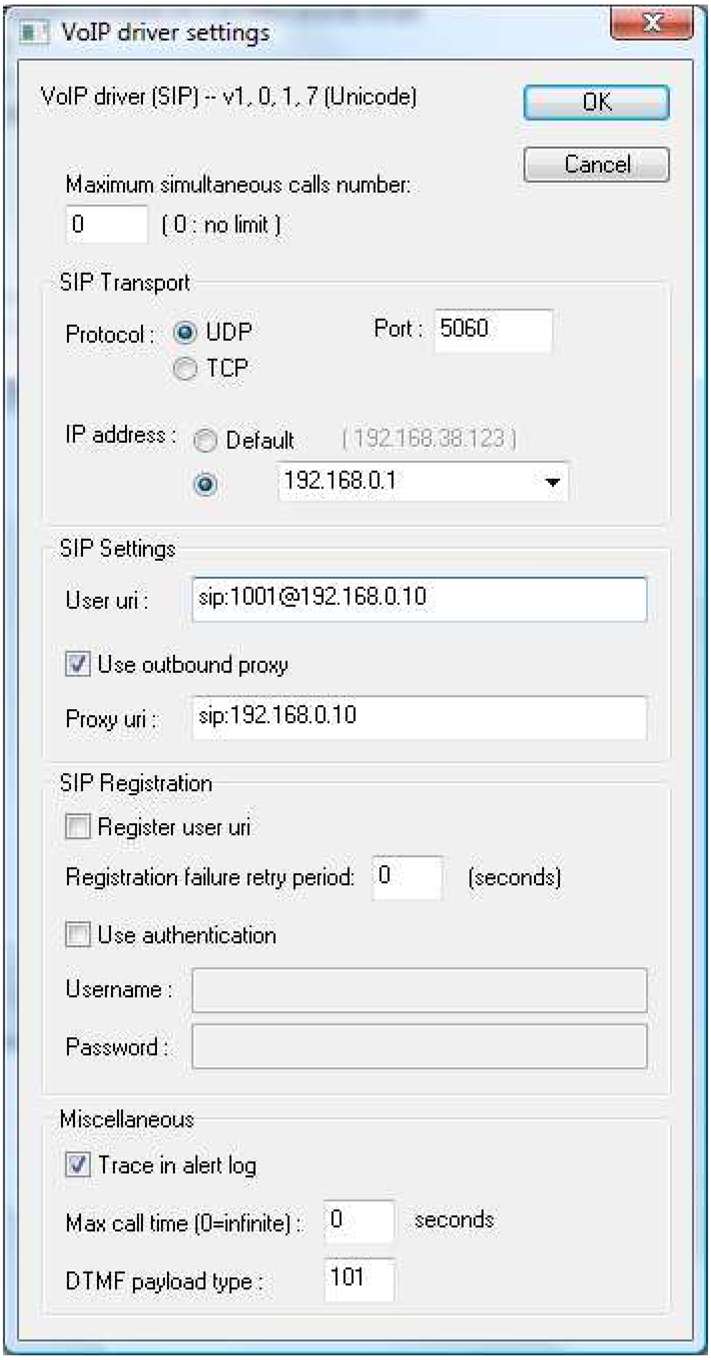
With this type of installation, the uri's are all of type: sip:username@realm, where the realm field is the domain name (usually the address of the proxy or the name of the machine) and the username field is a phone number.

In this case, all calls go through the proxy.



SIP driver

In this properties box, the proxy field needs to be filled in.
The uri of the user can, as in the following example, be a phone number.



User record

The configuration of the user record is made much simpler. All the addresses having the same proxy, ALERT offers the possibility to specify the full uri, just like the setup without proxy or only the phone number.

In this case: sip:1010@192.168.0.10 or simply 1010.

Usage example

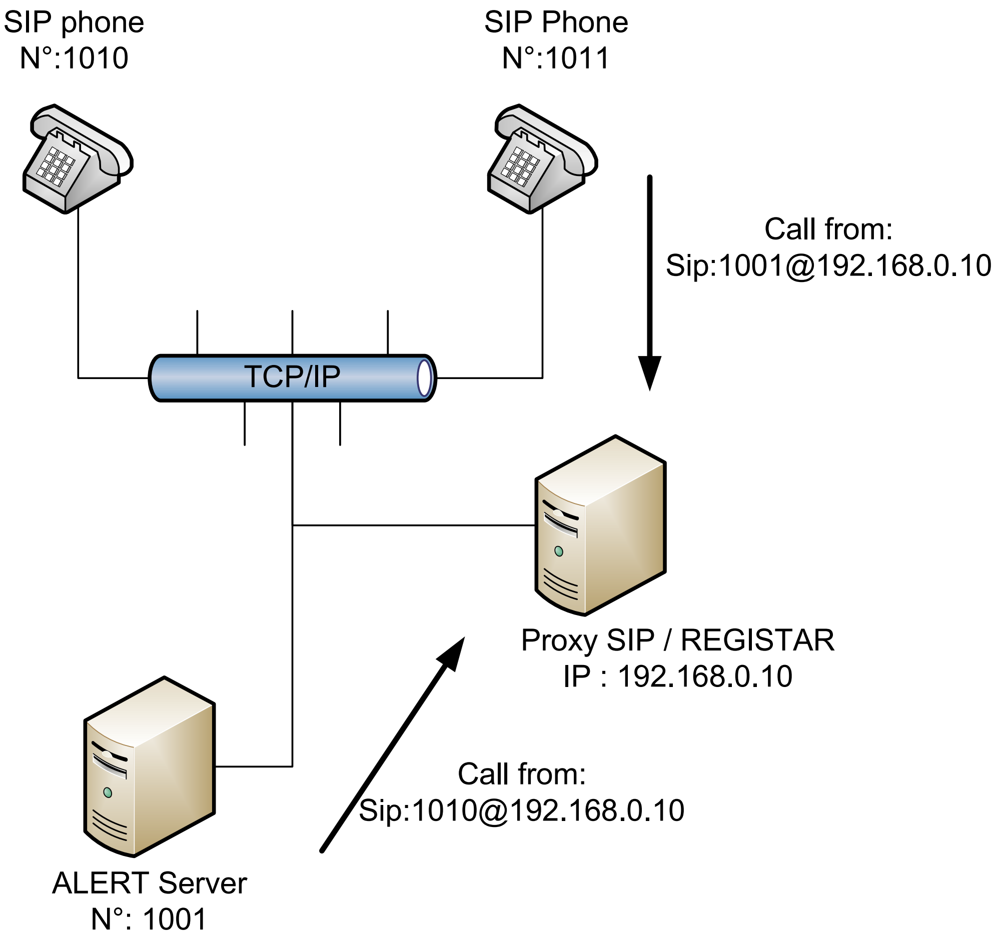
This is the type of setup to use with the Cisco CallManager. The CallManager is the proxy. The table of correspondence between telephone numbers and IP addresses is managed by the proxy.
ALERT must also have a phone number if operators want to contact the voice server application.

This configuration also corresponds to the use of the MV-310 VoIP gateway / GSM. In this case, the proxy is the gateway and ALERT can then only call via this gateway.

Setup with registration

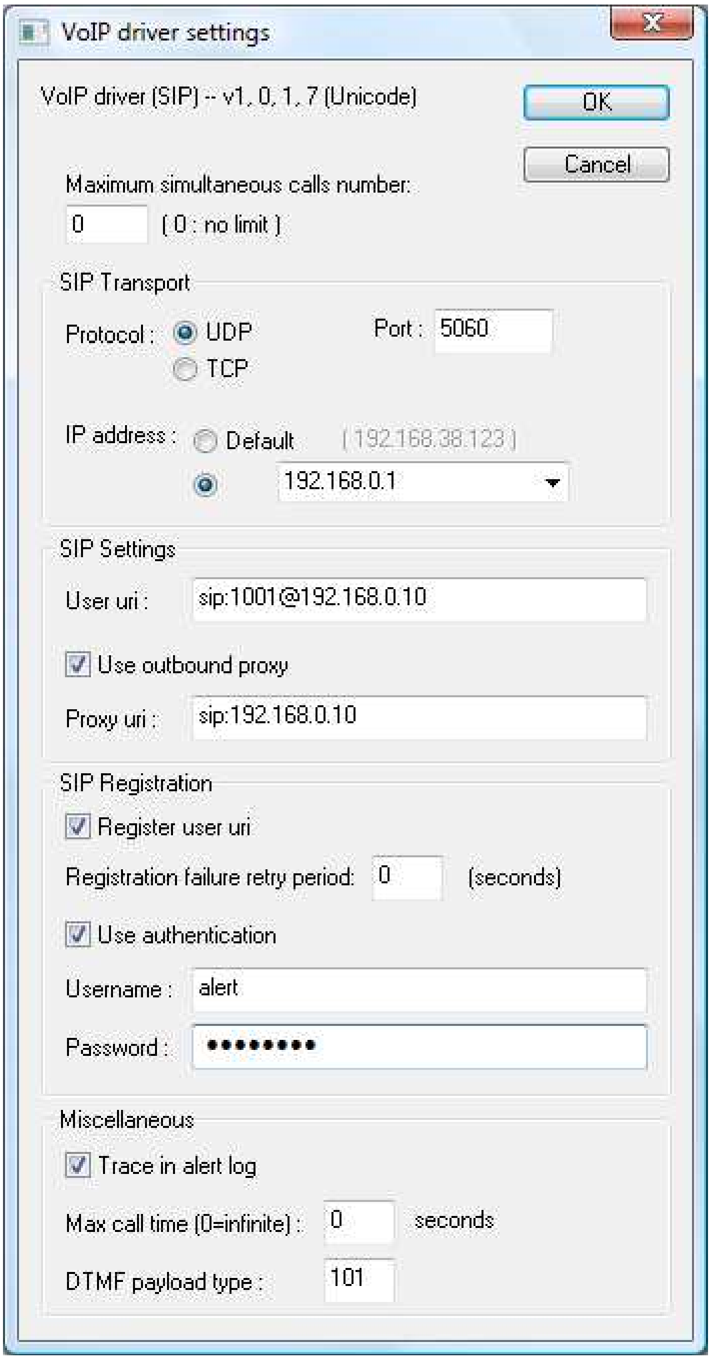
This type of installation allows dynamic IP addresses. Each piece of equipment (including ALERT) registers at startup with the current registar sip. The latter is often the proxy.

The operation is the same as with the proxy alone... The difference is that the IP / phone numbers correspondence is done dynamically.



SIP driver

In this particular case, you need to specify the data identification supplied by the telephony administrator.
In our case, ALERT registers itself with its login and password for the call number 1001



User record

The user record setup is the same as the setup with proxy.

The call addresses are of type: sip:1010@192.168.0.10 or simply 1010.

Usage example

With a subscription to a SIP provider.
The configuration of the driver then depends on data supplied by the provider.

With Asterisk or another IPBX. This time it is the administrator of the telephone system that provides the data to specify in ALERT.