Sipura Back-to-Back Config.

This will create a line extension between a Sipura 1001 (although 2000, 2002 & 2100 would be the same) & a SPA3000 connected either to a plain-old telephone line (POTS) or an analogue PBX system.

Incoming calls on the SPA3000 PSTN line will ring the phone connected to the SPA1001.

Picking up the phone connected to the SPA1001 will give a dialtone at the PSTN line of the first SPA3000 just as if this phone was itself connected directly to the POTS line or PBX, whereas it could be anywhere in the world.

No registrations will be used, addressing will be dealt with purely by IP addresses.

IP address of the first SPA3000 is: 192.168.192.10
IP address of the SPA1001 is: 192.168.192.12

These addresses are for example only. Replace them for whichever addresses you've configured your Sipuras to. It would be a good idea to configure them with static addresses rather than using DHCP since we'll be using the IP addresses to contact each SPA. If these addresses were to change, you would have to reconfigure the Sipuras.

How To Setup

SPA3000: Login to the web interface by typing it's IP address into a PC connected to the same subnet & click "admin login" & "advanced".

Go into the tab for the "PSTN Line" & alter the following settings:

- "Make Call Without Reg" to "yes".
- "Ans Call Without Reg" to "yes".
- Change dialplan 2 to read "(S0<:192.168.192.12>)". This sets up a hotline which calls the remote SPA using it's IP address at the standard SIP port of 5060. It's wise to leave use dialplan 2 (or any number after that) & not dialplan 1 since most of the default settings on this page are set to use dialplan 1.
- "PSTN Ring Thru Line 1" if you have a phone connected to the 3000 & want it to ring when a call is received via the PSTN, leave this as "yes". If you only want the phone on connected to the remote SPA to ring, set this to "no".
- "PSTN Caller Default DP " to "2". This should match whichever dialplan you setup two steps ago. Again, try to avoid changing dialplan 1 in this case.
- "PSTN Answer Delay " change this to zero. Otherwise any incoming calls will not be forwarded to the remote SPA for 16 seconds (as the default value here is 16). However this will cause the phone connected to the SPA3000 to not ring even if you specified "Ring Thru Line 1" above. Adjust the delay accordingly if you want the phone to ring before the caller is forwarded onto the SPA1001.

In the "Line 1" tab, change the following settings:
- "Make Call Without Reg" to "yes".
- "Ans Call Without Reg" to "yes".

Now in the "User 1" tab alter the following setting:

– "Cfwd All Dest" to "gw0". This forwards any incoming calls on the VoIP line to gateway-0 which is the FXO connected to the PSTN. Now when the SPA1001 calls the IP address of this 3000, it is automatically forwarded to the PSTN & the user of the remote hears the PSTN dialtone.

SPA1001 setup:

In the web interface go to the tab for "line 1" and alter the following settings:

– "Make Call Without Reg" to "yes". This allows calls to be made without being registered to a SIP registrar.
– "Ans Call Without Reg" to "yes". This allows calls to be received without being registered.
– "Enable IP Dialling" to "yes". This enables the SPA to dial using IP addresses rather than SIP URIs which is ideally what should be used.
– Change the dial plan to read "(S0<:192.168.192.10>)". This sets up what is called a "hotline". So when the phone is picked up, it automatically dials the number (or IP address in this case) without the user doing anything. Here it connects to the first SPA3000.

Security:

What has been done so far will work but so far anyone could type the IP address of the SPA3000 into an IP phone & make calls through your PSTN or PBX!

Alter these settings in the "PSTN Line" tab of each SPA3000:

– "VoIP Caller Auth Method" change to "PIN". This means that anyone accessing your PSTN line will be confronted by a set of beeps indicating that they should enter a PIN number. Failure to do so means they cannot access your PSTN line.
– "VoIP Access List" add the IP address of the SPA1001 into here: 192.168.192.12 in this case. This allows your remote SPA to bypass the PIN number authorisation.
– "VoIP Caller 1 PIN" change this to any PIN number you want. This is what people will have to enter in to access the PSTN/PBX.

Whilst stopping unauthorised uses accessing your PSTN line this also means you can call your SPA3000's IP address from any IP phone & make calls using your own PSTN/PBX once you've entered your PIN number in!