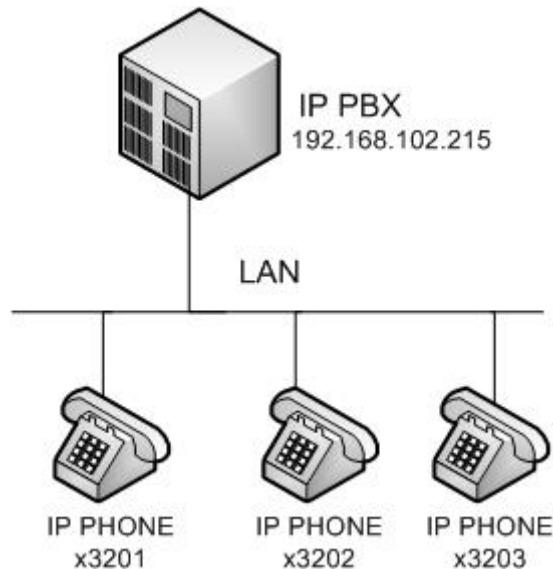


OneStream Virtual Extensions with IP PBX

The Virtual Extensions feature allows a remote worker to be able to place calls on hold or transfer calls in a similar way that they would when in the office.

In this example we have an existing IP PBX in an office with 3 users who have IP Phones on their desks with extension numbers 3201, 3202 and 3203:

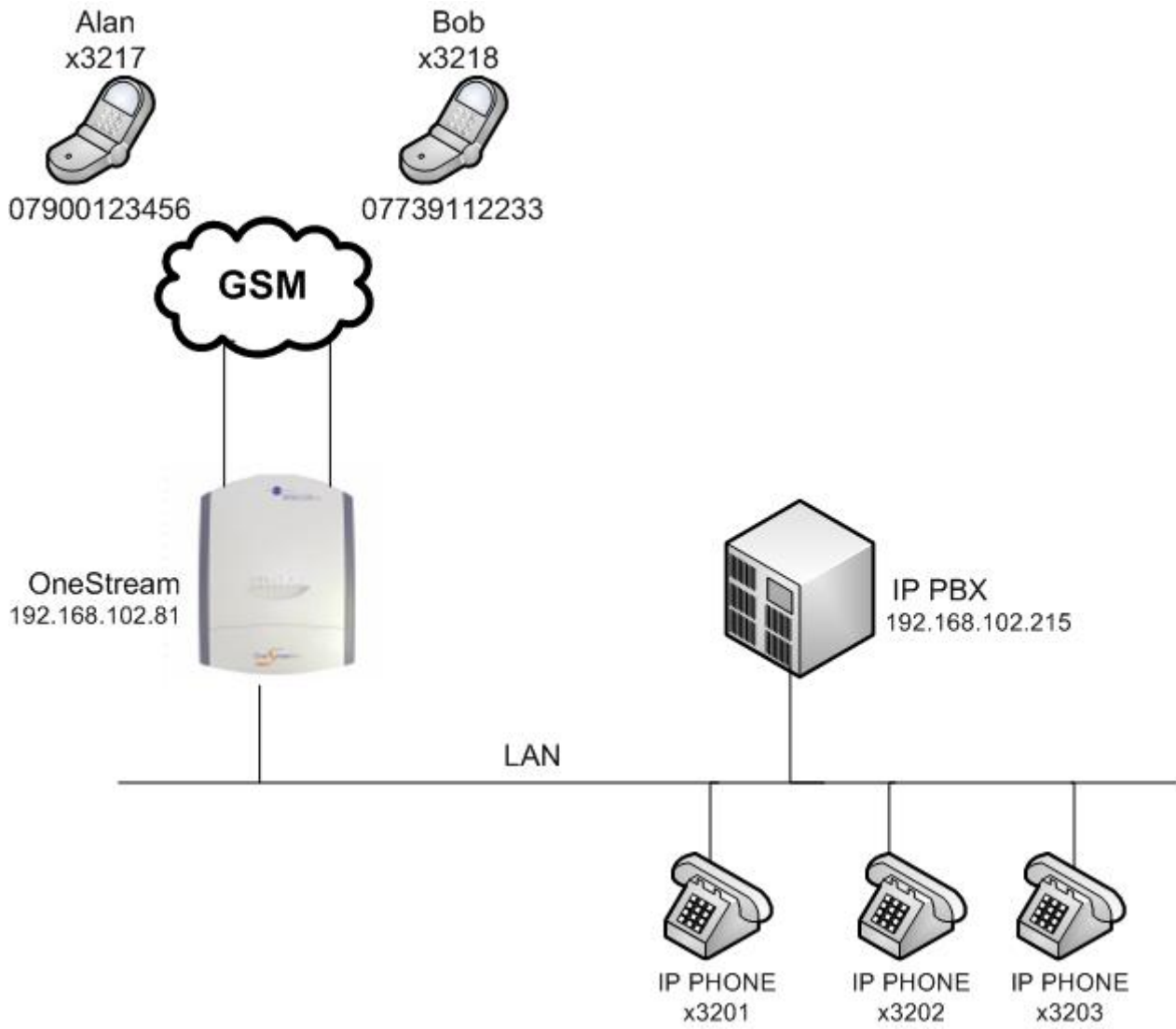


There are 2 remote workers, Alan and Bob who want to use their mobile phones as Virtual Extensions of the IP PBX. The IP PBX has extension numbers 3217 and 3218 available and these will be used for the Virtual Extensions:



A OneStream G is plugged into the LAN in the office (this example would also work using a OneStream GFX or OneStream GBRI). The OneStream will register to the IP PBX as extensions 3217 and 3218 in order to handle the Virtual Extensions. The full setup is shown on the following page.

OneStream Virtual Extensions with IP PBX



OneStream Virtual Extensions with IP PBX

GROUPS - 3 Groups are required on the OneStream as follows:

<u>Group</u>	<u>Type</u>
1 DISA	DISA
2 GSM	GSM
3 IP PBX	SIP Network

The "DISA" Group will be used to provide a secondary dialtone to Alan or Bob when they call in to the OneStream:

Edit Group "DISA"

Interface Type

Name

Options

Password

The password is left blank – we will only allow calls from Alan or Bob's mobile phone numbers so no password is required.

1. The "GSM" Group will be used to route calls to and from the GSM modules:

Edit Group "GSM"

Interface Type

Name

Select Interfaces

Changing Interfaces Will Disconnect Any Active Calls!

GSM Module 1

GSM Module 2

Calling Options

CLI On Off

Confidence Tone On Off

Roaming On Off

Hunting

OneStream Virtual Extensions with IP PBX

- The "IP PBX" group is used to register as extensions 3217 and 3218 on the PBX so that the PBX will send all calls for Alan and Bob to the OneStream:

Edit Group "IP PBX"

Interface Type SIP Network ▾

Name IP PBX

SIP Network

Options

SIP Server 192.168.102.215

SIP Port (default 5060) 5060

NAT Traversal Disable ▾

Call Limit (0=unlimited) 0

From (optional) @

Registration Required

Registrations

	Username	Password	Contact
1	<input type="text" value="3217"/>	<input type="text" value="••••"/>	<input type="text"/>
2	<input type="text" value="3218"/>	<input type="text" value="••••"/>	<input type="text"/>

Audio Codecs

1	<input type="text" value="G.711a ▾"/>
2	<input type="text" value="G.711u ▾"/>
3	<input type="text" value="G.729 ▾"/>

By clicking on the "Home/Status" page on the OneStream web interface we can check that the registration to the PBX has been successful:

SIP Networks

SIP Proxy	Port	User	Status
<u>192.168.102.215</u>	<u>5060</u>	<u>3218</u>	<u>Registered Tue, 28 Apr 2009 11:51:56</u>
<u>192.168.102.215</u>	<u>5060</u>	<u>3217</u>	<u>Registered Tue, 28 Apr 2009 11:51:57</u>

OneStream Virtual Extensions with IP PBX

ROUTES – 7 routes are required on the OneStream as follows:

<u>Route</u>	<u>From Group</u>	<u>Dest. Addr.</u>	<u>Orig. Addr.</u>	<u>To Group</u>	<u>Mod. Dest.</u>	<u>Mod. Orig.</u>	<u>ACT</u>	<u>Split/Fail</u>
1 DISA to IP PBX	DISA	32?	-	IP PBX	-	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 IP PBX to IP PBX	IP PBX	32?	-	IP PBX	-	-	<input type="checkbox"/>	<input type="checkbox"/>
3 IP PBX to VE (Alan)	IP PBX	3217	-	GSM	07900123456	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 IP PBX to VE (Bob)	IP PBX	3218	-	GSM	07739112233	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 VE (Alan) to DISA	GSM	s	07900123456	DISA	-	3217	<input type="checkbox"/>	<input type="checkbox"/>
6 VE (Bob) to DISA	GSM	s	07739112233	DISA	-	3218	<input type="checkbox"/>	<input type="checkbox"/>
7 VE to IP PBX	GSM	32?	-	IP PBX	-	-	<input type="checkbox"/>	<input type="checkbox"/>

Route 1 – this route allows Alan and Bob to dial any of the other extensions (starting with 32) on the PBX after first calling into the OneStream and getting the secondary dialtone. Note that Call Transfer is enabled on this route.

Route 2 – this route allows extensions on the IP PBX to transfer calls to other extensions on the IP PBX.

Routes 3 and 4 – these routes allow calls from the IP PBX to be connected to Alan and Bobs mobile phones. Calls to 3217 will be sent to Alans mobile, calls to 3218 will be sent to Bobs. Note that call transfer is enabled on these routes.

Routes 5 and 6 – these routes allow calls from Alan and Bobs mobiles to be passed to DISA which gives the secondary dialtone. Note that the Originating numbers are modified so that the correct virtual extension number is displayed (3217 or 3218).

Route 7 – this route allows calls which Alan or Bob have placed on hold to be transferred to other PBX extensions.

If we want to allow calls to and from all mobile phones (instead of just to Alan and Bob) then 2 further routes are required as follows:

<u>Route</u>	<u>From Group</u>	<u>Dest. Addr.</u>	<u>Orig. Addr.</u>	<u>To Group</u>	<u>Mod. Dest.</u>	<u>Mod. Orig.</u>	<u>ACT</u>	<u>Split/Fail</u>
DISA to IP PBX	DISA	32?	-	IP PBX	-	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8 GSM to IP PBX	GSM	s	-	IP PBX	3201	-	<input type="checkbox"/>	<input type="checkbox"/>
9 IP PBX to GSM	IP PBX	07?	-	GSM	-	-	<input type="checkbox"/>	<input type="checkbox"/>
IP PBX to IP PBX	IP PBX	32?	-	IP PBX	-	-	<input type="checkbox"/>	<input type="checkbox"/>
IP PBX to VE (Alan)	IP PBX	3217	-	GSM	07900123456	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IP PBX to VE (Bob)	IP PBX	3218	-	GSM	07739112233	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VE (Alan) to DISA	GSM	s	07900123456	DISA	-	3217	<input type="checkbox"/>	<input type="checkbox"/>
VE (Bob) to DISA	GSM	s	07739112233	DISA	-	3218	<input type="checkbox"/>	<input type="checkbox"/>
VE to IP PBX	GSM	32?	-	IP PBX	-	-	<input type="checkbox"/>	<input type="checkbox"/>

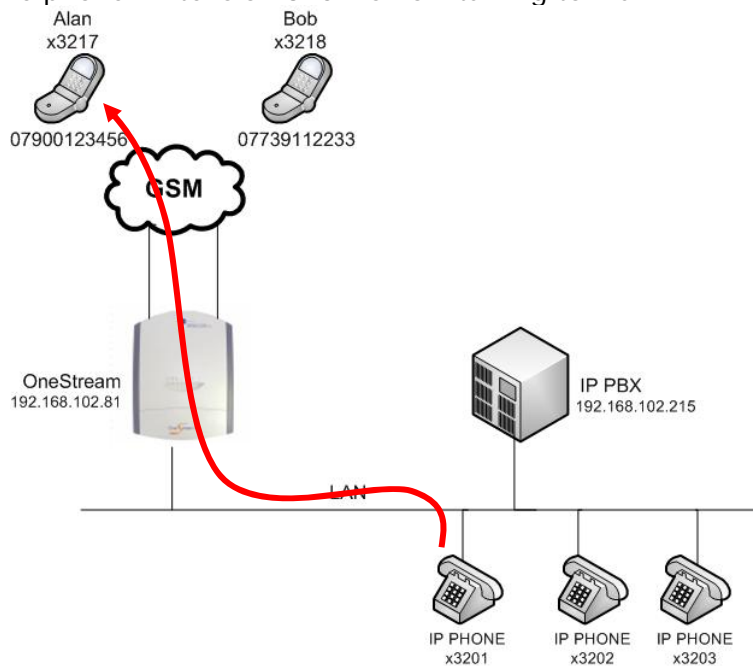
Route 8 – this route allows calls from mobile phones other than Alan and Bob to be sent to an extension of the IP PBX. Here we send all calls from other mobiles to extension 3201.

Route 9 – this route allows any mobile phone number (starting with 07) to be dialled from the IP PBX.

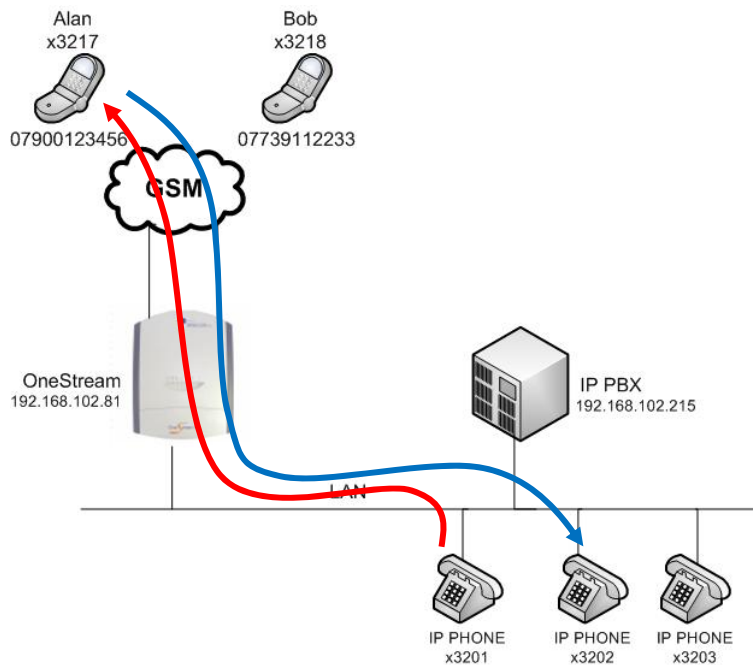
OneStream Virtual Extensions with IP PBX

DIALLING EXAMPLE 1

Extension 3201 in the office wants to call Alan so he dials 3217. The call is passed to the OneStream which dials Alans mobile phone. Extension 3201 is now talking to Alan.

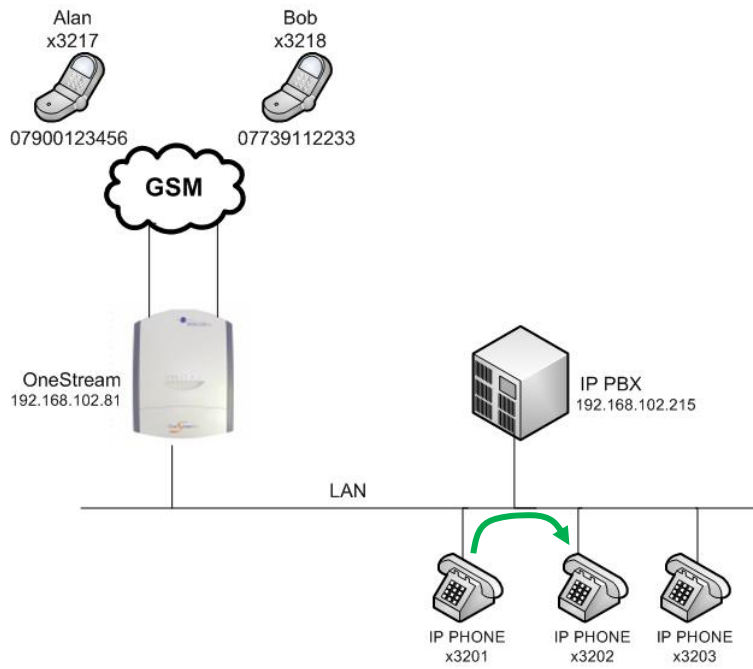


Alan wants to place the call on hold so he presses the * key on his mobile phone. Extension 3201 is now on hold and Alan hears a dialtone on his mobile phone. Alan then dials 3202 and is connected to extension 3202 in the office.



OneStream Virtual Extensions with IP PBX

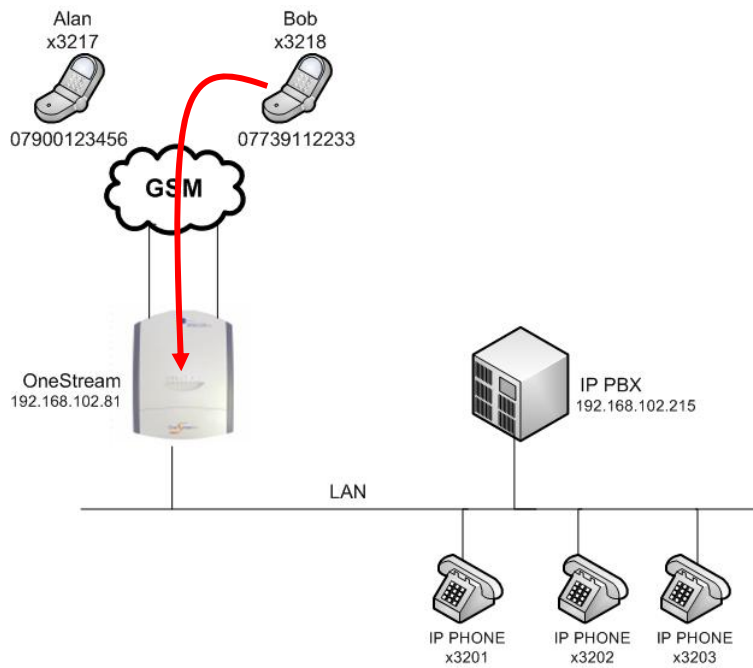
Alan now completes the call transfer by ending the call on his mobile. Extension 3201 is now connected to extension 3202.



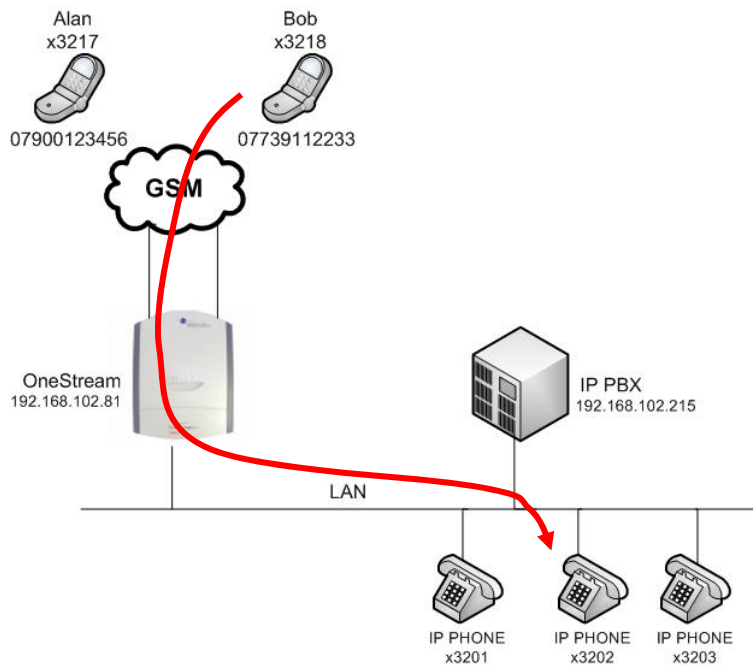
OneStream Virtual Extensions with IP PBX

DIALLING EXAMPLE 2

Bob calls into the office by dialling the GSM number for one of the SIMs in the OneStream. The OneStream answers the call and Bob hears a secondary dialtone.

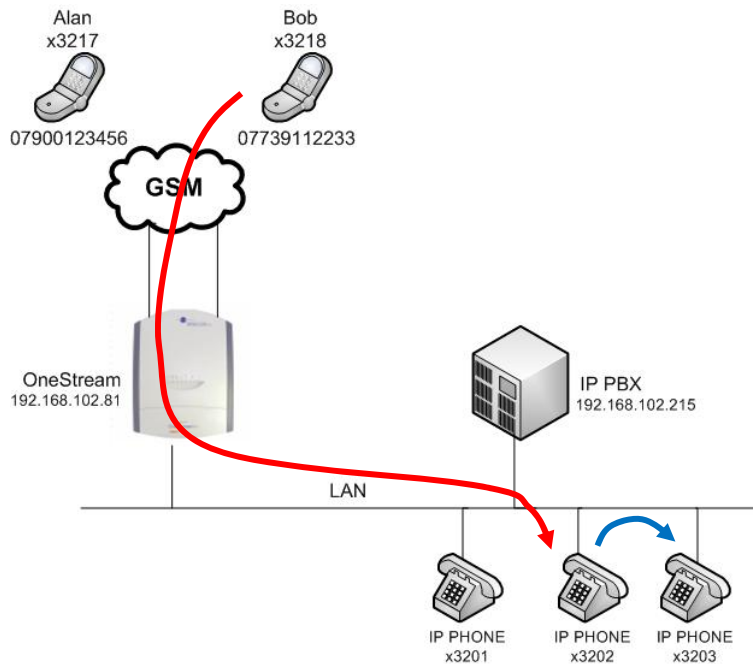


Bob dials 3202 on his mobile and the OneStream sends the call to extension 3202 on the IP PBX. Bob is now talking to extension 3202.



OneStream Virtual Extensions with IP PBX

Extension 3202 then places Bob on Hold by pressing the * key. Bob hears the On Hold Music generated by the OneStream. Extension 3202 then dials 3203. Now Bob is on hold and extension 3202 is talking to extension 3203.



Extension 3202 now completes the call transfer by hanging up the phone. Bob is now connected to extension 3203.

