



Overview

OneStream A (at the Head Office) acts as a Server. OneStream B, OneStream C and OneStream D register with OneStream A for each of their extensions.

It will be possible to dial from any office extension to any other office extension by dialling the extension number. E.g. To dial from an extension at Branch 1 to the phone connected to FXS2 on the OneStream at Branch 2 the user would dial 2202.

Port forwarding must be setup on the firewall at the head office to forward the SIP port (UDP port 5060) to OneStream A (OneStream A must be assigned a static IP Address). The firewalls at the branches should not require any modification.

An available STUN Server is required to enable all of the OneStream units to lookup their external IP addresses and traverse the firewalls correctly.

Configuring STUN

This step is required on ALL OneStream units (Head Office and Branch offices)

On the Advanced webpage the **External (Internet) IP Address** section must be filled in:

External (Internet) IP Address

Discover IP Address

Not Set
 Use STUN Server
 Set Manually

STUN Server

STUN Server Port

External IP Address
 . . .

Local Networks

Network IP Address / Subnet Mask
e.g. 192.168.1.0/255.255.255.0

Discover IP Address Select "Use STUN Server"

STUN Server Enter the domain name and port for an available STUN server

Local Networks Enter the network IP address for the local network e.g. if the IP address of the OneStream is 192.168.1.10 and the subnet mask is 255.255.255.0 then the local networks should be set to 192.168.1.0/255.255.255.0

Head Office (OneStream as a Server)

Groups

Add Group

<u>Group</u>	<u>Type</u>	<u>Edit</u>	<u>Delete</u>
Branches	SIP Extension		
FXS1	Analogue FXS (PBX)		
FXS2	Analogue FXS (PBX)		
FXS3	Analogue FXS (PBX)		
FXS4	Analogue FXS (PBX)		
GSM	GSM		

Delete the default FXS group and add a separate group for each FXS that will be used:

Add Group

Interface Type

Name

Select Interfaces

Changing Interfaces Will Disconnect Any Active Calls!

- Analogue FXS (PBX) 1 IN GROUP "FXS1"
- Analogue FXS (PBX) 2 IN GROUP "FXS2"
- Analogue FXS (PBX) 3 IN GROUP "FXS3"
- Analogue FXS (PBX) 4
- Analogue FXS (PBX) 5
- Analogue FXS (PBX) 6

[Show Advanced Options](#)

Add a SIP Extension group to allow the OneStream units at branch offices to register their extensions:

Edit Group "Branches"

Interface Type

Name

Options

SIP Port (default 5060)

NAT Traversal

Call Limit (0=unlimited)

Extensions

	Username	Password
1	<input type="text" value="2101"/>	<input type="password" value="••••••••"/>
2	<input type="text" value="2102"/>	<input type="password" value="••••••~"/>
3	<input type="text" value="2103"/>	<input type="password" value="••••••~"/>
4	<input type="text" value="2104"/>	<input type="password" value="••••••~"/>
5	<input type="text" value="2201"/>	<input type="password" value="••••~"/>
6	<input type="text" value="2202"/>	<input type="password" value="••••~"/>
7	<input type="text" value="2203"/>	<input type="password" value="••••~"/>
8	<input type="text" value="2204"/>	<input type="password" value="••••~"/>
9	<input type="text" value="2301"/>	<input type="password" value="••••~"/>
10	<input type="text" value="2302"/>	<input type="password" value="••••~"/>
11	<input type="text" value="2303"/>	<input type="password" value="••••~"/>
12	<input type="text" value="2304"/>	<input type="password" value="••••~"/>

Show Advanced Options

Name Enter a name to identify the group e.g. Branches

NAT Traversal Select "Disable" since the OneStream will use STUN to traverse the firewall correctly

Extensions Add an extension for every branch office extension number and enter a username and password. E.g. 2101, 2102, 2103 and 2104 for branch 1 etc. It is important to use strong passwords since the extensions will be accessible from the internet.

Routes

Add Route

Route	From Group	Dest. Addr.	Orig. Addr.	To Group	Mod. Dest.	Mod. Orig.	ACT	CB	Split/Fail
Branches > Branches	Branches	_2XXX	-	Branches	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Branches > FXS1	Branches	1001	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Branches > FXS2	Branches	1002	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Branches > FXS3	Branches	1003	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Branches > FXS4	Branches	1004	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > Branches	FXS1	_2XXX	-	Branches	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > FXS2	FXS1	1002	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > FXS3	FXS1	1003	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > FXS4	FXS1	1004	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > Branches	FXS2	_2XXX	-	Branches	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > FXS1	FXS2	1001	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > FXS3	FXS2	1003	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > FXS4	FXS2	1004	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > Branches	FXS3	_2XXX	-	Branches	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > FXS1	FXS3	1001	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > FXS2	FXS3	1002	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > FXS4	FXS3	1004	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > Branches	FXS4	_2XXX	-	Branches	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > FXS1	FXS4	1001	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > FXS2	FXS4	1002	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > FXS3	FXS4	1003	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following routes are required:

Route to handle calls between branch office extensions:

Name Branches > Branches
From Group Branches
Destination Addresses _2XXX (matches any 4 digit number starting with a 2)
To Group Branches

Route to handle calls from branch office extensions to the head office extension 1001 (FXS1):

Name Branches > FXS1
From Group Branches
Destination Addresses 1001
To Group FXS1
(repeat for extensions 1002 (FXS2), 1003 (FXS3) and 1004 (FXS4))

Route to handle calls from head office extension 1001 (FXS1) to branch office extensions:

Name FXS1 > Branches
From Group FXS1
Destination Addresses _2XXX (matches any 4 digit number starting with a 2)
To Group Branches
(repeat for extensions 1002 (FXS2), 1003 (FXS3) and 1004 (FXS4))

Route to handle calls from head office extension 1001 (FXS1) to extension 1002 (FXS2):

Name FXS1 > FXS2
From Group FXS1
Destination Addresses 1002
To Group FXS2

(repeat so there is a route from each local extension to each other local extension =12 routes when 4 local extensions)

Branch Offices (OneStream as a client)

Groups

Add Group

<u>Group</u>	<u>Type</u>	<u>Edit</u>	<u>Delete</u>
FXS1	Analogue FXS (PBX)		
FXS2	Analogue FXS (PBX)		
FXS3	Analogue FXS (PBX)		
FXS4	Analogue FXS (PBX)		
GSM	GSM		
Head Office	SIP Network		

Delete the default FXS group and add a separate group for each FXS that will be used:

Add Group

Interface Type

Name

Select Interfaces

Changing Interfaces Will Disconnect Any Active Calls!

- Analogue FXS (PBX) 1 IN GROUP "FXS1"
- Analogue FXS (PBX) 2 IN GROUP "FXS2"
- Analogue FXS (PBX) 3 IN GROUP "FXS3"
- Analogue FXS (PBX) 4
- Analogue FXS (PBX) 5
- Analogue FXS (PBX) 6

[Show Advanced Options](#)

Add a SIP Network group to register the extensions to the Head Office OneStream:

Edit Group "Head Office"

Interface Type

Name

SIP Network

Options

SIP Server

SIP Port (default 5060)

NAT Traversal

Call Limit (0=unlimited)

From (optional) @

Registration Required

Registrations

	Username	Auth Username	Auth Password	Contact
1	<input type="text" value="2101"/>	<input type="text"/>	<input type="text" value="••••••••"/>	<input type="text" value="2101"/>
2	<input type="text" value="2102"/>	<input type="text"/>	<input type="text" value="••••••••"/>	<input type="text" value="2102"/>
3	<input type="text" value="2103"/>	<input type="text"/>	<input type="text" value="••••~••••"/>	<input type="text" value="2103"/>
4	<input type="text" value="2104"/>	<input type="text"/>	<input type="text" value="••••~••••"/>	<input type="text" value="2104"/>

Show Advanced Options

- Name** Enter a name to identify the group e.g. Head Office
- NAT Traversal** Select "Disable" since the OneStream will use STUN to traverse the firewall correctly
- Registration Required** Make sure this option is enabled
- Registration** Add a registration for each phone connected to this OneStream
- Username** Enter a username to register to the Head Office OneStream. This should match one of the usernames entered in the SIP Extension group on the Head Office OneStream (all branches must use a different usernames) e.g. 2101
- Auth Password** Enter the corresponding password for the user which was setup in the SIP Extension group on the Head Office OneStream
- Contact** This should match the username e.g. 2101

Routes

Add Route

Route	From Group	Dest. Addr.	Orig. Addr.	To Group	Mod. Dest.	Mod. Orig.	ACT	CB	Split/Fail
FXS1 > FXS2	FXS1	2102	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > FXS3	FXS1	2103	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > FXS4	FXS1	2104	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS1 > Head Office	FXS1	_1XXX_2XXX	-	Head Office	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > FXS1	FXS2	2101	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > FXS3	FXS2	2103	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > FXS4	FXS2	2104	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS2 > Head Office	FXS2	_1XXX_2XXX	-	Head Office	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > FXS1	FXS3	2101	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > FXS2	FXS3	2102	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > FXS4	FXS3	2104	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS3 > Head Office	FXS3	_1XXX_2XXX	-	Head Office	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > FXS1	FXS4	2101	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > FXS2	FXS4	2102	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > FXS3	FXS4	2103	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FXS4 > Head Office	FXS4	_1XXX_2XXX	-	Head Office	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Office > FXS1	Head Office	2101	-	FXS1	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Office > FXS2	Head Office	2102	-	FXS2	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Office > FXS3	Head Office	2103	-	FXS3	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head Office > FXS4	Head Office	2104	-	FXS4	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following routes are required:

Route to handle calls from local extension 2101 (FXS1) to local extension 2102 (FXS2):

Name FXS1 > FXS2
From Group FXS1
Destination Addresses 2102
To Group FXS2

(repeat so there is a route from each local extension to each other local extension =12 routes when 4 local extensions)

Route to handle calls from local extension 2101 (FXS1) to branch office and head office extensions:

Name FXS1 > Head Office
From Group FXS1
Destination Addresses _1XXX (matches any 4 digit number starting with a 1) and
 _2XXX (matches any 4 digit number starting with a 2)
To Group Head Office

(repeat for extensions 2102 (FXS2), 2103 (FXS3) and 2104 (FXS4))

Route to handle calls from branch office and head office extensions to the local extension 2101 (FXS1):

Name Head Office > FXS1
From Group Head Office
Destination Addresses 2101
To Group FXS1

(repeat for extensions 2102 (FXS2), 2103 (FXS3) and 2104 (FXS4))