Vcomm Solution & Interoperability Testing

Application Notes for Configuring Ingate SIParator with an Avaya S8300 for SIP Trunking without SES – Issue 1.0

Abstract

These application notes describe the configuration steps required for the Ingate SIParator version 4.6.2 SBC to successfully enable the Avaya S8300 Call Manager version 5.0 for SIP Trunking without the need for Avaya SIP Enablement Server (SES).

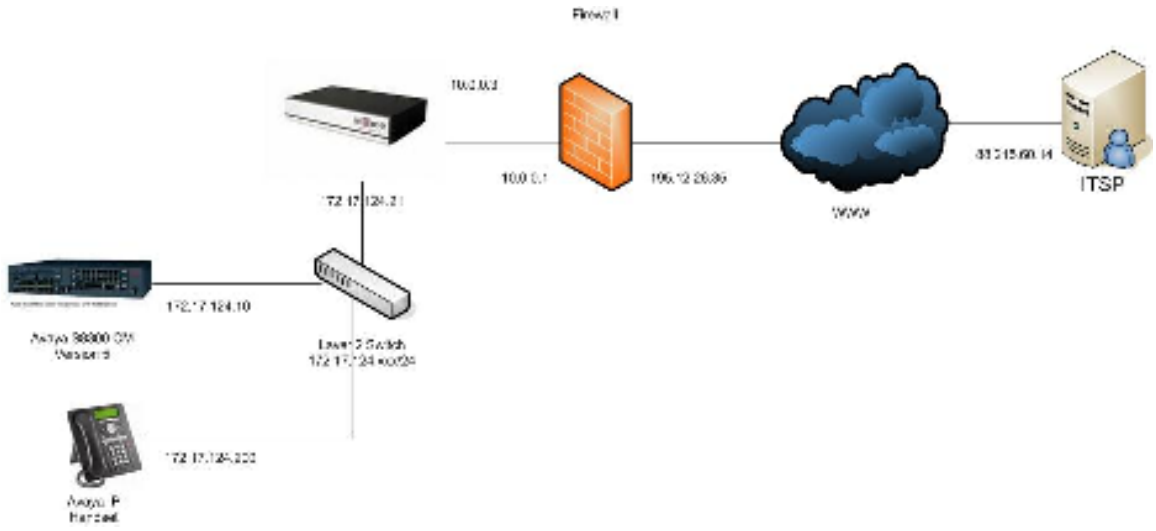
Written by Andy Glover ©2009 Vcomm Uk Ltd
Testing conducted by Andy Glover (Vcomm) and Dean Jones (Westcon)

1. Introduction

With the introduction of software release 5.0 for the Avaya S8300 CM, it is now possible to talk directly over a sip trunk without the need for an SES server. This document will walk you through the set up of both Avaya CM and the Ingate SIParator.

The Ingate SIParator is a session border controller that handles the ingress and egress of SIP messaging between two networks (i.e LAN and WAN). It also has basic proxy and far end NAT traversal functionality that could be put to use in certain deployment situations, but are not covered by this document.

The SIParator was connected to the network in a DMZ –LAN scenario:



Please refer to the Ingate SIParator documentation for other deployment scenarios.

The IP addresses used in this test were:

Avaya S8300	172.17.124.10		
Ingate SIParator	LAN 172.17.124.21	DMZ 10.0.0.3	WAN 195.12.26.35
ITSP	88.215.60.14		

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2. Equipment and Software Validated

The following equipment and software were used for the testing of this scenario:

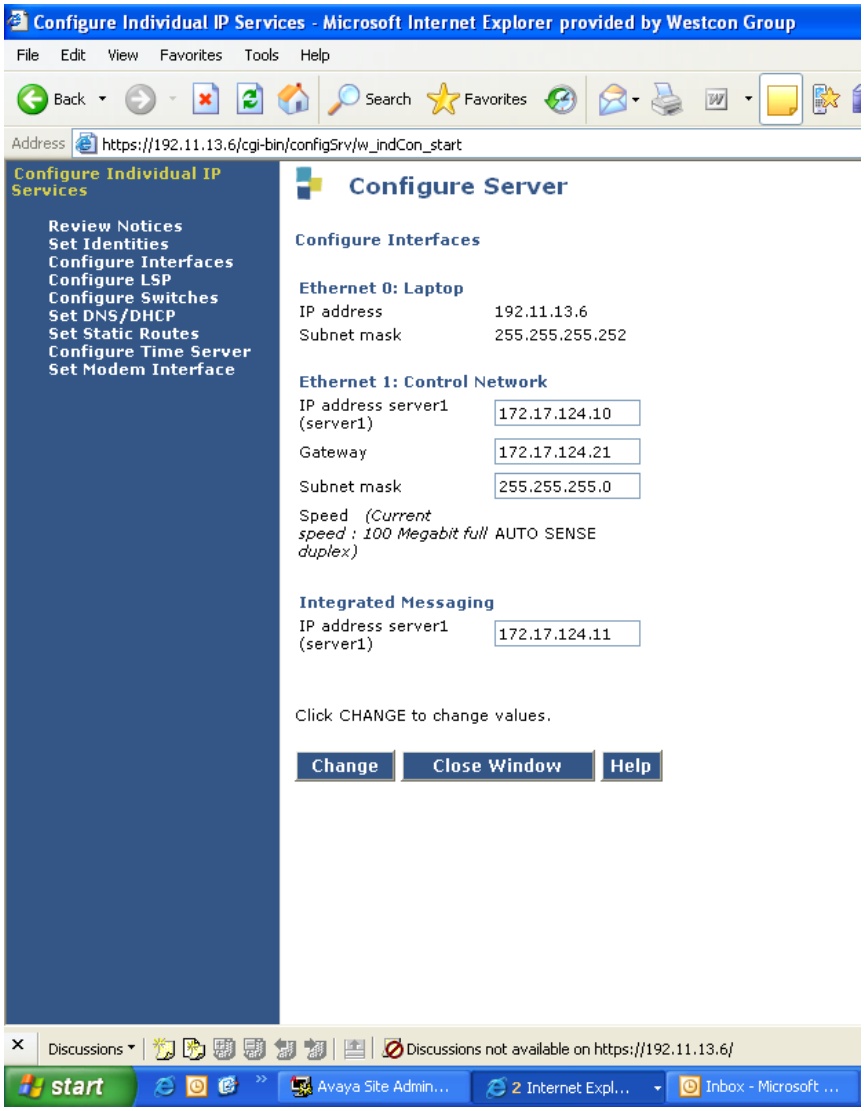
Equipment	Software Version
Avaya S8300 Call Manager	5.0
Avaya IP Handset	
Ingate SIParator	4.6.2
Gamma SIP Trunk	IPDC V3

3. Configuring the Avaya S8300

For a detailed description of how to set up the Avaya S8300 please refer to the Avaya's own manual. This guide will show you the necessary changes to this default configuration needed to make this scenario work.

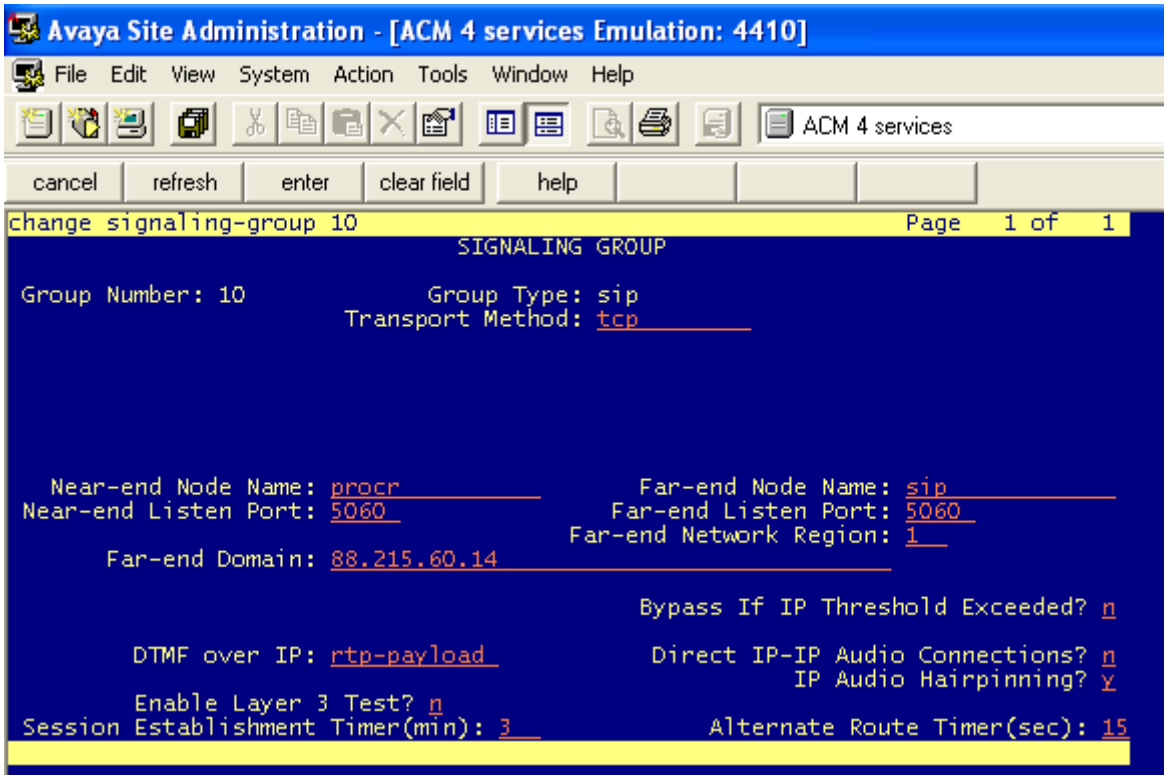
3.1 Avaya Network Settings

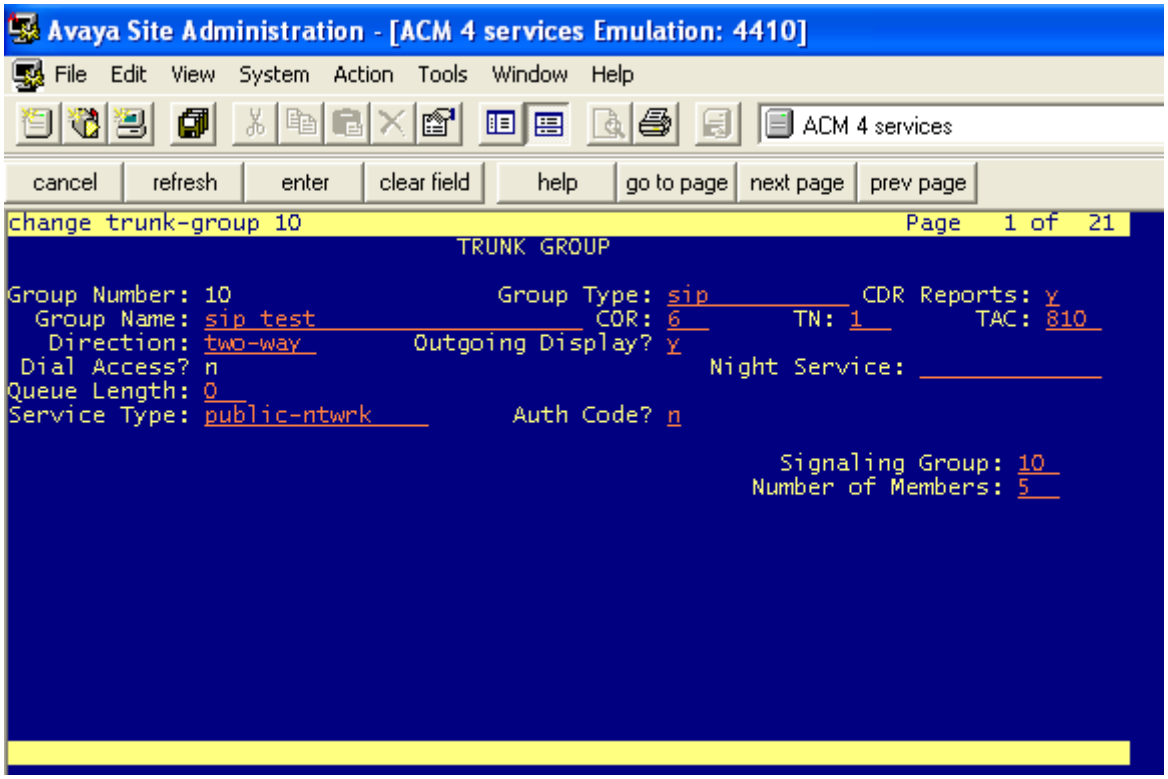
Access the Avaya S8300 network settings. Select Configure Server → Configure Interfaces.
Enter the IP address of the Avaya into *IP address server 1*.
Enter the IP address of the Ingate SIParator into *Gateway*.
Enter the subnet mask into *subnet mask*.

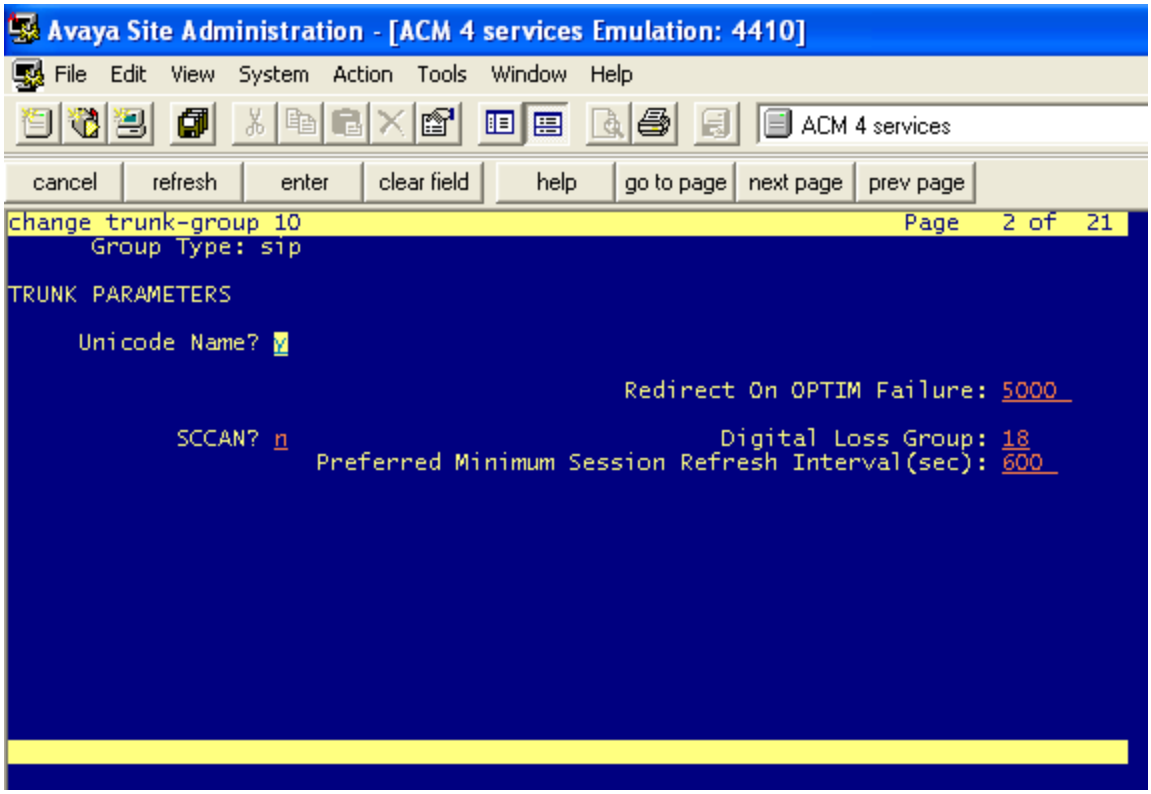


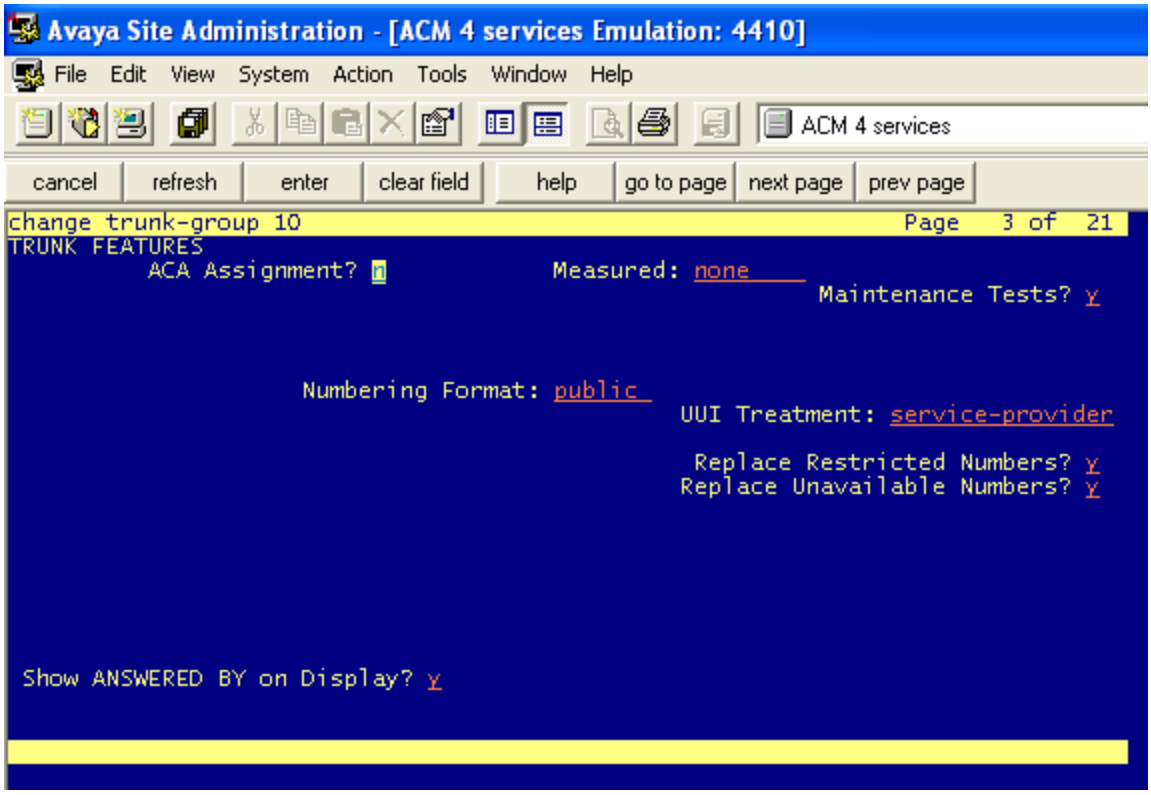
3.2 Avaya Setup Screens

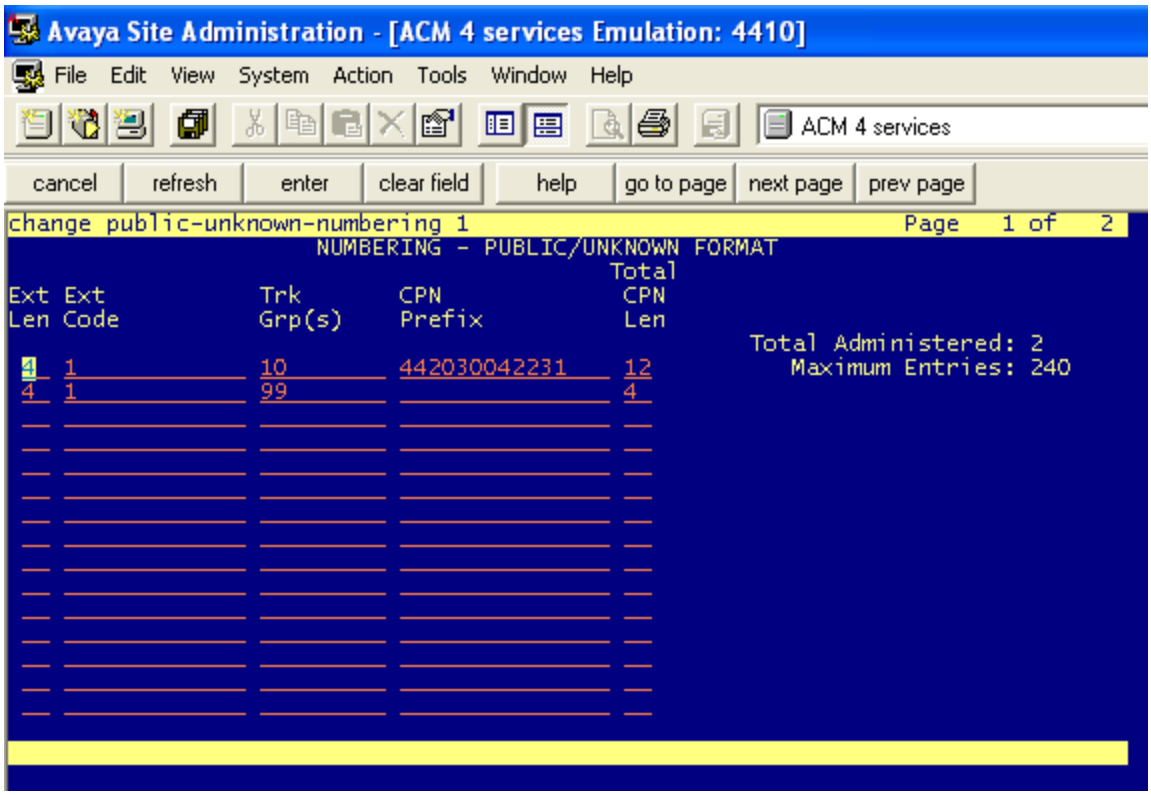
The following screens show the specific changes needed to the basic programming for SIP trunking to work.

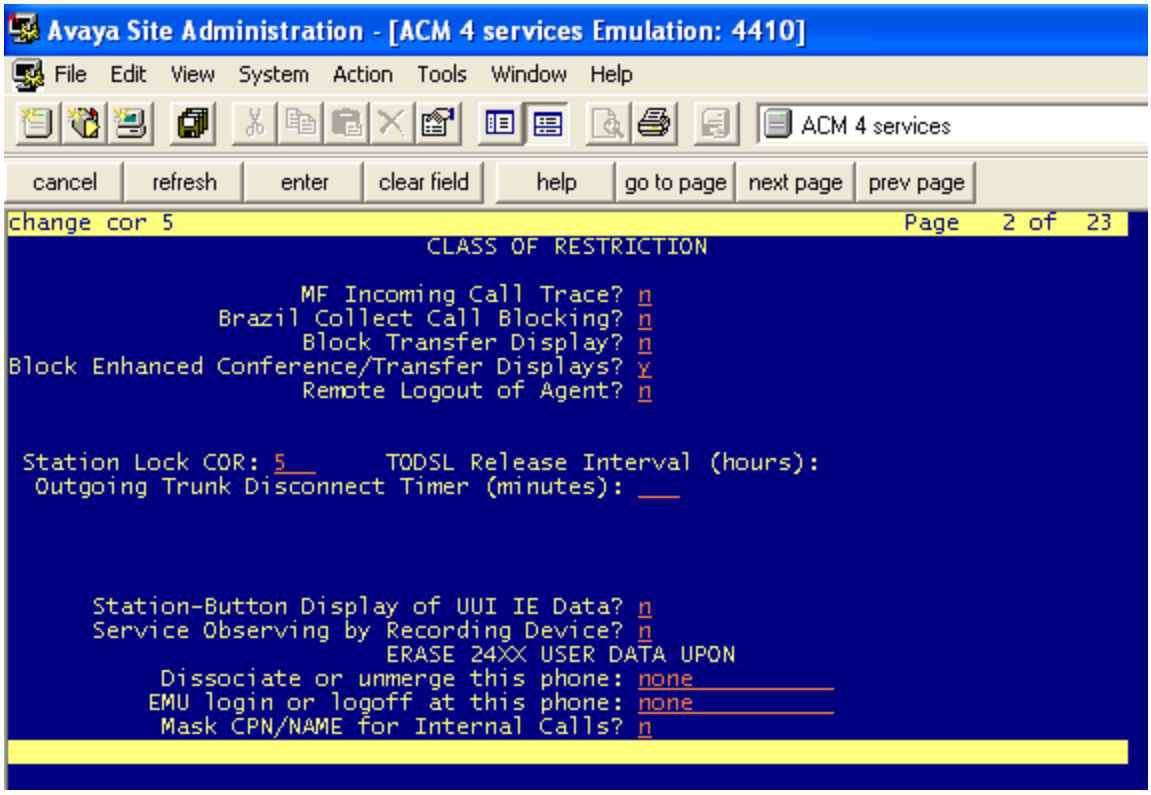


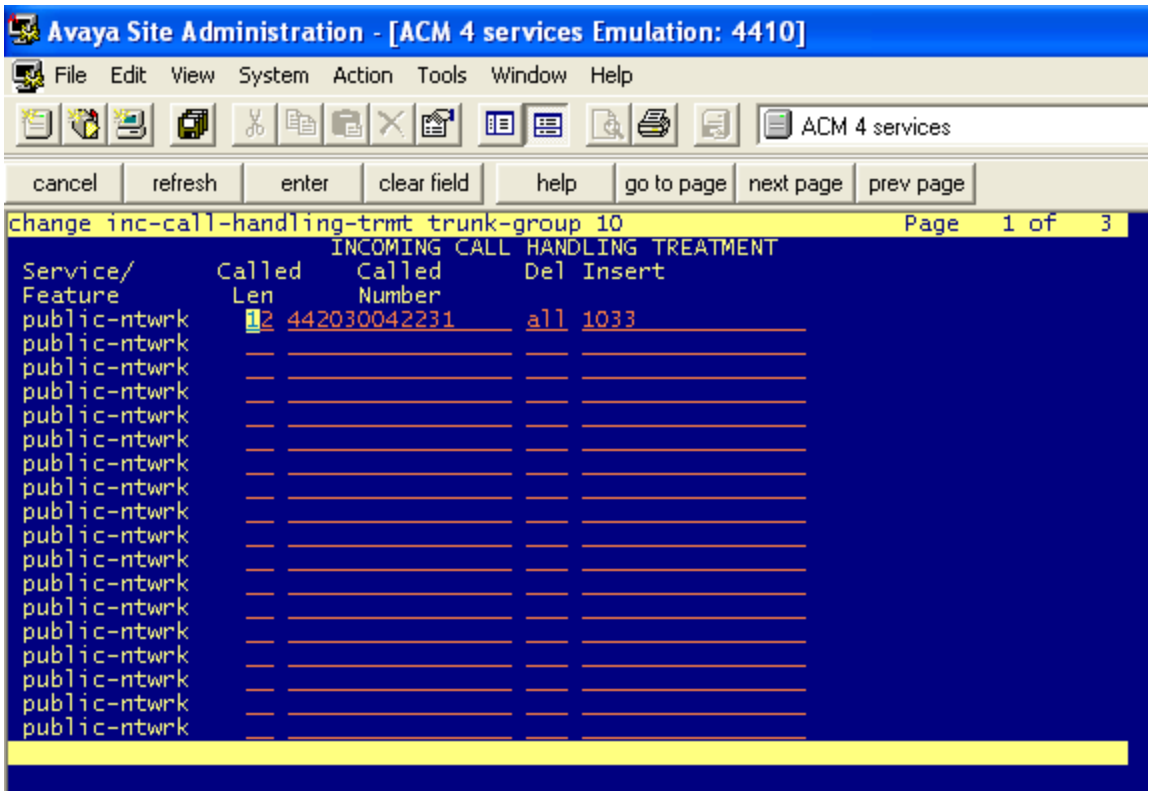

Avaya Site Administration - [ACM 4 services Emulation: 4410]
File Edit View System Action Tools Window Help
ACM 4 services
cancel refresh enter clear field help go to page next page prev page
change trunk-group 10 Page 1 of 21
TRUNK GROUP
Group Number: 10 Group Type: sip CDR Reports: y
Group Name: sip test COR: 6 TN: 1 TAC: 810
Direction: two-way Outgoing Display? y
Dial Access? n Night Service:
Queue Length: 0
Service Type: public-ntwrk Auth Code? n
Signaling Group: 10
Number of Members: 5


Avaya Site Administration - [ACM 4 services Emulation: 4410]
File Edit View System Action Tools Window Help
ACM 4 services
cancel refresh enter clear field help go to page next page prev page
change trunk-group 10 Page 2 of 21
Group Type: sip
TRUNK PARAMETERS
Unicode Name? y
Redirect On OPTIM Failure: 5000
SCCAN? n Digital Loss Group: 18
Preferred Minimum Session Refresh Interval(sec): 600


Avaya Site Administration - [ACM 4 services Emulation: 4410]
File Edit View System Action Tools Window Help
ACM 4 services
cancel refresh enter clear field help go to page next page prev page
change trunk-group 10 Page 3 of 21
TRUNK FEATURES
ACA Assignment? n Measured: none
Maintenance Tests? y
Numbering Format: public
UUI Treatment: service-provider
Replace Restricted Numbers? y
Replace Unavailable Numbers? y
Show ANSWERED BY on Display? y


Avaya Site Administration - [ACM 4 services Emulation: 4410]
File Edit View System Action Tools Window Help
ACM 4 services
cancel refresh enter clear field help go to page next page prev page
change public-unknown-numbering 1 Page 1 of 2
NUMBERING - PUBLIC/UNKNOWN FORMAT
Ext Len
Ext Code
Trk Grp(s)
CPN Prefix
Total CPN Len
Total Administered: 2
Maximum Entries: 240
4 1 10 442030042231 12
4 1 99 4


Avaya Site Administration - [ACM 4 services Emulation: 4410]
File Edit View System Action Tools Window Help
ACM 4 services
cancel refresh enter clear field help go to page next page prev page
change cor 5 Page 2 of 23
CLASS OF RESTRICTION
MF Incoming Call Trace? n
Brazil Collect Call Blocking? n
Block Transfer Display? n
Block Enhanced Conference/Transfer Displays? y
Remote Logout of Agent? n
Station Lock COR: 5 TODSL Release Interval (hours):
Outgoing Trunk Disconnect Timer (minutes):
Station-Button Display of UUI IE Data? n
Service Observing by Recording Device? n
ERASE 24XX USER DATA UPON
Dissociate or unmerge this phone: none
EMU login or logoff at this phone: none
Mask CPN/NAME for Internal Calls? n


Avaya Site Administration - [ACM 4 services Emulation: 4410]
File Edit View System Action Tools Window Help
ACM 4 services
cancel refresh enter clear field help go to page next page prev page
change inc-call-handling-trmt trunk-group 10 Page 1 of 3
INCOMING CALL HANDLING TREATMENT
Service/ Feature Called Len Called Number Del Insert
public-ntwrk 12 442030042231 all 1033
public-ntwrk
public-ntwrk
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public-ntwrk
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3.3 Points to Note

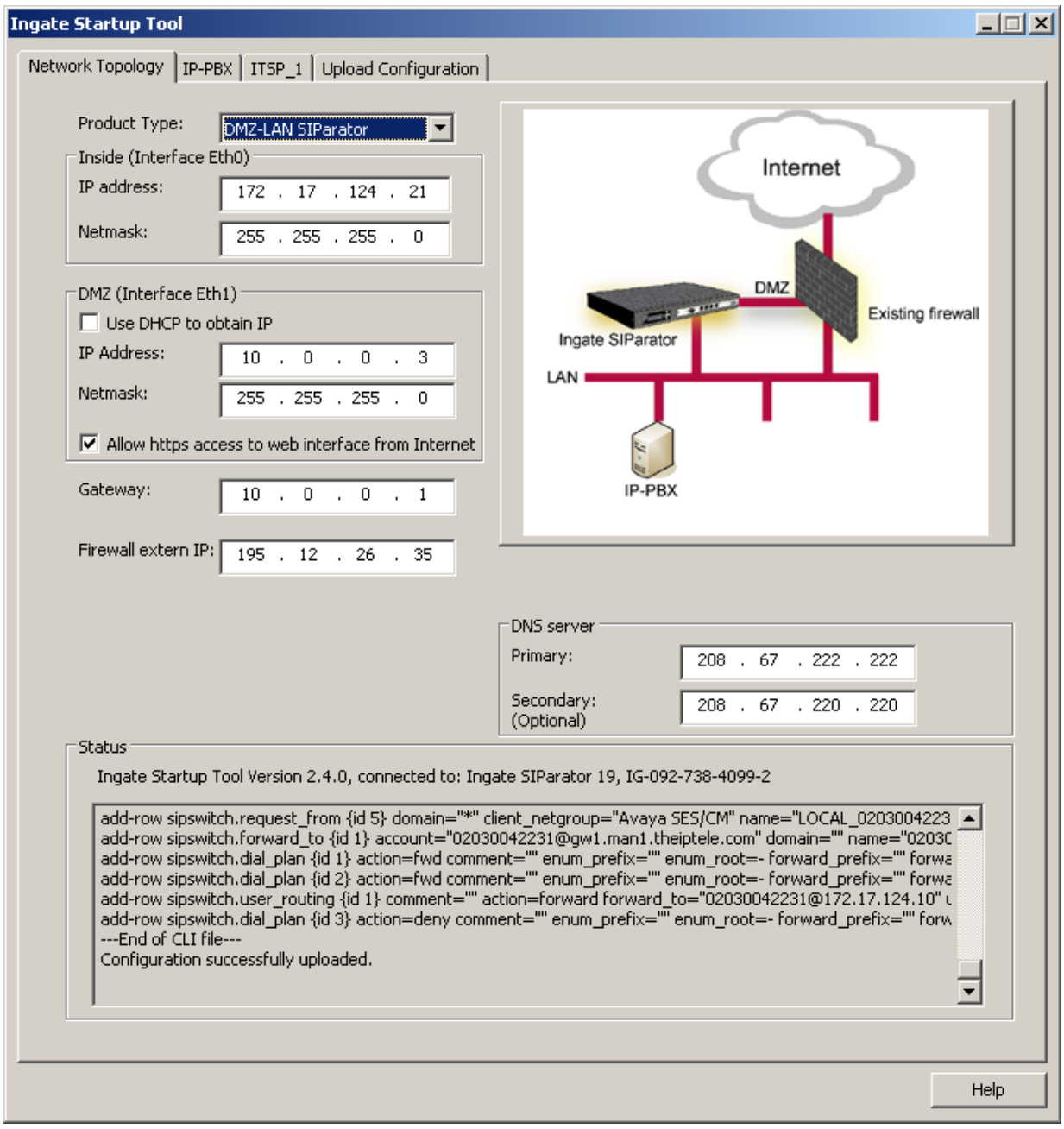
1. The Ingate SIParator is used as the Gateway off of the host network
2. The Far-End-Domain is that off the ITSP not the Ingate
3. Direct IP-to-IP Audio is set to NO
4. Hairpinning is set to YES

4. Setting up the Ingate SIParator

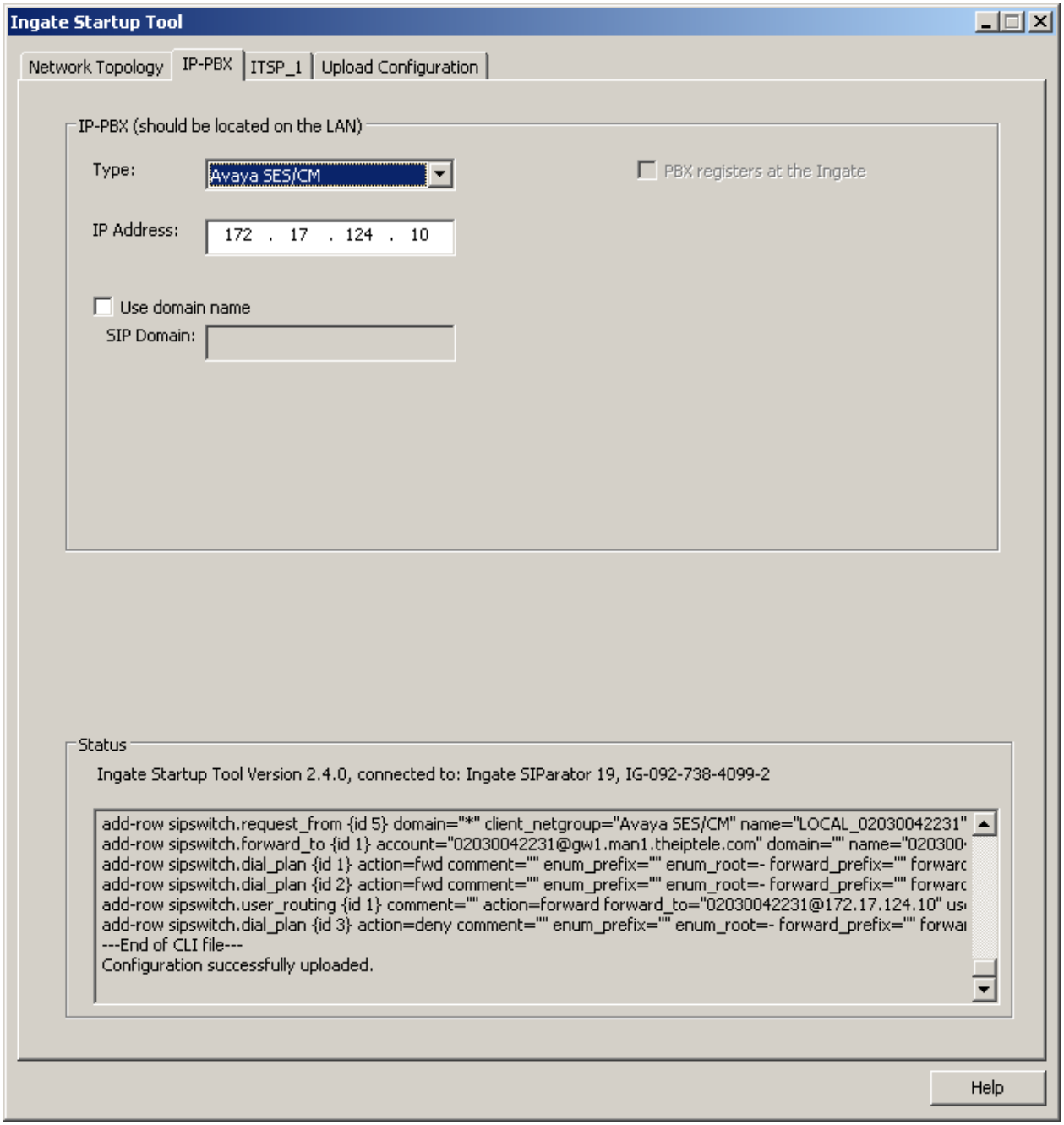
4.1 Basic Configuration

Download and install the Ingate startup tool from www.ingate.com. Once installed run the program and connect to the Ingate.

Enter the network settings.



Select the Avaya SES/CM and enter it's IP Address



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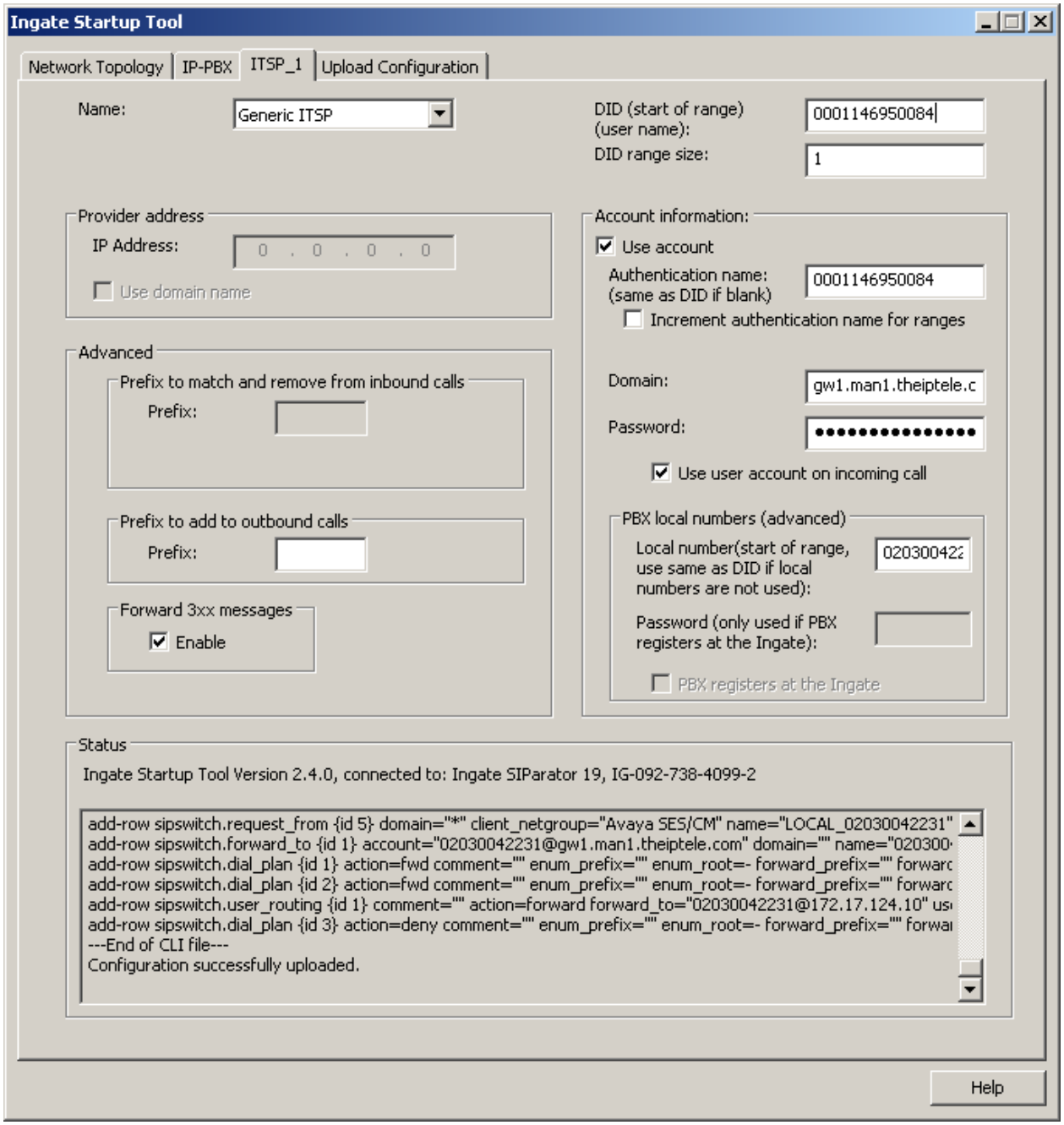
Select an ITSP, entering the details provided by them for the SIP Trunk.



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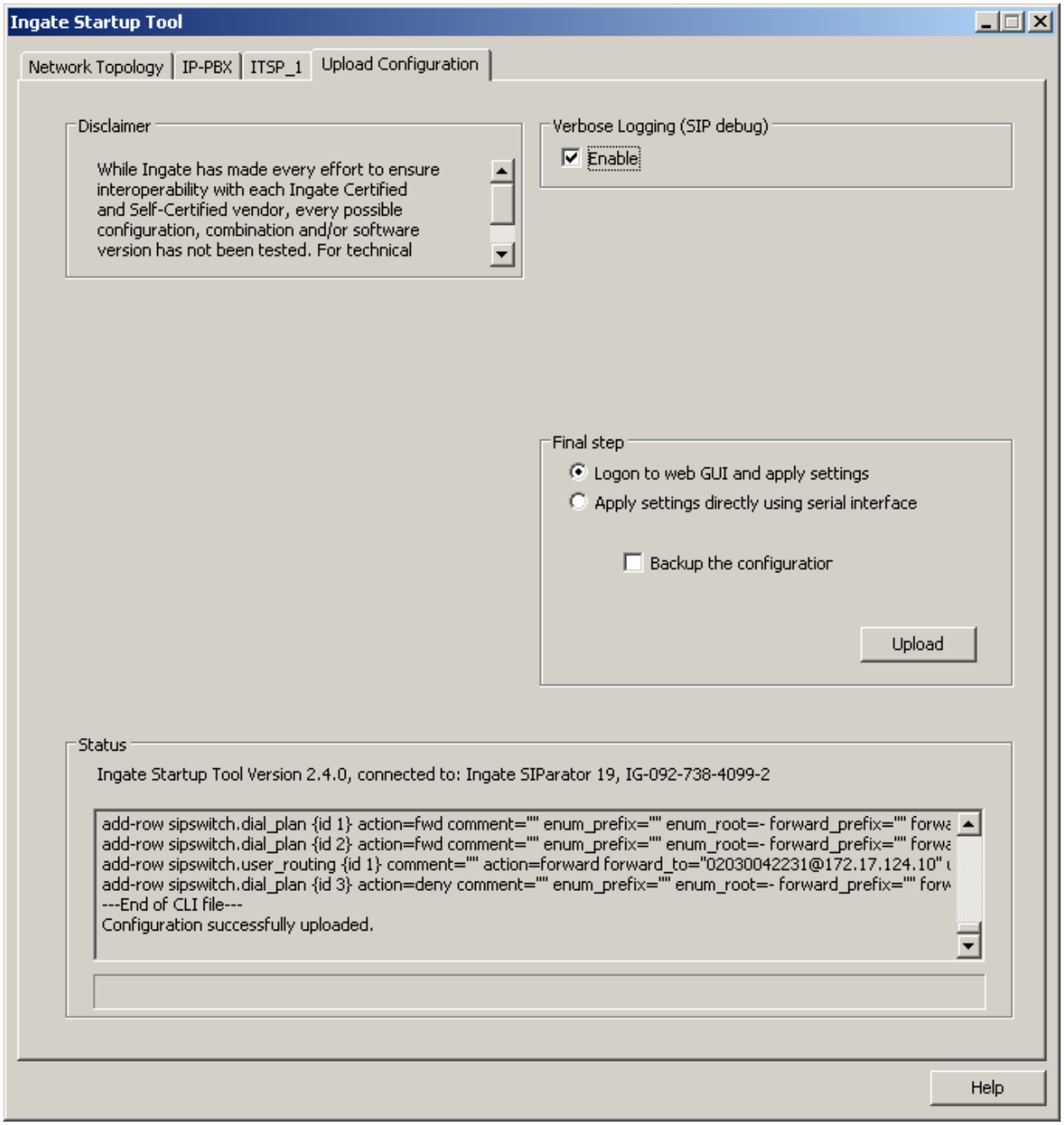
Apply the configuration. This will then take you to the web interface of the Ingate.

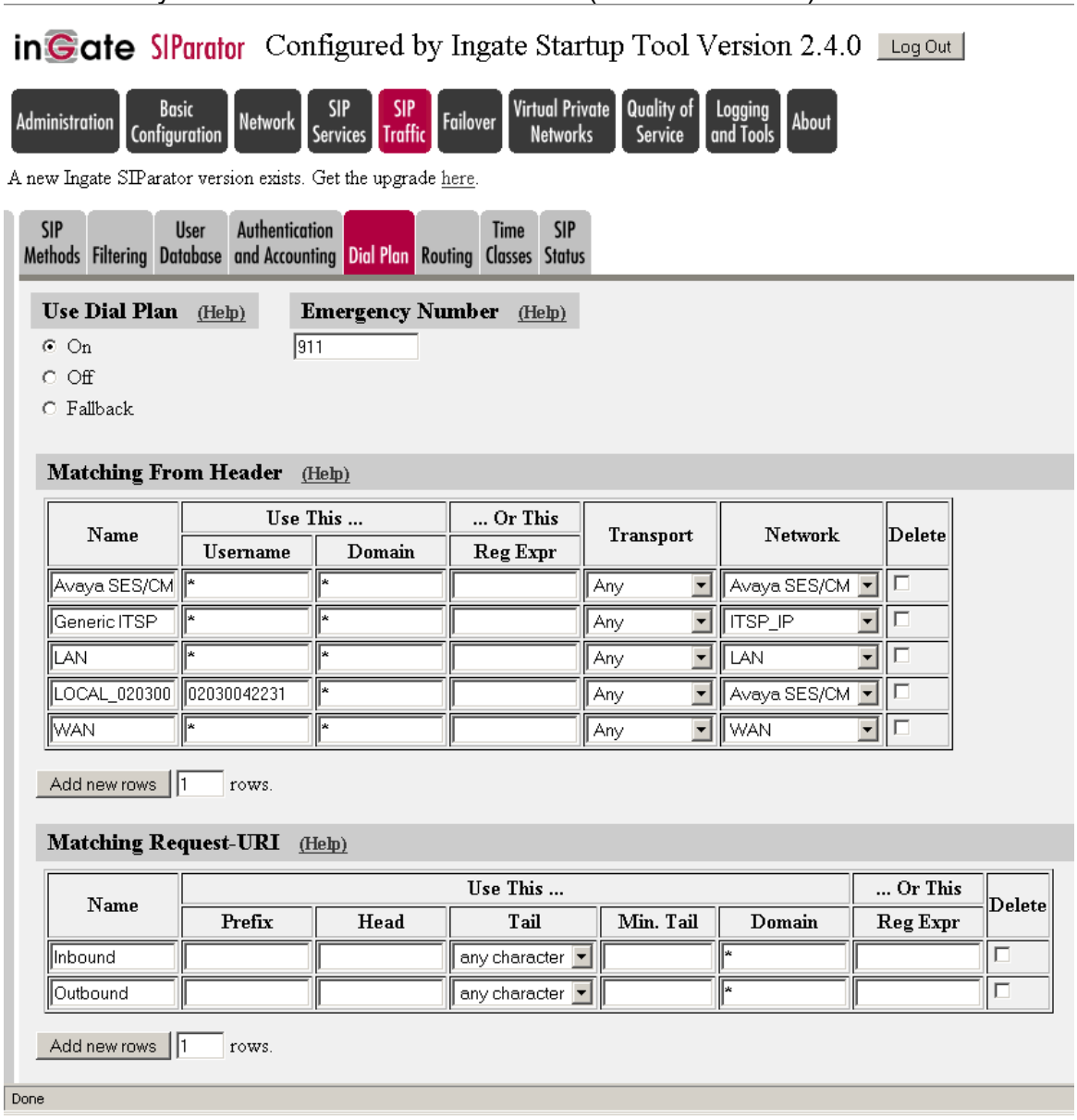


Firstly log in to the web interface, then go to Administration → Apply Settings → Save Configuration.

Go to Sip Traffic → Dial Plan. Change the transport type under Matching From Header to 'Any'

Add an entry in Matching Request-URI for Inbound calls to suit the inbound number range.

Add an entry into Dial Plan for Inbound calls (see screen shot).



Forward To (Help)

Name	Subno.	Use This ... Account	... Or This Replacement URI	Port	Transport	... Or This Reg Expr	Delete
02030042231	1	0001146950084@gw1.man1.theiptele.com			-		
Avaya	1	-	172.17.124.10	5060	TCP		

Add new rows 1 groups with 1 rows per group.

Dial Plan (Help)

No.	From Header	Request-URI	Action	Forward To	Add Prefix Forward	Add Prefix ENUM	ENUM Root	Time Class	Comment	Delete
1	LAN	Outbound	Forward	02030042231			-	-		
2	WAN	Inbound	Forward	Avaya			-	-		

Add new rows 1 rows.

Methods in Dial Plan (Help)

The ACK, PRACK, CANCEL, BYE, NOTIFY, UPDATE and INFO methods cannot be handled by the Dial Plan.

Method	Delete
INVITE	
OPTIONS	
SUBSCRIBE	
MESSAGE	
REFER	

Add new rows 1 rows.

REGISTER in Dial Plan (Help)

- (•) Keep To headers for REGISTER requests passed through the Dial Plan
- ( ) Rewrite To headers for REGISTER requests passed through the Dial Plan

ENUM Root (Help)

Name	Subno.	ENUM Root	Delete
e164.arpa.	1	e164.arpa.	
e164.org.	1	e164.org.	

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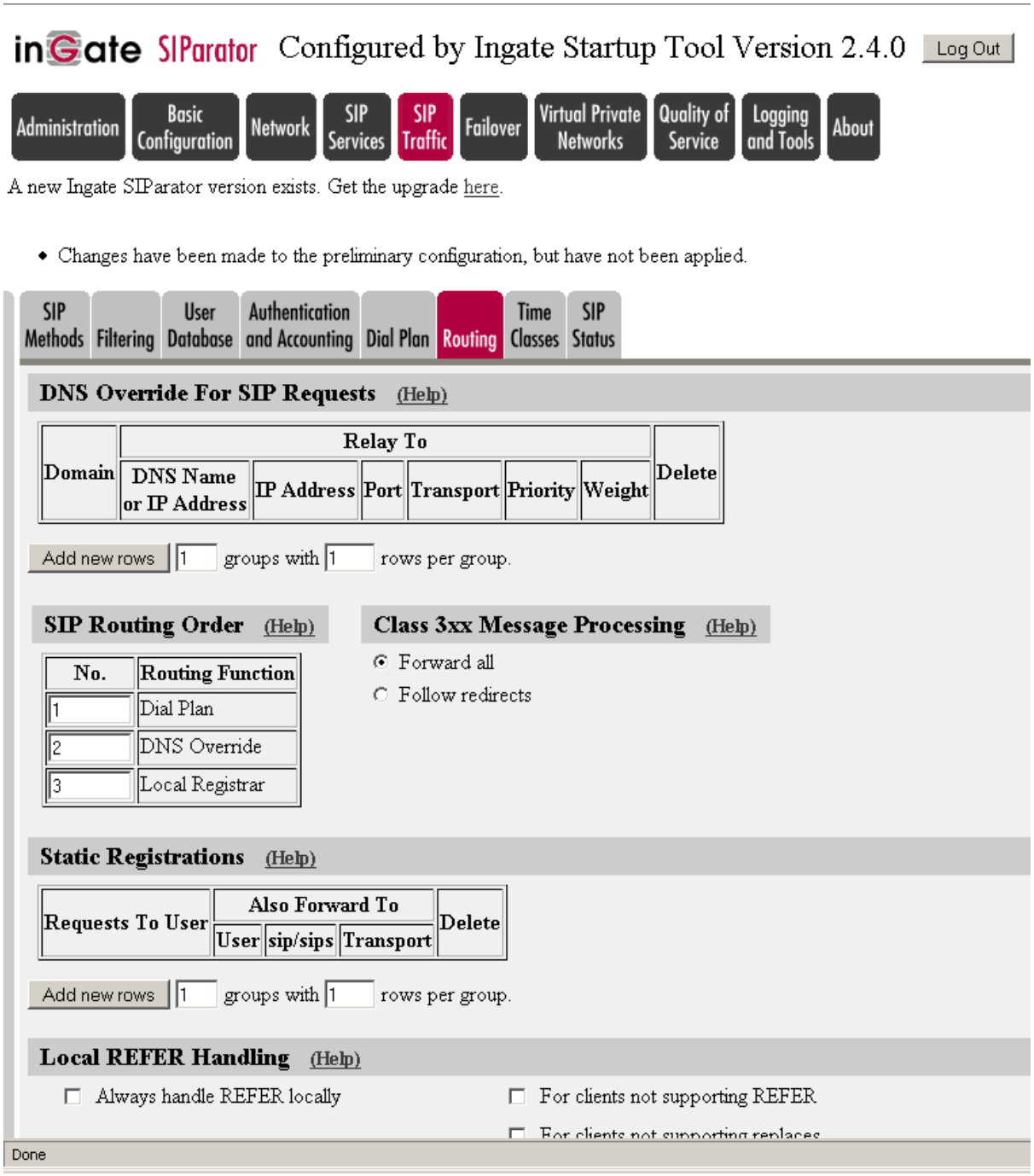
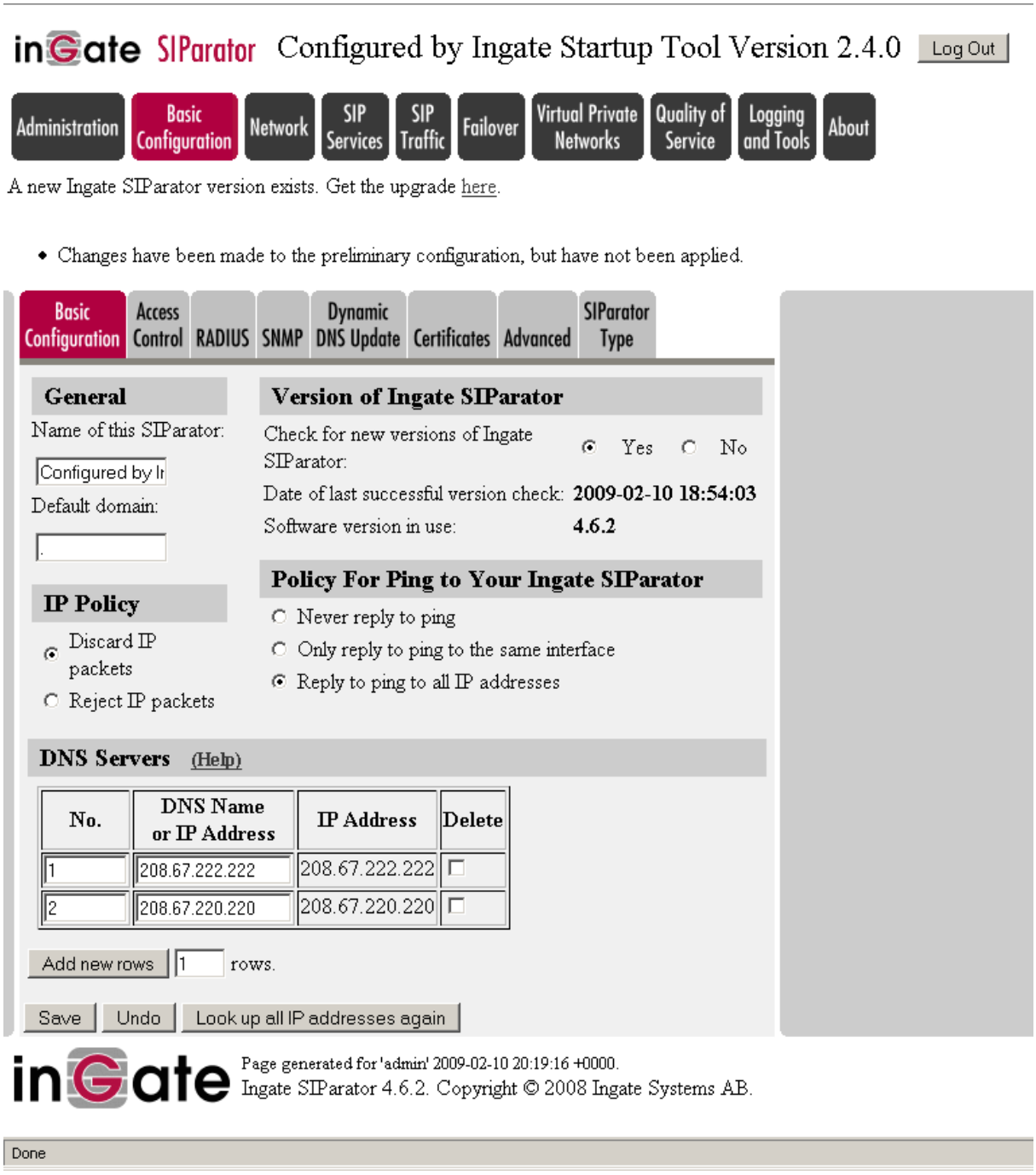
Under Sip Traffic → Routing, change the SIP Routing order as shown.



Next, under Basic Configuration select Reply to ping to all IP addresses.



Now go to Administration → Apply Settings → Save Configuration. You should now be able to successfully make inbound and outbound calls.

5. Interoperability Testing

Features tested using this configuration were:

- Inbound calls
- Outbound calls
- Call hold
- Call transfer
- Conference

Further features of the Avaya were not tested but should work. For further assistance in this please contact Vcomm UK Ltd or your Ingate partner.

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