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XO SIP Service

OpenText Fax server (RightFax) with Dialogic Brooktrout SR140




XO Communications

REVISION HISTORY

Revision Number	Date	Authors	Changes
1.0	06/03/2010	Himanshu Kapadia	Initial Draft

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1. Introduction

This document contains the test results of the SIP Trunking used to certify OpenText Fax server (RightFax) with Dialogic SR140. This test verified the basic interoperability, features of the appliance, and the integration of the architecture framework. This certification test plan is to be executed in XO's Plano Certification Laboratory (Plano Lab) which is equipped with different test equipments and is capable to simulate XO's VoIP network environment.

2. Executive Summary

This report provides the test results found to date for the OpenText Fax server (RightFax) SIP Trunking evaluation. The following is a summary addressing the issues found while performing the test.

- If customer is adding this RightFax to their SIP services, it is recommended that a separate SIP trunk be provisioned for faxing. If customer insists on one circuit, XO will provisionprovisioning will have to manually provision two trunks (assign sessions to fax portion of the service)

- RightFax doesn't support DTMF with RFC 2833. By default XO codec packages for SIP Trunk (1 and 2) has DTMF with RFC 2833 enable. This causes call to fail.

  Workaround: Both XO packages need to be changed when used with OpenText Fax server (RightFax). DTMF with RFC 2833 needs to be disabled on XO SONUS.

- OpenText Fax server (RightFax) supports fax modes 'T.38 only' and 'G.711 Pass through only'. Testing was done with both modes.

  With 'T.38 only' mode requires a few changes on XO network for it to work properly. Contact XO Activation support for help.

  With 'G.711 only' mode no changes are required related to FAX on XO packet service profile.

- XO and RightFax server doesn't allow the ability to set Fax speed more than 14400 bps with 'Maximum T.38 version' set as '0'.

- DSCP values for SIP signaling and RTP packets couldn't be set from OpenText Fax server (RightFax). There are options to set these values but it didn't work.

3. Software and Hardware Equipment Requirements for Testing

1. Cisco 2400 used as a router
   Cisco IOS Software, 2400 Software (C2430-IS-M), Experimental Version 12.4(20060718:201451) [acphan-V124_4_T2_1 104]
   System image file is "flash:c2430-is-mz.xo"

2. OpenText Fax server (RightFax)

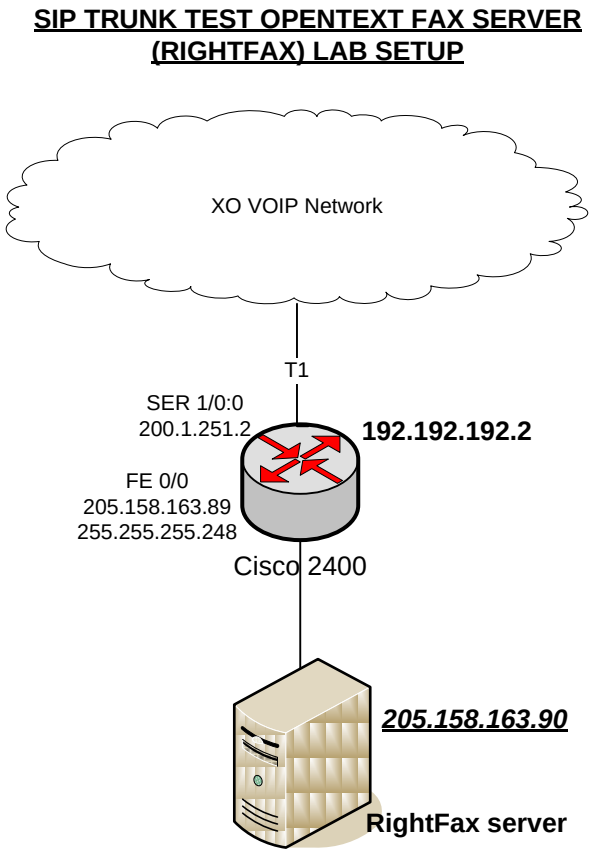
   Version: 9.4.1.4070 *(9.4 FP1 SR4)*

   Dialogic SR140: Brooktrout SDK version – 6.3.4B11.51

   OpenText fax server software was installed on Windows server 2008 R2 Standard (64 bit)

4. Test Configurations

The following diagram is the configuration used during lab testing.



Notes:

- Above lab setup only shows main lab network elements.

5. OPENTEXT FAX SERVER (RIGHTFAX) with Dialogic SR140 SIP Trunking

5.1. Test Results

- ***Right Fax server configured with Fax as 'T.38 only'***

1	Fax Tests	One page faxes were used for these tests and the fax copies received were legible.	Package 1	Package 2
1.1	Inbound fax - G711	Verify a fax call is established from PSTN to extension.	NA	NA
1.2	Outbound fax - G711	Verify a fax call is established from extension to PSTN	NA	NA
1.3	Inbound fax T.38 (G3 – G3)	Fax server speed = G3 and PSTN side fax = G3.	P (9600 bps)	P (9600 bps)
1.4	Outbound fax -T.38 (G3 – G3)	Fax server speed = G3 and PSTN side fax = G3.	P (9600 bps)	P (9600 bps)
1.5	Inbound fax T.38 (G3 - SG3)	Fax server speed = G3 and PSTN side fax = SG3.	P (14400 bps)	P (14400 bps)
1.6	Outbound fax -T.38 (G3 - SG3)	Fax server speed = G3 and PSTN side fax = SG3.	P (14400 bps)	P (14400 bps)
1.7	Inbound fax T.38 (SG3 - G3)	Fax server speed = SG3 and PSTN side fax = G3.	NS*	NS*
1.8	Outbound fax -T.38 (SG3 - G3)	Fax server speed= SG3 and PSTN side fax = G3.	NS*	NS*
1.9	Inbound fax T.38 (SG3 - SG3)	Fax server speed = SG3 and PSTN side fax = G3.	NS*	NS*
2.0	Outbound fax -T.38 (SG3 - SG3)	Fax server speed= SG3 and PSTN side fax = G3.	NS*	NS*

*NS: Not supported. Please check test summary for more details.

- ***Right Fax server configured with Fax as 'G.711 pass though only'***

2	Fax Tests	One page faxes were used for these tests and the fax copies received were legible.	Package 1	Package 2
2.1	Inbound fax - G711	Verify a fax call is established from PSTN to extension.	P	P
2.2	Outbound fax - G711	Verify a fax call is established from extension to PSTN	P	P

6. Test Bed Configuration Files

6.1 Cisco 2400 Configuration

```
Building configuration...

Current configuration : 2023 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname SipTrunkIAD2
!
boot-start-marker
boot-end-marker
!
card type t1 1
enable password cisco
!
no aaa new-model
!
resource policy
!
network-clock-participate T1 1/0
network-clock-participate T1 1/1
network-clock-select 1 T1 1/0
network-clock-select 2 T1 1/1
ip subnet-zero
!
!
no ip domain lookup
!
!
!
voice-card 0
!
!
!
!
!
!
!
!
!
!
```

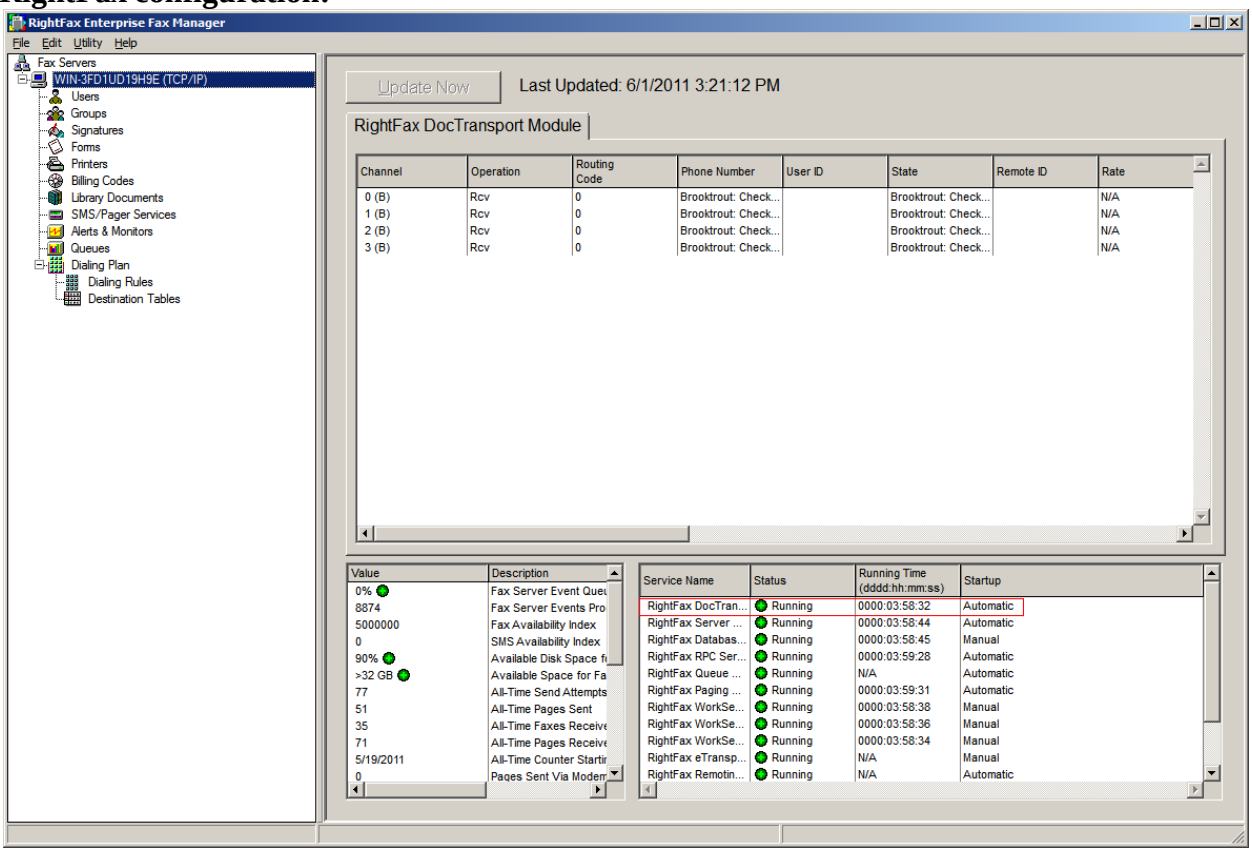
```
!
!
!
controller T1 1/0
 framing esf
 linecode b8zs
 channel-group 0 timeslots 1-24
 description T1 interface to the network terminating on ERX s4/0:2/1/5/4/1
!
controller T1 1/1
 framing esf
 linecode b8zs
!
!
!
!
interface FastEthernet0/0
 ip address 201.1.251.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 ip address 202.1.251.1 255.255.255.0
 duplex full
 speed 100
!
interface Serial1/0:0
 description PPP Link to the network terminating on ERX-VT1 #6
 ip address 200.1.251.2 255.255.255.252
 no ip redirects
 ip virtual-reassembly
 encapsulation ppp
 load-interval 30
 tx-ring-limit 1
 tx-queue-limit 1
 no cdp enable
 max-reserved-bandwidth 100
!
ip http server
!
ip classless
ip route 0.0.0.0 0.0.0.0 200.1.251.1
!
!
!
!
!
control-plane
```

```
!
!
!
voice-port 2/0
!
voice-port 2/1
!
voice-port 2/2
!
voice-port 2/3
!
voice-port 2/4
!
voice-port 2/5
!
voice-port 2/6
!
voice-port 2/7
!
voice-port 2/8
!
voice-port 2/9
!
voice-port 2/10
!
voice-port 2/11
!
voice-port 2/12
!
voice-port 2/13
!
voice-port 2/14
!
voice-port 2/15
!
voice-port 2/16
!
voice-port 2/17
!
voice-port 2/18
!
voice-port 2/19
!
voice-port 2/20
!
voice-port 2/21
!
voice-port 2/22
```

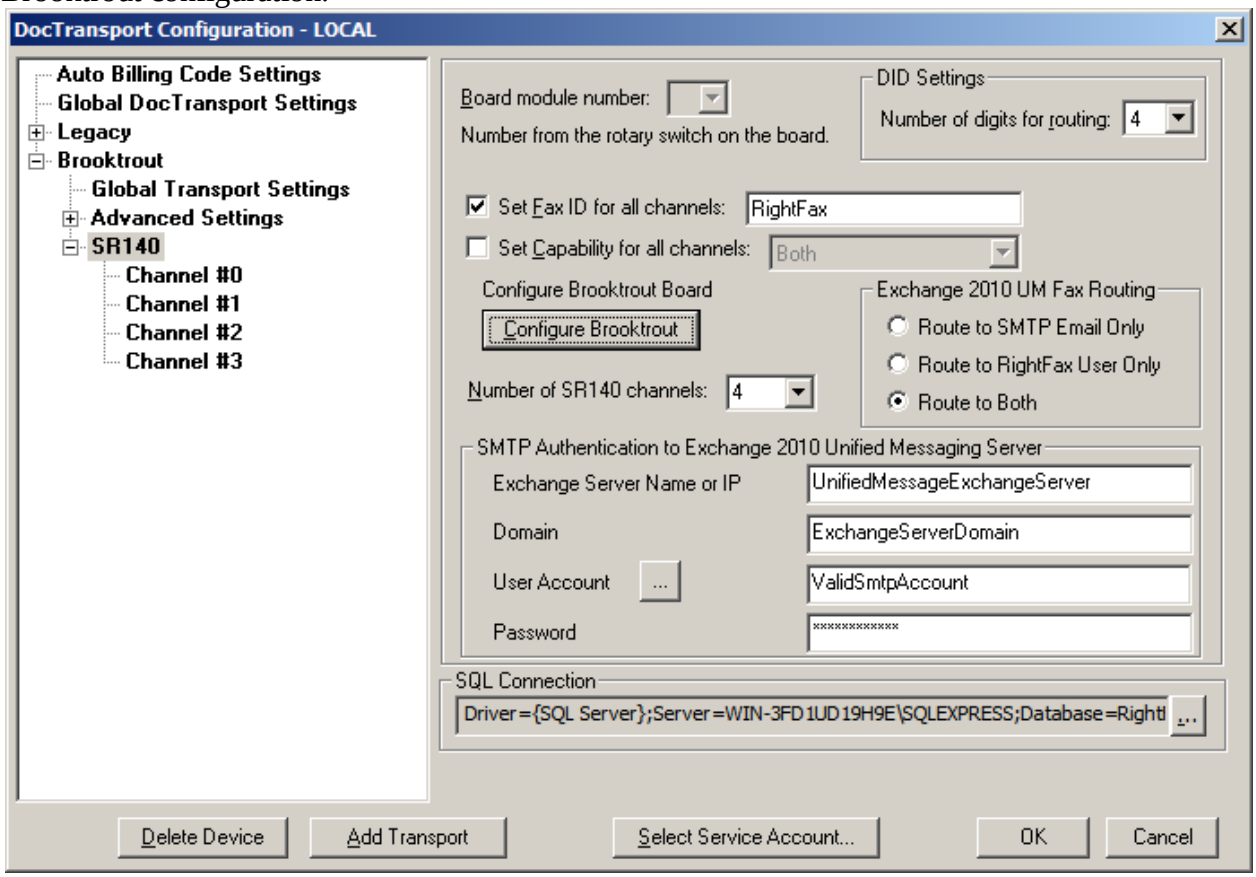
```
!
voice-port 2/23
!
!
!
!
banner login ^CC ^C
banner motd ^C ** Welcome to the SipTrnkIAD2 ** ^C
!
line con 0
 exec-timeout 0 0
 transport preferred telnet
line aux 0
 transport preferred telnet
line vty 0 4
 exec-timeout 0 0
 password cisco
 login
 terminal-type mon
 transport preferred telnet
line vty 5 15
 exec-timeout 0 0
 password cisco
 login
 transport preferred telnet
!
end
```

7. OpenText Fax Server (RightFax) basic Configuration

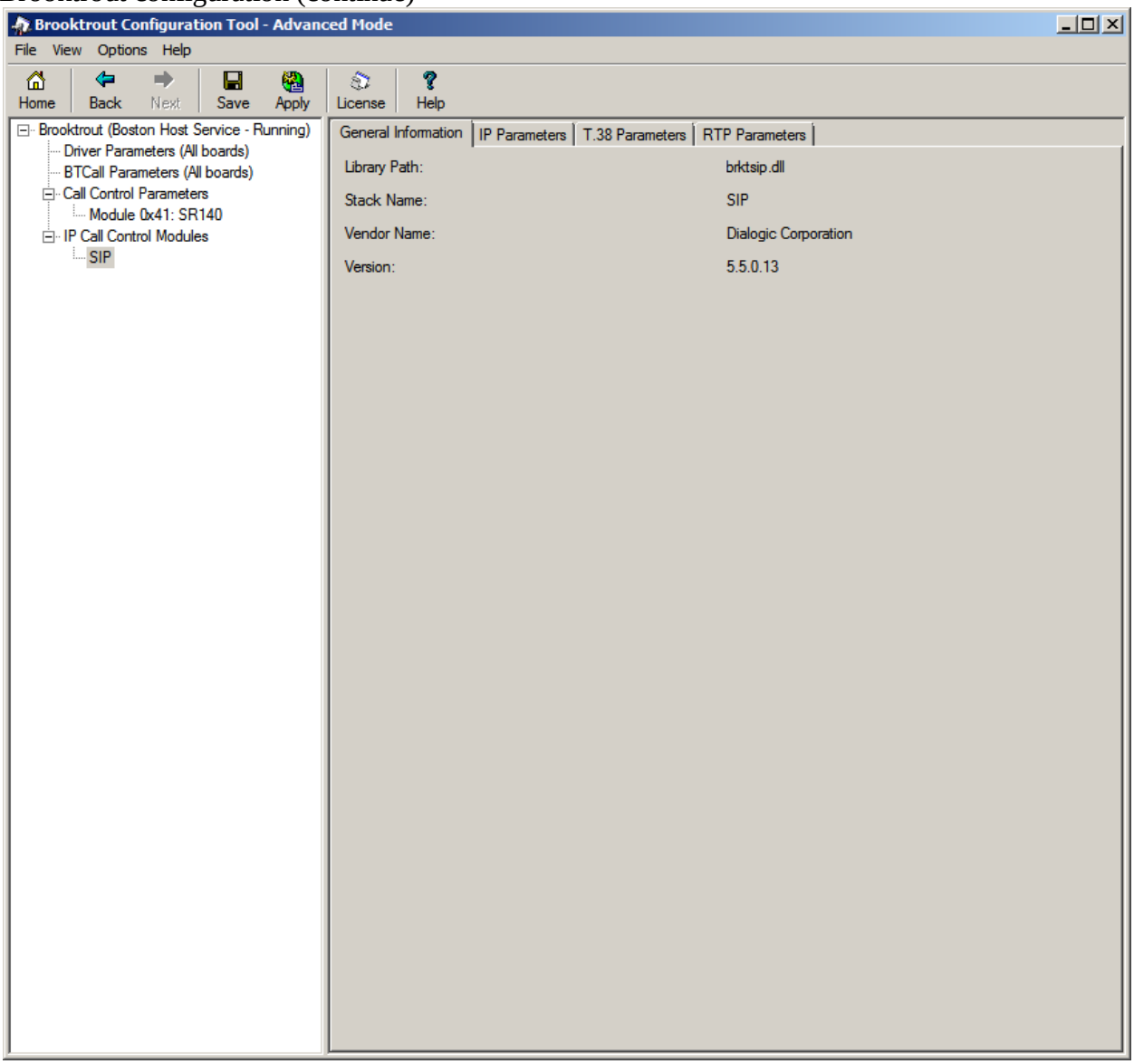
RightFax configuration:



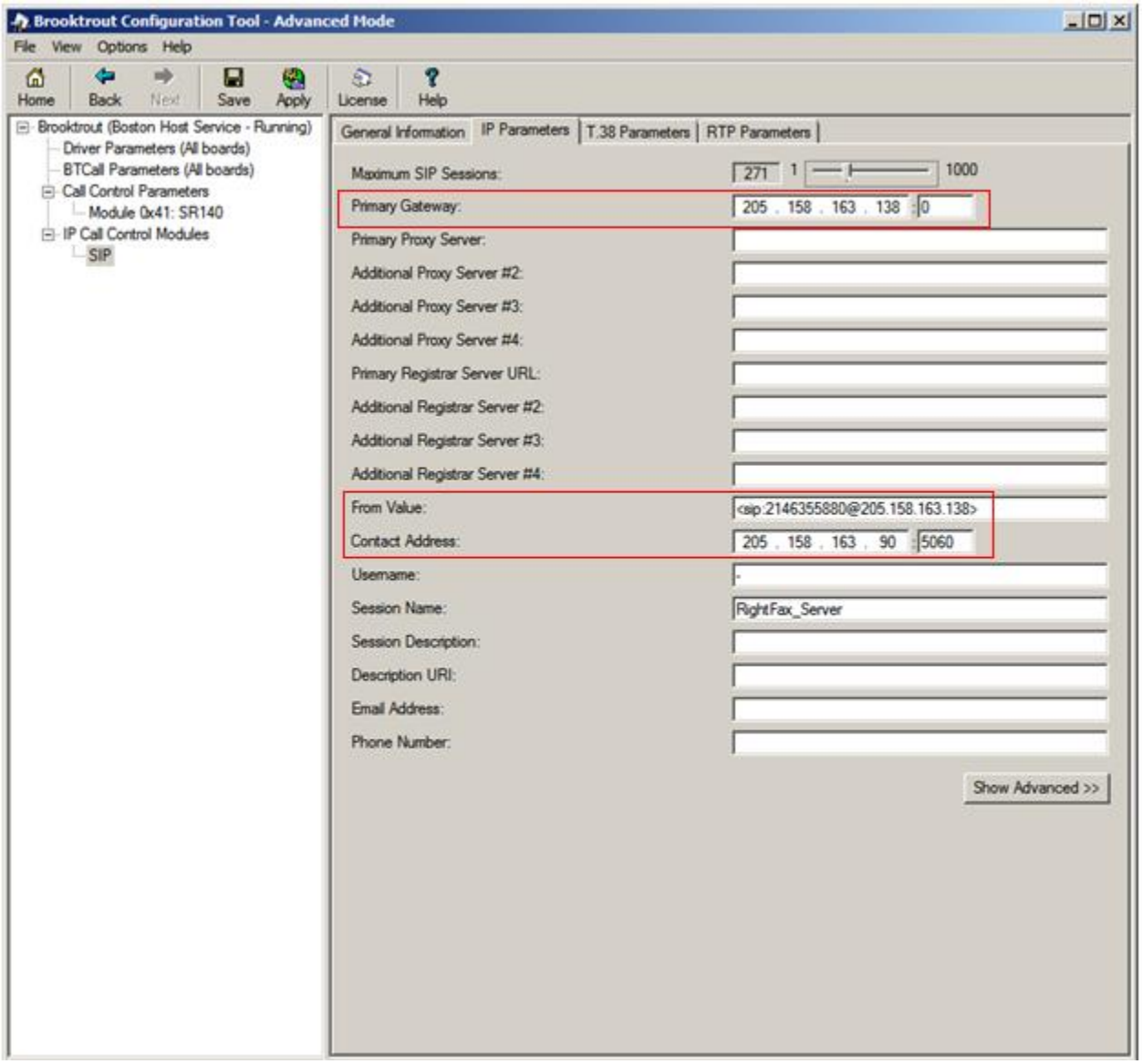
Brooktrout configuration:



Brooktrout configuration (continue)



Brooktrout configuration (continue):



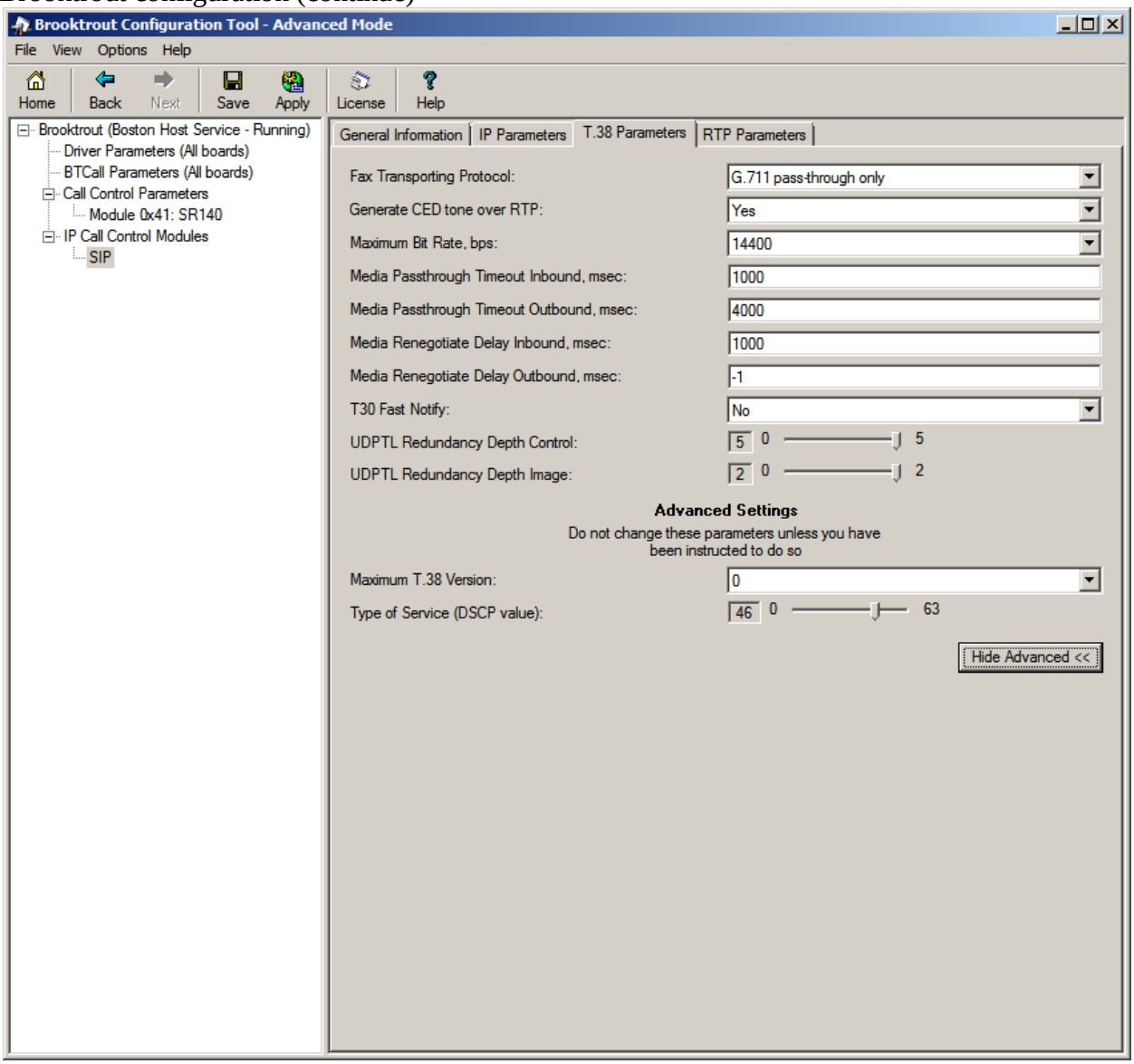
Primary Gateway: XO NBS IP

From value: <sip:XXXXXXXXXX@Y.Y.Y.Y >

Where XXXXXXXXXX is one of XO DID and Y.Y.Y.Y is XO NBS IP.

Contact IP: Fax server IP

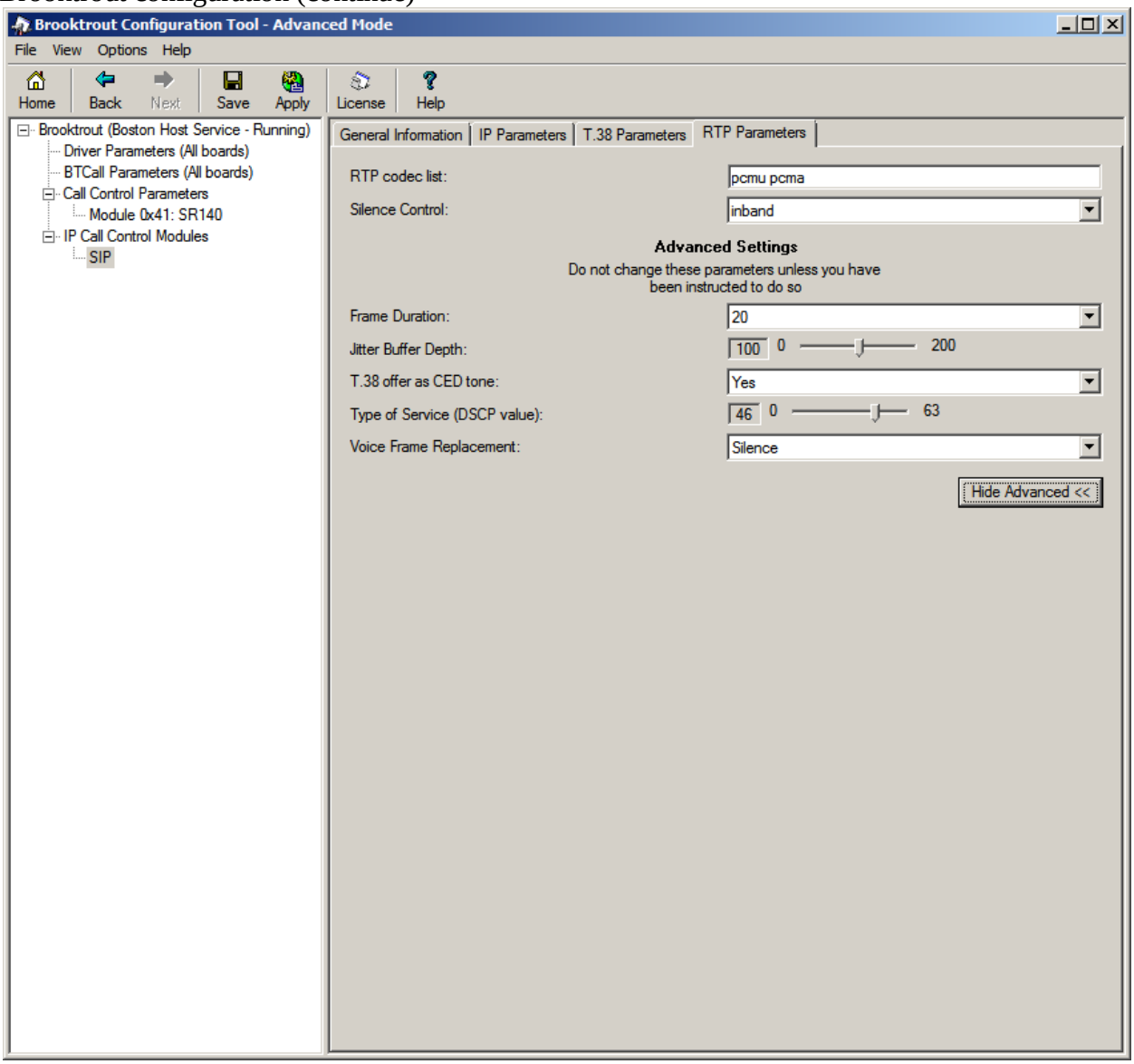
Brooktrout configuration (continue)



"Fax Transporting Protocol"

This is where Fax transport mode configured. It could be either 'G.711 pass through only' or 'T.38 only'.

Brooktrout configuration (continue)



RightFax FaxUtil:
This tool is being used to send out Fax and check status of inbound and outbound fax.