



**Dialogic[®] Brooktrout[®] SR140 Fax Software with
Alcatel-Lucent OmniPCX Enterprise**
Installation and Configuration Integration Note

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1. Scope

This document is intended as a general guide for configuring a basic installation of the **Alcatel-Lucent OmniPCX Enterprise** for use with Dialogic® Brooktrout® SR140 Fax over IP (FoIP) software platform. The interoperability includes **SIP** call control and **T.38/T.30** media.

This document is not intended to be comprehensive and thus does not replace the manufacturer's detailed configuration documentation. Users of this document should already have a general knowledge of how to install and configure the **Alcatel OXE**.

The sample configuration shown and/or referred in the subsequent sections was used for lab validation testing by Dialogic. Therefore, it is possible and even likely that the example configuration will not match the exact configuration and versions that would be present in a deployed environment. However, the sample configuration does provide a possible starting point to work with the equipment vendor for configuring your device. Please consult the appropriate manufacturer's documentation for details on setting up your specific end user configuration.

For ease of reference, the Dialogic® Brooktrout® SR140 Fax Software and Dialogic® Brooktrout® TR1034 Fax Boards will sometimes be denoted herein, respectively, as SR140 and TR1034. All references to the SDK herein refer to the Dialogic® Brooktrout® Fax Products SDK. The Alcatel-Lucent OmniPCX Enterprise will sometimes be denoted herein as Alcatel OXE or OmniPCX OXE, or some other form thereof.

2. Configuration Details

The following systems were used for the sample configuration described in the document.

2.1 Gateway

Vendor	Alcatel-Lucent
Model	OmniPCX Enterprise (OXE)
Software Version	R9.1-i1.605-21
IP Device	Dialogic® Brooktrout® SR140
Protocol to IP Device	SIP
Additional Notes	The OmniPCX Enterprise (OXE) should not be confused with the OmniPCX Office (OXO).

2.2 Dialogic® Brooktrout® SR140 Fax Software

Vendor	Dialogic
Model	Dialogic® Brooktrout® SR140 Fax Software
Software Version	SDK 6.3.0
Protocol to SIP Trunking Service	SIP
callctrl.cfg file	Default settings

2.3 Network System Configuration

The diagram below details the sample configuration used in connection with this document.

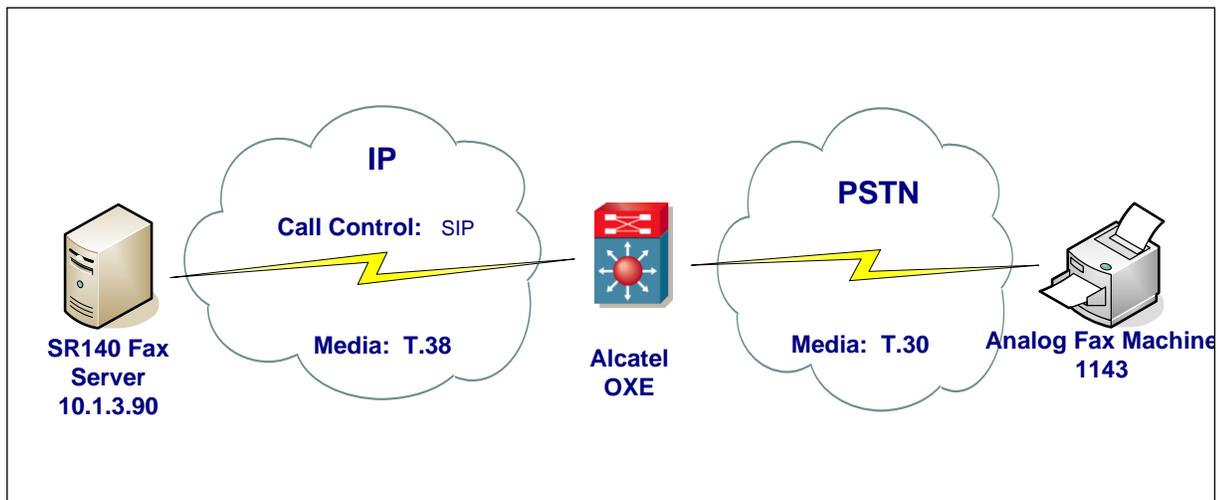


Diagram Notes: SR140 Fax Server = Fax Server including Dialogic® Brooktrout® SR140 Fax Software and third party fax application

3. Prerequisites

None.

4. Summary of Limitations

- OXE Release 9.1 supports only T.38 for FoIP.
- OXE Release 9.1 supports only V21, V29 (9600 baud) and does not support V17 (14,400 baud).
- There is no ECM configuration setting on the Alcatel OXO. All calls were non-ECM.
- SR140 does not support G.729 or G.723.

5. Deployment Details

5.1 Network Addresses

Device #	Device Make, Model, and Description	Device IP Address
1	OXE main CPU (call server) for call control	10.1.2.1
2	OXE standby CPU (call server) for call control	10.10.10.1
3	OXE GW (GD card) for T.38/VOIP medium	10.1.2.10
4	SR140 fax server	10.1.3.90

The 2 call servers (device 1 and 2) are in the same node, with the DNS name "etesting.XmlForum.com".

6. Alcatel-Lucent OmniPCX Enterprise Setup Notes

6.1 User Analog - Classic Fax Declaration

Mgr -> users

```
Review/Modify: Users
Node Number (reserved) : 101
Directory Number : 1143
Directory name : Classic-FAX
Directory First Name : Z
UTF-8 Directory Name : -----
UTF-8 Directory First Name : -----
Location Node : 1
Shelf Address : 1
Board Address : 1
Equipment Address : 66
Set Type + ANALOG
Entity Number : 4
Set Function + Default
Profile Name : -----
Key Profiles + None
Domain Identifier : 0
Language ID : 1
Secret Code : ****
PIN : ****
Associated Set No. : 1143
Cost Center ID : 255
Cost Center Name : -----
Charging COS + Justified
Public Network COS : 2
External Forwarding COS : 255
Phone Features COS : 0
Connection COS : 0
Hunt Group Dir No. : -----
ACD Group Directory No. : -----
```

6.2 SIP Trunk Declaration

Mgr -> Trunk Groups -> create

Check on Mgr -> Trunk Groups -> Trunk Group and confirm the Entity number is the same as that used in the User Entity.

```
Review/Modify: Trunk Groups
Node Number (reserved) : 101
Trunk Group ID : 41
Trunk Group Type + T2
Trunk Group Name : SIP
UTF-8 Trunk Group Name : -----
Number Compatible With : -1
Remote Network : 5
Shared Trunk Group + False
Special Services + Nothing
Node number : 1
Transcom Trunk Group + False
Auto.reserv.by Attendant + False
Overflow trunk group No. : -1
Tone on seizure + False
Private Trunk Group + False
Q931 Signal variant + ABC-F
SS7 Signal variant + No variant
Number Of Digits To Send : 30
Channel selection type + Quantified
Auto.DTMF dialing on outgoing call + NO
T2 Specification + SIP
Homogenous network for direct RTP + NO
Public Network COS : 31
DID transcoding + False
Can support UUS in SETUP + True
Implicit Priority
```

6.3 Automatic Routing Selection (ARS) Configuration

Translator -> Prefix

Translator -> External Number Plan -> Numbering Discriminator -> Discriminator rule

Translator -> ARS route list

Translator -> Automatic Route Selection -> ARS route list -> ARS route

```
Review/Modify: ARS Route
Node Number (reserved) : 101
Instance (reserved) : 1
Instance (reserved) : 1
ARS Route list : 2
Route : 1

Name : Route-2-1_
Trunk Group Source + Route
Trunk Group : 41
No.Digits To Be Removed : 0
Digits To Add : -----
Numbering Command Tabl. ID : 4
VPN Cost Limit : 5
Protocol Type + Dependant on Trunk Group Type
NPD identifier : 255
Route Type + Public
ATM Address ID : -1
Preempter + False

Quality

[ Add ] [ Remove ] [ Next ] [Previous]

Quality + Speech
```

6.4 Numbering Command Table

Translator -> Automatic Route Selection -> Numbering Command Table

```
Review/Modify: Numbering Command Table
Node Number (reserved) : 101
Instance (reserved) : 1
Instance (reserved) : 1
Table ID : 4

Carrier Reference : 0
Command : I
Associated Ext SIP gateway : 4
```

6.5 SIP Gateway Declaration

Mgr -> SIP -> SIP Ext Gateway

```
Review/Modify: SIP Ext Gateway
Node Number (reserved) : 101
Instance (reserved) : 1
SIP External Gateway ID : 4
Gateway Name :
SIP Remote domain : 10.1.3.90
PCS IP Address : -----
SIP Port Number : 5060
SIP Transport Type + UDP
RFC3262 Forced use + False
Belonging Domain : -----
Registration ID : -----
Registration ID P_Asserted + False
Registration timer : 0
SIP Outbound Proxy : -----
Supervision timer : 0
Trunk group number : 41
Pool Number : -1
Outgoing realm : -----
Outgoing username : -----
Outgoing Password : -----
Confirm : -----
Incoming username : -----
Incoming Password : -----
Confirm : -----
RFC 3325 supported by the distant + True
DNS type + DNS A
SIP DNS1 IP Address : -----
SIP DNS2 IP Address : -----
SDP in 18x + False
Minimal authentication method + SIP Digest
INFO method for remote extension + False
Send only trunk group algo + False
To EMS + False
Routing Application + False
Dynamic Payload type for DTMF : 97
```

6.6 Proxy Configuration (includes Authentication)

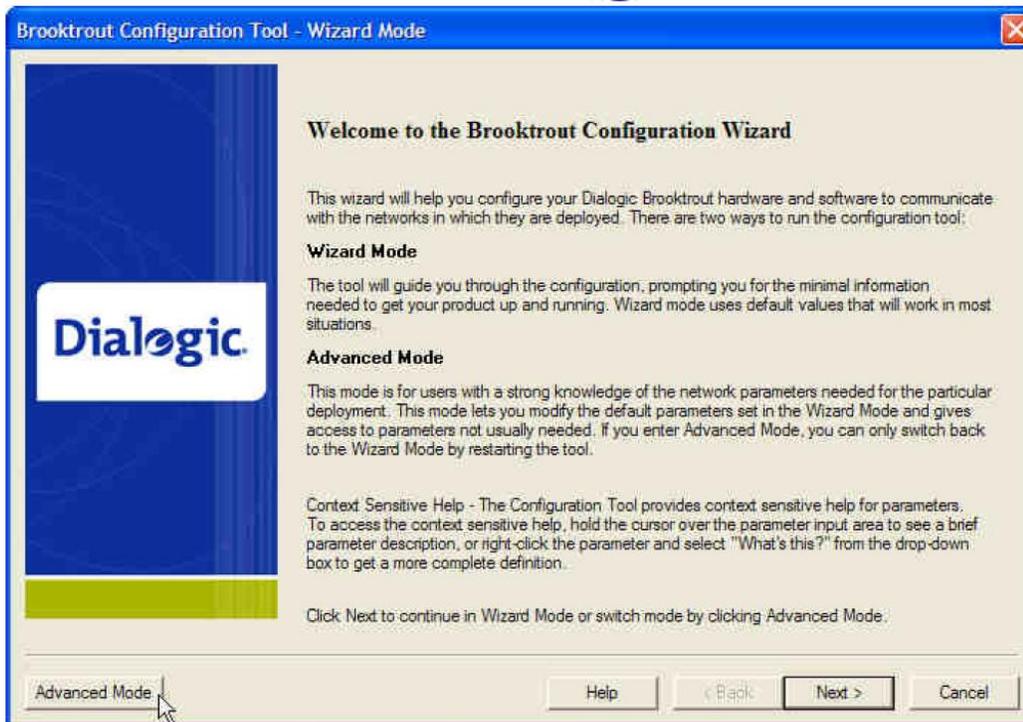
```
Review/Modify: SIP Proxy
Node Number (reserved) : 101
Instance (reserved) : 1
Instance (reserved) : 1
SIP initial time-out : 500
SIP timer T2 : 4000
Dns Timer overflow : 100000
Recursive search + False
Minimal authentication method + SIP None
Authentication realm : alcatel
Only authenticated incoming calls + False
Framework Period : 3
Framework Nb Message By Period : 25
Framework Quarantine Period : 1800
TCP when long messages + True
```

7. Dialogic® Brooktrout® SR140 Fax Software Setup Notes

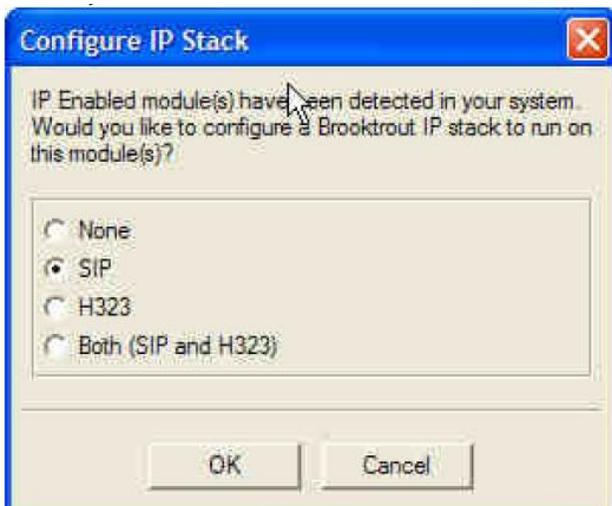
The *Installation and Configuration Guides* for the SR140 are available from the following site:

<http://www.dialogic.com/manuals/brooktrout/default.htm>

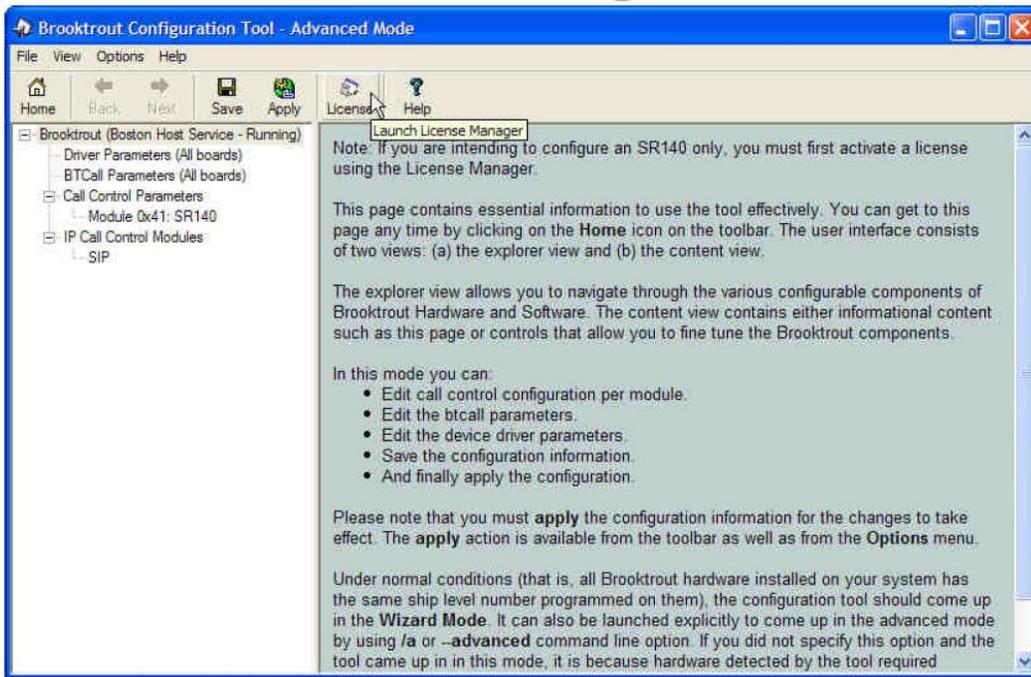
The configuration can be done in Wizard or in Advance Mode. Advance Mode was used in the test configuration.



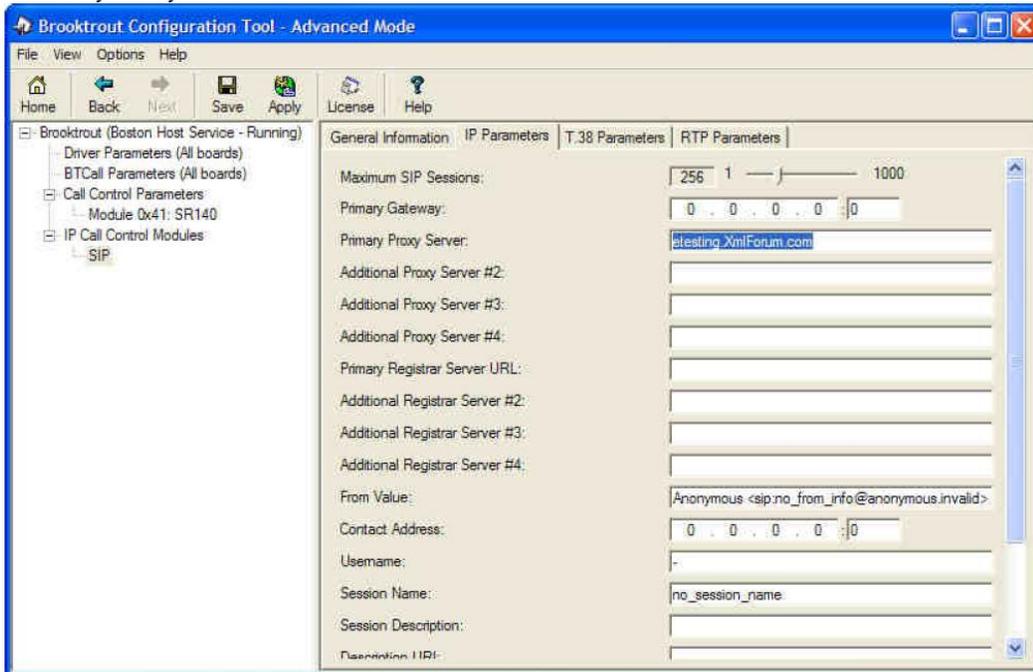
Select **SIP** for the IP stack.



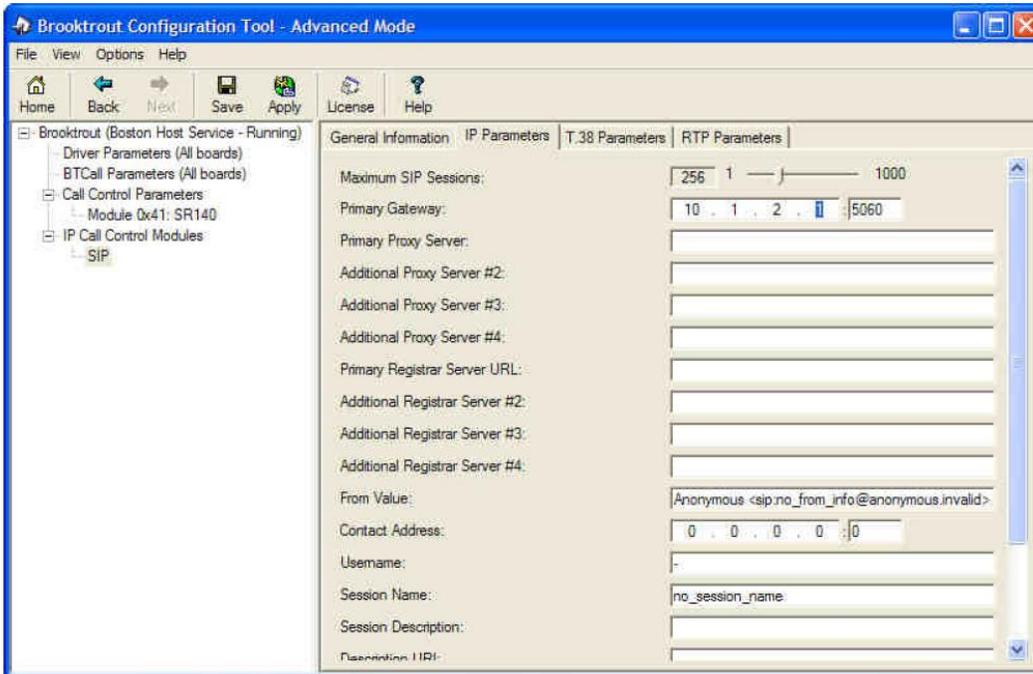
Activate the SR140 license via the License Manager, if not already activated.



To support the OXE spatial redundancy, enter the DNS name of the Alcatel Call Server to which the SR140 needs to communicate with - in this example, node 1 etesting.XmlForum.com - in the "Primary Proxy Server" field:



When the SR140 needs only to talk to 1 single Alcatel Call Server, enter the IP address of this Call Server - in this case the main CPU **10.1.2.1** - in the **Primary Gateway** field:



For anything else, the default SR140 configuration was used. Press **Apply** to save and apply the configuration.

8. Frequently Asked Questions

- "I'm configured as near as possible to this the sample configuration described in this document, but calls are still not successful; what is my next step?"
 - ➔ Provide this document to your gateway support.
 - ➔ Ensure T.38 is enabled on the gateway.
 - ➔ Confirm that basic network access is possible by pinging the gateway.
- "How do I obtain Wireshark traces?"
 - ➔ The traces can be viewed using the Wireshark network analyzer program, which can be freely downloaded from <http://www.wireshark.org>.
 - ➔ To view the call flow in Wireshark, open the desired network trace file and select "Statistics->VoIP Calls" from the drop down menu. Then highlight the call and click on the "Graph" button.