



Dialogic[®] Brooktrout[®] SR140 Fax Software with Nortel CS1000

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 **Nortel CS1000** 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 should not and 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 **Nortel CS1000**

The sample configuration shown and/or referred in the subsequent sections was used for lab validation testing by Dialogic. Therefore, it is quite possible that the sample configuration will not match an exact configuration or 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.

2. Configuration Details

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

2.1 Gateway

Vendor	Nortel
Model	CS1000
Software Version	Communication Server 1000 Release 5.5 Signalling Server: 5.50.12
PSTN Device	Dialogic® Brooktrout® TR1034 T1 Fax Board
Protocol to PSTN Device	T1 QSIG
IP Device	Dialogic® Brooktrout® SR140 Fax Software

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. The Nortel CS1000 will be denoted herein as CS1000, or some other form thereof. All mentions to the SDK herein refer to the Dialogic® Brooktrout® Fax Products SDK.

2.2 Dialogic® Brooktrout® SR140 Fax Software

Vendor	Dialogic
Model	Dialogic® Brooktrout® SR140 Fax Software
Software Version	SDK 5.2.7
Protocol to Gateway or Call Manager	SIP
callctrl.cfg file	All defaults

2.3 Dialogic® Brooktrout® TR1034 Fax Board

Vendor	Dialogic
PSTN Device	Dialogic® Brooktrout® TR1034 T1 Fax Board
Software Version	SDK 6.0.0 was used for testing
Protocol to PSTN Device	T1 QSIG
callctrl.cfg file	All defaults

2.4 Network System Configuration

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

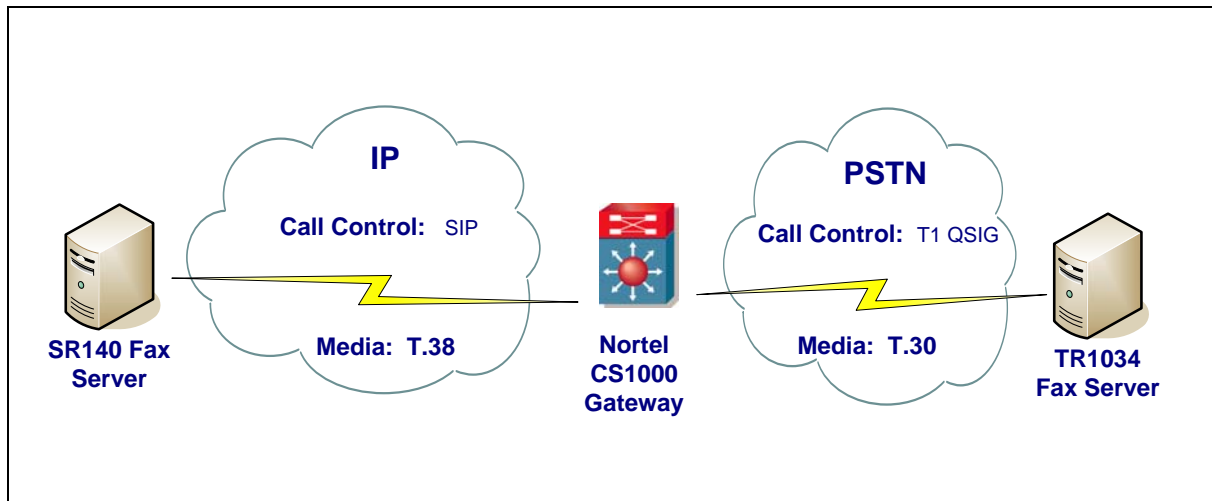


Diagram Notes:

- SR140 Fax Server = Fax Server including Dialogic® Brooktrout® SR140 Fax Software and third party fax application
- TR1034 Fax Server = Fax Server including Dialogic® Brooktrout® TR1034 Fax Board and third party fax application

3. Prerequisites

No special requirements to note.

4. Summary of Limitations

No limitations to note.

5. Deployment Details

5.1 Network Addresses

Device #	Device Make, Model, and Description	Device IP Address
1	Nortel CS1000	10.242.203.72
2	SR140	10.242.202.14

5.2 Dialing Plan Overview

SR140 to PSTN: tfax -u 0 -v -s 30010000@10.242.203.72 images\eagle.tif

PSTN to SR140: tfax -u 22 -v -s 81005501 images\eagle.tif

6. Dialogic® Brooktrout® SR140 Fax Software Setup Notes

For the sample test configuration, the SR140 was configured using the default values.

7. Dialogic® Brooktrout® TR1034 Fax PSTN Setup Notes

For the sample test configuration, the TR1034 was configured using the default values for T1 QSIG.

8. Nortel CS1000 Gateway Setup Notes

The following screenshots show the values that were used to configure the CS1000.

SIP Trunk Route

The screenshot shows the 'Customer 0, Route 18 Property Configuration' page in the Nortel CS1000 Element Manager. The page is titled 'Basic Configuration' and contains a table with the following data:

Input Description	Input Value
Route Data Block (RDB) (TYPE)	RDB
Customer number (CUST)	00
Route Number (ROUT)	18
Designator field for trunk (DES)	SIP_TRUNK
Trunk Type (TKTP)	TIE
Incoming and Outgoing trunk (ICOG)	Incoming and Outgoing (IAO)
Access Code for the trunk route (ACOD)	8100
Trunk type M911P (M911P)	<input type="checkbox"/>
The route is for a virtual trunk route (VTRK)	<input checked="" type="checkbox"/>
- Zone for codec selection and bandwidth management (ZONE)	001 Range: 0 - 255
- Node ID of signaling server of this route (NODE)	1 Range: 0 - 9999
- Protocol ID for the route (PCID)	SIP (SIP)
- Print Correlation ID in CDR for the route (CRID)	<input checked="" type="checkbox"/>
Integrated Services Digital Network option (ISDN)	<input checked="" type="checkbox"/>
- Mode of operation (MODE)	Route uses ISDN Signaling Link (ISLD)
- D channel number (DCH)	77 Range: 0 - 254
- Interface type for route (IFC)	Meridian M1 (SL1)
- Private Network Identifier (PNI)	00000 Range: 0 - 32700
- Network Calling Name Allowed (NCHIA)	<input checked="" type="checkbox"/>
- Network Call Redirection (NCRD)	<input checked="" type="checkbox"/>
- Trunk Route Optimization (TRO)	<input type="checkbox"/>
- Recognition of DTI2 ABCD FALT signal for ISL (FALT)	<input type="checkbox"/>
- Channel Type (CHTY)	B-channel (BCH)
- Call Type for outgoing direct dialed TIE route (CTYP)	Coordinated Dialing Plan (CDP)
- Insert ESN Access Code (INAC)	<input type="checkbox"/>

SIP Trunk Channel

The screenshot displays the 'Customer 0, Route 18, Trunk 1 Property Configuration' page in the Nortel CS 1000 Element Manager. The interface is viewed through a Windows Internet Explorer browser. The left sidebar contains a navigation menu with categories like Home, Links, System, Customers, and Security. The main content area shows the configuration details for a SIP Trunk Channel under the 'Basic Configuration' section.

Managing: [10.242.202.75](#)
 Routes and Trunks » Routes and Trunks » Customer 0, Route 18, Trunk 1 Property Configuration

Customer 0, Route 18, Trunk 1 Property Configuration

- Basic Configuration

Input Description	Input Value
Trunk data block (TYPE)	<input type="text" value="IPTI"/>
Terminal Number (TN)	<input type="text" value="112 0 03 00"/>
Designator field for trunk (DES)	<input type="text" value="SIP_TRUNK"/>
Extended Trunk (XTRK)	<input type="text" value="VTRK"/>
Route number, Member number (RTMB)	<input type="text" value="18 1"/>
Level 3 Signaling (SIGL)	<input type="text" value=""/>
Card Density (CDEN)	<input type="text" value="8D"/>
Start arrangement Incoming (STRI)	<input type="text" value="Immediate (IMM)"/>
Start arrangement Outgoing (STRO)	<input type="text" value="Immediate (IMM)"/>
Trunk Group Access Restriction (TGAR)	<input type="text" value="0"/>
Channel ID for this trunk. (CHID)	<input type="text" value="2001"/>
Increase or decrease the member numbers (INC)	<input type="text" value="Increase channel and member number (YES)"/>
Class of Service (CLS)	<input type="text" value="Edit"/>

+ Advanced Trunk Configurations

At the bottom right of the configuration area, there are three buttons: **Save**, **Delete**, and **Cancel**.

SIP Routing Outbound-DSC for User Endpoints

>ld 87

ESN000

MEM AVAIL: (U/P): 98889928 USED U P: 5318275 61618 TOT: 104269821

DISK SPACE NEEDED: 74 KBYTES

REQ prt

CUST 0

FEAT cdp

TYPE dsc

DSC 6

DSC 6

FLEN 4

DSP LSC

RLI 18

NPA

NXX

SIP Routing Outbound-DSC for Gateway Endpoint

MEM AVAIL: (U/P): 98889928 USED U P: 5318275 61618 TOT: 104269821

DISK SPACE NEEDED: 74 KBYTES

REQ prt

CUST 0

FEAT cdp

TYPE dsc

DSC 55

DSC 55

FLEN 4

DSP LSC

RLI 18

NPA

NXX

NRS Routing

NRS Manager - Windows Internet Explorer
 http://10.242.202.76/cgi/nrsm.cgi

NORTEL NETWORK ROUTING SERVICE MANAGER

Home **Configuration** Tools Reports Administration **Active DB view** (set Standby DB view) Help | Logout

Location: Configuration > Routing Entries >

Routing Entries

Show Routing Entries for (Service Domain / L1 Domain / L0 Domain / Endpoint)
 Select domains and enter a gateway endpoint name to show specified routing entries.
 Use the wildcard * by itself for all gateway endpoints :

Intel.com / newyork / buffalo /

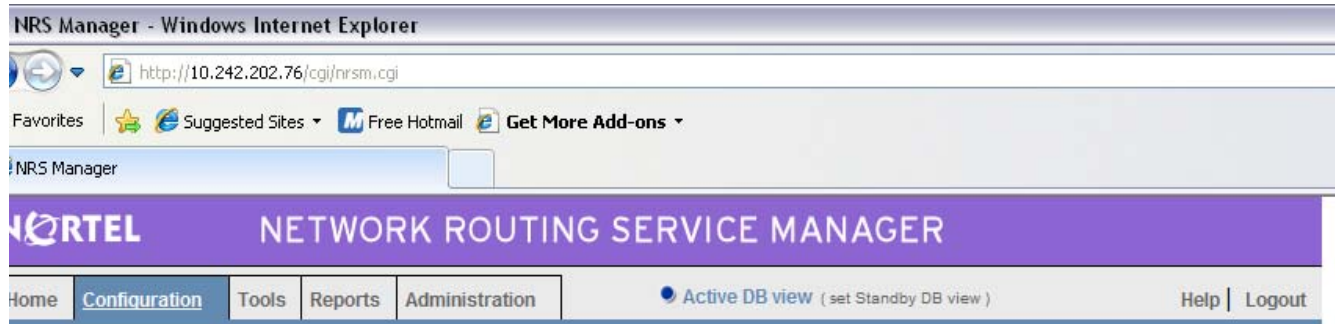
Gateway Endpoint: SR-140 [Look up](#)

With DN Type: < All DN Types > [Show](#)

Showing 1 - 2 of 2 < Previous | Next >

#	DN Prefix	DN Type	Route Cost	SIP URI Phone Context
1	5500	Private level 0 regional (CDP steering code)	1	buffalo.newyork
2	5501	Private level 0 regional (CDP steering code)	1	buffalo.newyork

NRS Gateway Endpoints



- Service Domains
- Domains (UDP)
- Domains (CDP)
- Gateway Endpoints
- Service Endpoints
- Routing Entries
- Default Routes
- Administrative Servers

Location: Configuration > Gateway Endpoints >

Gateway Endpoints

Show Gateway Endpoints for (Service Domain / L1 Domain / L0 Domain):

/
 /

Showing 1 - 3 of 3 < Previous | Next >

#	ID	Support Protocol(s)	Call Signaling IP	Description	# of routing entries
1	SJPhone	Static SIP	10.242.202.153	Not available	1
2	SR-140	Static SIP	10.242.202.14	Not available	2
3	SigServ	RAS H.323 / Static SIP	10.242.203.72 / 10.242.203.71	Not available	0

NRS User Endpoints

Location: Configuration > User Endpoints >

User Endpoints

Show User Endpoints for (Service Domain / L1 Domain / L0 Domain):

Intel.com / newyork / buffalo Show

Showing 1 - 2 of 2 < Previous | Next >

#	ID	L0 DN	L1 DN Prefix	E.164 Local DN Prefix	E.164 Area Code	E.164 Country Code	Registration Status
1	SR140	6005	6005	6005			Not registered
2	TomTest	6003	6003	6003			Not registered

9. 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.