

**Spectrum Enterprise SIP Trunking Service
ShoreTel Shoregear 90 R14.2 Build 19.43.1700.00
(without Ingate SIParator)
IP PBX Configuration Guide**

About Spectrum Enterprise:

Spectrum Enterprise is a division of Charter Communications following a merger with Time Warner Cable and acquisition of Bright House Networks. Spectrum Enterprise is a national provider of scalable, fiber technology solutions. The Spectrum Enterprise portfolio includes networking and managed services solutions, including Internet access, Ethernet and Managed Network Services, Voice, TV and Cloud solutions. Our industry-leading team of experts works closely with clients to achieve greater business success.

About this document:

Spectrum Enterprise assures IP PBX compatibility by conducting interoperability testing to ensure any potential compatibility issues have been resolved prior to installation. Please review the IP PBX configuration instructions in this guide prior to your installation date.

Be advised that this document may contain references to Charter or Charter Business. All references to Charter should be read as Spectrum Enterprise.

Thank you,

Spectrum Enterprise

ShoreTel Shoregear 90 R14.2 Build 19.43.1700.00 (without Ingate SIParator) IP PBX Configuration Guide



1 Introduction

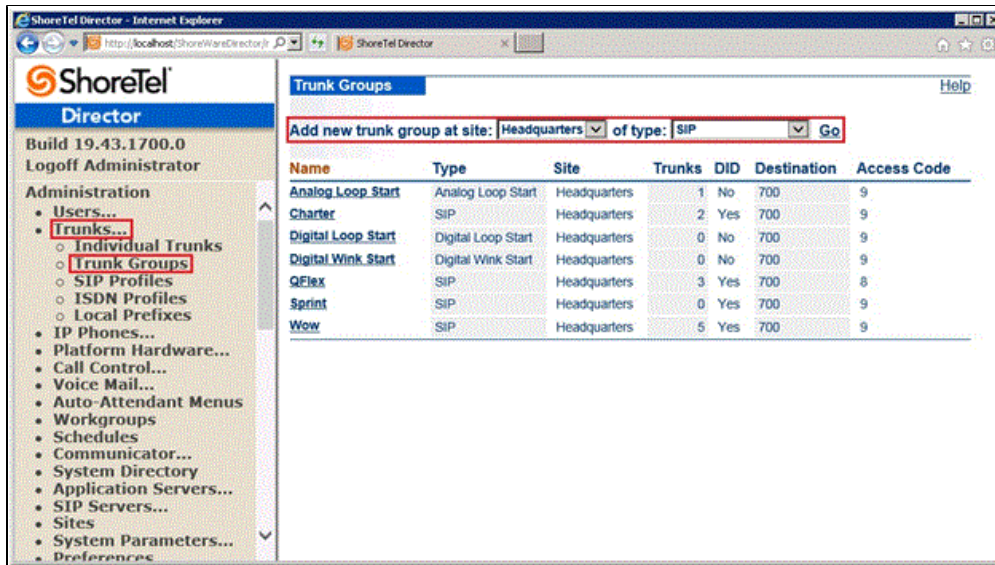
This document describes how to configure the ShoreTel IP PBX to interoperate with the Charter network. It does not provide any information how to provision, configure or use the features of ShoreTel. Please refer to the documentation provided with the IP PBX or contact the vendor.

2 Configuration

2.1 SIP Trunk Setup

To setup the SIP trunk, follow the step-by-step procedure.

Step	Action	Result
1	Under Administration Navigate to Trunks -> Trunks Groups	
2	At Add new trunk group at site: Select Headquarters	
3	At of type: Select SIP	
4	Click Go button	
5	Go to the next table.	



Step	Action	Result
1	Under Edit SIP Trunk Group Name: Enter appropriate name	Charter is an example
2	Profile: Select ITSP	ITSP is a default SIP Profile
3	Under Inbound: Number of Digits From CO: Enter 10	
4	DNIS Verify checkbox is unchecked	
5	DID Verify checkbox is checked	
6	Under Tandem Trunking At User Group: Select Executives	
7	Go to the next table.	

Trunk Groups
Edit SIP Trunk Group

Name:

Site: Headquarters

Language:

Enable SIP Info for G.711 DTMF Signaling

Profile:

Digest Authentication:

Username:

Password:

Inbound:

Number of Digits from CO:

DNIS

DID

Extension

Translation Table:

Prepend Dial In Prefix:

Use Site Extension Prefix

Tandem Trunking

User Group:

Prepend Dial In Prefix:

Destination:

Step	Action	Result												
1	Under Outbound: At Network Call Routing: Access Code: Enter the appropriate access code	9 is an example												
2	Local Area Code: Enter the appropriate local area code	303 is an example. This depends on DID range												
3	Billing Telephone Number: Enter the appropriate billing telephone number	+1(303) 835-6006 is an example. Usually this will be the first number in DID range provisioned by service provider.												
4	Under Trunk Services: Verify the following checkboxes are checked: <table border="1" data-bbox="212 1440 597 1732"> <tbody> <tr> <td>a</td> <td>Local</td> </tr> <tr> <td>b</td> <td>Long Distance</td> </tr> <tr> <td>c</td> <td>International</td> </tr> <tr> <td>d</td> <td>Enable Original Caller Information</td> </tr> <tr> <td>e</td> <td>Easy Recognizable Codes</td> </tr> <tr> <td>f</td> <td>Caller ID not blocked by default</td> </tr> </tbody> </table>	a	Local	b	Long Distance	c	International	d	Enable Original Caller Information	e	Easy Recognizable Codes	f	Caller ID not blocked by default	
a	Local													
b	Long Distance													
c	International													
d	Enable Original Caller Information													
e	Easy Recognizable Codes													
f	Caller ID not blocked by default													
5	Go to the next table.													

Outbound:

Network Call Routing:

Access Code:

Local Area Code:

Additional Local Area Codes:

Nearby Area Codes:

Billing Telephone Number: e.g. +1 (408) 331-3300

Trunk Services:

Local

Long Distance

International

Enable Original Caller Information

n11 (e.g. 411, 611, except 911 which is specified below)

Emergency (e.g. 911)

Easily Recognizable Codes (ERC) (e.g. 800, 888, 900)

Explicit Carrier Selection (e.g. 1010xxx)

Operator Assisted (e.g. 0+)

Caller ID not blocked by default

Enable Caller ID (Please confirm with the Carrier(s) or the Service Provider(s) on how the end-to-end caller name is delivered)

When Site Name is used for the Caller ID, overwrite it with:

Step	Action	Result
1	Under Trunk Digit Manipulation: At Remove leading 1 for Local Area Codes Check the checkbox	
2	All other values are set by default	
3	Click the Save button	
4	Procedure completed	

Trunk Digit Manipulation:

Remove leading 1 from 1+10D
Hint: Required for some long distance service providers.

Remove leading 1 for Local Area Codes (for all prefixes unless a specific local prefix list is provided below)
Hint: Required for some local service providers with overlay area codes.

Dial 7 digits for Local Area Code (for all prefixes unless a specific local prefix list is provided below)
Hint: Local prefixes required for some local service providers with mixed 7D and 1+10D in the same home area.

Dial in E.164 Format

Local Prefixes: [Go to Local Prefixes List](#)

Prepend Dial Out Prefix:

Off System Extensions:

Translation Table:



2.2 Individual Trunk Configuration Setup

To setup an individual trunk configuration, follow the step-by-step procedure.

Step	Action	Result
1	Under Administration Navigate to Trunks -> Individual Trunks	
2	At Add new trunk group at site: Select Headquarters	
3	At of type: Select Charter	
4	Click Go button	
5	Go to the next table.	

The screenshot shows the ShoreTel Director interface. On the left is a navigation menu with 'Trunks' and 'Individual Trunks' highlighted. The main content area is titled 'Trunks by Group'. At the top, there are two dropdown menus: 'Add new trunk at site:' set to 'Headquarters' and 'in trunk group:' set to 'Charter', followed by a 'Go' button. Below this is a 'Show page:' dropdown set to '1: Charter - WOW (4)' and a '11 Records 25 per page' indicator. A 'Delete' button is also present. The main part of the screenshot is a table with the following columns: Name, Group, Type, Site, Switch, Port/Channel, and SIP IP Address. The table contains several rows of trunk configurations, including Charter, Charter (1), E91, QFlex_trk, QFlex_trk (1), QFlex_trk (2), WOW, WOW (1), WOW (2), WOW (3), and WOW (4).

Step	Action	Result
1	Under Edit Record Name: Enter the appropriate name	Charter is used as an example
2	Switch: Select Shoregear 90	
3	IP Address: Enter the LAN side of the Adtran	IP address 10.65.1.5 is used as an example
4	Number of Trunks: Enter the appropriate number of trunks	IP address 10.65.1.5 is used as an example

5	Click the Save button	
6	Procedure completed	

Trunks [Help](#)

Edit Trunk New Copy Save Delete Reset

Edit this record Refresh this page * modified

Site: Headquarters

Trunk Group: Charter

Name:

Switch:

IP Address:

Number of Trunks: (regular switch 1 - 220, virtual switch 1 - 500)



2.3 User Group Configuration Setup

To setup a user group configuration, follow the step-by-step procedure.

Step	Action	Result
1	Under Administration Navigate to Users -> User Groups	
2	In the User Groups window Select Executives	
3	Go to the next table	

ShoreTel Director [Help](#)

Build 19.43.1700.0
Logoff Administrator

Administration

- **Users...**
 - Individual Users
 - **User Groups**
 - Class of Service
 - Anonymous Telephones
 - Extension Lists
 - Batch Update Utility
 - Call Handling Mode Defaults...
- Trunks...
- IP Phones...
- Platform Hardware...
- Call Control...
- Voice Mail...

User Groups

Add new

Name	Permissions			Voice Mail Interface	Account Codes	DID AS CESID
	Telephony Features	Call	Voice Mail			
Account Code Service	Minimally Featured	No Restrictions	No Mail Box	None	Disabled	Yes
Anonymous Telephones	Minimally Featured	Internal Only	No Mail Box	None	Disabled	Yes
Audio Conference	Minimally Featured	No Restrictions	No Mail Box	None	Disabled	Yes
Executives	Fully Featured	No Restrictions	Large Mail Box	None	Disabled	Yes
House Telephones	Minimally Featured	Internal Only	No Mail Box	None	Disabled	Yes
IP Telephones	Minimally Featured	Internal Only	No Mail Box	None	Disabled	Yes
Managers	Partially Featured	No Restrictions	Medium Mail Box	None	Disabled	Yes
Staff	Partially Featured	Long Distance Calling	Medium Mail Box	None	Disabled	Yes
Voice Mail Notification	Minimally Featured	No Restrictions	No Mail Box	None	Disabled	Yes

Step	Action	Result
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1	Under Outgoing Trunk Groups (Access Code): Click Charter (9)	
2	Leave all the remaining parameters as default.	
3	Click the Save button	
4	Procedure completed	

User Groups New Copy Save Delete Reset Help

Edit User Group

Edit this record Refresh this page

Name:

COS - Telephony: [Go to this Class of Service](#)

COS - Call Permissions: [Go to this Class of Service](#)

COS - Voice Mail: [Go to this Class of Service](#)

Send Caller ID as Caller's Emergency Service Identification (CESID).

Send DID as Caller's Emergency Service Identification (CESID).

Account Code Collection:

Show ShoreTel Communicator users a list of account codes when dialing.

Outgoing Trunk Groups (Access Code):

Analog Loop Start (9)

Charter (9)

Digital Loop Start (9)

Digital Wink Start (9)

QFlex (8)

Sprint (9)

Wow (9)

Voice Mail Interface Mode:

Music on Hold:

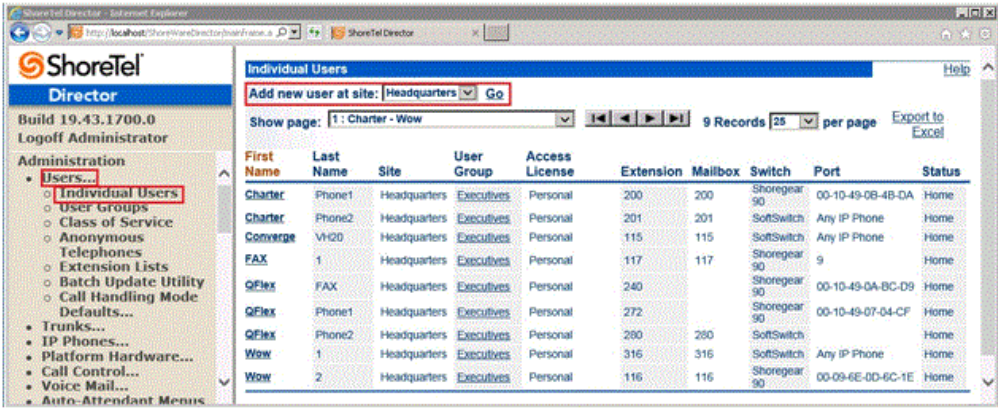


2.4 Individual User Configuration Setup

To setup an individual user group configuration, follow the step-by-step procedure.

Step	Action	Result
1	Under Administration Navigate to Users -> Individual Users	
2	In the Individual Users At Add a new user at site: Select Headquarters	
3	Click Go button	

4	Go to the next table	
---	----------------------	--



Step	Action	Result
1	In the User screen In the General tab First Name: Enter the appropriate name	Charter is used as an example
2	Number: Enter an appropriate number	200 is used as an example
3	License Type: Select Extension and Mailbox	
4	Access License: Select Professional	
5	DID Range Check checkbox Select the appropriate range	+13038356006 (o of 1 available) Charter is an example
6	DID Number: Enter the appropriate DID number	The DID number is provisioned for the specific user. This number should be in the DID Range selected. 913038356006 is used as an example.
7	PSTN Failover: Select None	
8	User Group: Select Executive	
9	Primary Phone Port: Click IP Phones Select the MAC address of the phone	
10	All other settings are left as default	

11	Click the Save button	
12	Procedure completed	

Users [Help](#)

Edit User

▼ **General**
▶ Personal Options
▶ Distribution Lists
▶ Workgroups
▶ Connect Services
[Refresh this page](#)

First Name:
Last Name:
Number:
License Type:
Access License: Enable Contact Center Integration
Caller ID: (e.g. +1 (408) 331-3300)
 DID Range: [View System Directory](#)
DID Number: (Range: +13038356006 - 13038356006)
PSTN Failover:
User Group:

Site:
Language:
Primary Phone Port: IP Phones
 Ports
 SoftSwitch
Current Port:
Jack #:



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