

# Cisco Business Edition 4000 on Spectrum SIP Trunking

v1.1

May 2019

## Contributors:

- Scott Brown

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# 1. Introduction

This document provides configuration and deployment guidelines for the Cisco Business Edition 4000 (BE4K) version isr4300-universalk9.V1610\_1A\_BE4K\_ES3.SPA or newer, for use with Spectrum Enterprise SIP Trunking.

## 2. Requirements

This document is written for Spectrum Enterprise internal technical and external telecom vendor audiences and makes the following assumptions:

- The reader has a full understanding of and technical competency with Spectrum Enterprise SIP Trunking.
- The reader has a full understanding of and technical competency with AudioCodes SIP Trunking gateways, such as the M800C, M4000.
- The reader has a full understanding of and technical competency with Internet Explorer or Chrome web browsers. Firefox is NOT recommended.
- The reader has a full understanding of and technical competency with the Cisco BE4000 Configuration and Deployment portal.

## 3. Configuration

### 3.1. Cisco Configuration Portal

Configuration of the Cisco BE4K is accomplished via the [Cisco BE4K Configuration Portal](https://go.be4000.cisco.com/).

Login to your Cisco account.

NOTE: You must have access to the BE4K Deployment portal. Contact your Cisco rep for more information.

The screenshot shows the Cisco Business Edition 4000 Configuration Portal. The browser address bar displays <https://go.be4000.cisco.com/>. The navigation bar includes the Cisco logo, links for Home, Features, Training, and Support, a Service Status indicator, a search bar for documentation, and a **Sign In** button highlighted with a red circle. The main content area features a 'Feature Updates' section dated 28 March 2019, with a 'Learn More' button. Below this is the 'Business Edition 4000' section, described as 'Simple, cloud-managed office communications', with 'See Features' and 'Become a Cisco Partner' buttons. An image of the Business Edition 4000 hardware is shown on the right, with a laptop displaying the 'Common Tasks' interface.

United States - English



## Log in to your account

Username or email

---

[Forgot username?](#)

Next

[Create a new account](#)

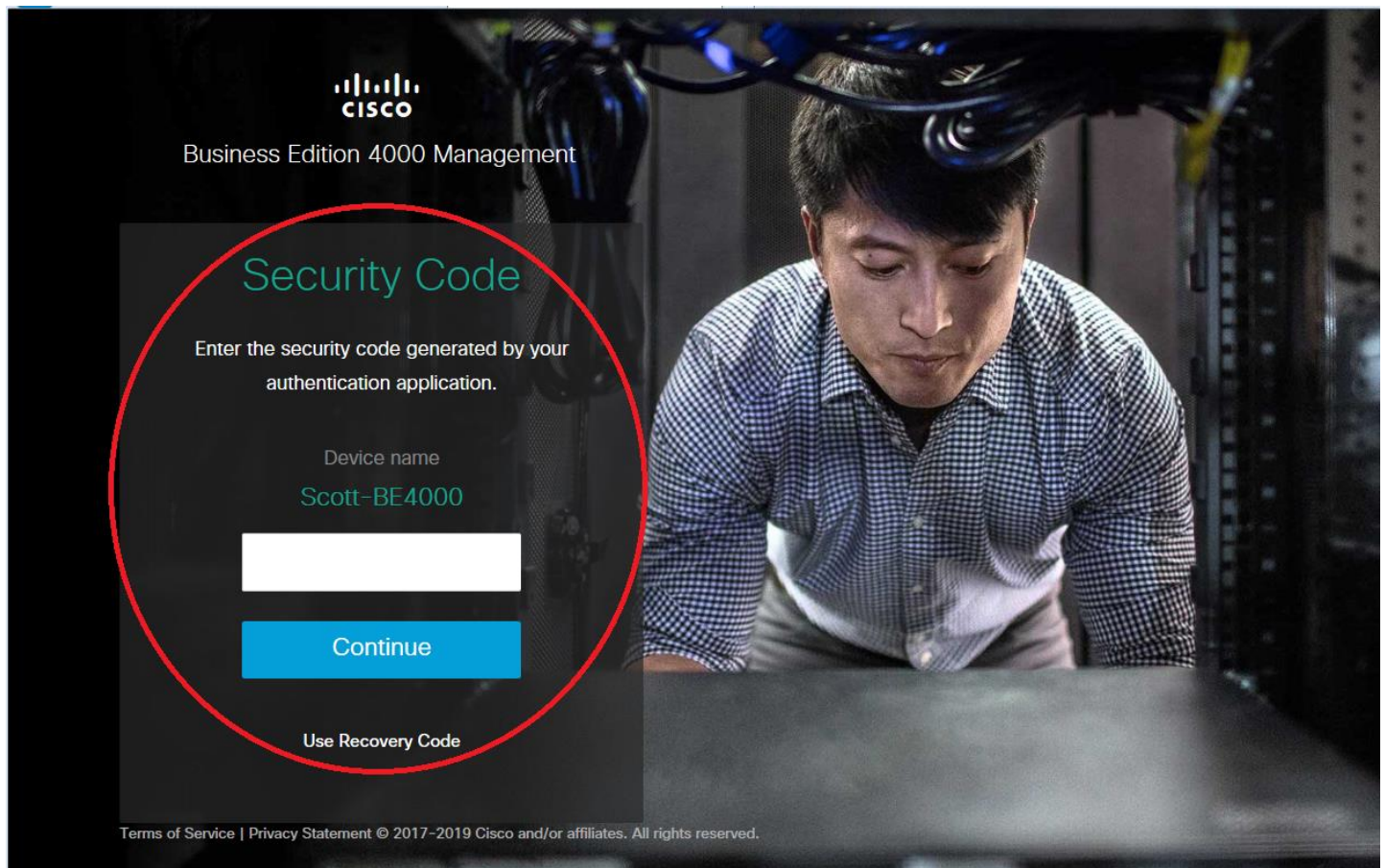
## 3.2. Security Code Entry

### Access BE4000 Partner Portal

To access the BE4000 Partner Portal, Cisco partners are required to use two factor authentication using a standards-based one time password (OTP) generator together with their Cisco.com user account. Varieties of standards-based OTP applications are available (some of them are listed here), free of charge, for most makes of smart phone.

- For iPhone phones: [OTP Auth](#) or [Google Authenticator](#).
- For Android phones: [Google Authenticator](#) or [FreeOTP Authenticator](#).

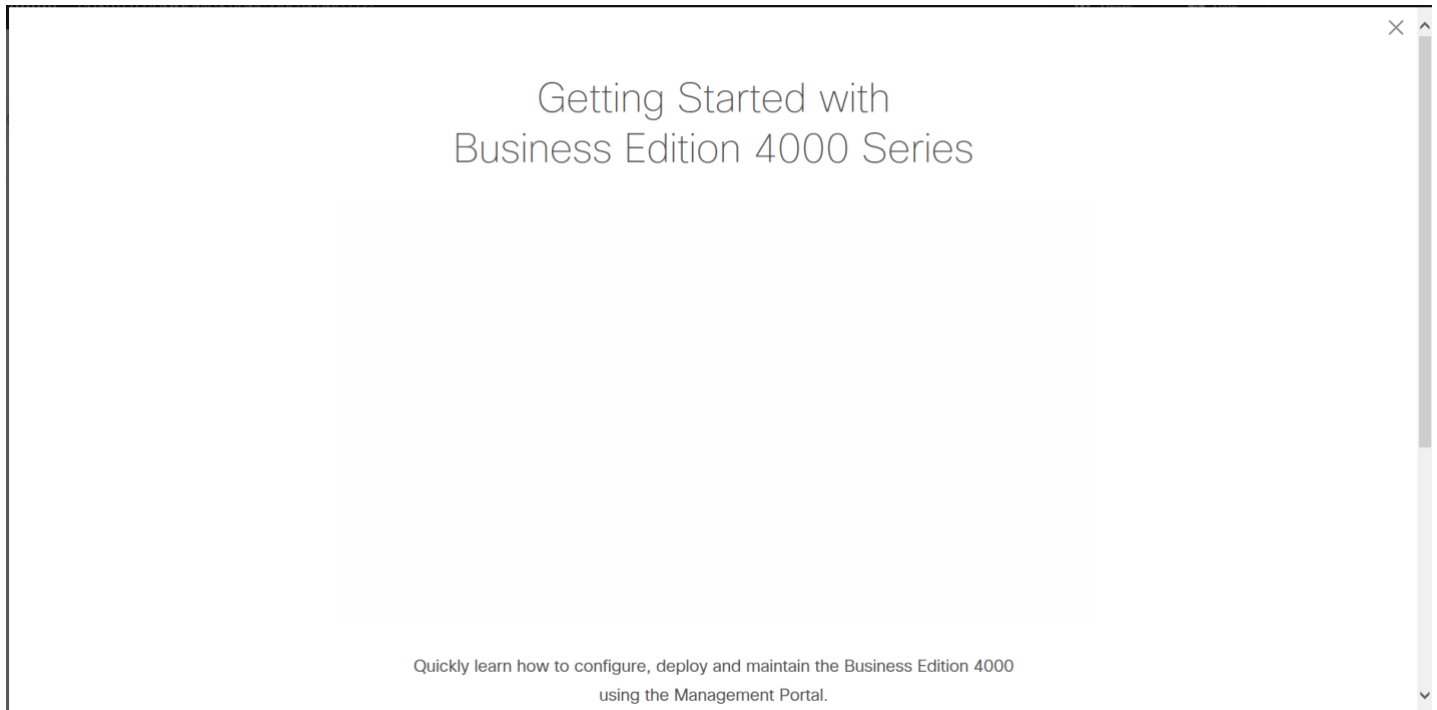
 **Note** The PingID authentication application is not currently supported.



## 3.3. Customer Configuration

### 3.3.1. Introduction Video

- Once logged in, you will be offered an opportunity to watch a “Getting Started with Business Edition 4000 Series” video.



This video is mandatory to watch in its entirety, though you may postpone and continue configuration up to 3 times.

All users must watch the introduction video in its entirety. Choose to continue watching the video now or postpone up to 2 more time(s).

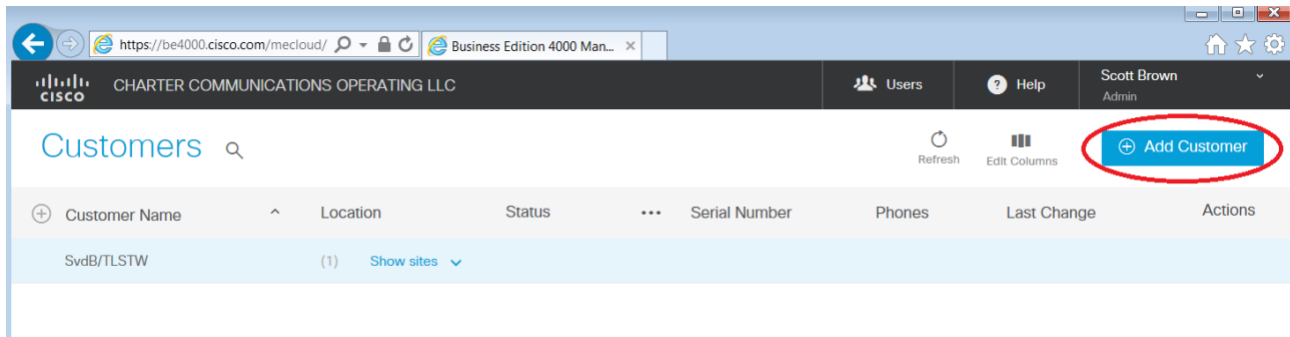
Choose “Getting Started” in the Support menu of the header bar to open this video again.

Postpone

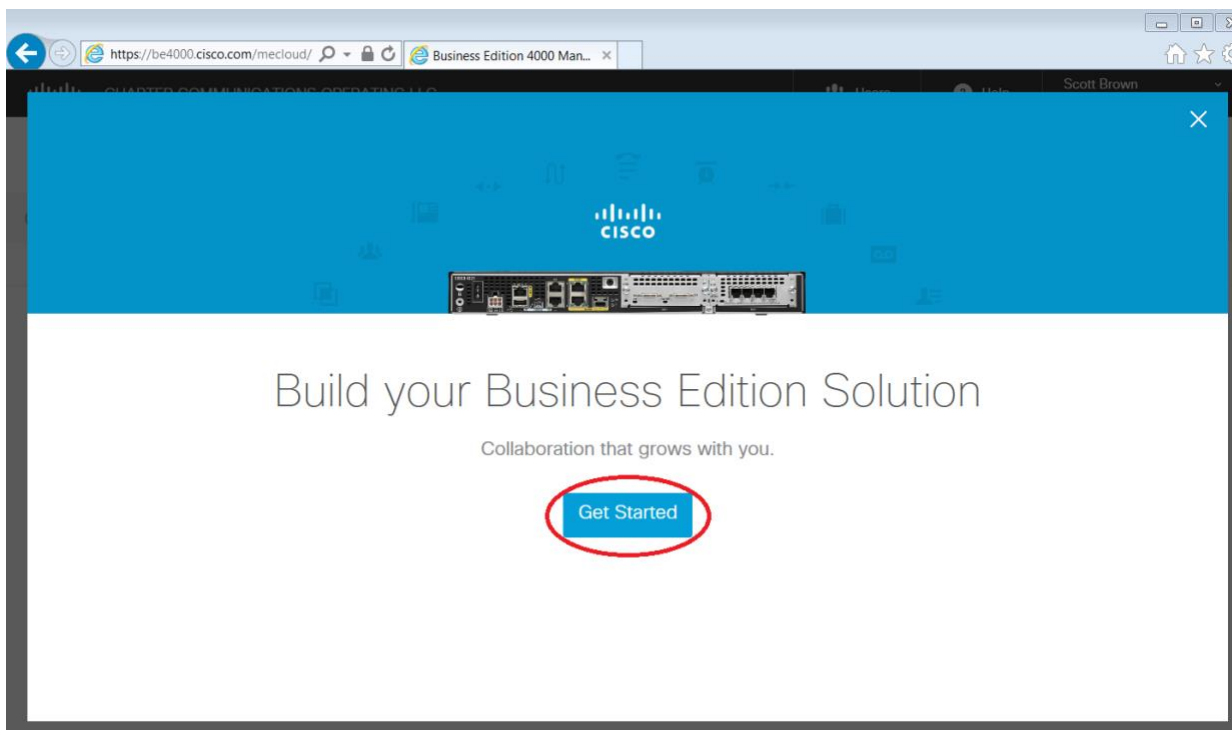
Watch Video

### 3.3.2. Add Customer

- Once logged in, click “Add Customer” in the upper right



Click “Get Started”





Add Customer information. Once complete, click the arrow in the lower right

Business Edition 4000 Configuration ✕

### Add Customer

▲ Fields highlighted in Yellow cannot be changed after deployment.

Enter Customer and Location Details

Customer Name	Location
<input type="text"/>	<input type="text"/>
Customer Admin Email	Contact Name
<input type="text"/>	<input type="text"/>
Phone Number	
<input type="text"/>	

CHARTER COMMUNICATIONS OPERATING LLC

➤

### 3.3.3. LAN Connection

- Enter Customer LAN and SMTP server information

Business Edition 4000 Configuration

1 Connectivity 2 Dial Plan 3 Stations 4 Call Routing 5 Features

LAN Connection	✓
System Settings	✓
Direct Dial Numbers	✓
SIP Trunk	
Line Cards	
Private IP Ranges	

## LAN Connection

▲ Fields highlighted in Yellow cannot be changed after deployment.

Input the Network Details

FX4000 IP Address  
192.168.0.2 ▲

Voicemail IP Address  
192.168.0.4 ▲

Subnet Mask  
255.255.255.0 ▲

Gateway Address  
192.168.0.1 ▲

Internet Service Provider (ISP)  
Spectrum Enterprise ▲

SMTP Server - Enables Voicemail to Email Functionality

IP Address or Domain Name ⓘ  
mail.charter.com

Port  
25

Security Mode  
None ▼

Sender's Email Address  
vmail@charter.com

Authenticate

### 3.3.4. System Settings

- Configure System Settings (if needed)

The screenshot displays the 'Business Edition 4000 Configuration' interface. At the top, a blue header contains the title and a close button. Below the header is a navigation bar with five tabs: '1 Connectivity', '2 Dial Plan', '3 Stations', '4 Call Routing', and '5 Features'. The 'System Settings' page is active, showing a left-hand menu with options: 'LAN Connection' (checked with a green checkmark), 'System Settings', 'Direct Dial Numbers', 'SIP Trunk', 'Line Cards', and 'Private IP Ranges'. The main content area is titled 'System Settings' and includes a yellow warning banner: 'Fields highlighted in Yellow cannot be changed after deployment.' The settings are organized into sections: 'Dial an Outside Line' (Dial: 9), 'Extension length' (4), 'Interdigit Timeout' (5 Seconds), 'Send to Voicemail Automatically' (Dial: 2 + Extension), 'Intercom' (Dial: 4 + Extension), 'Advanced Options' (Forwarding Local: Enable), 'Phone Redirect Limit' (5), and 'Demo' (No). A bottom navigation bar features a back arrow and a forward arrow.

### 3.3.5. Direct Dial Numbers

- Add Direct Dial Numbers via spreadsheet or line by line

Business Edition 4000 Configuration
✕

1 Connectivity

2 Dial Plan

3 Stations

4 Call Routing

5 Features


LAN Connection	✓
System Settings	✓
Direct Dial Numbers	
SIP Trunk	
Line Cards	
Private IP Ranges	

## Direct Dial Numbers

---

### Add Numbers

Add Direct Inward Dial (DID) numbers for your SIP, BRI, and PRI connections. Do not add FXO line numbers here, these can be added later with the port configuration. In the Service Name column, identify which service each number belongs to. For easy reference, you can use any name for your services. Numbers may be imported or manually entered. Input must be in national number format. If your numbers have leading zeros, we recommend using a text editor, rather than Excel.



Drag & Drop your spreadsheet

or

Choose file

⊕ Add Row
Download Template

←
→

Example of Direct Dial Number entry

Business Edition 4000 Configuration
✕

1 Connectivity

2 Dial Plan

3 Stations

4 Call Routing

5 Features

LAN Connection	✓
System Settings	✓
<b>Direct Dial Numbers</b>	
SIP Trunk	
Line Cards	
Private IP Ranges	

## Direct Dial Numbers

### Add Numbers

Add Direct Inward Dial (DID) numbers for your SIP, BRI, and PRI connections. Do not add FXO line numbers here, these can be added later with the port configuration. In the Service Name column, identify which service each number belongs to. For easy reference, you can use any name for your services. Numbers may be imported or manually entered. Input must be in national number format. If your numbers have leading zeros, we recommend using a text editor, rather than Excel.

[Replace this list](#)

Service Name	Registered Numbers	Delete
Spectrum Enterprise	8133020123	✕

[Add Row](#)
[Download Template](#)

< >

### 3.3.6. SIP Trunk Configuration

The screenshot displays the 'Business Edition 4000 Configuration' interface. At the top, there is a blue header with the title and a close button. Below the header is a navigation bar with six tabs: '1 Connectivity', '2 Dial Plan', '3 Stations', '4 Call Routing', '5 Features', and an unlabeled tab. The 'Connectivity' tab is active. On the left side, there is a vertical list of configuration items: 'LAN Connection' (checked), 'System Settings' (checked), 'Direct Dial Numbers' (checked), 'SIP Trunk' (selected), 'Line Cards', and 'Private IP Ranges'. The main content area is titled 'SIP Trunk' and features a toggle switch that is currently turned off. Below the title, there is a sub-header: 'Define trunk using templated or custom configurations.' At the bottom right of the interface, there are two circular navigation buttons, one with a left arrow and one with a right arrow.

### 3.3.6.1. Service Settings

Business Edition 4000 Configuration
✕

1 Connectivity

2 Dial Plan

3 Stations

4 Cell Routing

5 Features

LAN Connection ✓

System Settings ✓

Direct Dial Numbers ✓

**SIP Trunk**

Service

Interface

Proxy

Registrar

Security

Codec

---

Line Cards

---

Private IP Ranges

## SIP Trunk ☑

---

**Note:** Choose your provider from the "Provider Templates" or use 'Custom'. To have a new provider added as a template, or to request assistance contact the dedicated [SIP Support Team](#). Do not open a TAC case as they will not be able to assist you.

### Service Settings

Service Name

Select.. ▼

⊗ Please select a service name.

Provider Template

Custom ▼

←
→

## Spectrum Enterprise SIP Information

The screenshot displays the 'Business Edition 4000 Configuration' interface. The top navigation bar includes tabs for '1 Connectivity', '2 Dial Plan', '3 Stations', '4 Call Routing', and '5 Features'. The 'SIP Trunk' section is active, showing a toggle switch turned on. A note states: 'Note: Choose your provider from the "Provider Templates" or use "Custom". To have a new provider added as a template, or to request assistance contact the dedicated SIP Support Team. Do not open a TAC case as they will not be able to assist you.' The 'Service Settings' section contains two dropdown menus: 'Service Name' set to 'Spectrum Enterprise' and 'Provider Template' set to 'Custom'. These two dropdown menus are circled in red. A sidebar on the left lists various configuration options, with 'SIP Trunk' selected. At the bottom right, there are navigation arrows.

## 3.3.6.2. Interface

- This document does not cover usage of the secondary interface for trunking. No changes on this page.



### 3.3.6.3. Proxy

- Enter the Spectrum Enterprise gateway LAN IP Address in the field for Proxy Address. Proxy Port is 5060.
- Select “T.38 fall back to G.711u” for Fax Transmission Protocol

Business Edition 4000 Configuration

1 Connectivity 2 Dial Plan 3 Stations 4 Call Routing 5 Features

LAN Connection ✓  
System Settings ✓  
Direct Dial Numbers ✓  
SIP Trunk  
Service ✓  
Interface ✓  
Proxy  
Registrar  
Security  
Codec  
Line Cards  
Private IP Ranges

## SIP Trunk

Note: To request assistance contact the dedicated [SIP Support Team](#). Do not open a TAC case as they will not be able to assist you.

### Proxy Server

Proxy Address: 192.168.0.3 Proxy Port: 5060

Outbound Proxy Address: Outbound Proxy Port:

Call Authentication

Username and Password: Show password

Authentication Realm: Include in Invite

Advanced Options

Min-SE: 90 Session Expires: 1800

RTP Port Range: 8000 48198

Transport Layer: UDP Fax Transmission Protocol: T.38 fall back to G.711u

DTMF Signalling Protocol: RFC2833 Calling Party Restriction: Remote Party ID (RPID)

Calling Party Domain:

CLI Restriction Prefix:

### 3.3.6.4. Registrar

- No entry for this page

### 3.3.6.5. Security

- Enter the Spectrum Enterprise gateway LAN IP Address

**Business Edition 4000 Configuration**

Connectivity | Dial Plan | Stations | Call Routing | Features

LAN Connection	✓
System Settings	✓
Direct Dial Numbers	✓
<b>SIP Trunk</b>	
Service	✓
Interface	✓
Proxy	✓
Registrar	✓
Security	✓
Codec	
Line Cards	
Private IP Ranges	

## SIP Trunk ☑

Note: To request assistance contact the dedicated [SIP Support Team](#). Do not open a TAC case as they will not be able to assist you.

### Security

You must add at least one trusted IP Address. The BE4000 accepts Incoming VoIP (SIP) calls only if the remote IP address of an Incoming VoIP call matches an address in the Trusted IP Address list. Enter the IP addresses provided for proxy, outbound proxy, and registrar from your service provider. IP addresses must be provided if hostnames are used.

Trusted IP Address ⓘ	Delete
192.168.0.1	✕

[+ Add Row](#)

### 3.3.6.6. Codec

- Choose g711ulaw only

Business Edition 4000 Configuration

Connectivity | Dial Plan | Stations | Call Routing | Features

LAN Connection	✓
System Settings	✓
Direct Dial Numbers	✓
<b>SIP Trunk</b>	
Service	✓
Interface	✓
Proxy	✓
Registrar	✓
Security	✓
<b>Codec</b>	
Line Cards	
Private IP Ranges	

## SIP Trunk ☑

Note: To request assistance contact the dedicated [SIP Support Team](#). Do not open a TAC case as they will not be able to assist you.

### Codec

Codec g711ulaw and g711alaw are enabled by default. Choose additional codecs if required by the subscribed SIP provider.

#### Voice Class Codec

Do not enable a codec unless required by the provider. Reorder the codec by dragging the rows, as prescribed by the provider. At least one codec must be selected.

<input checked="" type="checkbox"/>	g711ulaw	≡
<input type="checkbox"/>	g711alaw	≡
<input type="checkbox"/>	g729a	≡
<input type="checkbox"/>	g722-64	≡
<input type="checkbox"/>	ilbc	≡

#### Conferencing Capacity

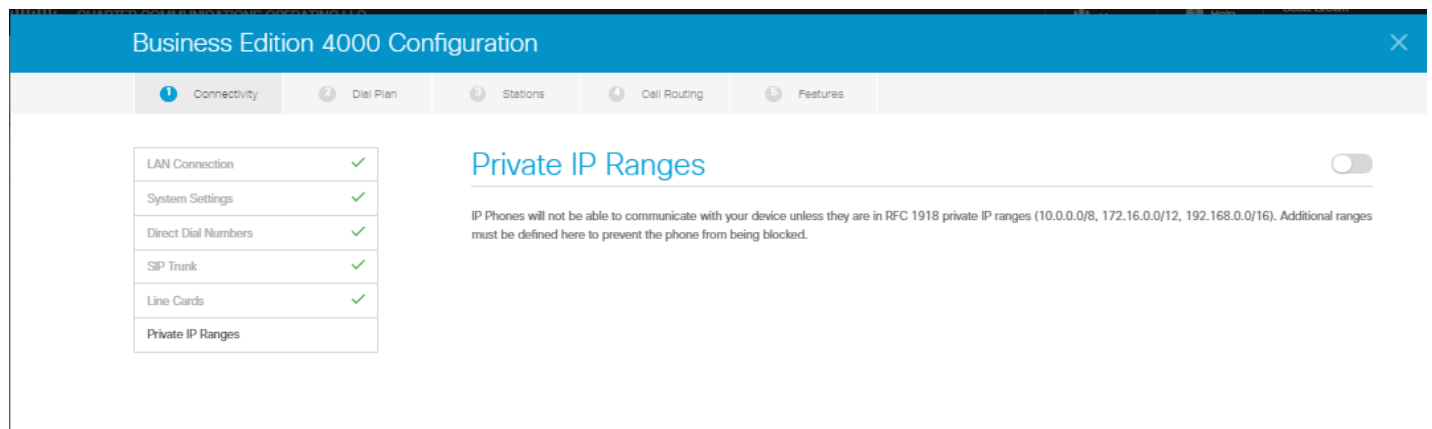
Having a 'g711alaw' or 'g711ulaw' codec enabled allows for up to 5 simultaneous 8-person calls when Conferencing is enabled. Visit the [Support Portal](#) to learn more.

### 3.3.7. Line Cards

- This document does not cover the usage of Line Cards as they are not germane to Spectrum Enterprise SIP Trunking

### 3.3.8. Private IP Ranges

- IP Phones that are not addressed with RFC 1918 compliant IPs will be unable to communicate with the BE4K unless their address range is added as an additional range



The screenshot shows the 'Business Edition 4000 Configuration' interface. On the left, a navigation menu lists several settings: LAN Connection, System Settings, Direct Dial Numbers, SIP Trunk, Line Cards, and Private IP Ranges. The 'Private IP Ranges' option is currently selected. The main content area displays the 'Private IP Ranges' configuration page, which includes a toggle switch that is currently turned off. Below the toggle, a warning message states: 'IP Phones will not be able to communicate with your device unless they are in RFC 1918 private IP ranges (10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16). Additional ranges must be defined here to prevent the phone from being blocked.'

## 3.4 Dial Plan

### 3.4.1. Region Settings

- Choose the appropriate settings for the customer's region and preferences

Business Edition 4000 Configuration

Connectivity | **Dial Plan** | Stations | Call Routing | Features

Region Settings  
Dial Plans

### Region Settings

▲ Fields highlighted in Yellow cannot be changed after deployment.

Telephony Port Tones  
United States

Time Zone  
Pacific Standard/Daylight Time -480

Phone Display Language  
English

Phone Tones  
United States

Voicemail and System Prompt Language  
English (United States)

Selfcare Portal  
English

Time Format  
12

Date Format  
M/U/Y

DST Auto Adjust  
Enable

### 3.4.2. Dial Plans

- Choose the appropriate Dial Plan for the customer

Business Edition 4000 Configuration

Connectivity | **Dial Plan** | Stations | Call Routing | Features

Region Settings    
 Dial Plans

### Dial Plans

⚠ Fields highlighted in Yellow cannot be changed after deployment.

Country: United States

User Local Dialling Options: Local calls require 10 digits

Pattern	Description	ReqTA	COR	Preference
011[1-9]T	International	True	call-international	SIPthenPOTS
011800T	International Toll-Free	True	call-toll-free	SIPthenPOTS
1[2-9].[2-9].....\$	Long Distance	True	call-national	SIPthenPOTS
1800.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
1833.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
1844.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
1855.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
1866.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
1877.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
1888.....\$	Toll-Free	True	call-toll-free	SIPthenPOTS
[2-9].[2-9].....\$	Local 10 digit dialling	True	call-local	SIPthenPOTS
[2,3,6,7,8]11\$	Toll-Free Service Numbers	True	call-toll-free	SIPthenPOTS
411\$	Directory Assistance	True	call-national-plus	SIPthenPOTS
511\$	Traffic and Weather	True	call-local	SIPthenPOTS
911\$	Emergency	False	call-emergency	POTSthenSIP
911\$	Emergency	True	call-emergency	POTSthenSIP
1900.....\$	Premium	True	block	SIPthenPOTS

## 3.5. Stations

- Enter station information via spreadsheet or line by line (example of line by line shown)

Business Edition 4000 Configuration

Connectivity
  Dial Plan
  Stations
  Call Routing
  Features

[Replace this list](#)

When entering the Single Number Reach (SNR number), enter it in same way you would dial it from your office phone, including any digits required to get an outside line if needed.

Type	First Name	Last Name	Display Name	Email	Extension	Phone Type	COR	Voicemail	SNR ⓘ	Delete
User	Schotte	Braun	S.Braun	schotte.braun@svdb.com	1001	7811	internal	<input type="checkbox"/>	98135558802	
User	Dale	Hooper	D.Hooper	dale.hooper@svdb.com	1002	7811	internal	<input type="checkbox"/>		

[Add Row](#) [Download Template](#)

## 3.6. Call Routing

### 3.6.1. Business Hours

- Configure business hours to meet customer preferences

Business Edition 4000 Configuration
✕

✔

Connectivity

✔

Dial Plan

✔

Stations

⬇

Call Routing

ⓘ

Features

Business Hours
Hunt Group
Auto Attendant
Night Service
Inbound Call Mapping
Outbound Caller ID
System Operator

### Business Hours

Set the weekly schedule for open hours. This schedule will be used by services such as Auto Attendant. Please enter business hours in 24 hour format (17:00 for example). Times must be either full (:00) or half hours (:30).

**Open Business Hours**

24/7 (No Closed Hours)

Dual Hours (Open and Closed)

**Hours of Operation**

M

T

W

T

F

S

S

To

[⊕ Add New Hours](#)

**Holiday**

New Year

⊕

⊕

[⊕ Add New Holiday](#)



### 3.6.2. Hunt Group

- Configure Hunt Group(s) to meet customer needs.

Business Edition 4000 Configuration
✕

✔ Connectivity

✔ Dial Plan

✔ Stations

🔍 Cell Routing

⚙️ Features

Business Hours	✔
Hunt Group	
Auto Attendant	
Night Service	
Inbound Call Mapping	
Outbound Caller ID	
System Operator	

## Hunt Group 🔴

Group Name  Pilot Number

Add Members

🔍 Search by Member name or Extensor   [👤 Show Member Directory](#)

⊘ Minimum 2 members required.

Allow dynamic members

Hunt Method

When No Member is Available

Timer Settings ⓘ

Member Timeout  
 Seconds (3-60000)

Enable Call Queuing

### 3.6.3. Auto Attendant

- Configure Auto Attendant to meet customer needs.

The screenshot displays the 'Business Edition 4000 Configuration' interface. At the top, there is a navigation bar with tabs for 'Connectivity', 'Dial Plan', 'Stations', 'Cell Routing', and 'Features'. The 'Cell Routing' tab is active. On the left side, a sidebar menu lists various configuration options: 'Business Hours', 'Hunt Group', 'Auto Attendant', 'Night Service', 'Inbound Call Mapping', 'Outbound Caller ID', and 'System Operator'. The 'Auto Attendant' section is expanded, showing sub-options: 'General Settings', 'Open Menu', and 'Close Menu'. The main content area is titled 'Auto Attendant' and features a toggle switch that is turned on. Below the title, there are several configuration fields: 'Pilot Number' (an empty text input), 'How many times do you want message to be played' (a dropdown menu set to '4'), 'Drop Through destination' (a dropdown menu set to '--Select--'), and 'Audio Prompt' (a section with an upload button, a text input containing 'AA\_aPrompt1.wav', and an 'Upload' button).

### 3.6.4. Night Service

- Configure Night Service to meet customer needs.

Business Edition 4000 Configuration
✕

✔ Connectivity
✔ Dial Plan
✔ Stations
Call Routing
⋮ Features

Business Hours	✔
Hunt Group	✔
Auto Attendant	✔
Night Service	
Inbound Call Mapping	
Outbound Caller ID	
System Operator	

## Night Service 🔴

Designate the weekly schedule and holidays when Night Service forwarding rules will be enabled. Rules only apply to phones with the feature enabled.

**Manual Activation Code**

\*1234

*Leading \* is required, followed by 3 to 15 digits*

**Active Hours**

Monday Close	17:00	to	Tuesday Open	08:59
Tuesday Close	17:00	to	Wednesday Open	08:59
Wednesday Close	17:00	to	Thursday Open	08:59
Thursday Close	17:00	to	Friday Open	08:59
Friday Close	17:00	to	Saturday Open	16:59
Saturday Close	17:00	to	Sunday Open	16:59
Sunday Close	17:00	to	Monday Open	08:59

**Holidays**

Jan

▼

1

⊗

⊕ Add Row

### 3.6.5. Inbound call mapping

- Configure Inbound Call Mapping to direct calls for unassigned numbers to a default target.

Business Edition 4000 Configuration
✕

✔ Connectivity

✔ Dial Plan

✔ Stations

🔍 Call Routing

⏪ Features

Business Hours	✔
Hunt Group	✔
Auto Attendant	✔
Night Service	✔
Inbound Call Mapping	
Outbound Caller ID	
System Operator	

## Inbound Call Mapping

Incoming calls to numbers not assigned to a specific internal number will be directed to the default target selected for each service in the table below.

Service Provider

Default Target

Provider Send Digits

SIP SpectrumEnterprise

Designate how calls to registered numbers are routed within the system. Choose a target type and number for each registered number.

Spectrum Enterprise <span style="float: right;">1 -</span>		
Registered Number	Target Type	Target Number
8133020123	<input type="text" value="Extension"/>	<input type="text" value="1001 S.Braun"/>

### 3.6.6. Outbound Caller ID

- Configure Outbound Caller ID to reflect the Registered Number (Main TN) of the customer

The screenshot shows the 'Business Edition 4000 Configuration' interface. On the left, a sidebar lists configuration categories: Business Hours, Hunt Group, Auto Attendant, Night Service, Inbound Call Mapping, Outbound Caller ID, and System Operator, each with a green checkmark. The main content area is titled 'Outbound Caller ID' and includes the following elements:

- A navigation bar with tabs for Connectivity, Dial Plan, Stations, Cell Routing (active), and Features.
- A sub-header 'Outbound Caller ID' with a close button (X).
- Instructions: 'Select a registered number to use as the default caller ID for each service.'
- Fields for 'Service Provider' (SIP SpectrumEnterprise) and 'Default Outbound DID' (8133020123).
- Instructions: 'Manage caller ID for each extension in the table below. By default extensions mapped to Trunk Default will be assigned the service default caller ID number.'
- A table with two columns: 'Mapped Extension' and 'Caller ID'.
 

Mapped Extension	Caller ID
1001 S.Braun	Trunk Default
1002 D.Hooper	Trunk Default

### 3.6.7. System Operator

- Configure a System Operator for internal calls to "0" in the Voice Mail system

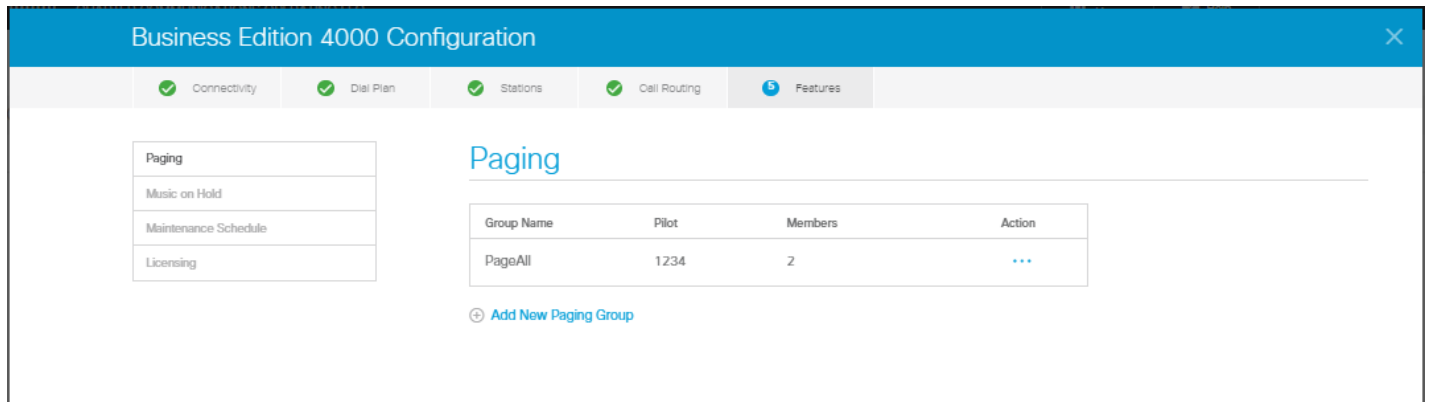
The screenshot shows the 'Business Edition 4000 Configuration' interface. On the left, a sidebar lists configuration categories: Business Hours, Hunt Group, Auto Attendant, Night Service, Inbound Call Mapping, Outbound Caller ID, and System Operator, each with a green checkmark. The main content area is titled 'System Operator' and includes the following elements:

- A navigation bar with tabs for Connectivity, Dial Plan, Stations, Cell Routing, and Features (active).
- A sub-header 'System Operator' with a toggle switch that is currently turned on.
- Instructions: 'Designate a number to transfer a call to when the caller presses '0' in the Voice Mail system.'
- Fields for 'Target Type' and 'Target Number', both currently set to '--Select--'.

## 3.7. Features

### 3.7.1. Paging

- Configure Paging to meet customer's preferences.



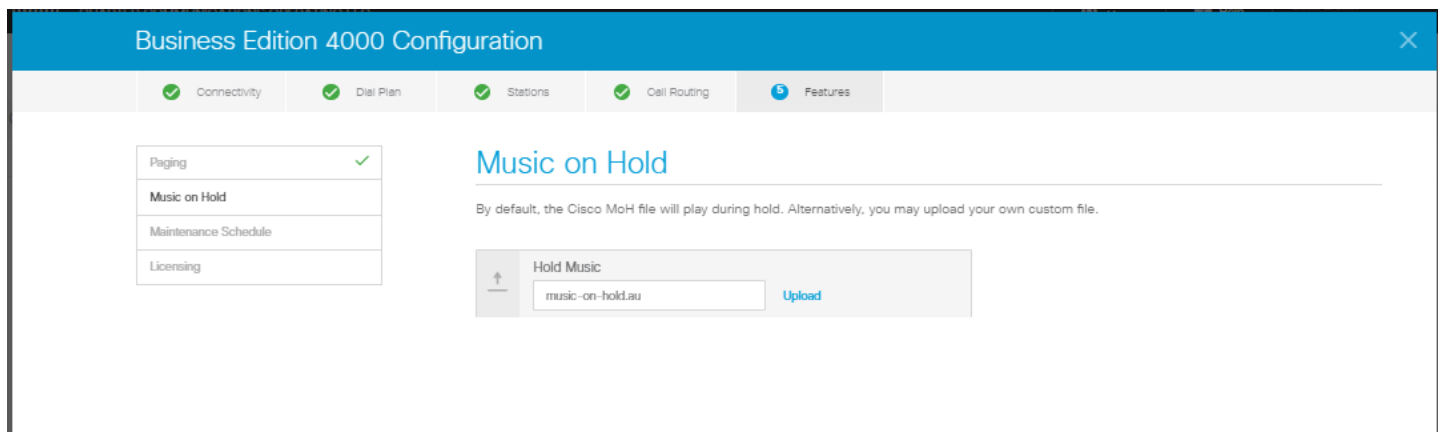
The screenshot shows the 'Business Edition 4000 Configuration' interface. The top navigation bar includes 'Connectivity', 'Dial Plan', 'Stations', 'Call Routing', and 'Features' (selected). The left sidebar lists 'Paging', 'Music on Hold', 'Maintenance Schedule', and 'Licensing'. The main content area is titled 'Paging' and contains a table with the following data:

Group Name	Pilot	Members	Action
PageAll	1234	2	...

Below the table is a link: [Add New Paging Group](#)

### 3.7.2. Music on Hold

- Configure MoH to meet customer preferences. A new file may be uploaded to the BE4K to customize the MoH.



The screenshot shows the 'Business Edition 4000 Configuration' interface. The top navigation bar includes 'Connectivity', 'Dial Plan', 'Stations', 'Call Routing', and 'Features' (selected). The left sidebar lists 'Paging', 'Music on Hold' (selected), 'Maintenance Schedule', and 'Licensing'. The main content area is titled 'Music on Hold' and contains the following text:

By default, the Cisco MoH file will play during hold. Alternatively, you may upload your own custom file.

Below this text is a 'Hold Music' section with an upload icon, a text input field containing 'music-on-hold.au', and an 'Upload' button.

### 3.7.3. Maintenance Schedule

- Configure a Maintenance Schedule to designate safe times to install software updates. System backup scheduling is also accomplished on this page.

The screenshot shows the 'Business Edition 4000 Configuration' interface. The 'Features' tab is active, and the 'Maintenance Schedule' section is expanded. On the left, a sidebar shows 'Paging', 'Music on Hold', 'Maintenance Schedule', and 'Licensing', all with green checkmarks. The main content area is titled 'Maintenance Schedule' and contains two paragraphs of explanatory text. The first paragraph states: 'Designate a time each day when it will be safe for the system to install software updates. This will be a 2 hour block of time when the system may be offline and unable to make or receive phone calls.' The second paragraph states: 'Designate at least one day each week when a system will create a backup. If no day selected, backup will be created on Saturday by default. The system will be offline and unable to make or receive phone calls.'

	Beginning	Ending	Backup
Monday	00:00	to 02:00	<input type="checkbox"/>
Tuesday	00:00	to 02:00	<input type="checkbox"/>
Wednesday	00:00	to 02:00	<input type="checkbox"/>
Thursday	00:00	to 02:00	<input type="checkbox"/>
Friday	00:00	to 02:00	<input type="checkbox"/>
Saturday	00:00	to 02:00	<input checked="" type="checkbox"/>
Sunday	00:00	to 02:00	<input type="checkbox"/>

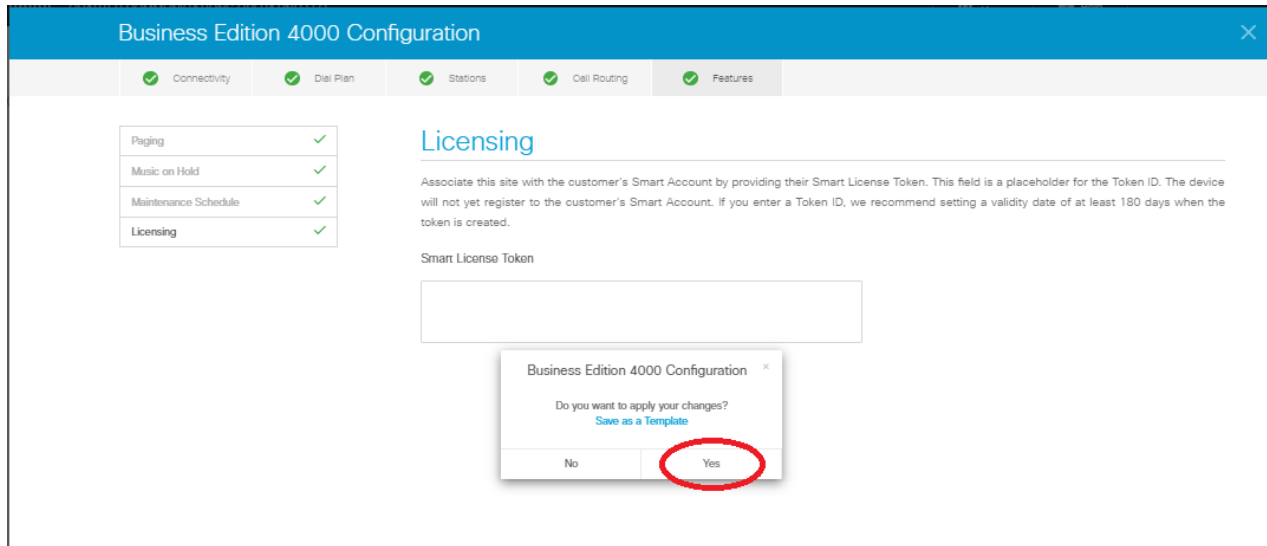
### 3.7.4. Licensing

- Apply customer's Smart License Token if the customer has this. Otherwise, leave blank

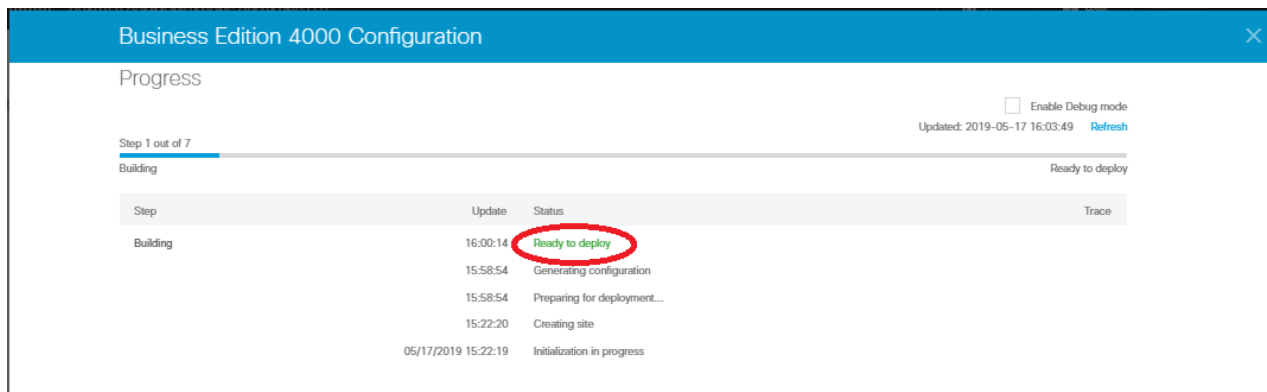
The screenshot shows the 'Business Edition 4000 Configuration' interface. The 'Features' tab is active, and the 'Licensing' section is expanded. On the left, a sidebar shows 'Paging', 'Music on Hold', 'Maintenance Schedule', and 'Licensing', all with green checkmarks. The main content area is titled 'Licensing' and contains a paragraph of explanatory text: 'Associate this site with the customer's Smart Account by providing their Smart License Token. This field is a placeholder for the Token ID. The device will not yet register to the customer's Smart Account. If you enter a Token ID, we recommend setting a validity date of at least 180 days when the token is created.'

Smart License Token

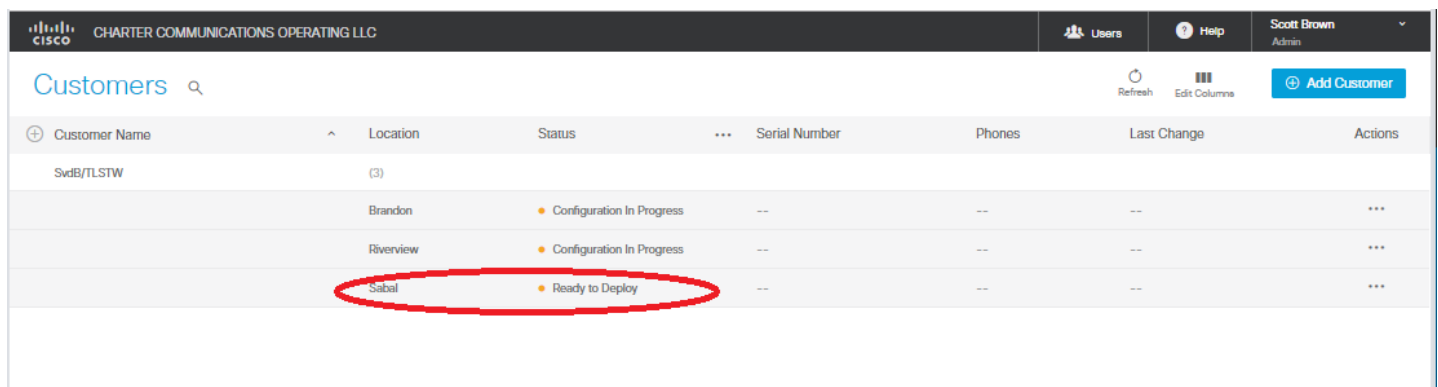
### 3.7.5. Apply changes.



- Configuration builds and is complete once “Ready to deploy” is displayed



On your main portal page, the newly configured site will now reflect “Ready to Deploy”





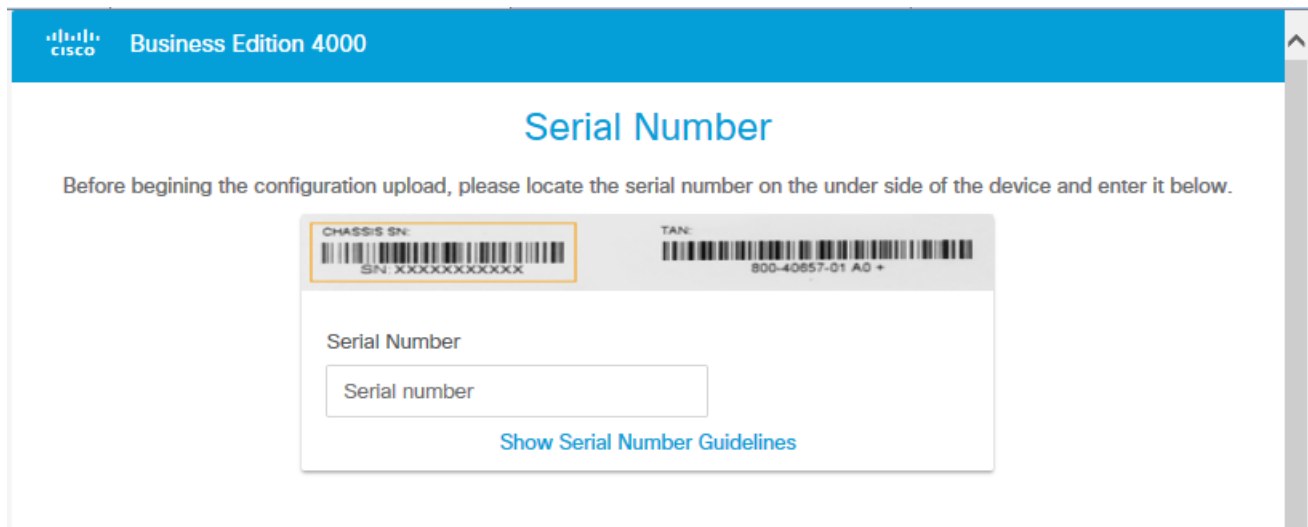
## 4. Deployment

### 4.1. Cisco Deployment Portal

Deployment of the Cisco BE4K is accomplished via the [Cisco BE4K deployment Portal](#).

### 4.2. Deployment

4.2.1. Enter the serial number of the BE4K into the portal



The screenshot shows a web interface for the Cisco Business Edition 4000. At the top, there is a blue header with the Cisco logo and the text "Business Edition 4000". Below the header, the page title is "Serial Number". A message reads: "Before beginning the configuration upload, please locate the serial number on the under side of the device and enter it below." Below this message, there are two barcode images. The first is labeled "CHASSIS SN:" and has "SN. XXXXXXXXXXXX" below it. The second is labeled "TAN:" and has "800-40657-01 A0 +" below it. Below the barcodes, there is a text input field labeled "Serial Number" with the placeholder text "Serial number". At the bottom of the input area, there is a link that says "Show Serial Number Guidelines".

#### 4.2.2. Choose Customer and Site

CISCO Business Edition 4000

1 2 3 4

### Choose Configuration

SN: [REDACTED]

Customer: SvdB/TLSTW

Site: Sabal

#### 4.2.3. Confirm Line Cards (Line Cards are not covered by this document)

CISCO Business Edition 4000

✓ 2 3 4

### Confirm Line Cards

SN: [REDACTED]  
SvdB/TLSTW  
Sabal

Ensure Line Cards slots are as follow

No Line Cards No Line Cards

#### 4.2.4. Confirm Connections

- Make sure BE4K interface GE0/0/0 is cabled to Spectrum Enterprise SIP gateway LAN interface
- Make sure BE4K is powered on
- Deploy the configuration to the BE4K

CISCO Business Edition 4000

Confirm Connections

SN: [REDACTED]  
SvdB/TLSTW  
Sabal

Complete the following steps

Step 1	Cable Connections	+
Step 2	Power on Device	
Step 3	Deploy Configuration	

Deploy Configuration

#### 4.2.5. Deployment!

The screenshot displays the Cisco Business Edition 4000 deployment progress. At the top, the Cisco logo and 'Business Edition 4000' are visible. A progress bar shows four steps, with the fourth step, 'Connecting', highlighted in blue and containing a '4'. Below the progress bar, the word 'Connecting' is written in blue. A circular progress indicator is shown with a blue arc, and the text 'Seeking Device....' is centered below it. A yellow banner contains the text: 'It may take up to 5 min before the device becomes available.' Below this banner, a grey box contains the text: 'Use these guides to assist you in completing the system installation.' Two links are listed below: 'DHCP and Option 150' with a globe icon and 'How to use Extension Assigner' with a person icon. Both links have a right-pointing chevron.

## 5. Caveats

- None at this time.

### **About Spectrum Enterprise**

Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes networking and managed services solutions: Internet access, Ethernet access and networks, Voice and TV solutions. Spectrum Enterprise's industry-leading team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. More information about Spectrum Enterprise can be found at [enterprise.spectrum.com](https://enterprise.spectrum.com).